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STA. 132+29.32 I.R. 71 NB END PROJECT STA. 132+26.71 I.R. 71 SB BEGIN PROJECT STA. 100+20.01 **BEGIN PROJEC** 

### 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 <u>FEATURE</u>	APPROVAL 	SHEET <u>NUMBER</u>
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

APPROVED\_ ODOT DIRECTOR, DEPARTMENT OF DATE\_ TRANSPORTATION

DATE 7/3119 ODOT DISTRICT DEPUTY DIRECTOR

### BMP'S

STATE OF OHIO

DEPARTMENT OF TRANSPORTATION

FRA-71-17.46

PHASE 3B

CITY OF COLUMBUS FRANKLIN COUNTY

FOR ENGINEERS SEALS, SEE SHEET 2

FOR SHEET INDEX, SEE SHEET 3

PORTIONS OF THIS PROJECT LIE WITHIN THE CORPORATION LIMITS OF 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.

### 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

## EARTH DISTURBED AREA

PROJECT EARTH DISTURBED AREA: 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

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

## 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

### 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.

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

		C		MENT OF TRANS							SUPPLEMENTAL CIFICATIONS	SPECIAL PROVISIONS
3P-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
3P-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	
P-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	
P-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	
P-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	
-1.1	7/19/13 DM/1.2	<u>√1×1/8×1/3</u>	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-3.1	1/18/13 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	
PM-1.1	7/18/14/DMHJ	√1215/16 7°C-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	
M-4.3	7/18/14 DM-4.4	1/15/16 TC-16.21	7/20/18 TC-52.20		1/17/14			MT-102.30	10/16/15	907	1/20/12	
M-4.4	7/21/17	TC-18.24	1/17/14 TC-61.30	7/19/19 HL-30.41	1/19/18	3		MT-105.10	7/19/13	939	7/17/15	
M-4.5	7/21/17 CB-1.1	7/19/19 TC-21.10	7/19/19 TC-65.10	1/17/14 HL-40.20	7/19/19	7		MT-110.10	7/19/13		_	
M-4.6	7/19/13 CB-2 <b>.</b> 2	7/20/18 TC-21.50	7/15/16 TC-65.11	7/21/17 HL-50.21	1/18/19	7		MT-120.00	1/19/18			
PM-6.1	7/18/14 CB-2.3	1/15/16 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

SHEET

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)	<i>12,130</i>	_ 13,130	92,930	_ <i>92,</i> 930	_ 72,300	72,300	_ 28,700
DESIGN YEAR ADT (2035)	<i>14<b>,</b>190</i>	_ 15,070	_ 120,040	_ 120,040	_ 87,960	87,960	32,820
DESIGN HOURLY VOLUME (2035)	1,630	_ 1,510	_ 10,370	_ 10,370	_ <i>8,800</i>	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	<i>35 MPH</i>
LEGAL SPEED	35 MPH	_ 35 MPH	_ 55 MPH (MATCH EXISTING)	_ <i>55 MPH</i>	_ 55 MPH (MATCH EXISTING)	_ 55 MPH	<i>35 MPH</i>
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

## INDEX OF SHEETS:

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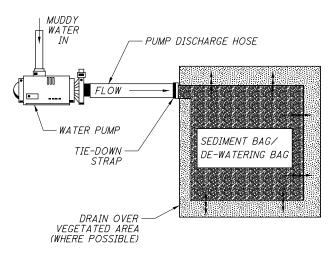
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## SEDIMENT-LADEN DEWATERING

THE PUMPING OF DIRECT DISCHARGE OF SEDIMENT-LADEN (MUDDY) WATER TO THE CITY'S SEWER SYSTEM OR A RECIEVING STREAM IS A VIOLATION OF OHIO EPA (OEPA) AND CITY OF COLUMBUS REGULATIONS. ALL INLETS RECIEVING 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 RECIEVING STREAM. INLET PROTECTION IS REQUIRED ON ALL INLETS RECIEVING 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 UTILITES 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 AND 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 EXITING 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 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 RAMPS 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 PERIINENI 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.

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611, 6″ CONDUIT, TYPE B, FOR DRAINAGE CONNECTION		•
611, 6" CONDUIT, TYPE C, FOR DRAINAGE CONNECTION	√ 50 FT. <mark>-</mark>	٩
611, 8" CONDUIT, TYPE B, FOR DRAINAGE CONNECTION	/ 50 FT. <mark>-</mark>	4
611, 8" CONDUIT, TYPE C', FOR DRAINAGE CONNECTION	<i>√ 50 FT</i> .	
611, 12" CONDUIT, TYPE B, FOR DRAINAGE CONNECTIO	N 50 FT. 🖥	٩
611, 12" CONDUIT, TYPE C, FOR DRAINAGE CONNECTIO	N 50 FT	
611, 4" CONDUIT, TYPE B, FOR SANITARY	100 FT.	
611, 6" CONDUIT, TYPE B, FOR SANITARY	100 FT.	١
611, 8" CONDUIT, TYPE B, FOR SANITARY	100 FT	<
611, INSPECTION WELL	1 EA.	
202, REMOVAL MISC., INSPECTION WELL	1 EA.	1
203, EMBANKMENT, ÁS PER PLAN	10 CY -	4
		_

## 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

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 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 CHANCE 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 11-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

### 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

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

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 SPECFICATIONS 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 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 AVENÚE, 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 UNANTIFIED ARCHAEOLOGICAL ON HISTORIC
PROPERTIES, OR UNANTIFIED AFFECTS, 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 INDIAN TRIBES THAT MAY ATTACH TRADITIONAL CULTURAL AND AND RELIGIOUS SIGNIFICANCE TO THE DISCOVERED PROPERTY. ODOT WIL 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.
- B. 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.
- E. 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.

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### 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

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

4. BE AVAILABLE ON SITE FOR OTHER MEETINGS OR DISCUSSIONS

4. BE AVAILABLE ON SITE FOR OTHER MEETINGS OR DISCUSSION.
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. 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

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.

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).

DAILY TTC SETUP AND REMOVAL

C. WHEN CONSTRUCTION STAGING CAUSES A CHANGE IN THE TTC

D. CRASH OCCURRENCES WITHIN THE CONSTRUCTION AREA AND WITHIN THE INFLUENCE AREA(S) APPROACHING THE WORK ZONE. 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

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

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

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 61, 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.

I SUPERINTENDENT SHALL NOTIFY THE ENGINEER IMMEDIATELY
IF ANY CONTRACTOR TIM CONTACT IS ADDED, REMOVED OR THE
CONTACT INFORMATION CHANGES OVER THE COURSE OF THE

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

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. CONTRACTOR TIM CONTACTS SHALL PERFORM, AT A

MINIMUM, THE FOLLOWING FUNCTIONS WHEN AN INCIDENT/CRASH

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

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

FOLLÓWING 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. 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

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 DEVÍCE, 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 CHANNELIZEŔ.

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 PROCEEDURES, 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 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 THE PROJECT OF THIS DOES NOT THE PROJECT. 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

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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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	<i>5512</i>	EACH	WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN	67
614	13310	511	EACH	BARRIER REFLECTOR, TYPE 1, ONE-WAY	65
<del>~614</del> ~	13350	<b>√5</b> # <b>√</b>		OBJECT, MARKER, ONE, WAX	<b>~65</b> ~
614	18000	90000	EACH	MAINTAINING TRAFFIC, MISC.: BRIDGE DECK AND PAVEMENT PATCHING	67
<del>614</del>	18601	<del>VzgV</del>	<b>USNIMI</b>	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	<del></del>
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	<i>8551</i>	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	
<del>~614</del> ~	31200	$\sim \sim \sim$	EACH	WORK-ZONE WORD ON PAVEMENT, 72% CLASS I, 642 PAINT	
615	10000	LS		ROADS FOR MAINTAINING TRAFFIC	
<del>\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\</del>	25000	<del>137</del>	<del>Cyc</del>	PAVEMENT FOR MAINTAINING TRAPFIC, CLASS B	
616	10000	360	MGAL	<b>WATER</b>	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)	
1					

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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:

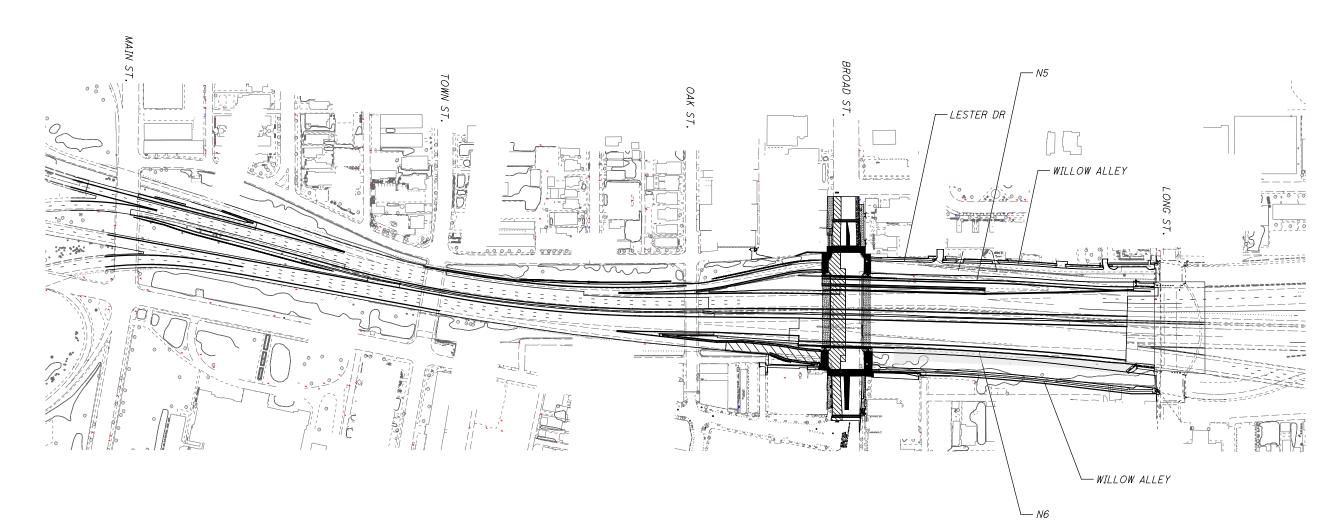
IF NECESSARY THE CONTRACTOR MAY CLOSE I-71 FOR DEMOLITION AND/OR SETTING BRIDGE BEAMS. THE CLOSURE(S) MAY ONLY BE 10PM FRIDAY - 5AM MONDAY. SEE THE FOLLOWING SHEETS FOR DETAILS:

<u>LEGEND</u>

TEMPORARY PAVEMENT PLACED PRIOR TO THIS PHASE

TEMPORARY PAVEMENT PLACED DURING THIS PHASE

WORK AREA



SCALE

 $\overset{\circ}{\vdash}$ 

OF TRAFFIC

S

MAINTENANCE PHASE 2A

**.46** 

-71

RA

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SOUTH

**DETOUR** 

M3-3-24

M1-1-24

M4-9R-30

(41)

ROAD

R11-2-48

48X24

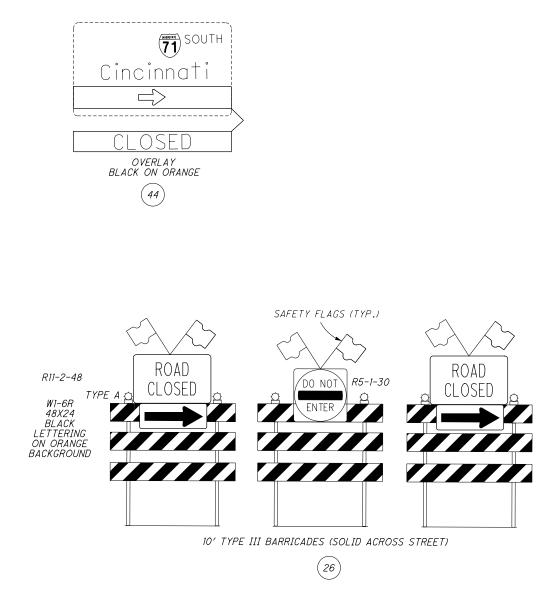






1. THIS DETOUR SHALL BE IN EFFECT FOR THE DURATION OF THE I-71 SB ENTRANCE RAMP CLOSURE.

3. ALL SIGNS ON THIS SHEET SHALL BE BLACK LETTERING ON AN ORANGE BACKGROUND EXCEPT THE RII-2
"ROAD CLOSED", R5-1 "DO NOT ENTER" SIGNS, AND MI-1 ROUTE



SOUTH

**DETOUR** 

M3-3-24

M1-1-24

M4-9L-30

(38)

(43)

SOUTH

**DETOUR** 

M3 - 3 - 24

M1-1-24

M4-9-30

(39)

**DETOUR** 

M3 - 3 - 24

M1-1-24

M4-9R-30

(40)

SPECIAL

48" X 48"

I-71 SB

ENTRANCE

RAMP

CLOSED

(a)

SOUTH

**DETOUR** 

M3 - 3 - 24

M1-1-24

M4-9L-30

(37)

(42)



2. CONTRACTOR SHALL NOTIFY THE ODOT WORK ZONE TRAFFIC MANAGER 14 DAYS PRIOR TO IMPLEMENTING THIS DETOUR.



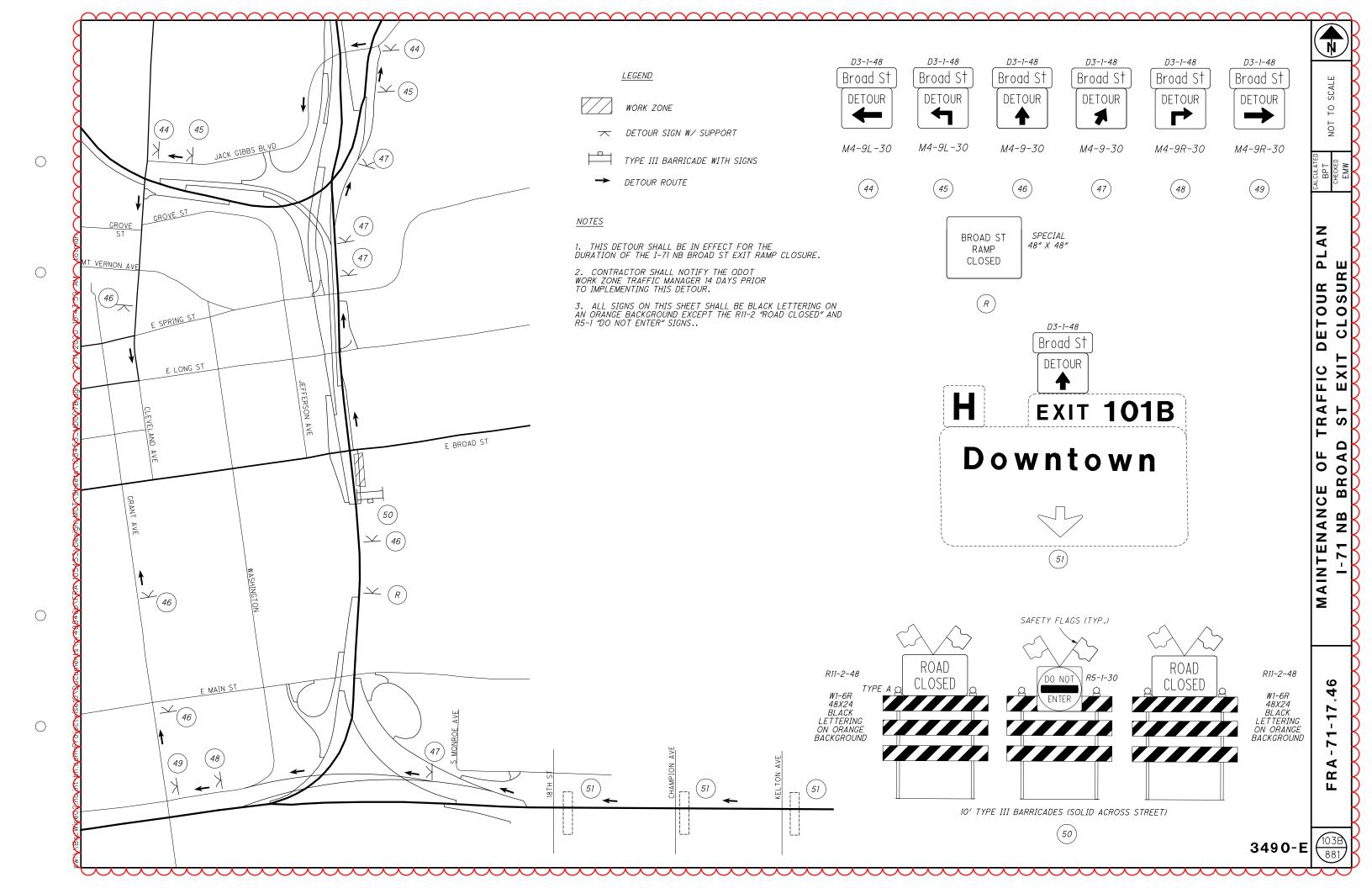
*LEGEND* 

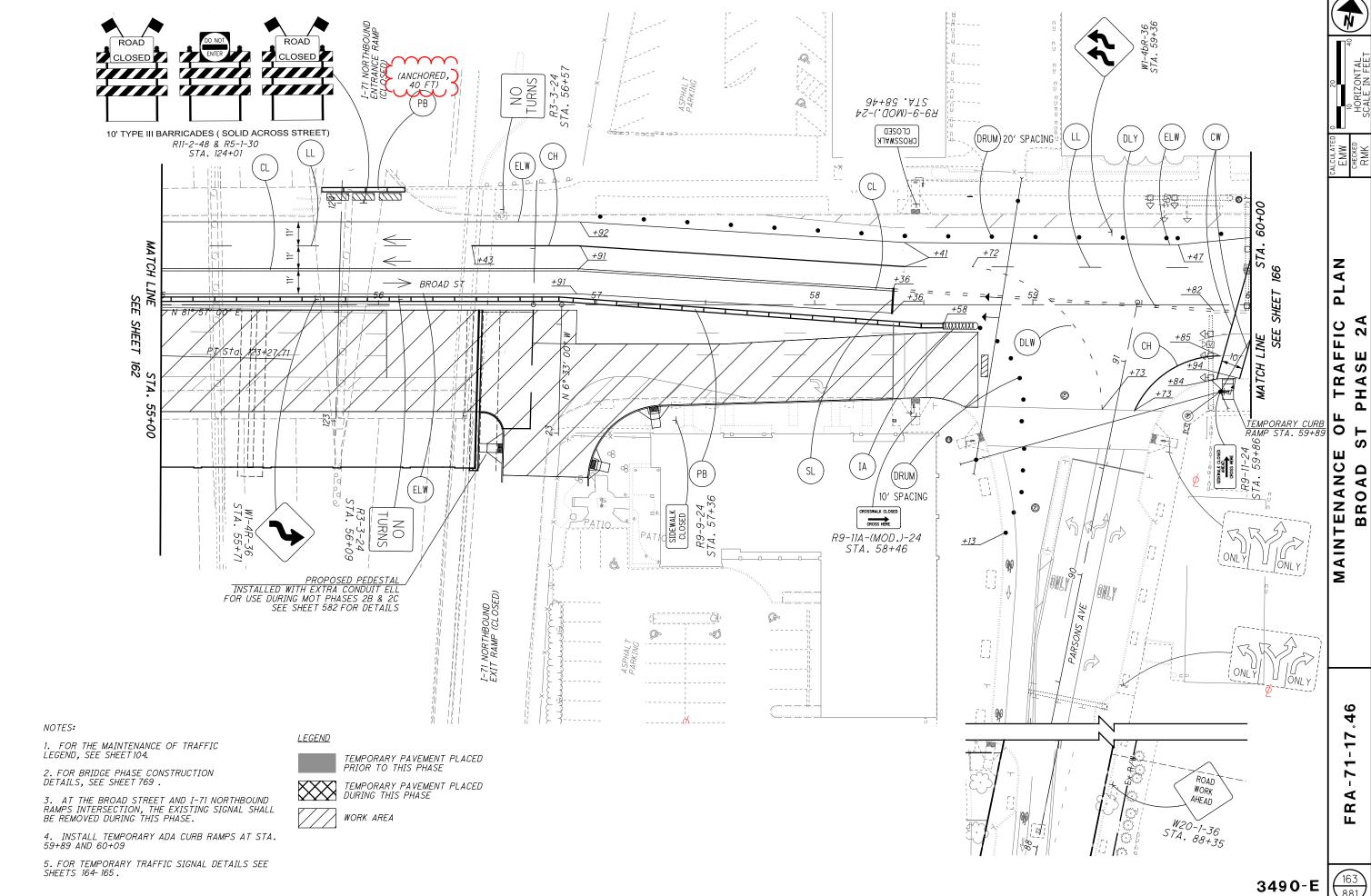
WORK ZONE

DETOUR ROUTE

DETOUR SIGN W/ SUPPORT

TYPE III BARRICADE WITH SIGNS





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			Sł	HEET NU	М.		1				PART.			ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEE1
55	56	57	61	205	274	277	445	OFFICE CALC	01/IMS/PV	02/NHS/ PV	06/MPO/ OT/Cols	07/S>2/ 0T/Cols	08/ENH/ OT/Cols	172,00	EXT	TOTAL	07117	5200/14/ /10//	NO.
	1.6								1.6					201	11000	1.6		ROADWAY	
<del></del>	LS	$\sim$		$\sim$	$\sim$	$\sim$	$\sim$	$\sim$	LS	$\sim$	$\sim$	$\sim\sim$	$\sim$	<del>201</del> 202	11201	LS	$\sim$	CLEARING AND CRUBBING PORTIONS OF STRUCTURE REMOVED, AS PER PLAN	Y 56
4	<del>\(\frac{1}{2}\)</del>			لعلاجات	Leave				Loleda					202	1/201	130,8041		Parentalis of Structure Removed, as Fer Flair	
				20,000	13,033				13,033					202	30000	13,033	SF	WALK REMOVED	
				591	13,033				591					202	30600	591		CONCRETE MEDIAN REMOVED	
				193					193					202	30601	193		CONCRETE MEDIAN REMOVED, AS PER PLAN	55
				100					103					202	30001	100	37	CONONETE MEDIAN NEMOVED, AS LEN LEAN	1 00
				4,645					4,645					202	30700	4,645	FT	CONCRETE BARRIER REMOVED	
				5.145	2,380				7,525					202	32000	7,525		CURB REMOVED	
							2,978		2,978					202	35100	2,978		PIPE REMOVED, 24" AND UNDER	
							1,058		1,058					202	35200	1,058		PIPE REMOVED, OVER 24"	
				3,171	1,066				4,237					202	38000	4,237		GUARDRAIL REMOVED	
				1					1					202	42206	1		ANCHOR ASSEMBLY REMOVED	
				2					2					202	47800	2		IMPACT ATTENUATOR REMOVED	
					5				5					SPECIAL	20252990	5		PARKING BLOCK REMOVED	55
						<u> </u>	17		17					202	58000	17	EACH	MANHOLE REMOVED	
							43		43					202	58300	43	EACH	CATCH BASIN OR INLET REMOVED	
						<u> </u>	,		,					202	50000	,	FACU	CATCULDACIN OD INLET ADANDONED	
				206	2.050		- /		2,336					202	58600	2,336		CATCH BASIN OR INLET ABANDONED	
				286	2,050 5				5					202 202	75000 98100	<u> </u>	FT EACH	FENCE REMOVED REMOVAL MISC.: BOLLARD REMOVED	55
					2				2					202	98100	2		REMOVAL MISC.: DUMPSTER PAD REMOVED	55
					2				2					202	98100	2	EACH	REMOVAL MISC.: DUMPSTER REMOVED	55
									-					202	00700		LAGII	TEMOTHE MISOT DOMESTER REMOTED	1 00
					3				3					202	98100	3	EACH	REMOVAL MISC.: POST REMOVED	55
					2				2					202	98100	2	EACH	REMOVAL MISC.: STORAGE TRAILER REMOVED	55
					1				1					202	98100	1		REMOVAL MISC:FLAG POLE REMOVED	55
					2				2					202	98100	2	EACH	REMOVAL MISC:LANDSCAPE LIGHT REMOVED	55
			$\sim$	$\sim$	$ \sqrt{2} $		$+\infty$		$\sim$	$\sim$		$\sim$	$\sim$	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	<del>\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\</del>		<del>L</del> ACH	AFMQYAL-WISG:-TABE-GAATEABMOVED	<b>√</b> 55
		(	1 1				1		1 1			l		202	98100	1	EACH	REMOVAL MISC.:INSPECTION WELL	60 -
						$\sim$							$\mathcal{M}_{\mathcal{C}}$	202	98200	/	<b>!</b>	REMOVAL MISC. MALL AEMOVED	_
					383	ļ <u>-</u> .			383					معروب	98400	383	SF	REMOVAL MISC.:BRICK PAVERS REMOVED AND SALVAGED	55
						44,432			44,432					203	10000	44,432	CY	EXCAVATION	
	<i></i>	,	$\bigcap_{i=1}^{n}$	)		44,853		<b>—</b> (	44,853					203	20000	<del>4</del> 4 <del>2</del> 853	CY	EMBANKMENT AS BED BLAN	
	50	,	10	,				1	60	,				203	20001	$\frac{60}{2}$	CY	EMBANKMENT, AS PER PLAN	56,6
								52,459	36,960	15,061	438			204	10000	52,459	SY	SUBGRADE COMPACTION	+
		2,800						1.284	30,000	3,923	161			204	13000	4.084		EXCAVATION OF SUBGRADE	
		2,000						1,284		1,123	161			204	20000	1,284		EMBANKMENT	
		2,800						1,7=1	2,800	.,				204	30010	2,800		GRANULAR MATERIAL, TYPE B	
		2,800							2,800					204	30030	2,800		GRANULAR MATERIAL, TYPE D	
																·		·	
	29									28.87	0.13			204	45000	29		PROOF ROLLING	
		4,000							4,000					204	50000	4,000		GEOTEXTILE FABRIC	
		4,000							4,000					204	51000	4,000	SY	GEOGRID	
		LS							LS					208	14001	LS		VIBRATION CONTROL AND MONITORING, AS PER PLAN	57
		5,065							5,065					512	10101	5,065		SEALING OF CONCRETE SURFACE (EPOXY-URETHANE), AS PER PLAN	57
				1,302					1,302					606	15050	1,302	FT	GUARDRAIL, TYPE MGS	
				4					4					606	26100	4		ANCHOR ASSEMBLY, TYPE E	
				6					6					606 606	35002 35102	6		MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1 MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2	
				.3					7					606	60022	3		IMPACT ATTENUATOR, TYPE 2 (UNIDIRECTIONAL)	-
				1		<u> </u>			1					606	60028	1		IMPACT ATTENUATOR, TYPE 2 (BIDIRECTIONAL) 55 MPH/ 28"	
									1					000	00020	,	LACIT	INN ACT ATTENDATOR, THE E GOOMECTIONAL 30 MITH, 20	1
				1					1					606	61000	1	EACH	IMPACT ATTENUATOR, MISC.: WORK ZONE IMPACT ATTENUATOR	55
			1		1				<u> </u>	700				607	20001	700		FENCE, TYPE CL, AS PER PLAN, A	55
700				· ·						30				607	20001	30		FENCE, TYPE CL, AS PER PLAN, B	55
700														607	23000	184		FENCE, TYPE CLT	
700				184					184	- 00			l			07 507			
				184	27,523				184 27,523					608	10000	<i>27,523</i>	) SF	4" CONCRETE WALK	
				184					27,523					608	10000	21,523	3F	4" CONCRETE WALK	
				184	475									608	15000	475	SF	8" CONCRETE WALK	
				184	475 6,534			3,069	27,523			9,603		608 608	15000 98000	475 9,603	SF SF	8" CONCRETE WALK WALKWAY, MISC.:BRICK PAVER CROSSWALK	
				184	475 6,534 3,214			3,069 6,572	27,523 475		177	9,603	9,609	608 608 608	15000 98000 98000	475 9,603 9,786	SF SF SF	8" CONCRETE WALK WALKWAY, MISC.:BRICK PAVER CROSSWALK WALKWAY, MISC.:BRICK PAVER WALK	57
				184	475 6,534 3,214 9				27,523 475 9		177	9,603	9,609	608 608 608 608	15000 98000 98000 98100	475 9,603 9,786 9	SF SF SF FT	8" CONCRETE WALK WALKWAY, MISC.:BRICK PAVER CROSSWALK WALKWAY, MISC.:BRICK PAVER WALK WALKWAY, MISC.:CONCRETE STEPS WITH HANDRAIL	57 672
				184	475 6,534 3,214				27,523 475		177	9,603	9,609	608 608 608	15000 98000 98000	475 9,603 9,786	SF SF SF FT	8" CONCRETE WALK WALKWAY, MISC.:BRICK PAVER CROSSWALK WALKWAY, MISC.:BRICK PAVER WALK	57 57 672 57
				184	475 6,534 3,214 9 13				27,523 475 9 13		177	9,603	9,609	608 608 608 608	15000 98000 98000 98100 98200	475 9,603 9,786 9	SF SF SF FT EACH	8" CONCRETE WALK WALKWAY, MISC.:BRICK PAVER CROSSWALK WALKWAY, MISC.:BRICK PAVER WALK WALKWAY, MISC.:CONCRETE STEPS WITH HANDRAIL WALKWAY, MISC.:COLUMBUS CURB RAMP, TYPE A	57 672 57
				184	475 6,534 3,214 9				27,523 475 9		177	9,603	9,609	608 608 608 608	15000 98000 98000 98100	475 9,603 9,786 9	SF SF SF FT EACH	8" CONCRETE WALK WALKWAY, MISC.:BRICK PAVER CROSSWALK WALKWAY, MISC.:BRICK PAVER WALK WALKWAY, MISC.:CONCRETE STEPS WITH HANDRAIL	57 672

					5	SHEET NU •	/M.			055105		PART.	100 ::= -	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEE
55	59	60	61	205	274	277	445	473	519	OFFICE CALC	01/IMS/PV	, 02/NHS/ PV	06/MPO/ OT/Cols		EXT	TOTAL			NO.
	<u> </u>			280							280 772			622 622	10120	280	FT FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE C CONCRETE BARRIER, SINGLE SLOPE, TYPE C1	
	+'			772 3,364		+	+			+	3,364			622	10140 10160	772 3,364	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE D	+
	+			4		+	+				3,304			622	24840	4	EACH	CONCRETE BARRIER END SECTION, TYPE B	
				<u> </u>												,	27.01.		
				2							2			622	24860	2	EACH	CONCRETE BARRIER END SECTION, TYPE C1	
	<u> </u>			8							8			622	25000	8	EACH	CONCRETE BARRIER END SECTION, TYPE D	
	<u> </u>			5			1				5			622	25014	5	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE CI	
				16							16			622 622	25050 25050	16 2	EACH EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D, A	516
														022	23030		EAUT	CONCRETE DARRIER, END ANCHORAGE, RETUFORCED, TIPE D, A	310
					14						14			622	41000	14	FT	PORTABLE BARRIER, 32" (ROADWAY)	
				730							730			622	90000	730	FΤ	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
	<u> </u>			123			-				123			622	90000	123	FT	BARRIER, MISC.:TYPE D MODIFIED	516
11				1		-	1				11			623	38500	11	EACH	MONUMENT ASSEMBLY (TYPE A)	
11				114	2						116			626	00102	116	EACH	BARRIER REFLECTOR, TYPE 1, ONE WAY	
				23							23			626	00102	23	EACH	BARRIER REFLECTOR, TYPE 2, ONE WAY	
				1					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	1.0		875	10000	13,000	LB	LONGITUDINAL JOINT ADHESIVE	
				1							LS	LS		878	25000	LS		INSPECTION AND COMPACTION TESTING OF UNBOUND MATERIALS  EROSION CONTROL	
	2			1							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										346			659	14000	346	SY	REPAIR SEEDING AND MULCHING	
	346										346			659	15000	346	SY	INTER-SEEDING	
	1000		1								0.00			050	00000	0.00	TON	ACHUEDOLU, EEDTU IZED	
	0.96 1.43										0.96			659 659	20000 31000	0.96 1.43	TON ACRE	COMMERCIAL FERTILIZER LIME	
	38										38			659	35000	38	MGAL	WATER	
	16										16			659	40000	16	MSF	MOWING	
							167				167			670	00700	167	SY	DITCH EROSION PROTECTION	
	<u> </u>										LS			832	15000	LS		STORM WATER POLLUTION PREVENTION PLAN	
	<u> </u>		+								LS			832	15002	LS		STORM WATER POLLUTION PREVENTION INSPECTIONS	
	+'			+		+	+				LS 530,000			832 832	15010 30000	LS 530,000	EACH	STORM WATER POLLUTION PREVENTION INSPECTION SOFTWARE  EROSION CONTROL	+
	+			1		+	1				000,000			032	30000	330,000	LACIT	ENOSION CONTROL	
	+																	DRAINAGE	
		400									400			605	05200	400	FΤ	4" UNCLASSIFIED PIPE UNDERDRAINS	
	<u> </u>							12,687			12,687			605	11100	<i>12,687</i>	FT	6" SHALLOW PIPE UNDERDRAINS	
	<u> </u>			1			1	568			568			605	13300	568	FT	6" UNCLASSIFIED PIPE UNDERDRAINS	
	-		100					5 <b>,</b> 172			5,172 100			605 611	14000 00100	5,172 100	FT FT	6" BASE PIPE UNDERDRAINS 4" CONDUIT, TYPE B, FOR SANITARY	
	+		100	+			+				100			011	00100	700	1 1	TOOLDOTT, THE B, TON SANTANT	
	1	400		1							400			611	00406	400	FT	4" CONDUIT, TYPE F	
			$\sim$	\			165				165			611	00900	165	FΤ	6" CONDUIT, TYPE B	
	}		50	5							50			611	00900	50	FT	6" CONDUIT, TYPE B, FOR DRAINAGE CONNECTION	
	<del>                                     </del>		100	Б							100			611	00900	100	FT	6" CONDUIT, TYPE B, FOR SANITARY	
	+		50	<del>Ď</del> —		-	1				50			611	01100	50	FT	6" CONDUIT, TYPE C, FOR DRAINAGE CONNECTION	
	+		50	<del>D</del>							50			611	01800	50	FT	8" CONDUIT, TYPE B, FOR DRAINAGE CONNECTION	
	+		100	D		+					100			611	01800	100	FT	8" CONDUIT, TYPE B, FOR SANITARY	
			50	$\triangleright$							50			611	02000	50	FT	8" CONDUIT, TYPE C, FOR DRAINAGE CONNECTION	
				$\mathcal{Q}$			49				49			611	03100	49	FT	10" CONDUIT, TYPE B	
	7			K	1	1	1,183				1,183			611	04400	1,183	FT	12" CONDUIT, TYPE B	
		ļ		k	1	1	1							0**	0.4451	22		ION CONDUIT TYPE D. AC DED DI IVI	1
		Ī	F0	K	1	+	99	+		+	99	-		611	04401	99 50	FT	12" CONDUIT, TYPE B, AS PER PLAN	60
	-		50	<del>K</del> —	1	+	25	+		+ +	50 25	-		611 611	04400 04600	50 25	FT FT	12" CONDUIT, TYPE B, FOR DRAINAGE CONNECTION 12" CONDUIT, TYPE C	
					1	1	20	+	1	1				611	04600	50	FT	12" CONDUIT, TYPE C, FOR DRAINAGE CONNECTION	
			50	К		1	1			1 1	50								
		w	50	,5			3,004				50 3,004			611	05900	3,004	FT	15" CONDUIT, TYPE B	
		u		,5							3,004				05900			15" CONDUIT, TYPE B	
		w		,3			3,004 199 301										FT FT FT		

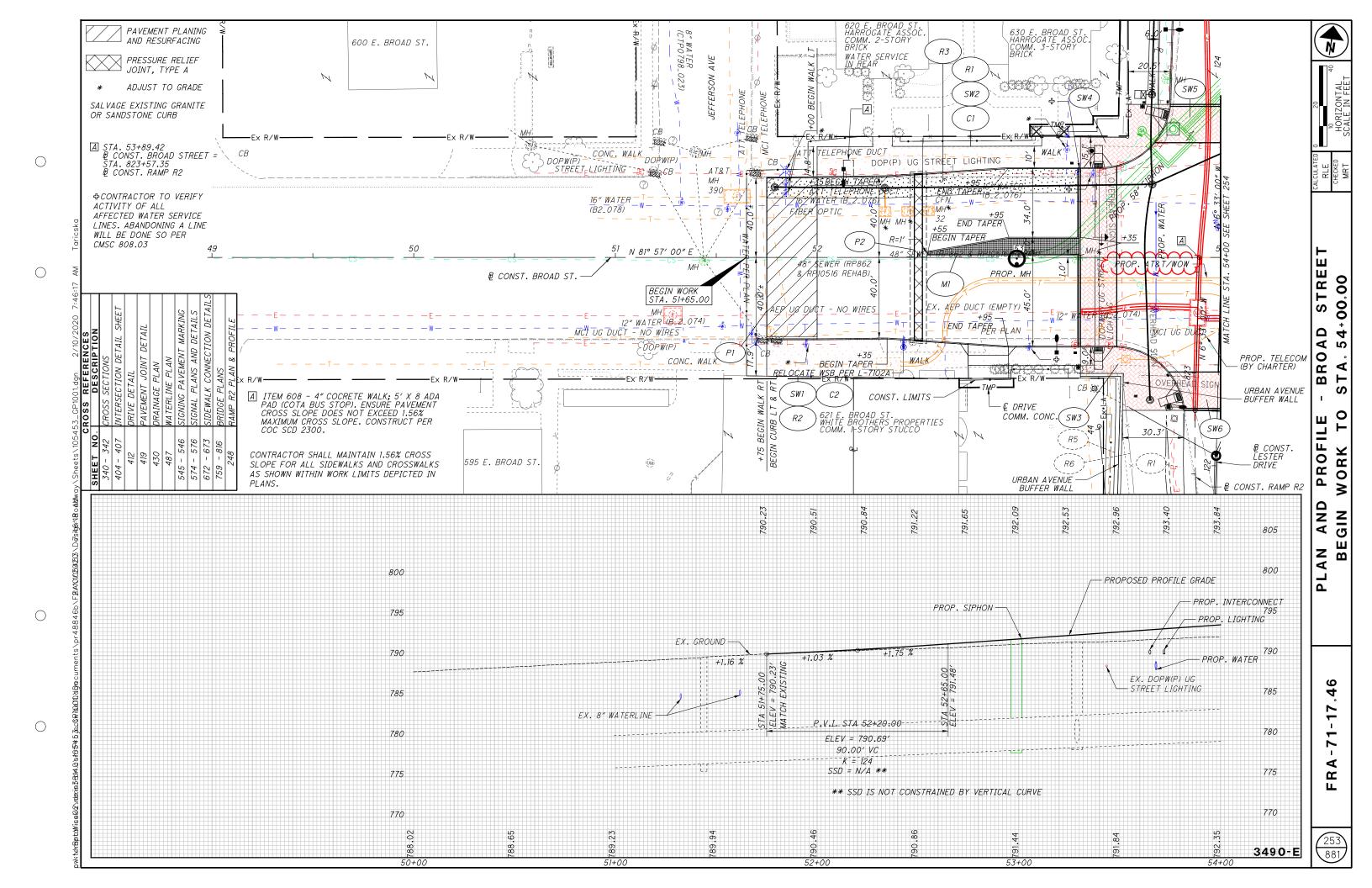
			SHEET	NUM.				PAF		ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE
2	58	61	205	274	445	OFFICE CALC	01/IMS/PV	02/NHS/ PV	06/MPO/ OT/Cols	08/ENH/	EXT	TOTAL	ONII	DESCRIPTION	NO.
					36	DALO	36			611	08900	36	FT	21" CONDUIT, TYPE B	
					64		64			611	08900	64	FT	21" CONDUIT, TYPE B, 706.02 W/ PREMIUM JOINTS	
					102		102			611	10400	102		24" CONDUIT, TYPE B	
_					91		91			611	13400	91		30" CONDUIT, TYPE B	+
-					661 2		661 2			611 611	16400 98180	661 2		36" CONDUIT, TYPE B CATCH BASIN, NO. 3A	
					2		2			611	98300	2		CATCH BASIN, NO. 5	
	+				6		6			611	98370	6	EACH	CATCH BASIN, NO. 6	
+					1		1			611	98470	1		CATCH BASIN, NO. 2-2B	
					3		3			611	99104	3		INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE C	
					1		1			611	99110	1	EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE C1	
					9		9			611	99114	9	EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D	
					3		3			611	99115	3	EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D, AS PER PLAN	461
					1		1			611	99574	1		MANHOLE, NO. 3	1
					15		15			611	99575	15	EACH	MANHOLE, NO. 3. AS PER PLAN	60
$\sim$	$\sim \sim$	$\sim$	$\sim$	$\sim$	$\overset{\wedge}{\searrow}$		\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	$\sim$	$\sim$	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~9966/~		V FAGHY	MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN INSPECTION WELL	61
		1	I			1	1 1			l 1 611	99720	1	EACH	INSPECTION WELL	
$\sim$	$\sim$	1500						$\sim$		SPECIAL	81199820	+		MISCELLANEOUS METAL	61
					9 27		9 27			611 611	99900 99900	9 27		DRAINAGE STRUCTURE, MISC.: CITY OF COLUMBUS DOUBLE CURB AND GUTTER INLET (AA-S125B WITH GRATE AA-S128) DRAINAGE STRUCTURE, MISC.: CITY OF COLUMBUS MANHOLE, TYPE C (AA-S102)	457 453
+					13		13			611	99900	13		DRAINAGE STRUCTURE, MISC.: CITY OF COLUMBUS STANDARD CURB AND GUTTER INLET (AA-S125A WITH GRATE AA-S128)	457
					1		1			611	99900	1	EACH	DRAINAGE STRUCTURE, MISC.: CITY OF COLUMBUS STANDARD CURB AND GUTTER INLET (AA-S125A WITH GRATE AA-S129)	457
					1		1			611	99900	1		DRAINAGE STRUCTURE, MISC.:CITY OF COLUMBUS 42" CURB INLET (AA-S123)	458
					1		1			611	99900	1	EACH	DRAINAGE STRUCTURE, MISC.:CITY OF COLUMBUS MANHOLE RECONSTRUCTION AND REHABILITATION (AA-S171)	456
-					1		1			611	99900	1		DRAINAGE STRUCTURE, MISC::CITY OF COLUMBUS STANDARD CATCH BASIN (AA-SI33A WITH GRATE AA-SI39)	459
					255		255			839	30000	255	FT	TRENCH DRAIN WITH STANDARD GRATE	
	+													PAVEMENT	
	150						150			251	01000	150	SY	PARTIAL DEPTH PAVEMENT REPAIR (441)	
	700		3,534	203			3,737			252	01500	3,737		FULL DEPTH PAVEMENT SAWING	
			- / :			40,801	40,801			254	01000	40,801		PAVEMENT PLANING, ASPHALT CONCRETE, 1 1/2"	
						3,242	3,242			254	01000	3,242	SY	PAVEMENT PLANING, ASPHALT CONCRETE, 3 1/4"	
						275	275			254	01000	275	SY	PAVEMENT PLANING, ASPHALT CONCRETEVARIABLE DEPTH	
						10,850	6,086	4,764		302	46000	10,850	CY	ASPHALT CONCRETE BASE, PG64-22 (11 1/2")	
						175	175	1,101		302	46000	175		ASPHALT CONCRETE BASE, PG64-22 (5")	
						404	404			302	46000	404	CY	ASPHALT CONCRETE BASE, PG64-22 (6")	
						10		10		302	46000	10	CY	ASPHALT CONCRETE BASE, PG64-22 (9")	
						8,652	6,073	2,506	73	304	20000	8,652	CY	AGGREGATE BASE	
						1,173	1,173			305	15020	1,173	SY	11" CONCRETE BASE, CLASS QC 1P WITH QC/QA	
						8,698	8,260		438	305	17500	8,698	SY	CONCRETE BASE, MISC.:8.5" CONCRETE BASE, CLASS QCI WITH QC/QA	59
						963	932		31	407	13900	963	GAL	TACK COAT, 702.13	
-						6,002 1,111	4,808 503	1,172 586	22 22	407 441	20000 50000	6,002 1,111	GAL CY	NON-TRACKING TACK COAT ASPHALT CONCRETE SURFACE COURSE. TYPE 1. (448). PG64-22	
	+					1,111	303	300	22	441	30000	1,111	U1	ASFRALT CONCRETE SURFACE COURSE, TIFE 1, 19401, FG04-22	
						1,410	1,394		16	441	50300	1,410	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)	
						1,945	1,837	108		442	00100	1,945	CY	ANTI-SEGREGATION EQUIPMENT	55
_						3,383	2,784	599		442 442	10000	3,383	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446)	
						1,240	1,102	138 206		442	10100 20200	1,240 206	CY CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446)  ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (448)	
_				170		10.4	170			SPECIAL	45130000	170	FT	PRESSURE RELIEF JOINT, TYPE A	59
-						184 35	184 35			452 452	14010 15010	184 35	SY SY	10" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P 12" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P	
+			1,070			33	1,070			609	24511	1,070		CURB, TYPE 4-C, AS PER PLAN	32
			1,010	715			715			609	26001	715		CURB, TYPE 6, AS PER PLAN	32
				00			20			200	50000	00	CV	W CONCRETE TRAFFIC ICLAND	
- 1			345	22			22 345			609 609	50000 70000	22 345	SY SY	4" CONCRETE TRAFFIC ISLAND 4" CONCRETE MEDIAN	
-+	+		340	1,845			1,845			609	72000	1,845	SY	CONCRETE MEDIAN	
				4,009			7,0 10			4,009 609	98000	4,009	FT	CURB, MISC.:STRAIGHT 18" GRANITE CURB "A"	44
						<del>                                     </del>				1,770 609	98000	1,770	FT	CURB, MISC.:STRAIGHT 18" GRANITE CURB "B"	44
				1,770						1,110		/		don's mice to minima of the contract of the co	
	0.51			1,770			0.51			618	40600	0.51	MILE	RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)	

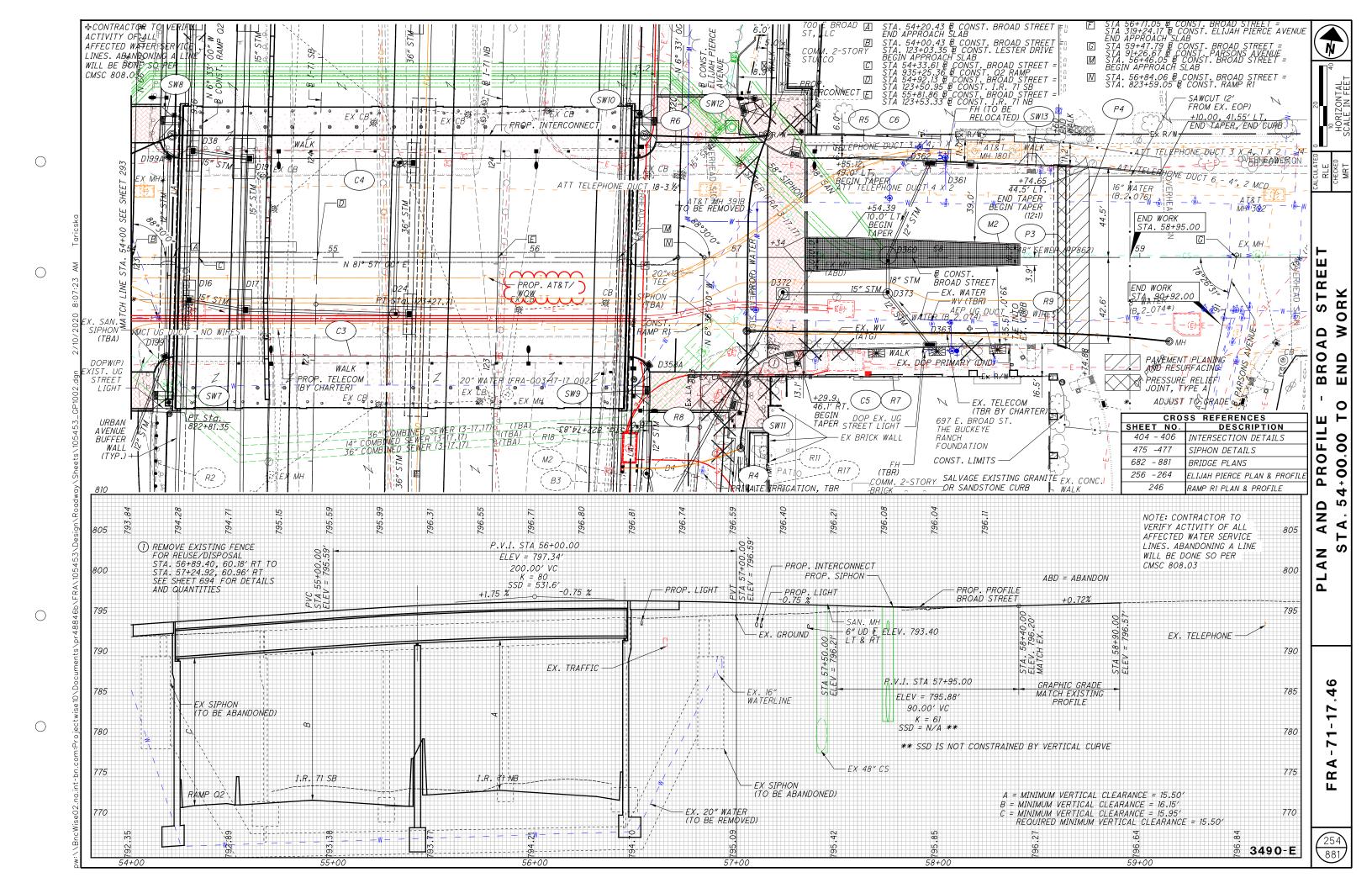
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			SHEET 						05/IMS/	07/5\2	08/ENH/	PART.	10/IMS/	11/IMC/OT	12/145/07	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SHE
493	494	500	502	512-513	604	515A	515D	01/IMS/PV	OT OT	/OT/COLS	OT/Cols	/AEP	OT/ATT	/TW	/VER		EXT	TOTAL			N
9											9					625	32000	9	EACH	GROUND ROD (ELECTRICAL)	
465	1										465					625 600	36000	465	FT	PLASTIC CAUTION TAPE	
2	$\vdash$										1					690 690	98000 98000	2	EACH EACH	SPECIAL -MISC.: 50' POWER POLE, TDMIS-1  SPECIAL -MISC.: EXISTING DOP VAULT #200 AS PER PLAN	45
1	++										1					690	98000	1	EACH	SPECIAL -MISC.: GUY WIRE	43
1	$\vdash$										1					690	98000	1 1	EACH	SPECIAL -MISC.: MANHOLE #1 AS PER PLAN, TDMIS-1015	49
											,						00000	<u>'</u>	EHOH	OF COINC MILEON MINIMACE THE FENTY, FORMED TOTAL	
1											1					690	98000	1	EACH	SPECIAL -MISC.: MANHOLE #2 AS PER PLAN, TDMIS-1015	45
	225										2					690 690	98000 98100	225	EACH FT	SPECIAL -MISC.: REMOVE POWER POLE  SPECIAL -CONDUIT, CONCRETE ENCASED: 1-2", TDMIS-1013	1
	225 165										225 165					690	98100	225 165	FT	SPECIAL -CONDUIT, CONCRETE ENCASED: 1-2, TDMIS-1013  SPECIAL -CONDUIT, CONCRETE ENCASED: 2-2", TDMIS-1013	49
	135										135					690	98100	135	FT	SPECIAL -CONDUIT, CONCRETE ENCASED: 2-5", TDMIS-1013	7.3
	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	<del> </del>										150					690	98100	150	FT	SPECIAL -MISC.: REMOVE AERIAL PRIMARY CONDUCTORS	
	350										350					690	98100	350	FT	SPECIAL -NO. 2/O AWG AL TRIPLEX W/ ACSR NEUTRAL, TDMIS-1501	1
	LS										LS					690	98400	LS	-	SPECIAL -CONDUCTOR SAFETY POLICY, TDMIS-1603	49
				$\sim$									$\sim$					$\sim$		TELECOMMUNICATIONS (AT&T)	
	<u> </u>		,	4,074	ν <u> </u>								4.074	<u>ر</u>		625	25920 (	4,074	) FT	CONDUIT, MISC.: CONCRETE ENCASED FIBERGLASS CONDUIT, 4"	5.
					/							`		,				W.	1		
	++					200								200		COF	25020	200		TELECOMMUNICATIONS (CHARTER) CONDUIT, MISC.:FIBERGLASS CONDUIT, 4", DIRECTIONAL DRILLED	51
	+					266								266		625	25920	266	FT	CONDUIT, MISC.:FIBERGLASS CONDUIT, 4, DIRECTIONAL DRILLED	31
																				TELECOMMUNICATIONS (VERIZON)	
							318								318	625	25920	318	FT	CONDUIT, MISC.:FIBERGLASS CONDUIT, 4"	51
	1																			ELECTRICAL (AER)	
	$\vdash$																			ELECTRICAL (AEP)	
			233									233				511	53016	233	CY	CLASS QC4 CONCRETE, MISC.: CLASS QC4 CONCRETE, PEA GRAVEL ENCASEMENT, AS PER PLAN	50
	$\vdash$		6,234									6,234				625	25920	6,234	FT	CONDUIT, MISC.:CONDUIT, PVC, 5", SCH. 40, ELECTRIC RATED, AS PER PLAN	50
			1,253									1,253				625	29401	1,253	FT	TRENCH IN PAVED AREAS, AS PER PLAN	50
			1									1				690	98000	1	EACH	SPECIAL -MISC.: FIBERGLASS BOX PAD INSTALLATION	50
			2									2				690	98000	2	EACH	SPECIAL -MISC.: PRECAST CONCRETE ELECTRIC MANHOLE	50
			1									1				690	98000	1	EACH	SPECIAL -MISC.: PRECAST PRIMARY ENCLOSURE	50
	1																			TELECOLUMINION TIONS (C.O.S. DOT)	
	1	80						10		70						625	25603	80	FT	TELECOMMUNICATIONS (C.O.C. DOT) CONDUIT, 4", 725.05, AS PER PLAN	45
	$\vdash$	900						900		70						690	98100	900	FT	SPECIAL - MISC.: REMOVAL AND DISPOSAL OF FOI.HM FIBER OPTIC CABLE	45
	+	1,856						1,856								690	98100	1,856	FT	SPECIAL - MISC.: REMOVAL AND DISPOSAL OF FO2.HH FIBER OFTIC CABLE	49
		1,582						1,582								804	98000	1,582	FT	FIBER OPTIC CABLE, MISC.: FOI.HH FIBER OPTIC CABLE, 288 STRAND	49
		3,439						3,439								804	98000	3,439	FT	FIBER OPTIC CABLE, MISC.: FO2.HH FIBER OPTIC CABLE, 288 STRAND	45
		1,185						,		1,185						804	98000	1,185	FT	FIBER OPTIC CABLE, MISC.: FO3.HM FIBER OPTIC CABLE, 288 STRAND	45
	1																			TRAFFIC SURVEILLANCE	
	$\vdash$				LS				LS							202	98000	LS		REMOVAL MISC.; REMOVAL OF PROJECT 1 PERMANENT ITS	60
					LS				LS							202	98000	LS		REMOVAL MISC.: REMOVAL OF PROJECT 3 TEMPORARY ITS	60
	+					$\sim$	~~~	000								625	25408	Não N	FT	CONDUIT, 2", 725.051 (SURVEILLANCE)	
				>	365				365	5						625	25504	365	FT	CONDUIT, 3", 725.051 (SURVEILLANCE)	
					3,426	$\overline{\mathcal{M}}$	$\mathcal{M}$		3,128							625	25750	U3,126U	FT	CONDUIT, 4", MULTICELL, 725.20 , EPC-40, (4)-1.25" INNER-DUCTS	
					<i>52</i>				<i>52</i>							625	25802	52	FT	CONDUIT, CONCRETE ENCASED, 4", MULTICELL, EPC-40	
	1			>		$\sim$	$\sim$	$\sim$							<u> </u>	<del>~625</del> ~	259 <del>0</del> 0	<del>\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\</del>		CONDUIT HOVED OR PRILLED A MULTICELLY EPG-89	ф <u> </u>
	$\vdash$			<del></del>	131 473				131 473	2						625 <b>625</b>	25906 <b>29100</b> (	131 473	FT	CONDUIT, JACKED OR DRILLED, 725.051, 3"	<del>, )</del>
					حتوك		$\mathcal{M}$		T T	7						625	29931	Time to the second	EACH	MEDIAN JUNCTION BOX, AS PER PLAN	6
					7				7							625	30700	7	EACH	PULL BOX, 725.08, 18"	
	1				5				5							625	31510	F	EACH	PULL BOX REMOVED (SURVEILLANCE)	
	<del>                                     </del>				5 4				5 4							625 625	31600	5	EACH EACH	PULL BOX, MISC.: CONCRETE, 32" (SURVEILLANCE)	6
	<del>                                     </del>				1				1							625	32000	1	EACH	GROUND ROD (SURVEILLANCE)	+
					3				3							625	34000	3	EACH	POWER SERVICE	
					27				27							630	03100	27	FT	GROUND MOUNTED SUPPORT, NO. 3 POST	
	1				24				24							630	80100	24	SF	SIGN, FLAT SHEET  VEHICULAR SIGNAL HEAD, (LED), 2-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, A	15
			1		3				3							632	04905	3	EACH	PER PLAN	
			l			!														, 2, 1, 2, 11, 2, 11, 11, 11, 11, 11, 11	6
					4				4							632	26500	4	EACH	DETECTOR LOOP  DISCONNECT SWITCH WITH ENCLOSURE  3490-E	

			SHEET	NUM.						PART.			T.T.C. (	ITEM	GRAND	/ /A / T T	DECODINETION	SEE	LATED SS CKED
69	573	584					C	O1/IMS/PV	, 02/NHS/P V	05/IMS/ OT	07/S>2/O T/Cols	08/ENH/O T/Cols	ITEM	EXT	TOTAL	UNIT	DESCRIPTION	SHEET NO.	CALCULA
	2							2					632	90101	2		REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN	569	]
	2							10				2	632	90400	2		SIGNALIZATION, MISC.: CCTV IP-CAMERA SYSTEM	570	4
	12 3												632	90400	12	EACH EACH	SIGNALIZATION, MISC.: SLEEVE FOR ANCHOR BASE FOUNDATION SIGNALIZATION, MISC.: STOP LINE RADAR DETECTION SYSTEM	568	4
	20							20					632 632	90400 90400	3 20		SIGNALIZATION, MISC.: STOP LINE RADAR DETECTION STSTEM SIGNALIZATION, MISC.:ACCESSIBLE PEDESTRIAN SIGNAL SYSTEM	570 570	-
													002	00700	20	EAOIT	STOTMETER TONY, MISSISSIBLE FEDES MINIT STOTME STOTEM	070	1
	1							1					632	90400	1		SIGNALIZATION, MISC::RELOCATED CCTV IP-CAMERA SYSTEM	568	
	3							3					633	01551	3		CONTROLLER UNIT, TYPE TS2/A2, WITH CABINET, TYPE TS2, AS PER PLAN	571	]
	3							3					633	67101	3	EACH	CABINET FOUNDATION, AS PER PLAN	571	4
										000					0000		<u>INTERCONNECT</u>		4
		2,660								2,660			625	25920	2,660	) FT	CONDUIT, MISC.: ENCASED INTERCONNECT CONDUIT BANK, TC-2, SCH 40	583	-
										2,660	,		625	31510	TÜ.		PULL BOX REMOVED (INTERCONNECT)		1
		11								11			625	31600	11	EACH	PULL BOX, MISC.: CONCRETE, 32"	583	]
		3								3			625	31600	3	EACH	PULL BOX, MISC.: CONCRETE, 48"	583	
		2								2			632	62820	2	EACH	INTERCONNECT, MISC.: FIBER OPTIC SPLICE ENCLOSURE, CLAMSHELL, 288 SPLICE	584	4
		2								2			632	62820	2	EACH	INTERCONNECT, MISC.: FIBER OPTIC SPLICE ENCLOSURE, DOME, 800 SPLICE	584	┨ 、
		1								1			633	99000	1		CONTROLLER ITEM, MISC.: LAYER 2 ETHERNET SWITCH	583	<b>↑</b> ~
		2								2			633	99000	2		CONTROLLER ITEM, MISC.: FIBER OPTIC ETHERNET TRANSCEIVER, SHORT RANGE	583	AB
		446								446			804	32060	446		DROP CABLE, 24 FIBER	584	<b> </b>
		6								6			804	34023	6	EACH	FIBER TERMINATION PANEL, 24 FIBER, AS PER PLAN	584	Σ
		408								408			804	35001	408	EACH	FUSION SPLICE, AS PER PLAN	584	<b>∃</b> 5
		4,590								4,590			804	98000	4,590		FIBER OPTIC CABLE, MISC.:144 FIBER	584	<b>⊤ા</b> ડ
		,													,				] ~
																	MAINTENANCE OF TRAFFIC		╛┙
112								62	50				202	35100	112		PIPE REMOVED, 24" AND UNDER (MOT)		<b>∣</b> ≲
1050								<u>4</u> 570	3 480				202 607	58100 20001	7 1050		CATCH BASIN REMOVED (MOT) FENCE, TYPE CL, AS PER PLAN, C	62	ା <u>ଜ</u>
112								62	50				611	05900	112		15" CONDUIT, TYPE B (MOT)	02	⊔ Z
7								4	3				611	98370	7		CATCH BASIN, NO. 6 (MOT)		╛
2,500								1 <b>,</b> 375	1,125				614	11110	2 <b>,</b> 500		LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE		ු ග
2								1	1 107				SPECIAL	61411300	2		WORK ZONE TRAFFIC SIGNAL	65	4
25 <b>,</b> 550								14,053 12	11 <b>,</b> 497				614 614	11630 12336	25,550 21		INCREASED BARRIER DELINEATION WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL)		4
LS								LS	LS				614	12420	LS	EAUT	DETOUR SIGNING		-
6								4	2				614	12484	6	EACH	WORK ZONE INCREASED PENALTIES SIGN		1
																			]
50								28	22				614	12500	50		REPLACEMENT SIGN		_
100 5,512								55 3,032	45 2,480				614 614	12600 12801	100 5,512		REPLACEMENT DRUM WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN	67	4
511								282	2,400				614	13310	5,312		BARRIER REFLECTOR, TYPE 1, ONE WAY	67	4
511								282	229				614	13350	511		OBJECT MARKER, ONE WAY		-
																	·		
90,000								49,500	40,500				614	18000	90,000		MAINTAINING TRAFFIC, MISC.:BRIDGE DECK AND PAVEMENT PATCHING	67	]
20									9				614	18601	20		PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	65	4
8.97 0.47								5	3.97 -0.53				614 614	20100 21100	8.97 0.47		WORK ZONE LANE LINE, CLASS I, 4", 642 PAINT WORK ZONE CENTER LINE, CLASS I, 642 PAINT		4
16.67								10	6.67				614	22100	16.67		WORK ZONE EDGE LINE, CLASS I, 4", 642 PAINT		-
20,191								11,105	9,086				614	23200	20,191		WORK ZONE CHANNELIZING LINE, CLASS I, 8", 642 PAINT		_
8,630								4,747	3,883				614	24200	8,630		WORK ZONE DOTTED LINE, CLASS I, 642 PAINT		4
130 2,509								72 1,380	58 1,129				614 614	26200 27200	130 2,509		WORK ZONE STOP LINE, CLASS I, 642 PAINT WORK ZONE CROSSWALK LINE, CLASS I, 642 PAINT		_ر ⊢
15								- 1,300 - 9	6				614	30200	15		WORK ZONE ARROW, CLASS I, 642 PAINT		<b>⊢</b> 46
	~~~	$\sim$			$\sim$			$\sim$		$\sim\sim$	$\sim\sim$	~~		73120Q	$\gamma \gamma \gamma \gamma$		WORK-ZONE-WORD-ON-PAVEMENT, 72% SLASS-V, 642 PAINT		<b>-</b>
1.5			ı					15	1 15				615	10000	1.5	l IIMP	IROADS FOR MAINTAINING TRAFFIC	U	1
		$\frac{1}{2}$	$\mathcal{A}$	$\sim$		$\sim$	$\mathcal{M}$										PAVEMENT POR MAINTAINING TRAFFIC, CLASS B	Ψ	┤┆
360								198	162				616	10000	360		WATER		⊣ ï
25,110 440								13,811 242	11,299 198				622 622	41000 41020	25,110 440		PORTABLE BARRIER, 32" PORTABLE BARRIER, 32", BRIDGE MOUNTED		-l '.
4								2	2				622	41050	4		PORTABLE BARRIER, "Y" CONNECTOR		<b>∣</b> 🏅
60								33	27				808	18700	60		DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY		H
																			<b>」 "</b>
													100	10000			INCIDENTALS		4
LS LS								LS	LS LS				108 614	10000 11000	LS		CPM PROGRESS SCHEDULE  MAINTAINING TRAFFIC		
LO		-						<u>LS</u> 30	LS				619	16021	LS 30		FIELD OFFICE, TYPE C, AS PER PLAN	55	196
			1					50	1	i			010				·		— <b>ા</b> /ાંગ્રહ
								LS					623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING  3490-1	_	0.01

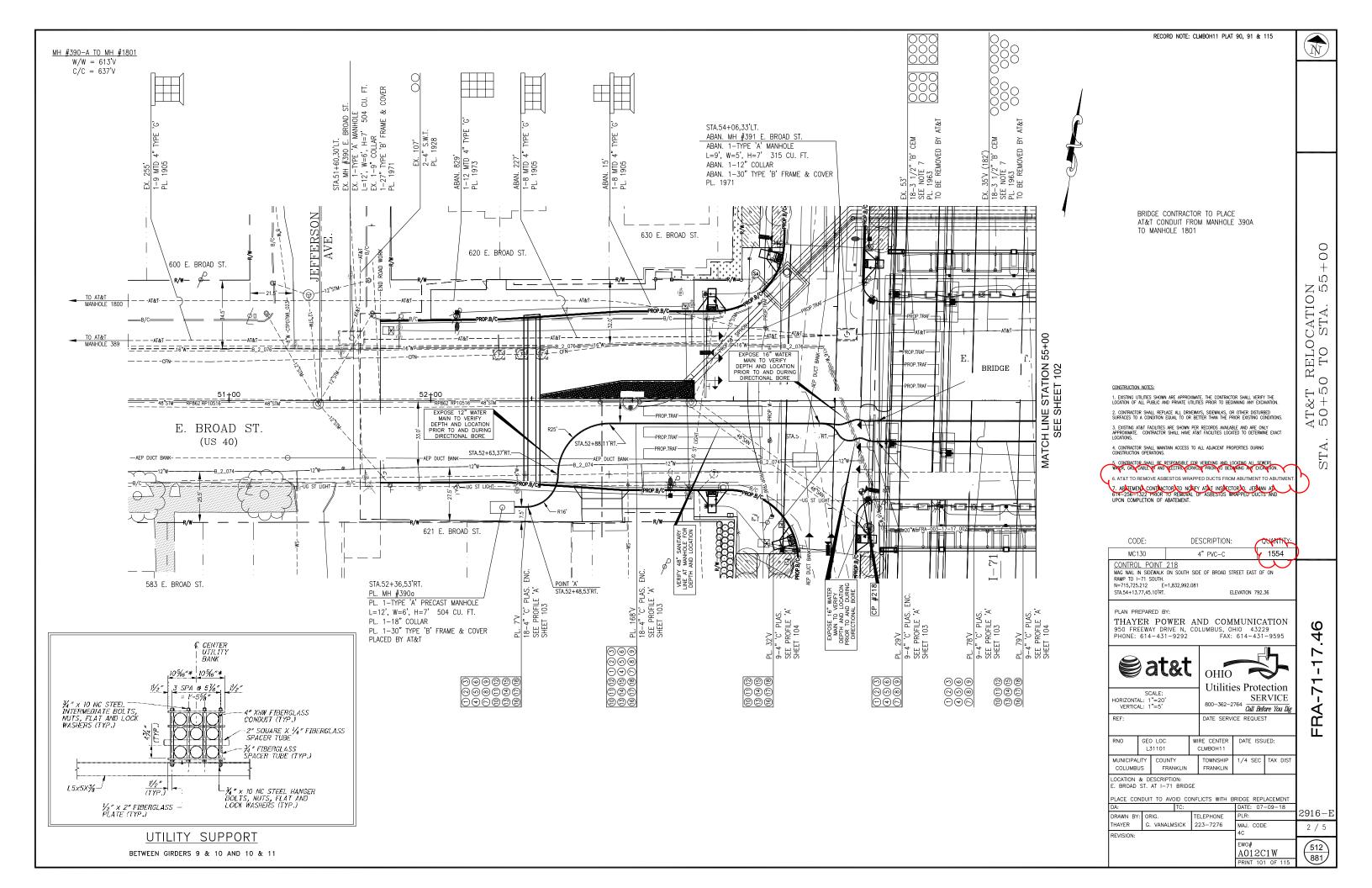


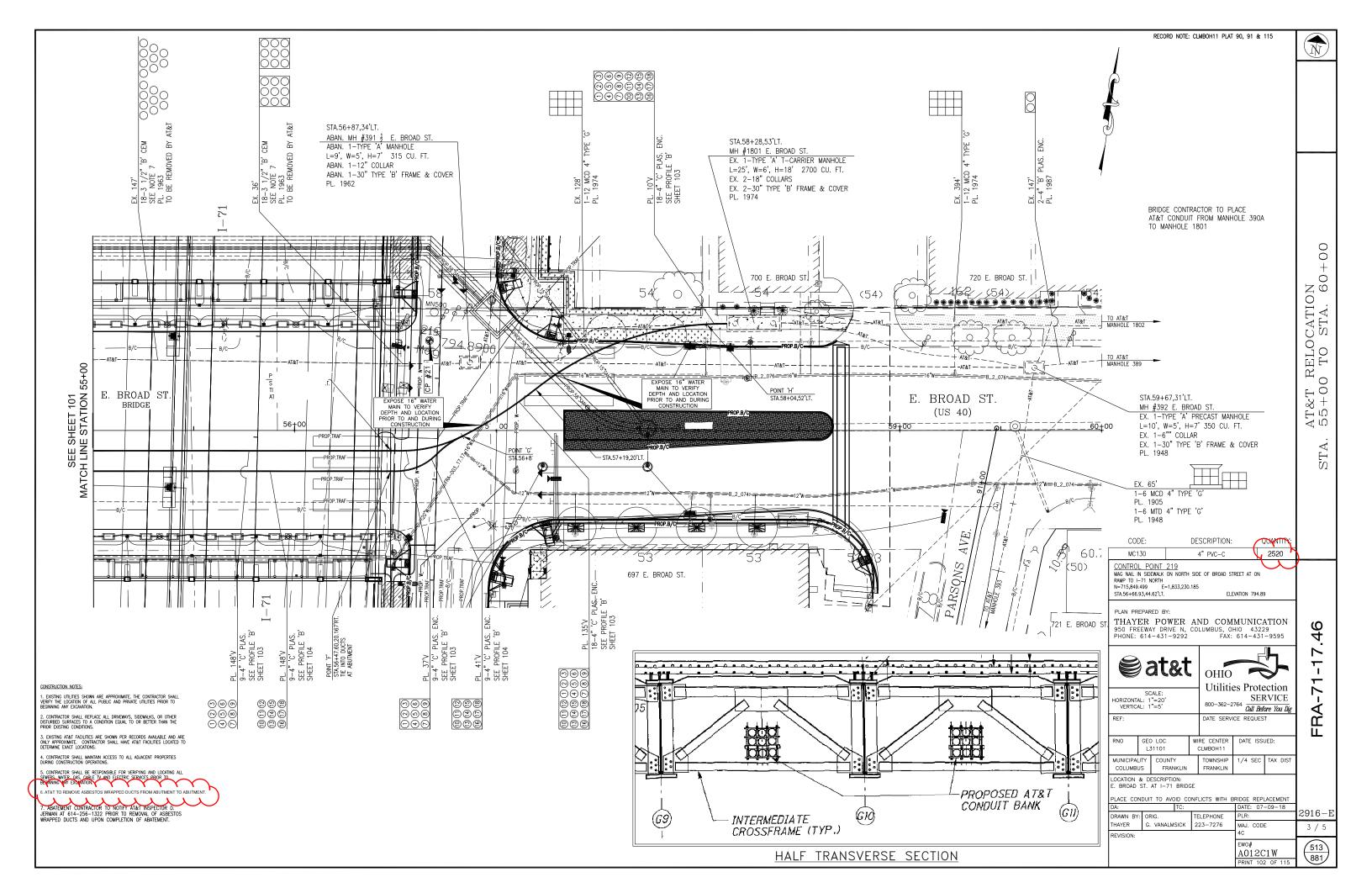


	202	202	202	202	202	202	202	202	202	202	202	202	202	202	202				SPECIAL			9
ESTIMATED QUANTITY FROM SHEET NO.	PAVEMENT REMOVED	WALK REMOVED	CURB REMOVED	GUARDRAIL REMOVED	FENCE REMOVED	REMOVAL MISC.:FLAG POLE REMOVED	REMOVAL MISC.:BRICK PAVERS REMOVED AND SALVAGED	REMOVAL MISC.:TREE GRATE REMOVED	REMOVAL MISC.:LANDSCAPE LIGHT REMOVED	REMOVAL MISC.: BOLLARD REMOVED	REMOVAL MISC.: DUMPSTER REMOVED	REMOVAL MISC.: DUMPSTER PAD REMOVED	REMOVAL MISC.: POST REMOVED	REMOVAL MISC.:WALL REMOVED	REMOVAL MISC.: STORAGE TRAILER REMOVED				PARKING BLOCK REMOVED			CALCULAT
	SY	SF	FT	FT	FT	EACH	SF	EACH	EACH	EACH	EACH	EACH	EACH	FT	EACH				EACH			
255	3495	10976	958	42	36	1	325	5	2					نىن	,							1
258	175	30	35		44																	1
261	348		146	19	499					1									4			1
264					531										2							1
267	1529		647	417	278					3												1
270	1728	15	311	500	500		58			1	2	2							1			1
273	328			88	73																	1
416	546	2012	283		79								3	13								1
																						1
TOTALS CARRIED TO GENERAL SUMMARY	8149	13033	2380	1066	2040	1	383	5	2	5	2	2	3	13	2				5			l
	SAWING					5d3	ERS	7	_	×			~						2	626	SPECIAL	_
ESTIMATED QUANTITY FROM SHEET NO.	FULL DEPTH PAVEMENT SA			4" CONCRETE WALK	8" CONCRETE WALK	WALKWAY, MISC.:CONCRETE STEP WITH HANDRAIL	WALKWAY, MISC.:GRANITE PAVERS 'C'	WALKWAY, MISC.:BROAD STREE DETECTABLE WARNINGS	WALKWAY, MISC.:BRICK PAVER CROSSWALK	VALKWAY, MISC.:BRICK PAVER WALK	WALKWAY, MISC.:REPAIR BRICK PAVER WALK	WALKWAY, MISC.:COLUMBUS CURE RAMP, TYPE A	WALKWAY, MISC.:COLUMBUS CURB RAMP, TYPE H	CURB, TYPE 6, AS PER PLAN	4" CONCRETE TRAFFIC ISLAND	CONCRETE MEDIAN	CURB, MISC.:STRAIGHT 18" GRANITE CURB "4"	CURB, MISC.:STRAIGHT 18" GRANITE CURB "B"	OORTABLE BARRIER, 32" (ROADWA)	BARRIER REFLECTOR, TYPE 1	PRESSURE RELIEF JOINT, TYPE A	
ESTIMATED QUANTITY FROM SHEET NO.	DEPTH PAVEMENT			× ×	× ×	7E	<u> </u>	WALKWAY, MISC.:BROAD STREE  DETECTABLE WARNINGS	WALKWAY, MISC.:BRICK PAVER CROSSWALK	S WALKWAY, MISC.:BRICK PAVER WA	l n-	BUS	WALKWAY, MISC.:COLUMBUS CURE	TYPE 6, AS PER PL	CONCRETE TRAFFIC	CONCRETE MEDIAN	CURB, MISC.:STRAIGHT 18"  GRANITE CURB "4"		32" (ROADWA	REFLECTOR, TYPE	RE RELIEF JOINT, TYPE	
ESTIMATED QUANTITY FROM SHEET NO.	FULL DEPTH PAVEMENT			4" CONCRETE W	8" CONCRETE W	WALKWAY, MISC.:CONCRETE WITH HANDRAIL	WALKWAY, MISC.:GRANITE			WALKWAY, MISC.:BRICK PAVER	WALKWAY, MISC.:REPAIR PAVER WALK	WALKWAY, MISC.:COLUMBUS RAMP, TYPE A	WALKWAY, MISC.:COLUMBUS RAMP, TYPE H	CURB, TYPE 6, AS PER PL	4" CONCRETE TRAFFIC	CONCRETE MEDI	CURB, MISC.:STRAIGHT GRANITE CURB "A"	CURB, MISC.÷STRAIGHT GRANITE CURB "B"	PORTABLE BARRIER, 32" (ROADWA	BARRIER REFLECTOR, TYPE	PRESSURE RELIEF JOINT, TYPE	
	FULL DEPTH PAVEMENT			S 4" CONCRETE W	S CONCRETE W	WALKWAY, MISC.:CONCRETE WITH HANDRAIL	WALKWAY, MISC.:GRANITE		SF	유 WALKWAY, MISC.:BRICK PAVER	WALKWAY, MISC.:REPAIR PAVER WALK	西 WALKWAY, MISC.・COLUMBUS 会 名MP, TYPE A	WALKWAY, MISC.:COLUMBUS RAMP, TYPE H	CURB, TYPE 6, AS PER PL	4" CONCRETE TRAFFIC	CONCRETE MEDI	CURB, MISC.:STRAIGHT GRANITE CURB "A"	CURB, MISC.:STRAIGHT GRANITE CURB "B"	PORTABLE BARRIER, 32" (ROADWA	BARRIER REFLECTOR, TYPE	그 PRESSURE RELIEF JOINT, TYPE	
255	FULL DEPTH PAVEMENT			SF CONCRETE W	S CONCRETE W	WALKWAY, MISC.:CONCRETE WITH HANDRAIL	WALKWAY, MISC.:GRANITE		SF	유 WALKWAY, MISC.:BRICK PAVER	WALKWAY, MISC.:REPAIR PAVER WALK	西 WALKWAY, MISC.・COLUMBUS 会 名MP, TYPE A	WALKWAY, MISC.:COLUMBUS RAMP, TYPE H	CURB, TYPE 6, AS PER PL	4" CONCRETE TRAFFIC	CONCRETE MEDI	CURB, MISC.:STRAIGHT GRANITE CURB "4"	CURB, MISC.:STRAIGHT GRANITE CURB "B"	PORTABLE BARRIER, 32" (ROADWA	BARRIER REFLECTOR, TYPE	그 PRESSURE RELIEF JOINT, TYPE	
255 258	FULL DEPTH PAVEMENT			SF 18768	S CONCRETE W	WALKWAY, MISC.:CONCRETE WITH HANDRAIL	WALKWAY, MISC.:GRANITE		SF	유 WALKWAY, MISC.:BRICK PAVER	WALKWAY, MISC.:REPAIR PAVER WALK	西 WALKWAY, MISC.・COLUMBUS 会 名MP, TYPE A	WALKWAY, MISC.:COLUMBUS RAMP, TYPE H	S I CURB, TYPE 6, AS PER PL	4" CONCRETE TRAFFIC	CONCRETE MEDI	CURB, MISC.:STRAIGHT GRANITE CURB "4"	CURB, MISC.:STRAIGHT GRANITE CURB "B"	PORTABLE BARRIER, 32" (ROADWA	BARRIER REFLECTOR, TYPE	그 PRESSURE RELIEF JOINT, TYPE	
255 258 261	FULL DEPTH PAVEMENT			SF 18768 30	S CONCRETE W	WALKWAY, MISC.:CONCRETE WITH HANDRAIL	WALKWAY, MISC.:GRANITE		SF	유 WALKWAY, MISC.:BRICK PAVER	で で の の の の の の の の の の の の の	西 WALKWAY, MISC.・COLUMBUS 会 名MP, TYPE A	WALKWAY, MISC.:COLUMBUS RAMP, TYPE H	S I CURB, TYPE 6, AS PER PL	4" CONCRETE TRAFFIC	CONCRETE MEDI	CURB, MISC.:STRAIGHT CURB "4"	CURB, MISC.:STRAIGHT GRANITE CURB "B"	PORTABLE BARRIER, 32" (ROADWA	BARRIER REFLECTOR, TYPE	그 PRESSURE RELIEF JOINT, TYPE	
255 258 261 264	FULL DEPTH PAVEMENT			SF 18768 30 2482 2064	SF SF CONCRETE W	WALKWAY, MISC.:CONCRETE WITH HANDRAIL	WALKWAY, MISC.:GRANITE		SF	유 WALKWAY, MISC.:BRICK PAVER	で で の の の の の の の の の の の の の	西 WALKWAY, MISC.・COLUMBUS 会 名MP, TYPE A	THE WALKWAY, MISC.:COLUMBUS  PRAMP, TYPE H	22 L1 CURB, TYPE 6, AS PER PL	4" CONCRETE TRAFFIC	CONCRETE MEDI	CURB, MISC.:STRAIGHT CURB 'A" CARMITE CURB 'A"	CURB, MISC.:STRAIGHT GRANITE CURB "B"	PORTABLE BARRIER, 32" (ROADWA	BARRIER REFLECTOR, TYPE	그 PRESSURE RELIEF JOINT, TYPE	
255 258 261 264 267	FULL DEPTH PAVEMENT			SF 18768 30 2482 2064	SF SF 31	MALKWAY, MISC ::CONGRETE  WALKWAY MISC ::CONGRETE	WALKWAY, MISC.:GRANITE		SF	유 WALKWAY, MISC.:BRICK PAVER	で で の の の の の の の の の の の の の	西 WALKWAY, MISC.・COLUMBUS 会 名MP, TYPE A	NALKWAY, MISC.:COLUMBUS	172 CURB, TYPE 6, AS PER PL	4" CONCRETE TRAFFIC	CONCRETE MEDI	CURB, MISC.:STRAIGHT 450 866 684 684 684 684	CURB, MISC.:STRAIGHT GRANITE CURB "B"	PORTABLE BARRIER, 32" (ROADWA	BARRIER REFLECTOR, TYPE	그 PRESSURE RELIEF JOINT, TYPE	
255 258 261 264 267 270	FULL DEPTH PAVEMENT			SF 18768 30 2482 2064 1284 2218	SF 31 62 62 113	MALKWAY, MISC ::CONGRETE  WALKWAY MISC ::CONGRETE	WALKWAY, MISC.:GRANITE		SF	유 WALKWAY, MISC.:BRICK PAVER	で で の の の の の の の の の の の の の	西 WALKWAY, MISC.・COLUMBUS 会 名MP, TYPE A	NALKWAY, MISC.:COLUMBUS	172 CURB, TYPE 6, AS PER PL	4" CONCRETE TRAFFIC	CONCRETE MEDI	CURB, MISC.:STRAIGHT 450 888 432 644 1000	CURB, MISC.:STRAIGHT GRANITE CURB "B"	PORTABLE BARRIER, 32" (ROADWA	BARRIER REFLECTOR, TYPE	그 PRESSURE RELIEF JOINT, TYPE	
255 258 261 264 267 270 273	FULL DEPTH PAVEMENT			SF 18768 30 2482 2064 1284 480	SF 31 62 62 113	MALKWAY, MISC ::CONGRETE  WALKWAY MISC ::CONGRETE	WALKWAY, MISC.:GRANITE		SF	유 WALKWAY, MISC.:BRICK PAVER	で で の の の の の の の の の の の の の	西 WALKWAY, MISC.・COLUMBUS 会 名MP, TYPE A	NALKWAY, MISC.:COLUMBUS	25 CURB, TYPE 6, AS PER PL	∴ CONCRETE TRAFFIC     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴     ∴	CONCRETE MEDI	CURB, MISC.:STRAIGHT 450 888 432 644 1000	CURB, MISC.:STRAIGHT GRANITE CURB "B"	PORTABLE BARRIER, 32" (ROADWA	DA BARRIER REFLECTOR, TYPE	그 PRESSURE RELIEF JOINT, TYPE	

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## 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 AERIALLY AS IN 32", 36", OR 48" POLL BOXES OR MOUNTED AERIALLY 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

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.

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 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 SHOWN AS BEING SPLICED IN THE PLANS ARE TO 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 CONSISTED OF THE SAME SIZE OF THE SAME SIZE. 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 DIAMETER PORTS. PLUG KITS AND BRALKETS SMALL 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 TEMS AND MATERIALS SHALL BE ANDERED TO THE OWNER HAD BEEN AND THE 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 TRAY 36 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 REQUIREDPLP CATALOG NUMBER
LGSTS72 AND ARE TO BE INSTALLED IN 48" PULL BOXES OR
MOUNTED AERIALLY 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 OTHER OBSTRUCTIONS. ADDITIONALLY. CONTRACTOR SHALL THE 800 DOME SPLICE ENCLOSURES SHALL BE 9.5"X28" 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

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 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

FIBER OPTIC CABLE SPLICE ENCLOSURES SHALL HAVE A ONE SECTION, 7 PORT END PLATE. EACH CABLE ENTERING THE ENCLOSURE SHALL BE SEALED WITH THE APPRORIATLEY 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 OF TO CORE AND UNLOSE OF THE STATE OF THE PROPOSED SECONDARY. 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
		$\sim$			
625	25920	2660	<b>₹</b> FT	CONDUIT, MISC.: ENCASED INTERCONNECT CONDUIT BANK, TC-2, SCH 40	583
625	31510		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

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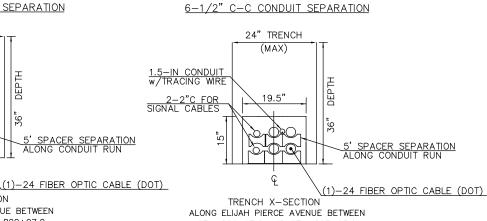
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4-3"C + 1-1.5" CONDUIT BANK 3" CONCRETE ENCASEMENT 5-1/2" C-C CONDUIT SEPARATION

18" TRENCH (MAX) 1.5-IN CONDUIT W/TRACING WIRE 5' SPACER SEPARATION ALONG CONDUIT RUN (1)-144 FIBER OPTIC CABLE

> TRENCH X—SECTION ALONG ELIJAH PIERCE AVENUE BETWEEN STA. 319+85.8 AND STA. 329+09.3 LOOKING EAST

2-2"C + 1-1.5" CONDUIT BANK 6-1/2" C-C CONDUIT SEPARATION



<u> 2-2"C + 1-1.5" CONDUIT BANK</u>

3' CONCRETE ENCASEMENT

STA. 822+97.0 AND STA. 823+23.0

LOOKING NORTH

24" TRENCH (MAX) 1.5-IN CONDUIT W/TRACING WIRE (1)-24 FIBER OPTIC CABLE (DOT) (1)-144 FIBER OPTIC CABLE, (2)-288 FIBER OPTIC CABLE (DOT)

TRENCH X-SECTION ALONG ELIJAH PIERCE AVENUE BETWEEN STA. 823+23.0 AND STA. 823+59.0 823+59.0 = 319+24.2STA. 319+24.2 AND STA. 319+85.8 LOOKING NORTH

-1.5" CONDUIT BANK ON BRIDGE

1-1.5" CONDUIT BANK

CONCRETE ENCASEMENT

18" TRENCH (MAX)

15"

TRENCH X-SECTION

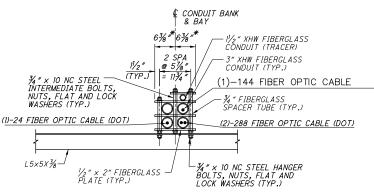
ALONG ELIJAH PIERCE AVENUE BETWEEN

STA. 822+65.0 AND STA. 822+97.0

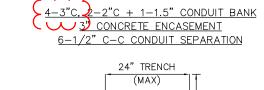
LOOKING NORTH

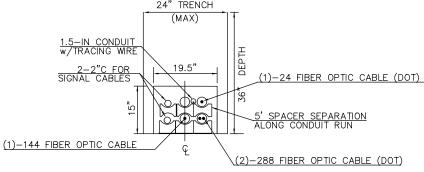
1.5-IN CONDUIT w/TRACING WIRE

6-1/2" C-C CONDUIT SEPARATION

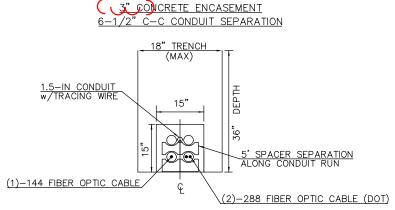


TRENCH X-SECTION ALONG BROAD STREET BETWEEN STA. 54+20.3 TO STA. 56+54.5 LOOKING EAST





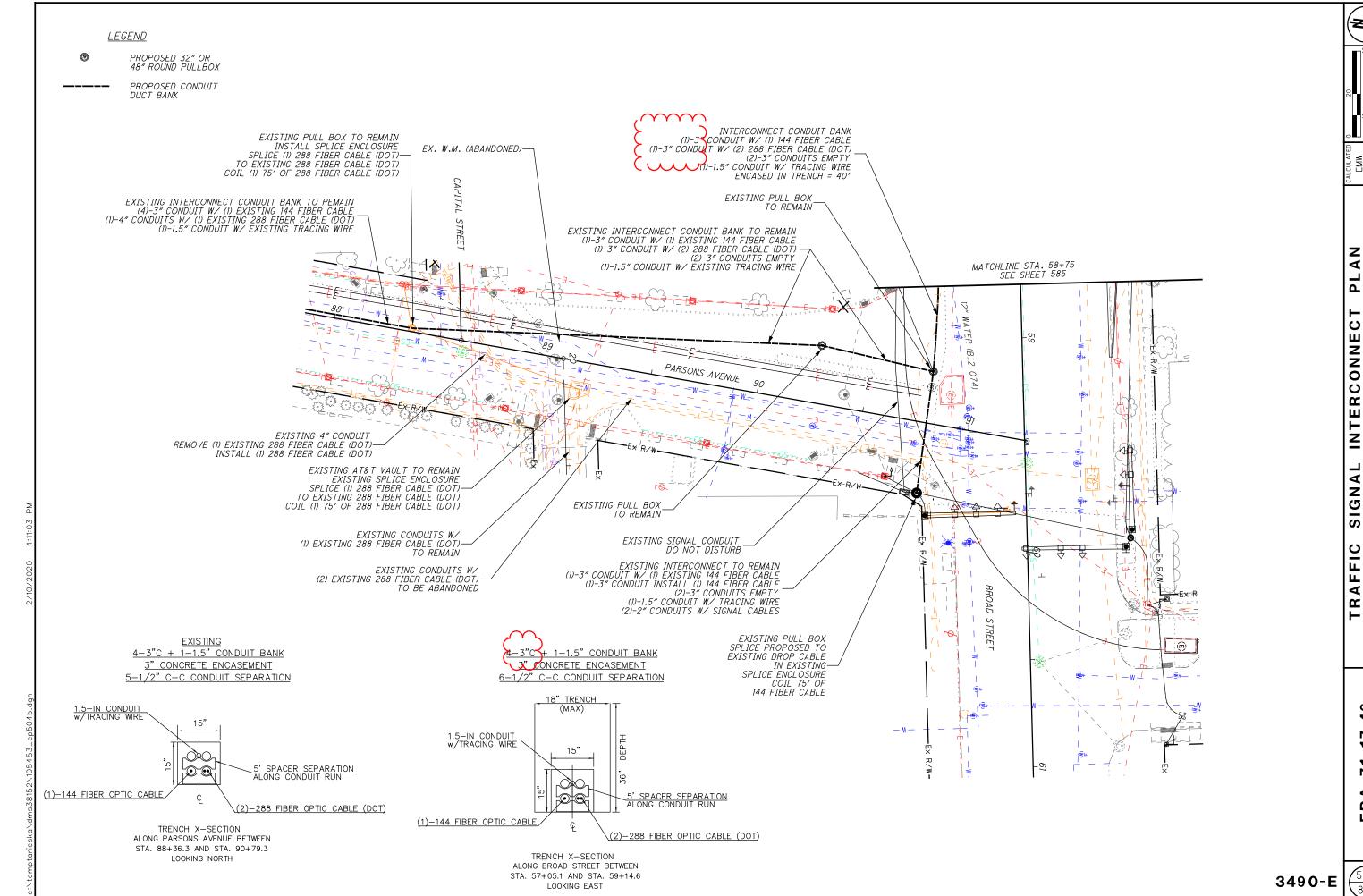
TRENCH X-SECTION ALONG BROAD STREET BETWEEN STA. 56+54.5 TO STA. 57+15.4 LOOKING EAST



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

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

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



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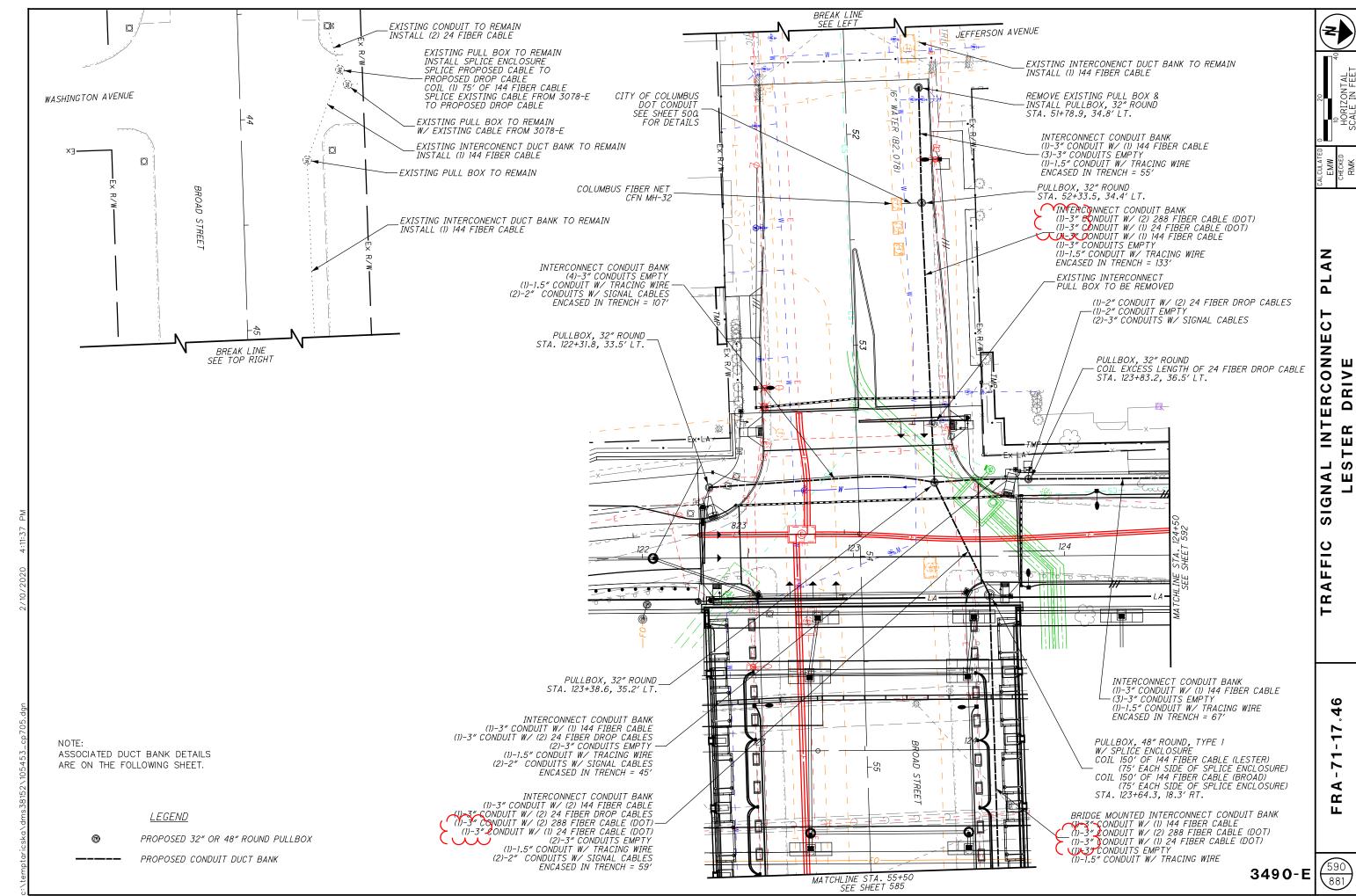
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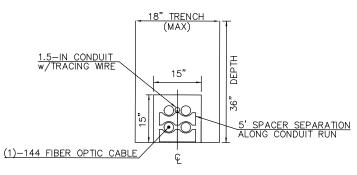
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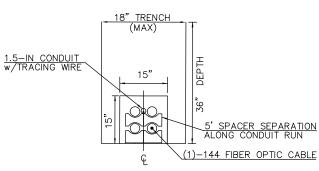
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4-3"C + 1-1.5" CONDUIT BANK 3" CONCRETE ENCASEMENT 5-1/2" C-C CONDUIT SEPARATION

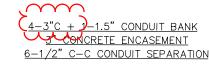


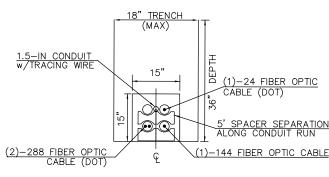
TRENCH X-SECTION ALONG LESTER DRIVE BETWEEN STA. 123+83.2 AND STA. 132+77.8 LOOKING NORTH

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

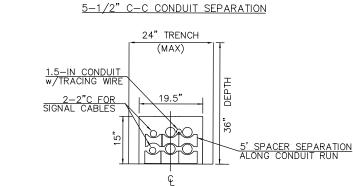


TRENCH X-SECTION ALONG BROAD STREET BETWEEN STA. 51+78.9 AND STA. 52+33.5 LOOKING EAST





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

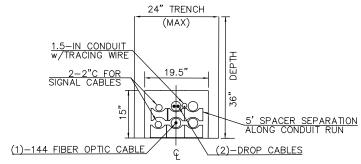


TRENCH X-SECTION ALONG LESTER DRIVE BETWEEN STA. 122+31.8 TO STA. 123+38.6 LOOKING NORTH

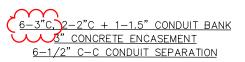
4-3"C + 2-2"C + 1-1.5" CONDUIT BANK

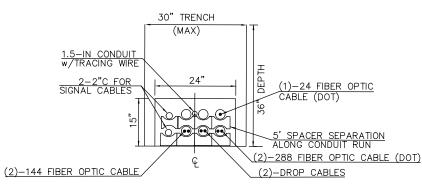
3" CONCRETE ENCASEMENT

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

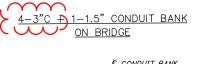


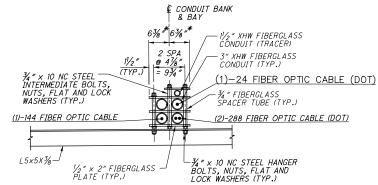
TRENCH X-SECTION ALONG LESTER DRIVE BETWEEN STA. 123+38.6 TO STA. 123+83.2 LOOKING NORTH





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

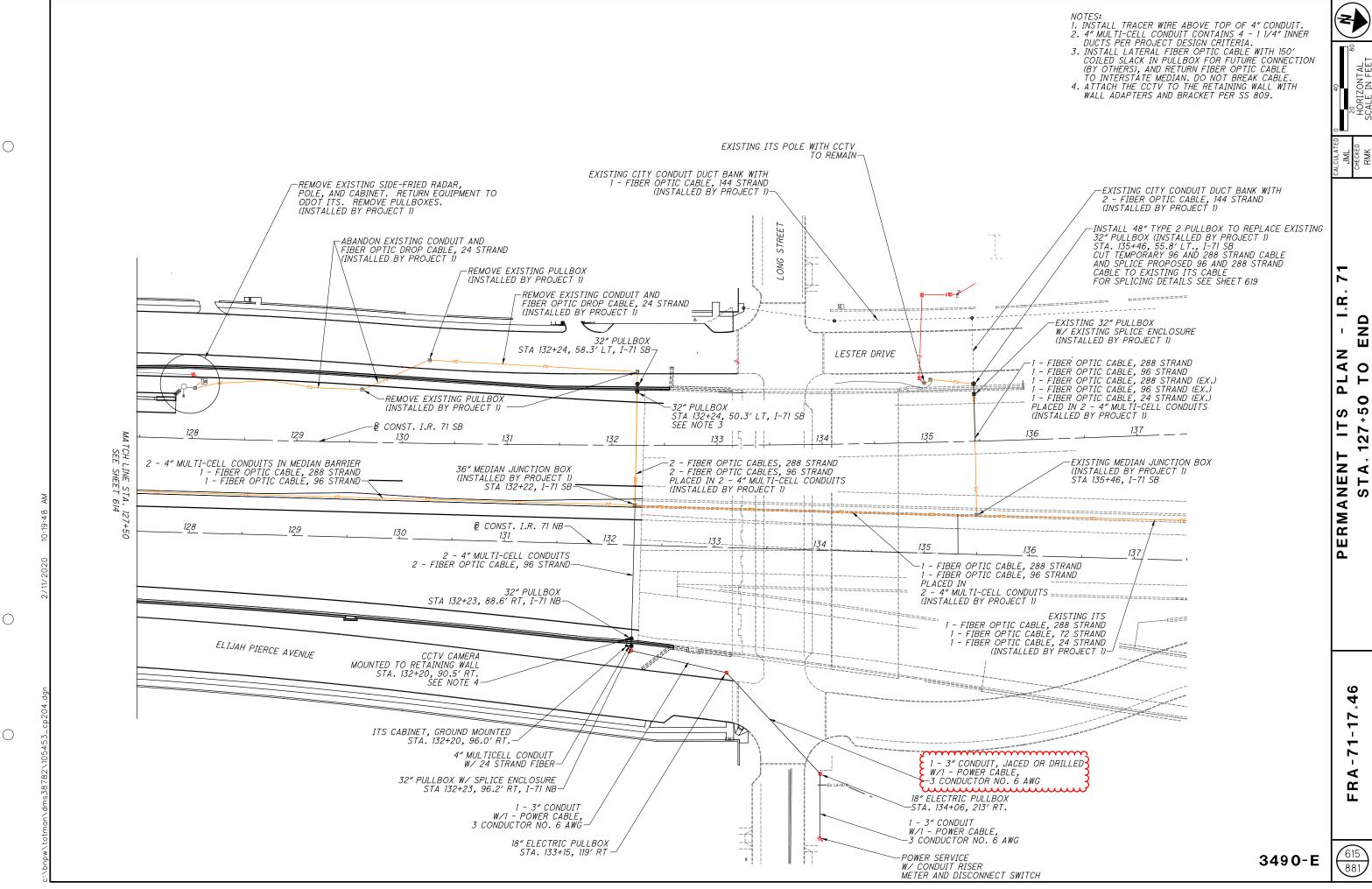




TRENCH X-SECTION ALONG BROAD STREET BETWEEN STA. 54+20.3 TO STA. 56+54.5 LOOKING EAST

				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	<b>₩</b>	FT	CONDUIT, 2", 725.051 (SURVEILLANCE)	
625	25504	365	FT	CONDUIT, 3", 725.051 (SURVEILLANCE)	007
625 625	25750 25802	<u> </u>	FT FT	CONDUIT, 4", MULTICELL, 725.20 , EPC-40 CONDUIT, CONCRETE ENCASED, 4", MULTICELL, EPC-40	603 603
<u>625</u> <b>√68</b> 5✓	25002 <b>25002</b>	52 <b>~646</b> ~	~~~	CONDUIT, CONCRETE ENCASED, 4, MOLTICELL, EFC-40  CONDUIT, CONCRETE ENCASED, 4, MOLTICELL, EFC-40  CONDUIT, CONCRETE ENCASED, 4, MOLTICELL, EFC-40	603 603
625	25906	131	FT	CONDUIT, JACKED OR DRILLED, 725.051, 3"	Y YOUY
		bbb			
625	29100	473	FT	TRENCH, 36" DEEP	
625	29931		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
205	70000		5.00	ODD/WD DOD	
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	
	00,00		, , , , , , , , , , , , , , , , , , ,	5.5.7, 2.1. 5.1.2.	
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. 14 ANG	
632	70401	3	EACH	CONDUIT RISER, 2" DIAMETER, AS PER PLAN	604
632	80402	1	EACH	SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 4	- 007
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	<u> </u>	EACH	CONTROLLER WORK PAD	
000	07200	<u> </u>	ZAON	SOFT NOTAL TAB	
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 7700	EACH	SPLICE ENCLOSURE, BUTT STYLE	007
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	
000	05070		F40''	ITC OLDRUCT CAND VETED	
809	65030	1	EACH	ITS CABINET - RAMP METER SIDE-FIRED RADAR DETECTOR	
809 809	68900	1	EACH EACH	SIVE-FIRED RADAR DETECTOR  ATC V6.24 CONTROLLER	
003	69122	1	LAUT	AIC VO.24 CONTROLLER	

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ſ			SF	HEET NL	JM.				PART.			17514	ITEM	GRAND	/ /	DECODIDATION	SEE	LATED EB CKED IC
	639	640	641	642			01/IMS/P V	02/NHS/ PV	07/S>2/ 0T/Cols	08/ENH/ OT/Cols	10/IMS/0 T/ATT	ITEM	EXT	TOTAL	UNIT	DESCRIPTION	SHEET NO.	CALCULATE TEB CHECKED R. IC
																LIGHTING		-
	14	12	24	2				52				625	00450	<i>52</i>		CONNECTION, FUSED PULL APART		
	27	27	24	19				97				625	00480	97		CONNECTION, UNFUSED PERMANENT		<b>」 ≻</b>
			2					2				625	10500	2		LIGHT POLE, MISC.:BRACKET, 8' ALUMINUM, FOR WOOD POLE ,	635	<u> </u>
																PER MIS 100		╛┫
																		<b>√</b> ⋝
.	7	4	12	1				11		13		625	10500	24		LIGHT POLE, MISC.:POLE, DOWNTOWN, STYLE B-1, PER MIS 308	635	<b>↓</b> ₹
)				1				1				625	10500	1	EACH	LIGHT POLE, MISC.:WOOD POLE STYLE C-1, PER TDMIS 1	635	M M D
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	7			4				4			<u> </u>	625	10614	4		LIGHT POLE ANCHOR BOLTS ON STRUCTURE	675	<b>⊣ "</b>
	/	6	8	17.4		1		22 134				625 625	14600	22	EACH	LIGHT POLE FOUNDATION, MISC.:6' FOUNDATION, DOWNTOWN, PER MIS 203	635	┨
				134		1		134				625	23308	134		DISTRIBUTION CABLE, MISC.:OVERHEAD CIRCUIT, 2 WIRE, OPEN-WIRE, PER MIS 400	635	<b>∃</b> ₹
ŀ						-										PER MIS 400		<b>⊢</b> ~~
ŀ	266	228	456			1		950			-	625	23308	950	FT	DISTRIBUTION CABLE, MISC.:POLE TO BE WIRED - 3 WRE PER MIS 501	635	<b>⊣</b>
ŀ	1,953	1,131	2,146	278		1		5,508			<u> </u>	625	23308	5,508	FT	DISTRIBUTION CABLE, MISC.:CIRCUIT, TYPE 1 PER MIS 403	635	∃ ₹
ŀ	1,300	الااوا	2,140	210	+ +	<del>                                     </del>		0,000	-	1	1	023	23300	0,000	ГΙ	DISTRIBUTION CADEL, MISC. CIRCUIT, FIFE FFER MIS 403	033	GENE
· •	1,474	975	1,850	53	+ +			4,352		1	1	625	25920	4,352	FT	CONDUIT, MISC.:2" PVC CONDUIT, CONCRETE ENCASED PER MIS 700	635	∣ ত
ŀ	321	272	120	111				824			1	625	25920	824		CONDUIT, MISC.:3" RIGID STEEL WITH 2" CONDUIT INSERT PER MIS 703	636	┪
ŀ	""	-14	120	2		+ +		2		1	1	625	25920	2		CONDUIT, MISC.: RISER, STREET LIGHT CIRCUIT, PER MIS 56	635	(5
ŀ				2		1		2		1	1	625	27600	2	EACH	LUMINAIRE, MISC.:LUMINAIRE, LED, COBRAHEAD, PER MIS 800	635	<b>1</b>
ŀ	7	6	12	1				26		1	1	625	27600	26		LUMINAIRE, MISC::LUMINAIRE, LED, TEARDROOP, PER MIS 801	635	5 N L
ŀ	<u> </u>	Ĭ	† <u>'</u> -	<u> </u>								5_5	_,,,,,,		_,,,,,			<b>↑ ⊢</b>
ľ	1,780	1,147	1,614	117				4,658				625	29010	4,658	FT	TRENCH, 30" DEEP		エ
İ		,	ĺ	5				5				625	31511	5		PULL BOX REMOVED, AS PER PLAN	656	<u> </u>
Ī	5	7	4	1				17				625	31600	17		PULL BOX, MISC.:PULL BOX, 13"X24", PER MIS 54	635	] =
	1	1						2				625	31600	2	EACH	PULL BOX, MISC.:PULL BOX, 17"X30", PER MIS 54	635	<b>–</b>
	1,794	1,147	1,614	117				4,672				625	36000	4,672	FT	PLASTIC CAUTION TAPE		<b>□</b> ⊢
																		□ іш
[				9				9				625	75400	9		LIGHT POLE REMOVED		<b>□</b>
				9				9				625	75500	9		LIGHT POLE FOUNDATION REMOVED		<b>│</b> ፳
				9				9				625	75506	9		LUMINAIRE REMOVED		<b>↓</b> ⊨
	1							1				625	98000	1		LIGHTING, MISC.:BRIDGE AESTHETIC LIGHTING CONTROLLER, 3 WIRE, 480V,	636	် <b>ဂ</b>
																PAD MOUNTED PER MIS 603		<b>↓</b> - ′
ļ													2222			TOUTTUE ATTOC CONTROL OR THE WINDS ARRAY BAR MOUNTED DED ATTO CONTROL		VENUE
- 1	/	- 1				ļ		2				625	98000	2	EACH	LIGHTING, MISC.:CONTROLLER, 3 WIRE, 480V, PAD MOUNTED PER MIS 603	636	<b>⊣</b> ⊃
				100				100				625	00100	100		LIGHTING MICC FV OVERHEAD CYCTEM DEMOVED DED MIC 001	0.75	Z
ŀ				180				180				625 625	98100 98200	(LS)		LIGHTING, MISC.:EX. OVERHEAD SYSTEM REMOVED, PER MIS 901 LIGHTING, MISC.:EXISTING UNDERGROUND SYSTEM REMOVED, PER MIS 902	635 636	⊣ ш
ŀ				'		1		/	LS			625	98200	(L3)		LIGHTING, MISC.:EXISTING UNDERGROUND STSTEM REMOVED, FER MIS 902  LIGHTING, MISC.:STRUCTURE LIGHTING SYSTEM COMPLETE	656	<b>→</b> >
ŀ						<del> </del>						020	30200	LJ		ETOTTINO, WISC. STRUCTORE ETOTTINO STOTEM COMPLETE	000	<b>⊢</b> ⋖
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REF NO.	SHEET NO.	ST	ATION T	O STATION	I	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 TDMIS 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	TRIBUTION CABLE, ACUIT, TYPE 1 PER MIS 403 FRIRITION CARLE	MISC.:OVERHEAD CIRCUIT, 2 WIRE, OPEN-WIRE, PER MIS 400	DISTRIBUTION CABLE, MISC.:POLE TO BE WIRED - 3 WRE 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	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	MIS 603 LIGHTING, MISC.:BRIDGE
	3,					HOSA CONNECT			CH STYL			EACH DOWN	MISC.:ORIM ET	MISC.:C	DISTRIBUT TO BE WIF	CONCRETI	CONDUIT 2" CC	HOWINAL LED, TEA	LUMINA PD LED, COE	FT	EACH 13"		XOB JJUN EACH	HORD GROUND ONLY,	TH9IT CH	FT (	ST LIGHT			EACH			
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SUBSUMMARY

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FRA-71-17.46

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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 ASSHTO 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 2½" 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 SOUARE FOOT AND A MAXIMUM STRENGTH LOAD PRESSURE OF 11.5 KIPS PER SOUARE 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 SOUARE FOOT AND A MAXIMUM STRENGTH LOAD PRESSURE OF 9.3 KIPS PER SOUARE FOOT.

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

FORWARD ABUTMENT FOOTING, AS DESIGNED, PRODUCES A MAXIMUM SERVICE LOAD PRESSURE OF 7.8 KIPS PER SOUARE FOOT AND A MAXIMUM STRENGTH LOAD PRESSURE OF 11.6 KIPS PER SOUARE 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 ADEOUATE TO ALLOW THE USE OF AN OPEN-CUT EXCAVATION USING 1.5H:IV 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 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%.

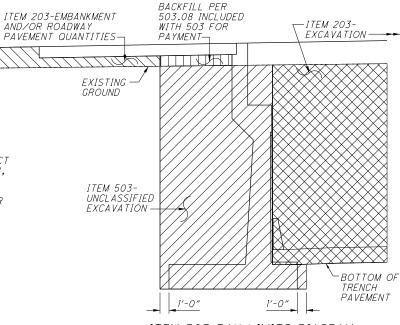
EXISTING STRUCTURE PLANS: EXISTING STRUCTURE PLANS MAY BE VIEWED BY PROSPECTIVE BIDDERS AT:
OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 6 OFFICE
400 E. WILLIAM ST.
DELAWARE, OHIO 43015
PHONE: (740) 833-8000

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 OC/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 OC/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.



### <u>ITEM 503 PAY LIMITS DIAGRAM</u>

ITEM 511 - CLASS OC2 CONCRETE WITH OC/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'-O" +/-) 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 OUALITY 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 OCI CONCRETE WITH OC/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. 17778-LIGHT NEUTRAL.

<u>ITEM 512 - SEALING OF CONCRETE SURFACES (NON-EPOXY):</u> 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 REOUIRED 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
28./18
BURGESS & NIPLE
LIE MUNGER
Engineers = Architects = Planners
608 RED ROAD, COLUMBUS, onto 43220
309 RED ROAD, COLUMBUS, onto 43220

JUM JCS 12/28/18
REVISED STRUCTURE FILE NUMBER
2502623

JMK JN. CHECKED REVI

GENERAL NOTES 1 IDGE NO. FRA-040-1351 40/BROAD ST. OVER 1-71

BRIDGE GENER
BRIDGE NO. FR
U.S. 40/BROAD S

FRA-71-17.46 PID No. 105453

5 /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 FACTORE PRESSURE: 11.5 KS	
BRIDGE NUMBER: FRA-040-1351	STRUCTURE FILE N	UMBER: 2502623
BENCHMARK LOCATION:		
FOOTING LOCATION: REAR ABUTMENT (LEFT AND	RIGHT EDGES OF P.	HASE 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:	MAXIMUM FACTORED BEARING PRESSURF: 11.5 KSF
FRA-71-17.14, PID 77371	PRESSURE: 11.5 KSF
BRIDGE NUMBER: FRA-040-1351	STRUCTURE FILE NUMBER: 2502623
BENCHMARK LOCATION:	
FOOTING LOCATION: REAR ABUTMENT (LEFT EDG	SE 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	

FRA-71-17.14, PID 77371	PRESSURE: 11.6 KS	
BRIDGE NUMBER: FRA-040-1351	STRUCTURE FILE N	UMBER: 2502623
BENCHMARK LOCATION:		
FOOTING LOCATION: FORWARD ABUTMENT (LEFT	AND RIGHT EDGES C	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		

MAYIMUM EACTORED REARING

PROJECT NUMBER

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 EDG	SES OF PHASE 1 FOO	TING)			
MONITORING PERIOD	LEFT MONUMENT	RIGHT MONUMENT			
AFTER FOOTING CONCRETE IS PLACED					
BEFORE PLACEMENT OF SUPERSTRUCTURE MEMBERS					
BEFORE DECK PLACEMENT					
AFTER DECK PLACEMENT					
PROJECT COMPLETION					

PRO IECT NI IMBER.

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	E 2 FOOTING)				
MONITORING PERIOD	LEFT MONUMENT				
AFTER FOOTING CONCRETE IS PLACED					
BEFORE PLACEMENT OF SUPERSTRUCTURE MEMBERS					
BEFORE DECK PLACEMENT					
AFTER DECK PLACEMENT					
PROJECT COMPLETION					

MAYIMUM EACTORED READING

ITEM 625 - CONDUIT, MISC.: 1 ½ "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 ½ "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 UPPORT SYSTEMS, FURNISHED BY OSBURN ASSOCIATES, INC., P.O. BOX 912, LOGAN, OHIO, TEL. (614) 385-6869, OR EOUAL, 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 COUAL, 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

EOUIPMENT 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 EOUAL, SUBJECT TO THE APPROVAL OF ATRT. 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 I 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
- 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 I 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

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.

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SENERAI SE NO. FRA-C /BROAD ST.

FRA-71-17 ° N PID 6 / 58

46 105453

		1			PARTICI	IPATION				BRID	GE - E	STIMA	ATED QUANTITIES		CALC. RMK	DATE 12/28/2018	CHK'D JS/JHL	DATE 12/28/2018
ТЕМ	ITEM EXT.	03/IMS/BR	04/NHS/BR	O6/MPO/OT/Cols	VYS>2/01/2018	08/ENH/O1/Cols	09/IMS/OT/AEP	10/IMS/01/ATT	II/IMS/OT/TW	12/IMS/01/VER	TOTAL	UNIT	DESCRIPTION	ABUTS.	PIERS	SUPER.	GENERAL	SHT. RE
202	11003	LUMP									LUMP		STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN (FRA-040-1351)					5 /
202	11003 22900	LUMP 489									LUMP	CV	STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN (FRA-040-1352)  APPROACH SLAB REMOVED				489	5 /
202 202	23500	1650									489 1650		WEARING COURSE REMOVED				1650	
503	11101	LUMP									LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN					5 , 13 /
-0.7	21100	7200	1200								4400	CV	UNICL ACCIFIED EVOLUATION	7050	5.40			
503 509	21100 10000	3200 345806	1298 140280	26074							4498 512160		UNCLASSIFIED EXCAVATION  EPOXY COATED REINFORCING STEEL	3958 139790	540 71579	300791		
511	34447	709	288	20014							997		CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN	155750	71313	997		5 /
511	34451			162							162	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN			162		5 /
511	41013	122	49								171	CY	CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS, AS PER PLAN		171			33 /
511	44113	518	210								728	CY	CLASS OCI CONCRETE WITH OC/OA, ABUTMENT NOT INCLUDING FOOTING, AS PER PLAN	728				5, 19, 22
511 511	46513	602	57								659		CLASS OCI CONCRETE WITH OC/QA, FOOTING, AS PER PLAN	462	197			5, 19, 22
11	51513	149		56							205	CY	CLASS OC2 CONCRETE WITH OC/OA, SIDEWALK, AS PER PLAN			205		5 .
12	10050	1564									1564		SEALING OF CONCRETE SURFACES (NON-EPOXY)			1564		
12	10100	1121									1121	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	777	344			
12	33000	32									32	SY	TYPE 2 WATERPROOFING	32				
513			275315								954000	LB	STRUCTURAL STEEL MEMBERS, LEVEL 4			954000		
13	20000	5933	2407								8340		WELDED STUD SHEAR CONNECTORS			8340		
3	95030	23	17740				12	35	11	11	92		STRUCTURAL STEEL, MISC.: CONDUIT SUPPORT BRACKETS			92		38
4	00060	43752	17748								61500	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT			61500		
14	00066	43752	17748								61500	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT			61500		
6	11210	213	87								300		STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL			300		
16	13600	51									51		I" PREFORMED EXPANSION JOINT FILLER	-	51			
16 16	13900 14000	7 231									7 231		2" PREFORMED EXPANSION JOINT FILLER PREFORMED EXPANSION JOINT FILLER, MISC: 11/4" THICK	7 231				
16	44100	4	2								6	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (1'-4" x 1'-0" x 21/6" PAD W/ 1'-5" X 1'-1" X 21/8" STEEL LOAD PLATE)			6		
16	44200	7	3								10	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (1'-4" x 10" x 35%6" PAD W/ 1'-5" X 11" X 15%" STEEL LOAD PLATE)			10		
16	44200	8	2								10	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (2'-0" x 1'-4" x 3¾" PAD W/ 2'-8" X 1'-5" X 2½" STEEL LOAD PLATE)			10		
16	44200	4	2								6	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (1'-4" x 10" x 35/6" PAD W/ 1'-5" X 11" X 11/2" STEEL LOAD PLATE)			6		
16	44200	3	1								4	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (1'-2" x 10" x 3\%6" PAD W/ 1'-3" X 11" X 1\%2" STEEL LOAD PLATE)			4		
16	44200	4	2								6	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (1'-0" x 1'-0" x 3¾" PAD W/ 1'-1" X 1'-1" X 1½" STEEL LOAD PLATE)			6		
6	44300	4	2								6	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (2'-0" x 1'-8" x 41/4" PAD W/ 2'-8" X 1'-9" X 21/8" STEEL LOAD PLATE)			6		
8	21200	398	161								559	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	559				
8	40000	217	88								305	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	305				
8	40010	16									16	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	16				
5 7	25000 39994	444 390	100								544 390	SY FT	REINFORCED CONCRETE APPROACH SLABS (T=15") TEMPORARY VANDAL FENCE, TYPE B			390	544	
5	10620	4			12						16	EACH	LIGHT POLE ANCHOR BOLTS, MISC.: ANCHOR BOLT ASSEMBLIES EMBEDDED IN CONCRETE BRIDGE DECK FOR LIGHT POLES AND LUMINAIRES			16		5 .
5	25920	227									227	FT	CONDUIT, MISC.: 11/2" FIBERGLASS, EXTRA HEAVY WALL, AS PER PLAN (INTERCONNECT TRACER)				227	6
5	25920	906		******	******			•	******		906	FΪ	CONDUIT, MISC.: 3 FIBERGLASS, EXTRA HEAVY WALL, AS PER PLAN (INTERCONNECT)	<b></b>			906	6
<u></u>	25000	<b></b>	<b></b>			<b></b>	<b></b>	4074		<del>  </del>	*******	سييسا	CONDUIT MICC - AN EIDEDOLACE ENTRY WELL AC DED DU CATOT	J			4074	
5 5	25920 25920	-						4074	227		4074 227	FT FT	CONDUIT, MISC.: 4" FIBERGLASS, EXTRA HEAVY WALL, AS PER PLAN (AT&T)  CONDUIT, MISC.: 4" FIBERGLASS, EXTRA HEAVY WALL, AS PER PLAN (TWC)				4074 227	6 6
. 5 ?5	25920								227		227	FT	CONDUIT, MISC.: 4" FIBERGLASS, EXTRA HEAVY WALL, AS PER PLAN (VER)				227	6 .
		1					1811				1811	FT	CONDUIT, MISC: 5" FIBERGLASS, EXTRA HEAVY WALL, AS PER PLAN (AEP)				1811	6

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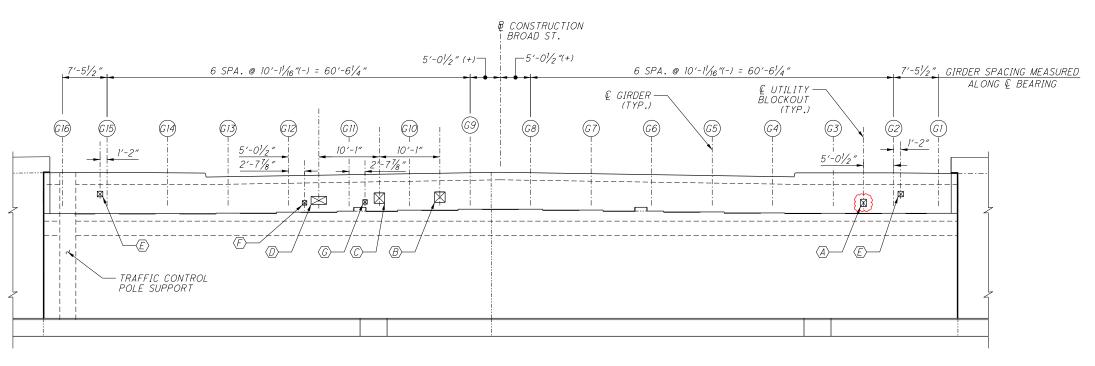
BURGESS & NIPLE
Engineers ■ Architects ■ Planners
5085 REED ROAD, COLUMBUS, OHIO 43220

BRIDGE ESTIMATED QUANTITIES
BRIDGE NO. FRA-040-1351
U.S. 40/BROAD ST. OVER 1-71

FRA-71-17.46 PID No. 105453

20/58

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## ELEVATION - REAR ABUTMENT

REAR ABUTMENT UTILITY BLOCKOUT TABLE										
BLOCKOUT	DESCRIPTION OF UTILITY	BAR Y								
<b>(</b> <i>A</i> <b>)</b>	TRAFFIC CONDUIT	[1'-0" x 1'-3"]	788.52	DAE04						
<i>⟨B</i> ⟩	AT&T CONDUIT	1'-9" x 1'-9"	789.23	RA504						
<u>(C)</u>	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)						
Œ	6" DIA. PLANTER DRAIN	11" × 11"	790.17	RA504						
F	4" TIME WARNER CONDUIT	9" x 9"	788.82	RA515 (LEFT SIDE) RA504 (RIGHT SIDE)						
<i>⑤</i>	4" TIME VERIZON CONDUIT	9" x 9"	788.98	RA515 (LEFT SIDE) RA504 (RIGHT SIDE)						

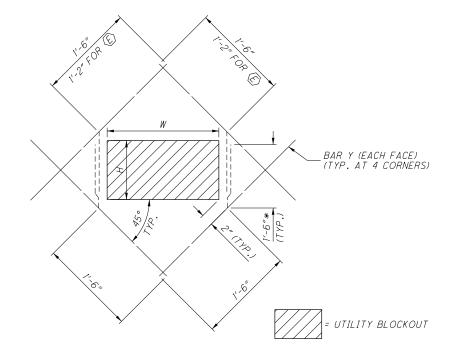
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DIRECTIONS LEFT AND RIGHT ARE BASED ON LOOKING AHEAD IN STATIONING—



UTILITY BLOCKOUT REINFORCEMENT DETAIL \* = FOR BENT "Y" BARS

## <u>LEGEND:</u>

DIA. = DIAMETER

G\_ = GIRDER DESIGNATION

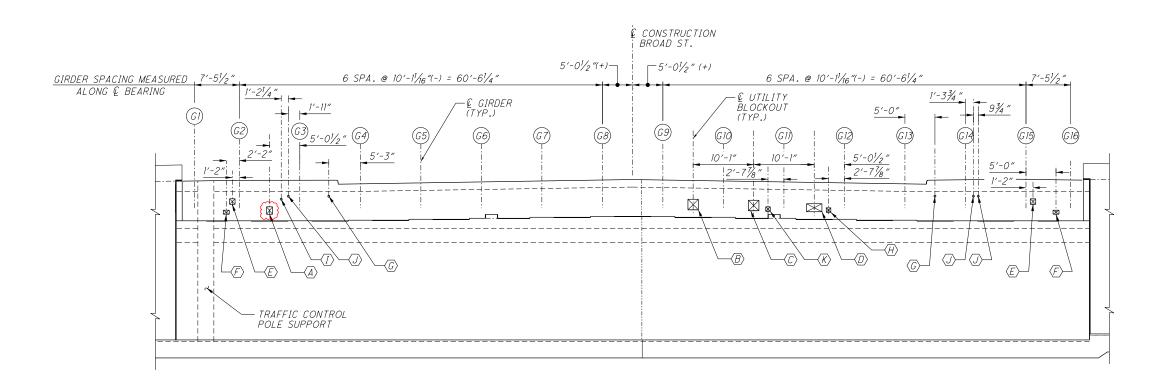
<u>NOTES:</u>

1. SEE SHEET 18 / 58 FOR DIMENSIONS NOT SHOWN.

2. DIMENSIONS SHOWN ARE MEASURED ALONG FRONT FACE OF BACKWALL UNLESS NOTED OTHERWISE.

23/58

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## ELEVATION - FORWARD ABUTMENT

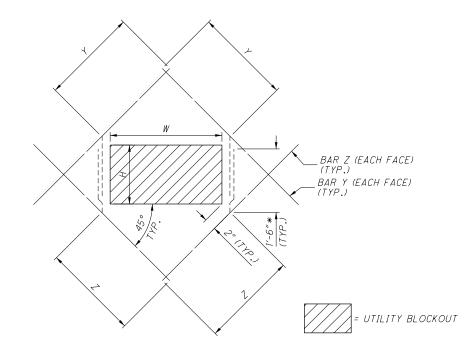
FORWARD ABUTMENT UTILITY BLOCKOUT TABLE										
BLOCKOUT	DESCRIPTION OF UTILITY	BLOCKOUT SIZE (W×H)	ELEV. @ BOT. OF BLOCKOUT	Υ	Z	BAR Y	BAR Z			
<b>(A)</b>	TRAFFIC CONDUIT	1'-0" x 1'-3"	791.02	1′-6″	1'-41/2"	FA504				
$\langle B \rangle$	AT&T CONDUIT	1'-9" x 1'-9"	791.77	1′-6″	1'-6"	FA504				
<u>(C)</u>	AT&T CONDUIT	1'-9" x 1'-9"	791.61	1′-6″	1′-6″	FA504 (LEFT SIDE) FA517 (RIGHT SIDE)				
<b>(D)</b>	AEP CONDUIT BANK	2'-7" x 1'-4"	791.45	1′-6″	1′-6″	FA504 (LEFT SIDE) FA517 (RIGHT SIDE)				
Œ	6" DIA. PLANTER DRAIN	11" × 11"	792.68	1'-3"	1'-1"	FA504 FA516				
F	4" WATER SLEEVE FOR IRRIGATION	1'-0" x 8"	791.03	1'-2"	1'-41/2"	FA504				
<i>⑤</i>	2" CITY LIGHTING	4" DIAM.	794.03	-	_	NONE				
$\langle H \rangle$	4" TIME WARNER CONDUIT	9" x 9"	791.35	1′-6″	1'-6"	FA517 (LE FA504 (RI				
<i>(I)</i>	1" AESTHETIC LIGHTING	4" DIAM.	793.53	-	-	NONE				
$\bigcirc$	1" AESTHETIC LIGHTING	4" DIAM.	794.03	_	-	NONE				
⟨K⟩	4" TIME VERIZON CONDUIT	9" x 9"	791.51	1′-6″	1'-6"	FA517 (LE FA504 (RI				

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UTILITY BLOCKOUT REINFORCEMENT DETAIL \* = FOR BENT "Y" OR "Z" BARS

## <u>LEGEND:</u>

ELEC. = ELECTRIC

DIA. = DIAMETER

 $G_{-}$  = GIRDER DESIGNATION

## <u>NOTES:</u>

1. SEE SHEET 21 / 58 FOR DIMENSIONS NOT SHOWN.

2. DIMENSIONS SHOWN ARE MEASURED ALONG FRONT FACE OF BACKWALL UNLESS NOTED OTHERWISE.

## UTILITY SUPPORT. TYPE I

CONDUIT BANK

& BAY

2 SPA @ 47/8" = 93/4"

(TYP.)

x 2" FIBERGLASS

PLATE (TYP.)

NUTS, FLAT AND LOCK

WASHERS (TYP.)

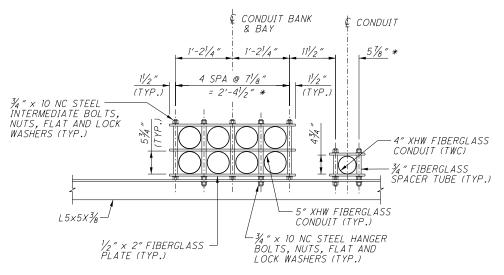
L5×5X¾—

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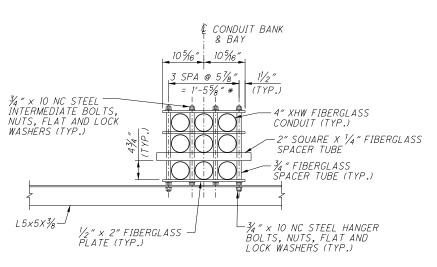
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BETWEEN GIRDERS 2 & 3 (TRAFFIC INTERCONNECT)

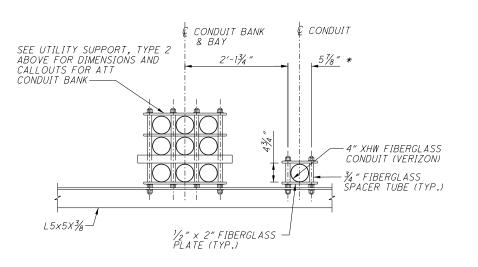


### UTILITY SUPPORT, TYPE 3 BETWEEN GIRDERS 11 & 12 (AEP & TWC)

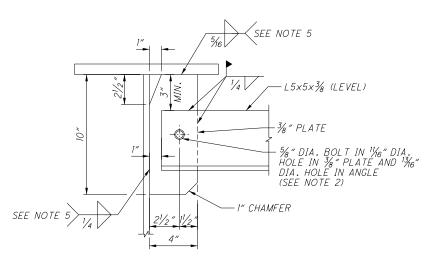


## UTILITY SUPPORT, TYPE 2 BETWEEN GIRDERS 9 & 10

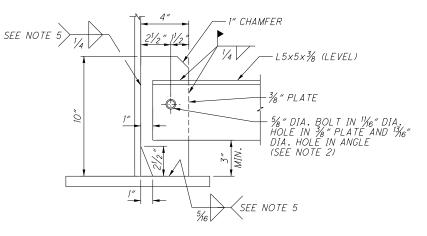
(AT&T)



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



DRAIN PIPE SUPPORT



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:

- 1. UTILITY BANKS ARE CENTERED BETWEEN GIRDERS.
- 2. BOLTS SHALL BE A325, TYPE I GALVANIZED, AND INSTALLED ACCORDING TO CMS 513.20.
- 3. FOR UTILITY SUPPORTS, INCLUDE L5x5x3/6, 3/6" PLATE, 5/6" BOLTS AND WELDING WITH ITEM 513, STRUCTURAL STEEL, MISC.: CONDUIT SUPPORT BRACKETS, FOR PAYMENT.
- 4. SEE SHEET 34 / 58 FOR SPACING OF  $L5x5x\frac{3}{8}$  ANGLES.
- 5. TERMINATE WELDS PER CMS 513.13.

UTILITY SUPPORT
BRIDGE NO. FRA-04
U.S. 40/BROAD ST. O' 105453 FRA-71-17

S

NT DETAILS 040-1351 OVER 1-71

NIPLE 3 = Planner OHIO 43220

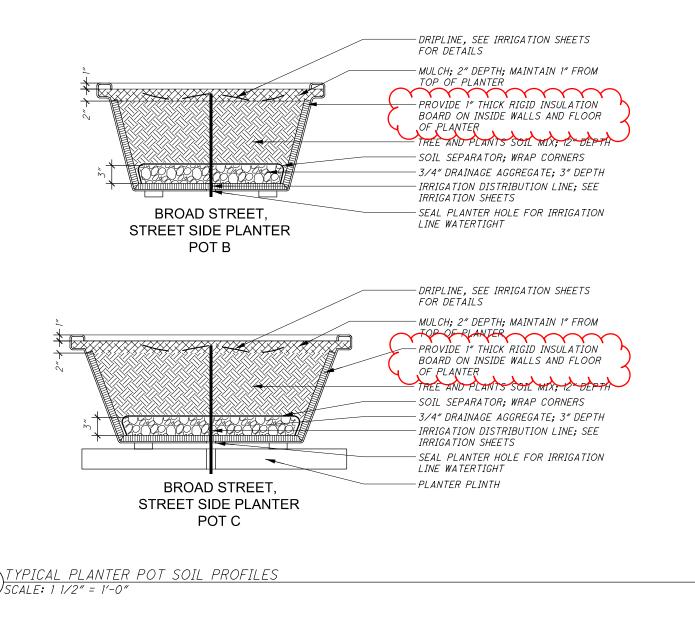
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BURGESS & Engineers - Archite

38 / 58

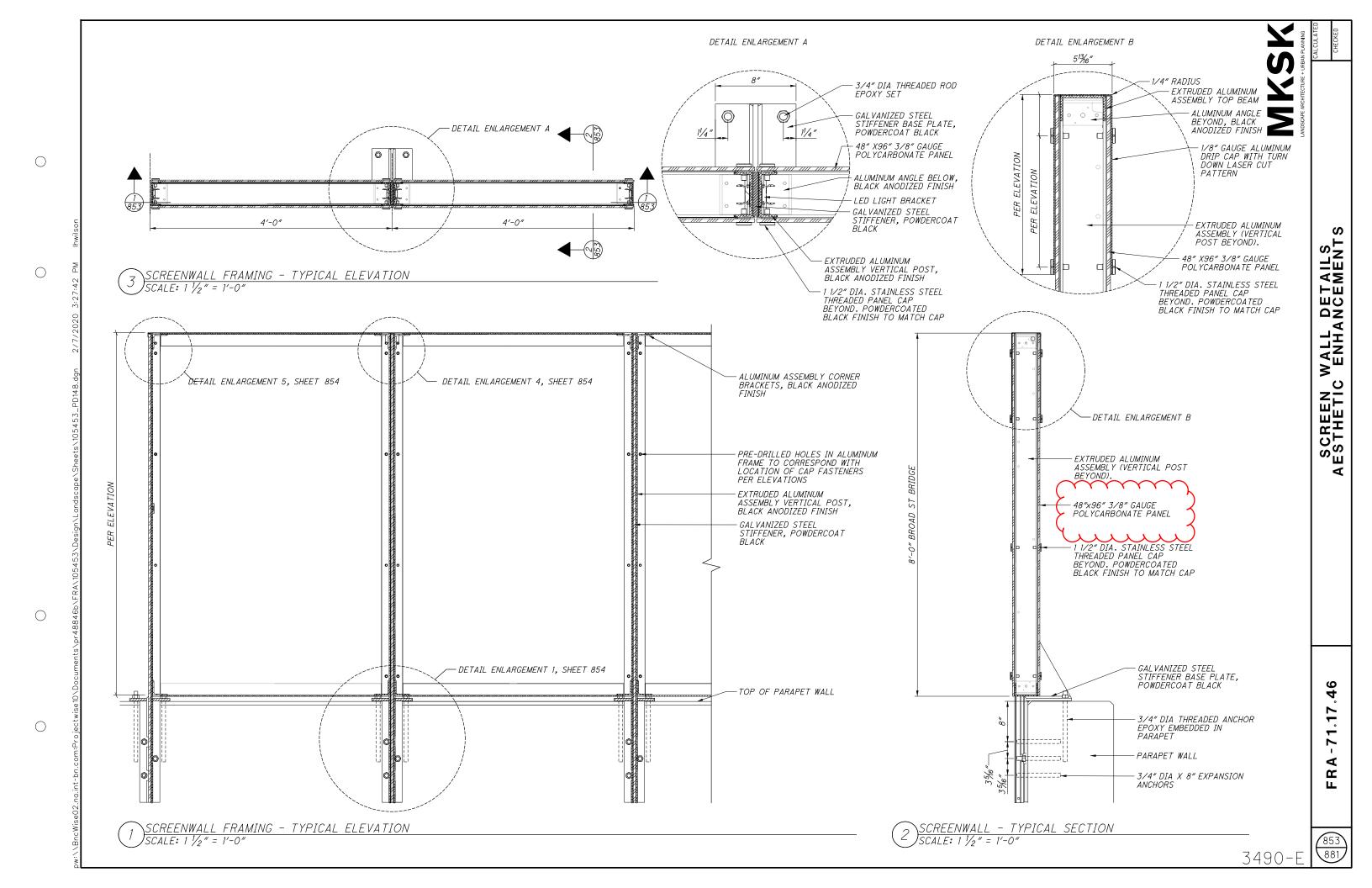
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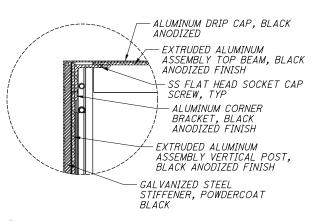
ALUMINUM ASSEMBLY CORNER BRACKETS, BLACK ANODIZED -GALVANIZED STEEL STIFFENER BASE PLATE, POWDERCOAT BLACK - EXTRUDED ALUMINUM ASSEMBLY TOP BEAM, BLACK ANODIZED FINISH TOP OF PARAPET WALL -3/4" DIA THREADED ANCHOR EPOXY EMBEDDED IN PARAPET BEYOND 3/4" X 8" EXPANSION ANCHOR, TYP OF 3

SCREENWALL POST ELEVATION ENLARGEMENT
SCALE: 1 ½" = 1'-0"

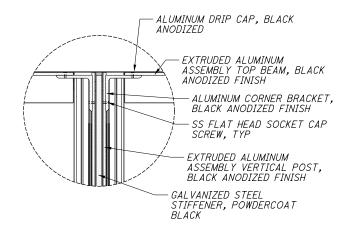
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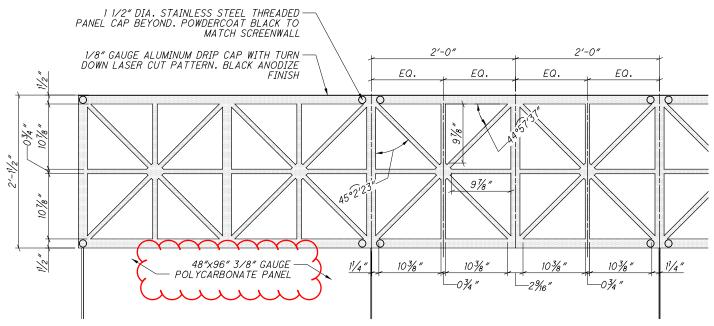
DETAIL ENLARGEMENT B



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



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



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

3490-E

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.

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.

TYPE B: 38" wide x 60" long x 18" tall.

2. TYPE C: 47" wide x 86" lang x 18" tall.

X. FINISH: AKUMMUM POWDER COAN BRACK COLON. E. ACCESSORIES WITH EACH PLANTER: IRRIGATION FITTINGS, DRAINAGE AGGREGATE, FILTER FABRIC, RIGID INSULATION BOARD AND DRAINAGE FITTINGS

## 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

### 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 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

### 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

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:

ARE CERTIFIED.

A. PRODUCT SUPPORT: PRODUCTS ARE SUPPORTED WITH COMPLETE ENGINEERING DRAWINGS AND DESIGN PATENTS.

B. PRODUCTION: ORDERS ARE FILLED WITHIN A 40-DAY C. FACILITY OPERATOR: WELDERS AND MACHINE OPERATORS

### 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.

OF THE MANUFACTURER.

1.7 WARRANTY:

1.8 FINISHES:

A.FINISH ON METAL:
1. PRIMER: RUST INHIBITOR EPOXY PRIMER COAT 1.0 - 1.5 MILS ON FERROUS

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 MANUFACTURED.

2. TOPCOAT: THERMOSETTING TGIC POLYESTER POWDER COAT, UV, CHIP, AND FLAKE RESISTANT. COLÓR: RAL 9004 BLACK, FINE TEXTURE.

TEST RESULTS:

SPECIFIC GRAVITY: 1.5 +/- .05 . OPTIMAL STORAGE: < 80°F, 50% RH . PARTICLE DISTRIBUTION: +44 MICRONS (325 MESH) 30 -

THEORETICAL COVERAGE: 59 SO/FT @ 2.2 MILS FILM THICKNESS: 2.2 TO 4.0 MILS

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

ADHESION: ASTM D3359 5B

DIRECT IMPACT: ASTM D2794 160 IN/LBS @ 2.2 MILS 14. REVERSE IMPACT: ASTM D2794 160 IN/LBS @ 2.2 MILS

SALT SPRAY HOURS: ASTM BIIT 1000 16. SALT SPRAY MATERIALS: CRS HENKEL B1000

### 2.0 MANUFACTURERS:

PROVIDE PRODUCTS FROM ONE OF THE FOLLOWING MANUFACTURERS: A. LANDSCAPE FORMS, INC. 431 LAWNDALE 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 ADEOUATELY 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

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SCREEN WALL AND AESTHETIC LIGHTING SYSTEMS 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. TES REPORTS REQUIRED SHALL INCLUDE SPECIFIED MATERIAL PROPERTIES LISTED BELOW.

C. SHOP DRAWINGS: INCLUDE PLANS, ELEVATIONS, SECTIONS, PANEL DIMENSIONS, DETAILS, AND ATTACHMENTS TO OTHER

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

AGRELING TO REPAIR OR REPLACE UNITS THAT FAIL IN MATERIAL OR WORKMANSHIP WITHIN THE SPECIFIED WARRANTY PENIOD.

F. SCREEN WALL AND AESTHETIC LIGHTING SYSTEMS MAINTENANCE AND OPERATING BINDERS SHALL INCLUDE: TABLE OF CONTENTS, WRITTEN DESCRIPTION OF SYSTEM, SYSTEM DRAWINGS: ONE (I) COPY OF THE ORIGINAL PLAN; ONE (I) COPY OF THE RECORD DRAWING INCLUDING 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
WARPANTY DATA O & MANUFULS SHALL BE PROVIDED AT WARRANTY DATA. O & M MANUALS SHÁLL 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 COMPONENT. LINCLUDING LIGHTS TRANSFORMERS FUSES FIGURATES SUBSTANTIAL COMPLETION.

SUBSTANTIAL COMPLETION.

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

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 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 PRFINSTALLATION CONFERENCE:

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

### 1.6 DELIVERY, STORAGE, AND HANDLING:

. DELIVER PLASTIC FABRICATIONS, SYSTEMS AND 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. . HANDLE MATERIALS TO PREVENT DAMAGE TO FINISHED SURFACES. E. PROVIDE PROTECTIVE COVERINGS TO PREVENT DAMAGE OR STAINING FOLLOWING INSTALLATION FOR

### 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

### 2.0 SYSTEM DESCRIPTION:

DURATION OF PROJECT.

TRANSLUCENT (COLOR AND TEXTURE TREATED) EXTERIOR GRADE POLYCARBONATE PANELS. HIGH IMPACT RESISTANT, UV STABLE, AND COLOR FUSED. 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

B. MATERIAL: POLYCARBONATE MEETING THE SPECIFIED PROPERTIES.

C. PANEL SIZES

1. BROAD STREET: 4'X8

D. SPECIFIED THICKNESS: 3/8" MOMINAL

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	RESUL T
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-USÉ).

A SELF EXTINGUISHING AS PER ASTM D 635.

4.ULTRAVIOLET 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

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. CATS 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 ENCLOSORY, ON NATED ACCOMMENTATION IN WELL 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".