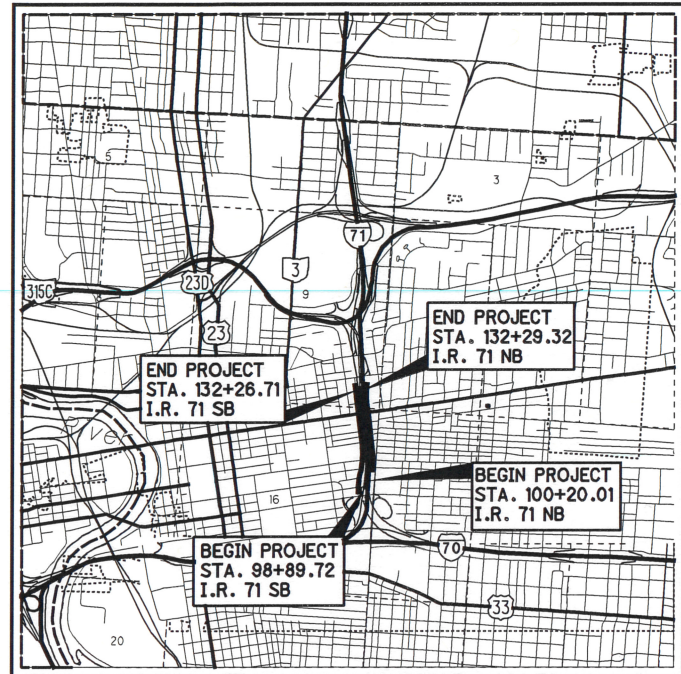


STATE OF OHIO
 DEPARTMENT OF TRANSPORTATION
FRA-71-17.46
PHASE 3B
 CITY OF COLUMBUS
 FRANKLIN COUNTY



LOCATION MAP

LATITUDE: 39°57'45" LONGITUDE: 82°58'58"



- PORTION TO BE IMPROVED _____
- INTERSTATE HIGHWAY _____
- STATE & FEDERAL ROUTES _____
- COUNTY & TOWNSHIP ROADS _____
- OTHER ROADS _____

DESIGN DESIGNATION

FOR DESIGN DESIGNATIONS, SEE SHEET 3

DESIGN EXCEPTIONS

DESIGN FEATURE	APPROVAL DATES	SHEET NUMBER
SHOULDER WIDTH: I.R. 71 SB (UNDER TOWN STREET)	5/18/17	24 & 213
SHOULDER WIDTH: I.R. 71 SB (UNDER OAK STREET)	6/28/19	24 & 217
SHOULDER WIDTH: RAMP R1	5/30/19	245 - 246
SHOULDER WIDTH: RAMP R2	5/18/17	248

UNDERGROUND UTILITIES
 Contact Two Working Days Before You Dig

OHIO811.org
 Before You Dig

OHIO811, 8-1-1, or 1-800-362-2764
 (Non-members must be called directly)

PLAN PREPARED BY:

BURGESS & NIPLE

5085 Reed Road
 Columbus, Ohio 43220

FOR ENGINEERS SEALS, SEE SHEET 2
 FOR SHEET INDEX, SEE SHEET 3

APPROVED _____
 DATE _____ ODOT DIRECTOR, DEPARTMENT OF TRANSPORTATION

APPROVED *Matthew R. Blahut*
 DATE 7/31/19 ODOT DISTRICT DEPUTY DIRECTOR

BMP'S

THIS PLAN UTILIZES STRUCTURAL BEST MANAGEMENT PRACTICES (BMP'S) FOR POST CONSTRUCTION STORM WATER TREATMENT. PROJECT 94343 (317IE) CONSTRUCTED THE BMP FOR THIS PROJECT. THIS PROJECT LIES WITHIN THE CITY OF COLUMBUS AND THE CITY OF COLUMBUS IS ABSOLVED OF ALL RESPONSIBILITIES FOR THE SWPPP, POST CONSTRUCTION BMP'S, FLOODPLAIN AND DOCUMENTATION TO THE OEPA.

PROJECT DESCRIPTION

THIS PROJECT RECONSTRUCTS I-71 BETWEEN MAIN STREET AND LONG STREET. THE NEW LESTER DRIVE (SB) AND ELIJAH PIERCE AVENUE (NB) URBAN AVENUES WILL BE CONSTRUCTED ADJACENT TO I.R. 71 BETWEEN BROAD STREET AND LONG STREET. THE BROAD STREET BRIDGE OVER I-71 WILL BE REPLACED.

EARTH DISTURBED AREA

PROJECT EARTH DISTURBED AREA: 15.78 ACRES
 ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 4.00 ACRES
 NOTICE OF INTENT EARTH DISTURBED AREA: 19.78 ACRES

LIMITED ACCESS

THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE OHIO REVISED CODE.

2019 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

MAINTENANCE OF TRAFFIC ENDORSEMENT

TRAFFIC REROUTED FOR WEEKEND I.R. 71 AND SIDE ROAD CLOSURES

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY EXCEPT FOR THE SIDE ROADS AS DESCRIBED ON SHEETS 77-103 AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

CITY OF COLUMBUS

PORTIONS OF THIS PROJECT LIE WITHIN THE CITY OF COLUMBUS AND THE CITY IS ABSOLVED IN THE FUTURE OF ANY RESPONSIBILITIES FOR THE SWPPP, POST CONSTRUCTION BMP MAINTENANCE, AND DOCUMENTATION TO THE OEPA.

FEMA NOTE

ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S FLOOD INSURANCE RITEMAP (DATED JUNE 17, 2008), THE SUBJECT PARCEL SHOWN HEREON LIE WITHIN ZONE "X AND AE", COMMUNITY PARCEL NO. 39049C0328K. NO PROPOSED EMBANKMENT IS ANTICIPATED TO BE PLACED IN THE FLOODPLAIN AS PART OF THIS PROJECT.

OHIO DEPARTMENT OF TRANSPORTATION STANDARD CONSTRUCTION DRAWINGS												ODOT SUPPLEMENTAL SPECIFICATIONS		SPECIAL PROVISIONS		
BP-2.1	7/17/15	LA-1.2	1/16/09	I-2.2	7/19/19	TC-41.10	7/19/13	TC-72.20	7/20/18	ITS-10.10	7/19/19	MT-95.31	7/19/19	800	7/19/19	NONE
BP-2.2	7/18/08			I-2.3	1/15/16	TC-41.15	10/18/13	TC-73.20	7/21/17	ITS-10.11	7/19/19	MT-95.32	4/19/19	804	7/19/19	
BP-2.3	7/18/14	MGS-1.1	1/19/18			TC-41.20	10/18/13	TC-81.21	1/18/19	ITS-12.10	7/19/19	MT-95.41	7/21/17	809	7/19/19	
BP-2.5	7/19/13	MGS-2.1	1/19/18	MH-1.2	1/15/16	TC-41.30	10/18/13			ITS-12.50	7/19/19	MT-98.10	1/20/17	813	10/19/18	
BP-3.1	7/18/14	MGS-3.1	1/19/18			TC-41.40	10/18/13	HL-10.11	7/19/19	ITS-14.11	1/18/19	MT-98.29	7/19/19	821	4/20/12	
BP-5.1	7/20/18	MGS-3.2	1/18/13	EXJ-4-87	1/19/18	TC-41.50	10/18/13	HL-10.12	1/20/17	ITS-14.50	7/20/18	MT-99.20	7/20/18	832	10/19/18	
BP-9.1	7/21/17			GSD-1-96	7/19/02	TC-42.10	10/18/13	HL-10.13	7/20/18	ITS-15.10	7/19/19	MT-99.30	4/19/19	839	7/17/15	
		DM-1.1	7/21/17	PCB-1-91	1/18/13	TC-42.20	10/18/13	HL-20.11	4/21/17	ITS-15.11	7/19/19	MT-101.60	1/20/17	875	1/18/19	
F-1.1	7/19/13	DM-1.2	1/18/13			TC-51.11	1/15/16	HL-20.13	1/19/18	ITS-18.00	7/19/19	MT-101.70	7/20/18	878	1/18/19	
		DM-4.3	1/15/16	TC-7.65	7/20/18	TC-51.12	1/15/16	HL-30.11	7/19/19	ITS-50.10	7/19/19	MT-101.90	7/21/17	902	7/19/19	
RM-1.1	7/18/14	DM-4.4	1/15/16	TC-15.115	7/20/18	TC-52.10	10/18/13	HL-30.21	1/17/14	ITS-76.10	7/19/19	MT-102.10	1/18/19	904	7/19/19	
RM-4.3	7/18/14			TC-16.21	7/20/18	TC-52.20	7/20/18	HL-30.22	1/17/14			MT-102.30	10/16/15	907	1/20/12	
RM-4.4	7/21/17	CB-1.1	7/19/19	TC-18.24	1/17/14	TC-61.30	7/19/19	HL-30.41	1/19/18			MT-105.10	7/19/13	939	7/17/15	
RM-4.5	7/21/17	CB-2.2	7/20/18	TC-21.10	7/19/19	TC-65.10	1/17/14	HL-40.20	7/19/19			MT-110.10	7/19/13			
RM-4.6	7/19/13	CB-2.3	1/15/16	TC-21.50	7/15/16	TC-65.11	7/21/17	HL-50.21	1/18/19			MT-120.00	1/19/18			
RM-6.1	7/18/14			TC-22.20	1/17/14	TC-71.10	1/19/18	HL-60.11	7/21/17							

FOR LIST OF APPLICABLE CITY OF COLUMBUS STANDARD CONSTRUCTION DRAWINGS, SUPPLEMENTAL SPECIFICATIONS AND SIGNATURES, SEE SHEET 2

FEDERAL PROJECT NO.
E190121

PID NO.
105453

CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT
NONE

FRA-71-17.46

1
 881

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DESIGN DESIGNATION

	LESTER DRIVE (NORTH OF BROAD ST.)	ELIJAH PIERCE AVENUE	I-71 NB (SOUTH OF BROAD ST.)	I-71 NB (NORTH OF BROAD ST.)	I-71 SB (SOUTH OF BROAD ST.)	I-71 SB (NORTH OF BROAD ST.)	BROAD STREET
CURRENT ADT (2015)	12,130	13,130	92,930	92,930	72,300	72,300	28,700
DESIGN YEAR ADT (2035)	14,190	15,070	120,040	120,040	87,960	87,960	32,820
DESIGN HOURLY VOLUME (2035)	1,630	1,510	10,370	10,370	8,800	8,800	2,950
DIRECTIONAL DISTRIBUTION	100%	100%	100%	100%	100%	100%	60%
TRUCKS (24 HOUR B&C)	2%	3%	10%	10%	10%	10%	2%
DESIGN SPEED	35 MPH	35 MPH	55 MPH (MATCH EXISTING)	60 MPH	55 MPH (MATCH EXISTING)	60 MPH	35 MPH
LEGAL SPEED	35 MPH	35 MPH	55 MPH (MATCH EXISTING)	55 MPH	55 MPH (MATCH EXISTING)	55 MPH	35 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	URBAN PRINCIPAL ARTERIAL	URBAN PRINCIPAL ARTERIAL	URBAN INTERSTATE	URBAN INTERSTATE	URBAN INTERSTATE	URBAN INTERSTATE	URBAN PRINCIPAL ARTERIAL
NHS PROJECT:	NO	NO	YES	YES	YES	YES	YES

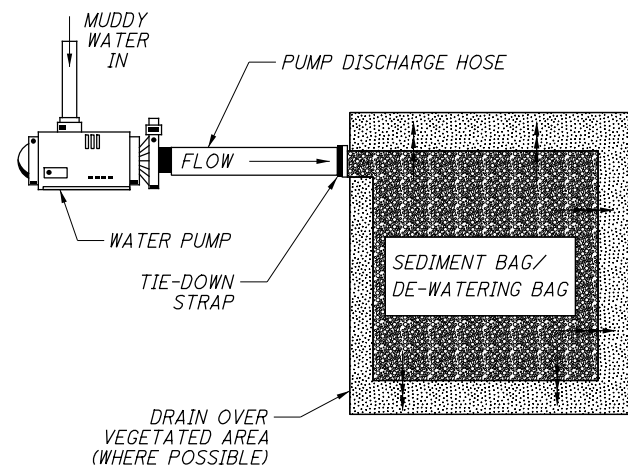
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SEDIMENT-LADEN DEWATERING

THE PUMPING OF DIRECT DISCHARGE OF SEDIMENT-LADEN (MUDDY) WATER TO THE CITY'S SEWER SYSTEM OR A RECEIVING STREAM IS A VIOLATION OF OHIO EPA (OEPA) AND CITY OF COLUMBUS REGULATIONS. ALL INLETS RECEIVING FLOW FROM RUNOFF, PUMPING ACTIVITIES, OR OTHER DIRECT DISCHARGES SHALL BE FITTED WITH AN INLET PROTECTION DEVICE THAT IS PROPERLY SIZED AND SECURED TO REDUCE THE DISCHARGE OF SEDIMENT INTO THE STORM SEWER SYSTEM AND RECEIVING STREAM. INLET PROTECTION IS REQUIRED ON ALL INLETS RECEIVING DISCHARGE REGARDLESS OF WHETHER OR NOT THE INLET IS TRIBUTARY TO ANY DOWNSTREAM EROSION AND SEDIMENT CONTROLS.

DISCHARGE HOSES USED DURING PUMPING ACTIVITIES SHALL BE FITTED WITH SEDIMENT BAGS THAT ARE PROPERLY SIZED PER MANUFACTURER'S RECOMMENDATIONS REGARDLESS OF WHAT OTHER SEDIMENT CONTROLS ARE IN PLACE FURTHER DOWNSTREAM. SEDIMENT BAGS MUST BE PROPERLY SECURED TO THE DISCHARGE HOSE AND PLACED OVER VEGETATED AREAS, WHERE FEASIBLE, DURING DISCHARGE.



SUGGESTED DISCHARGE SET-UP FOR PUMPING MUDDY WATER

DRAINAGE NOTES

MANHOLES AND OTHER CASTINGS

THE CASTING TOPS OF MANHOLES, VALVE BOXES, AND OTHER STRUCTURES REQUIRING ADJUSTMENT THAT ARE OWNED BY PRIVATE UTILITIES NEED TO BE ADJUSTED TO GRADE BY THEIR RESPECTIVE OWNERS. THE ODOT CONTRACTOR SHALL NOTIFY THE PRIVATE OWNER A MINIMUM OF 14 CALENDAR DAYS IN ADVANCE OF WORK OPERATIONS SO THE WORK MAY BE PROPERLY SCHEDULED. THE ODOT CONTRACTOR IS REQUIRED TO CONTACT THE UTILITY VIA PHONE AND EMAIL AND INCLUDE THE ODOT CONSTRUCTION ENGINEER ON THIS CORRESPONDENCE.

IF ADJUSTMENTS HAVE NOT BEEN COMPLETED 14 CALENDAR DAYS AFTER SCHEDULED, THE ODOT CONTRACTOR WILL NOTIFY THE ODOT PROJECT ENGINEER AND PROVIDE SPECIFIC STATION LOCATIONS AND OWNER INFORMATION. THE ODOT PROJECT ENGINEER WILL WORK WITH THE DISTRICT UTILITY COORDINATOR TO ISSUE AN OBSTRUCTION REMOVAL NOTICE WITHIN 5 DAYS OF RECEIPT WHICH WILL INFORM THE PRIVATE UTILITY TO ADJUST THE STRUCTURES AS NECESSARY OR ODOT WILL AUTHORIZE THE ODOT CONTRACTOR TO ADJUST AS NEEDED AND BILL THE OWNER OF THE FACILITY FOR THE ADJUSTMENT TO THE STRUCTURE.

SHOULD THE CONTRACTOR FAIL TO NOTIFY PRIVATE UTILITIES OF EXISTING MANHOLES, VALVE BOXES, AND OTHER STRUCTURES THAT REQUIRE ADJUSTMENTS TO GRADE, AND COVER THESE WITH THE PROPOSED ASPHALT TREATMENT, THE CONTRACTOR WILL BE REQUIRED TO UNCOVER THE MANHOLES, VALVE BOXES, AND OTHER STRUCTURES AT THEIR OWN EXPENSE SO THAT THE NECESSARY ADJUSTMENTS CAN BE MADE. THE METHOD OF REMOVAL AND REPAIR OF THE ASPHALT SHALL MEET ALL REQUIREMENTS OF THE ODOT ENGINEER AND SHALL BE AT THE CONTRACTORS EXPENSE.

STORM WATER FACILITIES ON CITY STREETS (CITY OF COLUMBUS)

BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE OWNER, THE ENGINEER AND THE CONTRACTOR SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND OTHER APPURTENANCES SHALL BE DETERMINED FROM FIELD OBSERVATIONS. THE ENGINEER SHALL KEEP RECORDS OF THE INSPECTION IN WRITING.

ALL NEW CONDUITS, INLETS, CATCH BASINS, AND MANHOLES CONSTRUCTED OR RECONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE OWNER.

ALL EXISTING MANHOLES, CATCH BASINS, DRAINS, SEWERS, AND APPURTENANCES INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. THE CONTRACTOR SHALL CORRECT ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS TO THE SATISFACTION OF THE ENGINEER. THE ABOVE IS NOT APPLICABLE FOR STRUCTURES TO BE ABANDONED. THE CONTRACTOR SHALL REMOVE DEBRIS, SILT, ETC. FROM THE EXISTING MANHOLES AND CATCH BASINS THAT HAVE BEEN AFFECTED BY THE CONSTRUCTION OPERATIONS. THE CONTRACTOR SHALL MAINTAIN SERVICE IN EXISTING SEWERS DURING CONSTRUCTION.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEMS.

GRADE CHANGES

IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING SEWER, OR EXISTING APPURTENANCE TO BE CONNECTED, DIFFERS FROM THE PLAN ELEVATION OR RESULTS IN A CHANGE IN THE PLAN SEWER SLOPE, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED SEWER WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS. IF IT IS DETERMINED THAT THE PROPOSED SEWER WILL INTERSECT AN EXISTING SEWER OR UNDERGROUND UTILITY IF CONSTRUCTED AS SHOWN ON THE PLAN, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED SEWER WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY.

GRADES AND ELEVATIONS SHOWN ON THE PLANS SHALL NOT BE REVISED UNDER ANY CIRCUMSTANCES WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM THE ENGINEER. INVERT ELEVATIONS SHALL NOT DEVIATE FROM PLAN ELEVATION BY MORE THAN 0.05 FOOT. FAILING TO MEET THE ABOVE REQUIREMENTS IS CAUSE FOR REJECTION OF THE AFFECTED SECTION OF SEWER.

DIVISION OF SEWERAGE AND DRAINAGE UTILITIES

CITY OF COLUMBUS LOCATORS WILL ONLY LOCATE AND MARK MAIN LINE SEWERS. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL SERVICE LATERALS AND FIELD VERIFYING THE LOCATION OF MAIN SEWER LINES. ANY DAMAGE AND/OR REPAIRS TO THE MAIN SEWER LINES OR SERVICE LATERALS ARE THE RESPONSIBILITY OF THE SEWER CONTRACTOR. REPAIRS MUST BE COMPLETED BY A LICENSED SEWER CONTRACTOR UNDER A SEPARATE SEWER PERMIT.

ITEM 611 - 12" CONDUIT, TYPE B, AS PER PLAN

IN LIEU OF THE PROVISIONS OF ITEM 611, PROVIDE ITEM 613 LOW STRENGTH MORTAR BACKFILL AS STRUCTURAL BACKFILL FOR THE PROPOSED CONDUIT WITHIN THE LIMITS OF PROPOSED BRIDGE APPROACH SLABS. THE ITEM 613 LOW STRENGTH MORTAR BACKFILL IS INCLUDED WITH ITEM 611 12" CONDUIT, TYPE B, AS PER PLAN FOR PAYMENT.

LICENSED SEWER TAPPER REQUIREMENT (CITY OF COLUMBUS)

IT SHALL BE UNLAWFUL FOR ANY PERSON TO ENGAGE IN THE BUSINESS OF SEWER TAPPING AND SEWER BUILDING, OR TO OPEN OR TAP ANY SEWER IN ANY STREET, ALLEY OR ANY PUBLIC OR PRIVATE PLACE IN THE CITY OF COLUMBUS WITHOUT FIRST SECURING A LICENSE TO ENGAGE IN SUCH BUSINESS, AS INDICATED IN COLUMBUS CITY CODE SECTION 1131.01.

FLEXIBLE PIPE WITHIN CITY OF COLUMBUS RIGHT-OF-WAYS

ANY FLEXIBLE SANITARY OR STORM PIPES USED WITHIN THE CITY OF COLUMBUS'S RIGHT-OF-WAYS, SHALL BE FROM THE CITY OF COLUMBUS PRE-APPROVED SUPPLIER LIST AT THE FOLLOWING WEBSITE:
<https://www.columbus.gov/publicservice/design-and-construction/document-library/>

EXISTING UNDERDRAINS

PROVIDE UNOBSTRUCTED OUTLETS FOR ALL EXISTING UNDERDRAINS ENCOUNTERED DURING CONSTRUCTION. PROVIDE AN OUTLET PER STANDARD CONSTRUCTION DRAWING DM-1.1 FOR ALL UNDERDRAINS THAT OUTLET TO A SLOPE.

UNDERDRAINS THAT CAN BE CONNECTED TO THE NEW OR EXISTING UNDERDRAINS AT THE END OF THE PROJECT LIMITS AS WELL AS ALL NECESSARY BENDS OR BRANCHES REQUIRED FOR CONNECTION ARE INCLUDED IN THE BASIS OF PAYMENT FOR UNCLASSIFIED PIPE UNDERDRAINS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

611, 4" CONDUIT, TYPE F	400 FT.
605, 4" UNCLASSIFIED PIPE UNDERDRAINS	400 FT.

TEMPORARY DRAINAGE ITEMS

TEMPORARY DRAINAGE ITEMS LABELED ON THE MAINTENANCE OF TRAFFIC PLAN ARE ITEMIZED ON THE MOT PLANS. PAYMENT FOR THE TEMPORARY DRAINAGE ITEMS ARE ITEMIZED AND CARRIED TO THE GENERAL SUMMARY.

DRAINAGE AT INTERSECTING STREETS

AT INTERSECTING STREETS WHERE THE DRAINAGE IS TOWARD OR INTO THE PROJECT, SPECIAL CARE SHALL BE TAKEN BY THE CONTRACTOR TO MAINTAIN PROPER GRADE ALONG THE EDGE OF THE PAVEMENT SO THAT WATER WILL NOT POND. AT INTERSECTING STREETS, WHERE THE EDGE OF PAVEMENT CONTINUES ACROSS THE STREET, CARE SHALL BE TAKEN TO FEATHER DOWN AND FORM A NEAT SEAM WITH THE PROPER GRADE.

EXISTING BRICK COMBINATION SEWERS

THE CONTRACTOR SHALL USE EXTREME CAUTION WHERE EXCAVATING OR ADDING CEMENT SUBGRADE OVER UNLINED BRICK SEWERS WITH LESS THAN 5' OF COVER. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE LOCATIONS OF BRICK SEWERS AND IF THEY HAVE BEEN LINED OR NOT.

THE CONTRACTOR SHALL NOT USE VIBRATION OR TAMPING EQUIPMENT OVER OR AROUND BRICK SEWERS. NO EQUIPMENT SHALL BE PARKED OVER A BRICK SEWER, NOR SHALL A BRICK SEWER BE EXPOSED WHEN PERFORMING BLIND TAPS INTO IT.

PROTECTION OF STORM SEWERS

ALL STORM SEWERS THAT MAY INTERFERE WITH THE SUBGRADE STABILIZATION PROCESS SHALL BE FLAGGED BEFORE THE STABILIZATION PROCESS BEGINS TO ALERT THOSE INVOLVED TO BE CAUTIOUS IN THOSE AREAS.

TYING INTO EXISTING DRAINAGE STRUCTURES

WHEN A PROPOSED CONDUIT IS BEING TIED INTO AN EXISTING DRAINAGE STRUCTURE, THE HOLE BEING MADE IN THE EXISTING STRUCTURE TO RECEIVE THE PROPOSED CONDUIT SHALL BE A CORED HOLE. FOR CONDUITS OVER 24", THE HOLE CAN BE NEATLY SAWED INSTEAD OF CORED.

THE COST OF TYING INTO AN EXISTING DRAINAGE STRUCTURE SHALL BE INCLUDED IN THE COST OF INSTALLING ITEM 611 CONDUIT.

ITEM 611 - MANHOLE, NO. 3, AS PER PLAN PROPOSED MANHOLES IN THE FREEWAY AND RAMP PAVEMENT

ANY PROPOSED MANHOLES LOCATED IN THE FREEWAY AND RAMP'S PROPOSED PAVEMENT SHALL BE CONSTRUCTED WITH A BOLTED DOWN, NON-VENTED FRAME AND COVER TO THE ELEVATION SHOWN IN THE PLANS.

RECONSTRUCT TO GRADE MANHOLES SHALL BE REMOVED TO THE LIMITS SHOWN IN THE PLANS.

ALL MATERIALS AND LABOR, INCLUDING EXCAVATION AND BACKFILL ARE PAID FOR AT THE CONTRACT PRICE FOR ITEM 611 - MANHOLE, NO. 3, AS PER PLAN.

PAVEMENT RESTORATION FOR DRAINAGE STRUCTURE INSTALLATIONS ON CITY STREETS (CITY OF COLUMBUS)

ANY STORM SEWER CONSTRUCTION ON THE CITY STREET SYSTEM THAT REQUIRES PAVEMENT RESTORATION OF THE EXISTING PAVEMENT TO MAINTAIN TRAFFIC, SHALL BE RESTORED PER THE CITY OF COLUMBUS STANDARD DRAWING 1441.

ALL LABOR, MATERIALS, AND EQUIPMENT FOR THE PAVEMENT RESTORATION SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEM.

DRAINAGE DISCHARGE CONTINUANCE

SHOULD UNRECORDED STORM OR SANITARY CONDUIT BE ENCOUNTERED DURING CONSTRUCTION, CONTRACTOR SHALL NOTIFY PROJECT ENGINEER IMMEDIATELY BEFORE PROCEEDING WITH ANY FURTHER WORK IN THE AREA.

FURNISH A DRAINAGE DISCHARGE CONTINUANCE FOR ANY DRAINAGE DISCHARGE DISTURBED BY THE WORK AND NOT SHOWN IN THE PLANS. THE LOCATION, TYPE (CONDUIT OR SWALE), SIZE AND GRADE OF THE DRAINAGE DISCHARGE CONTINUANCE WILL BE AGREED TO BY THE ENGINEER.

FURNISH AN INSPECTION WELL AT THE RIGHT OF WAY LINE IN ACCORDANCE WITH SCD DM-3.1 FOR EACH DRAINAGE DISCHARGE THAT OUTLETS THROUGH A CURB OPENING, OR INTO A STORM SEWER OR DRAINAGE STRUCTURE. THE COST IS INCLUDED IN ITEM 611, INSPECTION WELL. FURNISH A WELL GRADED TRANSITION BETWEEN THE DITCH AND THE SWALE WHEN OUTLETTING A SWALE TO A DITCH. THE COST FOR THE GRADED TRANSITION IS INCLUDED IN ITEM 203, EMBANKMENT AS PER PLAN.

FURNISH AN EROSION CONTROL PAD AS SHOWN IN SCD DM-1.1 WHEN OUTLETTING A CONDUIT TO A DITCH. THE COST FOR THE EROSION CONTROL PAD IS INCLUDED IN ITEM 611, CONDUIT, MISC TYPE (AS NOTED BELOW) FOR DRAINAGE DISCHARGE CONTINUANCE. FURNISH A DRILLED HOLE OR A CURB SECTION WITH A HOLE WHEN OUTLETTING A CONDUIT THROUGH A CURB OPENING. THE COST OF DRILLING, OR FURNISHING THE CURB SECTION WITH HOLE IS INCLUDED IN ITEM 611, CONDUIT, MISC TYPE (AS NOTED BELOW) FOR DRAINAGE DISCHARGE CONTINUANCE. FURNISH A DRILLED CORE HOLE WHEN OUTLETTING INTO A STORM SEWER OR DRAINAGE STRUCTURE. THE COST OF THE DRILLED CORE HOLE IS INCLUDED IN ITEM 611, CONDUIT, MISC TYPE (AS NOTED BELOW).

DOCUMENTATION

THE CONTRACTOR SHALL FURNISH WRITTEN DOCUMENTATION TO THE ENGINEER AND TO THE DISTRICT R/W PERMIT OFFICE. THE DOCUMENTATION INCLUDES THE CONSTRUCTION PROJECT NUMBER, PID, COUNTY, ROUTE, SECTION, LATITUDE AND LONGITUDE OF THE DRAINAGE DISCHARGE AT THE R/W, THE NAME OF PROPERTY OWNER WITH ADDRESS, THE DATE THE DRAINAGE DISCHARGE WAS LOCATED, THE DATE THE DRAINAGE DISCHARGE CONTINUANCE WAS FURNISHED, A DETAILED DESCRIPTION OF THE WORK AND PICTURES OF THE DRAINAGE DISCHARGE CONTINUANCE (IN PDF OR JPEG FORMAT). THE DOCUMENTATION IS INCLUDED IN ITEM 611, CONDUIT, MISC TYPE (AS NOTED BELOW) FOR DRAINAGE DISCHARGE CONTINUANCE OR ITEM 203, EMBANKMENT AS PER PLAN.

DRAINAGE DISCHARGE CONTINUANCE REMOVAL

THE ENGINEER MAY REQUIRE THE NEWLY INSTALLED DRAINAGE DISCHARGE CONTINUANCE TO BE REMOVED. REMOVE THE NEWLY INSTALLED CONDUIT AND ANY EXISTING CONDUIT TO THE RIGHT OF WAY LINE. FOR CONDUIT THAT OUTLETS THROUGH THE CURB RESTORE THE CURB BY FILLING THE HOLE WITH CLASS QC 1 CONCRETE OR REPLACE THE CURB SECTION. FOR CONDUIT THAT OUTLETS TO A STORM SEWER OR DRAINAGE STRUCTURE LEAVE 6 INCHES PROTRUDING OUTSIDE OF THE CONDUIT. PLUG THE PROTRUDING CONDUIT WITH EITHER A MANUFACTURED CAP OR CLASS QC 1 CONCRETE. FOR CONDUIT THAT OUTLETS TO THE DITCH REMOVE THE EROSION CONTROL PAD. RESTORE ALL AREAS AS REQUIRED. PLUG THE EXISTING CONDUIT REGARDLESS OF SIZE AT THE RIGHT OF WAY LINE WITH CLASS QC 1 CONCRETE AND RESTORE ALL AREAS AS REQUIRED. ALL COSTS ARE INCLUDED IN ITEM 202, REMOVAL MISC. CONDUIT. DAM THE SWALE THAT OUTLETS TO THE DITCH AT THE R/W AS DIRECTED BY THE ENGINEER. ALL COSTS ARE INCLUDED IN ITEM 203, EMBANKMENT AS PER PLAN REMOVE THE INSPECTION WELL AND RESTORE ALL AREAS AS REQUIRED. THE COST IS INCLUDED IN ITEM 202, REMOVAL MISC. INSPECTION WELL.

CONDUIT MATERIAL TYPES

THE FOLLOWING CONDUIT MATERIAL TYPES MAY BE USED: 707.33, 707.41 NONPERFORATED, 707.42, 707.43, 707.45, 707.46, 707.47, 707.51, AND 707.52 SDR35.

DRAINAGE NOTES (CONT'D)

DRAINAGE DISCHARGE CONTINUANCE (CONT'D)

PAY ITEMS

EACH OF THE PAY ITEMS LISTED BELOW FOR CONDUIT MISCELLANEOUS TYPES B, C, E AND F FOR DRAINAGE DISCHARGE CONTINUANCE INCLUDE CONDUIT SIZES 2 INCH TO 12 INCH. THERE IS NO COST DIFFERENTIATION FOR SIZE IN THESE PAY ITEMS. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER IN MAKING THE ABOVE DRAINAGE DISCHARGE CONTINUANCE:

611, 6" CONDUIT, TYPE B, FOR DRAINAGE CONNECTION	50 FT.
611, 6" CONDUIT, TYPE C, FOR DRAINAGE CONNECTION	50 FT.
611, 8" CONDUIT, TYPE B, FOR DRAINAGE CONNECTION	50 FT.
611, 8" CONDUIT, TYPE C, FOR DRAINAGE CONNECTION	50 FT.
611, 12" CONDUIT, TYPE B, FOR DRAINAGE CONNECTION	50 FT.
611, 12" CONDUIT, TYPE C, FOR DRAINAGE CONNECTION	50 FT.
611, 4" CONDUIT, TYPE B, FOR SANITARY	100 FT.
611, 6" CONDUIT, TYPE B, FOR SANITARY	100 FT.
611, 8" CONDUIT, TYPE B, FOR SANITARY	100 FT.
611, INSPECTION WELL	1 EA.
202, REMOVAL MISC., INSPECTION WELL	1 EA.
203, EMBANKMENT, AS PER PLAN	10 CY

CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING TO LAY THE PROPOSED CONDUIT.

IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT, OR EXISTING APPURTENANCE TO BE CONNECTED, DIFFERS FROM THE PLAN ELEVATION OR RESULTS IN A CHANGE IN THE PLAN CONDUIT SLOPE, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF AN PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

IF IT IS DETERMINED THAT THE PROPOSED CONDUIT WILL INTERSECT AN EXISTING SEWER OR UNDERGROUND UTILITY IS CONSTRUCTED AS SHOWN ON THE PLAN, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY.

PAYMENT FOR ALL THE OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEM.

REVIEW OF DRAINAGE FACILITIES

BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE STATE, REPRESENTATIVES OF THE STATE AND THE CONTRACTOR, ALONG WITH LOCAL REPRESENTATIVES, SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCE SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE STATE.

ALL NEW CONDUITS, INLETS, CATCH BASINS, AND MANHOLES CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE STATE.

ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEMS.

EXISTING DRAINAGE SYSTEMS (CITY OF COLUMBUS)

EXISTING DRAINAGE SYSTEMS (FIELD TILES, ROOF DRAIN OUTLETS, SUMP PUMPS, ETC.) ENCOUNTERED DURING CONSTRUCTION OF THE NEW STORM SEWER OR THE REMOVAL OF EXISTING STORM SEWERS SHALL BE EXTENDED AS NECESSARY AND BLIND TAPPED TO THE NEW STORM SEWER PER DIVISION OF SEWERAGE AND DRAINAGE STANDARD DRAWING II-S159 OR CONNECTED TO THE CATCH BASIN AS DIRECTED BY THE ENGINEER.

IF THE CONTRACTOR ENCOUNTERS A PIPE OR CONNECTION TO THE STORM SEWER THAT IN THE ESTIMATE OF THE ENGINEER MAY BE AN ILLICIT CONNECTION FROM AN ON-SITE SEWAGE DISPOSAL SYSTEM, COLUMBUS PUBLIC HEALTH SHALL BE CONTACTED AT 645-6448 TO DETERMINE WHETHER THE PIPE MAY BE RECONNECTED TO THE CITY'S STORM SEWER SYSTEM.

CLEAN WATER CONNECTIONS TO SANITARY SEWERS (CITY OF COLUMBUS)

ROOF DRAINS, FOUNDATION DRAINS, DRAIN TILES, AND OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SYSTEM ARE PROHIBITED.

CERTIFICATION OF PIPE AND STRUCTURES (CITY OF COLUMBUS)

ALL CONCRETE PIPE, STORM AND SANITARY STRUCTURES WILL BE STAMPED OR HAVE SUCH IDENTIFICATION NOTING THAT SAID PIPE, STORM AND SANITARY STRUCTURES HAVE BEEN INSPECTED BY THE DESIGNATED REPRESENTATIVE OF THE CITY OF COLUMBUS AND MEETS THEIR SPECIFICATIONS. PIPE AND STRUCTURES WITHOUT PROPER IDENTIFICATION WILL NOT BE PERMITTED FOR INSTALLATION.

MANHOLES, CATCH BASINS AND INLETS REMOVED OR ABANDONED

ALL CASTINGS SHALL BE CAREFULLY REMOVED AND STORED WITHIN THE RIGHT OF WAY FOR SALVAGE BY STATE AND CITY FORCES.

PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 202 ITEM.

ITEM 611 - MANHOLE RECONSTRUCT TO GRADE, AS PER PLAN

ANY EXISTING MANHOLE THAT IS TO REMAIN AND IS LOCATED IN THE FREEWAY AND RAMPS PROPOSED PAVEMENT, AND IS CALLED OUT AS MANHOLE RECONSTRUCT TO GRADE, AS PER PLAN, SHALL BE RECONSTRUCTED WITH A SOLID FLAT SLAB TOP WITH NO FRAME AND COVER AND NO OPENING IN THE FLAT SLAB TOP FOR A FRAME AND COVER TO THE ELEVATION AS SHOWN IN THE PLANS.

ALL MATERIALS AND LABOR, INCLUDING EXCAVATION AND BACKFILL ARE PAID FOR AT THE CONTRACT PRICE FOR ITEM 611 - MANHOLE RECONSTRUCT TO GRADE, AS PER PLAN.

ITEM SPECIAL - MISCELLANEOUS METAL

EXISTING CASTINGS MAY PROVE TO BE UNSUITABLE FOR REUSE, AS DETERMINED BY THE ENGINEER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE CASTINGS OF THE REQUIRED TYPE, SIZE AND STRENGTH (HEAVY OR LIGHT DUTY) FOR THE PARTICULAR STRUCTURE IN QUESTION. ALL MATERIAL SHALL MEET ITEM 611 OF THE SPECIFICATIONS AND SHALL HAVE THE PRIOR APPROVAL OF THE ENGINEER.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER.

SPECIAL, MISCELLANEOUS METAL 500 POUNDS

THE CONTRACTOR IS CAUTIONED TO USE EXTREME CARE IN THE REMOVAL, STORAGE AND REPLACEMENT OF ALL EXISTING CASTINGS. CASTINGS DAMAGED BY THE NEGLIGENCE OF THE CONTRACTOR, AS DETERMINED BY THE ENGINEER, SHALL BE REPLACED WITH THE PROPER NEW CASTINGS AT THE EXPENSE OF THE CONTRACTOR.

TRENCH DRAINS

THE USE OF SLOTTED DRAIN WILL NOT BE ALLOWED IN THE CONSTRUCTION OF THIS PROJECT. TRENCH DRAINS WILL BE USED IN PLACE OF THE SLOTTED DRAINS AND WILL FOLLOW THE SUPPLEMENTAL SPECIFICATIONS SS839 AND SS939.

ODOT WILL NOT ALLOW THE TRENCH DRAINS TO BE VALUE ENGINEERED TO A SLOTTED DRAIN.

ENVIRONMENTAL NOTES

ENVIRONMENTAL COMMITMENTS

HISTORIC RESOURCES

ACCESS SHALL BE MAINTAINED AT ALL TIMES TO THE HISTORIC RESOURCES COVERED BY SECTION 106 OF THE NATIONAL HISTORIC PRESERVATION ACT INCLUDING THE NEAR EAST SIDE HISTORIC DISTRICT, OHIO FARM BUREAU BUILDING @ 620-630 E BROAD STREET, TAX PARCELS 010-042377, 010-023468, 010-023469; BELMONT APARTMENT BUILDING @ 630 E TOWN STREET, TAX PARCEL 010-031935; THE ST. PAUL AFRICAN METHODIST EPISCOPAL CHURCH @ TAX PARCELS 010-066986-80, 010-066986-90, 010-066986-99; THE FORMER ASYLUM FOR THE BLIND @ 240 PARSONS AVENUE, TAX PARCEL 010-067006; CARABAR @ 115 PARSONS AVENUE, TAX PARCEL 010-006190; JEFFERSON AVENUE, HAMILTON AVENUE, AND EAST TOWN STREET. WITH REGARD TO HISTORIC RESOURCES COVERED BY SECTION 106 OF THE NATIONAL HISTORIC PRESERVATION ACT, TREATMENT PLANS INTENDED TO MINIMIZE HARM TO HISTORIC SITES AND DISTRICTS MUST BE IMPLEMENTED PRIOR TO THE START OF CONSTRUCTION ACTIVITY PER THE MEMORANDUM AGREEMENT (AGREEMENT NUMBER: 14242) WHICH WAS EXECUTED AUGUST 1, 2007 AND THE FIRST AMENDMENT TO THE MEMORANDUM OF AGREEMENT (AGREEMENT NUMBER: 14913) WHICH WAS EXECUTED JULY 18, 2008.

CONSTRUCTION NOISE AND VIBRATION SHALL BE MINIMIZED NEAR THE HISTORIC RESOURCES COVERED BY SECTION 106 OF THE NATIONAL HISTORIC PRESERVATION ACT INCLUDING THE NEAR EAST SIDE HISTORIC DISTRICT, OHIO FARM BUREAU BUILDING, BELMONT APARTMENT BUILDING, THE ST. PAUL AFRICAN METHODIST EPISCOPAL CHURCH, THE FORMER ASYLUM FOR THE BLIND, CARABAR, JEFFERSON AVENUE, HAMILTON AVENUE, AND EAST TOWN STREET.

NO CONSTRUCTION ACTIVITY OR CONSTRUCTION STAGING SHALL BE PERMITTED WITHIN THE BOUNDARIES OF THE HISTORIC RESOURCES COVERED BY SECTION 106 OF THE NATIONAL HISTORIC PRESERVATION ACT INCLUDING THE NEAR EAST SIDE HISTORIC DISTRICT, OHIO FARM BUREAU BUILDING, BELMONT APARTMENT BUILDING, THE ST. PAUL AFRICAN METHODIST EPISCOPAL CHURCH, THE FORMER ASYLUM FOR THE BLIND, CARABAR, JEFFERSON AVENUE, HAMILTON AVENUE, AND EAST TOWN STREET.

POST REVIEW DISCOVERIES

IF PREVIOUSLY UNIDENTIFIED ARCHAEOLOGICAL OR HISTORIC PROPERTIES, OR UNANTICIPATED EFFECTS, ARE DISCOVERED AFTER COMPLETION OF SECTION 106 REVIEWS, THAT PORTION OF THE PROJECT WILL STOP IMMEDIATELY, PURSUANT TO SECTION 203.04 OF ODOT'S CONSTRUCTION AND MATERIAL SPECIFICATIONS. THE ODOT PROJECT ENGINEER WILL IMMEDIATELY CONTACT ODOT OFFICE OF ENVIRONMENTAL SERVICES (ODOT-OES) AND/OR THE APPROPRIATE ODOT DISTRICT ENVIRONMENTAL COORDINATOR. NO FURTHER CONSTRUCTION IN THE AREA OF DISCOVERY WILL PROCEED UNTIL THE REQUIREMENTS OF 36 CFR SECTION 800.13 HAVE BEEN SATISFIED, INCLUDING CONSULTATION WITH FEDERALLY RECOGNIZED NATIVE AMERICAN TRIBES THAT MAY ATTACH TRADITIONAL CULTURAL AND AND RELIGIOUS SIGNIFICANCE TO THE DISCOVERED PROPERTY. ODOT WILL CONSULT WITH OSHPO AND INDIAN TRIBES, AS APPROPRIATE, TO RECORD, DOCUMENT AND EVALUATE NATIONAL REGISTER OF HISTORIC PLACES ELIGIBILITY OF THE PROPERTY, AND TO DESIGN A PLAN FOR AVOIDING, MINIMIZING, OR MITIGATING ADVERSE EFFECTS ON THE ELIGIBLE PROPERTY. IF NEITHER THE SHPO NOR A FEDERALLY RECOGNIZED NATIVE AMERICAN INDIAN TRIBE FILES A TIMELY OBJECTION TO THE ODOT-OES PLAN FOR ADDRESSING THE DISCOVERY, ODOT-OES MAY CARRY OUT THE REQUIREMENTS OF 36 CFR 800.13 ON BEHALF OF FHWA AND THE ACHP NEED NOT BE NOTIFIED.

FHWA AND ODOT WILL CONDUCT ALL REVIEW AND CONSULTATION IN ACCORDANCE WITH "PROGRAMMATIC AGREEMENT AMONG THE FEDERAL HIGHWAY ADMINISTRATION, THE ADVISORY COUNCIL ON HISTORIC PRESERVATION, THE OHIO HISTORICAL SOCIETY, STATE HISTORIC PRESERVATION OFFICE, AND THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION REGARDING IMPLEMENTATION OF THE FEDERAL-AID HIGHWAY PROGRAM IN OHIO (AGREEMENT NO. 12642)" (EXECUTED 07/17/06).

INDIANA BAT HABITAT

CLEARING OF ANY TREES THAT HAVE SUITABLE SUMMER BROOD-REARING OR ROOSTING HABITAT FOR THE FEDERALLY ENDANGERED INDIAN BAT (LIVING OR STANDING DEAD TREES OR SNAGS WITH EXFOLIATING, PEELING OR LOOSE BARK, SPLIT TRUNKS AND OR BRANCHES, OR CAVITIES), SHALL OCCUR ONLY DURING THE PERIOD BEFORE APRIL 1 AND AFTER SEPTEMBER 30, WHEN THIS SPECIES WOULD NOT BE USING SUCH HABITAT.

ENVIRONMENTAL COMMITMENTS (CON'T)

CONSTRUCTION NOISE

THE CONTRACTOR SHALL ENSURE THAT ALL CONSTRUCTION EQUIPMENT SHALL BE OPERATED IN COMPLIANCE WITH ALL APPLICABLE CITY OF COLUMBUS ORDINANCES AND REGULATIONS PERTAINING TO CONSTRUCTION NOISE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL FINES ASSESSED DUE TO NON-COMPLIANCE WITH THE CITY NOISE ORDINANCE.

THE CONSTRUCTION NOISE MITIGATION IDENTIFIED AND LISTED BELOW SHALL BE USED TO MINIMIZE CONSTRUCTION ACTIVITY DURING NIGHTTIME AND WEEKEND OPERATIONS:

- DIESEL POWERED VEHICLES SHALL NOT IDLE LONGER THAN 3 MINUTES. IDLING TIMES FOR OTHER VEHICLES AND INTERNAL COMBUSTION ENGINE POWERED EQUIPMENT SHALL ALSO BE MINIMIZED.
- ROUTING CONSTRUCTION EQUIPMENT THROUGH THE LOCAL STREET NETWORK SHALL BE AVOIDED OR MINIMIZED.
- FLASHING ARROW PANELS (FAPS) AND PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) SHALL BE SOLAR POWERED.
- JACKHAMMERS OR PAVEMENT BREAKERS SHALL BE OPERATED ELECTRICALLY OR HYDRAULICALLY. PNEUMATIC JACKHAMMERS SHALL ONLY BE USED IF EQUIPPED WITH PNEUMATIC DISCHARGE MUFFLERS, CERTIFIED BY THE MANUFACTURER.
- EXHAUST MUFFLERS, CERTIFIED BY THE MANUFACTURER, SHALL BE USED ON ALL INTERNAL COMBUSTION ENGINES.
- USE OF ELECTRIC SAWS RATHER THAN AIR OR GASOLINE POWERED SAWS SHALL BE REQUIRED.

CONSTRUCTION NOISE AND VIBRATION SHALL BE MINIMIZED NEAR THE HISTORIC RESOURCES COVERED BY SECTION 106 OF THE NATIONAL HISTORIC PRESERVATION ACT.

MAINTENANCE OF TRAFFIC

ALL MAINTENANCE-OF-TRAFFIC PLANS SHALL INCLUDE PEDESTRIANS AND BICYCLISTS.

NOTIFICATION

CITY OF COLUMBUS EMERGENCY SERVICES, SCHOOL SYSTEMS, FRANKLIN COUNTY, OTHER PUBLIC SERVICE PROVIDERS, AND LOCAL BUSINESSES SHALL BE NOTIFIED PRIOR TO CONSTRUCTION ON FREEWAY MAINLINES, RAMPS, OR BRIDGES.

ALL DETOUR ROUTES AND PROVISIONS FOR LOCAL ACCESS ARE CLEARLY POSTED IN ADVANCE OF PROJECT CONSTRUCTION.

ITEM 614 - WORKSITE TRAFFIC SUPERVISOR

SUBJECT TO APPROVAL OF THE ENGINEER, THE CONTRACTOR SHALL EMPLOY AND IDENTIFY (SOMEONE OTHER THAN THE SUPERINTENDENT) A PREQUALIFIED WORKSITE TRAFFIC SUPERVISOR (WTS) BEFORE STARTING WORK IN THE FIELD. THE WTS SHALL BE TRAINED IN ACCORDANCE WITH CMS 614.03, SHALL HAVE SUCCESSFULLY COMPLETED ODOT ADMINISTERED WTS TESTING (AND RE-TESTING WHEN APPLICABLE) AND BE LISTED ON THE ODOT PREQUALIFIED WTS ROSTER. PREQUALIFICATION EXPIRES EVERY 5 YEARS. RE-TESTING SHALL BE SUCCESSFULLY REPEATED EVERY 5 YEARS TO REMAIN PREQUALIFIED.

THE NAME OF THE PREQUALIFIED WTS AND RELATED 24-HOUR CONTACT INFORMATION SHALL BE PROVIDED TO THE ENGINEER AT THE PRECONSTRUCTION CONFERENCE. IF THE DESIGNATED WTS WILL NOT BE AVAILABLE FULL TIME (24/7), THE CONTRACTOR MAY DESIGNATE AN ALTERNATE (SECONDARY) WTS TO BE AVAILABLE WHEN THE PRIMARY IS OFF DUTY; HOWEVER THE PRIMARY WTS SHALL REMAIN THE POINT OF CONTACT AT ALL TIMES. ANY ALTERNATE (SECONDARY) WTS IS SUBJECT TO THE SAME TRAINING, PREQUALIFICATION AND OTHER REQUIREMENTS OUTLINED WITHIN THIS PLAN NOTE. AT ALL TIMES THE ENGINEER, OR ENGINEER'S REPRESENTATIVES, MUST BE INFORMED OF WHO THE PRIMARY WTS (AND SECONDARY WTS, IF APPLICABLE) IS AT THE CURRENT TIME.

THE WTS POSITION HAS THE PRIMARY RESPONSIBILITY OF IMPLEMENTING THE TRAFFIC MANAGEMENT PLAN (TMP), MONITORING THE SAFETY AND MOBILITY OF THE ENTIRE WORK ZONE, AND CORRECTING TEMPORARY TRAFFIC CONTROL (TTC) DEFICIENCIES FOR THE ENTIRE WORK ZONE. THE WTS, AND ALTERNATE WTS WHEN ON DUTY, SHALL HAVE SUFFICIENT AUTHORITY TO EFFECTIVELY CARRY OUT THE IDENTIFIED WTS RESPONSIBILITIES AND DUTIES. THE DUTIES OF THE WTS ARE AS FOLLOWS:

1. BE AVAILABLE ON A 24-HOUR PER DAY BASIS.
2. BE ON SITE FOR ALL EMERGENCY TTC NEEDS WITHIN ONE HOUR OF NOTIFICATION BY POLICE OR PROJECT STAFF, AND EFFECT CORRECTIVE MEASURES IMMEDIATELY ON EXISTING WORK ZONE TTC DEVICES.
3. ATTEND PRECONSTRUCTION MEETING AND ALL PROJECT MEETINGS WHERE TTC MANAGEMENT IS DISCUSSED.
4. BE AVAILABLE ON SITE FOR OTHER MEETINGS OR DISCUSSIONS WITH THE ENGINEER UPON REQUEST.
5. BE AWARE OF ALL EXISTING AND PROPOSED TTC OPERATIONS OF THE CONTRACTOR, SUBCONTRACTORS AND SUPPLIERS, AND ENSURE COORDINATION OCCURS BETWEEN THEM TO ELIMINATE CONFLICTING TEMPORARY AND/OR PERMANENT TRAFFIC CONTROL.
6. COORDINATE PROJECT ACTIVITIES WITH ALL LAW ENFORCEMENT OFFICERS (LEOS). THE WTS SHALL ALSO BE THE MAIN CONTACT PERSON WITH THE LEOS WHILE LEOS ARE ON THE PROJECT.
7. COORDINATE AND FACILITATE MEETINGS WITH ODOT PERSONNEL, LEOS AND OTHER APPLICABLE ENTITIES BEFORE EACH PLAN PHASE SWITCH TO DISCUSS THE WORK ZONE TTC FOR IMPLEMENTING THE PHASE SWITCH. SUBMIT A WRITTEN DETAIL OF MOT OPERATIONS AND SCHEDULE OF EVENTS TO IMPLEMENT THE SWITCH BETWEEN PHASE PLANS TO THE ENGINEER 5 CALENDAR DAYS PRIOR TO THIS MEETING.
8. BE PRESENT, ON SITE FOR, AND INVOLVED WITH, EACH TTC SET UP/TAKE DOWN AND EACH PHASE CHANGE IN ACCORDANCE WITH CMS 614.03.
9. ON A CONTINUAL BASIS ENSURE THAT THE TTC ZONE AND ALL RELATED DEVICES ARE INSTALLED, MAINTAINED AND REMOVED IN COMPLIANCE WITH THE CONTRACT DOCUMENTS.
10. ON A CONTINUAL BASIS FACILITATE CORRECTIVE ACTION(S) NECESSARY TO BRING DEFICIENT TTC ZONES AND ALL RELATED DEVICES INTO COMPLIANCE WITH CONTRACT DOCUMENTS IN THE TIMEFRAME DETERMINED BY THE ENGINEER.
11. INSPECT, EVALUATE, PROPOSE NECESSARY MODIFICATIONS TO, AND DOCUMENT THE EFFECTIVENESS OF, THE TTC DEVICES AND TRAFFIC OPERATIONS ON A DAILY BASIS (7 DAYS A WEEK). IN ADDITION, PERFORM ONE WEEKLY NIGHT INSPECTION OF THE WORK ZONE SETUP FOR DAYTIME WORK OPERATIONS; AND ONE DAYTIME INSPECTION PER WEEK FOR NIGHTTIME PROJECTS. THIS SHALL INCLUDE (BUT NOT BE LIMITED TO) DOCUMENTATION ON THE FOLLOWING PROJECT EVENTS:
 - A. INITIAL TTC SETUP (DAY AND NIGHT REVIEW).
 - B. DAILY TTC SETUP AND REMOVAL.
 - C. WHEN CONSTRUCTION STAGING CAUSES A CHANGE IN THE TTC SETUP.
 - D. CRASH OCCURRENCES WITHIN THE CONSTRUCTION AREA AND WITHIN THE INFLUENCE AREA(S) APPROACHING THE WORK ZONE.
 - E. REMOVAL OF TTC DEVICES AT THE END OF A PHASE OR PROJECT.
 - F. ALL OTHER EMERGENCY TTC NEEDS.
12. COMPLETE THE DEPARTMENT APPROVED LONG TERM INSPECTION FORM (CA-D-8) AFTER EACH INSPECTION AS REQUIRED IN #11 AND SUBMIT IT TO THE ENGINEER THE FOLLOWING WORKDAY. THESE REPORTS SHALL INCLUDE A CHECKLIST OF ALL TTC MAINTENANCE ITEMS TO BE REVIEWED. A COPY OF THE FORM WILL BE PROVIDED AT THE PRE-CONSTRUCTION MEETING. ANY DEFICIENCIES OBSERVED SHALL BE NOTED, ALONG WITH RECOMMENDED OR COMPLETED CORRECTIVE ACTIONS AND THE

DATES BY WHICH SUCH CORRECTIONS WERE, OR WILL BE, COMPLETED. A COPY OF THE CURRENT CA-D-8 DOCUMENT CAN BE FOUND ON THE OFFICE OF CONSTRUCTION ADMINISTRATION'S INSPECTION FORMS WEBSITE.
13. HAVE COPIES OF THE ODOT TEMPORARY TRAFFIC CONTROL MANUAL AND CONTRACT DOCUMENTS AVAILABLE AT ALL TIMES ON THE PROJECT.

THE DEPARTMENT WILL DEDUCT:

- A. THE PRORATED DAILY AMOUNT OF ITEM 614 MAINTAINING TRAFFIC FOR ANY DAY IN WHICH THE WTS FAILS TO PERFORM THE DUTIES SET FORTH ABOVE. THE PRORATED DAILY AMOUNT WILL BE EQUAL TO THE ORIGINAL BID AMOUNT FOR ITEM 614 MAINTAINING TRAFFIC DIVIDED BY THE DIFFERENCE BETWEEN THE ORIGINAL COMPLETION DATE AND THE FIRST DAY OF WORK, IN CALENDAR DAYS.
- B. 1% OF THE ORIGINAL BID AMOUNT FOR ITEM 614 MAINTAINING TRAFFIC FOR ANY DAY THAT A TTC ISSUE IS IDENTIFIED IN THE FIELD AND IS NOT CORRECTED IN THE GIVEN TIMEFRAME PER THE ENGINEER. DEDUCTION B SHALL NOT APPLY TO SITUATIONS COVERED BY DEDUCTION C.
- C. 1% OF THE ORIGINAL BID AMOUNT FOR ITEM 614 MAINTAINING TRAFFIC FOR ANY DAY THAT A LANE OR RAMP IS BLOCKED (FULLY OR PARTIALLY) WITHOUT TTC, AS DETERMINED BY THE ENGINEER. THIS DEDUCTION SHALL BE IN ADDITION TO ANY OTHER DISINCENTIVES ESTABLISHED FOR UNAUTHORIZED LANE USE.

FOR DAYS IN WHICH MORE THAN ONE DEDUCTION LISTED ABOVE OCCUR, THE HIGHEST DEDUCTION AMOUNT WILL APPLY.

IF THREE OR MORE TOTAL DAYS RESULT IN TTC ISSUES DESCRIBED IN DEDUCTION B OR C ABOVE, THE PRIMARY WTS SHALL BE IMMEDIATELY REMOVED FROM THE WORK IN ACCORDANCE WITH C&MS 108.05. UPON REMOVAL THE ENGINEER SHALL NOTIFY ODOT CENTRAL OFFICE (WTSPREQUALIFICATION@DOT.OHIO.GOV) TO REGISTER A REMOVAL AGAINST THE STATEWIDE PREQUALIFICATION FOR THE PRIMARY WTS. THREE REMOVALS SHALL CAUSE STATEWIDE DISQUALIFICATION FOR ANY PREVIOUSLY PREQUALIFIED WTS.

PAYMENT FOR THE ABOVE REQUIREMENTS, RESPONSIBILITIES AND DUTIES SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614, MAINTAINING TRAFFIC.

ITEM 614 - WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN

WORK ZONE RAISED PAVEMENT MARKERS, AS PER PLAN, AND THEIR INSTALLATION SHALL CONFORM TO C&MS 614 OR C&MS 621 AS SPECIFIED HEREIN.

- RAISED PAVEMENT MARKERS IN USE DURING THE SNOW-PLOWING SEASON SHALL CONFORM TO 621.
- RAISED PAVEMENT MARKERS IN USE DURING THE NON-SNOW-PLOW SEASON SHALL CONFORM TO EITHER 614 OR TO 621.

THE SNOW-PLOWING SEASON SHALL RUN FROM OCTOBER 15 THROUGH APRIL 1.

IF PROJECT DELAYS, NOT THE FAULT OF ODOT, CAUSE THE WORK TO EXTEND INTO THE SNOW-PLOWING SEASON, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING WORK ZONE RAISED PAVEMENT MARKERS (WZRPMS) CONFORMING TO C&MS 614, WITH RAISED PAVEMENT MARKERS CONFORMING TO 621, AS DETERMINED BY THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.

THIS ITEM SHALL INCLUDE PURCHASE, INSTALLATION AND REMOVAL OF ITEM 614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN, INCLUDING FILLING OF ANY DEPRESSIONS CREATED IN THE PAVEMENT AS PER C&MS 621.08.

AN ESTIMATED QUANTITY HAS BEEN PROVIDED IN THE MAINTENANCE OF TRAFFIC SUBSUMMARY.

TRAFFIC INCIDENT MANAGEMENT (TIM) DURING MOT

OHIO TIM IS OHIO'S TRAFFIC INCIDENT MANAGEMENT PROGRAM WHICH IS COMMITTED TO MAINTAINING THE SAFE AND EFFECTIVE FLOW OF TRAFFIC DURING EMERGENCIES AS TO PREVENT FURTHER DAMAGE, INJURY OR UNDUE DELAY OF THE MOTORING PUBLIC. IN ADDITION TO COMPLYING WITH THE PROVISION OF OMUTCD CHAPTER 6I, CONTROL OF TRAFFIC THROUGH TRAFFIC INCIDENT MANAGEMENT AREAS, THE CONTRACTOR SHALL ACTIVELY PARTICIPATE IN TIM PLANNING AND IMPLEMENTATION AS OUTLINED BELOW.

1. SUPERINTENDENT SHALL IDENTIFY THE INDIVIDUAL PERSONS ON THE PROJECT WHO WILL, OR MAY NEED TO, PERFORM THE DUTIES HEREIN. AT A MINIMUM, INCLUDE THE SUPERINTENDENT, FOREMEN AND SUPERVISORS (OR EQUIVALENT) AS WELL AS THE WORKSITE TRAFFIC SUPERVISOR (WTS; IF APPLICABLE TO THE PROJECT). THESE INDIVIDUALLY IDENTIFIED PERSONS SHALL COLLECTIVELY BE KNOWN AS CONTRACTOR TRAFFIC INCIDENT MANAGEMENT (TIM) CONTACTS. NOTIFY THE PROJECT ENGINEER OF THE CONTRACTOR TIM CONTACTS (ALONG WITH CONTACT INFORMATION FOR EACH) AT OR BEFORE THE PRECONSTRUCTION MEETING.
2. SUPERINTENDENT SHALL NOTIFY THE ENGINEER IMMEDIATELY IF ANY CONTRACTOR TIM CONTACT IS ADDED, REMOVED OR THE CONTACT INFORMATION CHANGES OVER THE COURSE OF THE PROJECT.
3. PRIOR THE FIRST DAY OF WORK IN THE FIELD, EACH CONTRACTOR TIM CONTACT ON THE PROJECT SHALL HAVE ATTENDED AND SUCCESSFULLY COMPLETED OHIO TIM TRAINING PROVIDED BY THE DEPARTMENT OR DESIGNEE. TRAINING INFORMATION CAN BE FOUND AT WWW.OHIOTIM.COM.
4. SUPERINTENDENT, AT A MINIMUM, SHALL ATTEND AND ACTIVELY PARTICIPATE IN A DEPARTMENT SCHEDULED TIM MEETING BEFORE CONSTRUCTION WORK BEGINS AND BEFORE EACH PHASE CHANGE. THESE MEETINGS WILL RESULT IN A DEPARTMENT ISSUED PROJECT SPECIFIC TRAFFIC INCIDENT MANAGEMENT PLAN (TIMP). AT THE TIM MEETINGS THE ATTENDING CONTRACTOR TIM CONTACTS SHALL:
 - A. COLLABORATE WITH ODOT AND SAFETY FORCES;
 - B. SHARE PROJECT SPECIFIC DETAILS THAT IMPACT TIM RESPONDERS; AND
 - C. RECOMMEND WAYS TO INCORPORATE NECESSARY EMERGENCY ACCESS AND OTHER TIM ELEMENTS FOR TIM RESPONDERS GIVEN PROJECT SPECIFIC WORK BEING COMPLETED AND PROJECT SPECIFIC PHASING.
5. CONTRACTOR TIM CONTACTS SHALL IMPLEMENT COMPONENTS OF THE RESULTING TIMP (SUCH AS APPROVED EMERGENCY INGRESS/EGRESS POINTS, ETC), AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH 109.05.
6. CONTRACTOR TIM CONTACTS SHALL PERFORM, AT A MINIMUM, THE FOLLOWING FUNCTIONS WHEN AN INCIDENT/CRASH OCCURS:
 - A. IF OBSERVED OR PRESENT WHEN OCCURS, CALL 911 AND THEN NOTIFY THE TRAFFIC MANAGEMENT CENTER (TMC) TO PROVIDE THE FOLLOWING:
 - I. LOCATION, INCLUDING MILEPOST NUMBER AND DIRECTION OF TRAVEL
 - II. NUMBER AND TYPE OF VEHICLES INVOLVED, IF KNOWN
 - III. ESTIMATED EXTENT OF DAMAGE OR INJURY, IF KNOWN
 - IV. ESTIMATED NUMBER OF PATIENTS INVOLVED, IF KNOWN
 - V. ANY POTENTIAL HAZARDOUS CONDITIONS, IF KNOWN
 - VI. THE PLACARD NUMBER ON ANY HAZARDOUS MATERIALS PLACARD FROM A SAFE DISTANCE, IF APPLICABLE AND VISIBLE
 - B. FOLLOWING AN INCIDENT/CRASH:
 - I. INITIATE TRAFFIC MANAGEMENT/PROVIDE TEMPORARY TRAFFIC CONTROL AS INDICATED IN THE TIMP, AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH 109.05.
 - II. RECOMMEND ROADWAY REPAIR NEEDS.
 - III. PROVIDE REPAIR RESOURCES AND INITIATE REPAIRS, AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH 109.05.
 - IV. ATTEND AND PARTICIPATE IN AN AFTER ACTION REVIEW (AAR).

ALL COSTS, UNLESS OTHERWISE SPECIFIED, RESULTING FROM THE ABOVE REQUIREMENTS SHALL BE CONSIDERED TO BE INCLUDED IN THE LUMP SUM PRICE FOR ITEM 614, MAINTAINING TRAFFIC. FAILURE TO PERFORM THE REQUIREMENTS OF THIS PLAN NOTE WILL RESULT IN A DAILY FINE OF 2% OF ITEM 614, MAINTAINING TRAFFIC AND MAY RESULT IN ONE OR MORE CONTRACTOR TIM CONTACTS BEING REMOVED FROM THE LIST OF OHIO TIM TRAINED INDIVIDUALS (AT THE SOLE DISCRETION OF THE OHIO TIM EXECUTIVE COMMITTEE). IN THE EVENT AN INDIVIDUAL IS REMOVED FROM THE OHIO TIM TRAINED LIST, THE INDIVIDUAL WILL BE REMOVED FROM CONTRACTOR TIM CONTACT RESPONSIBILITIES ON ALL PROJECTS.

LONGITUDINAL CHANNELIZER

LONGITUDINAL CHANNELIZER SHALL BE PROVIDED AS CALLED FOR IN THE PLANS. A LONGITUDINAL CHANNELIZER CONSISTS OF A COMBINATION OF VERTICAL COMPONENTS AND LONGITUDINAL BASE COMPONENTS, FIT TOGETHER TO CREATE A CONTINUOUS CHANNELIZING DEVICE, AS DETAILED IN TRAFFIC PIS 2010180. USE OF TUBULAR MARKERS, AS IDENTIFIED IN THE OMUTCD, FIGURE 6F-7, SHALL NOT QUALIFY FOR USE AS A LONGITUDINAL CHANNELIZER.

THE VERTICAL COMPONENT SHALL BE EQUIPPED WITH TWO 3" WIDE RETROREFLECTIVE BANDS, PLACED A MAXIMUM OF 2" FROM THE TOP, WITH A MAXIMUM SPACING OF 6" BETWEEN THE BANDS. THE LONGITUDINAL BASE COMPONENTS SHALL BE EQUIPPED WITH REFLECTORS.

THE LONGITUDINAL CHANNELIZERS SHALL COMPLY WITH THE REQUIREMENTS CONTAINED WITHIN TRAFFIC PIS 2010180.

FURNISH LONGITUDINAL CHANNELIZERS FROM THE APPROVED LIST FOUND ON THE OFFICE OF MATERIALS MANAGEMENT WEBSITE. FOR INSTALLATION PROCEDURES, FOLLOW THE MANUFACTURER'S INSTRUCTIONS.

LONGITUDINAL CHANNELIZERS SHALL BE MONITORED TO DETERMINE WHETHER THERE IS SIGNIFICANT DAMAGE FROM ERRANT VEHICLES.

PAYMENT FOR PROVIDING, INSTALLING AND REMOVING THE LONGITUDINAL CHANNELIZERS WILL BE MADE AT THE CONTRACT UNIT PRICE PER FOOT.

ITEM 614 - MAINTAINING TRAFFIC, MISC.: BRIDGE DECK AND PAVEMENT PATCHING

THIS WORK WILL BE AS DIRECTED BY THE ENGINEER AND WILL INCLUDE ALL ASSOCIATED MOT COSTS WITH THE ACTIVITY. THE COST FOR EACH ITEM SHALL BE \$1.00. THE FIXED AMOUNT SHOWN IN THE PROPOSAL IS INCLUDED (AS ANY OTHER BID ITEMS) IN THE TOTAL BID AMOUNT. THIS FIXED AMOUNT IS THE DEPARTMENT'S ESTIMATE OF THE TOTAL COST OF BRIDGE DECK AND PAVEMENT PATCHING WORK REQUIRED TO BE PERFORMED WITHIN THE WORK LIMITS AS DIRECTED BY THE ENGINEER. C&MS TABLE 104.02-2 DOES NOT APPLY TO REDUCTIONS IN THIS CONTRACT ITEM. FORCE ACCOUNT RECORDS SHALL BE KEPT TO TRACK AND ULTIMATELY DETERMINE THE AMOUNT OF THE PAY ITEM USED. THE WORK ITEM SHALL INCLUDE ALL WORK, AS DIRECTED BY THE ENGINEER, NEEDED TO RE-ESTABLISH A REASONABLY SAFE AND PASSABLE CONDITION OF THE DECK AND/OR PAVEMENT FOR THE DURATION OF THE REQUIRED UPCOMING MOT PHASES. THE CONTRACTOR SHALL MEET WITH THE ENGINEER TO ESTABLISH THE WORK AFTER EXECUTION OF THE CONTRACT. THE CONTRACTOR'S PROPOSED PHASING AND PHASING DURATIONS WILL ASSIST THE ENGINEER IN DETERMINING THE EXTENT OF THE WORK. THIS WORK IS ONLY INTENDED TO ESTABLISH A SAFE AND DRIVABLE CONDITION FOR THE DURATION OF THE PROJECT. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITIES OF 614.02B.
ITEM 614 MAINTAINING TRAFFIC MISC: BRIDGE DECK AND PAVEMENT PATCHING = 90,000 EACH

MAINTENANCE OF TRAFFIC FOR MARKING PAVEMENT REPAIRS

PROVIDE LANE CLOSURES AS PER THE MAINTENANCE OF TRAFFIC NOTES IN THESE PLANS A MINIMUM OF 24 HOURS PRIOR TO PERFORMING PAVEMENT REPAIRS TO ALLOW THE ENGINEER TO IDENTIFY AND MARK THE AREAS OF THE PAVEMENT IN NEED OF REPAIRS.

PAYMENT FOR ALL LABOR, EQUIPMENT, LAW ENFORCEMENT OFFICERS AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC.

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MAINTENANCE OF TRAFFIC NOTES

FRA-71-17.46

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EMW
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RMK

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ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	SEE SHEET
607	20001	1050	FT	FENCE, TYPE CL, AS PER PLAN	62
614	11000	LS		MAINTAINING TRAFFIC	62
614	11110	2500	hour	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	64
SPECIAL	61411300	2	EACH	WORK ZONE TRAFFIC SIGNAL	65
614	11630	25550	FT	INCREASED BARRIER DELINEATION	65
614	12336	21	EACH	WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL)	64
614	12420	LS		DETOUR SIGNING	66
614	12484	6	EACH	WORK ZONE INCREASED PENALTIES SIGN	66
614	12500	50	EACH	REPLACEMENT SIGN	65
614	12600	100	EACH	REPLACEMENT DRUM	65
614	12801	5512	EACH	WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN	67
614	13310	511	EACH	BARRIER REFLECTOR, TYPE 1, ONE-WAY	65
614	13350	511	EACH	OBJECT MARKER, ONE WAY	65
614	18000	90000	EACH	MAINTAINING TRAFFIC, MISC.: BRIDGE DECK AND PAVEMENT PATCHING	67
614	18601	20	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	65
614	20100	8.97	MILE	WORK ZONE LANE LINE, CLASS I, 4", 642 PAINT	
614	21100	0.47	MILE	WORK ZONE CENTER LINE, CLASS I, 642 PAINT	
614	22100	16.67	MILE	WORK ZONE EDGE LINE, CLASS I, 4", 642 PAINT	
614	23200	20090	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 8", 642 PAINT	
614	24200	8551	FT	WORK ZONE DOTTED LINE, CLASS I, 642 PAINT	
614	26200	130	FT	WORK ZONE STOP LINE, CLASS I, 642 PAINT	
614	27200	2509	FT	WORK ZONE CROSSWALK LINE, CLASS I, 642 PAINT	
614	30200	15	EACH	WORK ZONE ARROW, CLASS I, 642 PAINT	
614	31200	2	EACH	WORK ZONE WORD ON PAVEMENT, 72", CLASS I, 642 PAINT	
615	10000	LS		ROADS FOR MAINTAINING TRAFFIC	
615	25000	11371	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B	
616	10000	360	MGAL	WATER	65
622	41000	25110	FT	PORTABLE BARRIER, 32"	
622	41020	440	FT	PORTABLE BARRIER, 32", BRIDGE MOUNTED	
808	18700	60	SNMT	DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY	66
611	05900	112	FT	15" CONDUIT, TYPE B (MOT)	
611	98370	7	EACH	CATCH BASIN, NO. 6 (MOT)	
202	35100	112	FT	PIPE REMOVED, 24" AND UNDER (MOT)	
202	58100	7	EACH	CATCH BASIN REMOVED (MOT)	

CALCULATED
 EMW
 CHECKED
 SLT

MAINTENANCE OF TRAFFIC SUBSUMMARY

FRA-71-17.46



NOT TO SCALE

CALCULATED
EMW
CHECKED
RMK

**MAINTENANCE OF TRAFFIC
PHASE 2A SCHEMATIC**

FRA-71-17.46

72
881

MOT PHASE 2A SEQUENCE OF CONSTRUCTION:

1. CLOSE THE EXISTING BROAD STREET NORTHBOUND EXIT RAMP AND SOUTHBOUND ENTRANCE RAMP.
2. USING PART-WIDTH CONSTRUCTION TECHNIQUES, CONSTRUCT THE PROPOSED SOUTH HALF OF BROAD STREET BRIDGE OVER I-71. SEE BROAD STREET MOT PHASE 2A. (SHEETS 159 - 167)




NOTE:

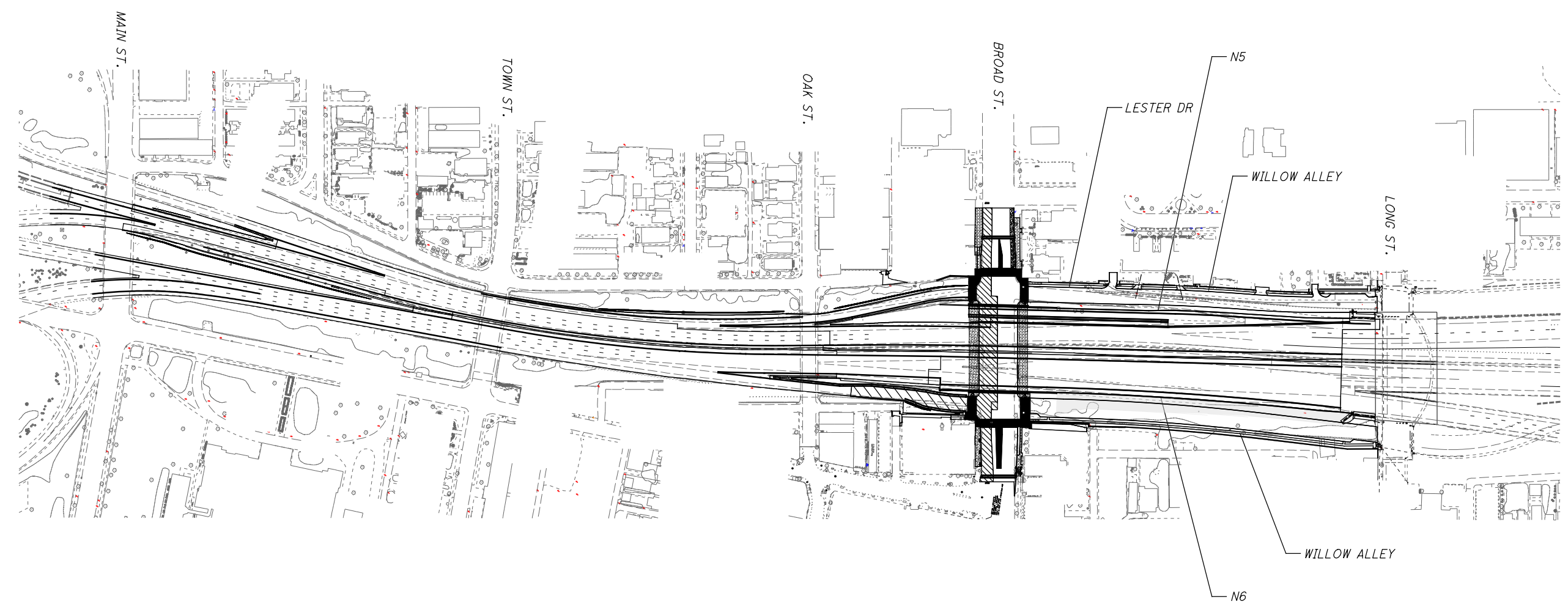
IF NECESSARY THE CONTRACTOR MAY CLOSE I-71 FOR DEMOLITION AND/OR SETTING BRIDGE BEAMS. THE CLOSURE(S) MAY ONLY BE 10PM FRIDAY - 5AM MONDAY.

SEE THE FOLLOWING SHEETS FOR DETAILS:

DETOURS AND ASSOCIATED CLOSURE PLANS.....77 -102 , 103A,103B
 MAINLINE PHASE 2A MOT PLANS..... 112 - 120
 BROAD STREET PHASE 2A MOT PLANS..... 159- 167

LEGEND

-  TEMPORARY PAVEMENT PLACED PRIOR TO THIS PHASE
-  TEMPORARY PAVEMENT PLACED DURING THIS PHASE
-  WORK AREA



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- LEGEND**
- WORK ZONE
 - DETOUR SIGN W/ SUPPORT
 - TYPE III BARRICADE WITH SIGNS
 - DETOUR ROUTE

- NOTES**
1. THIS DETOUR SHALL BE IN EFFECT FOR THE DURATION OF THE I-71 SB ENTRANCE RAMP CLOSURE.
 2. CONTRACTOR SHALL NOTIFY THE ODOT WORK ZONE TRAFFIC MANAGER 14 DAYS PRIOR TO IMPLEMENTING THIS DETOUR.
 3. ALL SIGNS ON THIS SHEET SHALL BE BLACK LETTERING ON AN ORANGE BACKGROUND EXCEPT THE R11-2 "ROAD CLOSED", R5-1 "DO NOT ENTER" SIGNS, AND M1-1 ROUTE SHIELDS.

 SOUTH INTERSTATE 71 DETOUR ← M3-3-24 M1-1-24 M4-9L-30 37	 SOUTH INTERSTATE 71 DETOUR ↶ M3-3-24 M1-1-24 M4-9L-30 38	 SOUTH INTERSTATE 71 DETOUR ↑ M3-3-24 M1-1-24 M4-9-30 39	 SOUTH INTERSTATE 71 DETOUR ↷ M3-3-24 M1-1-24 M4-9R-30 40	 SOUTH INTERSTATE 71 DETOUR → M3-3-24 M1-1-24 M4-9R-30 41
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 R3-1-24 42	 R3-2-24 43	 I-71 SB ENTRANCE RAMP CLOSED SPECIAL 48" X 48" Q
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 71 SOUTH
 Cincinnati
 →
 CLOSED
 OVERLAY
 BLACK ON ORANGE
 44

 R11-2-48 W1-6R 48X24 BLACK LETTERING ON ORANGE BACKGROUND TYPE A ROAD CLOSED →	 SAFETY FLAGS (TYP.) R5-1-30 DO NOT ENTER	 R11-2-48 W1-6R 48X24 BLACK LETTERING ON ORANGE BACKGROUND ROAD CLOSED →
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10' TYPE III BARRICADES (SOLID ACROSS STREET)

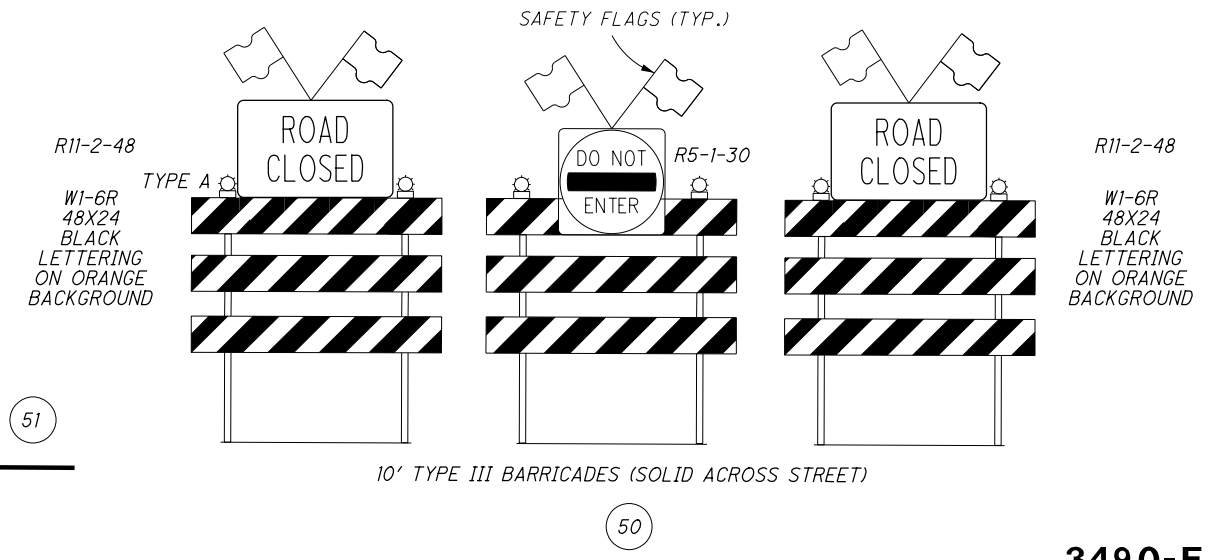
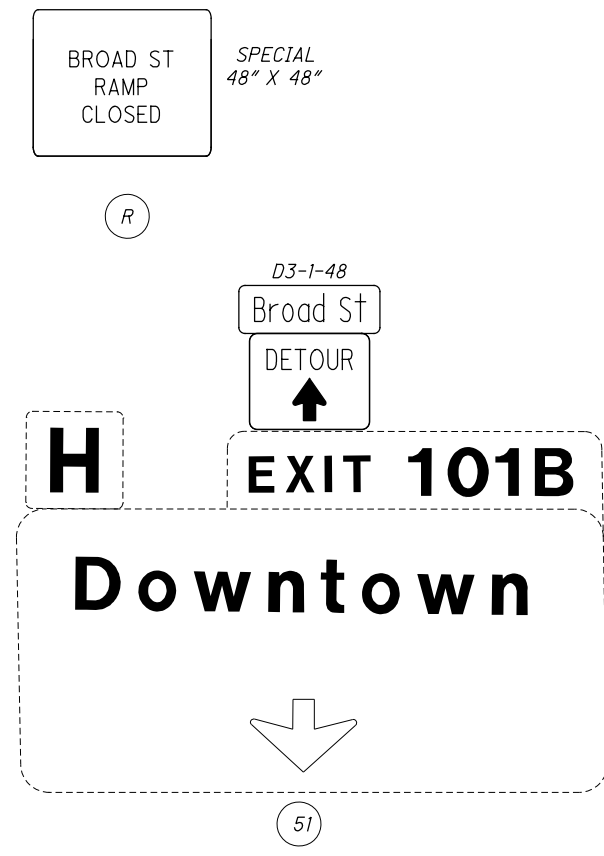
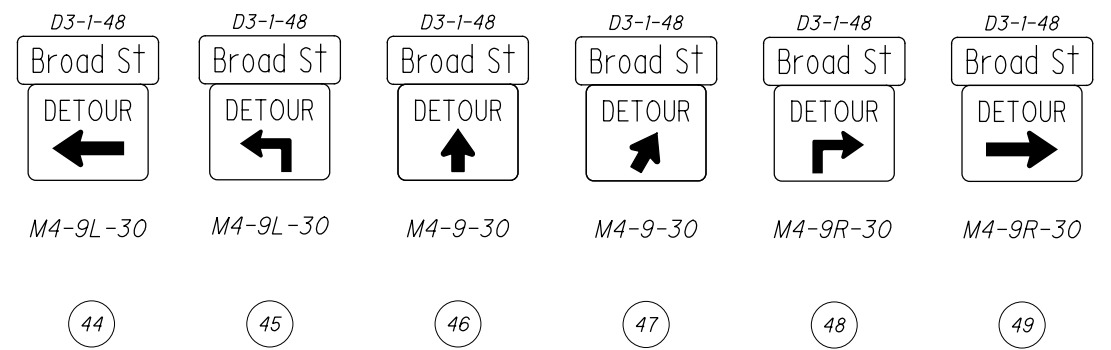
26

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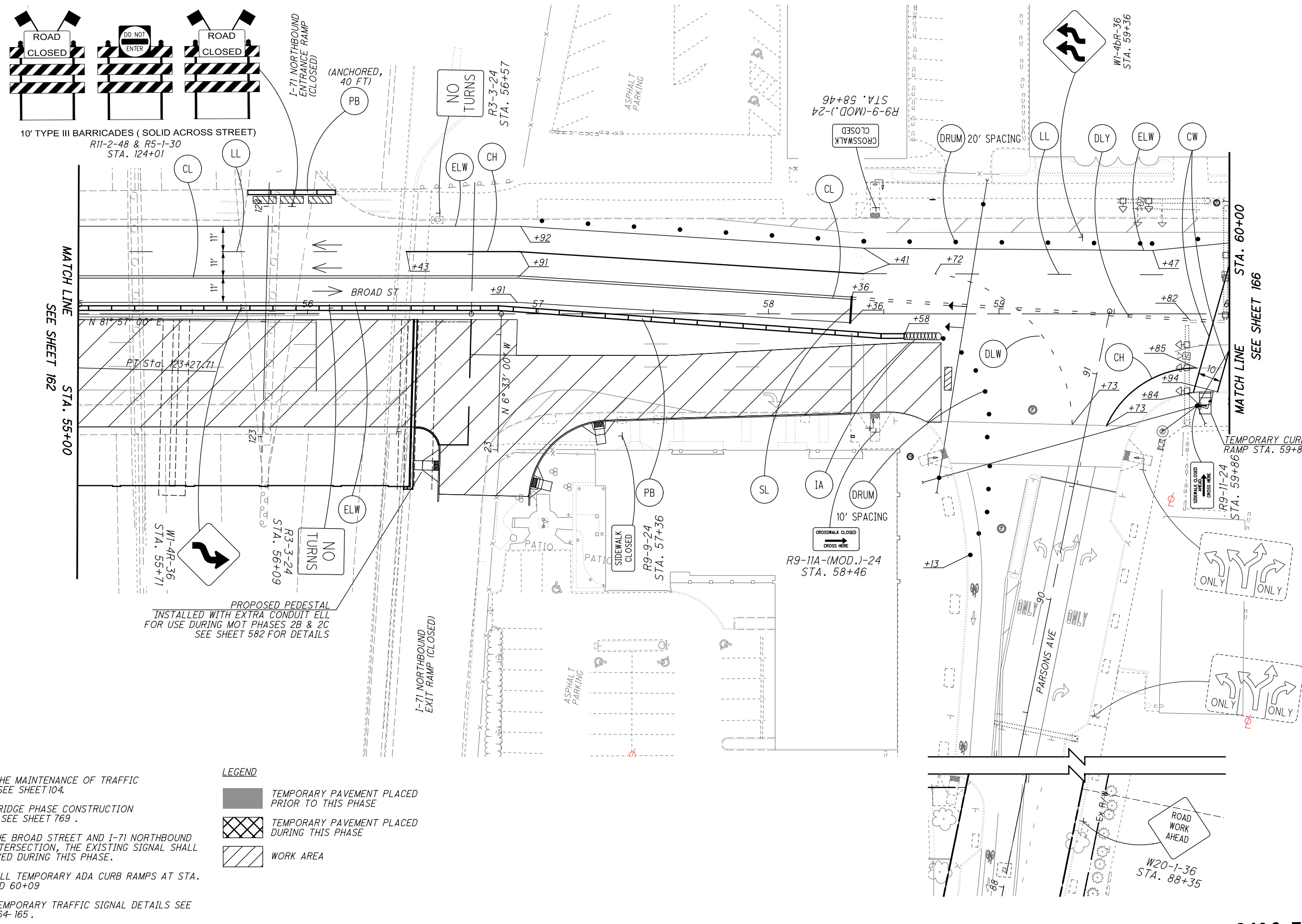
- LEGEND**
- WORK ZONE
 - DETOUR SIGN W/ SUPPORT
 - TYPE III BARRICADE WITH SIGNS
 - DETOUR ROUTE

- NOTES**
1. THIS DETOUR SHALL BE IN EFFECT FOR THE DURATION OF THE I-71 NB BROAD ST EXIT RAMP CLOSURE.
 2. CONTRACTOR SHALL NOTIFY THE ODOT WORK ZONE TRAFFIC MANAGER 14 DAYS PRIOR TO IMPLEMENTING THIS DETOUR.
 3. ALL SIGNS ON THIS SHEET SHALL BE BLACK LETTERING ON AN ORANGE BACKGROUND EXCEPT THE R11-2 "ROAD CLOSED" AND R5-1 "DO NOT ENTER" SIGNS..



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10' TYPE III BARRICADES (SOLID ACROSS STREET)
R11-2-48 & R5-1-30
STA. 124+01

I-71 NORTHBOUND
ENTRANCE RAMP
(CLOSED)
(ANCHORED,
40 FT)
PB

NO
TURNS
R3-3-24
STA. 56+57

R9-9-(MOD.)-24
STA. 58+46

W1-4R-36
STA. 59+36

MATCH LINE
SEE SHEET 162
STA. 55+00

MATCH LINE
SEE SHEET 166
STA. 60+00

PROPOSED PEDESTAL
INSTALLED WITH EXTRA CONDUIT ELL
FOR USE DURING MOT PHASES 2B & 2C
SEE SHEET 582 FOR DETAILS

I-71 NORTHBOUND
EXIT RAMP (CLOSED)

R9-9-24
STA. 57+36

R9-11A-(MOD.)-24
STA. 58+46

TEMPORARY CURB
RAMP STA. 59+86




R9-11-24
STA. 59+86

W20-1-36
STA. 88+35

NOTES:

1. FOR THE MAINTENANCE OF TRAFFIC LEGEND, SEE SHEET 104.
2. FOR BRIDGE PHASE CONSTRUCTION DETAILS, SEE SHEET 769 .
3. AT THE BROAD STREET AND I-71 NORTHBOUND RAMP'S INTERSECTION, THE EXISTING SIGNAL SHALL BE REMOVED DURING THIS PHASE.
4. INSTALL TEMPORARY ADA CURB RAMPS AT STA. 59+89 AND 60+09
5. FOR TEMPORARY TRAFFIC SIGNAL DETAILS SEE SHEETS 164- 165 .

LEGEND

-  TEMPORARY PAVEMENT PLACED PRIOR TO THIS PHASE
-  TEMPORARY PAVEMENT PLACED DURING THIS PHASE
-  WORK AREA

CALCULATED
EMW
CHECKED
RMK

0 20 40
10
HORIZONTAL
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MAINTENANCE OF TRAFFIC PLAN
BROAD ST PHASE 2A

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SHEET NUM.											PART.			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
55	59	60	61	205	274	277	445	473	519	OFFICE CALC	01/IMS/PV	02/NHS/ PV	06/MPO/ OT/Colts						
				280							280			622	10120	280	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE C	
				772							772			622	10140	772	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE C1	
				3,364							3,364			622	10160	3,364	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE D	
				4							4			622	24840	4	EACH	CONCRETE BARRIER END SECTION, TYPE B	
				2							2			622	24860	2	EACH	CONCRETE BARRIER END SECTION, TYPE C1	
				8							8			622	25000	8	EACH	CONCRETE BARRIER END SECTION, TYPE D	
				5							5			622	25014	5	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C1	
				16							16			622	25050	16	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D	
				2							2			622	25050	2	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D, A	516
					14						14			622	41000	14	FT	PORTABLE BARRIER, 32" (ROADWAY)	
				730							730			622	90000	730	FT	BARRIER, MISC.:PORTABLE BARRIER 32"	55
				713							713			622	90000	713	FT	BARRIER, MISC.:TYPE C1 MODIFIED	516
				43							43			622	90000	43	FT	BARRIER, MISC.:TYPE C MODIFIED	516
				123							123			622	90000	123	FT	BARRIER, MISC.:TYPE D MODIFIED	516
11											11			623	38500	11	EACH	MONUMENT ASSEMBLY (TYPE A)	
				114	2						116			626	00102	116	EACH	BARRIER REFLECTOR, TYPE 1, ONE WAY	
				23							23			626	00110	23	EACH	BARRIER REFLECTOR, TYPE 2, ONE WAY	
									6		6			690	98000	6	EACH	SPECIAL -PARKING METER POST HOLE CORE	519
										98	98			690	98300	98	SY	SPECIAL -MISC.: BRICK PAVEMENT	
LS											LS			690	98400	LS		SPECIAL -MISC.: RESTORE PARKING LOT	
	13,000										13,000			875	10000	13,000	LB	LONGITUDINAL JOINT ADHESIVE	
											LS	LS		878	25000	LS		INSPECTION AND COMPACTION TESTING OF UNBOUND MATERIALS	
																		EROSION CONTROL	
	2										2			659	00100	2	EACH	SOIL ANALYSIS TEST	
	768										768			659	00300	768	CY	TOPSOIL	
						6,999					6,999			659	10000	6,999	SY	SEEDING AND MULCHING	
											346			659	14000	346	SY	REPAIR SEEDING AND MULCHING	
											346			659	15000	346	SY	INTER-SEEDING	
											0.96			659	20000	0.96	TON	COMMERCIAL FERTILIZER	
											1.43			659	31000	1.43	ACRE	LIME	
											38			659	35000	38	MGAL	WATER	
											16			659	40000	16	MSF	MOWING	
								167			167			670	00700	167	SY	DITCH EROSION PROTECTION	
											LS			832	15000	LS		STORM WATER POLLUTION PREVENTION PLAN	
											LS			832	15002	LS		STORM WATER POLLUTION PREVENTION INSPECTIONS	
											LS			832	15010	LS		STORM WATER POLLUTION PREVENTION INSPECTION SOFTWARE	
											530,000			832	30000	530,000	EACH	EROSION CONTROL	
																		DRAINAGE	
			400								400			605	05200	400	FT	4" UNCLASSIFIED PIPE UNDERDRAINS	
								12,687			12,687			605	11100	12,687	FT	6" SHALLOW PIPE UNDERDRAINS	
								568			568			605	13300	568	FT	6" UNCLASSIFIED PIPE UNDERDRAINS	
								5,172			5,172			605	14000	5,172	FT	6" BASE PIPE UNDERDRAINS	
				100							100			611	00100	100	FT	4" CONDUIT, TYPE B, FOR SANITARY	
				400							400			611	00406	400	FT	4" CONDUIT, TYPE F	
								165			165			611	00900	165	FT	6" CONDUIT, TYPE B	
											50			611	00900	50	FT	6" CONDUIT, TYPE B, FOR DRAINAGE CONNECTION	
											100			611	00900	100	FT	6" CONDUIT, TYPE B, FOR SANITARY	
											50			611	01100	50	FT	6" CONDUIT, TYPE C, FOR DRAINAGE CONNECTION	
											50			611	01800	50	FT	8" CONDUIT, TYPE B, FOR DRAINAGE CONNECTION	
											100			611	01800	100	FT	8" CONDUIT, TYPE B, FOR SANITARY	
											50			611	02000	50	FT	8" CONDUIT, TYPE C, FOR DRAINAGE CONNECTION	
								49			49			611	03100	49	FT	10" CONDUIT, TYPE B	
								1,183			1,183			611	04400	1,183	FT	12" CONDUIT, TYPE B	
											99			611	04401	99	FT	12" CONDUIT, TYPE B, AS PER PLAN	
											50			611	04400	50	FT	12" CONDUIT, TYPE B, FOR DRAINAGE CONNECTION	60
								25			25			611	04600	25	FT	12" CONDUIT, TYPE C	
											50			611	04600	50	FT	12" CONDUIT, TYPE C, FOR DRAINAGE CONNECTION	
								3,004			3,004			611	05900	3,004	FT	15" CONDUIT, TYPE B	
											199			611	06100	199	FT	15" CONDUIT, TYPE C	
											301			611	07400	301	FT	18" CONDUIT, TYPE B	
											85			611	07400	85	FT	18" CONDUIT, TYPE B, 706.02 W/ PREMIUM JOINTS	

GENERAL SUMMARY

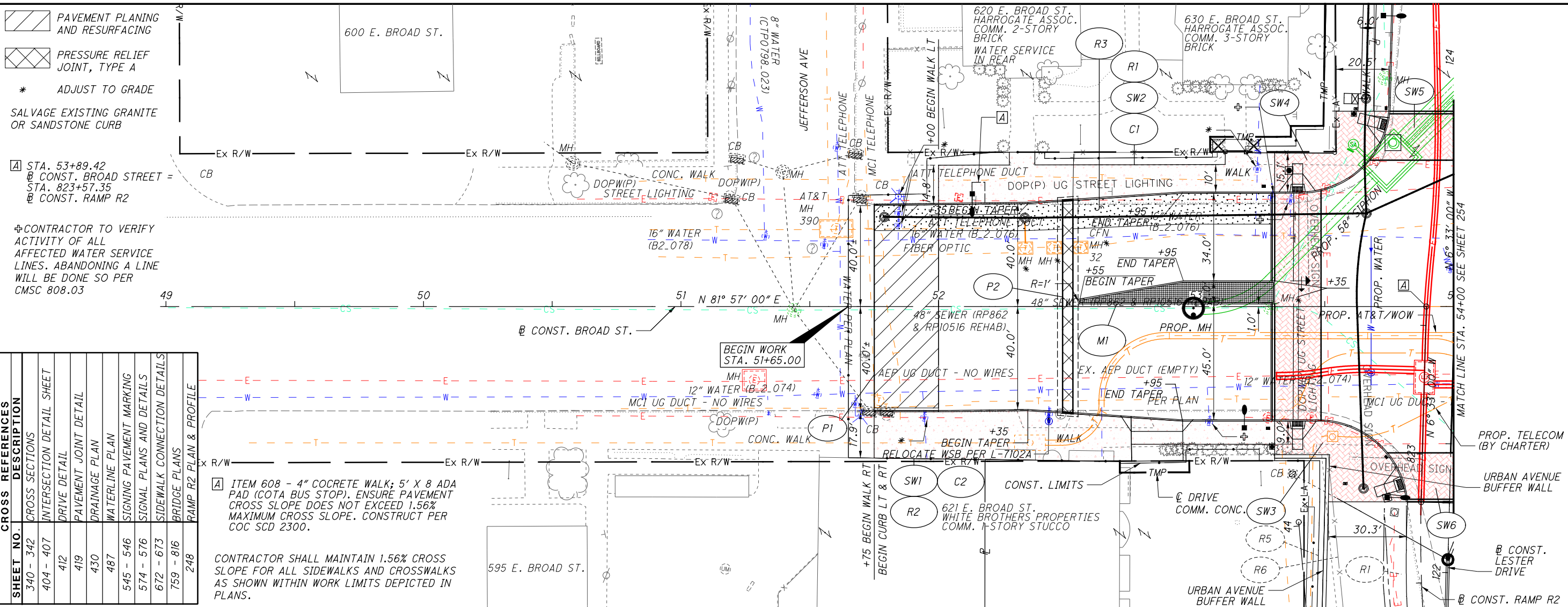
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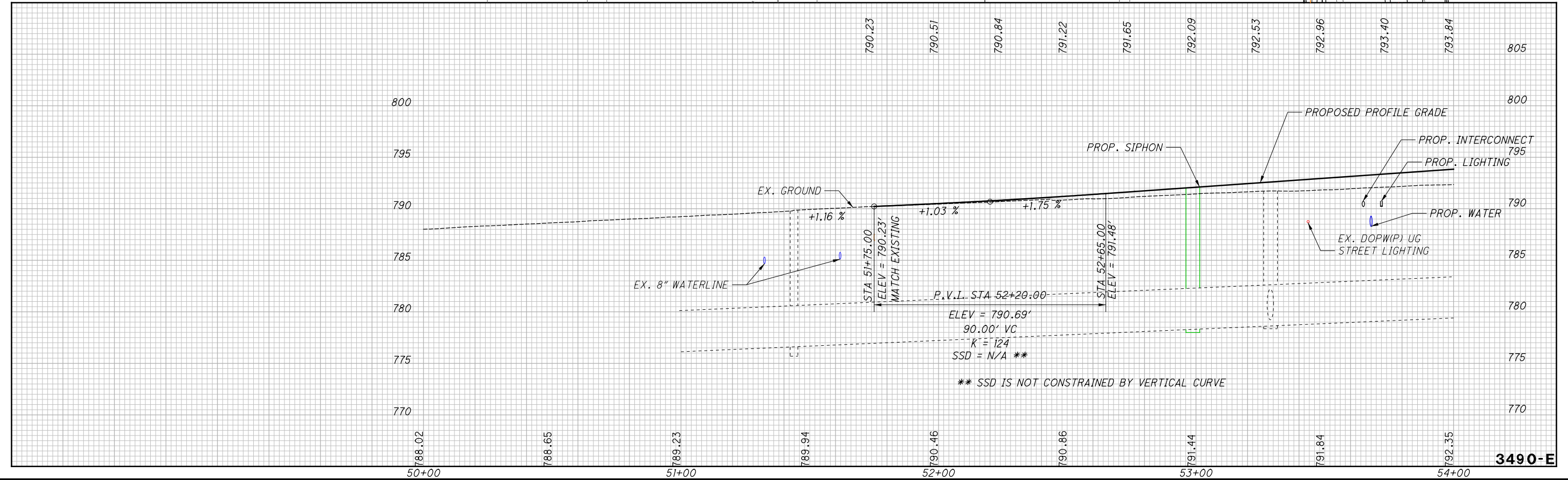
SHEET NUM.								PART.								ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.	
493	494	500	502	512-513	604	515A	515D	01/IMS/PV	05/IMS/OT	07/S>2/OT/COLS	08/ENH/OT/CoIs	9/IMS/OT/AEP	10/IMS/OT/ATT	11/IMS/OT/TW	12/IMS/OT/VER							
9											9					625	32000	9	EACH	GROUND ROD (ELECTRICAL)		
465											465					625	36000	465	FT	PLASTIC CAUTION TAPE		
2											2					690	98000	2	EACH	SPECIAL -MISC.: 50' POWER POLE, TDMIS-1		
1											1					690	98000	1	EACH	SPECIAL -MISC.: EXISTING DOP VAULT #200 AS PER PLAN	490	
1											1					690	98000	1	EACH	SPECIAL -MISC.: GUY WIRE		
1											1					690	98000	1	EACH	SPECIAL -MISC.: MANHOLE #1 AS PER PLAN, TDMIS-1015	490	
1											1					690	98000	1	EACH	SPECIAL -MISC.: MANHOLE #2 AS PER PLAN, TDMIS-1015	490	
2											2					690	98000	2	EACH	SPECIAL -MISC.: REMOVE POWER POLE		
	225										225					690	98100	225	FT	SPECIAL -CONDUIT, CONCRETE ENCASED: 1-2", TDMIS-1013	490	
	165										165					690	98100	165	FT	SPECIAL -CONDUIT, CONCRETE ENCASED: 2-2", TDMIS-1013	490	
	135										135					690	98100	135	FT	SPECIAL -CONDUIT, CONCRETE ENCASED: 2-5", TDMIS-1013		
	210										210					690	98100	210	FT	SPECIAL -CONDUIT, CONCRETE ENCASED: 6-5", TDMIS-1013		
	210										210					690	98100	210	FT	SPECIAL -DISTRIBUTION CABLE, 3-#500 KCMIL 15 KV WITH 1-#350 KCMIL 600 VOLT NEUTRAL, TDMIS-1510		
280											280					690	98100	280	FT	SPECIAL -MISC.: AERIAL PRIMARY CONDUCTORS		
150											150					690	98100	150	FT	SPECIAL -MISC.: REMOVE AERIAL PRIMARY CONDUCTORS		
	350										350					690	98100	350	FT	SPECIAL -NO. 2/0 AWG AL TRIPLEX W/ ACSR NEUTRAL, TDMIS-1501		
	LS										LS					690	98400	LS	FT	SPECIAL -CONDUCTOR SAFETY POLICY, TDMIS-1603	490	
																					TELECOMMUNICATIONS (AT&T)	
							4,074														CONDUIT, MISC.: CONCRETE ENCASED FIBERGLASS CONDUIT, 4"	512
																					TELECOMMUNICATIONS (CHARTER)	
							266														CONDUIT, MISC.:FIBERGLASS CONDUIT, 4", DIRECTIONAL DRILLED	515A
																					TELECOMMUNICATIONS (VERIZON)	
							318														CONDUIT, MISC.:FIBERGLASS CONDUIT, 4"	515D
																					ELECTRICAL (AEP)	
												233									CLASS QC4 CONCRETE, MISC.: CLASS QC4 CONCRETE, PEA GRAVEL ENCASEMENT, AS PER PLAN	503
												6,234									CONDUIT, MISC.:CONDUIT, PVC, 5", SCH. 40, ELECTRIC RATED, AS PER PLAN	503
												1,253									TRENCH IN PAVED AREAS, AS PER PLAN	501
												1									SPECIAL -MISC.: FIBERGLASS BOX PAD INSTALLATION	501
												2									SPECIAL -MISC.: PRECAST CONCRETE ELECTRIC MANHOLE	501
												1									SPECIAL -MISC.: PRECAST PRIMARY ENCLOSURE	507
																					TELECOMMUNICATIONS (C.O.C. DOT)	
																					CONDUIT, 4", 725.05, AS PER PLAN	499
																					SPECIAL - MISC.: REMOVAL AND DISPOSAL OF F01.HM FIBER OPTIC CABLE	499
																					SPECIAL - MISC.: REMOVAL AND DISPOSAL OF F02.HH FIBER OPTIC CABLE	499
																					FIBER OPTIC CABLE, MISC.: F01.HH FIBER OPTIC CABLE, 288 STRAND	499
																					FIBER OPTIC CABLE, MISC.: F02.HH FIBER OPTIC CABLE, 288 STRAND	499
																					FIBER OPTIC CABLE, MISC.: F03.HM FIBER OPTIC CABLE, 288 STRAND	499
																					TRAFFIC SURVEILLANCE	
																					REMOVAL MISC.: REMOVAL OF PROJECT 1 PERMANENT ITS	607
																					REMOVAL MISC.: REMOVAL OF PROJECT 3 TEMPORARY ITS	607
																					CONDUIT, 2", 725.051 (SURVEILLANCE)	
																					CONDUIT, 3", 725.051 (SURVEILLANCE)	
																					CONDUIT, 4", MULTICELL, 725.20, EPC-40, (4)-1.25" INNER-DUCTS	
																					CONDUIT, CONCRETE ENCASED, 4", MULTICELL, EPC-40	
																					CONDUIT, JACKED OR DRILLED, 4" MULTICELL, EPC-80	
																					CONDUIT, JACKED OR DRILLED, 725.051, 3"	
																					TRENCH, 36" DEEP	
																					MEDIAN JUNCTION BOX, AS PER PLAN	603
																					PULL BOX, 725.08, 18"	
																					PULL BOX REMOVED (SURVEILLANCE)	
																					PULL BOX, MISC.: CONCRETE, 32" (SURVEILLANCE)	604
																					GROUND ROD (SURVEILLANCE)	
																					POWER SERVICE	
																					GROUND MOUNTED SUPPORT, NO. 3 POST	
																					SIGN, FLAT SHEET	
																					VEHICULAR SIGNAL HEAD, (LED), 2-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN	604
																					DETECTOR LOOP	
																					DISCONNECT SWITCH WITH ENCLOSURE	
																					MESSENGER WIRE, 7 STRAND, 1/4" DIAMETER WITH ACCESSORIES, AS PER PLAN	604
												1,893										

GENERAL SUMMARY

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SHEET NO.	CROSS REFERENCES DESCRIPTION
340 - 342	CROSS SECTIONS
404 - 407	INTERSECTION DETAIL SHEET
412	DRIVE DETAIL
419	PAVEMENT JOINT DETAIL
430	DRAINAGE PLAN
487	WATERLINE PLAN
545 - 546	SIGNING PAVEMENT MARKING
574 - 576	SIGNAL PLANS AND DETAILS
672 - 673	SIDEWALK CONNECTION DETAILS
759 - 816	BRIDGE PLANS
248	RAMP R2 PLAN & PROFILE



PLAN AND PROFILE - BROAD STREET
BEGIN WORK TO STA. 54+00.00

FRA-71-17.46

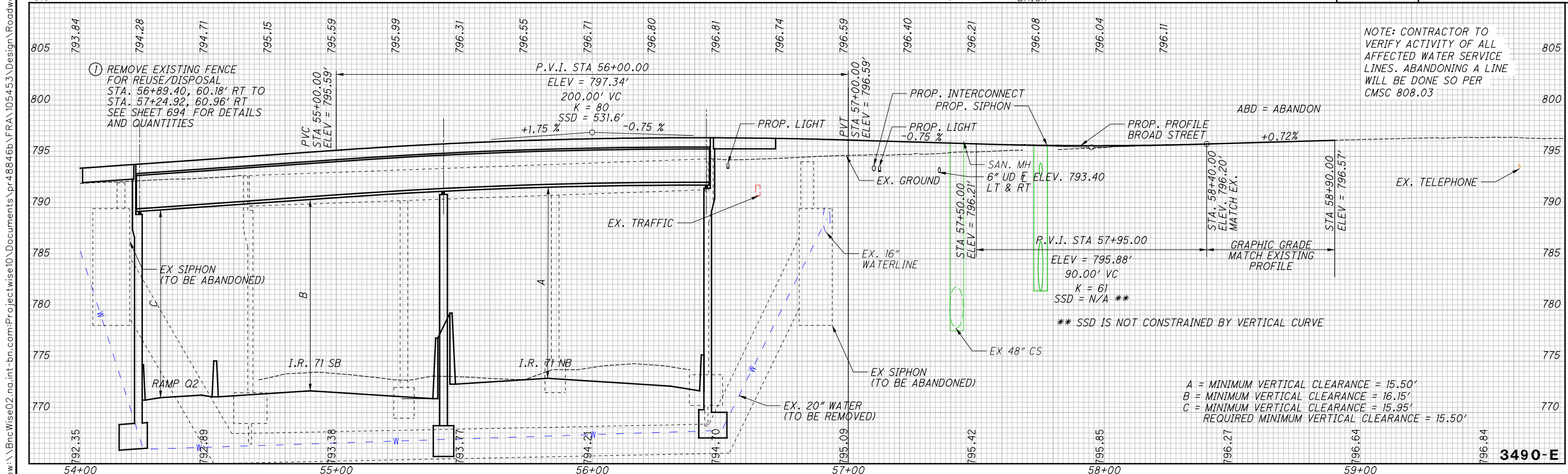
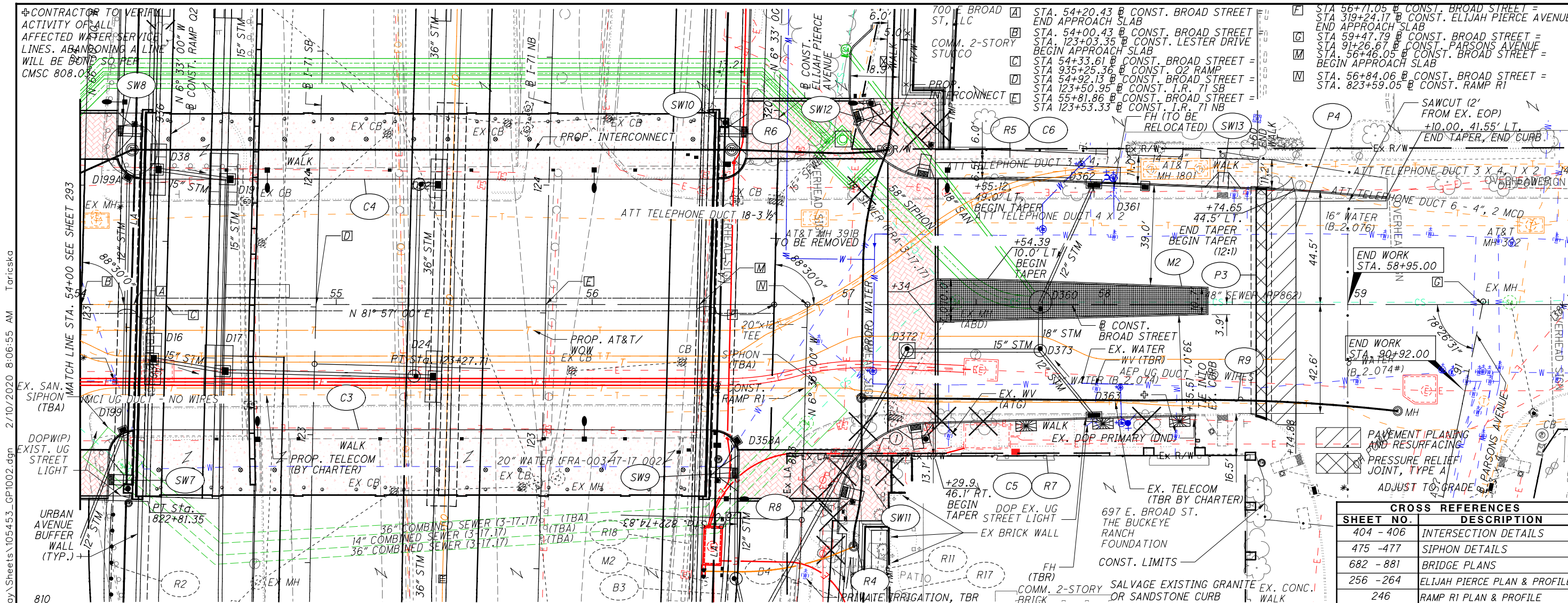
253
881

3490-E

SCALE: 1" = 40' HORIZONTAL
1" = 10' VERTICAL

CALCULATED: MRT
RLE
CHECKED: MRT

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CROSS REFERENCES	
SHEET NO.	DESCRIPTION
404 - 406	INTERSECTION DETAILS
475 - 477	SIPHON DETAILS
682 - 881	BRIDGE PLANS
256 - 264	ELIJAH PIERCE PLAN & PROFILE
246	RAMP R1 PLAN & PROFILE

NOTE: CONTRACTOR TO VERIFY ACTIVITY OF ALL AFFECTED WATER SERVICE LINES. ABANDONING A LINE WILL BE DONE SO PER CMSC 808.03

PLAN AND PROFILE - BROAD STREET - STA. 54+00.00 TO END WORK
 FRA-71-17.46
 254
 881

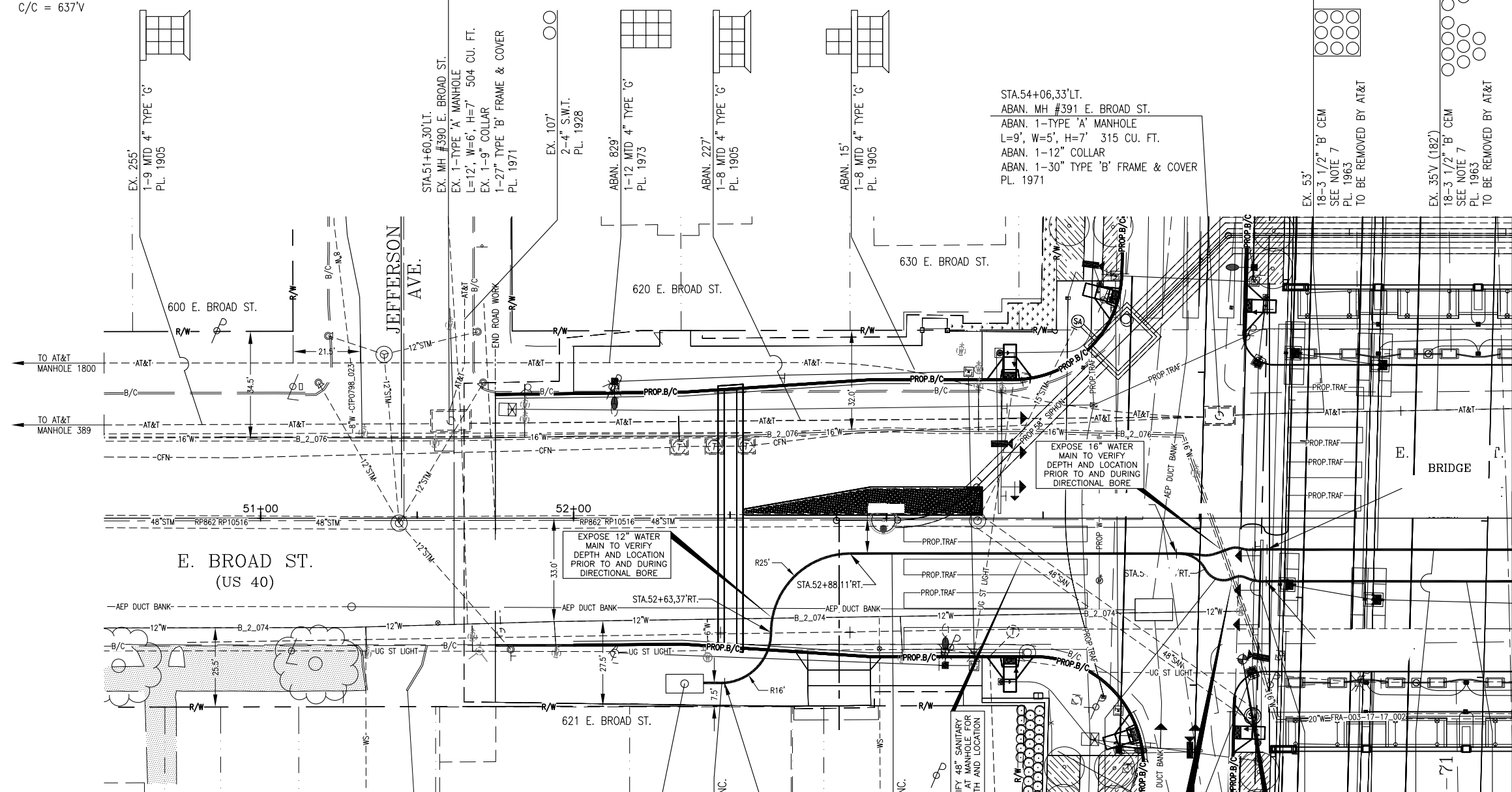
ESTIMATED QUANTITY FROM SHEET NO.	202	202	202	202	202	202	202	202	202	202	202	202	202	202	202	202				SPECIAL	
	PAVEMENT REMOVED SY	WALK REMOVED SF	CURB REMOVED FT	GUARDRAIL REMOVED FT	FENCE REMOVED FT	REMOVAL MISC.:FLAG POLE REMOVED EACH	REMOVAL MISC.:BRICK PAVERS REMOVED AND SALVAGED SF	REMOVAL MISC.:TREE GRATE REMOVED EACH	REMOVAL MISC.:LANDSCAPE LIGHT REMOVED EACH	REMOVAL MISC.: BOLLARD REMOVED EACH	REMOVAL MISC.: DUMPSTER REMOVED EACH	REMOVAL MISC.: DUMPSTER PAD REMOVED EACH	REMOVAL MISC.: POST REMOVED EACH	REMOVAL MISC.:WALL REMOVED FT	REMOVAL MISC.: STORAGE TRAILER REMOVED EACH					PARKING BLOCK REMOVED EACH	
255	3495	10976	958	42	36	1	325	5	2												
258	175	30	35		44																
261	348		146	19	499					1										4	
264					531																2
267	1529		647	417	278					3											
270	1728	15	311	500	500		58			1	2	2								1	
273	328			88	73																
416	546	2012	283		79								3	13							
TOTALS CARRIED TO GENERAL SUMMARY	8149	13033	2380	1066	2040	1	383	5	2	5	2	2	3	13	2					5	

ESTIMATED QUANTITY FROM SHEET NO.	252			608	608	608	608	608	608	608	608	608	608	609	609	609	609	609	609	622	626	SPECIAL
	FULL DEPTH PAVEMENT SAWING FT			4" CONCRETE WALK SF	8" CONCRETE WALK SF	WALKWAY, MISC.:CONCRETE STEPS WITH HANDRAIL LF	WALKWAY, MISC.:GRANITE PAVERS 'C' SF	WALKWAY, MISC.:BROAD STREET DETECTABLE WARNINGS SF	WALKWAY, MISC.:BRICK PAVER CROSSWALK SF	WALKWAY, MISC.:BRICK PAVER WALK SF	WALKWAY, MISC.:REPAIR BRICK PAVER WALK EACH	WALKWAY, MISC.:COLUMBUS CURB RAMP, TYPE A EACH	WALKWAY, MISC.:COLUMBUS CURB RAMP, TYPE H EACH	CURB, TYPE 6, AS PER PLAN FT	4" CONCRETE TRAFFIC ISLAND SY	CONCRETE MEDIAN SY	CURB, MISC.:STRAIGHT 18" GRANITE CURB "A" FT	CURB, MISC.:STRAIGHT 18" GRANITE CURB "B" FT	PORTABLE BARRIER, 32" (ROADWAY) FT	BARRIER REFLECTOR, TYPE I EACH	PRESSURE RELIEF JOINT, TYPE A FT	
255	203			18768	31				6534	3214		13		25		1845			1770			170
258				30															420			
261				2482										172					998			
264				2064						200									793			
267				1284	62								2	42					647			
270				2218	113	9							2	26					1007			
273				480	269														144			
416				197										450	22				14	2		
TOTALS CARRIED TO GENERAL SUMMARY	203			27523	475	9			6534	3214	200	13	4	715	22	1845	4009	1770	14	2		3490-E

MH #390-A TO MH #1801

W/W = 613'V
C/C = 637'V

RECORD NOTE: CLMBOH11 PLAT 90, 91 & 115



MATCH LINE STATION 55+00
SEE SHEET 102

BRIDGE CONTRACTOR TO PLACE
AT&T CONDUIT FROM MANHOLE 390A
TO MANHOLE 1801

CONSTRUCTION NOTES:

- EXISTING UTILITIES SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL PUBLIC AND PRIVATE UTILITIES PRIOR TO BEGINNING ANY EXCAVATION.
- CONTRACTOR SHALL REPLACE ALL DRIVEWAYS, SIDEWALKS, OR OTHER DISTURBED SURFACES TO A CONDITION EQUAL TO OR BETTER THAN THE PRIOR EXISTING CONDITIONS.
- EXISTING AT&T FACILITIES ARE SHOWN PER RECORDS AVAILABLE AND ARE ONLY APPROXIMATE. CONTRACTOR SHALL HAVE AT&T FACILITIES LOCATED TO DETERMINE EXACT LOCATIONS.
- CONTRACTOR SHALL MAINTAIN ACCESS TO ALL ADJACENT PROPERTIES DURING CONSTRUCTION OPERATIONS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND LOCATING ALL SEWERS, WATER, GAS, CABLE TV AND ELECTRIC SERVICES PRIOR TO BEGINNING ANY EXCAVATION.
- AT&T TO REMOVE ASBESTOS WRAPPED DUCTS FROM ABUTMENT TO ABUTMENT.
- ABATEMENT CONTRACTOR TO NOTIFY AT&T INSPECTOR D. JERMAN AT 614-256-1322 PRIOR TO REMOVAL OF ASBESTOS WRAPPED DUCTS AND UPON COMPLETION OF ABATEMENT.

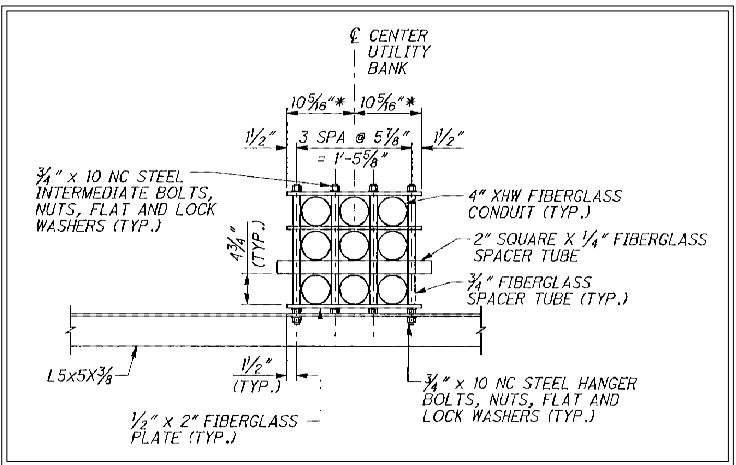
CODE: DESCRIPTION: QUANTITY:

MC130	4" PVC-C	1554
CONTROL POINT 218		
MAG NAIL IN SIDEWALK ON SOUTH SIDE OF BROAD STREET EAST OF ON RAMP TO I-71 SOUTH.		
N=715,725.212 E=1,832,992.081		ELEVATION 792.36
STA.54+13.77, 45.10' RT.		

PLAN PREPARED BY:
THAYER POWER AND COMMUNICATION
950 FREEWAY DRIVE N, COLUMBUS, OHIO 43229
PHONE: 614-431-9292 FAX: 614-431-9595

SCALE: HORIZONTAL: 1"=20' VERTICAL: 1"=5'	800-362-2764 Call Before You Dig
REF:	DATE SERVICE REQUEST

RNO	GEO LOC	WIRE CENTER	DATE ISSUED:
	L31101	CLMBOH11	
MUNICIPALITY	COUNTY	TOWNSHIP	TAX DIST
COLUMBUS	FRANKLIN	FRANKLIN	1/4 SEC
LOCATION & DESCRIPTION: E. BROAD ST. AT I-71 BRIDGE			
PLACE CONDUIT TO AVOID CONFLICTS WITH BRIDGE REPLACEMENT			
DA:	TC:	DATE:	07-09-18
DRAWN BY:	ORIG.	TELEPHONE	PLR:
THAYER	G. VANALMSICK	223-7276	MAJ. CODE
REVISION:			4C
			EW0#
			A012C1W
			PRINT 101 OF 115



UTILITY SUPPORT

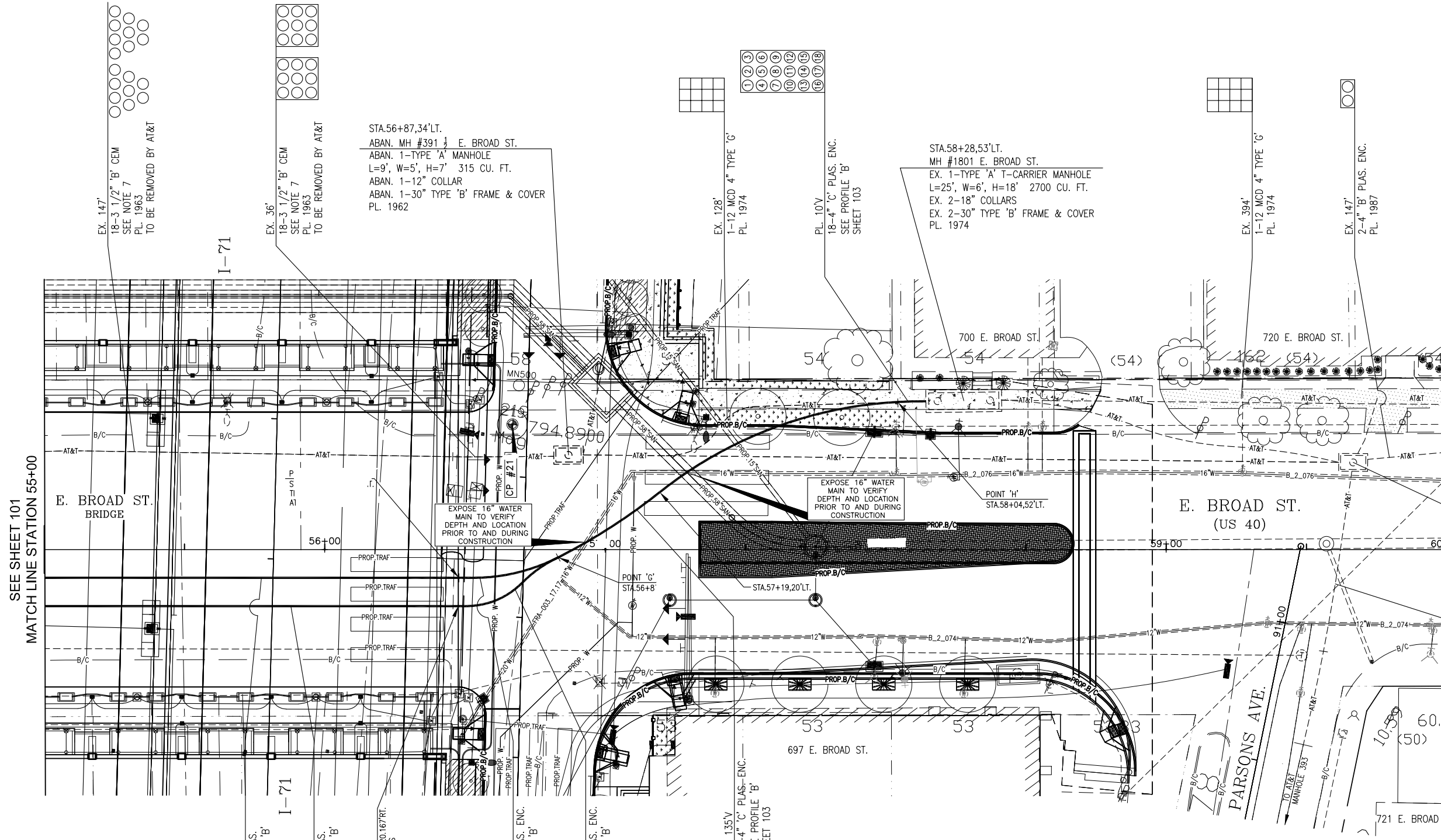
BETWEEN GIRDERS 9 & 10 AND 10 & 11

AT&T RELOCATION
STA. 50+50 TO STA. 55+00

FRA-71-17.46

2916-E
2 / 5

512
881



SEE SHEET 101
MATCH LINE STATION 55+00

BRIDGE CONTRACTOR TO PLACE
AT&T CONDUIT FROM MANHOLE 390A
TO MANHOLE 1801

STA.59+67,31'LT.
MH #392 E. BROAD ST.
EX. 1-TYPE 'A' PRECAST MANHOLE
L=10', W=5', H=7' 350 CU. FT.
EX. 1-6" COLLAR
EX. 1-30" TYPE 'B' FRAME & COVER
PL. 1948

CODE:	DESCRIPTION:	QUANTITY:
MC130	4" PVC-C	2520

CONTROL POINT 219
MAG NAIL IN SIDEWALK ON NORTH SIDE OF BROAD STREET AT ON
RAMP TO I-71 NORTH
N=715,849.499 E=1,833,230.185
STA.56+66.93,44.62'LT. ELEVATION 794.89

PLAN PREPARED BY:
THAYER POWER AND COMMUNICATION
950 FREEWAY DRIVE N, COLUMBUS, OHIO 43229
PHONE: 614-431-9292 FAX: 614-431-9595

REF:	DATE SERVICE REQUEST

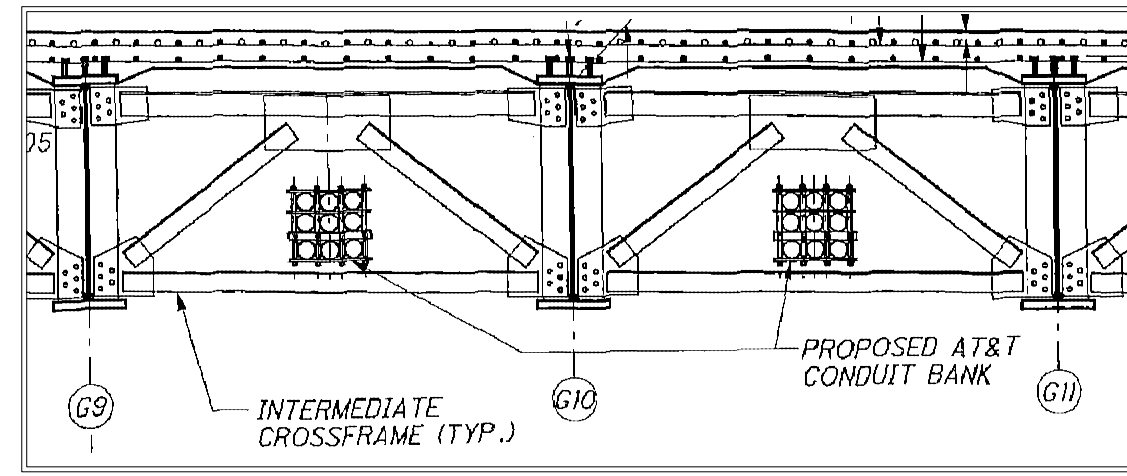
RNO	GEO LOC	WIRE CENTER	DATE ISSUED:
	L31101	CLMBOH11	
MUNICIPALITY	COUNTY	TOWNSHIP	1/4 SEC TAX DIST
COLUMBUS	FRANKLIN	FRANKLIN	

LOCATION & DESCRIPTION:
E. BROAD ST. AT I-71 BRIDGE

DA:	TC:	DATE:	07-09-18
DRAWN BY:	ORIG.	TELEPHONE	PLR:
THAYER	G. VANALMSICK	223-7276	MAJ. CODE
REVISION:			4C
			EWO#
			A012C1W
			PRINT 102 OF 115

- CONSTRUCTION NOTES:
- EXISTING UTILITIES SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL PUBLIC AND PRIVATE UTILITIES PRIOR TO BEGINNING ANY EXCAVATION.
 - CONTRACTOR SHALL REPLACE ALL DRIVEWAYS, SIDEWALKS, OR OTHER DISTURBED SURFACES TO A CONDITION EQUAL TO OR BETTER THAN THE PRIOR EXISTING CONDITIONS.
 - EXISTING AT&T FACILITIES ARE SHOWN PER RECORDS AVAILABLE AND ARE ONLY APPROXIMATE. CONTRACTOR SHALL HAVE AT&T FACILITIES LOCATED TO DETERMINE EXACT LOCATIONS.
 - CONTRACTOR SHALL MAINTAIN ACCESS TO ALL ADJACENT PROPERTIES DURING CONSTRUCTION OPERATIONS.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND LOCATING ALL SEWERS, WATER, GAS, CABLE TV AND ELECTRIC SERVICES PRIOR TO BEGINNING ANY EXCAVATION.
 - AT&T TO REMOVE ASBESTOS WRAPPED DUCTS FROM ABUTMENT TO ABUTMENT.
 - ABATEMENT CONTRACTOR TO NOTIFY AT&T INSPECTOR D. JERMAN AT 614-256-1322 PRIOR TO REMOVAL OF ASBESTOS WRAPPED DUCTS AND UPON COMPLETION OF ABATEMENT.

- 1 2 3 4 5 6 7 8 9
- 10 11 12 13 14 15 16 17 18
- 19 20 21 22 23 24 25 26 27 28 29 30
- 31 32 33 34 35 36 37 38 39 40
- 41 42 43 44 45 46 47 48 49 50
- 51 52 53 54 55 56 57 58 59 60
- 61 62 63 64 65 66 67 68 69 70
- 71 72 73 74 75 76 77 78 79 80
- 81 82 83 84 85 86 87 88 89 90
- 91 92 93 94 95 96 97 98 99 100



HALF TRANSVERSE SECTION

AT&T RELOCATION
STA. 55+00 TO STA. 60+00

FRA-71-17.46

2916-E
3 / 5
513
881

ITEM 632 INTERCONNECT, MISC.: FIBER OPTIC SPLICE ENCLOSURE, CLAMSHELL, 288 SPLICE

FIBER OPTIC CABLE SPLICES SHALL BE PERFORMED IN SPLICE ENCLOSURES AS SHOWN ON THE PLANS. THE SPLICE ENCLOSURES SHALL BE CORROSION RESISTANT, RODENT PROOF, RE-ENTERABLE, AND MANUFACTURER CERTIFIED FOR UNDERGROUND INSTALLATION.

288 CLAMSHELL SPLICE ENCLOSURES ARE TO BE INSTALLED IN 32", 36", OR 48" PULL BOXES OR MOUNTED AERIALY AS DIRECTED IN THE PLANS. CONTRACTOR SHALL ADVISE THE ENGINEER IN THE EVENT THAT CABLES CANNOT ENTER SPLICE ENCLOSURE PERPENDICULARLY TO CABLE PORT ENTRY PLATE, OR IF CABLE BENDS EXCEED MINIMUM INSTALLATION BEND RADIUS RATING AT THE ENCLOSURE ENTRY DUE TO EXISTING FIELD CONDITIONS SUCH AS INADEQUATE SPACE IN PULL BOX OR OTHER OBSTRUCTIONS. ADDITIONALLY, CONTRACTOR SHALL ADVISE THE ENGINEER PRIOR TO BEGINNING SPLICING IF PLANNED NUMBER OF SPLICES CANNOT BE NEATLY AND SECURELY CONTAINED IN THE TYPE OF SPLICE ENCLOSURE CALLED OUT IN THE PLANS.

FOR UNDERGROUND INSTALLATION, SPLICE ENCLOSURE AND SLACK CABLE MUST FIT WITHIN PULL BOX TO AVOID DAMAGE TO THE ENCLOSURE OR CABLE UPON CLOSING THE PULL BOX LID.

FOR AERIAL INSTALLATION, EXTENDED STRENGTH BRACKET SHALL BE INSTALLED WITH THE SPLICE ENCLOSURE TO ENSURE CABLE ENTRIES REMAIN PERPENDICULAR AND SECURELY FASTENED TO THE PORT ENTRY PLATE. AERIAL MOUNTED SLACK STORAGE RACKS ARE TO BE USED FOR ALL INSTALLATIONS WHERE CABLES ARE LOOPED OR BENT 180. THE COST OF THE STRAIN RELIEF HARDWARE, STRENGTH BRACKETS, TIES OR OTHER INSTALLATION HARDWARE IS CONSIDERED INCIDENTAL TO THIS PAY ITEM.

THE SPLICE ENCLOSURE SHALL BE WEATHERPROOF, WATERPROOF, CORROSION RESISTANT, RODENT PROOF, RE-ENTERABLE, AND CRUSH RESISTANT. CLAMSHELL ENCLOSURES SHALL HAVE UPPER AND LOWER PIECES WITH CABLE ENTRY PLATE THAT ARE TIGHTENED DOWN AND SEALED USING SCREWS / BOLTS. DOME ENCLOSURES SHALL BE SINGLE TUBE WITH CABLE ENTRY PLATE. THE SPLICE ENCLOSURE SHALL EASILY FIT INTO PULL BOXES ALONG WITH LOOPS OF SLACK CABLE IN BOX (APPROX. 150 FT) THE SPLICE ENCLOSURE SHALL BE A COMPLETE KIT INCLUDING ALL COMPONENTS AND HARDWARE FOR INSTALLATION. THE SPLICE ENCLOSURE SHALL BE SUITABLE FOR APPLICATION IN THE TEMPERATURE RANGE OF -40 C TO +70 C. THE SPLICE ENCLOSURE SHALL PROVIDE SPACE, ALLOWING ENTRY OF FIBER OPTIC CABLE WITHOUT EXCEEDING THE MINIMUM BEND RADIUS OF THE CABLE. THE ENCLOSURE SHALL HAVE PROVISIONS FOR CABLE AND PIGTAIL STRAIN-RELIEF, AND SHALL BE EQUIPPED WITH STRAIN-RELIEF HARDWARE. THE SPLICE ENCLOSURE SHALL BE EQUIPPED WITH ELASTOMERIC SPLICE BLOCKS ENCLOSED WITHIN MANUFACTURER SPLICE TRAYS AND SHALL PERMIT SELECTIVE FIBER SPLICING (LOOPING A BACKBONE CABLE IN AND OUT WHILE ONLY CUTTING INTO THE DESIRED FIBERS ALL BUFFER TUBES NOT SHOWN AS BEING SPLICED IN THE PLANS ARE TO BE SECURELY COILED WITHIN THE SPLICE ENCLOSURE). THE SIZE OF THE CLOSURE SHALL ALLOW ALL THE FIBERS OF THE LARGEST OPTICAL FIBER TRUNK CABLE TO BE FUSION SPLICED TO A SECOND CABLE OF THE SAME SIZE, PLUS ADDITIONAL PIGTAILS. THE SPLICE ENCLOSURE SHALL ALLOW SPLICING OF ALL FIBERS UP TO THE MAXIMUM NUMBER SPECIFIED ON THE CONTRACT DRAWINGS.

FIBER OPTIC CABLE SPLICE ENCLOSURES SHALL HAVE A THREE-SECTION, 4, 6, OR 8 PORT END PLATE WITH 7/8" DIAMETER PORTS. PLUG KITS AND BRACKETS SHALL BE INCIDENTAL TO PAY ITEM. ANY PROPOSED EQUIVALENT MUST BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. FIBER OPTIC CABLE SPLICE ENCLOSURES MUST MEET THE REQUIREMENTS LISTED UNDER BELLCORE TESTING REQUIREMENT GR-771-CORE AND UL 1863.

THE WORK AS DESCRIBED WILL BE MEASURED AS ONE UNIT FOR EACH OF THE INSTALLATIONS SPECIFIED, AND SHALL INCLUDE ALL MATERIALS, EQUIPMENT AND INCIDENTALS, COMPLETE IN PLACE. TERMINATIONS, CONNECTIONS, AND OTHER MISCELLANEOUS ITEMS AND MATERIALS SHALL BE INCIDENTAL TO THIS WORK AND NO SEPARATE PAYMENT WILL BE MADE. 12/2/15

ITEM 632 INTERCONNECT, MISC.: FIBER OPTIC SPLICE ENCLOSURE, DOME, 800 SPLICE

FIBER OPTIC CABLE SPLICES SHALL BE PERFORMED IN SPLICE ENCLOSURES AS SHOWN ON THE PLANS. THE SPLICE ENCLOSURES SHALL BE CORROSION RESISTANT, RODENT PROOF, RE-ENTERABLE, AND MANUFACTURER CERTIFIED FOR UNDERGROUND INSTALLATION.

THE 800 DOME SPLICE ENCLOSURES SHALL BE 9.5"X28" COYOTE DOME ENCLOSURE, PLP CATALOG NUMBER 80061057 WITH COYOTE SPLICE TRAY36 COUNT (USE ONLY WHEN FEWER THAN 500 SPLICES ARE REQUIRED) PLP CATALOG NUMBER 80805514 OR 80 COUNT (USE ONLY WHEN 500 OR MORE SPLICES ARE REQUIRED) PLP CATALOG NUMBER LGST52 AND ARE TO BE INSTALLED IN 48" PULL BOXES OR MOUNTED AERIALY AS DIRECTED IN THE PLANS. CONTRACTOR SHALL ADVISE THE ENGINEER IN THE EVENT THAT CABLES CANNOT ENTER SPLICE ENCLOSURE PERPENDICULARLY TO CABLE PORT ENTRY PLATE, OR IF CABLE BENDS EXCEED MINIMUM INSTALLATION BEND RADIUS RATING AT THE ENCLOSURE ENTRY DUE TO EXISTING FIELD CONDITIONS SUCH AS INADEQUATE SPACE IN PULL BOX OR OTHER OBSTRUCTIONS. ADDITIONALLY, CONTRACTOR SHALL ADVISE THE ENGINEER PRIOR TO BEGINNING SPLICING IF PLANNED NUMBER OF SPLICES CANNOT BE NEATLY AND SECURELY CONTAINED IN THE TYPE OF SPLICE ENCLOSURE CALLED OUT IN THE PLANS.

FOR UNDERGROUND INSTALLATION, SPLICE ENCLOSURE AND SLACK CABLE MUST FIT WITHIN PULL BOX TO AVOID DAMAGE TO THE ENCLOSURE OR CABLE UPON CLOSING THE PULL BOX LID.

FOR AERIAL INSTALLATION, EXTENDED STRENGTH BRACKET SHALL BE INSTALLED WITH THE SPLICE ENCLOSURE TO ENSURE CABLE ENTRIES REMAIN PERPENDICULAR AND SECURELY FASTENED TO THE PORT ENTRY PLATE. AERIAL MOUNTED SLACK STORAGE RACKS ARE TO BE USED FOR ALL INSTALLATIONS WHERE CABLES ARE LOOPED OR BENT 180. THE COST OF THE STRAIN RELIEF HARDWARE, STRENGTH BRACKETS, TIES OR OTHER INSTALLATION HARDWARE IS CONSIDERED INCIDENTAL TO THIS PAY ITEM.

ALL BUFFER TUBES NOT SHOWN AS BEING SPLICED IN THE PLANS ARE TO BE SECURELY COILED WITHIN THE SPLICE ENCLOSURE.

FIBER OPTIC CABLE SPLICE ENCLOSURES SHALL HAVE A ONE SECTION, 7 PORT END PLATE. EACH CABLE ENTERING THE ENCLOSURE SHALL BE SEALED WITH THE APPROPRIATELY SIZED GROMMET. GROMMETS, PLUG KITS AND BRACKETS SHALL BE INCIDENTAL TO PAY ITEM. ANY PROPOSED EQUIVALENT MUST BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. FIBER OPTIC CABLE SPLICE ENCLOSURES MUST MEET THE REQUIREMENTS LISTED UNDER BELLCORE TESTING REQUIREMENT GR-771-CORE AND UL 1863.

THE WORK AS DESCRIBED WILL BE MEASURED AS ONE UNIT FOR EACH OF THE INSTALLATIONS SPECIFIED, AND SHALL INCLUDE ALL MATERIALS, EQUIPMENT AND INCIDENTALS, COMPLETE IN PLACE. TERMINATIONS, CONNECTIONS, AND OTHER MISCELLANEOUS ITEMS AND MATERIALS SHALL BE INCIDENTAL TO THIS WORK AND NO SEPARATE PAYMENT WILL BE MADE. 8/15/16

**ITEM 804 - DROP CABLE, 24 FIBER, AS PER PLAN
ITEM 804 - FIBER TERMINATION PANEL, 24 FIBER, AS PER PLAN
ITEM 804 - FUSION SPLICE, AS PER PLAN
ITEM 804 - FIBER OPTIC CABLE, MISC: 144 FIBER**

THESE ITEMS SHALL BE PER THE CITY OF COLUMBUS SUPPLEMENTAL SPECIFICATION 1620.

INTERCONNECT SUBSUMMARY					
ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	SEE SHEET
625	25920	2660	FT	CONDUIT, MISC.: ENCASED INTERCONNECT CONDUIT BANK, TC-2, SCH 40	583
625	31510	3	EACH	PULL BOX REMOVED (INTERCONNECT)	
625	31600	11	EACH	PULL BOX, MISC.: CONCRETE, 32"	583
625	31600	3	EACH	PULL BOX, MISC.: CONCRETE, 48"	583
632	62820	2	EACH	INTERCONNECT, MISC.: FIBER OPTIC SPLICE ENCLOSURE, CLAMSHELL, 288 SPLICE	584
632	62820	2	EACH	INTERCONNECT, MISC.: FIBER OPTIC SPLICE ENCLOSURE, DOME, 800 SPLICE	584
633	99000	1	EACH	CONTROLLER ITEM, MISC.: LAYER 2 ETHERNET SWITCH	583
633	99000	2	EACH	CONTROLLER ITEM, MISC.: FIBER OPTIC ETHERNET TRANSCEIVER, SHORT RANGE	583
804	34023	5	EACH	FIBER TERMINATION PANEL, 24 FIBER, AS PER PLAN	584
804	35001	408	EACH	FUSION SPLICE, AS PER PLAN	584
804	98000	4590	FT	FIBER OPTIC CABLE, MISC.:144 FIBER	584



CALCULATED
EMW
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RMK

INTERCONNECT NOTES

FRA-71-17.46

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LEGEND

-  PROPOSED 32" OR 48" ROUND PULLBOX
-  PROPOSED CONDUIT DUCT BANK

NOTE:
ASSOCIATED DUCT BANK DETAILS
ARE ON THE FOLLOWING SHEET.

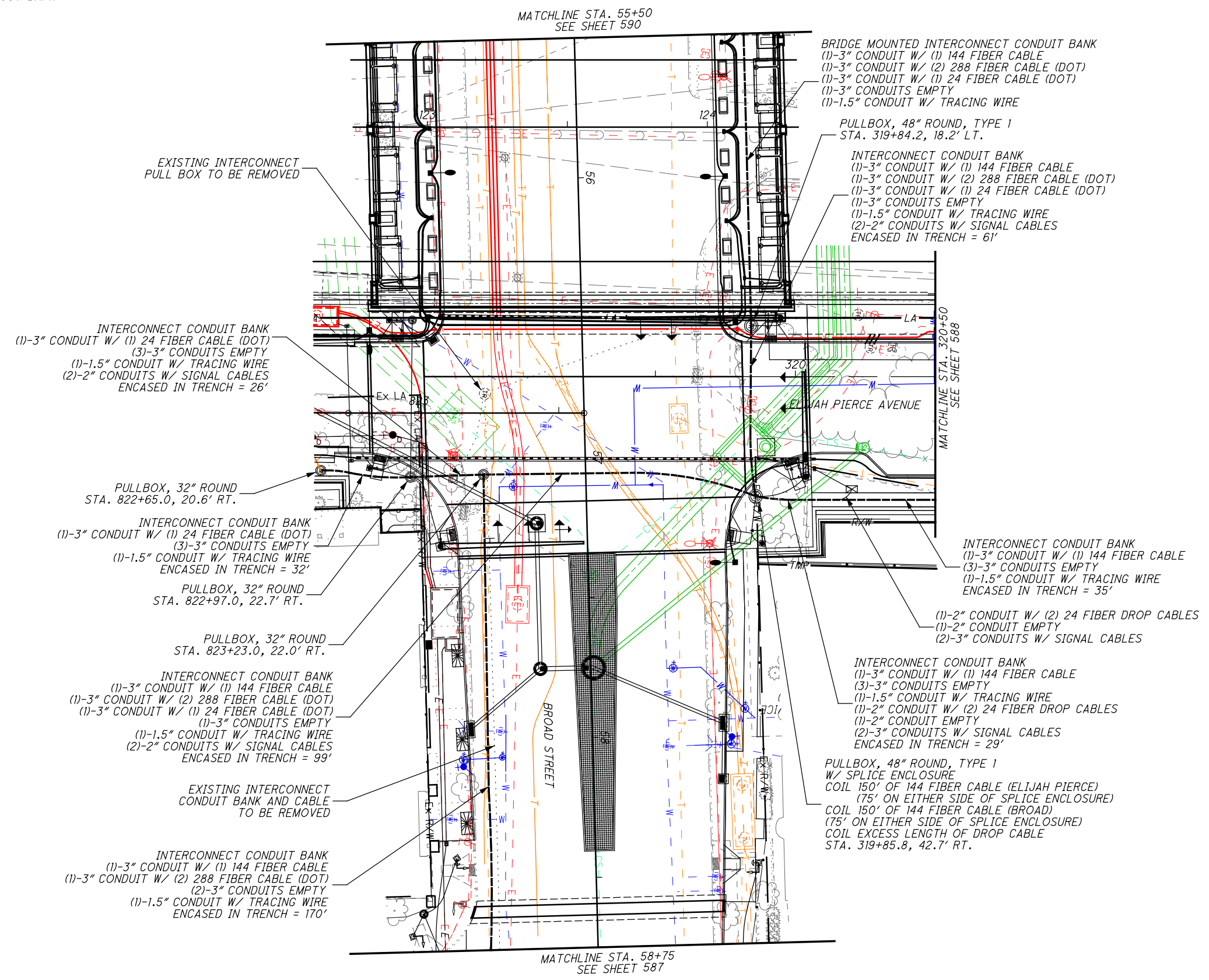


CALCULATED	EMW	CHECKED	RMK

**TRAFFIC SIGNAL INTERCONNECT PLAN
ELIJAH PIERCE AVENUE**

FRA-71-17.46

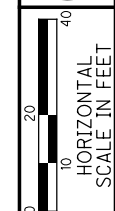
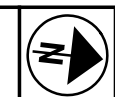
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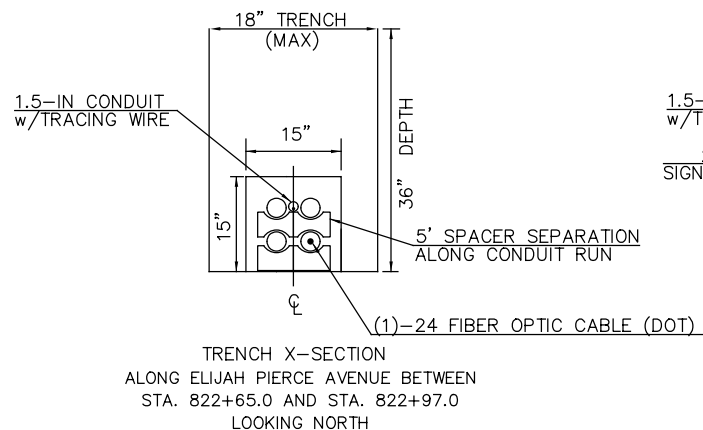
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TRAFFIC SIGNAL INTERCONNECT PLAN
ELIJAH PIERCE AVENUE AND BROAD STREET

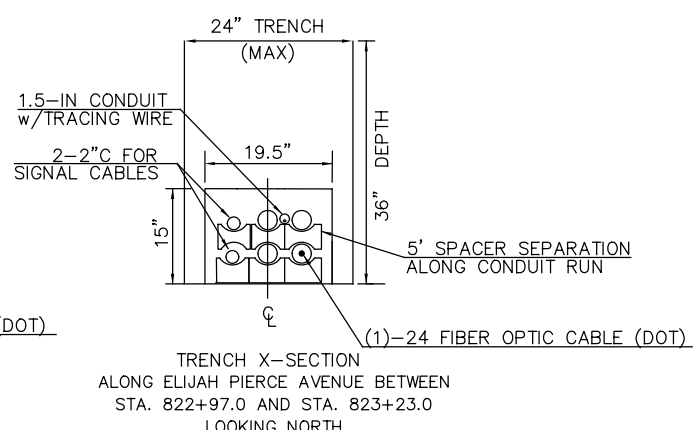
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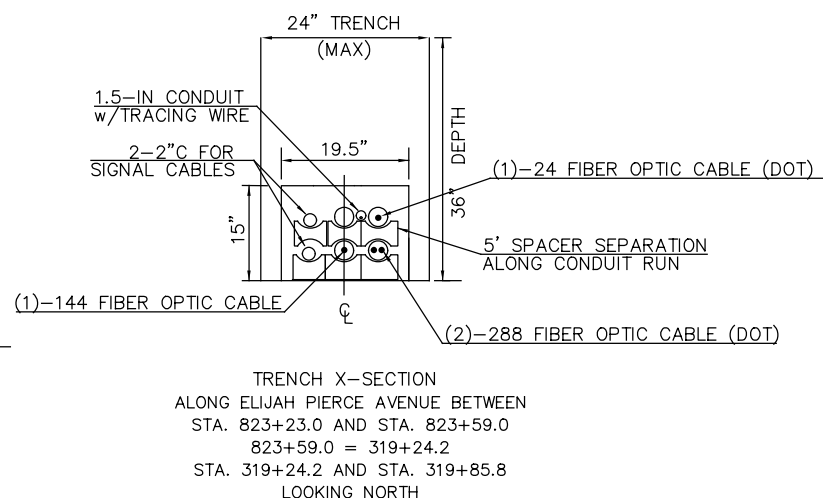
4-3"C + 1-1.5" CONDUIT BANK
3" CONCRETE ENCASEMENT
6-1/2" C-C CONDUIT SEPARATION



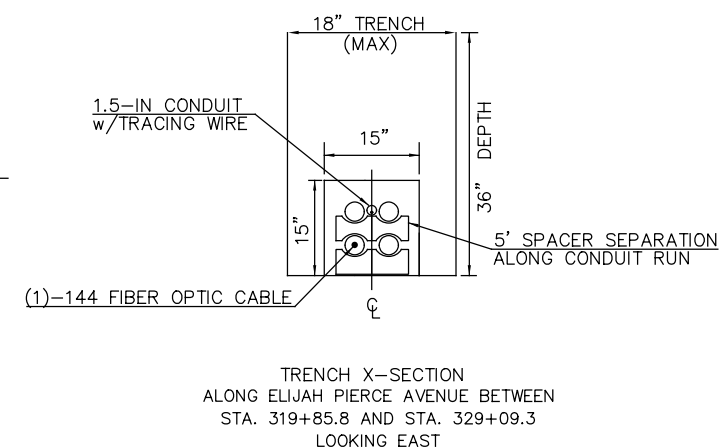
4-3"C + 2-2"C + 1-1.5" CONDUIT BANK
3" CONCRETE ENCASEMENT
6-1/2" C-C CONDUIT SEPARATION



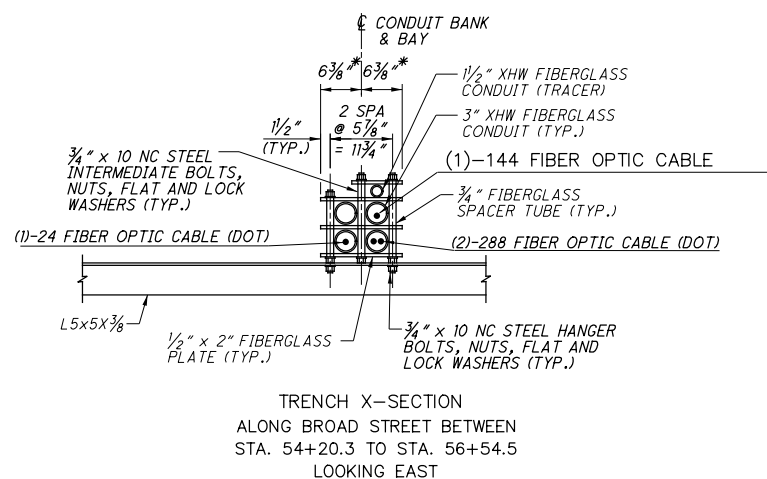
4-3"C + 2-2"C + 1-1.5" CONDUIT BANK
3" CONCRETE ENCASEMENT
6-1/2" C-C CONDUIT SEPARATION



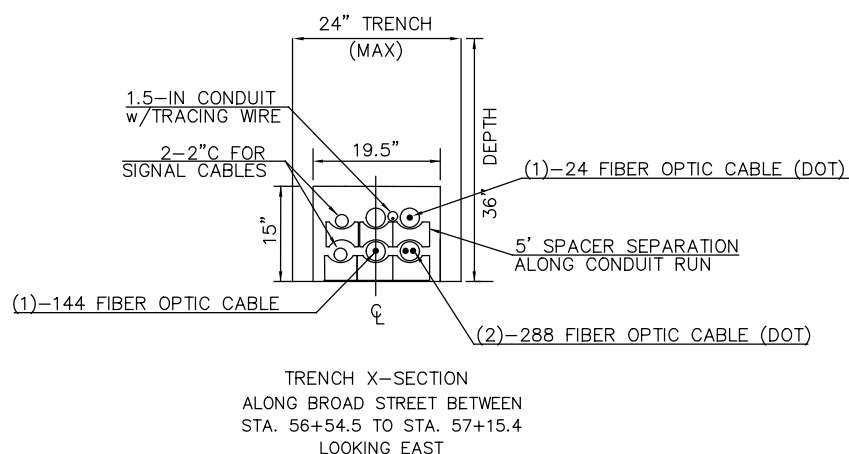
4-3"C + 1-1.5" CONDUIT BANK
3" CONCRETE ENCASEMENT
5-1/2" C-C CONDUIT SEPARATION



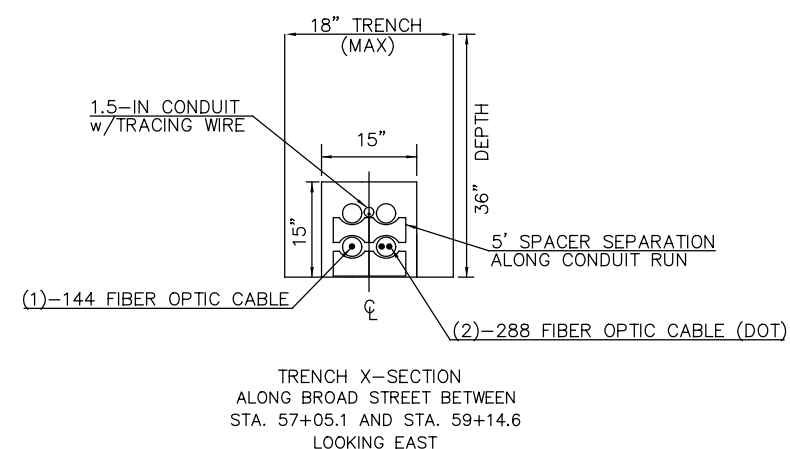
4-3"C + 1-1.5" CONDUIT BANK
ON BRIDGE



4-3"C, 2-2"C + 1-1.5" CONDUIT BANK
3" CONCRETE ENCASEMENT
6-1/2" C-C CONDUIT SEPARATION



4-3"C + 1-1.5" CONDUIT BANK
3" CONCRETE ENCASEMENT
6-1/2" C-C CONDUIT SEPARATION



NOTE:
WIRE-WRAP EACH TOP-ROW CONDUIT
TO SPACERS TO HOLD IN PLACE.

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LEGEND

- ⊙ PROPOSED 32" OR 48" ROUND PULLBOX
- PROPOSED CONDUIT DUCT BANK

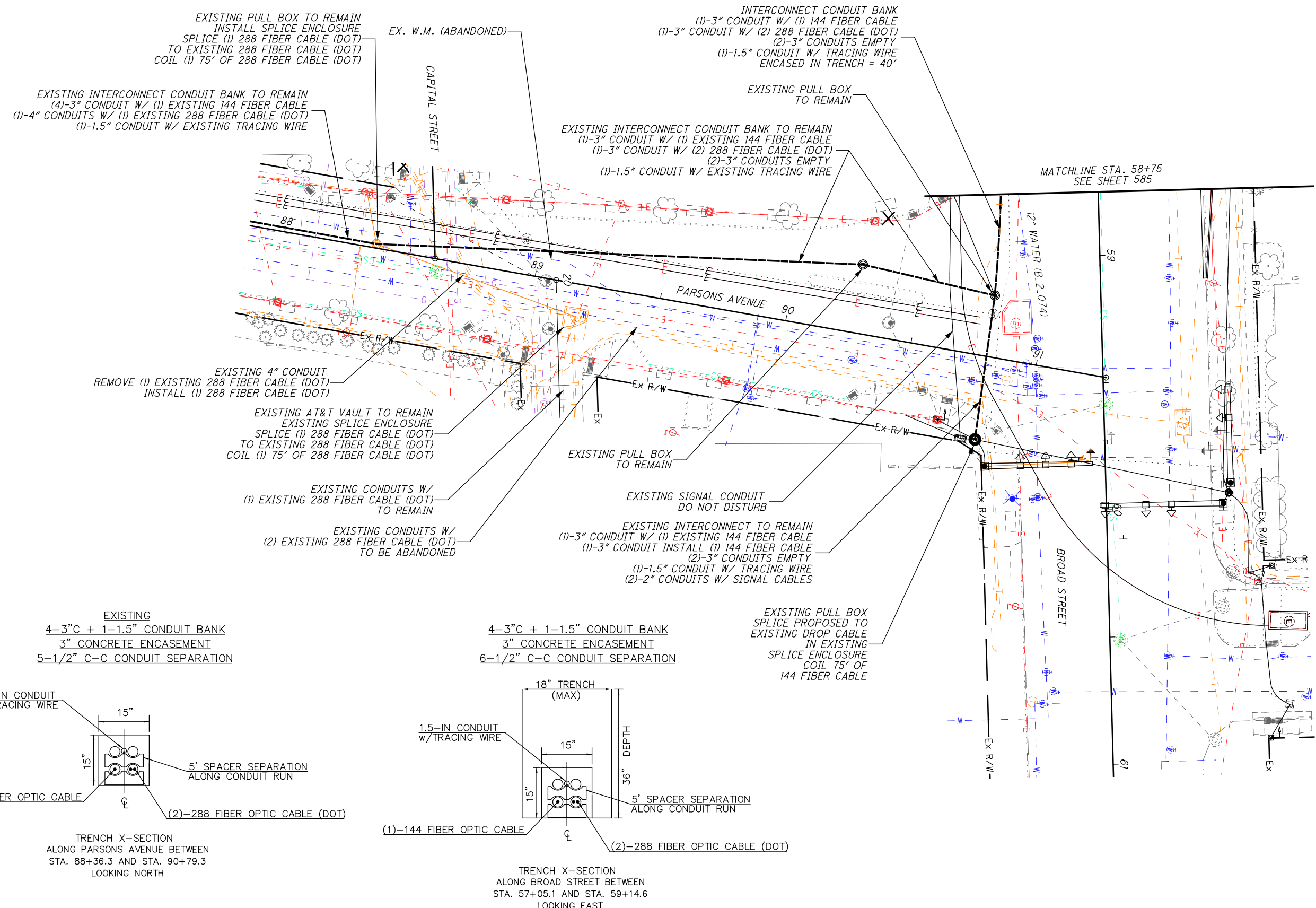


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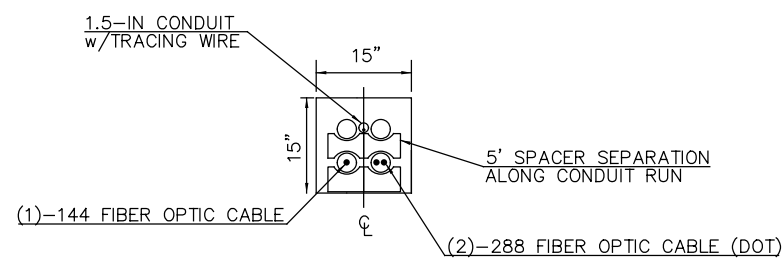
**TRAFFIC SIGNAL INTERCONNECT PLAN
PARSONS AVENUE**

FRA-71-17.46

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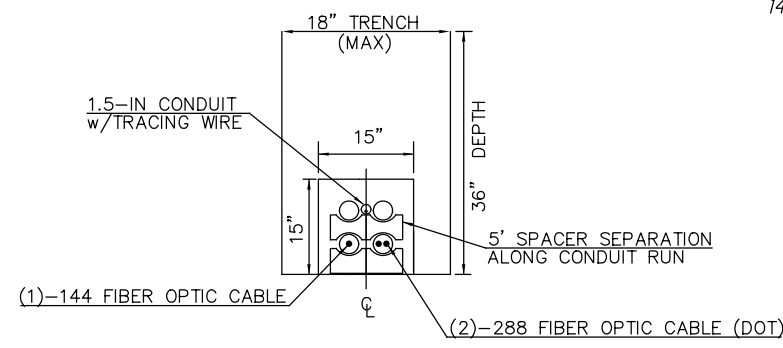


EXISTING
4-3" C + 1-1.5" CONDUIT BANK
3" CONCRETE ENCASUREMENT
5-1/2" C-C CONDUIT SEPARATION



TRENCH X-SECTION
ALONG PARSONS AVENUE BETWEEN
STA. 88+36.3 AND STA. 90+79.3
LOOKING NORTH

4-3" C + 1-1.5" CONDUIT BANK
3" CONCRETE ENCASUREMENT
6-1/2" C-C CONDUIT SEPARATION



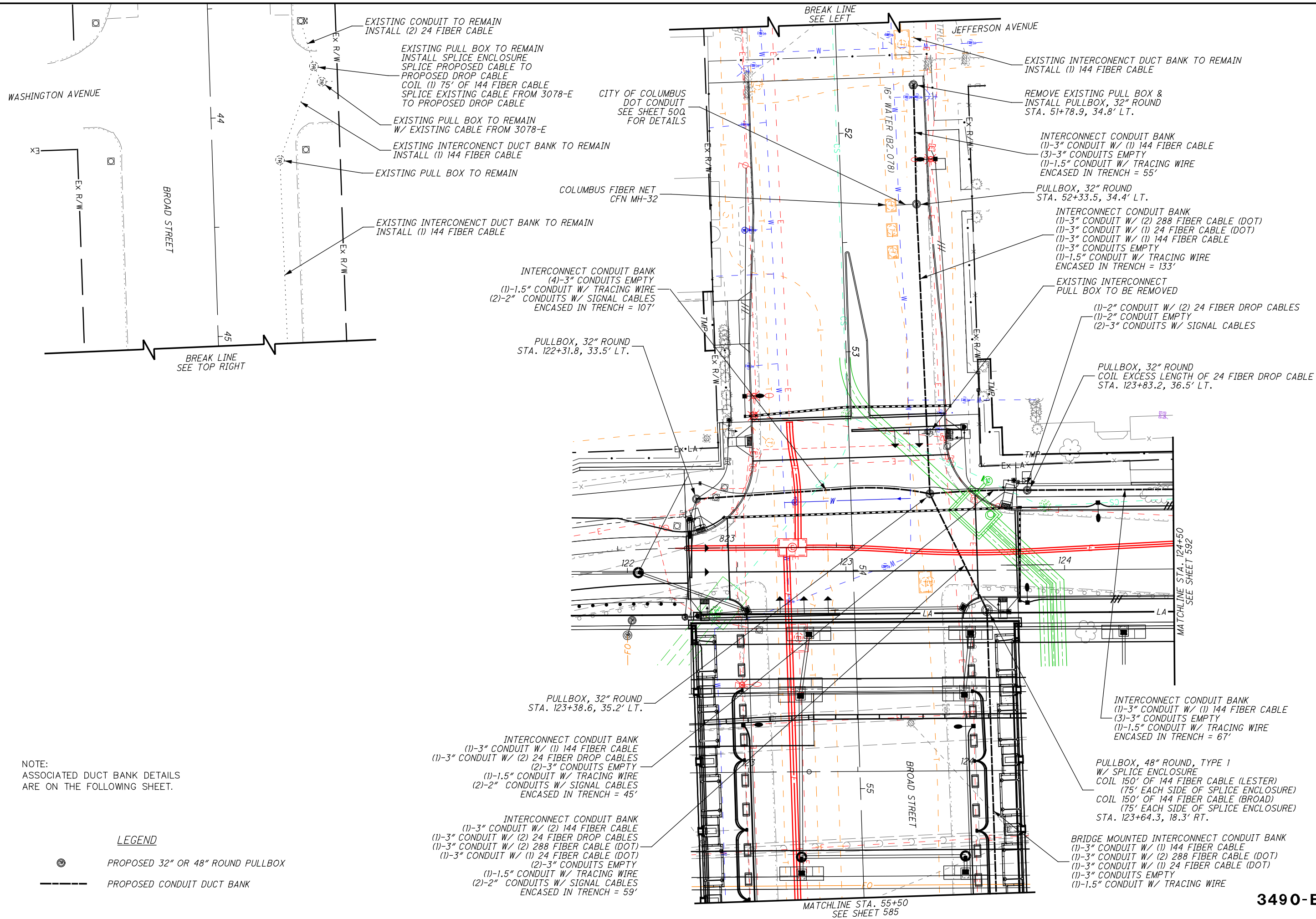
TRENCH X-SECTION
ALONG BROAD STREET BETWEEN
STA. 57+05.1 AND STA. 59+14.6
LOOKING EAST

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NOTE:
ASSOCIATED DUCT BANK DETAILS
ARE ON THE FOLLOWING SHEET.

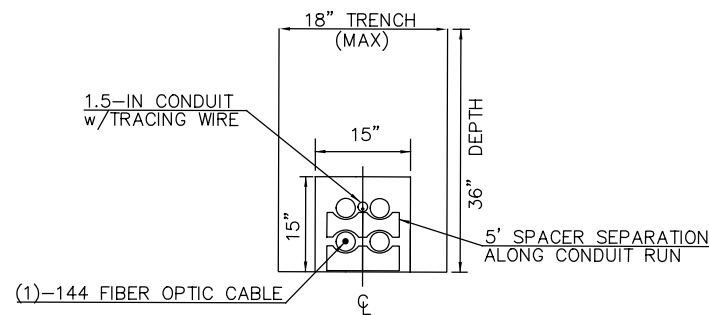
LEGEND

- PROPOSED 32" OR 48" ROUND PULLBOX
- PROPOSED CONDUIT DUCT BANK

- PULLBOX, 32" ROUND
STA. 123+38.6, 35.2' LT.
- INTERCONNECT CONDUIT BANK
(1)-3" CONDUIT W/ (1) 144 FIBER CABLE
(1)-3" CONDUIT W/ (2) 24 FIBER DROP CABLES
(2)-3" CONDUITS EMPTY
(1)-1.5" CONDUIT W/ TRACING WIRE
(2)-2" CONDUITS W/ SIGNAL CABLES
ENCASED IN TRENCH = 45'
- INTERCONNECT CONDUIT BANK
(1)-3" CONDUIT W/ (2) 144 FIBER CABLE
(1)-3" CONDUIT W/ (2) 24 FIBER DROP CABLES
(1)-3" CONDUIT W/ (2) 288 FIBER CABLE (DOT)
(1)-3" CONDUIT W/ (1) 24 FIBER CABLE (DOT)
(2)-3" CONDUITS EMPTY
(1)-1.5" CONDUIT W/ TRACING WIRE
(2)-2" CONDUITS W/ SIGNAL CABLES
ENCASED IN TRENCH = 59'

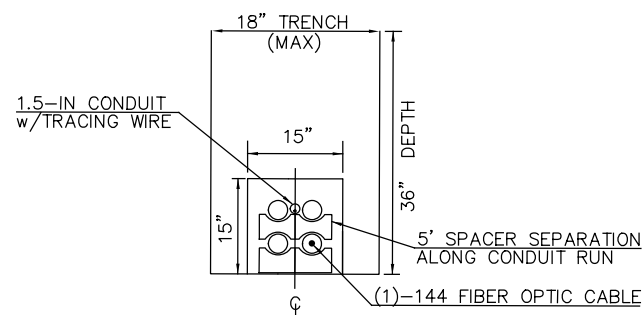
- INTERCONNECT CONDUIT BANK
(1)-3" CONDUIT W/ (1) 144 FIBER CABLE
(3)-3" CONDUITS EMPTY
(1)-1.5" CONDUIT W/ TRACING WIRE
ENCASED IN TRENCH = 67'
- PULLBOX, 48" ROUND, TYPE 1
W/ SPLICE ENCLOSURE
COIL 150' OF 144 FIBER CABLE (LESTER)
(75' EACH SIDE OF SPLICE ENCLOSURE)
COIL 150' OF 144 FIBER CABLE (BROAD)
(75' EACH SIDE OF SPLICE ENCLOSURE)
STA. 123+64.3, 18.3' RT.
- BRIDGE MOUNTED INTERCONNECT CONDUIT BANK
(1)-3" CONDUIT W/ (1) 144 FIBER CABLE
(1)-3" CONDUIT W/ (2) 288 FIBER CABLE (DOT)
(1)-3" CONDUIT W/ (1) 24 FIBER CABLE (DOT)
(1)-3" CONDUITS EMPTY
(1)-1.5" CONDUIT W/ TRACING WIRE

4-3"C + 1-1.5" CONDUIT BANK
 3" CONCRETE ENCASEMENT
 5-1/2" C-C CONDUIT SEPARATION



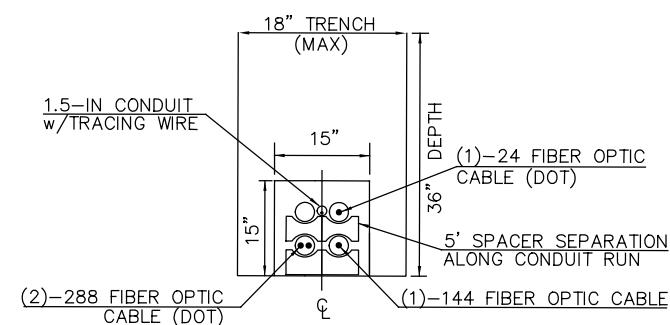
TRENCH X-SECTION
 ALONG LESTER DRIVE BETWEEN
 STA. 123+83.2 AND STA. 132+77.8
 LOOKING NORTH

4-3"C + 1-1.5" CONDUIT BANK
 3" CONCRETE ENCASEMENT
 5-1/2" C-C CONDUIT SEPARATION



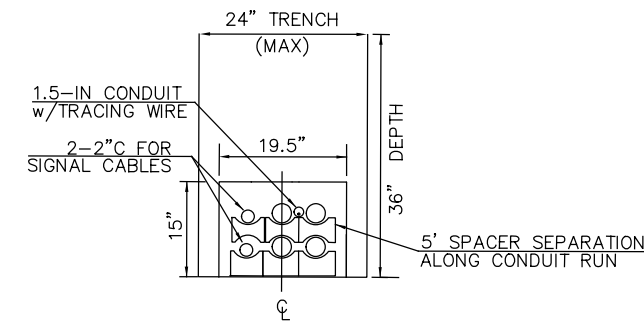
TRENCH X-SECTION
 ALONG BROAD STREET BETWEEN
 STA. 51+78.9 AND STA. 52+33.5
 LOOKING EAST

4-3"C + 1-1.5" CONDUIT BANK
 3" CONCRETE ENCASEMENT
 6-1/2" C-C CONDUIT SEPARATION



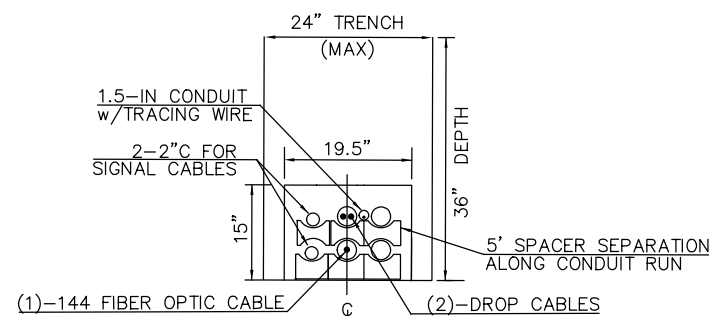
TRENCH X-SECTION
 ALONG BROAD STREET BETWEEN
 STA. 52+33.5 AND STA. 53+66.2
 LOOKING EAST

4-3"C + 2-2"C + 1-1.5" CONDUIT BANK
 3" CONCRETE ENCASEMENT
 5-1/2" C-C CONDUIT SEPARATION



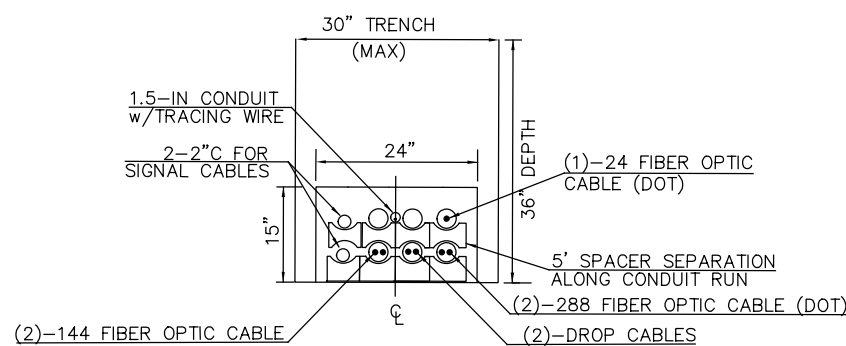
TRENCH X-SECTION
 ALONG LESTER DRIVE BETWEEN
 STA. 122+31.8 TO STA. 123+38.6
 LOOKING NORTH

4-3"C + 2-2"C + 1-1.5" CONDUIT BANK
 3" CONCRETE ENCASEMENT
 5-1/2" C-C CONDUIT SEPARATION



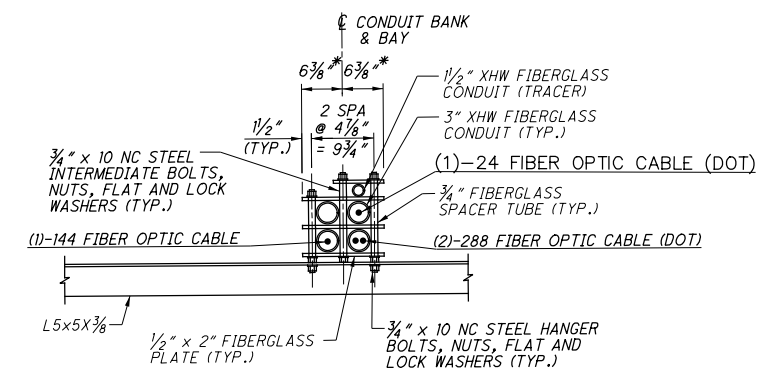
TRENCH X-SECTION
 ALONG LESTER DRIVE BETWEEN
 STA. 123+38.6 TO STA. 123+83.2
 LOOKING NORTH

6-3"C, 2-2"C + 1-1.5" CONDUIT BANK
 3" CONCRETE ENCASEMENT
 6-1/2" C-C CONDUIT SEPARATION



TRENCH X-SECTION
 ALONG BROAD STREET BETWEEN
 STA. 53+66.2 TO STA. 54+20.3
 LOOKING EAST

4-3"C + 1-1.5" CONDUIT BANK
 ON BRIDGE



TRENCH X-SECTION
 ALONG BROAD STREET BETWEEN
 STA. 54+20.3 TO STA. 56+54.5
 LOOKING EAST

NOTE:
 WIRE-WRAP EACH TOP-ROW CONDUIT
 TO SPACERS TO HOLD IN PLACE.

TRAFFIC SURVEILLANCE SUBSUMMARY					
ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	SEE SHEET
202	98000	LS		REMOVAL MISC.: REMOVAL OF PROJECT 1 PERMANENT ITS	607
202	98000	LS		REMOVAL MISC.: REMOVAL OF PROJECT 3 TEMPORARY ITS	607
625	25408	56	FT	CONDUIT, 2", 725.051 (SURVEILLANCE)	
625	25504	365	FT	CONDUIT, 3", 725.051 (SURVEILLANCE)	
625	25750	3126	FT	CONDUIT, 4", MULTICELL, 725.20, EPC-40	603
625	25802	52	FT	CONDUIT, CONCRETE ENCASED, 4", MULTICELL, EPC-40	603
625	25900	646	FT	CONDUIT, JACKED OR DRILLED, 4" MULTICELL, EPC-80	603
625	25906	131	FT	CONDUIT, JACKED OR DRILLED, 725.051, 3"	
625	29100	473	FT	TRENCH, 36" DEEP	
625	29931	6	EACH	MEDIAN JUNCTION BOX, AS PER PLAN	603
625	30700	7	EACH	PULL BOX, 725.08, 18"	
625	31510	5	EACH	PULL BOX REMOVED (SURVEILLANCE)	
625	31600	4	EACH	PULL BOX, MISC.: CONCRETE, 32" (SURVEILLANCE)	604
625	32000	1	EACH	GROUND ROD	
625	34000	3	EACH	POWER SERVICE	
630	03100	27	FT	GROUND MOUNTED SUPPORT, NO. 3 POST	
630	80100	24	SF	SIGN, FLAT SHEET	
632	04905	3	EACH	VEHICULAR SIGNAL HEAD, (LED), 2-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN	604
632	26500	4	EACH	DETECTOR LOOP	
632	28200	3	EACH	DISCONNECT SWITCH WITH ENCLOSURE	
632	29901	1893	FT	MESSENGER WIRE, 7 STRAND, 1/4" DIAMETER WITH ACCESSORIES, AS PER PLAN	604
632	40500	372	FT	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG	
632	64010	1	EACH	SIGNAL SUPPORT FOUNDATION	
632	65300	400	FT	LOOP DETECTOR LEAD-IN CABLE, 2 CONDUCTOR, NO. 14 AWG	
632	68300	610	FT	POWER CABLE, 3 CONDUCTOR, NO. 6 AWG	
632	70401	3	EACH	CONDUIT RISER, 2" DIAMETER, AS PER PLAN	604
632	80402	1	EACH	SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 4	
632	89301	12	EACH	WOOD POLE, AS PER PLAN	604
632	90400	1	EACH	SIGNALIZATION, MISC.: RAMP METER SIGN	604
632	90400	1	EACH	SIGNALIZATION, MISC.: REMOVAL OF SIDE-FIRED RADAR DETECTOR	603
633	67100	3	EACH	CABINET FOUNDATION	
633	67200	3	EACH	CONTROLLER WORK PAD	
804	15050	4783	FT	FIBER OPTIC CABLE, 288 FIBER	
804	32060	46	FT	DROP CABLE, 24 FIBER	
804	34022	2	EACH	FIBER TERMINATION PANEL, 24 FIBER	
804	36000	2	EACH	SLACK INSTALLATION	
804	37000	2	EACH	SPLICE ENCLOSURE, BUTT STYLE	
804	98000	7720	FT	FIBER OPTIC CABLE, MISC.: 96 FIBER	603
809	60000	1	EACH	CCTV IP-CAMERA SYSTEM, DOME-TYPE	
809	60010	1	EACH	CCTV IP-CAMERA SYSTEM, TYPE HD, WALL/TUNNEL	
809	61012	1	EACH	CCTV CONCRETE POLE, 50 FEET	
809	61090	1	EACH	CCTV LOWERING UNIT	
809	65000	2	EACH	ITS CABINET - GROUND MOUNTED	
809	65030	1	EACH	ITS CABINET - RAMP METER	
809	68900	1	EACH	SIDE-FIRED RADAR DETECTOR	
809	69122	1	EACH	ATC V6.24 CONTROLLER	
809	70000	LS		MAINTAINING ITS DURING CONSTRUCTION	603

CALCULATED
JML
CHECKED
RMK

TRAFFIC SURVEILLANCE
SUBSUMMARY

FRA-71-17.46

605
881

- NOTES:
1. INSTALL TRACER WIRE ABOVE TOP OF 4" CONDUIT.
 2. 4" MULTI-CELL CONDUIT CONTAINS 4 - 1 1/4" INNER DUCTS PER PROJECT DESIGN CRITERIA.
 3. INSTALL LATERAL FIBER OPTIC CABLE WITH 150' COILED SLACK IN PULLBOX FOR FUTURE CONNECTION (BY OTHERS), AND RETURN FIBER OPTIC CABLE TO INTERSTATE MEDIAN. DO NOT BREAK CABLE.
 4. ATTACH THE CCTV TO THE RETAINING WALL WITH WALL ADAPTERS AND BRACKET PER SS 809.

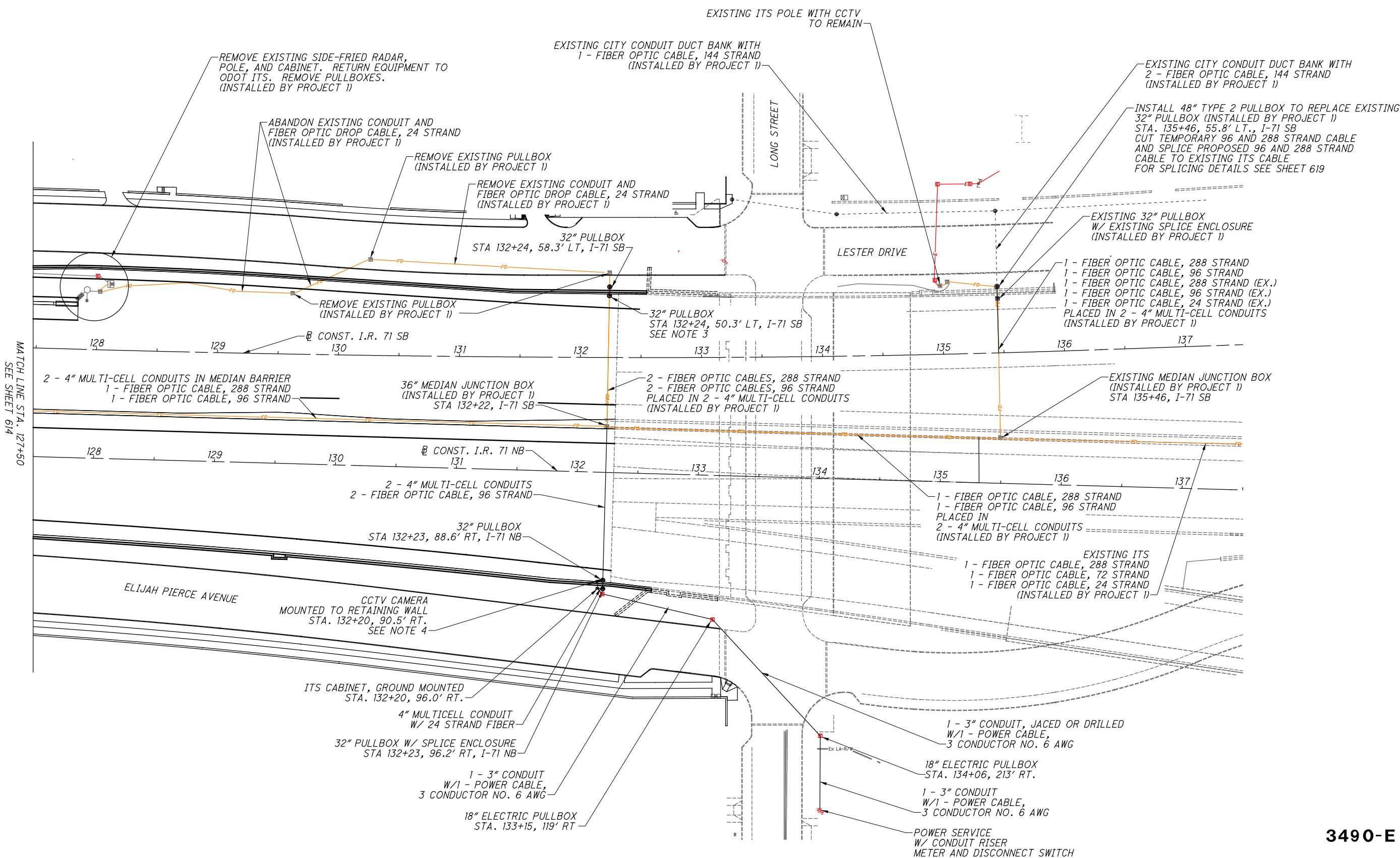


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PERMANENT ITS PLAN - I.R. 71
STA. 127+50 TO END

FRA-71-17.46

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881



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MATCH LINE STA. 127+50
SEE SHEET 614

SHEET NUM.					PART.					ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.	
639	640	641	642		01/IMS/P V	02/NHS/PV	07/S>2/OT/CoIs	08/ENH/OT/CoIs	10/IMS/OT/ATT							
														LIGHTING		
	14	12	24	2							625	00450	52	EACH	CONNECTION, FUSED PULL APART	
	27	27	24	19							625	00480	97	EACH	CONNECTION, UNFUSED PERMANENT	
			2								625	10500	2	EACH	LIGHT POLE, MISC.:BRACKET, 8' ALUMINUM, FOR WOOD POLE , PER MIS 100	635
	7	4	12	1							625	10500	24	EACH	LIGHT POLE, MISC.:POLE, DOWNTOWN, STYLE B-1, PER MIS 308	635
				1				13			625	10500	1	EACH	LIGHT POLE, MISC.:WOOD POLE STYLE C-1, PER TDMIS 1	635
				4							625	10614	4	EACH	LIGHT POLE ANCHOR BOLTS ON STRUCTURE	
	7	6	8	1							625	14600	22	EACH	LIGHT POLE FOUNDATION, MISC.:6' FOUNDATION, DOWNTOWN, PER MIS 203	635
				134							625	23308	134	FT	DISTRIBUTION CABLE, MISC.:OVERHEAD CIRCUIT, 2 WIRE, OPEN-WIRE, PER MIS 400	635
	266	228	456								625	23308	950	FT	DISTRIBUTION CABLE, MISC.:POLE TO BE WIRED - 3 WRE PER MIS 501	635
	1,953	1,131	2,146	278							625	23308	5,508	FT	DISTRIBUTION CABLE, MISC.:CIRCUIT, TYPE 1 PER MIS 403	635
	1,474	975	1,850	53							625	25920	4,352	FT	CONDUIT, MISC.:2" PVC CONDUIT, CONCRETE ENCASED PER MIS 700	635
	321	272	120	111							625	25920	824	FT	CONDUIT, MISC.:3" RIGID STEEL WITH 2" CONDUIT INSERT PER MIS 703	636
				2							625	25920	2	FT	CONDUIT, MISC.:RISER, STREET LIGHT CIRCUIT, PER MIS 56	635
				2							625	27600	2	EACH	LUMINAIRE, MISC.:LUMINAIRE, LED, COBRAHEAD, PER MIS 800	635
	7	6	12	1							625	27600	26	EACH	LUMINAIRE, MISC.:LUMINAIRE, LED, TEARDROOP, PER MIS 801	635
	1,780	1,147	1,614	117							625	29010	4,658	FT	TRENCH, 30" DEEP	
				5							625	31511	5	EACH	PULL BOX REMOVED, AS PER PLAN	656
	5	7	4	1							625	31600	17	EACH	PULL BOX, MISC.:PULL BOX, 13"X24", PER MIS 54	635
	1	1									625	31600	2	EACH	PULL BOX, MISC.:PULL BOX, 17"X30", PER MIS 54	635
	1,794	1,147	1,614	117							625	36000	4,672	FT	PLASTIC CAUTION TAPE	
				9							625	75400	9	EACH	LIGHT POLE REMOVED	
				9							625	75500	9	EACH	LIGHT POLE FOUNDATION REMOVED	
				9							625	75506	9	EACH	LUMINAIRE REMOVED	
	1										625	98000	1	EACH	LIGHTING, MISC.:BRIDGE AESTHETIC LIGHTING CONTROLLER, 3 WIRE, 480V, PAD MOUNTED PER MIS 603	636
	1	1									625	98000	2	EACH	LIGHTING, MISC.:CONTROLLER, 3 WIRE, 480V, PAD MOUNTED PER MIS 603	636
				180							625	98100	180	FT	LIGHTING, MISC.:EX. OVERHEAD SYSTEM REMOVED, PER MIS 901	635
				1							625	98200	LS		LIGHTING, MISC.:EXISTING UNDERGROUND SYSTEM REMOVED, PER MIS 902	636
								LS			625	98200	LS		LIGHTING, MISC.:STRUCTURE LIGHTING SYSTEM COMPLETE	656

CALCULATED TEB CHECKED RUC
URBAN AVENUE STREET LIGHTING GENERAL SUMMARY
FRA-71-17.46
 638
 881

REF NO.	SHEET NO.	STATION TO STATION				625	625	625	625	625	625	625	625	625	625	625	625	625	625	625	625	625	625	625	625	625	625	625	625	625	625	625	625		
						CONNECTION, FUSED PULL APART	CONNECTION, UNFUSED PERMANENT	LIGHT POLE, MISC.:POLE, DOWNTOWN, STYLE B-1, PER MIS 308	LIGHT POLE, MISC.:WOOD POLE STYLE C-1, PER TDMS 1	LIGHT POLE, MISC.:BRACKET, 8' ALUMINUM, FOR WOOD POLE, PER MIS 100	LIGHT POLE ANCHOR BOLTS ON STRUCTURE	LIGHT POLE FOUNDATION, MISC.:6' FOUNDATION, DOWNTOWN, PER MIS 203	MISC.:CIRCUIT, TYPE 1 PER MIS 403	DISTRIBUTION CABLE, MISC.:OVERHEAD CIRCUIT, 2 WIRE, OPEN-WIRE, PER MIS 400	DISTRIBUTION CABLE, MISC.:POLE TO BE WIRED - 3 WIRE PER MIS 501	CONDUIT, MISC.:2" PVC CONDUIT, CONCRETE ENCASED PER MIS 700	CONDUIT, MISC.:3" RIGID STEEL WITH 2" CONDUIT INSERT PER MIS 703	LUMINAIRE, MISC.:LUMINAIRE, LED, TEARDROOP, PER MIS 801	LUMINAIRE, MISC.:LUMINAIRE, LED, COBRAHEAD, PER MIS 800	TRENCH, 30" DEEP	PULL BOX, MISC.:PULL BOX, 13"X24", PER MIS 54	PULL BOX, MISC.:PULL BOX, 17"X30", PER MIS 54	PULL BOX REMOVED, AS PER PLAN	GROUND ROD FOR INFORMATION ONLY, INCLUDED IN MIS 501	CONDUIT, MISC.:RISER, STREET LIGHT CIRCUIT, PER MIS 56	PLASTIC CAUTION TAPE	LIGHTING, MISC.:EXISTING UNDERGROUND SYSTEM REMOVED, PER MIS 902	LIGHTING, MISC.:EX. OVERHEAD SYSTEM REMOVED, PER MIS 901	LIGHT POLE REMOVED	LIGHT POLE FOUNDATION REMOVED	LUMINAIRE REMOVED	LIGHTING, MISC.:CONTROLLER, 3 WIRE, 480V, PAD MOUNTED PER MIS 603	LIGHTING, MISC.:BRIDGE AESTHETIC LIGHTING CONTROLLER, 3 WIRE, 480V, PAD MOUNTED PER MIS 603		
					EACH	EACH	EACH	EACH	EACH	EACH	FT	FT	FT	FT	FT	EACH	EACH	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH			
157	652	327+00	RT			2	1	1						38																					
158	652	327+00	RT		328+61						170			160																					
159	652	328+61	RT			2	1	1						38																					
160	652	328+61	RT		328+63									2																					
161	652	327+92	LT		327+94									2																					
162-167		NOT USED																																	
168	652	325+85	LT		327+92						220			210																					
169	652	327+92	LT			2	1	1						38																					
270	653	120+15	LT		120+17									2																					
271	653	120+17	LT																																
272	653	120+17	LT		120+63																														
273	653	120+63	LT																																
274	653	120+63	LT		122+41																														
275	653	122+41	LT																																
276	653	122+41	LT		123+78																														
277	653	123+78	LT																																
277-280		NOT USED																																	
281	653	120+20	LT																																
282	653	120+20	LT		120+17																														
283	653	120+18	LT		120+20																														
284-285		NOT USED																																	
286	653	123+78	LT		123+78																														
287	653	123+78	RT																																
288	653	123+82	RT		123+89																														
289	653	123+89	RT			2	1	1																											
290		NOT USED																																	
291	653	120+63	LT																																
292-295		NOT USED																																	
296	653	52+12	LT			2	1																												
297	653	52+12	LT		53+23																														
298	653	52+23	LT																																
299	653	53+26	RT		53+23																														
300	653	53+26	RT																																
301	653	53+16	RT		53+26																														
302	653	53+16	RT			2	1																												
303	653	52+12	RT		53+16																														
304	653	52+06	LT		52+12																														
TOTALS CARRIED TO GENERAL SUMMARY							12	27	4					6	1131																				

CALCULATED		TEB		CHECKED		RUC	
URBAN AVENUE STREET LIGHTING SUBSUMMARY							
FRA-71-17.46							
3490-E							
640 881							

REF NO.	SHEET NO.	STATION TO STATION					625	625	625	625	625	625	625	625	625	625	625	625	625	625	625	625	625	625	625	625	625	625	625	625	625	625
		CONNECTION, FUSED PULL APART	CONNECTION, UNFUSED PERMANENT	LIGHT POLE; MISC.;POLE, DOWNTOWN, STYLE B-1, PER MIS 308	LIGHT POLE; MISC.;WOOD POLE STYLE C-1, PER TDMS 1	LIGHT POLE; MISC.;BRACKET, 8' ALUMINUM, FOR WOOD POLE, PER MIS 100	LIGHT POLE ANCHOR BOLTS ON STRUCTURE	LIGHT POLE FOUNDATION, MISC.;6' FOUNDATION, DOWNTOWN, PER MIS 203	DISTRIBUTION CABLE, MISC.;CIRCUIT, TYPE 1 PER MIS 403	DISTRIBUTION CABLE; MISC.;OVERHEAD CIRCUIT, 2 WIRE, OPEN-WIRE, PER MIS 400	DISTRIBUTION CABLE MISC.;POLE TO BE WIRED - 3 WIRE PER MIS 501	CONDUIT, MISC.;2" PVC CONDUIT, CONCRETE ENCASED PER MIS 700	CONDUIT, MISC.;3" RIGID STEEL WITH 2" CONDUIT INSERT PER MIS 703	LUMINAIRE, MISC.;LUMINAIRE, LED, TEARDROOP, PER MIS 801	LUMINAIRE, MISC.;LUMINAIRE, LED, COBRAHEAD, PER MIS 800	TRENCH, 30" DEEP	PULL BOX, MISC.;PULL BOX, 13"X24", PER MIS 54	PULL BOX, MISC.;PULL BOX, 17"X30", PER MIS 54	PULL BOX REMOVED, AS PER PLAN	GROUND RODFOR INFORMATION ONLY, INCLUDED IN MIS 501	CONDUIT, MISC.;RISER, STREET LIGHT CIRCUIT, PER MIS 56	PLASTIC CAUTION TAPE	LIGHTING, MISC.;EXISTING UNDERGROUND SYSTEM REMOVED, PER MIS 902	LIGHTING, MISC.;EX. OVERHEAD SYSTEM REMOVED, PER MIS 901	LIGHT POLE REMOVED	LIGHT POLE FOUNDATION REMOVED	LUMINAIRE REMOVED	LIGHTING, MISC.;CONTROLLER, 3 WIRE, 480V, PAD MOUNTED PER MIS 603	LIGHTING, MISC.;BRIDGE AESTHETIC LIGHTING CONTROLLER, 3 WIRE, 480V, PAD MOUNTED PER MIS 603			
EACH	EACH	EACH	EACH	EACH	EACH	EACH	FT	FT	FT	FT	FT	EACH	EACH	FT	EACH	EACH	EACH	EACH	EACH	FT	LS	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	
306	654	123+78	LT		124+17	LT					43																					
307	654	124+17	LT																													
308	654	NOT USED																														
309	654	123+89	RT		125+53	RT																										
310	654	125+53	RT																													
311	654	NOT USED																														
312	654	125+53	RT		126+61																											
313	654	125+68	LT																													
314	654	126+61	RT		127+83																											
315	654	127+83	RT																													
316	654	127+83	RT		130+14	RT																										
317	654	123+78	LT		125+68	LT																										
318	654	126+06	LT		126+42	LT																										
319	654	126+42	LT		126+71	LT																										
320		NOT USED																														
321	654	123+78	LT		126+06	LT																										
322	654	126+06	LT																													
323		NOT USED																														
324	654	126+71	LT																													
325	654	127+55	LT		127+86	LT																										
326	654	126+71	LT		128+97	LT																										
327	654	128+97	LT																													
328	654	128+97	LT		131+04	LT																										
329	655	131+28	LT		131+30	LT																										
330	655	132+42	RT		132+44	RT																										
331	655	131+04	LT																													
332	655	131+04	LT		131+28	LT																										
333	655	131+28	LT																													
334	655	131+28	LT		131+31	LT																										
335	655	131+31	LT																													
336	655	130+14	RT																													
337	655	130+14	RT		132+42	RT																										
338	655	132+42	RT																													
441		54+73	LT																													
442		NOT USED																														
443	656	55+01	LT																													
444	656	54+69	RT																													
445		NOT USED																														
446	656	55+96.5	RT																													
TOTALS CARRIED TO GENERAL SUMMARY							24	24	12		4	8	2146		456	1850	120	12		1614	4		8				1614					

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:

AS-1-15 DATED (REVISED) 7-17-15
EXJ-4-87 DATED (REVISED) 1-19-18
GSD-1-96 DATED (REVISED) 7-19-02
PCB-91 DATED (REVISED) 1-18-13
TVPF-1-18 DATED 7-20-18

AND TO THE FOLLOWING STANDARD TRAFFIC DRAWING:

HL-50.21 DATED (REVISED) 7-20-18

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION:

867 DATED 1-18-19

DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO THE "LRFD DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY TRANSPORTATION OFFICIALS, 6TH EDITION, 2012 AND THE ODOT BRIDGE DESIGN MANUAL, 2007.

SPECIAL DESIGN SPECIFICATIONS: THIS BRIDGE REQUIRED THE USE OF A TWO DIMENSIONAL MODEL USING THE GRILLAGE DESIGN METHOD TO ANALYZE THE STRUCTURE. THE COMPUTER PROGRAM USED FOR STRUCTURAL ANALYSIS WAS MDX v. 6.5. THE BRIDGE COMPONENTS DESIGNED BY THIS METHOD AND THE LIVE LOAD DISTRIBUTION FACTORS USED WERE:

DEAD LOAD DISTRIBUTION: LANDSCAPING, PLANTERS, PILASTERS AND PYLONS WERE APPLIED TO THE OUTSIDE 3 GIRDERS AS COMPOSITE LOADS. UTILITIES WERE APPLIED TO THE NEAREST GIRDERS AS NONCOMPOSITE LOADS. SIDEWALK DEAD LOAD WAS DISTRIBUTED AS A COMPOSITE LOAD TO EACH BEAM BASED ON ITS TRIBUTARY WIDTH. THE FUTURE WEARING SURFACE LOAD WAS DISTRIBUTED AS A COMPOSITE LOAD EVENLY TO THE MIDDLE 12 GIRDERS.

PEDESTRIAN LIVE LOAD WAS DISTRIBUTED TO EACH GIRDER BASED ON ITS TRIBUTARY WIDTH.

LIVE LOAD DISTRIBUTION: THE DESIGN ANALYSIS WAS CARRIED OUT BY APPLYING TRUCK AND LANE LOADS DIRECTLY TO THE GRILLAGE MODEL, RATHER THAN BY USING CALCULATED DISTRIBUTION FACTORS. THE LOAD RATING ANALYSIS OF THIS STRUCTURE WAS CONDUCTED USING A LINE GIRDER MODEL AND LIVE LOAD DISTRIBUTION FACTORS CALCULATED USING THE AASHTO "LRFD DESIGN SPECIFICATIONS".

OPERATIONAL IMPORTANCE: A LOAD MODIFIER OF 1.0 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL, 2007.

DESIGN LOADING: HL-93
FUTURE WEARING SURFACE OF 0.060 KIPS/SQ. FT.
SIDEWALK LIVE LOAD OF 0.075 KIPS/SQ. FT.
SATURATED SOIL UNIT WEIGHT OF 0.115 KIPS/CU. FT.

GENERAL DESIGN DATA:
CONCRETE CLASS OC2 - COMPRESSIVE STRENGTH 4.5 ksi (DECK, SIDEWALK, PARAPET, PILASTERS AND PYLONS)
CONCRETE CLASS OC1 - COMPRESSIVE STRENGTH 4.0 ksi (SUBSTRUCTURES)
REINFORCING STEEL - MINIMUM YIELD STRENGTH OF 60 ksi
STRUCTURAL STEEL - ASTM A709 GRADE 50 - YIELD STRENGTH 50 ksi

DECK PROTECTION METHOD:
EPOXY COATED REINFORCING STEEL
2 1/2" CONCRETE COVER

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE ONE INCH THICK.

FOUNDATION BEARING RESISTANCE: REAR ABUTMENT FOOTING, AS DESIGNED, PRODUCES A MAXIMUM SERVICE LOAD PRESSURE OF 7.8 KIPS PER SQUARE FOOT AND A MAXIMUM STRENGTH LOAD PRESSURE OF 11.5 KIPS PER SQUARE FOOT.

THE FACTORED BEARING RESISTANCE FOR THE REAR ABUTMENT IS 12.0 KIPS PER SQUARE FOOT.

PIER FOOTING, AS DESIGNED, PRODUCES A MAXIMUM SERVICE LOAD PRESSURE OF 7.5 KIPS PER SQUARE FOOT AND A MAXIMUM STRENGTH LOAD PRESSURE OF 9.3 KIPS PER SQUARE FOOT.

THE FACTORED BEARING RESISTANCE FOR THE PIER IS 15.6 KIPS PER SQUARE FOOT.

FORWARD ABUTMENT FOOTING, AS DESIGNED, PRODUCES A MAXIMUM SERVICE LOAD PRESSURE OF 7.8 KIPS PER SQUARE FOOT AND A MAXIMUM STRENGTH LOAD PRESSURE OF 11.6 KIPS PER SQUARE FOOT.

THE FACTORED BEARING RESISTANCE FOR THE FORWARD ABUTMENT IS 12.2 KIPS PER SQUARE FOOT.

GROUNDING: PROVIDE GROUNDING PER STANDARD DRAWING HL-50.21. THE FOLLOWING BRIDGE COMPONENTS SHALL BE CONNECTED TO THE GROUNDING SYSTEM: STRUCTURAL STEEL, SCREEN WALL POSTS, LIGHT POLES, AND ALUMINUM PLANTERS.

ITEM 202 STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN (FRA-040-1351): REMOVALS INCLUDED IN THIS ITEM ARE THE SUPERSTRUCTURE, ABUTMENTS, PIERS, LEFT AND RIGHT REAR WINGWALLS, LEFT FORWARD WINGWALL AND THE RIGHT FORWARD WINGWALL TO THE LIMITS SHOWN ON SHEET 27 / 58

REMOVALS BELOW PROPOSED PAVEMENT WILL EXTEND AT LEAST TO THE BOTTOM OF THE PROPOSED AGGREGATE BASE.

SEE ASBESTOS NOTIFICATION - EXISTING BROAD STREET BRIDGE NOTE ON SHEET 59/881 FOR ADDITIONAL WORK REQUIREMENTS INCLUDED IN THIS BID ITEM.

ITEM 202 STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN (FRA-040-1352): THIS STRUCTURE IS SUBJECT TO TESTING FOR ASBESTOS. THE CONTRACTOR SHALL USE A STATE CERTIFIED ASBESTOS INSPECTOR TO INSPECT AND SAMPLE THE BRIDGE FOR THE PRESENCE OF ASBESTOS. THE SAMPLES WILL BE PROVIDED TO THE CONTRACTOR FOR TESTING. THE COST TO INSPECT AND SAMPLE THE BRIDGE FOR THE PRESENCE OF ASBESTOS, TO DELIVER THE SAMPLES TO A TEST LAB, AND TO TEST THE SAMPLES FOR ASBESTOS WILL BE INCLUDED IN THIS PAY ITEM. THE CONTRACTOR SHALL COMPLETE THE "OHIO ENVIRONMENTAL PROTECTION AGENCY NOTIFICATION OF DEMOLITION AND RENOVATION" AFTER THE TESTING IS COMPLETE AND SEND THE FORM TO THE OHIO EPA 10 DAYS PRIOR TO DEMOLITION OR RENOVATION ACTIVITIES.

REMOVALS BELOW PROPOSED PAVEMENT WILL EXTEND AT LEAST TO THE BOTTOM OF THE PROPOSED AGGREGATE BASE.

CONSTRUCTION CONSTRAINTS: FILL THE VOID CREATED BY EXCAVATING FOR THE ABUTMENT FOOTINGS WITH TYPE B GRANULAR MATERIAL, 703.16.C. AFTER THE FOOTING AND THE BREASTWALL HAVE BEEN CONSTRUCTED, FILL THE VOID BEHIND EACH ABUTMENT UP TO THE GIRDER SEAT ELEVATION AND FROM THE GIRDER SEAT UP ON A 1:1 SLOPE TO THE SUBGRADE ELEVATION PRIOR TO CONSTRUCTING THE BACKWALL AND SETTING THE BEAMS ON THE ABUTMENT

ITEM 503, COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN: THE DESIGN SHOWN ON THE PLANS FOR TEMPORARY SUPPORT OF EXCAVATION IS ONE REPRESENTATIVE DESIGN THAT MAY BE USED TO CONSTRUCT THE PROJECT. THE CONTRACTOR MAY CONSTRUCT THE DESIGN SHOWN ON THE PLANS OR PREPARE AN ALTERNATE DESIGN TO SUPPORT THE SIDES OF EXCAVATIONS. IF CONSTRUCTING AN ALTERNATE DESIGN FOR TEMPORARY SUPPORT OF EXCAVATION, PREPARE AND PROVIDE PLANS IN ACCORDANCE WITH C&MS 501.05. THE DEPARTMENT WILL PAY FOR THE TEMPORARY SUPPORT OF EXCAVATION, INCLUDING TEMPORARY MSE WALLS, AT THE CONTRACT LUMP SUM PRICE FOR COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN. NO ADDITIONAL PAYMENT WILL BE MADE FOR PROVIDING AN ALTERNATE DESIGN.

THE EXTENT OF RIGHT-OF-WAY BEHIND AND ADJACENT TO THE PROPOSED ABUTMENTS IS ADEQUATE TO ALLOW THE USE OF AN OPEN-CUT EXCAVATION USING 1.5H:1V SLOPES. THIS BID ITEM SHALL INCLUDE ALL COSTS THE CONTRACTOR DEEMS NECESSARY TO SATISFY OSHA REQUIREMENTS IN REGARD TO THE USE OF AN OPEN-CUT EXCAVATION, TO PROVIDE ANY TEMPORARY SHORING TO MAINTAIN PEDESTRIAN/VEHICULAR TRAFFIC AS NOTED IN THESE PLANS, AND TO PROVIDE SHORING FOR ANY UTILITIES, SEWERS AND DRAINAGE APPURTENANCES THAT ARE PRESENT AT THE TIME OF ABUTMENTS CONSTRUCTION AND WHICH ARE TO REMAIN.

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 2.70 KIPS.

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

A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48".

A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY RAIL OF 65".

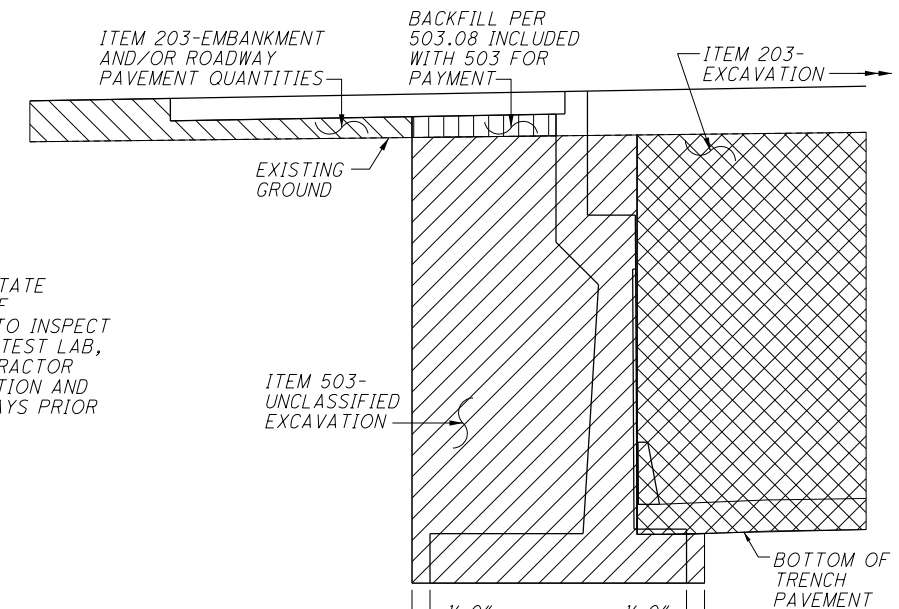
EXISTING STRUCTURE PLANS: EXISTING STRUCTURE PLANS MAY BE VIEWED BY PROSPECTIVE BIDDERS AT:
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 6 OFFICE
400 E. WILLIAM ST.
DELAWARE, OHIO 43015
PHONE: (740) 833-8000

UTILITY LINES: ALL UTILITY RELOCATION WORK SHALL BE COORDINATED AND PAID FOR PER THE CONTRACT DOCUMENTS. THE CONTRACTOR AND UTILITY COMPANIES ARE TO COOPERATE IN ACCORDANCE WITH CMS 105.07 AND BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

CONCRETE PARAPETS: SEE SHEET 50 / 58 FOR SAWCUT REQUIREMENTS.

ITEM 511 - CLASS OC2 CONCRETE WITH QC/OA, BRIDGE DECK, AS PER PLAN: PROVIDE BUFF WASH FINISH ON EDGES AND BOTTOM OF DECK OVERHANGS AS DETAILED.

ITEM 511 - CLASS OC2 CONCRETE WITH QC/OA, SIDEWALK, AS PER PLAN: FINISH SIDEWALKS WITH A BUFF WASH FINISH AND PLACE CONTROL JOINTS PER THE AESTHETIC ENHANCEMENT PLANS. PROVIDE PEJF AND SEALANT AROUND LUMINAIRES AT SIDEWALK PENETRATIONS AS SHOWN IN THESE PLANS.



ITEM 503 PAY LIMITS DIAGRAM

ITEM 511 - CLASS OC2 CONCRETE WITH QC/OA, BRIDGE DECK (PARAPET), AS PER PLAN:

PRIOR TO CONSTRUCTING ANY OF THE CONCRETE PARAPET, INCLUDING THE PILASTERS AND PYLONS, THE CONTRACTOR SHALL CAST A REPRESENTATIVE LENGTH (8'-0" +/-) FOR THE PARAPET, A TYPICAL PILASTER AND A TYPICAL PYLON. THE TEST PIECES SHALL RECEIVE A BUFF WASH FINISH PER THE AESTHETICS ENHANCEMENT SPECIFICATIONS. THE TEST PIECES SHALL BE REVIEWED BY THE ENGINEER. IF EXCESSIVE HONEYCOMBING, IRREGULAR OR BROKEN EDGES/CORNERS, WAVY SURFACES OR OTHER DEFECTS EXIST, OR IF THE FINISH IS DETERMINED UNACCEPTABLE BY THE ENGINEER, CONSTRUCTION METHODS SHALL BE REVISED TO PROVIDE AN ACCEPTABLE FINISH.

IF THE CONSTRUCTION METHOD IS UNACCEPTABLE, ADDITIONAL REPRESENTATIVE TEST PIECES SHALL BE CAST BY THE CONTRACTOR. THE CONTRACTOR SHALL REPEAT THIS PROCESS UNTIL THE CONSTRUCTION METHODS ARE ACCEPTABLE TO THE ENGINEER, AT NO ADDITIONAL COST TO THE STATE.

THE FINAL APPROVED TEST PIECES WILL SERVE AS A JOB SITE STANDARD FROM WHICH THE ACCEPTANCE OF ALL OTHER WORK WILL BE DETERMINED. THOSE PIECES OF WORK DETERMINED BY THE ENGINEER TO BE UNSATISFACTORY IN TERMS OF CONFORMANCE TO THE QUALITY AND REPRESENTATIVE APPEARANCE OF THE JOB STANDARD TEST PIECES WILL BE REPAIRED OR REPLACED AS DIRECTED BY THE ENGINEER AT NO ADDITIONAL COST TO THE PROJECT. UPON COMPLETION AND ACCEPTANCE OF ALL WORK, PROPERLY DISPOSE OF THE TEST PIECES.

PAYMENT FOR THE TEST PIECES SHALL BE INCLUDED WITH THIS ITEM.

SPECIFIC ATTENTION SHALL BE PAID TO USING FORMS THAT REDUCE THE JOINTS SHOWING ON THE FINISHED SURFACE AND TO MATCHING THE COLOR OF THE MORTAR USED TO FILL HOLES OR PERFORM OTHER CORRECTIVE WORK TO THE SURROUNDING CONCRETE.

FINISH PARAPETS, PILASTERS, KNEE WALLS, AND PYLONS NOTED IN THESE PLANS WITH A BUFF WASH FINISH PER THE AESTHETIC TREATMENT PLANS.

ITEM 511 - CLASS OC1 CONCRETE WITH QC/OA, ABUTMENT NOT INCLUDING FOOTING, AS PER PLAN: AFTER CONDUITS ARE PLACED THROUGH THE UTILITY BLOCKOUTS IN THE ABUTMENT BACKWALLS, FILL THE VOIDS USING NON-SHRINK MORTAR CONFORMING TO CMS 705.22

ITEM 514 - FIELD PAINTING STRUCTURAL STEEL, FINISH COAT: ALL NEW STRUCTURAL STEEL SHALL BE PAINTED USING THE IZEU COATING SYSTEM. THE URETHANE TOP COAT SHALL BE TINTED TO MEET FEDERAL COLOR #17038 (BLACK).

ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE): THE FINAL COAT SHALL BE TINTED SO THAT THE FINAL COLOR IS FEDERAL COLOR STANDARD NO. 1778-LIGHT NEUTRAL.

ITEM 512 - SEALING OF CONCRETE SURFACES (NON-EPOXY): NON-EPOXY SEALER SHALL BE CLEAR AND AS PER CMS 512.03.

ITEM 625, LIGHT POLE ANCHOR BOLTS, MISC.: ANCHOR BOLT ASSEMBLIES EMBEDDED IN CONCRETE BRIDGE DECK: FURNISH ANCHOR ASSEMBLIES FOR LIGHT POLES AND LUMINAIRES MOUNTED ON THE BRIDGE. THE ITEM INCLUDES STEEL PLATES, ANCHOR RODS, NUTS, WASHERS, AND SHEAR CONNECTORS AS SHOWN ON THE DRAWINGS OR AS REQUIRED FOR INSTALLATION. ANCHOR RODS SHALL CONFORM TO ASTM F1554 GRADE 55. COORDINATE DIMENSIONS OF ASSEMBLY WITH THE TRAFFIC PLANS. FABRICATE ASSEMBLY IN ACCORDANCE WITH CMS 513 AND 730. GALVANIZE THE ASSEMBLY AFTER FABRICATION IN ACCORDANCE WITH CMS 711.02.

DATE	12/28/18
REVIEWED	JCS
DRAWN	JMK
DESIGNED	JMK
CHECKED	RMK
STRUCTURE FILE NUMBER	2502623

BRIDGE NO. FRA-040-1351
U.S. 40/BROAD ST. OVER I-71

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ITEM 511, CLASS QCI CONCRETE WITH QC/QA, FOOTING, AS PER PLAN:
IN ADDITION TO THE REQUIREMENTS OF ITEM 511, INSTALL REFERENCE
MONUMENTS AT THE LOCATIONS SHOWN ON SHEET 8 / 58.

THE REFERENCE MONUMENT SHALL CONSIST OF A #8, OR LARGER, EPOXY COATED
REBAR EMBEDDED AT LEAST 6" INTO THE FOOTING AND EXTENDED VERTICALLY 4
TO 6 INCHES ABOVE THE TOP OF THE FOOTING. INSTALL A FOUR INCH
DIAMETER, SCHEDULE 40, PLASTIC PIPE AROUND THE REFERENCE MONUMENT.
CENTER THE PIPE ON THE REFERENCE MONUMENT AND PLACE THE PIPE VERTICAL
WITH ITS TOP AT THE FINISHED GRADE. THE PIPE SHALL HAVE A REMOVABLE,
SCHEDULE 40, PLASTIC CAP. PERMANENTLY ATTACH THE BOTTOM OF THE PIPE
TO THE TOP OF THE FOOTING.

ESTABLISH A BENCHMARK TO DETERMINE THE ELEVATIONS OF THE REFERENCE
MONUMENTS AT VARIOUS MONITORING PERIODS THROUGHOUT THE LENGTH OF
THE CONSTRUCTION PROJECT. THE BENCHMARK SHALL BE THE SAME
THROUGHOUT THE PROJECT AND SHALL BE INDEPENDENT OF ALL STRUCTURES.

RECORD THE ELEVATION OF EACH REFERENCE MONUMENT AT EACH MONITORING
PERIOD SHOWN IN THE TABLES BELOW.

THE ORIGINAL COMPLETED TABLES WILL BECOME PART OF THE DISTRICT'S
PROJECT PLAN RECORDS.

PROJECT NUMBER: FRA-71-17.14, PID 77371		MAXIMUM FACTORED BEARING PRESSURE: 11.5 KSF	
BRIDGE NUMBER: FRA-040-1351		STRUCTURE FILE NUMBER: 2502623	
BENCHMARK LOCATION:			
FOOTING LOCATION: REAR ABUTMENT (LEFT AND RIGHT EDGES OF PHASE 1 FOOTING)			
MONITORING PERIOD	LEFT MONUMENT	RIGHT MONUMENT	
AFTER FOOTING CONCRETE IS PLACED			
BEFORE PLACEMENT OF SUPERSTRUCTURE MEMBERS			
BEFORE DECK PLACEMENT			
AFTER DECK PLACEMENT			
PROJECT COMPLETION			

PROJECT NUMBER: FRA-71-17.14, PID 77371		MAXIMUM FACTORED BEARING PRESSURE: 11.5 KSF	
BRIDGE NUMBER: FRA-040-1351		STRUCTURE FILE NUMBER: 2502623	
BENCHMARK LOCATION:			
FOOTING LOCATION: REAR ABUTMENT (LEFT EDGE OF PHASE 2 FOOTING)			
MONITORING PERIOD	LEFT MONUMENT		
AFTER FOOTING CONCRETE IS PLACED			
BEFORE PLACEMENT OF SUPERSTRUCTURE MEMBERS			
BEFORE DECK PLACEMENT			
AFTER DECK PLACEMENT			
PROJECT COMPLETION			

PROJECT NUMBER: FRA-71-17.14, PID 77371		MAXIMUM FACTORED BEARING PRESSURE: 11.6 KSF	
BRIDGE NUMBER: FRA-040-1351		STRUCTURE FILE NUMBER: 2502623	
BENCHMARK LOCATION:			
FOOTING LOCATION: FORWARD ABUTMENT (LEFT AND RIGHT EDGES OF PHASE 1 FOOTING)			
MONITORING PERIOD	LEFT MONUMENT	RIGHT MONUMENT	
AFTER FOOTING CONCRETE IS PLACED			
BEFORE PLACEMENT OF SUPERSTRUCTURE MEMBERS			
BEFORE DECK PLACEMENT			
AFTER DECK PLACEMENT			
PROJECT COMPLETION			

PROJECT NUMBER: FRA-71-17.14, PID 77371		MAXIMUM FACTORED BEARING PRESSURE: 11.6 KSF	
BRIDGE NUMBER: FRA-040-1351		STRUCTURE FILE NUMBER: 2502623	
BENCHMARK LOCATION:			
FOOTING LOCATION: FORWARD ABUTMENT (LEFT EDGE OF PHASE 2 FOOTING)			
MONITORING PERIOD	LEFT MONUMENT		
AFTER FOOTING CONCRETE IS PLACED			
BEFORE PLACEMENT OF SUPERSTRUCTURE MEMBERS			
BEFORE DECK PLACEMENT			
AFTER DECK PLACEMENT			
PROJECT COMPLETION			

PROJECT NUMBER: FRA-71-17.14, PID 77371		MAXIMUM FACTORED BEARING PRESSURE: 9.3 TSF	
BRIDGE NUMBER: FRA-040-1351		STRUCTURE FILE NUMBER: 2502623	
BENCHMARK LOCATION:			
FOOTING LOCATION: PIER (LEFT AND RIGHT EDGES OF PHASE 1 FOOTING)			
MONITORING PERIOD	LEFT MONUMENT	RIGHT MONUMENT	
AFTER FOOTING CONCRETE IS PLACED			
BEFORE PLACEMENT OF SUPERSTRUCTURE MEMBERS			
BEFORE DECK PLACEMENT			
AFTER DECK PLACEMENT			
PROJECT COMPLETION			

PROJECT NUMBER: FRA-71-17.14, PID 77371		MAXIMUM FACTORED BEARING PRESSURE: 9.3 TSF	
BRIDGE NUMBER: FRA-040-1351		STRUCTURE FILE NUMBER: 2502623	
BENCHMARK LOCATION:			
FOOTING LOCATION: PIER (LEFT EDGE OF PHASE 2 FOOTING)			
MONITORING PERIOD	LEFT MONUMENT		
AFTER FOOTING CONCRETE IS PLACED			
BEFORE PLACEMENT OF SUPERSTRUCTURE MEMBERS			
BEFORE DECK PLACEMENT			
AFTER DECK PLACEMENT			
PROJECT COMPLETION			

ITEM 625 - CONDUIT, MISC.: 1 1/2" FIBERGLASS, EXTRA HEAVY WALL,
AS PER PLAN (INTERCONNECT TRACER): THIS WORK INCLUDES ALL LABOR,
MATERIAL AND EQUIPMENT NECESSARY TO INSTALL THE FIBERGLASS CONDUIT ON THE
BRIDGE INCLUDING CONDUIT, CONDUIT SUPPORT ASSEMBLIES, BRACING, EXPANSION
JOINTS, AND MOUNTING HARDWARE. PROVIDE 1 1/2" NOMINAL SIZE FIBERGLASS
CONDUITS WHICH MEET NATIONAL ELECTRIC MANUFACTURERS ASSOCIATION (NEMA)
TC-14. WALL THICKNESS SHALL BE A NOMINAL 0.25". PROVIDE CONDUIT SUPPORT
ASSEMBLIES FROM OSBURN ASSOCIATES SUPPORT SYSTEMS, FURNISHED BY OSBURN
ASSOCIATES, INC., P.O. BOX 912, LOGAN, OHIO, TEL. (614) 385-6869, OR
EQUAL, SUBJECT TO THE APPROVAL OF THE CITY OF COLUMBUS. INSTALL THE
CONDUIT AND CONDUIT SUPPORT ASSEMBLIES AS PER THE MANUFACTURER'S
INSTRUCTIONS. PLACE CONDUIT BELLS AND/OR COUPLINGS NO CLOSER THAN 6" TO
THE OUTSIDE EDGE OF ANY SUPPORT ANGLE. GALVANIZE ALL STEEL MOUNTING
HARDWARE AS PER 711.02.

ITEM 625 - CONDUIT, MISC.: 3" FIBERGLASS, EXTRA HEAVY WALL,
AS PER PLAN (INTERCONNECT): THIS WORK INCLUDES ALL LABOR, MATERIAL AND
EQUIPMENT NECESSARY TO INSTALL THE FIBERGLASS CONDUIT ON THE BRIDGE
INCLUDING CONDUIT, CONDUIT SUPPORT ASSEMBLIES, BRACING, EXPANSION
JOINTS, AND MOUNTING HARDWARE. PROVIDE 3" NOMINAL SIZE FIBERGLASS
CONDUITS WHICH MEET NATIONAL ELECTRIC MANUFACTURERS ASSOCIATION (NEMA)
TC-14. WALL THICKNESS SHALL BE A NOMINAL 0.25". PROVIDE CONDUIT SUPPORT
ASSEMBLIES FROM OSBURN ASSOCIATES SUPPORT SYSTEMS, FURNISHED BY OSBURN
ASSOCIATES, INC., P.O. BOX 912, LOGAN, OHIO, TEL. (614) 385-6869, OR
EQUAL, SUBJECT TO THE APPROVAL OF THE CITY OF COLUMBUS. INSTALL THE
CONDUIT AND CONDUIT SUPPORT ASSEMBLIES AS PER THE MANUFACTURER'S
INSTRUCTIONS. PLACE CONDUIT BELLS AND/OR COUPLINGS NO CLOSER THAN 6" TO
THE OUTSIDE EDGE OF ANY SUPPORT ANGLE. GALVANIZE ALL STEEL MOUNTING
HARDWARE AS PER 711.02.

ITEM 625 - CONDUIT, MISC.: 4" FIBERGLASS, EXTRA HEAVY WALL,
AS PER PLAN (AT&T & TWC): THIS WORK INCLUDES ALL LABOR, MATERIAL AND
EQUIPMENT NECESSARY TO INSTALL THE FIBERGLASS CONDUIT ON THE BRIDGE
INCLUDING CONDUIT, CONDUIT SUPPORT ASSEMBLIES, BRACING, EXPANSION
JOINTS, AND MOUNTING HARDWARE. PROVIDE 4" NOMINAL SIZE FIBERGLASS
CONDUITS WHICH MEET NATIONAL ELECTRIC MANUFACTURERS ASSOCIATION (NEMA)
TC-14. WALL THICKNESS SHALL BE A NOMINAL 0.25". PROVIDE CONDUIT SUPPORT
ASSEMBLIES FROM OSBURN ASSOCIATES SUPPORT SYSTEMS, FURNISHED BY OSBURN
ASSOCIATES, INC., P.O. BOX 912, LOGAN, OHIO, TEL. (614) 385-6869, OR
EQUAL, SUBJECT TO THE APPROVAL OF AT&T. INSTALL THE CONDUIT AND CONDUIT
SUPPORT ASSEMBLIES AS PER THE MANUFACTURER'S INSTRUCTIONS. PLACE CONDUIT
BELLS AND/OR COUPLINGS NO CLOSER THAN 6" TO THE OUTSIDE EDGE OF ANY
SUPPORT ANGLE. GALVANIZE ALL STEEL MOUNTING HARDWARE AS PER 711.02.

ITEM 625 - CONDUIT, MISC.: 5" FIBERGLASS, EXTRA HEAVY WALL,
AS PER PLAN (AEP): THIS WORK INCLUDES ALL LABOR, MATERIAL AND
EQUIPMENT NECESSARY TO INSTALL THE FIBERGLASS CONDUIT ON THE BRIDGE
INCLUDING CONDUIT, CONDUIT SUPPORT ASSEMBLIES, BRACING, EXPANSION
JOINTS, AND MOUNTING HARDWARE. PROVIDE 5" NOMINAL SIZE FIBERGLASS
CONDUITS WHICH MEET NATIONAL ELECTRIC MANUFACTURERS ASSOCIATION (NEMA)
TC-14. WALL THICKNESS SHALL BE A NOMINAL 0.25". PROVIDE CONDUIT SUPPORT
ASSEMBLIES FROM OSBURN ASSOCIATES SUPPORT SYSTEMS, FURNISHED BY OSBURN
ASSOCIATES, INC., P.O. BOX 912, LOGAN, OHIO, TEL. (614) 385-6869, OR
EQUAL, SUBJECT TO THE APPROVAL OF AEP. INSTALL THE CONDUIT AND CONDUIT
SUPPORT ASSEMBLIES AS PER THE MANUFACTURER'S INSTRUCTIONS. PLACE CONDUIT
BELLS AND/OR COUPLINGS NO CLOSER THAN 6" TO THE OUTSIDE EDGE OF ANY
SUPPORT ANGLE. GALVANIZE ALL STEEL MOUNTING HARDWARE AS PER 711.02.

SEQUENCE OF CONSTRUCTION:

THE FOLLOWING IS THE SEQUENCE OF CONSTRUCTION FOR THE BRIDGE AND
CAP-CAPABLE WALLS:

1. DURING MAINLINE AND BROAD STREET PHASE 1 MAINTENANCE OF TRAFFIC,
REMOVE EXISTING STRUCTURE FRA-040-1352 (I-71 NORTHBOUND ON RAMP).
2. CONSTRUCT THE CONCRETE COLLARS AT THE LEFT REAR AND LEFT FORWARD
CAP-CAPABLE WALLS FOR THE BROAD STREET SIPHON REPLACEMENT UP TO THE
BOTTOM OF THE FOOTING.
3. SUBSEQUENT TO SIPHON CONSTRUCTION, THE CONTRACTOR MAY ELECT TO
CONSTRUCT ANY PORTIONS OF WALL FOOTING AND WALL STEM THAT CONDITIONS
ALLOW PROVIDED THAT WALL STEMS BE CONSTRUCTED IN ENTIRETY TO A
CONTRACTION JOINT. IF FOOTING AND WALLS ARE NOT CONSTRUCTED AT THIS TIME,
THE CONTRACTOR SHALL PROTECT THE COLLAR AND EXPOSED REBAR FROM DAMAGE
UNTIL AS SUCH TIME THAT WORK RESUMES ON THESE WALLS.
4. DURING BROAD STREET PHASE 2A MOT, PLACE TEMPORARY SHORING AND REMOVE
THE RIGHT SIDE OF THE EXISTING STRUCTURE.
5. CONSTRUCT PHASE 1 PORTIONS OF STRUCTURE AS SHOWN IN THESE PLANS.
6. DURING BROAD STREET PHASE 2B MOT, PLACE ANY ADDITIONAL TEMPORARY
SHORING AND REDIRECT TRAFFIC TO NEW RIGHT SIDE OF SUPERSTRUCTURE.
7. REMOVE REMAINING PORTIONS OF EXISTING STRUCTURE AND COMPLETE PHASE 2
CONSTRUCTION AS SHOWN IN THESE PLANS.
8. PLACE CROSSFRAMES AND DECK IN CLOSURE BAY IN PHASE 3 AS SHOWN IN THESE
PLANS.

SEE SHEETS 11 / 58 TO 15 / 58 FOR ADDITIONAL DETAILS ABOUT
STRUCTURE PHASE CONSTRUCTION.

SEE SHEETS 71 AND 146 TO 178 FOR ADDITIONAL DETAILS ABOUT MAINTENANCE
OF TRAFFIC.

SEE SHEETS 474 TO 481 FOR ADDITIONAL DETAILS ABOUT SIPHON.

BRIDGE - ESTIMATED QUANTITIES

ITEM	ITEM EXT.	PARTICIPATION										TOTAL	UNIT	DESCRIPTION	ABUTS.	PIERS	SUPER.	GENERAL	SHT. REF.	CALC.	DATE	CHK'D	DATE	
		03/IMS/BR	04/NHS/BR	06/AMPO/OT/CoIs	07/S&S/OT/CoIs	08/ENH/OT/CoIs	09/IMS/OT/AEP	10/IMS/OT/ATT	11/IMS/OT/TW	12/IMS/OT/VER	RMK									12/28/2018	JS/JHL	12/28/2018		
202	11003	LUMP										LUMP		STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN (FRA-040-1351)									5 / 58	
202	11003	LUMP										LUMP		STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN (FRA-040-1352)									5 / 58	
202	22900	489										489	SY	APPROACH SLAB REMOVED					489					
202	23500	1650										1650	SY	WEARING COURSE REMOVED					1650					
503	11101	LUMP										LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN									5 , 13 / 58	
503	21100	3200	1298									4498	CY	UNCLASSIFIED EXCAVATION	3958	540								
509	10000	345806	140280	26074								512160	LB	EPOXY COATED REINFORCING STEEL	139790	71579	300791							
511	34447	709	288									997	CY	CLASS QC2 CONCRETE WITH QC/OA, BRIDGE DECK, AS PER PLAN			997						5 / 58	
511	34451			162								162	CY	CLASS QC2 CONCRETE WITH QC/OA, BRIDGE DECK (PARAPET), AS PER PLAN			162						5 / 58	
511	41013	122	49									171	CY	CLASS QC1 CONCRETE WITH QC/OA, PIER ABOVE FOOTINGS, AS PER PLAN		171							33 / 58	
511	44113	518	210									728	CY	CLASS QC1 CONCRETE WITH QC/OA, ABUTMENT NOT INCLUDING FOOTING, AS PER PLAN	728								5, 19, 22 / 58	
511	46513	602	57									659	CY	CLASS QC1 CONCRETE WITH QC/OA, FOOTING, AS PER PLAN	462	197							6 / 58	
511	51513	149		56								205	CY	CLASS QC2 CONCRETE WITH QC/OA, SIDEWALK, AS PER PLAN									5 / 58	
512	10050	1564										1564	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)			205							
512	10100	1121										1121	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	777	344	1564							
512	33000	32										32	SY	TYPE 2 WATERPROOFING	32									
513	10280	678685	275315									954000	LB	STRUCTURAL STEEL MEMBERS, LEVEL 4			954000							
513	20000	5933	2407									8340	EACH	WELDED STUD SHEAR CONNECTORS			8340							
513	95030	23						12	35	11	11	92	EACH	STRUCTURAL STEEL, MISC.: CONDUIT SUPPORT BRACKETS			92						38 / 58	
514	00060	43752	17748									61500	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT			61500							
514	00066	43752	17748									61500	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT			61500							
516	11210	213	87									300	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL			300							
516	13600	51										51	SF	1" PREFORMED EXPANSION JOINT FILLER		51								
516	13900	7										7	SF	2" PREFORMED EXPANSION JOINT FILLER	7									
516	14000	231										231	SF	PREFORMED EXPANSION JOINT FILLER, MISC: 1/4" THICK	231									
516	44100	4	2									6	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (1'-4" x 1'-0" x 2 1/16"			6							
516	44200	7	3									10	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (1'-4" x 10" x 3 5/16"			10							
516	44200	8	2									10	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (2'-0" x 1'-4" x 3 3/4"			10							
516	44200	4	2									6	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (1'-4" x 10" x 3 5/16"			6							
516	44200	3	1									4	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (1'-2" x 10" x 3 5/16"			4							
516	44200	4	2									6	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (1'-0" x 1'-0" x 3 3/4"			6							
516	44300	4	2									6	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (2'-0" x 1'-8" x 4 1/4"			6							
518	21200	398	161									559	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	559									
518	40000	217	88									305	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	305									
518	40010	16										16	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	16									
526	25000	444	100									544	SY	REINFORCED CONCRETE APPROACH SLABS (T=15")				544						
607	39994	390										390	FT	TEMPORARY VANDAL FENCE, TYPE B			390							
625	10620	4										16	EACH	LIGHT POLE ANCHOR BOLTS, MISC.: ANCHOR BOLT ASSEMBLIES EMBEDDED IN CONCRETE BRIDGE DECK			16						5 / 58	
625	25920	227										227	FT	CONDUIT, MISC.: 1/2" FIBERGLASS, EXTRA HEAVY WALL, AS PER PLAN (INTERCONNECT TRACER)				227					6 / 58	
625	25920	906										906	FT	CONDUIT, MISC.: 3" FIBERGLASS, EXTRA HEAVY WALL, AS PER PLAN (INTERCONNECT)				906					6 / 58	
625	25920											4074	FT	CONDUIT, MISC.: 4" FIBERGLASS, EXTRA HEAVY WALL, AS PER PLAN (AT&T)				4074					6 / 58	
625	25920											227	FT	CONDUIT, MISC.: 4" FIBERGLASS, EXTRA HEAVY WALL, AS PER PLAN (TWC)				227					6 / 58	
625	25920											227	FT	CONDUIT, MISC.: 4" FIBERGLASS, EXTRA HEAVY WALL, AS PER PLAN (VER)				227					6 / 58	
625	25920											1811	FT	CONDUIT, MISC.: 5" FIBERGLASS, EXTRA HEAVY WALL, AS PER PLAN (AEP)				1811					6 / 58	

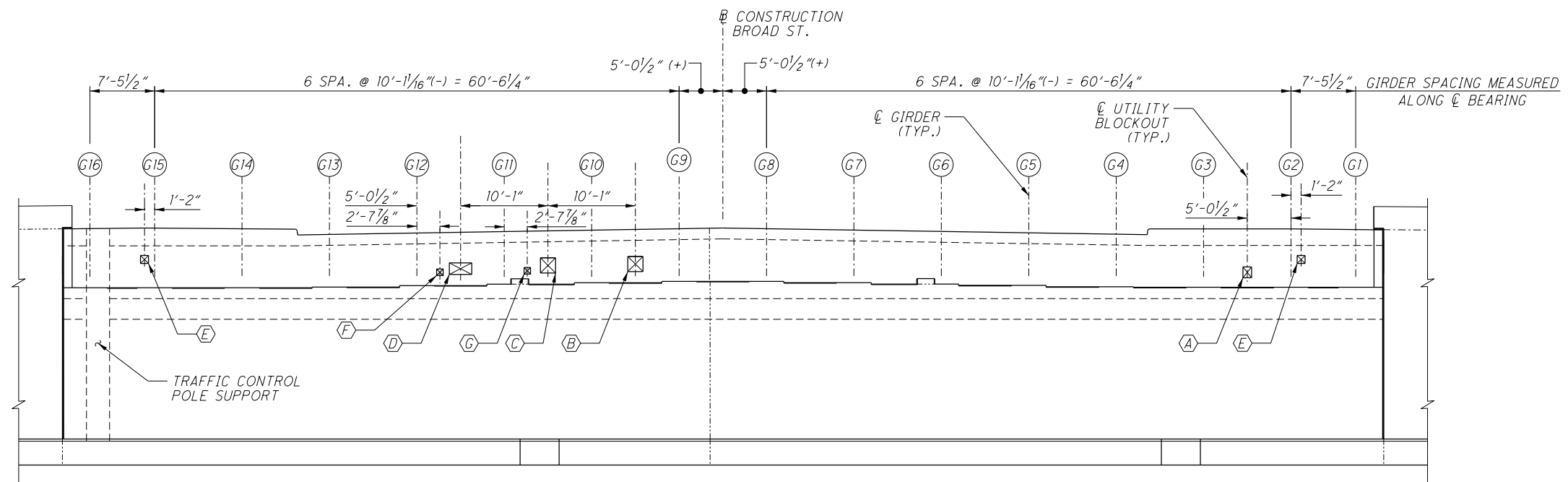
BURGESS & NIPLÉ
Engineers - Architects - Planners
5095 REED ROAD, COLUMBUS, OHIO 43220

DESIGNED: JS
CHECKED: RMK
DRAWN: AAA
REVISED:
REVIEWED: JCS
DATE: 12/28/18
STRUCTURE FILE NUMBER: 2502623

BRIDGE ESTIMATED QUANTITIES
BRIDGE NO. FRA-040-1351
U.S. 40/BROAD ST. OVER I-71

FRA-71-17.46
PID No. 105453

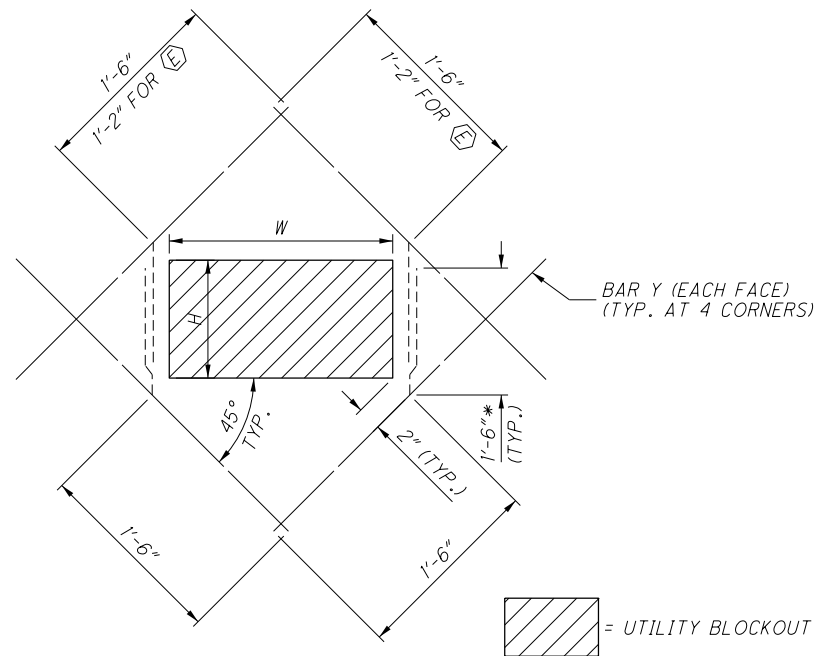
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ELEVATION - REAR ABUTMENT

REAR ABUTMENT UTILITY BLOCKOUT TABLE				
BLOCKOUT	DESCRIPTION OF UTILITY	BLOCKOUT SIZE (WxH)	ELEV. @ BOT. OF BLOCKOUT	BAR Y
(A)	TRAFFIC CONDUIT	1'-0" x 1'-3"	788.52	RA504
(B)	AT&T CONDUIT	1'-9" x 1'-9"	789.23	
(C)	AT&T CONDUIT	1'-9" x 1'-9"	789.07	RA504 (LEFT SIDE) RA515 (RIGHT SIDE)
(D)	AEP CONDUIT BANK	2'-7" x 1'-4"	788.90	RA504 (LEFT SIDE) RA515 (RIGHT SIDE)
(E)	6" DIA. PLANTER DRAIN	11" x 11"	790.17	RA504
(F)	4" TIME WARNER CONDUIT	9" x 9"	788.82	RA515 (LEFT SIDE) RA504 (RIGHT SIDE)
(G)	4" TIME VERIZON CONDUIT	9" x 9"	788.98	RA515 (LEFT SIDE) RA504 (RIGHT SIDE)

DIRECTIONS LEFT AND RIGHT ARE BASED ON LOOKING AHEAD IN STATIONING



UTILITY BLOCKOUT REINFORCEMENT DETAIL

* = FOR BENT "Y" BARS

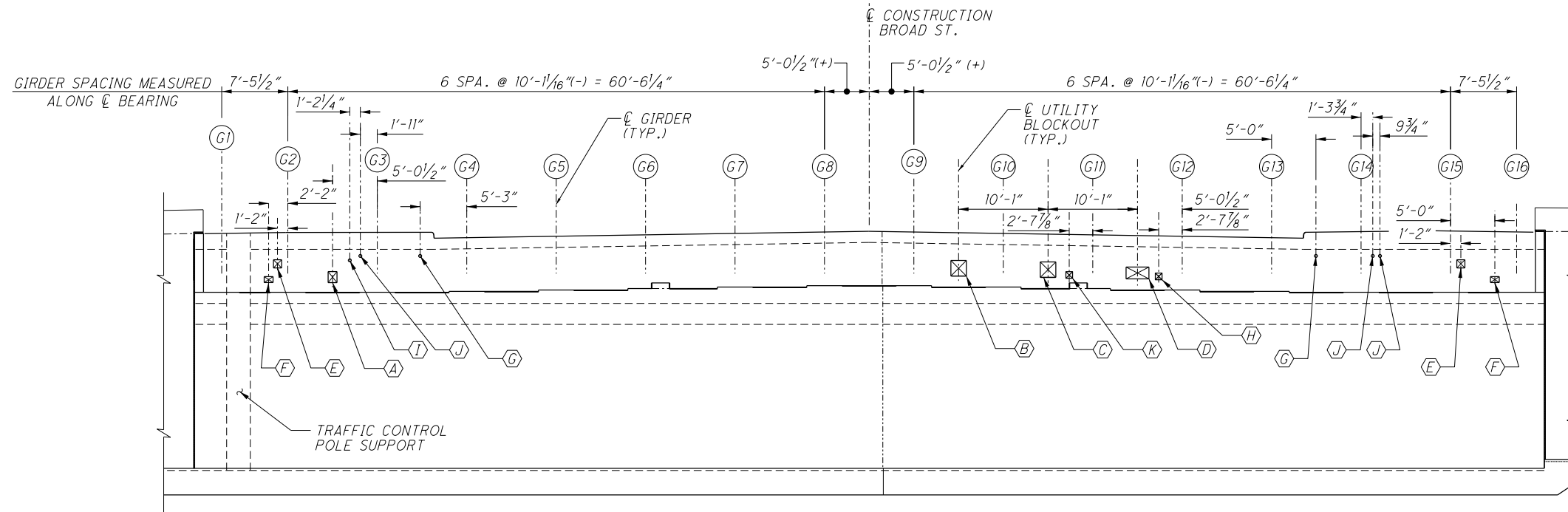
LEGEND:

- DIA. = DIAMETER
- (G) = GIRDER DESIGNATION

NOTES:

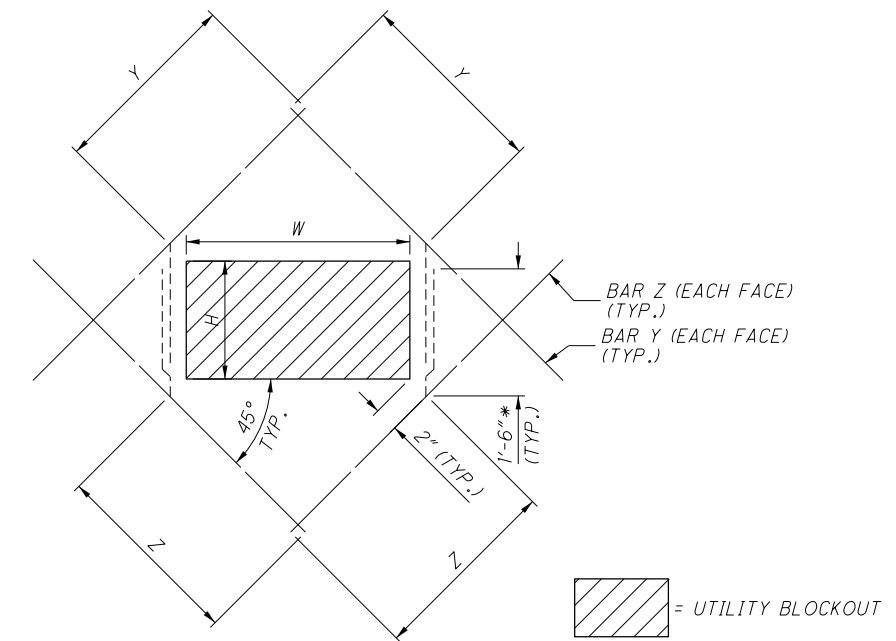
- SEE SHEET 18 / 58 FOR DIMENSIONS NOT SHOWN.
- DIMENSIONS SHOWN ARE MEASURED ALONG FRONT FACE OF BACKWALL UNLESS NOTED OTHERWISE.

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ELEVATION - FORWARD ABUTMENT

FORWARD ABUTMENT UTILITY BLOCKOUT TABLE							
BLOCKOUT	DESCRIPTION OF UTILITY	BLOCKOUT SIZE (WxH)	ELEV. @ BOT. OF BLOCKOUT	Y	Z	BAR Y	BAR Z
A	TRAFFIC CONDUIT	1'-0" x 1'-3"	791.02	1'-6"	1'-4 1/2"	FA504	
B	AT&T CONDUIT	1'-9" x 1'-9"	791.77	1'-6"	1'-6"	FA504	
C	AT&T CONDUIT	1'-9" x 1'-9"	791.61	1'-6"	1'-6"	FA504 (LEFT SIDE) FA517 (RIGHT SIDE)	
D	AEP CONDUIT BANK	2'-7" x 1'-4"	791.45	1'-6"	1'-6"	FA504 (LEFT SIDE) FA517 (RIGHT SIDE)	
E	6" DIA. PLANTER DRAIN	11" x 11"	792.68	1'-3"	1'-1"	FA504	FA516
F	4" WATER SLEEVE FOR IRRIGATION	1'-0" x 8"	791.03	1'-2"	1'-4 1/2"	FA504	
G	2" CITY LIGHTING	4" DIAM.	794.03	-	-	NONE	
H	4" TIME WARNER CONDUIT	9" x 9"	791.35	1'-6"	1'-6"	FA517 (LEFT SIDE) FA504 (RIGHT SIDE)	
I	1" AESTHETIC LIGHTING	4" DIAM.	793.53	-	-	NONE	
J	1" AESTHETIC LIGHTING	4" DIAM.	794.03	-	-	NONE	
K	4" TIME VERIZON CONDUIT	9" x 9"	791.51	1'-6"	1'-6"	FA517 (LEFT SIDE) FA504 (RIGHT SIDE)	



UTILITY BLOCKOUT REINFORCEMENT DETAIL

* = FOR BENT "Y" OR "Z" BARS

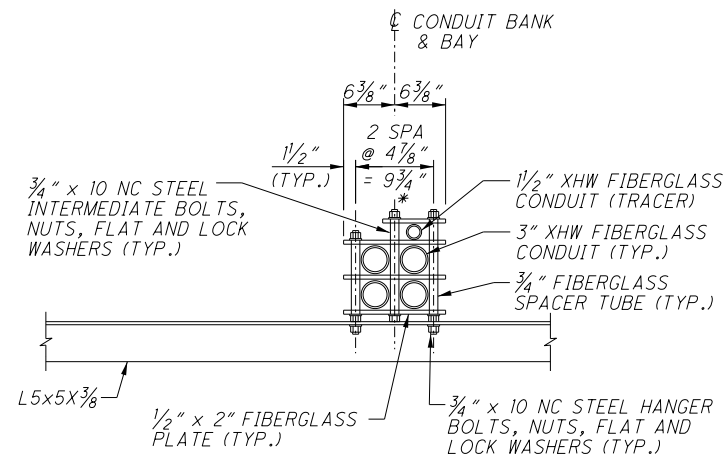
LEGEND:

- ELEC. = ELECTRIC
- DIA. = DIAMETER
- (G-) = GIRDER DESIGNATION

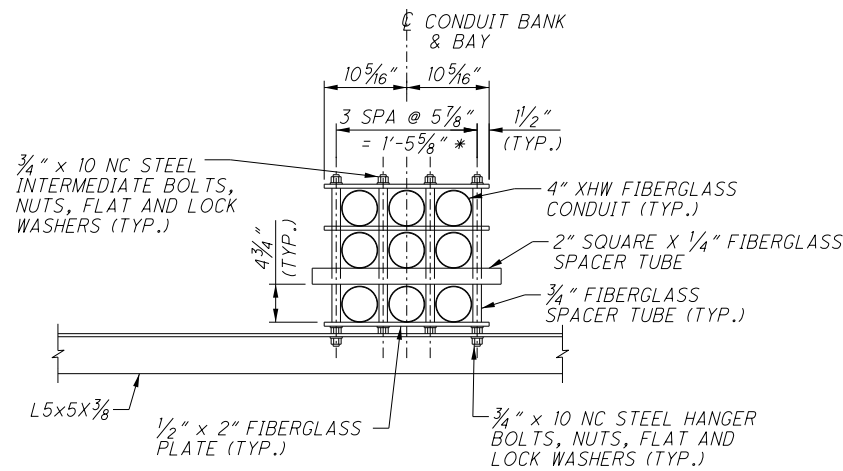
NOTES:

1. SEE SHEET 21 / 58 FOR DIMENSIONS NOT SHOWN.
2. DIMENSIONS SHOWN ARE MEASURED ALONG FRONT FACE OF BACKWALL UNLESS NOTED OTHERWISE.

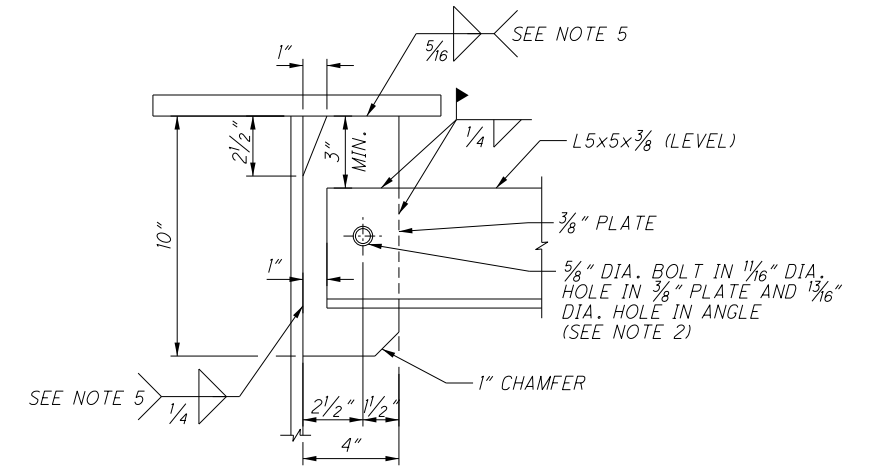
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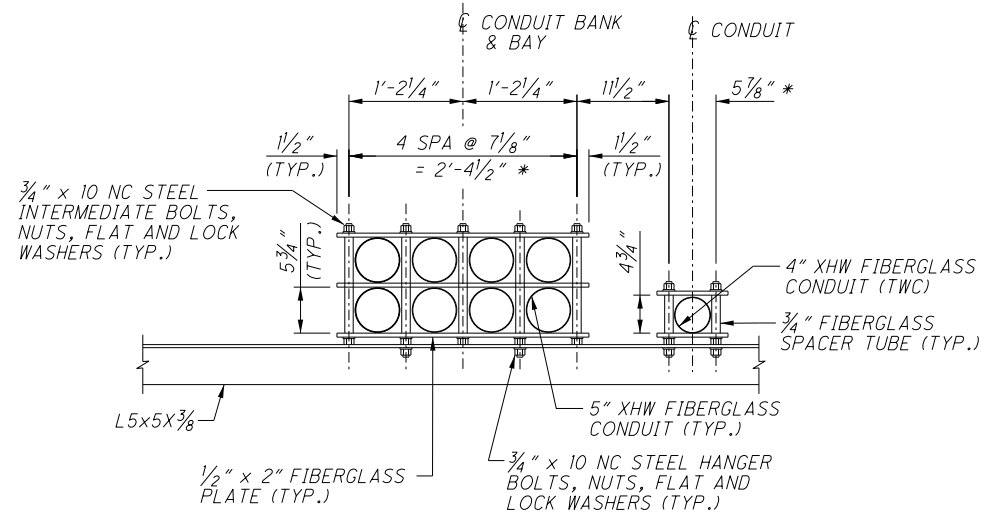
UTILITY SUPPORT, TYPE 1
BETWEEN GIRDERS 2 & 3
(TRAFFIC INTERCONNECT)



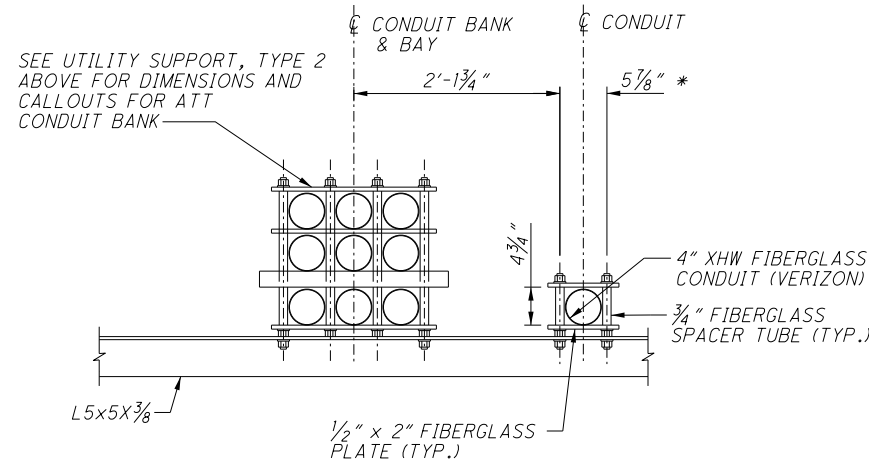
UTILITY SUPPORT, TYPE 2
BETWEEN GIRDERS 9 & 10
(AT&T)



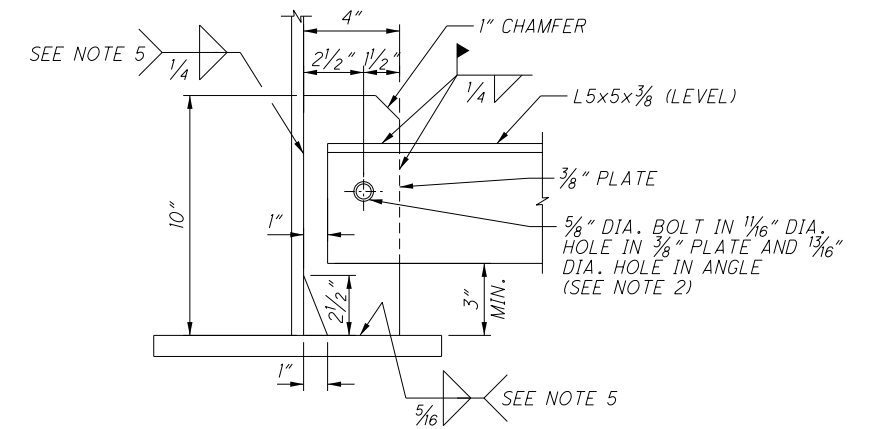
DRAIN PIPE SUPPORT



UTILITY SUPPORT, TYPE 3
BETWEEN GIRDERS 11 & 12
(AEP & TWC)



UTILITY SUPPORT, TYPE 4
BETWEEN GIRDERS 10 & 11
(AT&T & VERIZON)



CONNECTION DETAIL AT GIRDER

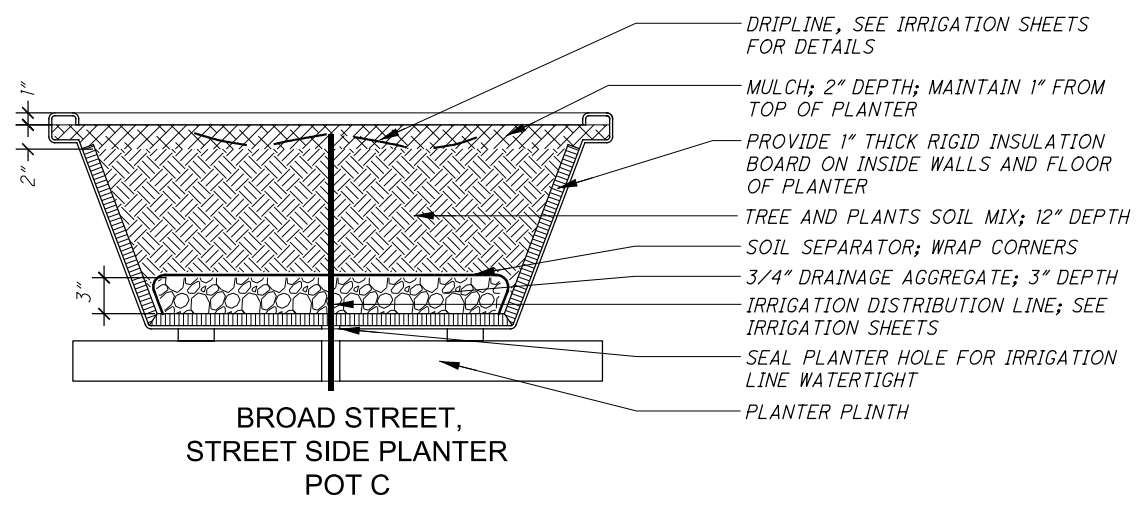
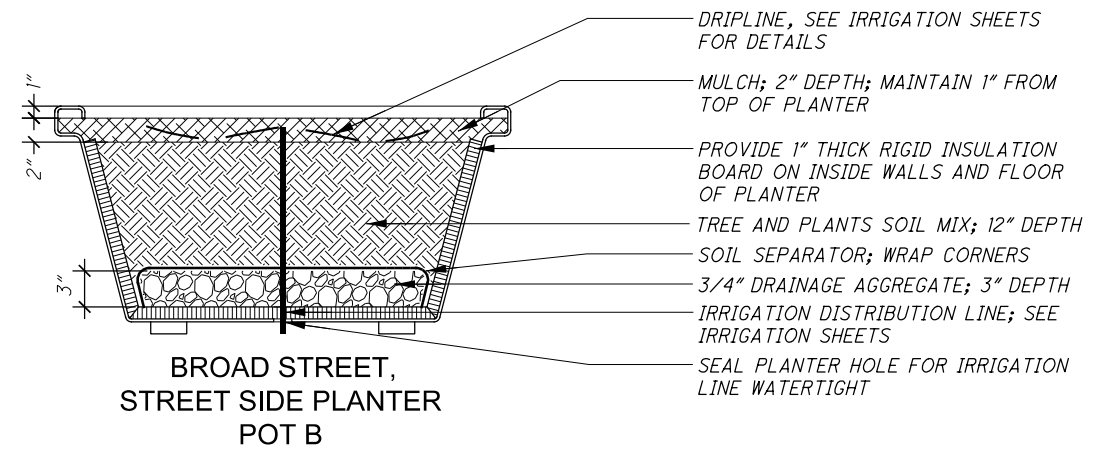
LEGEND:

- * = VERIFY THESE DIMENSIONS WITH THE CONDUIT SUPPORT SUPPLIER OR MANUFACTURER PRIOR TO DRILLING HOLES IN THE ANGLE
- NC = NATIONAL COARSE THREAD
- XHW = EXTRA HEAVY WALL

NOTES:

- UTILITY BANKS ARE CENTERED BETWEEN GIRDERS.
- BOLTS SHALL BE A325, TYPE 1 GALVANIZED, AND INSTALLED ACCORDING TO CMS 513.20.
- FOR UTILITY SUPPORTS, INCLUDE L5x5x3/8, 3/8" PLATE, 5/8" BOLTS AND WELDING WITH ITEM 513, STRUCTURAL STEEL, MISC.: CONDUIT SUPPORT BRACKETS, FOR PAYMENT.
- SEE SHEET 34 / 58 FOR SPACING OF L5x5x3/8 ANGLES.
- TERMINATE WELDS PER CMS 513.13.

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1 TYPICAL PLANTER POT SOIL PROFILES
SCALE: 1 1/2" = 1'-0"

SCREENWALL AND BROAD STREET LUMINAIRE NOTES:

THE ENTIRE SYSTEM OF PANELS, HARDWARE, LIGHTING, AND STRUCTURAL STEEL FRAME SHALL BE ENGINEERED & FABRICATED BY A SINGLE ENTITY.

THE ENTIRE SYSTEM IS TO BE ANALYZED FOR STRUCTURAL STABILITY, INCLUDING MINIMIZING DEFLECTION IN THE PANELS, THE HARDWARE CONNECTIONS AND SUBSTRUCTURE, AND THE CONNECTIONS TO THE PARAPET. USE AN OHIO REGISTERED ENGINEER TO PREPARE, SIGN, SEAL AND DATE THE CALCULATIONS. USE A SECOND OHIO REGISTERED ENGINEER TO CHECK, SIGN, SEAL, AND DATE THE CALCULATIONS.

ALL EXPOSED PORTIONS OF THE FRAMEWORK WILL BE POWDERCOATED. THE STRUCTURAL STEEL FRAMEWORK WILL ANCHOR TO THE PARAPET WALLS USING A FABRICATOR-SUPPLIED CONCRETE ANCHORING SYSTEM.

ALL CONNECTIONS FROM THE PANELS TO THE STRUCTURE TO BE GASKETED TO PROTECT THE MATERIAL AND PREVENT LIGHT LEAKAGE. LIGHTING TO EVENLY ILLUMINATE THE PANELS.

A FULL SIZE MOCKUP OF ONE COMPLETE PANEL IS REQUIRED DUE TO COMPLEXITY OF HARDWARE AND PANEL SYSTEMS. MOCKUP SHALL BE A FULL TYPICAL PANEL ASSEMBLY, INCLUDING TWO POSTS, TWO RAILS, TWO PANELS, FUNCTIONAL LIGHTING, ALL ASSOCIATED HARDWARE, GASKETED PANEL CONNECTION, EDGE JOINERY, FINAL FINISH, AND BOLTED CONNECTION TO PARAPET WALL. MOCKUP TO BE REVIEWED AND APPROVED BY FIELD ENGINEER PRIOR TO COMMENCEMENT OF FABRICATION AND INSTALLATION OF BALANCE OF PANELS.

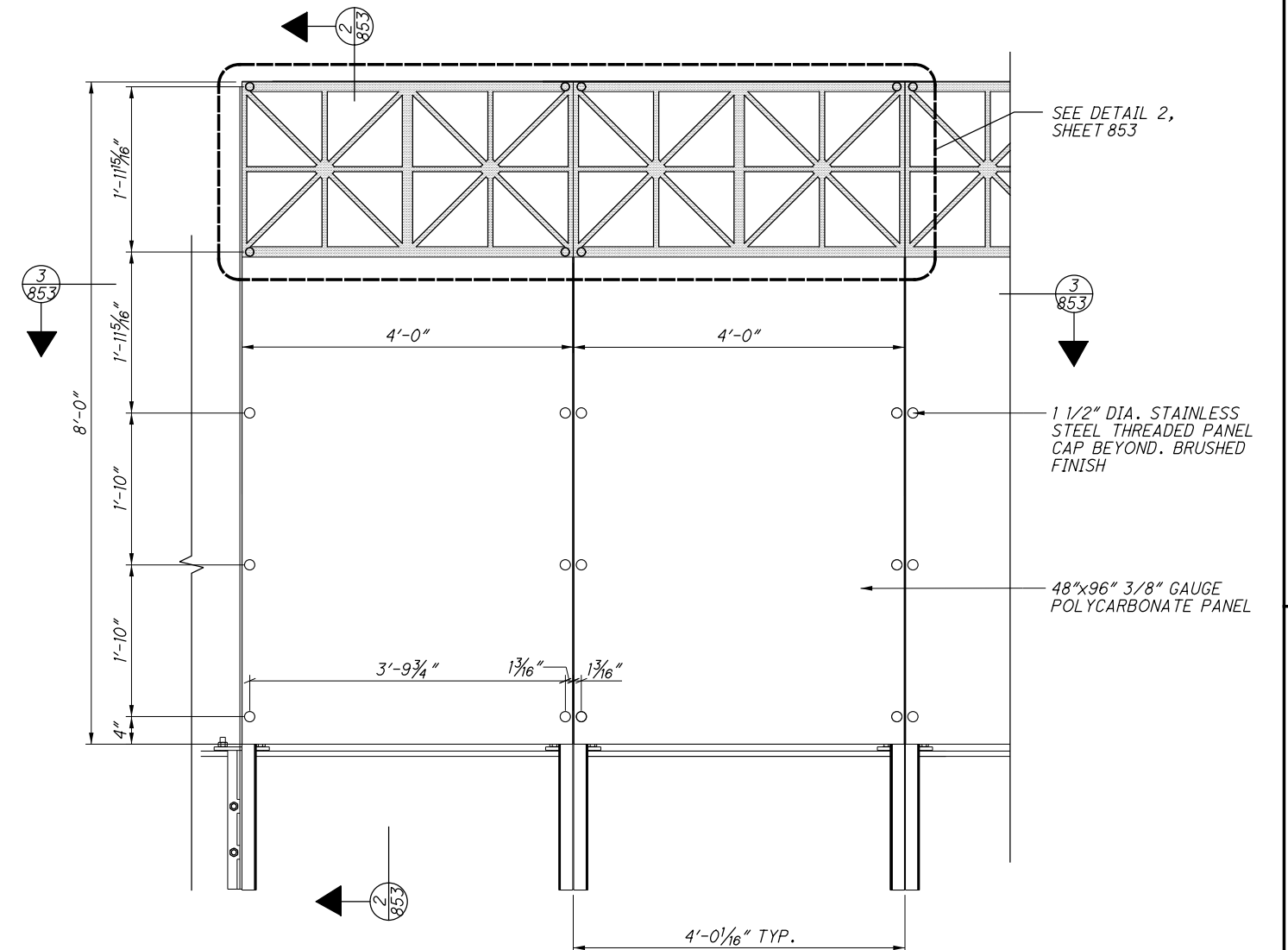
CNC TRIMMING 3 AXIS: ALL PANELS TO BE CUT TO SIZE AND SHAPE ON A 3 AXIS CNC TO ENSURE PRECISION

PANEL JOINERY: THE VERTICAL JOINT BETWEEN PANELS SHALL BE DONE USING A SQUARE EDGE JOINT DETAIL UNLESS OTHERWISE APPROVED WITH SHOP DRAWINGS AND MOCKUP.

EDGE FINISHING: ALL EXPOSED EDGES OF THE C3 PANELS WILL HAVE A SANDED FINISH AND THE EDGES OF THE HIRES PANELS WILL HAVE A POLISHED FINISH

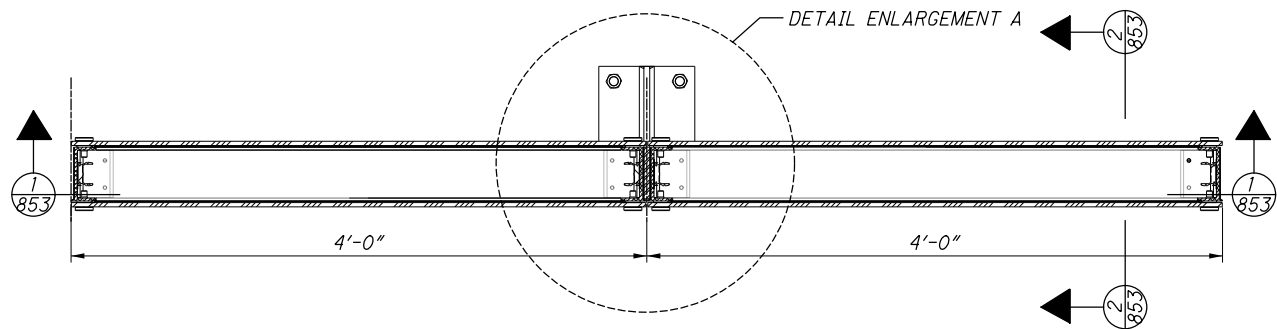
DRILLING: HOLES TO ACCOMMODATE THE HARDWARE WILL BE PRE-DRILLED INTO THE PANELS

THREADED INSERTS: THREADED INSERTS TO ACCEPT THE HARDWARE WILL BE PLACED INTO THE SUPPORT FINS AT THE FABRICATOR'S PLANT.

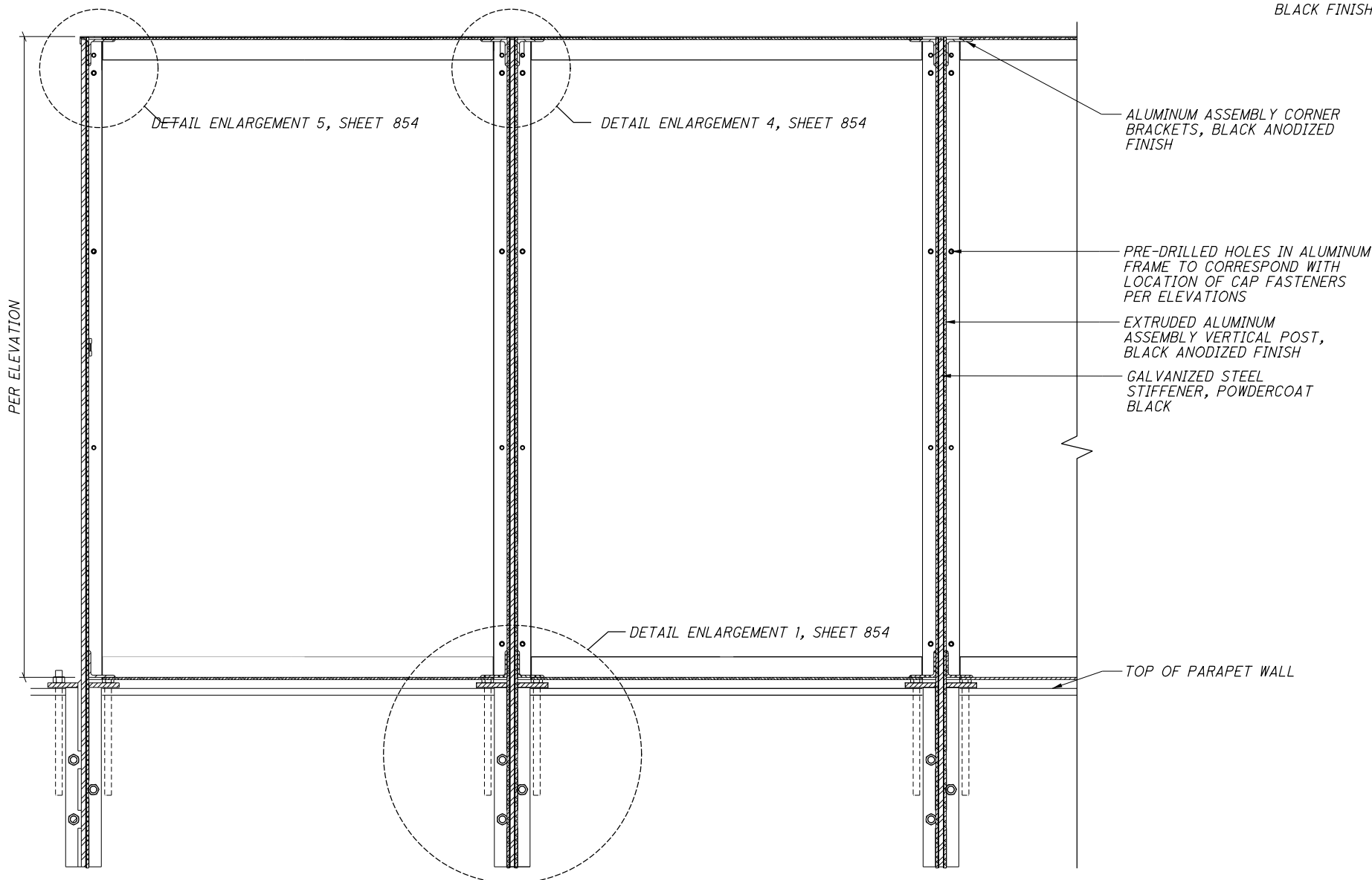
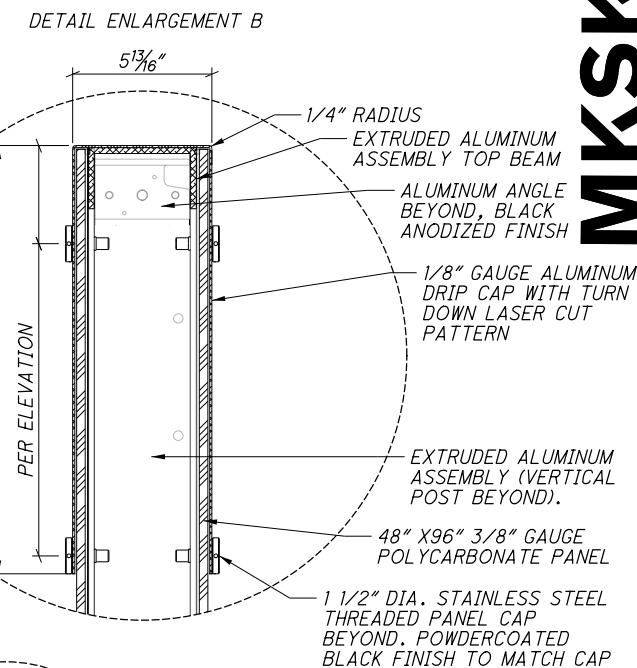
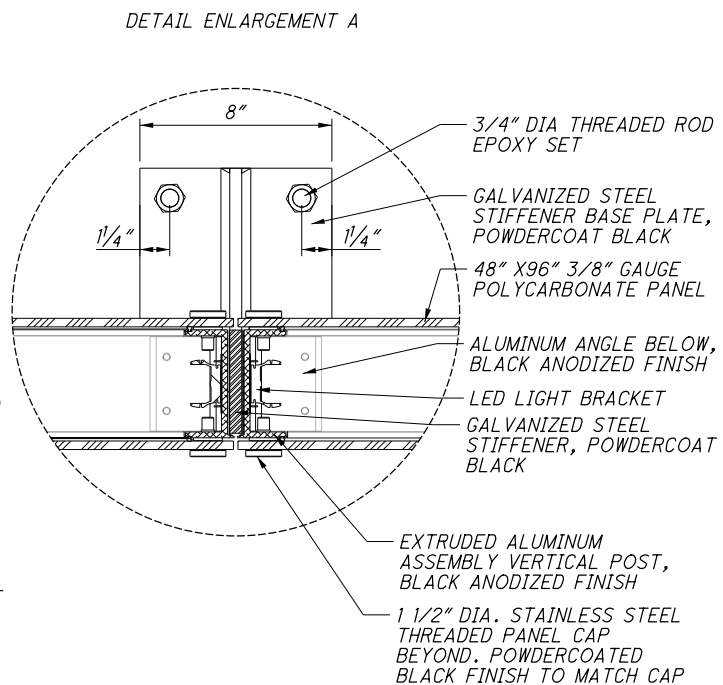


1 TYPICAL BROAD STREET SCREENWALL ELEVATION
SCALE: 1" = 1'-0"

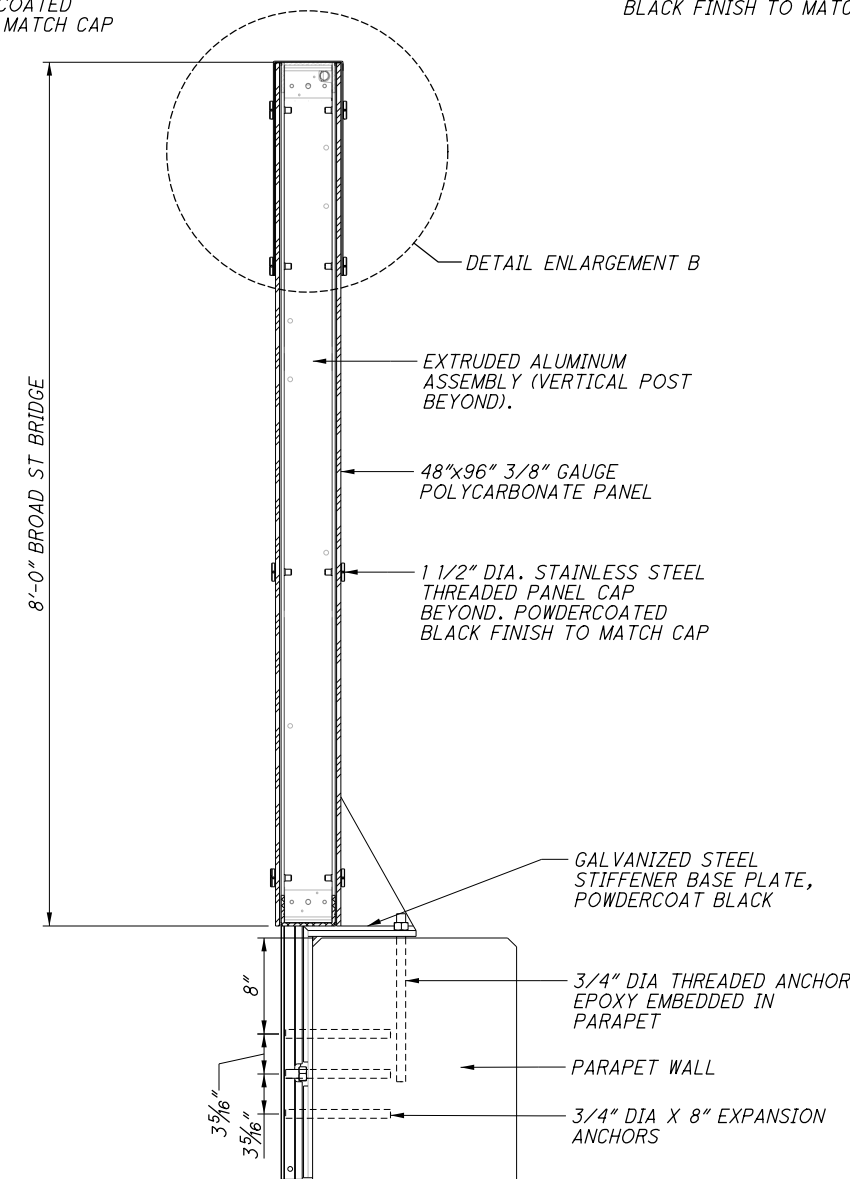
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3 SCREENWALL FRAMING - TYPICAL ELEVATION
SCALE: 1 1/2" = 1'-0"



1 SCREENWALL FRAMING - TYPICAL ELEVATION
SCALE: 1 1/2" = 1'-0"



2 SCREENWALL - TYPICAL SECTION
SCALE: 1 1/2" = 1'-0"

MKSK

LANDSCAPE ARCHITECTURE + URBAN PLANNING

CALCULATED

CHECKED

SCREEN WALL DETAILS
AESTHETIC ENHANCEMENTS

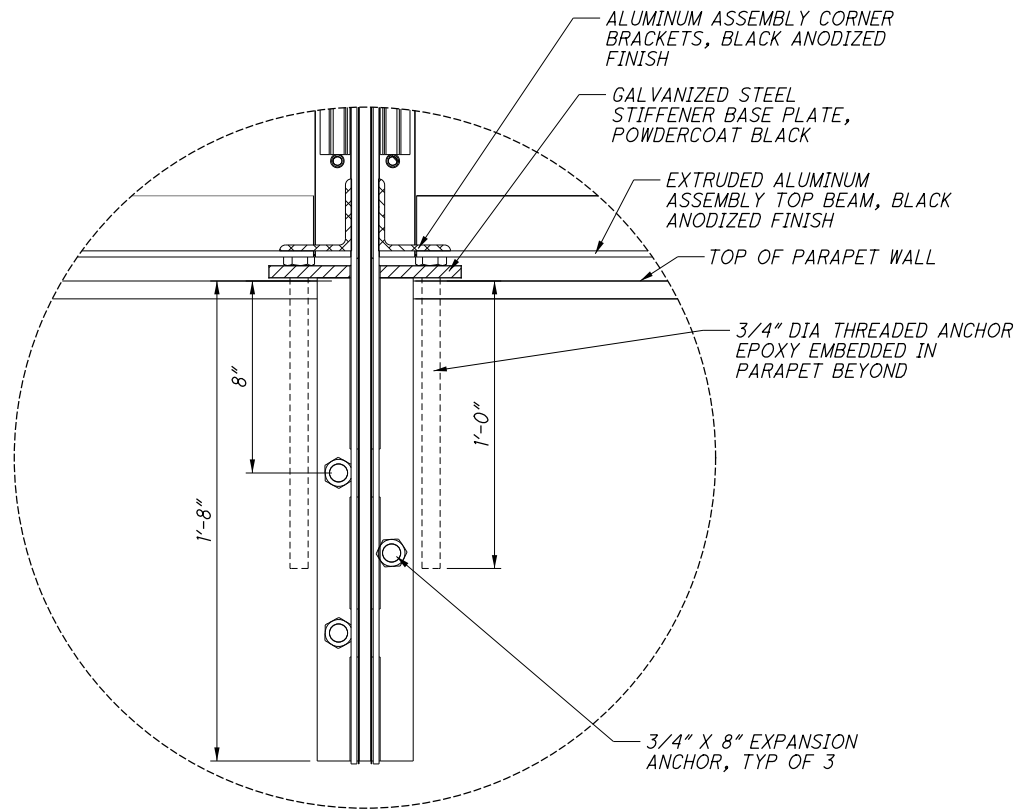
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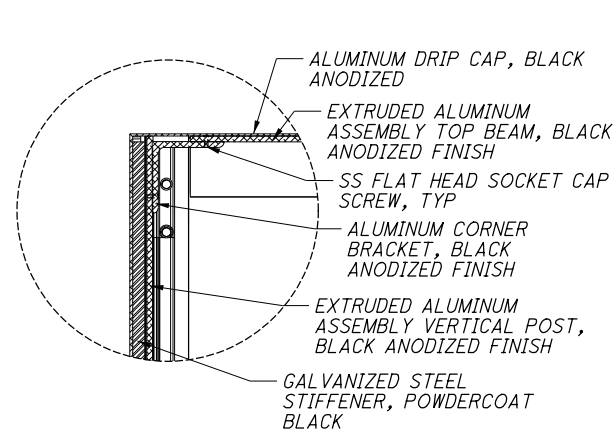
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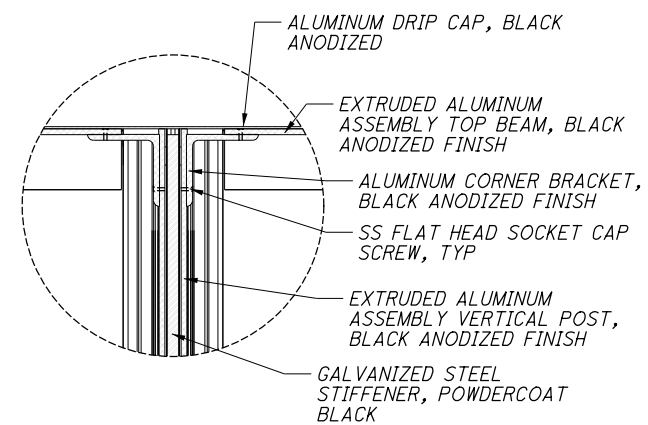


1 SCREENWALL POST ELEVATION ENLARGEMENT
SCALE: 1 1/2" = 1'-0"

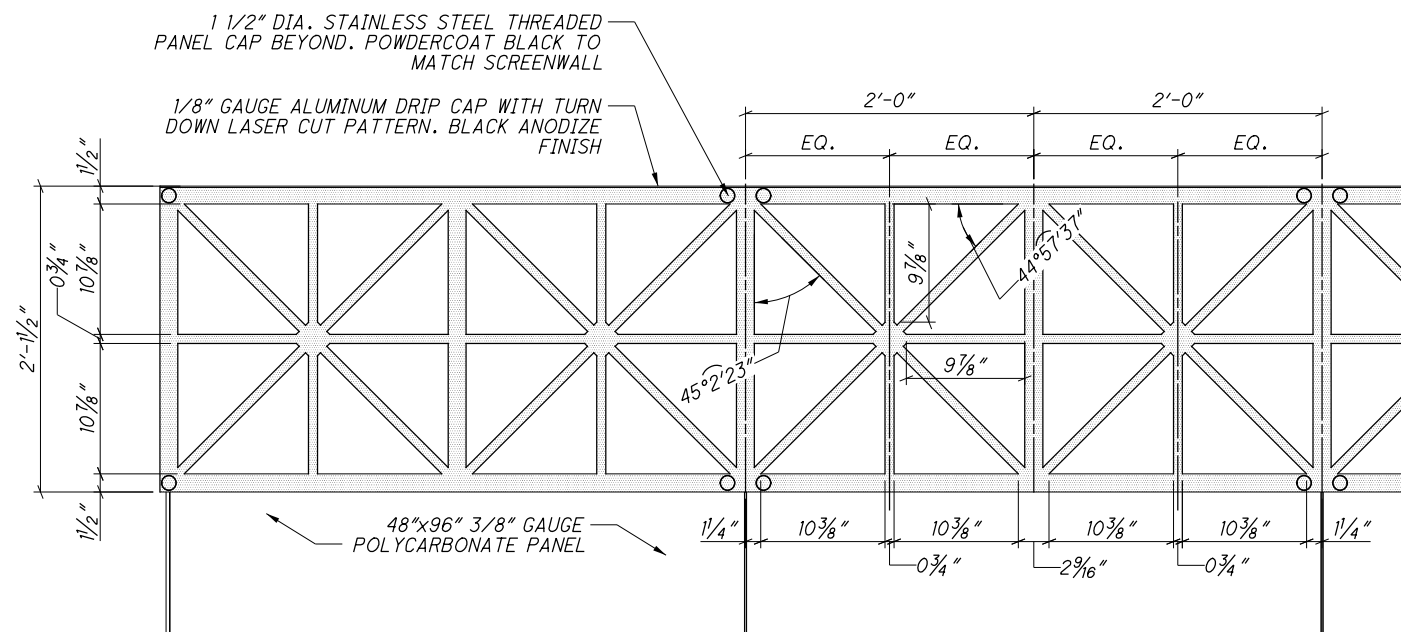
DETAIL ENLARGEMENT B



2 SCREENWALL ASSEMBLY - CORNER ENLARGEMENT AT END
SCALE: 1 1/2" = 1'-0"



3 SCREENWALL ASSEMBLY - CORNER ENLARGEMENT
SCALE: 1 1/2" = 1'-0"



4 SCREENWALL PATTERNED DRIP CAP - BROAD ST BRIDGE
SCALE: 1 1/2" = 1'-0"

SITE FURNISHINGS

1.0 SUMMARY:

- A. WORK SHALL INCLUDE ALL ENGINEERING, FABRICATION, TOOLS, LABOR, AND MATERIALS NECESSARY, INCLUDING ANCHORING DEVICES AND INCIDENTALS TO SUCCESSFULLY FABRICATE AND INSTALL THE VARIOUS CONFIGURATIONS AS SHOWN ON THE CONSTRUCTION DRAWINGS.
- B. THIS SECTION INCLUDES THE FOLLOWING:
 - 1. PLANTER POT TYPE B - BROAD STREET.
 - 2. PLANTER POT TYPE C - BROAD STREET.
- C. SIZES:
 - 1. TYPE B: 38" wide x 60" long x 18" tall.
 - 2. TYPE C: 47" wide x 86" long x 18" tall.
- D. FINISH: ALUMINUM POWDER COAT- BLACK COLOR.
- E. ACCESSORIES WITH EACH PLANTER: IRRIGATION FITTINGS, DRAINAGE AGGREGATE, FILTER FABRIC, RIGID INSULATION BOARD AND DRAINAGE FITTINGS

1.1 METHOD OF MEASUREMENT:

PLANTER POTS SHALL BE MEASURED BY LUMP SUM FOR EACH TYPE INCLUDING CONTAINER AND INSTALLATION ACCESSORIES. REFER TO PLANTING SOILS, PLANTS, AND IRRIGATION SECTIONS FOR METHOD OF MEASUREMENT FOR THESE SEPARATE ITEMS.

1.2 BASIS OF PAYMENT:

THE ACCEPTED PLANTER POTS WILL BE PAID FOR AT THE CONTRACT PRICE DESIGNATED FOR EACH TYPE AS SHOWN ON THE PLANS. ALL COSTS FOR WORK IN THIS SECTION ARE TO BE INCLUDED IN THE LUMP SUM PRICE FOR EACH PLANTER POT. THE COSTS FOR PLANTING SOILS, PLANTS, AND IRRIGATION SHALL BE INCLUDED ELSEWHERE.

1.3 REFERENCES:

- ASTM B 117 - STANDARD PRACTICE FOR OPERATING SALT SPRAY (FOG) APPARATUS.
- ASTM D 522 - STANDARD TEST METHODS FOR MANDREL BEND TEST OF ATTACHED ORGANIC COATINGS.
- ASTM D 523 - STANDARD TEST METHOD FOR SPECULAR GLOSS.
- ASTM D 2247 - STANDARD PRACTICE FOR TESTING WATER RESISTANCE OF COATINGS IN 100% RELATIVE HUMIDITY.
- ASTM D 2794 - STANDARD TEST METHOD FOR RESISTANCE OF ORGANIC COATINGS TO THE EFFECTS OF RAPID DEFORMATION (IMPACT).
- ASTM D 3359 - STANDARD TEST METHODS FOR MEASURING ADHESION BY TAPE TEST.
- ASTM D 3363 - STANDARD TEST METHOD FOR FILM HARDNESS BY PENCIL TEST.
- ASTM G 155 - STANDARD PRACTICE FOR OPERATING XENON ARC LIGHT APPARATUS FOR EXPOSURE OF NON-METALLIC
- ISO 1520 - PAINTS AND VARNISHES - CUPPING TEST.
- ISO 2815 - PAINTS AND VARNISHES - BUCHHOLZ INDENTATION TEST.

1.4 SUBMITTALS:

- A. PRODUCT DATA: SUBMIT MANUFACTURER'S PRODUCT DATA, STORAGE AND HANDLING REQUIREMENTS AND RECOMMENDATIONS, INSTALLATION METHODS AND AVAILABLE COLORS, STYLES, PATTERNS AND TEXTURES.
- B. SHOP DRAWINGS: SUBMIT MANUFACTURER'S SHOP DRAWINGS, INCLUDING PLANS AND ELEVATIONS, INDICATING OVERALL DIMENSIONS, MATERIALS, TOLERANCES, WELDING, FASTENERS, HARDWARE, MOUNTING, FINISHES, AND ACCESSORIES.
- C. SAMPLES: SUBMIT MANUFACTURER'S SAMPLES OF MATERIALS, FINISHES, AND FACTORY APPLIED COLOR FINISHES.
- D. WARRANTY DATA ON MANUFACTURER'S LETTERHEAD.

1.5 QUALITY ASSURANCE:

- A. PRODUCT SUPPORT: PRODUCTS ARE SUPPORTED WITH COMPLETE ENGINEERING DRAWINGS AND DESIGN PATENTS.
- B. PRODUCTION: ORDERS ARE FILLED WITHIN A 40-DAY SCHEDULE.
- C. FACILITY OPERATOR: WELDERS AND MACHINE OPERATORS ARE CERTIFIED.

1.6 DELIVERY, STORAGE, AND HANDLING:

- A. DELIVERY: DELIVER MATERIALS TO SITE IN MANUFACTURER'S ORIGINAL, UNOPENED CONTAINERS AND PACKAGING, WITH LABELS CLEARLY IDENTIFYING PRODUCT NAME AND MANUFACTURER.
- B. STORAGE: STORE MATERIALS IN CLEAN, DRY AREA IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. KEEP MATERIALS IN MANUFACTURER'S ORIGINAL, UNOPENED CONTAINERS AND PACKAGING UNTIL INSTALLATION.
- C. HANDLING: PROTECT MATERIALS AND FINISH DURING HANDLING AND INSTALLATION TO PREVENT DAMAGE.

1.7 WARRANTY:

WARRANTY INFORMATION: PRODUCTS WILL BE FREE FROM DEFECTS IN MATERIAL AND/OR WORKMANSHIP FOR A PERIOD OF THREE YEARS FROM THE DATE OF DELIVERY. THE WARRANTY DOES NOT APPLY TO DAMAGE RESULTING FROM ACCIDENT, ALTERATION, MISUSE, TAMPERING, NEGLIGENCE, OR ABUSE. SUPERFICIAL DAMAGE RESULTING FROM NORMAL USE: SCRATCHES, NICKS, AND ABRASIONS ARE TO BE CONSIDERED NORMAL WEAR AND TEAR, AND ARE NOT THE RESPONSIBILITY OF THE MANUFACTURER.

1.8 FINISHES:

- A. FINISH ON METAL:
 - 1. PRIMER: RUST INHIBITOR EPOXY PRIMER COAT 1.0 - 1.5 MILS ON FERROUS SUPPORTS.
 - 2. TOPCOAT: THERMOSETTING TGIC POLYESTER POWDER COAT, UV, CHIP, AND FLAKE RESISTANT.
 - 3. COLOR: RAL 9004 BLACK, FINE TEXTURE.
- B. TEST RESULTS:
 - 1. SPECIFIC GRAVITY: 1.5 +/- .05
 - 2. OPTIMAL STORAGE: < 80°F, 50% RH
 - 3. PARTICLE DISTRIBUTION: +44 MICRONS (325 MESH) 30 - 40%
 - 4. THEORETICAL COVERAGE: 59 SQ/FT @ 2.2 MILS
 - 5. FILM THICKNESS: 2.2 TO 4.0 MILS
 - 6. CURE SCHEDULE: 10 MINUTES @ 400
 - 7. METAL TEMPERATURE: 18 MINUTES @ 375
 - 8. 25 MINUTES @ 350
 - 9. GLOSS: ASTM D523 4 - 7%
 - 10. PENCIL HARDNESS: ASTM D3363 H-2H
 - 11. FLEXIBILITY: ASTM D522 1/8 IN
 - 12. ADHESION: ASTM D3359 5B
 - 13. DIRECT IMPACT: ASTM D2794 160 IN/LBS @ 2.2 MILS
 - 14. REVERSE IMPACT: ASTM D2794 160 IN/LBS @ 2.2 MILS
 - 15. SALT SPRAY HOURS: ASTM B117 1000
 - 16. SALT SPRAY MATERIALS: CRS HENKEL B1000

2.0 MANUFACTURERS:

- PROVIDE PRODUCTS FROM ONE OF THE FOLLOWING MANUFACTURERS:
- A. LANDSCAPE FORMS, INC.
431 LAWDALE AVENUE
KALAMAZOO, MI 49048
PHONE: (800) 521-2546
WEB SITE: WWW.LANDSCAPEFORMS.COM
 - B. FORMS+SURFACES
30 PINE STREET
PITTSBURGH, PA 15223
PHONE: (800) 451-0410
EMAIL: SALES@FORMS-SURFACES.COM
WEB SITE: WWW.FORMS-SURFACES.COM
 - C. ORE INC.
130 S. REDWOOD RD.
NORTH SALT LAKE, UT 84054
PHONE: (801) 936-0499
WEBSITE: WWW.ORECONTAINERS.COM
 - D. WASSAU TILE
PO BOX 1520
WASSAU, WI 54402
PHONE: (800) 388-8728
WEBSITE: WWW.WASSAUTILE.COM

2.1 MISCELLANEOUS MATERIALS:

- A. ANCHORS, FASTENERS, FITTINGS, AND HARDWARE: STAINLESS STEEL MANUFACTURER'S STANDARD, CORROSION-RESISTANT-COATED OR NON-CORRODIBLE MATERIALS; COMMERCIAL QUALITY, TAMPERPROOF, VANDAL AND THEFT RESISTANT, CONCEALED, RECESSED, AND CAPPED OR PLUGGED.
- B. NONSHRINK, NONMETALLIC GROUT: PREMIXED, FACTORY-PACKAGED, NONSTAINING, NONCORROSIVE, NONGASEOUS GROUT COMPLYING WITH ASTM C 1107; RECOMMENDED IN WRITING BY MANUFACTURER, FOR EXTERIOR APPLICATIONS.

3.0 EXAMINATION:

- A. VERIFY THAT SUBSTRATES ARE STABLE AND CAPABLE OF SUPPORTING THE WEIGHT OF ITEMS COVERED UNDER THIS SECTION. VERIFY THAT SUBSTRATES HAVE BEEN ADEQUATELY PREPARED TO SECURELY ANCHOR THOSE ITEMS THAT WILL BE SURFACE MOUNTED. NOTIFY FIELD ENGINEER OF CONDITIONS THAT WOULD ADVERSELY AFFECT INSTALLATION OR SUBSEQUENT USE. DO NOT BEGIN INSTALLATION UNTIL UNACCEPTABLE CONDITIONS ARE CORRECTED.

3.1 INSTALLATION:

- A. INSTALL PLANTERS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AT LOCATIONS INDICATED ON THE DRAWINGS.
- B. INSTALL SITE FURNISHINGS LEVEL, PLUMB, SQUARE, ACCURATELY ALIGNED, CORRECTLY LOCATED, AND WITHOUT WARP AND SECURELY ANCHORED AND POSITIONED AT LOCATIONS INDICATED ON DRAWINGS.

3.2 CLEANING:

- A. CLEAN PLANTERS PROMPTLY AFTER INSTALLATION IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. DO NOT USE HARSH CLEANING MATERIALS OR METHODS THAT COULD DAMAGE FINISH.
- B. REMOVE TEMPORARY PROTECTIVE COVERINGS.
- C. KEEP CLEAN UNTIL DATE OF FINAL COMPLETION.

3.3 ADJUSTING:

- A. FINISH DAMAGE: REPAIR MINOR DAMAGES TO FINISH IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND AS APPROVED BY DESIGNER. REPAIR DAMAGED FINISHES TO MATCH ORIGINAL FINISH OR REPLACE COMPONENT.
- B. COMPONENT DAMAGE: REMOVE AND REPLACE DAMAGED COMPONENTS THAT CANNOT BE SUCCESSFULLY REPAIRED AS DETERMINED BY DESIGNER.

3.4 PROTECTION:

PROTECT INSTALLED PLANTERS TO ENSURE THAT, EXCEPT FOR NORMAL WEATHERING, PLANTERS WILL BE WITHOUT DAMAGE OR DETERIORATION UNTIL DATE OF FINAL ACCEPTANCE.

SCREEN WALL AND AESTHETIC LIGHTING SYSTEMS

1.0 SUMMARY

THIS SECTION INCLUDES THE FOLLOWING:

- A. INTERNALLY ILLUMINATED SCREEN WALL SYSTEM CAPABLE OF MEETING ALL APPLICABLE STANDARDS FOR WIND, LATERAL, DEAD LOADS, WITH EXTERIOR RATED LIGHT FIXTURES AND ELECTRICAL COMPONENTS.
- B. RECESSED WALL LUMINAIRES

1.1 METHOD OF MEASUREMENT:

- A. SCREEN WALL SYSTEM SHALL BE MEASURED BY LUMP SUM FOR EACH BRIDGE INCLUDING:
 - 1. BROAD STREET SCREEN WALL SYSTEM (INCLUDING SIDEWALK LUMINAIRES)
- B. RECESSED WALL LUMINAIRES SHALL BE MEASURED BY EACH FIXTURE INCLUDING CONDUIT UP TO EACH FIXTURE:
 - 1. BROAD STREET RECESSED WALL LUMINAIRES

1.2 BASIS OF PAYMENT:

- A. THE ACCEPTED SCREENWALL SYSTEM WILL BE PAID FOR AT THE CONTRACT PRICE DESIGNATED FOR EACH BRIDGE SHOWN ON THE PLANS. ALL COSTS FOR WORK IN THIS SECTION ARE TO BE INCLUDED IN THE LUMP SUM PRICE FOR EACH SCREENWALL SYSTEM. COST SHALL INCLUDE ALL CONDUIT AND WIRING BEGINNING AT FIRST PULL BOX ON THE BRIDGE.
- B. THE ACCEPTED RECESSED WALL LUMAIRES WILL BE PAID FOR AT THE CONTRACT PRICE DESIGNATED FOR EACH FIXTURE SHOWN ON THE PLANS. COSTS SHALL INCLUDE ALL CONDUIT AND WIRING NEEDED FOR EACH FIXTURE BEGINNING AT THE FIRST PULL BOX ON THE BRIDGE.

1.3 SUBMITTALS:

- A. PRODUCT DATA: SUBMIT MANUFACTURER'S PRODUCT DATA; INCLUDE PRODUCT DESCRIPTION, FABRICATION INFORMATION, AND COMPLIANCE WITH SPECIFIED PERFORMANCE REQUIREMENTS.
- B. SUBMIT PRODUCT TEST REPORTS FROM A QUALIFIED INDEPENDENT 3RD PARTY TESTING AGENCY INDICATING EACH TYPE AND CLASS OF PANEL SYSTEM COMPLIES WITH THE PROJECT PERFORMANCE REQUIREMENTS, BASED ON COMPREHENSIVE TESTING OF CURRENT PRODUCTS. PREVIOUSLY COMPLETED TEST REPORTS WILL BE ACCEPTABLE IF FOR CURRENT MANUFACTURER AND INDICATIVE OF PRODUCTS USED ON THIS PROJECT. TEST REPORTS REQUIRED SHALL INCLUDE SPECIFIED MATERIAL PROPERTIES LISTED BELOW.
- C. SHOP DRAWINGS: INCLUDE PLANS, ELEVATIONS, SECTIONS, PANEL DIMENSIONS, DETAILS, AND ATTACHMENTS TO OTHER WORK.
- D. SAMPLES FOR INITIAL SELECTION: SUBMIT MINIMUM 4-INCH BY 4-INCH SAMPLES. INDICATE FULL COLOR, TEXTURE AND PATTERN VARIATION. SAMPLES FOR VERIFICATION: SUBMIT MINIMUM 8-INCH BY 8-INCH SAMPLE FOR EACH TYPE, TEXTURE, PATTERN AND COLOR OF SOLID PLASTIC FABRICATION.
- E. WARRANTY: MANUFACTURER'S SPECIAL WARRANTY ON PLASTIC FABRICATIONS: MANUFACTURER'S STANDARD FORM AGREEING TO REPAIR OR REPLACE UNITS THAT FAIL IN MATERIAL OR WORKMANSHIP WITHIN THE SPECIFIED WARRANTY PERIOD.
- F. SCREEN WALL AND AESTHETIC LIGHTING SYSTEMS MAINTENANCE AND OPERATING BINDERS SHALL INCLUDE: TABLE OF CONTENTS, WRITTEN DESCRIPTION OF SYSTEM, SYSTEM DRAWINGS: ONE (1) COPY OF THE ORIGINAL PLAN; ONE (1) COPY OF THE RECORD DRAWING INCLUDING LOCATIONS OF AS-BUILT CONDUITS, AND PULL BOXES; ONE (1) COPY OF THE APPROVED SHOP DRAWINGS, WIRING DIAGRAM, LISTING OF MANUFACTURERS, PART NUMBER AND ANY OTHER REFERENCE NEEDED TO ORDER PARTS INCLUDING BUT NOT LIMITED TO TRANSFORMERS, LIGHT FIXTURES, AND LENSES, "APPROVED" SUBMITTALS OF ALL EQUIPMENT, OPERATION INSTRUCTION, MAINTENANCE INSTRUCTION, COMPLETE TROUBLESHOOTING CHARTS, PARTS LIST, AND WARRANTY DATA. O & M MANUALS SHALL BE PROVIDED AT SUBSTANTIAL COMPLETION TO ALLOW FOR PROJECT ENGINEER REVIEW PRIOR TO FINAL ACCEPTANCE.
- G. SCREEN WALL SYSTEM SPARE PARTS AND TOOLS: PROVIDE OWNER TWO (2) SETS PER BRIDGE OF SPECIALTY TOOLS TO OPEN SCREEN WALL ASSEMBLY AND SERVICE PANELS. PROVIDE TEN PERCENT OF EXPENDABLE COMPONENTS (INCLUDING LIGHTS, TRANSFORMERS, FUSES, ETC.) AT SUBSTANTIAL COMPLETION.
- H. SCREEN WALL SYSTEM DEMONSTRATION AND OPERATING INSTRUCTION: PROVIDE DEMONSTRATION AND OPERATING INSTRUCTION AT CITY OF COLUMBUS DEPARTMENT OF PUBLIC SERVICES OFFICES. INSTRUCTION TO INCLUDE REVIEW OF SYSTEM OPERATION, MAINTENANCE AND BASIC PROGRAMMING OF COLOR-CHANGING LED CONTROLS.

1.4 QUALITY ASSURANCE:

- A. MOCKUPS: BUILD MOCKUPS TO VERIFY SELECTIONS MADE UNDER SAMPLE SUBMITTALS AND TO DEMONSTRATE AESTHETIC EFFECTS. BUILD MOCKUP TO DEMONSTRATE FINISHED CONSTRUCTION QUALITY AND WORKMANSHIP FOR EACH TYPE OF PLASTIC FABRICATION AND LIGHTING EFFECT.
- B. MANUFACTURERS QUALIFICATIONS: MATERIALS AND SYSTEMS SHALL BE MANUFACTURED BY A COMPANY CONTINUOUSLY AND REGULARLY EMPLOYED IN THE MANUFACTURE OF SPECIFIED MATERIALS FOR A PERIOD OF AT LEAST THREE (3) CONSECUTIVE YEARS AND WHICH CAN SHOW EVIDENCE OF THOSE MATERIALS BEING SATISFACTORILY USED ON AT LEAST THREE (3) PROJECTS OF SIMILAR SIZE, SCOPE AND LOCATION. AT LEAST ONE (1) OF THE PROJECTS SHALL HAVE BEEN SUCCESSFUL FOR USE ONE YEAR OR LONGER. MANUFACTURER MUST OFFER A DOCUMENTED RECLAIM PROCESS THAT WILL TAKE BACK, AT THE MANUFACTURERS COST, PANELS THAT ARE AT THEIR END-OF LIFE CYCLE. MANUFACTURER MUST HAVE DOCUMENTED TRAINING AND QUALIFICATION PROGRAM FOR FABRICATION AND INSTALLATION OF PLASTIC FABRICATIONS.
- C. INSTALLER: A FIRM WHICH HAS AT LEAST FIVE (5) YEARS EXPERIENCE IN WORK OF THE TYPE AND SIZE REQUIRED BY THIS SECTION AND WHICH IS ACCEPTABLE TO THE PROJECT ENGINEER.
- D. REFERENCES: THE CONTRACTOR MUST SUPPLY THREE REFERENCES FOR WORK OF THIS TYPE AND SIZE WITH THEIR BID INCLUDING NAMES AND PHONE NUMBERS OF CONTACT PERSON(S).
- E. THE PROJECT ENGINEER WILL BE ON SITE AT VARIOUS TIMES TO OBSERVE THE WORK BEING INSTALLED ACCORDING TO THE SPECIFICATIONS AND DRAWINGS.

1.5 PREINSTALLATION CONFERENCE:

CONDUCT PREINSTALLATION CONFERENCE INCLUDING INSTALLER, FABRICATOR, AND PROJECT ENGINEER.

1.6 DELIVERY, STORAGE, AND HANDLING:

- A. DELIVER PLASTIC FABRICATIONS, SYSTEMS AND SPECIFIED ITEMS IN MANUFACTURER'S STANDARD PROTECTIVE PACKAGING.
- B. DO NOT DELIVER PLASTIC FABRICATIONS, SYSTEM, COMPONENTS AND ACCESSORIES TO PROJECT SITE UNTIL AREAS ARE READY FOR INSTALLATION.
- C. STORE MATERIALS IN A FLAT ORIENTATION IN A DRY PLACE THAT IS NOT EXPOSED TO EXTERIOR ELEMENTS.
- D. HANDLE MATERIALS TO PREVENT DAMAGE TO FINISHED SURFACES.
- E. PROVIDE PROTECTIVE COVERINGS TO PREVENT DAMAGE OR STAINING FOLLOWING INSTALLATION FOR DURATION OF PROJECT.

1.7 WARRANTY:

COMPLETE AESTHETIC LIGHTING SYSTEM COMPONENTS SHALL HAVE WARRANTY FOR A PERIOD OF UP TO FIVE YEARS AFTER PURCHASE THAT THE PRODUCT IS FREE FROM MANUFACTURING AND WORKMANSHIP DEFECTS PROVIDED THAT ANY CLAIMS MADE UNDER THIS LIMITED WARRANTY MUST BE SUBMITTED IN WRITING BY NO LATER THAN FIVE YEARS AFTER THE PURCHASE OF THE PRODUCT.

2.0 SYSTEM DESCRIPTION:

TRANSLUCENT (COLOR AND TEXTURE TREATED) EXTERIOR GRADE POLYCARBONATE PANELS. HIGH IMPACT RESISTANT, UV STABLE, AND COLOR FUSED. AS THE PANELS WILL BE UTILIZED FOR AN EXTERIOR TEMPERATE CLIMATE THE PANELS WILL CONTAIN A DURABLE SURFACE FINISH TO RESIST WINDBLOWN DUST AND DEBRIS.

2.1 SCREENWALL PANEL MATERIAL:

- A. MANUFACTURER: PRODUCT MANUFACTURERS MUST BE SUBMITTED WITH SUPPORTING TECHNICAL DATA, SAMPLES AND ENGINEERING CALCULATIONS FOR WRITTEN ARCHITECTURAL APPROVAL TEN DAYS PRIOR TO BID DATE.
- B. MATERIAL: POLYCARBONATE MEETING THE SPECIFIED PROPERTIES.
- C. PANEL SIZES:
 - 1. BROAD STREET: 4'X8'
- D. SPECIFIED THICKNESS: 3/8" NOMINAL
- E. SPECIFIED COLORS: TRANSLUCENT WHITE
- F. FINISHES: STUCCO (FRONT) / STUCCO (BACK)

2.2 BASIS OF DESIGN SAMPLE:

A BASIS OF DESIGN SAMPLE OF PANEL MATERIAL IS AVAILABLE FOR REVIEW AT PROJECT ENGINEER'S OFFICE.

2.3 PANEL MATERIALS PROPERTIES:

A. PANEL MATERIAL SHALL MEET THE FOLLOWING TESTING REQUIREMENTS:

DESCRIPTION	TEST	UNITS	RESULT
IMPACT RESISTANCE (INSTRUMENTED)	ASTM D 3763	FT-LBS	>100
FLAME SPREAD	ASTM D 635-98	-	PASS CCI RATING (CCI RATING (MATERIAL SELF-EXTINGUISH)
SELF-IGNITION TEMPERATURE	ASTM D 1929-96	°F	PASS >950° VS. 650°F MIN.
TENSILE STRENGTH	ASTM D 638	PSI	9000
COMPRESSIVE STRENGTH	ASTM D 695	PSI	12500
FLEXURAL STRENGTH	ASTM D 790	PSI	13500
FLEXURAL MODULUS	ASTM D 790	PSI	34500
AMOUNT OF EXPANSION/ CONTRACTION	ASTM D 696	IN/ (IN°-F)	.00004
LARGE MISSILE IMPACT	ASTM D 1886	-	PASS-NONBREAK
IMPACT STRENGTH UN-NOTCHED (23°C)	ASTM D 256	FT/LB	NONBREAK
HEAT DISTORTION TEMPERATURE (66 PSI)	ASTM D 648	°F	280

B. PANEL MATERIAL SHALL MEET THE FOLLOWING MINIMUM GUIDELINES:

- 1. HEAT RESISTANCE OF GREATER THAN 2300F.
- 2. IMPACT STRENGTH SHALL BE GREATER THAN 200 FT-LBS (FOR DURABILITY, SHIPPING, INSTALLATION, AND FITNESS-FOR-USE).
- 3. SELF EXTINGUISHING AS PER ASTM D 635.
- 4. UL TRAVIOLET SCREENS TO PREVENT UV RADIATION FROM TRANSMITTING BELOW 370 NM. PANELS SHALL BE UV STABILIZED ON BOTH THE FIRST AND SECOND SURFACE OF EACH PANEL.
- 5. SUPPLIED BY AN ISO 14001 (ENVIRONMENTAL) CERTIFIED CORPORATION.
- 6. ALL COLOR MUST BE ATTACHED VIA FUSION ATTACHMENT COATINGS OR ADHESIVE APPLIED COLORS ARE NOT ACCEPTABLE.
- 7. MANUFACTURER MUST OFFER MATERIAL TAKE-BACK RECLAIM PROGRAM AT END OF USEFUL LIFE.
- 8. PANELS TO BE MANUFACTURED BY AND BE FROM ALL AMERICAN SOURCING OF MATERIAL, USA-FABRICATED
- 9. PANELS TO BE CERTIFIED GREENGUARD GOLD UL2818-2013 GOLD STANDARD FOR CHEMICAL EMISSIONS FOR BUILDING MATERIALS, FINISHES & FURNISHINGS

2.4 PANEL SUPPORT SYSTEM:

THE SUPPORT SYSTEM FOR THE PANELS SHALL BE A FABRICATED ALUMINUM FRAMEWORK WITH STEEL STRUCTURAL SUPPORTS.

2.5 SUPPORT SYSTEM COMPONENTS:

- A. ALUMINUM FRAMEWORK TO BE 6063-T6 WITH 70% RECYCLED CONTENT FINISHED WITH ARCHITECTURAL TWO - STEP BLACK ELECTROLYTE PLATING IN CHANNEL SHAPE TO CONCEAL RECESSED LED LIGHTING.
- B. STEEL STIFFENERS TO BRACE ALUMINUM FRAMEWORK SHALL BE MILD STEEL HOT DIP GALVANIZED AND POWDERCOATED BLACK SHERWIN WILLIAMS GRAPHITE BLACK RAL 9011 (RBS8-00006).
- C. PANELS SHALL BE FASTENED TO ALUMINUM FRAMEWORK USING CAPS MANUFACTURED FROM 316 STAINLESS STEEL WITH (2) FASTENING HOLES LOCATED AT THE SIDE OF THE CAP FOR USE WITH DRILL MOUNT CAP INSTALLATION TOOL.
- D. STEEL STIFFENER SHALL BE MOUNTED TO CONCRETE PARAPET THROUGH COMBINATION OF WEDGE ANCHORS AT VERTICAL FACE AND EPOXY ANCHORS AT TOP OF PARAPET; ALUMINUM FRAMEWORK SHALL BE BOLTED TO STEEL STIFFENERS AND VISUALLY COVER ANCHORS AT VERTICAL FRONT FACE OF PARAPET.
- E. CONTINUOUS DRIP CAP ALONG TOP OF ASSEMBLIES TO BE 6063-T6 WITH 70% RECYCLED CONTENT FINISHED WITH ARCHITECTURAL TWO - STEP BLACK ELECTROLYTE PLATING, OVERLAP DRIP CAPS AT SEAMS.
- F. CONTINUOUS T-SLOT TYPE GASKET AMESBURY 32007 IN WHITE COLOR SHALL BE PROVIDED AROUND PANEL EDGES.

2.6 BROAD STREET LUMINAIRE SYSTEM COMPONENTS:

- A. LUMINAIRE TO BE FABRICATED OUT OF ALUMINUM 6061 T6 SHEET ALUMINUM TO BE WELDED, GROUND SMOOTH, AND POWDERCOATED BLACK SHERWIN WILLIAMS GRAPHITE BLACK RAL 9011 (RBS8-00006).
- B. ALUMINUM AT INTERIOR OF ILLUMINATED SPACE TO BE POWDERCOATED SIGNAL WHITE RAL 9003.
- C. REMOVABLE TOP ASSEMBLY TO HOUSE RGB LIGHTING CONTROL EQUIPMENT AND A WATER-RESISTANT GASKETED SEAL SHALL BE MAINTAINED.
- D. LUMINAIRE SHALL BE ANCHORED INTO CONCRETE THROUGH WEDGE ANCHORS; FASTENERS WHERE POSSIBLE TO BE CONCEALED.

2.7 SCREEN WALL LED BACK-LIGHTING:

- A. BROAD STEET: RGB DMX CONTROLLED LIGHTING TO BE RGB COLOR CHANGING LIGHT BARS WITH WET LOCATION RATING AND UL EQUIVALENT. SECTIONAL DIMENSION PROPERTIES TO MATCH LOW PROFILE LIGHT BARS.
 - 1. BEAM ANGLE TO BE 25°
 - 2. EACH 4' PANEL ASSEMBLY WITH RGB LIGHTING TO BE PAIRED TO DRIVER CONTROLLABLE BY DMX DIMMER. DMX 3 CHANNEL DIMMER WILL REQUIRE 120 VOLT INPUT AT EACH PANEL ASSEMBLY.
 - 3. LIGHTING BARS SHALL RECESS IN ALUMINUM STRUCTURE AND MOUNT DIRECTLY TO ALUMINUM STRUCTURE WITH LIGHT BEAM DIRECTED TOWARDS THE CENTER OF THE ASSEMBLY.
 - 4. CAT5 CABLING TO BE PROVIDED FROM BRIDGE MAIN CONTROL TO EACH INDIVIDUAL 4' PANEL ASSEMBLY IN SERIES FOR CONTROL OF THE DMX DIMMER.
 - 5. SUPPLIER TO PROVIDE 185W DRIVER IN EACH 4' ASSEMBLY SUITABLE FOR WET LOCATION OR ENCLOSED IN NEMA 4 OR 4X RATED ENCLOSURE FOR DRIVER AS WELL AS MC CABLING AND PLUG AND PLAY CONNECTIONS FOR JOINING THE ASSEMBLIES ALONG THE SIDE OF THE BRIDGE CONTINUOUSLY.
 - 6. ALL ELECTRICAL COMPONENTS TO BE PRE-ASSEMBLED AND INSTALLED PRIOR TO DELIVERY TO JOB SITE.
 - 7. QUICK DISCONNECT BETWEEN DRIVER AND LINE VOLTAGE TO BE PROVIDED WITHIN THE NEMA ENCLOSURE, OR RATED ACCORDINGLY IF WET LOCATION DRIVER USED. #8 AWG MAINLINE TO BE USED TO PROVIDE POWER TO AREAS BETWEEN PILASTERS, WITH #12 AWG MC TO BE USED FROM MAIN LINE TO INDIVIDUAL ASSEMBLIES BETWEEN PILASTERS.
 - 8. NEMA ENCLOSURES, DRIVERS, AND CABLING SHALL ALL NEST WITHIN RECESSES OF ALUMINUM FRAMEWORK AND NOT SHADOW OR IMPEDE LIGHTING OF PANELS.
 - 9. PROGRAMMING FOR THE DMX TO BE PROVIDED BY DMX PROFESSIONAL ONSITE AFTER INSTALLATION OF ALL SYSTEMS.
 - 10. EACH 4' SECTION TO HAVE TWO INDIVIDUALLY CONTROLLABLE ZONES, ONE PER SIDE.
 - 11. LIGHTING PULL BOXES SHALL BE LABELED "LIGHTING".

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LANDSCAPE ARCHITECTURE + URBAN PLANNING

SPECIFICATION - SCREEN WALL SYSTEM AESTHETIC ENHANCEMENTS

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