

STATE OF OHIO

DEPARTMENT OF TRANSPORTATION

**FRA-70-22.61**

**RECONSTRUCTION OF EXISTING SEPARATED CROSSING WITH THE NORFOLK SOUTHERN RAILROAD  
CITY OF COLUMBUS  
FRANKLIN COUNTY**

PROJECT DESCRIPTION

THIS IS THE FIRST CONSTRUCTION PROJECT FROM THE FAR EAST FREEWAY STUDY (PID# 76997). PHASE 1 INCLUDES PARTIALLY RECONFIGURING THE SYSTEM TO SYSTEM INTERCHANGE OF IR 70 AND IR 270 AND THE SYSTEM TO SERVICE INTERCHANGE OF IR 70 AND BRICE ROAD BY REMOVING MAJOR WEAVING MOVEMENTS. THE RECONFIGURATION WILL SEPARATE THE THROUGH AND LOCAL TRAFFIC FROM IR 270 AND IR 70 HEADED EASTBOUND AND TO BRICE ROAD. THROUGH TRAFFIC TO IR 70 EASTBOUND FROM IR 270 SOUTHBOUND WILL UTILIZE A NEW DIRECTIONAL FLY OVER RAMP WHILE NORTH BOUND TRAFFIC WILL CONTINUE TO USE THE EXISTING RAMP. EXITS FOR BRICE ROAD WILL OCCUR ON IR 270 NORTH AND SOUTH BOUND AND ON IR 70 BEFORE IR 270; FUNNELING LOCAL TRAFFIC ONTO A COLLECTOR-DISTRIBUTOR EXIT RAMP. THIS PROJECT INCLUDES ALL THE ASSOCIATED DRAINAGE, LIGHTING, TRAFFIC CONTROL, UTILITY RELOCATION, AND NOISE ABATEMENT TO RECONFIGURE THE INTERCHANGES.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA: 76.2 ACRES  
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 3.0 ACRES  
NOTICE OF INTENT EARTH DISTURBED AREA: 79.2 ACRES

LIMITED ACCESS

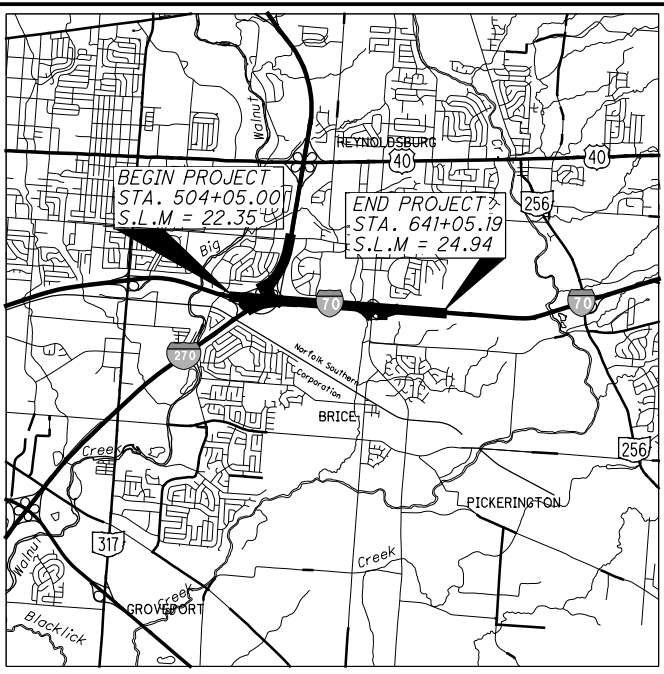
THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE OHIO REVISED CODE.

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.

POST CONSTRUCTION BMPs

ALL POST CONSTRUCTION BMPs WILL BE OWNED, OPERATED AND MAINTAINED BY ODOT PERSONAL. 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.



LOCATION MAP

LATITUDE: 39°55'59" LONGITUDE: 82°50'27"



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

FOR DESIGN DESIGNATIONS SEE SHEET 2.  
FOR DESIGN EXCEPTIONS SEE SHEET 2.  
FOR ENGINEERS SEAL SEE SHEET 2.

ASSOCIATED PLANS

FEMA FLOOD ZONE AE  
BIG WALNUT CREEK  
FIRM: 39049C0361K 06/17/2008  
BASE FLOOD ELEVATION: 750.2  
WORK PERMITTED: REPLACEMENT OF EXISTING GUARDRAIL AND STORM SEWER UNDER NOE BIXBY ROAD. NO FILL TO BE PLACED IN FLOODWAY AND FLOOD ZONE AE.

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STANDARD CONSTRUCTION DRAWINGS

SUPPLEMENTAL SPECIFICATIONS

AS-1-15	7/17/15	HL-10.13	4/17/20	ICD-1-82	7/19/02	MH-4	7/16/21	MT-101.90	7/17/20	TC-42.20	10/18/13	800	10/15/21	869	10/17/14
AS-2-15	1/18/19	HL-10.31	4/17/20	I-3C, 3C1	7/16/21	MT-95.30	7/19/19	MT-102.10	1/17/20	TC-51.11	1/15/16	804	7/16/21	875	1/18/19
BP-2.1	7/17/15	HL-20.11	1/15/21	I-3D	7/16/21	MT-95.40	1/17/20	MT-102.30	10/16/15	TC-52.10	10/18/13	808	1/18/19	878	4/16/21
BP-2.2	1/15/21	HL-20.21	1/15/21	ITS-14.10	1/15/21	MT-95.45	1/17/20	MT-103.10	1/19/18	TC-52.20	1/15/21	809	7/16/21	894	4/16/21
BP-5.1	7/16/21	HL-30.11	1/15/21	ITS-14.11	1/15/21	MT-96.11	4/16/21	MT-104.10	10/16/15	TC-61.10	1/17/20	813	10/19/18	904	1/15/21
BP-6.1	7/19/13	HL-30.21	4/17/20	RM-1.1	1/15/21	MT-96.20	7/15/16	MT-105.10	1/17/20	TC-61.30	7/19/19	821	4/20/12	908	10/20/17
BP-9.1	1/18/19	HL-30.22	1/15/21	RM-4.3	7/18/14	MT-96.26	1/18/19	SBR-1-13	7/20/18	TC-65.10	1/17/14	825	1/17/20	909	7/16/21
CB-3	7/16/21	HL-30.31	4/17/20	RM-4.4	7/19/19	MT-97.10	4/19/19	SICD-1-96	7/18/21	TC-65.11	7/21/17	832	10/19/18	913	4/16/21
CB-3A	7/16/21	HL-30.32	4/17/20	RM-4.5	7/21/17	MT-97.12	1/20/17	TC-12.3	1/21/22	TC-71.10	7/16/21	836	1/19/18	921	4/20/12
CB-4A, 5A, 8A	7/16/21	HL-30.33	4/17/20	RM-4.6	7/19/13	MT-98.10	1/17/20	TC-15.116	7/16/21	TC-72.20	7/20/18	840	4/16/21	961	4/17/20
CB-8	7/16/21	HL-40.20	7/17/20	MGS-1.1	7/16/21	MT-98.11	1/17/20	TC-21.11	7/16/21	TC-73.20	1/17/20	846	4/17/15	COC 1620	9/10/18
DM-1.1	7/17/20	HL-50.11	1/16/15	MGS-2.1	1/19/18	MT-98.21	1/17/20	TC-21.21	7/16/21	TC-81.11	7/16/21	863	7/16/21		
DM-1.2	7/16/21	HL-50.21	1/15/21	MGS-3.1	1/19/18	MT-98.28	1/17/20	TC-21.50	4/17/20	TC-84.20	10/18/13				
DM-4.1	7/17/20	HL-60.11	7/21/17	MGS-3.2	1/18/13	MT-99.20	4/19/19	TC-22.20	1/17/14	TC-84.21	10/18/13				
F-1.1	7/19/13	HL-60.12	7/16/21	MGS-4.2	7/19/13	MT-99.30	1/17/20	TC-41.10	7/19/13	TC-85.21	7/16/21				
F-3.1	7/19/13	HL-60.21	7/20/18	MGS-4.3	1/18/13	MT-99.60	7/15/16	TC-41.20	10/18/13	TC-85.22	1/19/18				
F-3.4	7/19/13	HL-60.31	1/17/20	MGS-5.2	7/15/16	MT-101.60	1/17/20	TC-41.30	10/18/13	VPF-1-90	7/20/18				
GSD-1-19	1/15/21	HW-1.1	7/20/18	MGS-5.3	7/15/16	MT-101.70	1/17/20	TC-41.40	10/18/13	WQ-1.1	1/18/13				
HL-10.11	1/15/21	HW-2.1	7/20/18	MH-1	7/16/21	MT-101.75	1/17/20	TC-41.50	10/18/13	WQ-1.2	1/15/16				
HL-10.12	1/20/17	HW-2.2	7/20/18	MH-3	7/16/21	MT-101.80	1/17/20	TC-42.10	10/18/13						

**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)

**HR**  
PLAN PREPARED BY:  
HDR ENGINEERING, INC.  
2800 CORPORATE EXCHANGE DR.,  
SUITE 100  
COLUMBUS, OHIO 43231  
614-839-5770

APPROVED: *[Signature]*  
DATE 12/6/2021 DISTRICT DEPUTY DIRECTOR

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

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### CITY OF COLUMBUS APPROVALS

CITY OF COLUMBUS SIGNATURES ON THIS PLAN SIGNIFY ONLY CONCURRENCE WITH THE GENERAL PURPOSES AND GENERAL LOCATION OF THE PROJECT. ALL TECHNICAL DETAILS REMAIN THE RESPONSIBILITY OF THE ENGINEER PREPARING THE PLANS.

*Steven Wasosky* 2/9/2022  
DESIGN SECTION ENGINEER, DIVISION OF DESIGN AND CONSTRUCTION DATE

*James Gross* 2/24/2022  
ADMINISTRATOR, DIVISION OF POWER DATE

*DA RMV John Newsome* 2/22/2022  
ADMINISTRATOR, DIVISION OF SEWERAGE AND DRAINAGE DATE

*TEH S. PATTENSKI* 2/22/2022  
ADMINISTRATOR, DIVISION OF WATER DATE

*Ann Aubry* 3/11/2022  
DIRECTOR, DEPARTMENT OF PUBLIC UTILITIES DATE

*Michael Kentner* 3/3/2022  
FIRE PREVENTION BUREAU, DIVISION OF FIRE DATE

*Darryl Joyce* 2/24/2022  
ENGINEERING SUPERVISOR, DEPARTMENT OF TECHNOLOGY DATE

*Don E. Evans for Bernita A. Reese* 2/24/2022  
DIRECTOR, DEPARTMENT OF RECREATION AND PARKS DATE

*James Young* 3/11/2022  
CITY ENGINEER/ADMINISTRATOR, DIVISION OF DESIGN AND CONSTRUCTION DATE

*Jennifer Gallagher* 3/14/2022  
DIRECTOR, DEPARTMENT OF PUBLIC SERVICE DATE

CALCULATED  
SJB  
CHECKED  
TJS

CITY OF COLUMBUS SIGNATURES

FRA - 70 - 22.61

1A  
1199

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**UTILITIES**

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

**ELECTRIC:**  
AEP - AERIAL DISTRIBUTION  
850 TECH CENTER DR  
GAHANNA, OH 43230-6605  
MR. PAUL PAXTON  
(614) 883-6831 O  
(614) 949-8883 C  
ppaxton@aep.com

AEP - TRANSMISSION  
700 MORRISON RD  
GAHANNA, OH 43230  
MS. BARBARA DUNLAP  
(614) 552-1893  
bdunlap@aep.com

**FIBER OPTIC:**  
AT&T OHIO (FKA SBC)  
111 N 4TH ST  
COLUMBUS, OH 43215  
MR. DONALD G. MARSHALL JR.  
(888) 611-4466 REPAIR SERVICE  
(937) 296-3929 DAMAGE  
PREVENTION  
(614) 216-2396 C  
dm619w@att.com

**GAS:**  
COLUMBIA GAS OF OHIO  
3550 JOHNNY APPLESEED CT  
COLUMBUS, OH 43215  
MR. MIKE SUCHARSKI  
(614) 818-2104  
msucharski@nisource.com

**SANITARY, STORM:**  
CITY OF COLUMBUS  
DPU - DIVISION OF SEWERAGE  
& DRAINAGE  
SEWER MAINTENANCE MANAGER  
1250 FAIRWOOD AVE  
COLUMBUS, OH 43026  
(614) 645-7102

**WATER:**  
CITY OF COLUMBUS  
DIVISION OF WATER  
910 DUBLIN RD  
COLUMBUS, OH 43215  
(614) 645-7788

**POWER, STREET LIGHTING:**  
CITY OF COLUMBUS  
DIVISION OF POWER -  
DISTRIBUTION  
3568 INDIANOLA AVE  
COLUMBUS, OH 43214  
MR. REID SPRITE  
(614) 645-7019  
rsprite@columbus.gov

CITY OF COLUMBUS  
DIVISION OF POWER - STREET  
LIGHTING  
3568 INDIANOLA AVE  
COLUMBUS, OH 43214  
MR CHRIS VOGEL  
(614) 645-6963  
cvoegel@columbus.gov

**TELEPHONE:**  
HORIZON  
1123 GOODALE BOULEVARD  
SUITE 550  
COLUMBUS, OH 43212  
MR. JIM LUMP  
(740) 772-8256  
horizonutility@horizonconnects.com

LUMEN (FKA CENTURYLINK/ LEVEL  
3 COMMUNICATIONS/TW TELECOM)  
250 W. OLD WILSON BRIDGE  
SUITE 130  
WORTHINGTON, OH 43085  
relocations@lumen.com

VERIZON (FKA MCI/XO)  
120 RAVINE ST  
AKRON, OH 44303  
AL GUEST  
(330) 622-5967 O  
(330) 329-5495 C  
allan.guest@verizon.com

**CABLE:**  
CHARTER SPECTRUM  
MID-OHIO DIVISION  
3760 INTERCHANGE DR  
COLUMBUS, OH 43204  
JOSEPH VLOCK  
(614) 402-1979  
joseph.vlock@charter.com

WIDE OPEN WEST  
3765 CORPORATE DR  
COLUMBUS, OH 43231  
MR. MARK FREY  
(614) 948-4616 O  
(614) 668-8079 C  
m.frey20@wideopenwest.com

**TRAFFIC SIGNALS:**  
CITY OF COLUMBUS  
TRAFFIC SIGNALS  
1820 E 17TH AVE  
COLUMBUS, OH 43219  
MR. ANDREW VOLLENIK  
(614) 645-7799  
amvolenik@columbus.gov

**TECHNOLOGY:**  
CITY OF COLUMBUS  
DEPARTMENT OF TECHNOLOGY -  
CABLE INTERCONNECT SECTION  
1355 MCKINLEY AVE, BUILDING C  
COLUMBUS, OH 43222  
MR DAVE MCNALLY  
(614) 645-1501  
dwmcnally@columbus.gov

**LIGHTING, TRAFFIC SIGNALS:**  
ODOT DISTRICT 6 - TRAFFIC  
400 E WILLIAM ST  
DELAWARE, OH 43015  
MR DAVID CARLIN  
(740) 833-8267 O  
(740) 815-6015 C

**WATER, SANITARY, STORM:**  
CITY OF REYNOLDSBURG  
7232 E MAIN ST  
REYNOLDSBURG, OH 43068  
MR JUSTIN COFFMON  
(614) 322-4500  
jcoffmon@ci.reynoldsburg.oh.us

**UTILITIES**

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT AND NOT MEMBERS OF OUPS:

CENTRAL OFFICE ITS LAB  
(614) 387-4113  
CEN.ITS.LAB@do.t.ohio.gov  
EMAIL REQUESTS FOR LOCATES SHALL INCLUDE "UTILITY LOCATE REQUEST", PROJECT NAME, AND PID IN THE SUBJECT LINE.

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

**CONTRACTOR'S USE OF ODOT RIGHT-OF-WAY**

THE WASTE AND BORROW AREAS SHOWN IN THE PLANS HAVE BEEN PREVIOUSLY INVESTIGATED FOR ECOLOGICAL RESOURCES. IT IS NOT NECESSARY TO HIRE AN ECOLOGICAL ENVIRONMENTAL CONSULTANT AS PER CONSTRUCTION AND MATERIAL SPECIFICATION 105.16 TO INVESTIGATE THESE AREAS. ALL OTHER REQUIREMENTS OF C&MS 105.16 APPLY.

THE WASTE AND BORROW AREAS SHOWN IN THE PLANS HAVE BEEN INVESTIGATED BY A CULTURAL RESOURCE CONSULTANT. IT IS NOT NECESSARY TO HIRE A CULTURAL RESOURCE CONSULTANT AS PER CONSTRUCTION AND MATERIAL SPECIFICATION 105.16 TO INVESTIGATE THESE AREAS. ALL OTHER REQUIREMENTS OF C&MS 105.16 APPLY.

THE WASTE AND BORROW AREAS SHOWN ON THE PLANS HAVE BEEN INVESTIGATED AND ARE NOT IN THE FEMA FLOODPLAIN ZONE.

THE CONTRACTOR SHALL NOT BORROW FROM A SITE KNOWN OR SUSPECTED OF HAVING CONTAMINATED SOIL OR WATER.

**ENDANGERED BAT HABITAT REMOVAL**

THIS PROJECT IS LOCATED WITHIN THE KNOWN HABITAT RANGES OF THE FEDERALLY LISTED AND PROTECTED INDIANA BAT AND NORTHERN LONG-EARED BAT. NO TREES SHALL BE REMOVED UNDER THIS PROJECT FROM APRIL 1 THROUGH SEPTEMBER 30. ALL NECESSARY TREE REMOVAL SHALL OCCUR FROM OCTOBER 1 THROUGH MARCH 31. THIS REQUIREMENT IS NECESSARY TO AVOID AND MINIMIZE IMPACTS TO THESE SPECIES AS REQUIRED BY THE ENDANGERED SPECIES ACT. FOR THE PURPOSES OF THIS NOTE, A TREE IS DEFINED AS: A LIVE, DYING, OR DEAD WOODY PLANT, WITH A TRUNK THREE INCHES OR GREATER IN DIAMETER AT A HEIGHT OF 4.5 FEET ABOVE THE GROUND SURFACE, AND WITH A MINIMUM HEIGHT OF 13 FEET.

NOTE THAT TREES WILL BE CLEARED AT THE FOLLOWING LOCATIONS IN ADVANCE OF THE PROJECT:

- ALONG THE WEST SIDE OF THE SOUTHBOUND RAMP (A1) FROM I-270 TO I-70
- THE INFIELD OF THE I-270 & I-70 INTERCHANGE IN THE AREA NEEDED FOR THE CONSTRUCTION OF BRIDGE FRA-270-4262 (EXCLUDING THE CONIFERS)
- THE AREA LOCATED TO THE EAST OF THE NORTHBOUND I-270 TO I-70 EAST RAMP (C1), BETWEEN NOE BIXBY ROAD AND THE NORTH SIDE OF THE NORFOLK SOUTHERN RAILROAD.



**ROUNDING**

THE ROUNDING AT SLOPE BREAKPOINTS SHOWN ON THE TYPICAL SECTIONS APPLIES TO ALL CROSS-SECTIONS EVEN THOUGH OTHERWISE SHOWN.

**EXISTING PLANS**

LISTED BELOW ARE ALL EXISTING PLANS THAT MAY BE INSPECTED IN THE ODOT DISTRICT 6 OFFICE LOCATED IN DELAWARE, OH.

- FRA-70-14.69
- FRA-70-14.78
- FRA-70-16.18
- FRA-70-19.29
- FRA-70-21.29
- FRA-70-21.31
- FRA-70-23.92

- FRA-270-20.21
- FRA-270-40.45

D06-EXTRUSIGN-CITIES

**CONSTRUCTION NOISE**

ACTIVITIES AND LAND USE ADJACENT TO THIS PROJECT MAY BE AFFECTED BY CONSTRUCTION NOISE. IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS, DO NOT OPERATE POWER-OPERATED CONSTRUCTION-TYPE DEVICES BETWEEN THE HOURS OF 10pm AND 6am. IN ADDITION, DO NOT OPERATE AT ANY TIME ANY DEVICE IN SUCH A MANNER THAT THE NOISE CREATED SUBSTANTIALLY EXCEEDS THE NOISE CUSTOMARILY AND NECESSARILY ATTENDANT TO THE REASONABLE AND EFFICIENT PERFORMANCE OF SUCH EQUIPMENT.

**SURVEYING PARAMETERS**

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE SHEETS 3-5 OF THE PLANS FOR A TABLE CONTAINING PROJECT CONTROL INFORMATION.

USE THE FOLLOWING PROJECT CONTROL, VERTICAL POSITIONING, AND HORIZONTAL POSITIONING PARAMETERS FOR ALL SURVEYING:

**PROJECT CONTROL**

POSITIONING METHOD: STATIC GNSS  
MONUMENT TYPE: (A)(B)

**VERTICAL POSITIONING**

ORTHOMETRIC HEIGHT DATUM: NAVD88  
GEOID: GEOID12A

**HORIZONTAL POSITIONING**

REFERENCE FRAME: NAD\_83(2011)(EPOCH:2010.0000)  
ELLIPSOID: GRS80  
MAP PROJECTION: LAMBERT CONFORMAL CONIC  
COORDINATE SYSTEM: OHIO STATE PLANE (SOUTH)(NORTH) ZONE  
COMBINED SCALE FACTOR: 0.99994935  
PROJECT ADJUSTMENT FACTOR (1/X): 1.0000506526  
ORIGIN OF COORDINATE: 0,0

USE THE POSITIONING METHODS AND MONUMENT TYPE USED IN THE ORIGINAL SURVEY TO RESTORE ALL MONUMENTS RELATED TO PRIMARY PROJECT CONTROL THAT ARE DAMAGED OR DESTROYED BY CONSTRUCTION ACTIVITIES. RESTORE THE DAMAGED OR DESTROYED MONUMENTS IN ACCORDANCE WITH

C&MS 623.  
UNITS ARE IN U.S. SURVEY FEET. USE THE FOLLOWING CONVERSION FACTOR: 1 METER = 3.280833333 U.S. SURVEY FEET.

**WORK LIMITS**

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

**CLEARING AND GRUBBING**

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.

**BENCHING OF FOUNDATION SLOPES**

ALTHOUGH CROSS-SECTIONS INDICATE SPECIFIC DIMENSIONS FOR PROPOSED BENCHING OF THE EMBANKMENT FOUNDATIONS IN CERTAIN AREAS, NO WAIVER OF THE SPECIFICATIONS IS INTENDED. BENCH ALL OTHER SLOPED EMBANKMENT AREAS AS SET FORTH IN 203.05. NO ADDITIONAL PAYMENT WILL BE MADE FOR BENCHING REQUIRED UNDER THE PROVISIONS OF 203.05.

**CONTRACTION AND/OR EXPANSION JOINTS**

ALTHOUGH SPECIFIC LOCATIONS OF CERTAIN CONTRACTION AND EXPANSION JOINTS HAVE BEEN DETAILED ON THIS PLAN, NO WAIVER OF THE SPECIFICATIONS IS INTENDED. IN ALL CASES, THE PROVISION OF EXPANSION JOINTS AT ALL MAJOR STRUCTURES INCLUDING THE MAXIMUM SPACING BETWEEN CONTRACTION JOINTS IS IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING BP-2.2 AND THE SPECIFICATIONS.

**CITY OF COLUMBUS OCCUPANCY PERMIT**

WHEN EXCAVATING WITHIN COLUMBUS PUBLIC RIGHT OF WAY LIMITS, THE CONTRACTOR SHALL OBTAIN AN EXCAVATION PERMIT FROM THE CITY OF COLUMBUS, DEPARTMENT OF PUBLIC SERVICE - PERMIT OFFICE BETWEEN THE HOURS OF 7:30 AM AND 4:00 PM MONDAY THROUGH FRIDAY.  
PHONE: (614) 645-7497  
FAX: (614) 645-1876  
EMAIL: colspemits@columbus.gov

CALCULATED  
SUBJ  
CHECKED  
TJS

GENERAL NOTES

FRA - 70 - 22.61

40  
1199

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**PERMITS, WATERWAY PERMITS COMMITMENTS**

1. ANY WATERWAY PERMITS REQUIRED WILL BE OBTAINED PRIOR TO THE START OF CONSTRUCTION ACTIVITIES. NO IMPACTS TO WATERS WILL OCCUR UNTIL THE WATERWAY PERMITS ARE RECEIVED.

**PERMITS, STORM WATER PERMITS COMMITMENTS**

1. THE SPECIFICATIONS SET FORTH IN THE MOST CURRENT VERSION OF ODOT'S CONSTRUCTION AND MATERIAL SPECIFICATIONS, LOCATION AND DESIGN MANUAL AND STANDARD CONSTRUCTION DRAWINGS WILL BE USED TO ENSURE ADEQUATE EROSION AND SEDIMENT CONTROL DURING CONSTRUCTION. DISTURBED AREAS WILL BE RESEEDED.

2. POST CONSTRUCTION BEST MANAGEMENT PRACTICES (BMPs) ARE REQUIRED AS PART OF OHIO EPA'S NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL CONSTRUCTION PERMIT. BMPs ARE PROVIDED TO THE PERPETUAL MANAGEMENT OF STORM WATER RUNOFF SO THAT A RECEIVING STREAM'S PHYSICAL, CHEMICAL AND BIOLOGICAL FUNCTIONS ARE MAINTAINED. A STORM WATER POLLUTION PREVENTION PLAN WILL BE PREPARED AND A NOTICE OF INTENT SUBMITTED TO THE OEPA PRIOR TO CONSTRUCTION.

**ECOLOGICAL, AGENCY COORDINATION COMMITMENTS**

1. PER THE 2007 PROGRAMMATIC CONSULTATION ON THE INDIANA BAT BETWEEN FHWA, ODOT AND THE UNITED STATES FISH AND WILDLIFE SERVICE (USFWS), THE CONTRACTOR MUST COMPLETE ALL TREE CLEARING FOR THIS PROJECT ONLY BETWEEN OCTOBER 1 AND MARCH 31.

2. THE USFWS REQUIRES THAT THE CONTRACTOR SEED ALL DISTURBED AREAS DURING CONSTRUCTION TO ENCOURAGE ESTABLISHMENT OF VEGETATIVE COVER AND TO DECREASE EROSION.

3. THE USFWS REQUIRES THAT THE CONTRACTOR KEEP STAGING AREAS WELL AWAY FROM STREAMS AND WETLANDS.

4. NO IN-WATER WORK (WORK BELOW THE OHWM) WILL BE PERMITTED IN BIG WALNUT CREEK.

**ENVIRONMENTAL JUSTICE, ENVIRONMENTAL JUSTICE COMMITMENTS**

1. A PLAN FOR NOISE WALL PUBLIC INVOLVEMENT (PI) WILL BE REQUIRED TO CONSIDER THE ENVIRONMENTAL JUSTICE (EJ) POPULATIONS IN THE PROJECT AREA. STRATEGIES WILL NEED TO BE DEVELOPED TO ENSURE WE HEAR FROM THE TENANTS IN THE AREA, NOT JUST THE PROPERTY OWNERS. IF INITIAL EFFORTS OF NOISE PI RESULT IN LESS THAN 50% RESPONSE RATE, ADDITIONAL STRATEGIES WILL NEED TO BE EMPLOYED. COORDINATE WITH THE OFFICE OF ENVIRONMENTAL SERVICES (OES) PRIOR TO THE FIRST ROUND OF NOISE PI.

**REVIEW OF DRAINAGE FACILITIES**

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

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

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

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

**ITEM 611 - 24" CONDUIT, TYPE B, AS PER PLAN, 706.02**

THIS ITEM SHALL MEET ALL THE SPECIFICATIONS OF ITEM 611 AND INCLUDE ALL WORK ASSOCIATED WITH OUTLETTING THE PIPE INTO THE EXISTING BOX CULVERT INCLUDING BUT NOT LIMITED TO CORING HOLE IN BOX CULVERT AND GROUTING AROUND PIPE USING NON-SHRINK NON-METALLIC GROUT.

**ITEM 622 - BARRIER, MISC.: PORTABLE BARRIER, UNANCHORED**

THIS ITEM SHALL MEET ALL THE SPECIFICATIONS OF ITEM 622 EXCEPT THE BARRIER SHALL BE LEFT IN PLACE AFTER CONSTRUCTION AND BECOME PROPERTY OF THE DEPARTMENT.

**POST CONSTRUCTION STORM WATER TREATMENT**

THIS PLAN UTILIZES STRUCTURAL BEST MANAGEMENT PRACTICES (BMP'S) FOR POST CONSTRUCTION STORM WATER TREATMENT.

**EXTENDED DETENTION BASIN**

THIS PLAN UTILIZES EXTENDED DETENTION BASIN FOR POST CONSTRUCTION STORM WATER TREATMENT. DETENTION BASINS MAY BE USED AS SEDIMENT CONTROL DEVICES DURING CONSTRUCTION. FOLLOWING STABILIZATION OF THE TRIBUTARY AREA, FINAL GRADING OF THE DETENTION BASIN MUST MATCH THE PLANS. THE DETENTION BASIN OUTLET STRUCTURE FOR CONSTRUCTION MUST BE REMOVED AND THE OUTLET STRUCTURE MUST BE MADE TO MATCH THE DESIGN SHOWN IN THE PLANS.

**ITEM 611 - INLET NO.3 FOR SINGLE SLOPE BARRIER, TYPE D, AS PER PLAN**

ALL WORK FOR THIS ITEM SHALL BE ACCORDING TO THE DETAIL ON SHEETS 752-753.

**ITEM 611 - CATCH BASIN, NO. 3A, AS PER PLAN**

ALL WORK FOR THIS ITEM SHALL BE IN ACCORDANCE WITH C&MS 611 UNLESS OTHERWISE NOTED BY THE DETAIL ON SHEET 834.

**ITEM 611 - CATCH BASIN, NO. 3, AS PER PLAN**

ALL WORK FOR THIS ITEM SHALL BE IN ACCORDANCE WITH C&MS 611 UNLESS OTHERWISE NOTED BY THE DETAIL ON SHEET 834.

**ITEM 611 - MANHOLE, NO. 3, AS PER PLAN**

ALL WORK FOR THIS ITEM SHALL BE IN ACCORDANCE WITH C&MS 611 UNLESS OTHERWISE NOTED BY THE DETAIL ON SHEET 753A.

**ITEM 442 - 1 1/2" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A, (447), AS PER PLAN**

LONGITUDINAL JOINTS (FLEXIBLE PAVEMENT)  
LOCATE LONGITUDINAL JOINTS IN THE SURFACE COURSE SUBJECT TO THE FOLLOWING REQUIREMENTS:

PLACE THE MAINLINE PAVEMENT SURFACE COURSE WITH A SINGLE COLD LONGITUDINAL JOINT LOCATED BETWEEN LANES 2 AND 3. WHERE THE NUMBER OF MAINLINE LANES EXCEEDS 4 LANES, A COLD JOINT IS PERMITTED BETWEEN LANES 4 AND 5. A COLD LONGITUDINAL JOINT IS PERMITTED BETWEEN THE SHOULDER AND MAINLINE PAVEMENT. NO OTHER COLD JOINTS ARE PERMITTED IN THE SURFACE COURSE OF MAINLINE PAVEMENT.

**ITEM 442 - 1 1/4" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446), AS PER PLAN**

THIS ITEM SHALL MEET ALL THE SPECIFICATIONS OF ITEM 442 - ASPHALT CONCRETE SURFACE COURSE EXCEPT BE CONSTRUCTED WITH A PG76-22M BINDER.

**ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 2, AS PER PLAN**

ALL WORK FOR THIS ITEM SHALL BE IN ACCORDANCE WITH ITEM 609 COMBINATION CURB AND GUTTER AND INSTALLED ACCORDING TO THE DETAIL ON SHEET 834.

**ITEM 255 - FULL DEPTH PAVEMENT SAWING, AS PER PLAN**

THIS WORK IS LOCATED IN AREAS WHERE THE PAVEMENT IS TO BE SAWCUT AND WIDENED. THE CONTRACTOR SHALL INSTALL A FABRIC GRID ALONG THE SAWCUT LINE AS SHOW IN DETAIL ON SHEET 834. PLACEMENT OF THE FABRIC GRID IS TO BE IN ACCORDANCE WITH MANUFACTURES SPECIFICATIONS. PROVIDED BELOW ARE THE ALLOWABLE PRODUCTS FOR FABRIC MATERIAL.

FABRIC/GRID TABLE				
MANUFACTURER	PRODUCT NAME	ROLL WIDTH (IN)	ADDRESS	PHONE
CHASE/ROYSTAN	PAVE-GLASS	24	128 FIRST ST., PITTSBURGH, PA 15238	412-828-1500
ST GOBAIN	GLASS GRID 8505	60	8000 S. RIVERSIDE DR., AURORA, OH 44202	276-632-1605
OWENS CORNING	TRUPAVE	150	8000 S. RIVERSIDE DR., AURORA, OH 44202	276-632-1605
ST GOBAIN	GLASS GRID CG100	60	8000 S. RIVERSIDE DR., AURORA, OH 44202	276-632-1605

PAYMENT SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO SAWCUT EXISTING PAVEMENT AND INSTALL FABRIC GRID UNDER ITEM 255 - FULL DEPTH PAVEMENT SAWING, AS PER PLAN. SEE TYPICAL SECTIONS FOR LIMITS.

CALCULATED  
SJB  
CHECKED  
TJS

GENERAL NOTES

FRA-70-22.61

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c:\pwworking\p11\1607352B\95639\_GG101.dgn 3/10/2022 12:40:45 PM TSCHOEN

SHEET NUM.															PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.		
42	54	237	238	239	240	241	242	243	244	245	687	743	748	749	751	01/IMS/PV	EXT	TOTAL					
		3	2	3	3											26	602	20000	26	CY	DRAINAGE (CONT.)		
										6,026						6,026	605	06000	6,026	FT	CONCRETE MASONRY		
						11,284	9,317	10,996	10,112							41,709	605	11100	41,709	FT	4" BASE PIPE UNDERDRAINS		
20						609	907	35	33							1,604	605	13300	1,604	FT	6" SHALLOW PIPE UNDERDRAINS		
																					6" UNCLASSIFIED PIPE UNDERDRAINS		
																					6" BASE PIPE UNDERDRAINS		
20						9,507	5,199	6,884	7,852							29,442	605	14000	29,442	FT	AGGREGATE DRAINS		
																20	605	31100	20	FT	4" CONDUIT, TYPE F FOR UNDERDRAIN OUTLET		
																17	611	00410	17	FT	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS		
																					6" CONDUIT, TYPE F		
20						683	343	462	377							1,865	611	00510	1,865	FT	12" CONDUIT, TYPE A		
																					12" CONDUIT, TYPE B		
	68															43	611	04200	43	FT	12" CONDUIT, TYPE C		
																					15" CONDUIT, TYPE B		
																					15" CONDUIT, TYPE B, 706.02 WITH PREMIUM JOINTS		
																					15" CONDUIT, TYPE F, 707.05 TYPE C, 707.21		
																					18" CONDUIT, TYPE B		
																					18" CONDUIT, TYPE B, 706.02 WITH PREMIUM JOINTS		
																					18" CONDUIT, TYPE C		
																					18" CONDUIT, TYPE F, 707.05 TYPE C, 707.21		
																					21" CONDUIT, TYPE B		
																					24" CONDUIT, TYPE B		
																					24" CONDUIT, TYPE B, AS PER PLAN, 706.02, WITH NONSHRINK, NONMETALLIC GROUT		43
																					24" CONDUIT, TYPE C		
																					24" CONDUIT, TYPE F, 707.05 TYPE C, 707.21		
																					27" CONDUIT, TYPE B		
																					27" CONDUIT, TYPE C		
																					27" CONDUIT, TYPE C, 706.02 WITH PREMIUM JOINTS		
																					30" CONDUIT, TYPE B		
																					30" CONDUIT, TYPE C		
																					36" CONDUIT, TYPE B		
																					36" CONDUIT, TYPE C		
																					42" CONDUIT, TYPE A, 706.02, 707.02 ALUMINIZED, 707.04, 707.33 WITH WELDED BELL		
																					48" CONDUIT, TYPE A, 706.02, 707.01 ALUMINIZED, 707.04, 707.33 WITH WELDED BELL		
																					48" CONDUIT, TYPE C		
																					54" CONDUIT, TYPE C		
																					60" CONDUIT, TYPE C		
																					72" CONDUIT, TYPE B		
																					72" CONDUIT, TYPE B, 706.02 WITH PREMIUM JOINTS, 706.11		
																					84" CONDUIT, TYPE B		
																					34" X 53" CONDUIT, TYPE C, 706.04		
																					9' X 5' CONDUIT, TYPE A, 706.05		
																					CATCH BASIN, NO. 3, AS PER PLAN		43
																					CATCH BASIN, NO. 3A, AS PER PLAN		43
																					CATCH BASIN, NO. 5A		
																					CATCH BASIN, NO. 8		
																					CATCH BASIN, NO. 8A		
																					INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE C		
																					INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D		
																					INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D, AS PER PLAN		43
																					MANHOLE, NO. 3		
																					MANHOLE, NO. 3, AS PER PLAN		43
																					MANHOLE, NO. 4		
																					PRECAST REINFORCED CONCRETE OUTLET		
																					WATER QUALITY BASIN, DETENTION		

CALCULATED TJS CHECKED CO

GENERAL SUMMARY

FRA - 70 - 22.61

209  
1199

SHEET NO.	REFERENCE NO.	STATION TO STATION		SIDE	602	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611		
		FROM	TO		CONCRETE MASONRY CY	15" CONDUIT, TYPE B FT	15" CONDUIT, TYPE F, 707.05 TYPE C, 707.21 FT	18" CONDUIT, TYPE B FT	18" CONDUIT, TYPE C FT	18" CONDUIT, TYPE F, 707.05 TYPE C, 707.21 FT	21" CONDUIT, TYPE B FT	24" CONDUIT, TYPE B FT	24" CONDUIT, TYPE F, 707.05 TYPE C, 707.21 FT	27" CONDUIT, TYPE B FT	36" CONDUIT, TYPE B FT	36" CONDUIT, TYPE C FT	48" CONDUIT, TYPE C FT	54" CONDUIT, TYPE C FT	72" CONDUIT, TYPE B, 706.02 W/ PREMIUM JOINTS, 706.11 FT	84" CONDUIT, TYPE B FT	34"X53" CONDUIT, TYPE C, 706.04 EA	CATCH BASIN, NO. 8 EA	CATCH BASIN, NO. 8A EA	CATCH BASIN, NO. 5A EA	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE C EA	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D EA	MANHOLE, NO. 3 EA	MANHOLE, NO. 4 EA
IR-70																												
705	D501	534+56.89	534+06.44	RT	0.66															55							1	
705	D502	535+60.20	534+56.89	RT																105	1						1	
705	D154	535+94.86	535+60.20	RT				118																			1	
705	D503	536+82.61	535+60.20	RT																		124					1	
705	D507	536+82.61	536+83.52	RT																		20					1	
705	D950	537+60.00	537+59.97	RT																								
705	D155	537+59.97	535+94.86	RT				165																			1	
705	D504	538+37.11	536+82.61	RT																								
705	D505	539+97.03	538+37.11	RT																								
705	D506	542+96.94	539+97.03	RT																								
705	D105	544+15.98	544+15.98	RT	0.02																						1	
707	D104	545+96.38	542+96.94	RT	0.01	5																					1	
707	D103	548+77.89	545+96.38	RT																							1	
709	D85	561+96.03	561+96.03	RT																							1	
709	D84	562+15.02	561+96.03	RT				19																			1	
709	D113	564+10.80	562+10.80	RT																							1	
709	D83	565+50.00	565+50.00	RT																							1	
IR-270																												
716	D203	977+88.96	978+54.42	RT																								
716	D700	978+32.73	978+54.42	RT	0.43	41																						
716	D202	978+54.42	979+38.83	RT																								
716	D183	979+79.06	980+02.00	RT		23																					1	
716	D184	980+02.00	980+50.00	RT																							1	
716	D181	980+50.00	980+50.02	RT																							1	
716	D182	980+50.02	980+50.02	RT	0.43																							
716	D180	981+28.45	980+50.00	RT		78																					1	
716	D178	982+14.23	981+28.45	RT		87																					1	
717	D176	988+00.00	980+00.00	RT																							1	
717	D177	988+00.00	980+00.00	RT	0.25																							
717	D175A	989+30.86	989+30.86	RT																							1	
717	D175C	989+30.86	989+30.86	RT	0.31																							
721	D156	1047+93.66	1050+09.50	LT				212																			1	
721	D149	1050+09.50	1052+03.72	LT				191																			1	
721	D153	1047+02.21	1051+92.08	LT																							1	
721	D150	1052+03.72	1052+06.52	LT	0.03			5																			1	
721	D151	1052+06.52	1051+92.08	LT																							1	
722	D152	1057+00.00	1057+00.00	LT	0.06			5																			1	
<b>TOTALS CARRIED TO GENERAL SUMMARY</b>					2.2	569	57	715	13	60	48	89	50	58	958	462	5	501	162	10	160	6	1	2	4	5	13	1



**NOTES**

**GENERAL:** With normal soil and site conditions, this precast manhole may be used for any required manhole depth.

Cast and assemble sections of the precast manhole with either all tongue or all groove ends up. Lift holes may be provided in each section for handling.

Leave handling device for the flat slab in place.

Place standard 4" curb drain stubs 30" below the top of the curb or as directed

**TRANSITION (OR REDUCER) ABOVE BASE:** This section can be either eccentric cone or flat slab.

**BASE:** Manhole, No. 3, APP is shown with a monolithic floor and riser which may be cast in one or two operations. A permissible alternate is to cast and ship the floor and barrel separately. Provide openings for inlet and outlet pipes, either when the unit is cast or later, to meet project requirements. Bottom channels may be formed of concrete, precast in the base or field constructed as shown on **SCD MH-1** and **MH-2**.

**RISER SECTIONS:** Openings for 18" and smaller inlet pipes may be either prefabricated or cut in the field provided the sides of the pipe at the springline do not project into the manhole.

**CONNECTIONS:** Connections between precast manhole sections and pipes on sanitary sewers may be sealed with resilient connectors conforming to ASTM C 923.

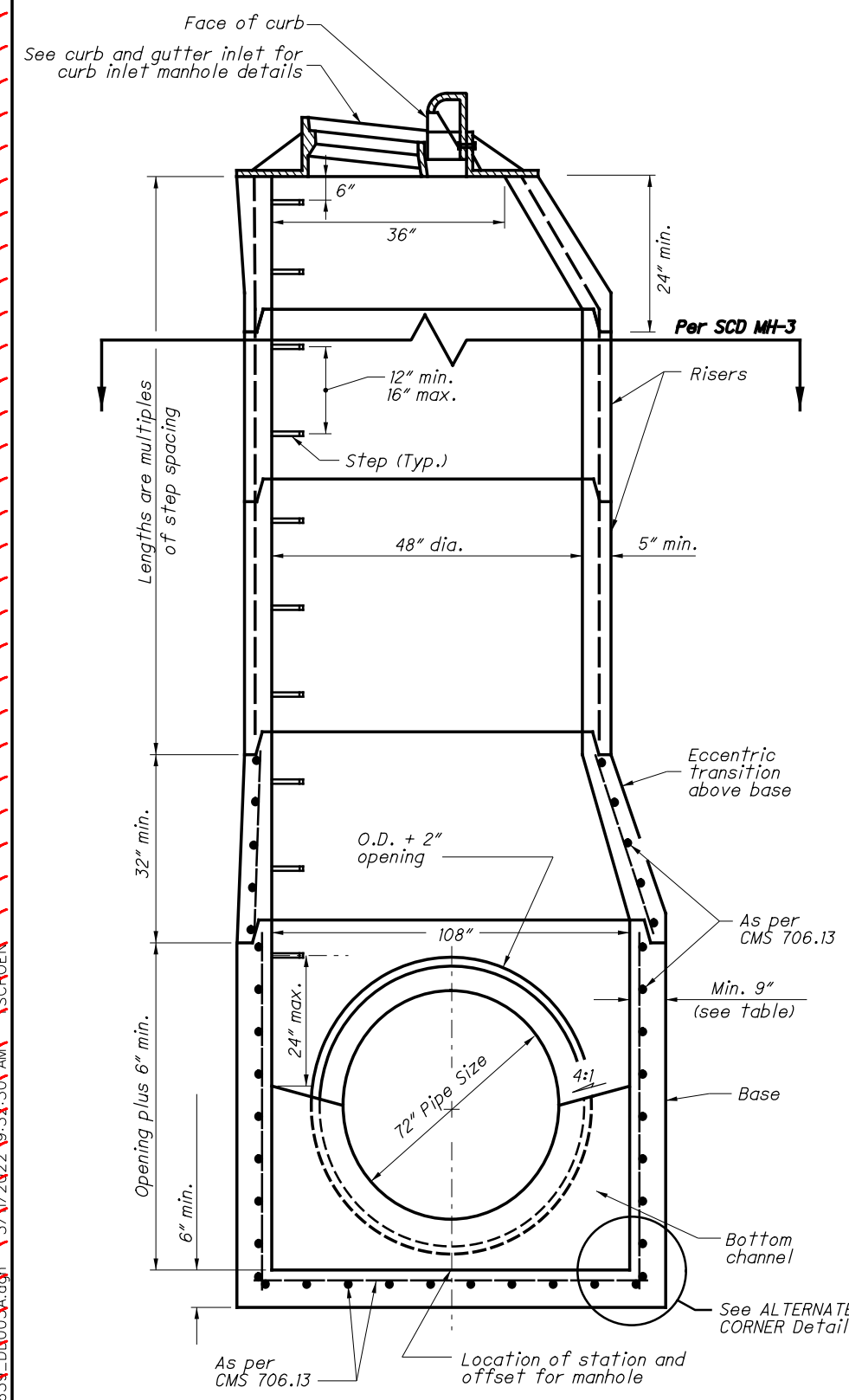
**JOINT SEAL:** Furnish resilient seal between precast manhole sections on sanitary sewers and flexible gasket joints per CMS 706.11.

**OPENINGS:** Ensure pipe openings are the O.D. of the pipe being supplied plus 2" when fabricated or field cut. Fill any voids per C&MS 611.

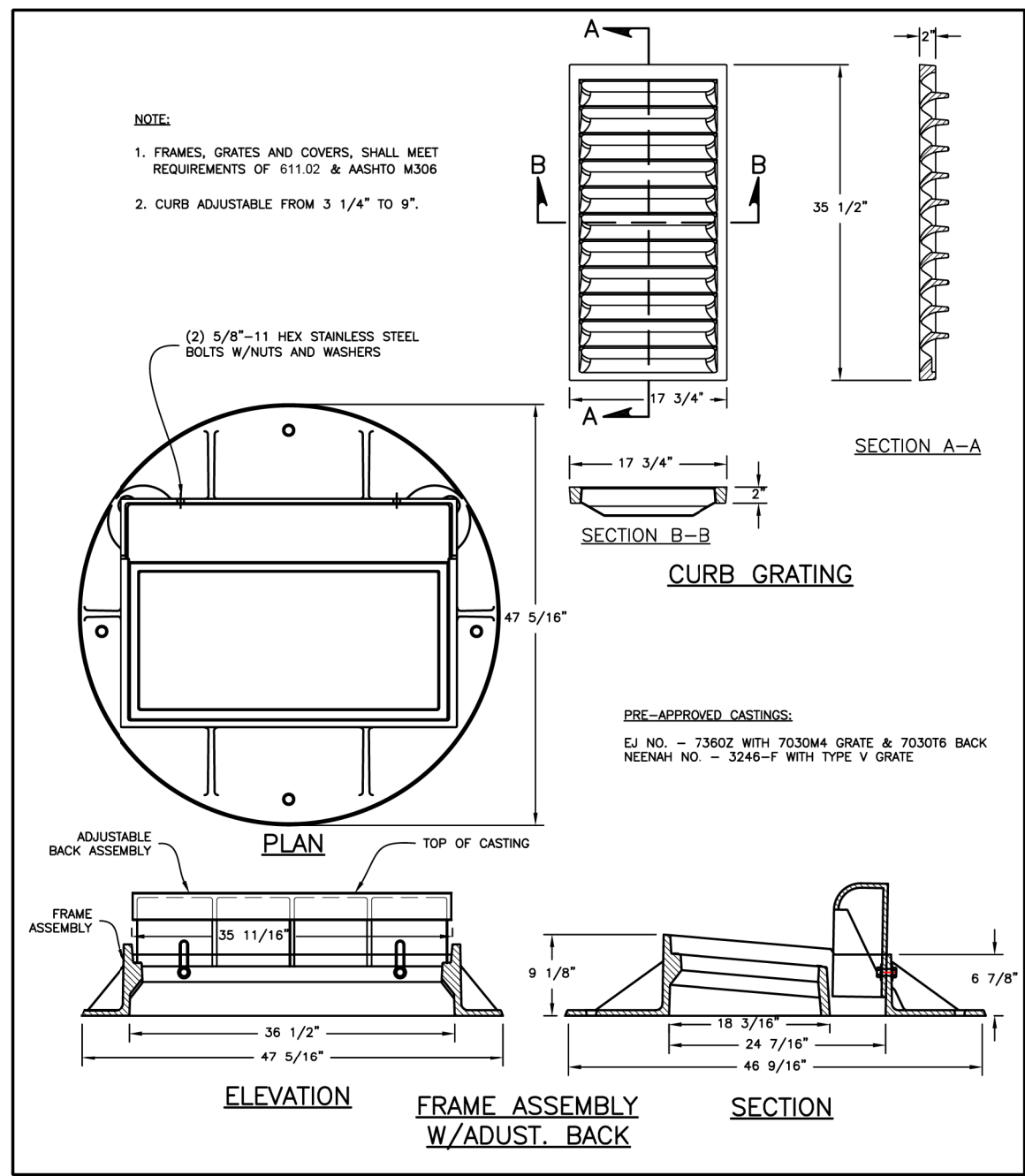
**MATERIALS:** Provide materials for bases and other precast sections, including reinforcement not specified here, that meet the requirements of CMS 706.13.

**DROP PIPE:** When specified on the plans, construct drop pipe as shown on **SCD MH-2**.

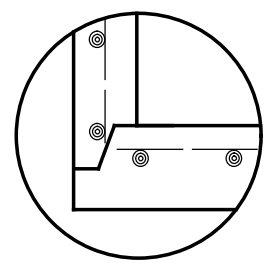
**STEPS:** Meet the requirements shown on **SCD MH-1**.



**108" PRECAST BASE**



**CURB AND GUTTER INLET FOR CURB INLET MANHOLE DETAILS**



**ALTERNATE CORNER DETAIL**

**GENERAL NOTES - RETAINING WALL I**

**STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS**

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:  
SBR-1-13 DATED/REVISED 07-20-18

**DESIGN SPECIFICATIONS**

THIS STRUCTURE CONFORMS TO THE 8TH EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2017, AND THE ODOT BRIDGE DESIGN MANUAL, 2019.

**DESIGN DATA**

CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI (RETAINING WALL FOOTING AND STEM)

CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4.5 KSI (PARAPET)

REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI

**UTILITY LINES**

THE UTILITY(IES) SHALL BEAR ALL EXPENSE INVOLVED IN RELOCATING THE AFFECTED UTILITY LINES. THE CONTRACTOR AND UTILITY(IES) ARE TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

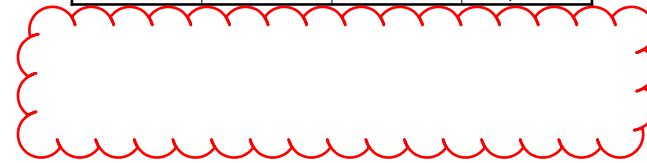
**WALL EXCAVATION**

LIMITS OF WALL EXCAVATION SHOWN IN WALL SECTIONS ARE FOR QUANTITY PURPOSES ONLY. CONTRACTOR HAS THE OPTION TO USE AN EXCAVATED SLOPE OR SUPPORTED EXCAVATION. SEE MAINTENANCE OF TRAFFIC PLANS FOR ANY REQUIRED WORK ZONE SHEETING.

**WALL DESIGN CRITERIA**

THE FACTORED BEARING RESISTANCE FOR WALL I IS LISTED IN THE TABLE BELOW:

FACTORED BEARING RESISTANCE			
WALL LETTER	WALL LIMITS		(PSF)
	FROM STA.	TO STA.	
I	100+00.00	105+49.90	3,800



**CONTROL JOINTS**

SAWCUT 1/4" DEEP CONTROL JOINTS ALONG THE PERIMETER OF THE PARAPET AS SOON AS THE SAW CAN BE OPERATED WITHOUT DAMAGING THE CONCRETE.

USE AN EDGE GUIDE, FENCE, OR JIG TO ENSURE THAT THE CUT JOINT IS STRAIGHT, TRUE, AND ALIGNED ON ALL FACES OF THE PARAPET. THE JOINT WIDTH SHALL BE THE WIDTH OF THE SAW BLADE, A NOMINAL WIDTH OF 1/4 INCH.

PLACE CONTROL JOINTS AT A MAXIMUM SPACING OF 15'-0". SEE WALL ELEVATION FOR CONTROL JOINT LOCATIONS.

SEAL THE PERIMETER OF THE CONTROL JOINT TO A MINIMUM DEPTH OF ONE INCH WITH A POLYURETHANE OR POLYMERIC MATERIAL CONFORMING TO ASTM C920, TYPE S. LEAVE THE BOTTOM ONE-HALF INCH OF BOTH THE INSIDE AND OUTSIDE FACES OF THE PARAPET UNSEALED TO ALLOW ANY WATER WHICH MAY ENTER THE JOINT TO ESCAPE.

**ITEM 511, CLASS QC2 CONCRETE, MISC.: PARAPET ON RETAINING WALL**

ALL MATERIAL, LABOR AND INCIDENTALS NECESSARY TO FURNISH AND PLACE CONCRETE FOR THE PARAPET ON TOP OF THE CONCRETE RETAINING WALL SHALL BE INCLUDED FOR PAYMENT WITH ITEM 511, CLASS QC2 CONCRETE. ALL REINFORCING STEEL EMBEDDED IN THE RETAINING WALL AND LOCATED WITHIN THE PARAPET SHALL BE INCLUDED WITH ITEM 509, EPOXY COATED REINFORCING STEEL FOR PAYMENT. THE QUALITY CONTROL REQUIREMENTS SHALL BE PER CMS 455.

CALCULATED BY: CMR	DATE: 12/30/2019
CHECKED BY: SRW	DATE: 1/07/2020

ESTIMATED QUANTITIES OF WALL I						
ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	WALL I	REF.
503	11100	LUMP		COFFERDAMS AND EXCAVATION BRACING	LUMP	
503	21100	849	CY	UNCLASSIFIED EXCAVATION	849	
509	10000	62081	LB	EPOXY COATED REINFORCING STEEL	62081	
511	46212	476	CY	CLASS QC1 CONCRETE WITH QC/QA, RETAINING/WINGWALL INCLUDING FOOTING	476	
511	53012	84	CY	CLASS QC2 CONCRETE, MISC.: PARAPET ON RETAINING WALL	84	
512	10100	652	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	652	
512	33000	34	SY	TYPE 2 WATERPROOFING	34	
516	13600	83	SF	1" PREFORMED EXPANSION JOINT FILLER	83	
518	21200	168	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	168	
518	40000	573	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	573	

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DESIGN AGENCY H&B ENGINEERING, INC. 2800 CORPORATE EXCHANGE DR., SUITE 100 COLUMBUS, OHIO 43231 614-833-5770		DATE	8/13/20
		REVIEWED	BTA
DESIGNED	CMR	CHECKED	SRW
DRAWN	CMR	REVISED	
STRUCTURE FILE NUMBER	N/A		
GENERAL NOTES AND ESTIMATED QUANTITIES TABLE WALL I ALONG RAMP C1 AND SCARBOROUGH BLVD.			
FRA - 70-22.61 PID No. 95639		2 / 9	



**GENERAL NOTES - MSE AND CIP TRANSITION WALLS**

**STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS**

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:  
 SICD-1-96 DATED/REVISED 07-18-14  
 SBR-1-13 DATED/REVISED 07-20-18

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:  
 840 DATED 04-16-21  
 878 DATED 04-16-21

**DESIGN SPECIFICATIONS**

THIS STRUCTURE CONFORMS TO THE 8TH EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2017, AND THE ODOT BRIDGE DESIGN MANUAL, 2019.

**DESIGN DATA**

CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI (C.I.P. COPING, LEVELING PAD, C.I.P. TRANSITION WALL FOOTING AND STEM)

CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4.5 KSI (MOMENT SLAB AND PARAPET)

REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI

**UTILITY LINES**

THE UTILITY(IES) SHALL BEAR ALL EXPENSE INVOLVED IN RELOCATING THE AFFECTED UTILITY LINES. THE CONTRACTOR AND UTILITY(IES) ARE TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

**WALL EXCAVATION**

LIMITS OF WALL EXCAVATION SHOWN IN WALL SECTIONS ARE FOR QUANTITY PURPOSES ONLY. CONTRACTOR HAS THE OPTION TO USE AN EXCAVATED SLOPE OR SUPPORTED EXCAVATION. SEE MAINTENANCE OF TRAFFIC PLANS FOR ANY REQUIRED WORK ZONE SHEETING.

**CONTROL JOINTS**

SAWCUT 1/4" DEEP CONTROL JOINTS ALONG THE PERIMETER OF THE PARAPET AS SOON AS THE SAW CAN BE OPERATED WITHOUT DAMAGING THE CONCRETE.

USE AN EDGE GUIDE, FENCE, OR JIG TO ENSURE THAT THE CUT JOINT IS STRAIGHT, TRUE, AND ALIGNED ON ALL FACES OF THE PARAPET. THE JOINT WIDTH SHALL BE THE WIDTH OF THE SAW BLADE, A NOMINAL WIDTH OF 1/4 INCH.

PLACE CONTROL JOINTS AT A MAXIMUM SPACING OF 15'-0". SEE WALL ELEVATION FOR CONTROL JOINT LOCATIONS.

SEAL THE PERIMETER OF THE CONTROL JOINT TO A MINIMUM DEPTH OF ONE INCH WITH A POLYURETHANE OR POLYMERIC MATERIAL CONFORMING TO ASTM C920, TYPE S. LEAVE THE BOTTOM ONE-HALF INCH OF BOTH THE INSIDE AND OUTSIDE FACES OF THE PARAPET UNSEALED TO ALLOW ANY WATER WHICH MAY ENTER THE JOINT TO ESCAPE.

**MAINTENANCE OF TRAFFIC**

REFER TO THE PROJECT OVERALL MAINTENANCE OF TRAFFIC PLANS FOR ADDITIONAL INFORMATION WITH RESPECT TO MAINTENANCE OF TRAFFIC.

**PROPRIETARY RETAINING WALL DATA**

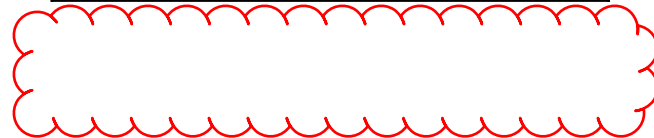
THE PROPRIETARY WALL SUPPLIER SHALL DESIGN THE INTERNAL STABILITY OF A MECHANICALLY STABILIZED EARTH (MSE) WALL IN ACCORDANCE WITH SS840 TO SUPPORT THE ABUTMENT. THE DESIGN FOR INTERNAL STABILITY SHALL INCLUDE A NOMINAL (I.E. UNFACTORED) HORIZONTAL STRIP LOAD DUE TO FRICTION (FR) FROM THE SUPERSTRUCTURES OF THE VALUE LISTED IN THE TABLE ON THIS SHEET, APPLIED PERPENDICULAR TO THE FACE OF WALL AT THE BASE OF THE CONCRETE FOOTING. THIS STRIP LOAD DOES NOT INCLUDE EARTH PRESSURE LOADS FROM THE ABUTMENT BACKFILL. HOWEVER, THE PROPRIETARY WALL SUPPLIER SHALL INCLUDE EARTH PRESSURE LOADS FROM THE ABUTMENT BACKFILL IN THE DESIGN CALCULATIONS.

BRIDGE SUPERSTRUCTURE LOADINGS			
MSE WALL	BRIDGE NO.	LOCATION	HORIZONTAL LOAD (K/FT)
B	FRA-270-4262	REAR ABUTMENT	0.88
G-H	FRA-270-4262	FWD ABUTMENT	1.02

**WALL DESIGN CRITERIA**

THE FACTORED BEARING RESISTANCE FOR EACH WALL IS LISTED IN THE TABLE BELOW:

FACTORED BEARING RESISTANCE			
WALL LETTER	WALL LIMITS		(PSF)
	FROM STA.	TO STA.	
B	10+00.00	10+81.48	5,600
B	10+81.48	20+94.72	6,680
B	20+94.72	22+24.75	5,600
G-H	100+00.00	100+45.00	5,700
G-H	3036+04.86 *	3031+60 *	7,150
G-H	3031+60 *	3030+50 *	7,280
G-H	3030+50 *	3029+00 *	6,759
G-H	3029+00 *	3027+89 *	9,360
G-H	108+36.90	108+87.65	8,450
G-H	117+06.65	117+86.65	5,700



**MINIMUM SOIL REINFORCEMENT LENGTHS**

PROVIDE MINIMUM 8 FOOT SOIL REINFORCEMENT LENGTHS ACCORDING TO SUPPLEMENTAL SPECIFICATION 840.04 EXCEPT AS FOLLOWS:

MINIMUM SOIL REINFORCEMENT LENGTHS			
MSE WALL LETTER	WALL LIMITS		MIN. STRAP LENGTH
	FROM STA.	TO STA.	
B	10+81.48	20+94.72	0.7 x H
B	3010+72 *	3011+50 *	0.8 x H
G-H	3036+04.86 *	3031+60 *	0.7 x H
G-H	3031+60 *	3027+89 *	0.8 x H
G-H	108+36.90	108+87.65	0.7 x H

\* = STATION RANGE ALONG RAMP A2 CENTERLINE.

H = THE WALL HEIGHT AS DETERMINED ACCORDING TO SUPPLEMENTAL SPECIFICATION 840.04.

**ITEM 203 EMBANKMENT, AS PER PLAN**

PLACE AND COMPACT EMBANKMENT MATERIAL IN 6 INCH LIFTS FOR THE CONSTRUCTION OF THE APPROCH EMBANKMENT BETWEEN STATIONS 3010+35 TO 3010+87. FOR ADDITIONAL INFORMATION SEE RAMP A2 CROSS SECTIONS.

**ITEM 511, CLASS QC2 CONCRETE, MISC.: MOMENT SLAB AND PARAPET**

ALL MATERIAL, LABOR AND INCIDENTALS NECESSARY TO FURNISH AND PLACE CONCRETE FOR THE MOMENT SLABS AND PARAPETS ALONG THE MSE WALLS SHALL BE INCLUDED FOR PAYMENT WITH ITEM 511, CLASS QC2 CONCRETE. PAYMENT FOR THIS ITEM SHALL INCLUDE ALL DOWEL RODS AND ALL JOINT MATERIALS IN CONTACT WITH THE MOMENT SLAB. ALL REINFORCING STEEL EMBEDDED IN THE MOMENT SLAB AND WITHIN THE PARAPET SHALL BE INCLUDED WITH ITEM 509, EPOXY COATED REINFORCING STEEL FOR PAYMENT. THIS ITEM SHALL ALSO REQUIRE QUALITY CONTROL, MEETING THE REQUIREMENTS PER CMS 455 AND CMS 511.04.

**ITEM 511, CLASS QC2 CONCRETE, MISC.: PARAPET ON RETAINING WALL**

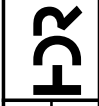
ALL MATERIAL, LABOR AND INCIDENTALS NECESSARY TO FURNISH AND PLACE CONCRETE FOR THE PARAPET ON TOP OF THE CAST-IN-PLACE CONCRETE TRANSITION RETAINING WALL SHALL BE INCLUDED FOR PAYMENT WITH ITEM 511, CLASS QC2 CONCRETE. ALL REINFORCING STEEL EMBEDDED IN THE RETAINING WALL AND LOCATED WITHIN THE PARAPET SHALL BE INCLUDED WITH ITEM 509, EPOXY COATED REINFORCING STEEL FOR PAYMENT. THE QUALITY CONTROL REQUIREMENTS SHALL BE PER CMS 455.

**ITEM 840 CONCRETE COPING, AS PER PLAN**

PROVIDE EPOXY COATED REINFORCING AND CLASS QC1 CONCRETE AS SHOWN IN THE PLANS. CONCRETE AND REINFORCING STEEL IN THE COPING, ADDITIONAL CONCRETE AND REINFORCING STEEL AT ROADWAY FEATURES, PEJF BETWEEN COPING AND BARRIER, AND EXPANSION JOINTS SHALL BE INCLUDED IN THE UNIT BID PRICE PER FOOT FOR THIS ITEM.

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DESIGN AGENCY  
 HRS ENGINEERING, INC.  
 2802 CORPORATE EXCHANGE DR.,  
 SUITE 100  
 COLUMBUS, OHIO 43231  
 614-839-5770



DATE 8/13/20  
 REVIEWED BTA  
 STRUCTURE FILE NUMBER N/A

DRAWN CMR  
 CHECKED CMR  
 REVISIONS RBK

GENERAL NOTES - WALLS B AND G-H  
 MSE AND CIP TRANSITION WALLS B AND G-H  
 ALONG RAMP A2

FRA-70-22.61  
 PID No. 95639