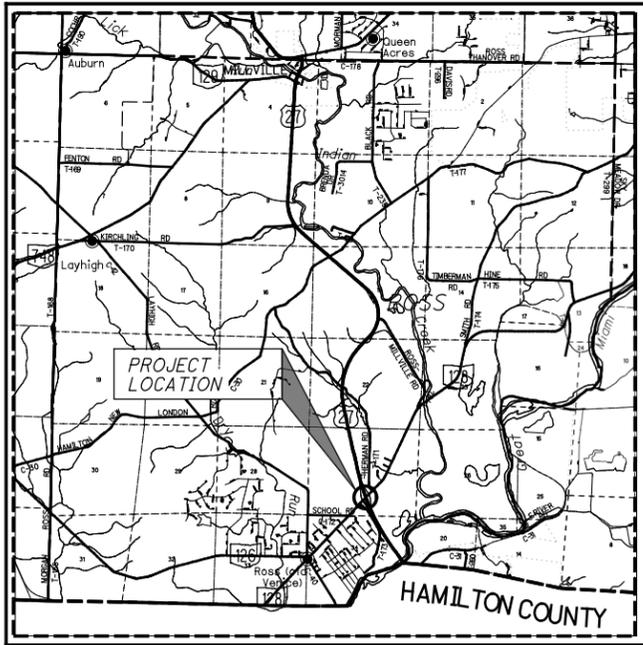


STATE OF OHIO DEPARTMENT OF TRANSPORTATION

BUT-US 27-0.80

ROSS TOWNSHIP
BUTLER COUNTY



LOCATION MAP

LATITUDE: N 39°19'20" LONGITUDE: W 84°38'20"



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

DESIGN DESIGNATION

	<u>BUT-27-0.80</u>	<u>BUT-128-1.60</u>
CURRENT ADT (2023)	21,000	11,000
DESIGN YEAR ADT (2035)	21,500	11,00
DESIGN HOURLY VOLUME (2035)	2,600	1,400
DIRECTIONAL DISTRIBUTION	11%	8%
TRUCKS (24 HOUR B&C)	8.0%	4.0%
DESIGN SPEED	35	35
LEGAL SPEED	35	35
DESIGN FUNCTIONAL CLASSIFICATION:	03 PRINCIPAL URBAN ARTERIAL	05 MAJOR COLLECTOR
NHS PROJECT	YES	NO

DESIGN EXCEPTIONS

NONE REQUIRED

ADA DESIGN WAIVERS

NO

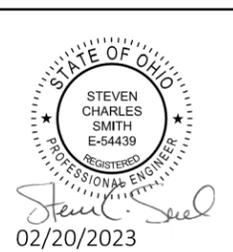
UNDERGROUND UTILITIES
Contact Two Working Days
Before You Dig

OHIO811.org
Before You Dig

OHIO 811, 8-1-1, or 1-800-362-2764
(Non members must be called directly)

PLAN PREPARED BY:
BURGESS & NIPLÉ, INC.
525 VINE STREET, SUITE 1300
CINCINNATI, OH 45202

ENGINEER'S SEAL:



ENGINEER'S SEAL:



INDEX OF SHEETS:

TITLE SHEET	1
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STRUCTURES (20' and over)	25 - 42

FEDERAL PROJECT NUMBER

E191848

RAILROAD INVOLVEMENT

NONE

PROJECT DESCRIPTION

REHABILITATE BRIDGES BUT-27-0080 L&R BY REPLACING THE WEARING SURFACE, BARRIERS, BEARINGS AND PAINT

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA: 0.42 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 0.0 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA: NOT REQUIRED

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 SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS AND CHANGES LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

STANDARD CONSTRUCTION DRAWINGS						SUPPLEMENTAL SPECIFICATIONS		SPECIAL PROVISIONS		
BP-3.1	1/21/22	MT-95.30	7/19/19	TC-12.31	1/21/22	EXJ-4-87	7/15/22	800-2019	SEE PROPOSAL	ASBESTOS
BP-5.1	7/15/22	MT-95.45	1/17/20	TC-21.21	7/15/22			808	1/18/19	REPORT 6/10/22
		MT-98.20	4/19/19	TC-21.50	4/17/20			82	4/20/12	
		MT-102.10	1/17/20	TC-22.20	1/17/14			832	7/15/22	
MGS-1.1	7/16/21	MT-102.20	4/19/19	TC-41.20	10/18/13			808	4/15/22	
MGS-2.1	1/19/18	MT-104.10	10/16/15	TC-41.40	10/18/13					
MGS-3.1	1/19/18	MT-105.10	1/17/20	TC-42.20	10/18/13					
MGS-5.3	7/15/16			TC-52.20	1/15/21					
MGS-6.2	7/19/19			TC-61.30	7/19/19					
				TC-65.10	1/17/14					
RM-4.2	4/17/20			TC-65.11	7/15/22					
RM-4.3	1/21/22			TC-71.10	7/15/22					
RM-4.4	7/19/19			TC-72.20	7/20/18					
RM-4.5	7/21/17									
RM-4.6	7/19/13									

APPROVED _____

DATE _____ DISTRICT DEPUTY DIRECTOR

APPROVED _____

DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION

SHEET TITLE

DESIGN AGENCY



DESIGNER

SDC

REVIEWER

SCS 05-13-22

PROJECT ID

102769

SHEET TOTAL

P.01 42

BUT-US 27-0.80

MODEL: Sheet PAPER SIZE: 34x22 (in.) DATE: 2/20/2023 TIME: 7:53:16 AM USER: ccompton P:\PR9470\102769\400-Engineering\Roadway\Sheets\102769_GT001.dgn

ITEM 614, MAINTAINING TRAFFIC (LANES OPEN DURING HOLIDAYS OR SPECIAL EVENTS)

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

NEW YEAR'S (OBSERVED) GENERAL/REGULAR ELECTION DAY ((NOV)
 TOTAL SOLAR ECLIPSE (4/8/24) THANKSGIVING
 MEMORIAL DAY CHRISTMAS (OBSERVED)
 FOURTH OF JULY (OBSERVED) (OTHER HOLIDAY OR SPECIAL EVENT)
 LABOR DAY

THE PERIOD OF TIME THAT THE LANES ARE TO BE OPEN DEPENDS ON THE DAY OF THE WEEK ON WHICH THE HOLIDAY OR SPECIAL EVENT FALLS. THE FOLLOWING SCHEDULE SHALL BE USED TO DETERMINE THIS PERIOD:

DAY OF HOLIDAY TIME ALL LANES
 OR SPECIAL EVENT MUST BE OPEN TO TRAFFIC

SUNDAY 12:00N FRIDAY THROUGH 6:00 AM MONDAY
 MONDAY 12:00N FRIDAY THROUGH 6:00 AM TUESDAY
 MONDAY (TOTAL SOLAR ECLIPSE)
 12:00N MONDAY THROUGH 6:00 AM WEDNESDAY
 TUESDAY 12:00N MONDAY THROUGH 6:00 AM WEDNESDAY
 TUESDAY (GEN./REG. ELECTION)
 5:00 AM TUESDAY THROUGH 12:00 AM WEDNESDAY
 WEDNESDAY 12:00N TUESDAY THROUGH 6:00 AM THURSDAY
 THURSDAY 12:00N WEDNESDAY THROUGH 6:00 AM FRIDAY
 THURSDAY (THANKSGIVING ONLY)
 6:00 AM WEDNESDAY THROUGH 6:00 AM MONDAY
 FRIDAY 12:00N THURSDAY THROUGH 6:00 AM MONDAY
 SATURDAY 12:00N FRIDAY THROUGH 6:00 AM MONDAY

DURING THE SAME PERIODS, MAINTAIN PEDESTRAIN ACCESS IF PEDESTRIAN ACCESS WAS PRESENT PRIOR TO CONSTRUCTION.

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE PER THE LANE VALUE CONTRACT (PN 127).

NOTIFICATION OF TRAFFIC RESTRICTIONS

THROUGHOUT THE DURATION OF THE PROJECT, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IN WRITING OF ALL TRAFFIC RESTRICTIONS AND UPCOMING MAINTENANCE OF TRAFFIC CHANGES. THE CONTRACTOR SHALL ENSURE THE WRITTEN NOTIFICATION IS SUBMITTED IN A TIMELY MANNER TO ALLOW THE PROJECT ENGINEER TO MEET THE REQUIRED TIME FRAMES SET FORTH IN THE TABLE BELOW TO INFORM THE SPECIAL HAULING PERMITS SECTION (HAULING.PERMITS@DOT.OHIO.GOV) AND THE DISTRICT PUBLIC INFORMATION OFFICE (PIO). THIS NOTIFICATION SHALL BE RECEIVED BY THE PROJECT ENGINEER PRIOR TO THE PHYSICAL SETUP OF ANY APPLICABLE SIGNS OR MESSAGE BOARDS.

INFORMATION SHOULD INCLUDE, BUT IS NOT LIMITED TO, ALL CONSTRUCTION ACTIVITIES THAT IMPACT OR INTERFERE WITH TRAFFIC AND SHALL LIST THE SPECIFIC LOCATION, TYPE OF WORK, ROAD STATUS, DATE AND TIME OF RESTRICTION, DURATION OF RESTRICTION, NUMBER OF LANES MAINTAINED, NUMBER OF LANES CLOSED, MINIMUM VERTICAL CLEARANCE, MINIMUM WIDTH OF DRIVABLE PAVEMENT, DETOUR ROUTES, IF APPLICABLE, AND ANY OTHER INFORMATION REQUESTED BY THE PROJECT ENGINEER.

NOTIFICATION OF TRAFFIC RESTRICTIONS TIME TABLE

ITEM	DURATION OF CLOSURE	NOTICE DUE TO PERMITS & PIO
RAMP & ROAD CLOSURES	>= 2 WEEKS	21 CALENDAR DAYS PRIOR TO CLOSURE
	> 12 HOURS & < 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	<= 12 HOURS	4 CALENDAR DAYS PRIOR TO CLOSURE
LANE CLOSURES & RESTRICTIONS	>= 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	< 2 WEEKS	5 BUSINESS DAYS PRIOR TO CLOSURE
START OF CONSTRUCTION & TRAFFIC PATTERN CHANGES	N/A	14 CALENDAR DAYS PRIOR TO IMPLEMENTATION

ANY UNFORESEEN CONDITIONS NOT SPECIFIED IN THE PLANS REQUIRING TRAFFIC RESTRICTIONS SHALL ALSO BE REPORTED TO THE PROJECT ENGINEER USING THE NOTIFICATION TIME TABLE.

INTERIM COMPLETION REQUIREMENTS

THE PROJECT HAS AN INTERIM COMPLETION DATE OF NOVEMBER 1, 2023. ON OR BEFORE THE INTERIM COMPLETION DATE, ALL WORK ON SR 128 SHALL BE COMPLETED.

THE CONTRACTOR SHALL BE ASSESSED A DAILY DISINCENTIVE IN THE AMOUNT OF \$4,000 PER DAY FOR FAILURE TO COMPLETE ALL THE REQUIRED WORK AND ASSOCIATED INCIDENTALS RELATED TO THE WORK. DAILY DISINCENTIVES ARE APPLICABLE TO THE WORK REQUIRED TO THE INTERIM COMPLETION DATE ONLY. THE CONTRACTOR IS STILL SUBJECT TO LIQUIDATED DAMAGES AS OUTLINED IN CMS 108.07 FOR THE REMAINDER OF THE CONTRACT.

DESCRIPTION OR LOCATION OF CRITICAL WORK	COMPLETION DATE	TIME PERIOD	DISINCENTIVE \$ PER TIME PERIOD
	10/1/2024	DAY	\$4,000

ITEM 411, STABILIZED CRUSHED AGGREGATE, AS PER PLAN

DURING ANY SEQUENCE OF OPERATIONS WHERE TRAFFIC IS TO BE MAINTAINED WITHIN 2 FEET OF THE EDGE OF THE PAVED SHOULDER, THE GRADED SHOULDER AREA ADJACENT TO THE PAVED SHOULDER SHALL BE STRENGTHENED. ITEM 411 AGGREGATE PLACED A MINIMUM OF 6 INCHES DEEP, OR A COMPOSITION WITH SIMILAR STRUCTURAL CHARACTERISTICS, SHALL BE SPECIFIED FOR 2 FEET BEYOND THE EDGE OF THE TEMPORARY TRAVELED LANE. THIS TREATMENT SHOULD BE PLACED IN CONJUNCTION WITH FINAL GRADED SHOULDER TREATMENTS WHEN SUCH SHOULDER USE IS REQUIRED ON FINAL SURFACE COURSE PAVEMENTS. THIS TREATMENT MAY BE LEFT IN PLACE.

THE FOLLOWING STATION RANGES MAY NEED SHOULDER STABILIZATION:
 - NB US 27 (INSIDE SHOULDER): STA. 39+00 TO STA. 45+50
 - NB US 27 (OUTSIDE SHOULDER): STA. 37+35 TO STA. 45+00
 - SB US 27 (OUTSIDE SHOULDER): STA. 41+50 TO STA. 49+00

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 411, STABILIZED CRUSHED AGGREGATE, AS PER PLAN 68 CY

SHEET NUM.											PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.
3	4	5	6	17	18	19					01/NHS/14	ITEM	EXT	TOTAL			
ROADWAY																	
LS											LS	201	11000	LS		CLEARING AND GRUBBING	
				223							223	202	23000	223	SY	PAVEMENT REMOVED	
				496							496	202	30600	496	SY	CONCRETE MEDIAN REMOVED	
				1,588							1,588	202	38000	1,588	FT	GUARDRAIL REMOVED	
				8							8	202	42001	8	EACH	ANCHOR ASSEMBLY REMOVED, TYPE A, AS PER PLAN	3
				2							2	202	42206	2	EACH	ANCHOR ASSEMBLY REMOVED	
				4							4	202	47000	4	EACH	BRIDGE TERMINAL ASSEMBLY REMOVED	
				2							2	202	47800	2	EACH	IMPACT ATTENUATOR REMOVED	
				350							350	606	15050	350	FT	GUARDRAIL, TYPE MGS	
				75							75	606	15550	75	FT	GUARDRAIL, BARRIER DESIGN, TYPE MGS	
				2							2	606	26150	2	EACH	ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016)	
				2							2	606	26150	2	EACH	ANCHOR ASSEMBLY, MGS TYPE E (NCHRP 350)	
				6							6	606	35002	6	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	
				2							2	606	60012	2	EACH	IMPACT ATTENUATOR, TYPE 1 (BIDIRECTIONAL)	
				2							2	606	60028	2	EACH	IMPACT ATTENUATOR, TYPE 2 (BIDIRECTIONAL) (35mph, 48-INCH)	
				111							111	609	24510	111	FT	CURB, TYPE 4-C	
				130							130	622	10100	130	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE B1	
				237							237	622	10160	237	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE D	
				2							2	622	24851	2	EACH	CONCRETE BARRIER END SECTION, TYPE B1. AS PER PLAN	22
				2							2	622	25000	2	EACH	CONCRETE BARRIER END SECTION, TYPE D	
				2							2	622	25050	2	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D	
				12							12	626	00110	12	EACH	BARRIER REFLECTOR, TYPE 2, BIDIRECTIONAL	
EROSION CONTROL																	
33											33	659	00300	33	CY	TOPSOIL	
300											300	659	10000	300	SY	SEEDING AND MULCHING	
0.04											0.04	659	20000	0.04	TON	COMMERCIAL FERTILIZER	
0.06											0.06	659	31000	0.06	ACRE	LIME	
2											2	659	35000	2	MGAL	WATER	
											7500	832	30000	7500	EACH	EROSION CONTROL	
ENVIRONMENTAL/REMEDATION																	
											LS	690	98400	LS		SPECIAL MISC.: WORK INVOLVING ASBESTOS CONTAINING MATERIALS	27
PAVEMENT																	
				831							831	204	10000	831	SY	SUBGRADE COMPACTION	
				23,595							23,595	254	01000	23,595	SY	PAVEMENT PLANING, ASPHALT CONCRETE, 1.5"	
				186							186	301	56000	186	CY	ASPHALT CONCRETE BASE, PG64-22, (449)	
				136							136	304	20000	136	CY	AGGREGATE BASE	
				1,828							1,828	407	20000	1,828	GAL	NON-TRACKING TACK COAT	
				1,018							1,018	442	22100	1,018	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (449)	
				40							40	442	22400	40	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (449)	
TRAFFIC CONTROL																	
						22					22	621	54000	22	EACH	RAISED PAVEMENT MARKER REMOVED	
						22					22	621	00100	22	EACH	RPM	
						2					2	625	32000	2	EACH	GROUND ROD	
						2					2	630	72320	2	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-12.31, DESIGN 6	
						2					2	630	79500	2	EACH	SIGN SUPPORT ASSEMBLY, POLE MOUNTED	
						10					10	630	80100	10	SF	SIGN, FLAT SHEET	
						2					2	630	84010	2	EACH	CONCRETE BARRIER MEDIAN OVERHEAD SIGN SUPPORT FOUNDATION, TYPE TC-21.50	
						2					2	630	84900	2	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
						2					2	630	86002	2	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
						1					1	630	86310	1	EACH	REMOVAL OF STRUCTURE MOUNTED SIGN AND DISPOSAL	
						2					2	630	86320	2	EACH	REMOVAL OF STRUCTURE MOUNTED SIGN AND REERECTION	
						3					3	630	97700	3	EACH	SIGNING, MISC.: REMOVAL OF STRUCTURE MOUNTED SIGN SUPPORT AND DISPOSAL	23
						0.32					0.32	644	00100	0.32	MILE	EDGE LINE, 4"	
						2.65					2.65	644	00104	2.65	MILE	EDGE LINE, 6"	
						1.4					1.4	644	00204	1.4	MILE	LANE LINE, 6"	



GENERAL NOTES:

REFERENCE SHALL BE MADE TO THE FOLLOWING STANDARD DRAWINGS:

EXJ-4-87 REVISED 01-19-18
GSD-1-19 REVISED 01-15-21
SBR-1-20 REVISED 07-17-20

REFERENCE SHALL BE MADE TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:

800 SEE PROPOSAL
843 DATED 10-18-19

DESIGN DATA:

CONCRETE CLASS QC3 - COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)

CONCRETE CLASS QC3 - COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)

REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI

STRUCTURAL STEEL - ASTM A709 GRADE 50

STEEL HP SECTIONS - ASTM A572 - YIELD STRENGTH 50 KSI

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO THE 9TH EDITION OF THE LRFD BRIDGE DESIGN SPECIFICATIONS ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2020 AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

DESIGN LOADING

DESIGN LOADING INCLUDES:

VEHICULAR LIVE LOAD: HL-93
FUTURE WEARING SURFACE (FWS) OF 0.060 KIPS/SQ.FT

EXISTING STRUCTURE PLANS

THE EXISTING STRUCTURE PLANS ARE AVAILABLE ONLINE THROUGH THE FOLLOWING WEBSITE:
<ftp://ftp.dot.state.oh.us/pub/Contracts/Attach/D08-100835/Reference%20Files/>

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO BECOME FAMILIAR WITH ALL PERTINENT EXISTING DRAWINGS AND DETAILS RELEVANT TO THIS PROJECT.

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO C&MS SECTIONS 102.05, 105.02 AND 513.04. BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

CUT LINE CONSTRUCTION JOINT PREPARATION

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

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

THIS WORK CONSISTS OF REMOVAL OF THE EXISTING BARRIER, EXISTING EXPANSION JOINTS, EXISTING END CROSS FRAMES, EXISTING ABUTMENT BEARINGS AND PORTIONS OF THE ABUTMENT BACKWALL. REMOVAL OF THE BARRIER MAY CAUSE ANCILLARY DAMAGE TO THE DECK EDGE. ANY DAMAGE THAT DOES NOT EXPOSE REINFORCING MAY BE SEALED OVER. FOR ANY DAMAGE THAT EXPOSES REINFORCING, THE HORIZONTAL DEPTH OF REPAIR IS TO EXTEND 3" PAST THE FIRST LONGITUDINAL BAR ON THE TOP AND BOTTOM. SEE PLAN FOR DETAILS. WHEN REPLACING THE ABUTMENT BEARINGS USE TEMPORARY SUPPORTS DURING CONSTRUCTION, SEE ITEM 516-JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE FOR DETAILS. THE PROVISIONS OF ITEM 202 APPLY EXCEPT AS SPECIFIED BY THE FOLLOWING NOTES. PERFORM WORK CAREFULLY DURING REMOVALS TO PROTECT PORTIONS OF SUCH SYSTEMS THAT ARE TO BE SALVAGED AND INCORPORATED INTO THE PROPOSED STRUCTURE. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE RAM TYPE OF EQUIPMENT IS PROHIBITED. REMOVE CONCRETE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL OF CONCRETE. DO NOT PLACE PNEUMATIC HAMMERS IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05.

THE CONTRACTOR MUST REVIEW THE STRUCTURE WHEN PREPARING HIS BID. THE CONTRACTOR WILL REVIEW THE CONDITION OF THE STRUCTURE TO DETERMINE WHAT DEBRIS WILL FALL FROM THE STRUCTURE DURING REMOVAL. THE CONTRACTOR WILL DETERMINE THE CORRESPONDING COST TO CLEAN UP ANY AND ALL DEBRIS WHICH FALLS FROM THE STRUCTURE DURING ANY REMOVAL OPERATION. THE COST TO CLEAN AND CLEAN UP ALL DEBRIS DURING REMOVAL SHALL BE INCLUDED WITH THE BID FOR THIS ITEM OF WORK. NO ADDITIONAL COST WILL BE RECOGNIZED TO CLEAN DEBRIS RESULTING FROM THE STRUCTURE REMOVAL OPERATION.

ALL UTILITIES MUST REMAIN ACTIVE DURING CONSTRUCTION UNLESS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL TEMPORARILY SUPPORT ANY CONDUITS AND ELECTRICAL BOXES AS NECESSARY TO PERFORM THE REPAIRS.

ITEM 509 - REINFORCING STEEL, MISC.: GALVANIZED REINFORCING

REINFORCING STEEL FOR DOWELS INTO THE EXISTING DECK AND WINGWALLS SHALL BE GRADE 60 DEFORMED BARS PER CMS 509 AND SHALL BE GALVANIZED PER CMS 711.02.

ITEM 509 - REINFORCING STEEL, REPLACEMENT OF REINFORCING STEEL, AS PER PLAN

REPLACE EXISTING REINFORCING BARS DEEMED BY THE ENGINEER TO BE UNUSABLE BECAUSE OF CORROSION. THE DEPARTMENT WILL MEASURE THE REPLACEMENT REINFORCING STEEL BY THE NUMBER OF POUNDS ACCEPTED IN PLACE. REPLACE ALL EXISTING REINFORCING STEEL BARS WHICH ARE TO BE INCORPORATED INTO THE NEW WORK AND ARE DEEMED BY THE ENGINEER TO BE MADE UNUSABLE BY CONCRETE REMOVAL OPERATIONS WITH NEW REINFORCING STEEL OF THE SAME SIZE AND COATING AT NO COST TO THE DEPARTMENT.

ITEM 510 - DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT, AS PER PLAN

USE AN ANCHOR ADHESIVE EVALUATED ACCORDING TO ICCES REPORT AC308, "ACCEPTANCE CRITERIA FOR POST-INSTALLED ADHESIVE ANCHORS IN CONCRETE ELEMENTS", FOR CRACKED AND UNCRACKED CONCRETE APPLICATIONS, PUBLISHED ICCES REPORTS FOR ACCEPTABLE PRODUCTS ARE AVAILABLE AT:

WWW.ICC-ES.ORG/EVALUATION_REPORTS/INDEX.SHTML

SELECT FROM ON THE FOLLOWING APPROVED PRODUCTS:

DEWALT/POWERS FASTENERS PURE 110+ EPOXY ADHESIVE ANCHOR SYSTEM (ICCES REPORT ESR-3298)

ADHESIVES TECHNOLOGY CORPORATION (ATC) ULTRABOND HS-1CC ADHESIVE ANCHOR SYSTEM (ICCES REPORT ESR-4057)

HILT HIT-HY 200 ADHESIVE ANCHOR SYSTEM (ICCES REPORT ESR-3187)

INSTALL ADHESIVE ANCHORS ACCORDING TO THE MANUFACTURER'S INSTALLATION INSTRUCTIONS PUBLISHED IN SECTION 4.3 OF THE ICCES REPORTS LISTED ABOVE. THE MINIMUM EMBEDMENT DEPTH FOR ANCHORS SHALL BE AS SHOWN IN THE PLANS.

ITEM 512 - SEALING OF CONCRETE STRUCTURES, AS PER PLAN

SEAL ALL EXPOSED SURFACES OF THE BARRIER (EXCEPT THE FORM LINER), DECK EDGES (INCLUDING 6" MINIMUM WIDTH UNDER THE DECK), PIERS, AND ABUTMENTS WITH EPOXY URETHANE SEALER, FEDERAL COLOR 17778.

DUE TO THE RECENT SUPPLY SHORTAGES, THE DEPARTMENT HAS BEEN MADE AWARE OF DIFFICULTIES THAT SUPPLIERS ARE HAVING IN OBTAINING THE NECESSARY MATERIALS FOR EPOXY. ON THIS PROJECT THE CONTRACTOR CAN USE TRADITIONAL EPOXY-URETHANE SEALERS APPROVED ON THE QPL OR ELECT TO SUBSTITUTE BRIDGE COTE XL-70 W/SILANE THAT IS LISTED ON THE APPROVED NOISE SUPPLIER LIST UNDER APPROVED SEALERS FOR NOISE BARRIERS. APPROVEDNOISESUPPLIERSLIST.PDF (OHIO.GOV).

IF BRIDGE COTE XL-70 W/SILANE IS CHOSEN, MEET THE REQUIREMENTS OF THE BRIDGE COTE XL-70 W/SILANE TECHNICAL DATA SHEET WITH THE EXCEPTION OF THE SURFACE PREPARATION THAT WILL STILL FOLLOW THE REQUIREMENTS LISTED UNDER C&MS 512 FOR EPOXY URETHANE SEALERS.

ITEM 514 - FIELD PAINTING OF EXISTING STRUCTURAL STEEL

FIELD PAINT THE EXISTING STRUCTURAL STEEL USING OZEU USING COLOR TO MATCH EXISTING.

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

THIS WORK CONSISTS OF TEMPORARILY SUPPORTING THE EXISTING STRUCTURES TO COMPLETE THE WORK AS DEFINED IN THE PROJECT PLANS. SUBMIT CONSTRUCTION PLANS IN ACCORDANCE WITH CMS 501.05.

IF, DURING THE JACKING OPERATIONS, CRACKING OF THE CONCRETE SUPERSTRUCTURE, SEPARATION OF THE CONCRETE DECK FROM THE STEEL STRINGERS, OR OTHER DAMAGE TO THE STRUCTURE IS VISUALLY OBSERVED, IMMEDIATELY CEASE THE JACKING OPERATION AND INSTALL SUPPORTS TO THE SATISFACTION OF THE ENGINEER. ANALYZE THE DAMAGE AND SUBMIT A METHOD OF CORRECTION TO THE ENGINEER FOR APPROVAL. EPOXY INJECT ALL BEAMS THAT SEPARATE FROM THE DECK FOR THE DISTANCE OF THE SEPARATION IN ACCORDANCE WITH CMS 512.07. THE DEPARTMENT WILL NOT PAY FOR THE COST OF THIS EPOXY INJECTION OR OTHER REQUIRED REPAIRS. THE BRIDGE BEARINGS SHALL BE FULLY SEATED AT ALL CONTACT AREAS. IF FULL SEATING IS NOT ATTAINED, SUBMIT A REPAIR PLAN TO THE ENGINEER. THE DEPARTMENT WILL NOT PAY FOR THE REPAIR COSTS TO ENSURE FULL SEATING ON BEARINGS.

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

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

ITEM 516 - ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE NEOPRENE), AS PER PLAN.

THIS WORK SHALL INCLUDE FABRICATION AND INSTALLATION OF ELASTOMERIC BEARINGS TO REPLACE THE EXISTING ABUTMENT BEARINGS. THE UNIT PRICE BID SHALL INCLUDE ALL MATERIALS, LABOR, TESTING, AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC BEARINGS (EACH). PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE BID FOR EACH ITEM 516 - ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN.

ITEM 517 - RAILING, MISC.: CONCRETE RAILING WITH ASHLAR STONE FORMLINER

THE VOLUME OF CONCRETE REQUIRED PER ODOT STANDARD DRAWING SBR-1-20 FOR CONSTRUCTION OF PARAPETS AND ANY ADDITIONAL CONCRETE NEEDED TO CREATE THE FORMLINED ARCHITECTURAL TREATMENT SHALL BE INCLUDED IN ITEM 517 RAILING, MISC.: CONCRETE RAILING WITH ASHLAR STONE FORMLINER FOR PAYMENT. THE CONCRETE SHALL MEET THE SPECIFICATIONS PER ITEM 511 CLASS QC3 CONCRETE MISC.: SUPERSTRUCTURE CONCRETE, AS PER PLAN (FOR PARAPETS AND DECK SLAB). ALL MATERIALS AND LABOR REQUIRED FOR APPLICATION OF THE FORMLINERS AND SURFACE SEALING SHALL ALSO BE INCLUDED WITH ITEM 517 RAILING, MISC.: CONCRETE RAILING WITH ASHLAR STONE FORMLINER.

A. GENERAL

THE WORK TO BE DONE UNDER THIS ITEM SHALL INCLUDE THE CONSTRUCTION OF TEXTURED AND COLORED CONCRETE SURFACES USING FORM LINERS AND A COLOR STAIN SYSTEM DESIGNED TO DUPLICATE CLOSELY THE APPEARANCE OF NATURAL STONE.

THE MANUFACTURER(S) OF THE FORM LINER AND COLOR STAIN SYSTEM SHALL HAVE FIVE (5) YEARS EXPERIENCE MAKING FORM LINERS AND COLOR STAINS TO MATCH NATURAL STONE SHAPES, SURFACE TEXTURES AND COLORS. THE PATTERN AND COLORING SHALL FOLLOW THE MANUFACTURER'S STANDARD DETAILS AND SPECIFICATIONS FOR THE CHOSEN DESIGN. THE CONTRACTOR SHALL HAVE A MINIMUM OF FIVE (5) YEARS EXPERIENCE WITH CONSTRUCTING VERTICALLY FORMED ARCHITECTURAL CONCRETE AND SHALL BE TRAINED IN THE MANUFACTURER'S SPECIAL TECHNIQUES IN ORDER TO ACHIEVE THE DESIRED CONCRETE APPEARANCE.

FOR THE BASE BID THE FORM LINER PATTERN TO BE USED ON THE PARAPETS SHALL BE "RUSTIC ASHLAR #11003" AS MANUFACTURED BY CUSTOM ROCK INTERNATIONAL WWW.CUSTOMROCK.COM, FITZGERALD FORMLINERS WWW.FORMLINERS.COM, SPEC FORMLINERS WWW.SPECFORMLINERS.COM, OR APPROVED EQUAL. THE LOCAL REPRESENTATIVE FOR CUSTOM ROCK INTERNATIONAL IS BOMANITE DESIGNS, INC., 6001 PINECONE DRIVE, MENTOR, OHIO 44060, PH: (440) 350-3900. THE ARCHITECTURAL RELIEF SHALL NOT EXCEED 2". THERE SHALL BE A 4" CONCRETE CAP ON ALL THE PARAPETS AS DETAILED IN THE PLANS.

B. PRODUCTS

FORM LINERS SHALL BE REUSABLE, MADE OF HIGH STRENGTH URETHANE OR ABS AND BE EASILY ATTACHABLE TO CONCRETE FORMS. THEY SHALL NOT COMPRESS MORE THAN ONE-QUARTER INCH (1/4") WHEN CONCRETE IS POURED AT A RATE OF TEN VERTICAL FEET (10'-0") PER HOUR. FORM LINERS SHALL BE REMOVABLE WITHOUT CAUSING DETERIORATION OF THE CONCRETE SURFACE OR ANY UNDERLINING CONCRETE. USE A RELEASE AGENT THAT IS COMPATIBLE WITH THE FORM LINER AND WITH THE COLOR STAIN SYSTEM TO BE APPLIED TO THE CONCRETE SURFACES AND PROVIDE THE ENGINEER WITH THE MANUFACTURER'S SPECIFICATIONS FOR PRODUCT APPLICATION.

METAL OR FIBERGLASS FORM TIES SHALL BE USED. FORM TIES SHALL BE DESIGNED TO SEPARATE A MINIMUM OF ONE INCH (1") BACK FROM THE FINISHED SURFACE LEAVING ONLY A NEAT HOLE THAT CAN BE PLUGGED WITH PATCHING MATERIAL. A SAMPLE AND/OR DESCRIPTION OF THE FORM TIE SHOWING ITS METHOD OF SEPARATION WHEN FORMS ARE REMOVED SHALL BE SUPPLIED TO THE ENGINEER FOR APPROVAL PRIOR TO USE.

BUT-US 27-0.80

MODEL: Sheet PAPER: 34x22 (in.) DATE: 3/23/2023 TIME: 9:58:42 AM USER: gorsler P:\PR9470\102769\400-Engineering\Structures\SFN_10270080\Sheets\102769_SFN_0900605_SN001.dgn

GENERAL NOTES - 1
BUT-27-0080 L/R
US 27 OVER SR 128

SFN 0900575

SFN 0900605

DESIGN AGENCY



DESIGNER CHECKER
XAC SJA

REVIEWER

MAB 05/26/21

PROJECT ID
102769

SUBSET TOTAL
2 18

SHEET TOTAL
P.26 42

GENERAL NOTES (CONTINUED):

ITEM SPECIAL STRUCTURES: CONSULTANT FOR CONCRETE QUALITY CONTROL INCLUDING TESTING AND INSPECTION

ALL CONCRETE SHALL BE TESTED. ALL TESTING, INSPECTION AND QUALITY CONTROL FOR CONCRETE, NOT INCLUDED UNDER QC/QA PAY ITEMS, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL PROVIDE A CONCRETE TESTING CONSULTANT WITH PREVIOUS EXPERIENCE AND FAMILIARITY IN ODOT PROCEDURES, CONCRETE TESTING REQUIREMENTS AND CONCRETE TESTING DOCUMENTATION. AT LEAST 30 DAYS PRIOR TO CONCRETE PLACEMENT, SUBMIT TO THE ENGINEER FOR APPROVAL, THE PROPOSED CONCRETE TESTING CONSULTANT ALONG WITH THE RESUMES OF THE PROPOSED TESTING PERSONNEL.

TESTING CONCRETE FOR STRUCTURES AND PORTLAND CEMENT CONCRETE PAVEMENT SHALL BE PERFORMED AS OUTLINED IN CONSTRUCTION AND MATERIAL SPECIFICATIONS 455.

THROUGH THE CONTRACTOR, THE CONSULTANT SHALL BE RESPONSIBLE FOR ENSURING THAT ALL CONCRETE PLACED IS IN ACCORDANCE WITH THE SPECIFICATIONS. SUCH WORK SHALL BE IN ACCORDANCE WITH THE APPLICABLE CONSTRUCTION AND MATERIAL SPECIFICATIONS AND THE ODOT CONSTRUCTION INSPECTION MANUAL OF PROCEDURES FOR CONCRETE. THE CONCRETE CONSULTANT SHALL PROVIDE THE NECESSARY TRAINED TECHNICIAN(S) AND EQUIPMENT AND SHALL FURNISH THE PROJECT ENGINEER WITH TWO (2) COPIES OF ALL TEST RESULTS WITHIN 24 HOURS AFTER COMPLETION OF CONCRETE PLACEMENT.

THE TECHNICIANS SHALL BE ACI LEVEL 1 CERTIFIED AND WILL BE REQUIRED TO DEMONSTRATE HIS/HER COMPETENCE AND EXPERIENCE LEVELS TO THE ENGINEER PRIOR TO BEGINNING WORK. THE ENGINEER WILL ORDER THE CONTRACTOR TO REPLACE ANY TECHNICIAN THAT IS NOT VERSED IN THE REQUIRED TESTING PROCEDURE.

THE TECHNICIAN SHALL VERBALLY NOTIFY THE ODOT PROJECT ENGINEER OF ANY FAILING TESTS AND SHALL SUBMIT FOLLOW-UP WRITTEN NOTIFICATION TO THE PROJECT ENGINEER OF REMEDIAL ACTION(S) TAKEN. TESTS SHALL BE TAKEN AS SPECIFIED WITHIN THE CONSTRUCTION AND MATERIAL SPECIFICATIONS, CONCRETE MANUAL OR APPROPRIATE SUPPLEMENTAL SPECIFICATION AS LISTED IN THE PROPOSAL GOVERNING THE PROJECT. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO MAKE IMMEDIATE CORRECTIONS OR ADJUSTMENTS TO THE CONCRETE MIX VIA DIRECT COMMUNICATION WITH THE CONCRETE SUPPLIER'S PLANT PERSONNEL TO MAINTAIN UNINTERRUPTED COMPLIANCE WITH THE SPECIFICATIONS UPON NOTIFICATION OF CONCRETE MIX NON-COMPLIANCE BY THE CONSULTANT TECHNICIAN. THE PROJECT ENGINEER MAY REQUIRE MORE FREQUENT TESTING AS CONDITIONS WARRANT.

UPON COMPLETION OF DAILY CONCRETE PLACEMENT(S), THE CONCRETE CONSULTANT SHALL PROVIDE THE PROJECT ENGINEER WITH DAILY TEST REPORTS, TE-45'S, INSPECTORS DAILY REPORT AND SUPPORTING DOCUMENTATION FOR EACH ITEM OF CONCRETE WORK PERFORMED SEPARATED BY MIX DESIGN. SUBSEQUENTLY, UPON COMPLETION OF AN ENTIRE CONCRETE SPECIFICATION ITEM, THE CONCRETE CONSULTANT SHALL ALSO PROVIDE THE PROJECT ENGINEER WITH TWO (2) COPIES OF AN ADDITIONAL INSPECTION REPORT BY A REGISTERED PROFESSIONAL ENGINEER, STATE OF OHIO, WHICH CONTAINS THE TESTING RESULTS SUMMARY FOR EACH ITEM BY CONTRACT REFERENCE NUMBER AND THE CONSULTANT'S CONCLUSIONS RELATIVE TO SPECIFICATION COMPLIANCE FOR ALL CONCRETE TESTING WORK.

THE ODOT PROJECT ENGINEER RESERVES THE RIGHT TO MAKE UNANNOUNCED QUALITY-CONTROL TESTS TO VERIFY PROCEDURES USED AND RESULTS BEING OBTAINED BY THE CONTRACTOR. THE CONCRETE TECHNICIAN SHALL WORK UNDER THE DIRECTION OF A REGISTERED PROFESSIONAL ENGINEER, STATE OF OHIO, WHO WILL MONITOR THE CONCRETE TEST RESULTS. THE FINAL INSPECTION REPORTS FOR EACH COMPLETED ITEM SHALL BE SIGNED BY A REGISTERED PROFESSIONAL ENGINEER, STATE OF OHIO, CERTIFYING THAT ALL CONCRETE TESTS PROVIDED BY THE CONTRACTOR MET APPLICABLE CONTRACT REQUIREMENTS. A FINAL REPORT ISSUED BY THE CONSULTING FIRM SHALL CONTAIN A CERTIFIED STATEMENT OF COMPLIANCE WITH ODOT SPECIFICATIONS AND ANY OTHER CONCLUSIONS REGARDING THE CONCRETE MATERIALS INCORPORATED INTO THE PROJECT. SUCH STATEMENT SHALL BE SIGNED BY A REGISTERED PROFESSIONAL ENGINEER, STATE OF OHIO. AND, THE CONCRETE CONSULTANT SHALL BE REQUIRED TO ATTEND MONTHLY PROGRESS MEETINGS AS REQUIRED BY THE PROJECT ENGINEER.

ADDITIONALLY, THE CONTRACTOR SHALL BE REQUIRED TO KEEP A POSTED LIST OF BEAM AND CYLINDER IDENTIFICATION NUMBERS FOR THE PURPOSE OF IDENTIFYING THE CORRESPONDING PLACEMENT LOCATION AND CONCRETE SPECIFICATION ITEM.

PAYMENT SHALL BE BID AS LUMP SUM FOR ITEM SPECIAL STRUCTURES: CONSULTANT FOR CONCRETE QUALITY CONTROL INCLUDING TESTING AND INSPECTION. THE ITEM WILL BE PAID FOR AS FOLLOWS:

- UPON APPROVAL OF CONSULTANT 20%
- PROGRESSIVE EQUIVALENT PAYMENTS 50%
- UPON SUBMISSION OF FINAL REPORT 30%

THE TECHNICIAN SHALL HAVE THE FULL EFFECT AND AUTHORITY OF AN ODOT PROJECT INSPECTOR IN DETERMINING ACCEPTABILITY OF MATERIAL AND CONCRETE PLACEMENT PRACTICES.

ITEM 511 - CLASS QC3 CONCRETE, MISC.: SUPERSTRUCTURE CONCRETE WITH QC/QA, AS PER PLAN (FOR PARAPETS AND DECK SLAB)

ITEM 511 - CLASS QC3 CONCRETE, MISC.: SUBSTRUCTURE CONCRETE, AS PER PLAN (ABUTMENT AND WING WALLS)
THIS ITEM MODIFIES THE STANDARD 511 CONCRETE FOR STRUCTURES SPECIFICATION TO INCLUDE MACRO-SYNTHETIC AND CORROSION INHIBITORS INTO THE SUPERSTRUCTURE AND SUBSTRUCTURE CONCRETE. THIS ITEM SHALL CONFORM TO CMS 511 WITH THE FOLLOWING CONDITIONS AND REVISIONS:

PROVIDE MATERIALS CONFORMING TO 511.02 EXCEPT AS MODIFIED BELOW:

~~PORTLAND CEMENT CONCRETE 499.03 CLASS QC 3 MEETING A DESIGN STRENGTH OF 4,500 PSI (SUPERSTRUCTURE) OR 4,000 PSI (SUBSTRUCTURE), WITH MACRO-SYNTHETIC FIBERS WITH MODIFICATION PER 511.02~~

FIBERS FOR CONCRETE ASTM C 1116, TYPE III
CORROSION INHIBITOR 515.15

THE CLASS QC3 CONCRETE FOR THE SUPERSTRUCTURE AND SUBSTRUCTURE SHALL MEET THE FOLLOWING CRITERIA: WATER/CEMENT RATIO = 0.40 MAXIMUM; MINIMUM 4 LBS/CY MACRO-SYNTHETIC FIBERS (1.0 IN. MIN. TO 2.5 IN. MAX.) MEETING ASTM C1116 TYPE III SHALL BE ADDED TO THE MIX.

MIX SHALL INCLUDE A MIGRATING CORROSION INHIBITOR AS MANUFACTURED BY AN APPROVED SUPPLIER LISTED ON ODOT'S QUALIFIED APPROVED SUPPLIERS, ITEM 515.15. THE DOSAGE RATE LISTED ON THE ODOT QUALIFIED APPROVED SUPPLIERS LIST WILL APPLY.

THE MACRO-SYNTHETIC FIBERS SHALL BE INCORPORATED INTO THE MIX IN SUCH A WAY THAT NO 'BALLING' OCCURS. UPON INSPECTION OF THE MIX AT THE TIME OF PLACEMENT, IF ANY 'BALLING' OCCURS, THE ENGINEER SHALL REJECT THE REMAINDER OF THE LOAD AT ANY TIME DURING THE POUR. IT IS IMPORTANT TO FOLLOW INDUSTRY STANDARDS AND ASTM SPECIFICATIONS ON THE PREMIXING OF THE CEMENT, AGGREGATE AND MACRO-SYNTHETIC FIBERS PRIOR TO THE ADDITION OF WATER AND ADMIXTURES. PROVIDE MACRO-SYNTHETIC FIBERS THAT ARE MONOFILAMENT FIBERS MADE FROM VIRGIN POLYPROPYLENE, POLYETHYLENE, OR CO-POLYMERS THAT ARE INERT TO ALKALI ATTACK. ENSURE THE MACRO-SYNTHETIC FIBERS HAVE A MINIMUM TENSILE STRENGTH OF 70 KSI, A MINIMUM MODULUS OF ELASTICITY OF 800 KSI, A MINIMUM FILAMENT DIAMETER OF 0.012 INCHES, AND ASPECT RATIO BETWEEN 60 AND 100, AND ARE BETWEEN 1.0 AND 2.5 INCHES IN LENGTH. STORE THE MACRO-SYNTHETIC FIBERS ACCORDING TO THE MANUFACTURE'S RECOMMENDATION AND KEEP THE MATERIAL FREE FROM DUST, DIRT AND MOISTURE.

USE A MINIMUM DOSAGE RATE OF MACRO-SYNTHETIC FIBERS OF 4.0 LBS/CY OF CONCRETE. DETERMINE THE FINAL PROPOSED DOSAGE RATE THROUGH MIX TESTING. ENSURE THE FIBER REINFORCED CONCRETE MEETS OR EXCEEDS A MINIMUM EQUIVALENT FLEXURAL STRENGTH RATIO OF 25% ACCORDING TO ASTM C 1609. ENSURE THE FINAL PROPOSED MIX IS WORKABLE AND ABLE TO BE PRODUCED SUCH THAT BALLING OR CLUMPING OF THE FIBERS IS NOT A PROBLEM AS DETERMINED BY THE ENGINEER. UTILIZE A LABORATORY REGULARLY INSPECTED BY THE CEMENT AND CONCRETE REFERENCE LABORATORY (CCRL) OF THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, OR OTHER APPROVED REFERENCE LABORATORY, TO PERFORM THE TESTING. BEFORE USE, SUBMIT DOCUMENTATION TO THE PROJECT ENGINEER CERTIFYING BOTH THE MACRO-SYNTHETIC FIBERS AND THE MIX MEET OR EXCEED THE REQUIRED PROPERTIES. SAMPLING WILL BE ALLOWED FOR TESTING PURPOSES. A DEMONSTRATION OF THE MIX PRODUCTION OR TRIAL MIX, MAY BE REQUIRED BY THE ENGINEER PRIOR TO PLACING ANY OF THE MIX ON THE PROJECT.

THE BATCH WEIGHTS SHALL BE CORRECTED TO COMPENSATE FOR THE MOISTURE CONTAINED IN THE AGGREGATE AT THE TIME OF USE. A CHEMICAL ADMIXTURE (705.12, TYPE A OR D) SHALL BE USED. THE TRANSIT MIXER CHARGE SHALL BE LIMITED TO 3/4 OF ITS RATED CAPACITY OR 6 CUBIC YARDS, WHICHEVER IS SMALLER. THE FIRST THREE TRANSIT MIXER LOADS ARE REQUIRED TO BE AT THE MINIMUM YARDAGE LISTED ABOVE TO SHOW PROOF OF THE SUCCESSFUL BATCHING OPERATION. AFTER CONSISTENCY IN THE DELIVERED MATERIAL HAS BEEN ESTABLISHED, THE CONCRETE SUPPLIER MAY INCREASE THE BATCH DELIVERED QUANTITIES AS LONG AS THE QUALITY REMAINS ACCEPTABLE TO THE ENGINEER. THE ENGINEER CAN REDUCE THE BATCH LOAD SIZE AT ANY TIME AS NEEDED TO CORRECT/IMPROVE CONCRETE QUALITY.

CONCRETE SUPPLIERS SHOULD RECOGNIZE THAT THE CORROSION INHIBITOR AND ADMIXTURES MAY HAVE AN EFFECT ON STRENGTH, ENTRAINED AIR CONTENT, WORKABILITY, ETC. OF THEIR CONCRETE MIXES. THE CORROSION INHIBITOR IS SUGGESTED TO BE A MCI PRODUCT BY CORTEC OR AN APPROVED EQUAL FROM THE QUALIFIED PRODUCTS LIST. THE CONCRETE SUPPLIER'S CHOICE OF ONE OF THESE CORROSION INHIBITORS DOES NOT ALLEVIATE MEETING DESIGN REQUIREMENTS. PLEASE BE ADVISED THAT SOME PRODUCTS ON THE LIST EFFECT THE DELIVERED MIX PROPERTIES GREATLY WHILE OTHER PRODUCTS DO NOT.

APPROACH SLABS, DIAPHRAGMS, AND BRIDGE RAILING CONCRETE (WHEN APPLICABLE) ARE TO USE THE SAME MIX DESIGN AS THE BRIDGE DECK. THE CONTRACTOR SHOULD BE ADVISED THAT CONCRETE RETARDING AGENTS MAY NEED TO BE ADDED TO OFFSET THE EFFECTS OF THE MIGRATING CORROSION INHIBITOR SELECTED. USE SELF-COMPACTING CONCRETE ON DECORATIVE RAILING SIMILAR TO TEXAS RAILING AND MACRO-SYNTHETIC CONCRETE PER THIS SPECIFICATION ON TRADITIONAL CONCRETE RAILING WHEN APPLICABLE. USE MACRO-SYNTHETIC CONCRETE PER THIS SPECIFICATION FOR THE RAILING ON THIS PROJECT.

THE CONTRACTOR SHALL PROVIDE TRADITIONAL BRIDGE DECK FORMS CONFORMING TO CMS 508. PERMANENT STAY-IN-PLACE (SIP) FORMS ARE NOT ALLOWED. THE PLACING OF THE DECK AND THE APPROACH SLABS IN THE SAME CONCRETE POUR IS NOT PERMITTED.

UTILITIES:
DUKE ENERGY ELECTRIC
DUKE ENERGY ELECTRIC REPORTS NO CONFLICTS WITH ITS FACILITIES WITH THE WORK BEING DONE. THE CONTACT ON THIS PROJECT IS AARON WRIGHT AT 513-514-8209.

DUKE ENERGY GAS
DUKE ENERGY GAS HAS FACILITIES WITHIN THE PROJECT LIMITS, AS THEY HAVE AN UNDERGROUND GAS LINE ALONG THE S SIDE OF SR 128 BY THE GUARDRAIL. THIS GUARDRAIL WILL BE REPLACED AND A TYPE E ANCHOR ASSEMBLY WILL BE ADDED. THE GAS LINE WILL STAY IN PLACE, AS THE GUARDRAIL WILL BE EXTENDED AND A POST WILL BE OMITTED TO NOT CONFLICT WITH THE LINE. THE CONTACT ON THIS PROJECT IS BRAD STEINMETZ AT 513-287-1460.

ALTA FIBER
ALTA FIBER REPORTS NO CONFLICTS WITH ITS FACILITIES WITH THE WORK BEING DONE. ALTA FIBER HAS 2 COPPER LINES AND 2 FIBER OPTIC AERIAL LINES ALONG THE S SIDE OF SR 128 THAT WILL REMAIN IN PLACE. THE CONTACT ON THIS PROJECT IS AARON WRIGHT AT 513-514-8209.

CHARTER COMMUNICATIONS
CHARTER COMMUNICATIONS HAS FACILITIES ON THE SAME POLES AS CINCINNATI BELL, AND THEREFORE REPORTS NO CONFLICTS WITH ITS FACILITIES WITH THE WORK BEING DONE. THE CONTACT ON THIS PROJECT IS PAUL BIRETTA AT 513-386-5808.

BUTLER COUNTY WATER & SEWER
BUTLER COUNTY WATER & SEWER HAS FACILITIES WITHIN THE PROJECT LIMITS. BUTLER COUNTY WATER & SEWER HAS MANHOLES AND A SEWER MAIN ON THE SOUTH SIDE OF OF SR 128. SOME OF THIS SEWER IS IN THE EXISTING PAVEMENT. A NOTE WILL BE INCLUDED IN THE PLANS FOR THE CONTRACTOR TO USE CAUTION WHEN PLACING ANY NEW GUARDRAIL POSTS IN ORDER O AVOID THE SEWER MAIN AND MANHOLES. THE CONTACT ON THIS PROJECT IS TIM MCQUEEN AT 513-785-5168.

SOUTHWEST REGIONAL WATER DISTRICT
SOUTHWEST REGIONAL WATER DISTRICT HAS FACILITIES WITHIN THE PROJECT LIMITS. SOUTHWEST WATER HAS AN UNDERGROUND WATERMAIN ADJACENT TO THE GUARDRAIL ON THE NORTH SIDE OF NB SR 128, AND THIS GUARDRAIL WILL BE EXTENDED AS PART OF THE PROJECT. A NOTE WILL BE INCLUDED IN THE PLANS FOR THE CONTRACTOR TO USE CAUTION WHEN PLACING NEW GUARDRAIL POSTS IN ORDER TO AVOID THE WATER MAIN. THE CONTACT ON THIS PROJECT IS TOM PUCKETT AT 513-896-3350.

ODOT DISTRICT 8
ODOT DISTRICT 8 HAS FACILITIES WITHIN THE PROJECT LIMITS. ODOT HAS UNDERGROUND HIGHWAY LIGHTING CABLE ADJACENT TO THE GUARDRAIL ON THE NORTH SIDE OF NB SR 128. THE CONTRACTOR WILL USE CAUTION WHEN PLACING NEW GUARDRAIL POSTS IN ORDER TO AVOID THE CABLE. THE CONTACT ON THIS PROJECT IS JIM JUDD AT 513-933-6692.

GENERAL NOTES - 3
BUT-27-0080 L/R
US 27 OVER SR 128

SFN	0900575
SFN	0900605
DESIGN AGENCY	
B&N burgessniple.com	
DESIGNER	CHECKER
XAC	SJA
REVIEWER	
MAB	05/26/21
PROJECT ID	
102769	
SUBSET	TOTAL
4	18
SHEET	
TOTAL	
P.28	42

BUT-27-0800 ESTIMATED BRIDGE QUANTITIES							CALC.	DATE	CHK'D	DATE
ITEM	ITEM EXT.	TOTAL	ALT. BID	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GENERAL	SHT. REF.
203	11203	LS			PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN					2/18
509	10000	13,215		LB	EPOXY COATED REINFORCING STEEL	2341		10,874		
509	20001	100		LB	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN				100	2/18
509	30020	12,785		FT	NO. 4 GFRP DEFORMED BARS			12,785		
509	40000	7369		LB	REINFORCING STEEL, MISC.: GALVANIZED REBAR			7369		
510	10000	2144		EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	360		1784		
511	53014	23		CY	CLASS QC3 CONCRETE, MISC.: SUPERSTRUCTURE CONCRETE, AS PER PLAN (FOR PARAPET AND DECK SLAB)	23				
511	53014	15		CY	CLASS QC3 CONCRETE, MISC.: SUBSTRUCTURE CONCRETE, AS PER PLAN (FOR ABUTMENT AND WING WALLS)			15		
512	10101	1285		SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	217	505	563		2/18
512	73500	1535		SY	TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN			1535		
513	21500	5396		LB	REPLACEMENT OF DETERIORATED END CROSSFRAMES			5396		
514	00050	17,150		SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL			17,150		
514	00056	17,150		SF	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT			17,150		
514	00060	17,150		SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT			17,150		
514	00066	17,150		SF	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, FINISH COAT			17,150		
514	00504	30		MNHR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL			30		
514	10000	12		EACH	FINAL INSPECTION REPAIR			12		
516	11210	185		FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL			185		
516	44101	20		EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), 1'-0"x1'-2"x2 3/4", AS PER PLAN	20				2/18
516	47001	LS			JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN					2/18
517	76300	841		FT	RAILING, MISC.: CONCRETE RAILING WITH ASHLAR STONE FORMLINER, AS PER PLAN			841		2/18
518	12700	16		EACH	SCUPPER, VERTICAL EXTENSION			16		
519	11101	142		SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	91	51			3/18
530	00200	LS			SPECIAL - STRUCTURE (CONSULTANT FOR CONCRETE QUALITY CONTROL INCLUDING TESTING AND INSPECTION)					4/18
625	25500	841		FT	CONDUIT, 3", 725.04			841		

ESTIMATED QUANTITIES
 BUT-27-0080 L/R
 US 27 OVER SR 128

SFN 0900575

SFN 0900605

DESIGN AGENCY



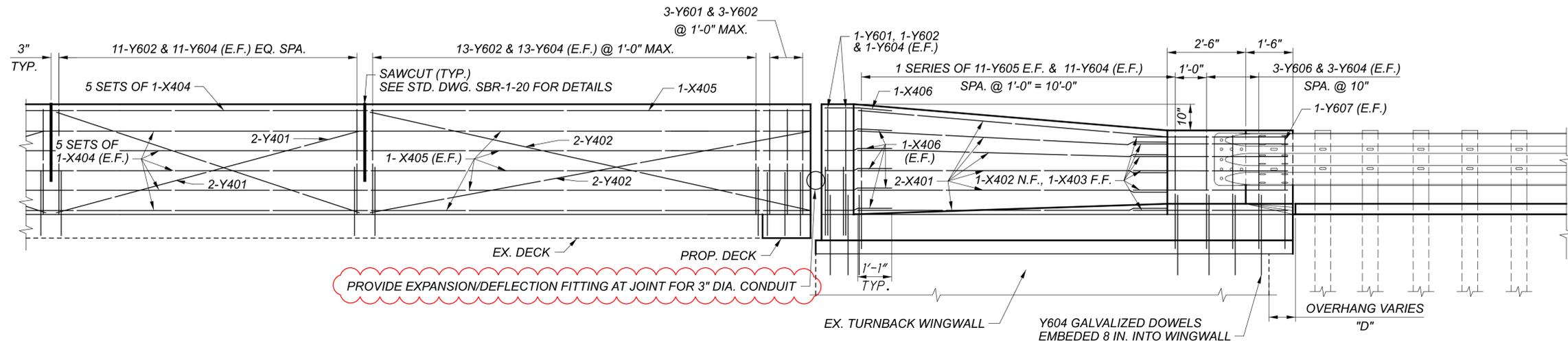
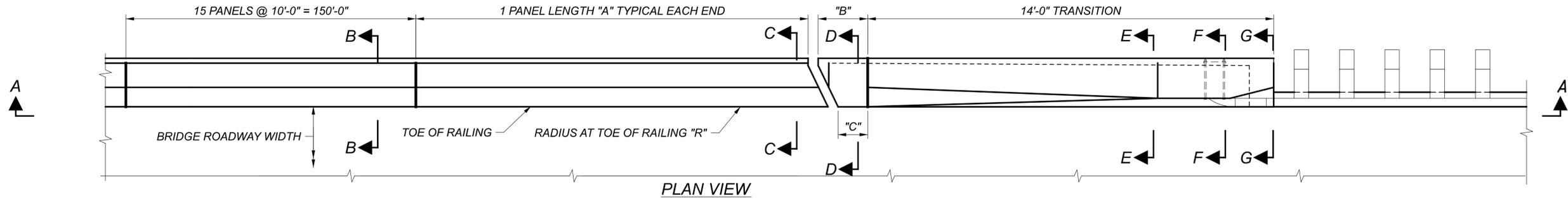
DESIGNER CHECKER
 XAC SJA

REVIEWER
 MAB 05/26/21

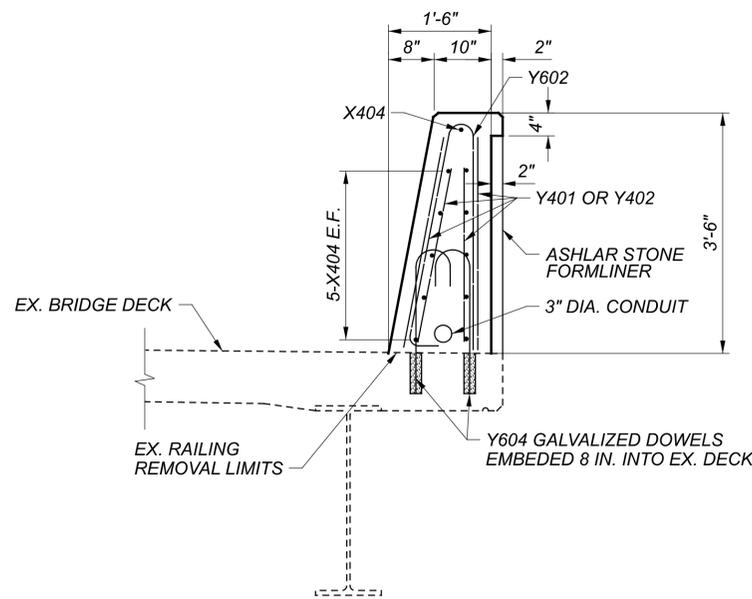
PROJECT ID
 102769

SUBSET TOTAL
 5 18

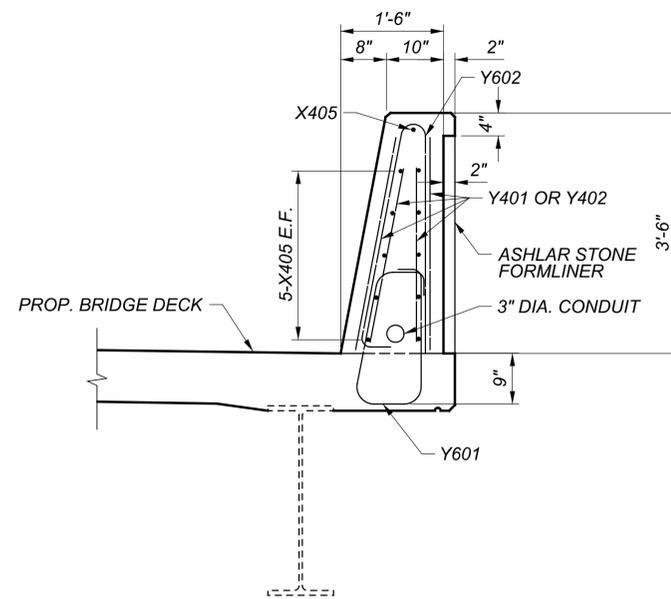
SHEET TOTAL
 P.29 42



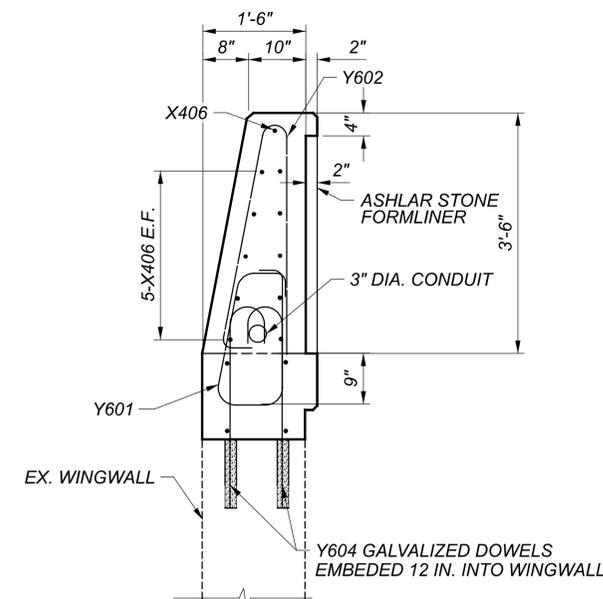
SECTION A-A



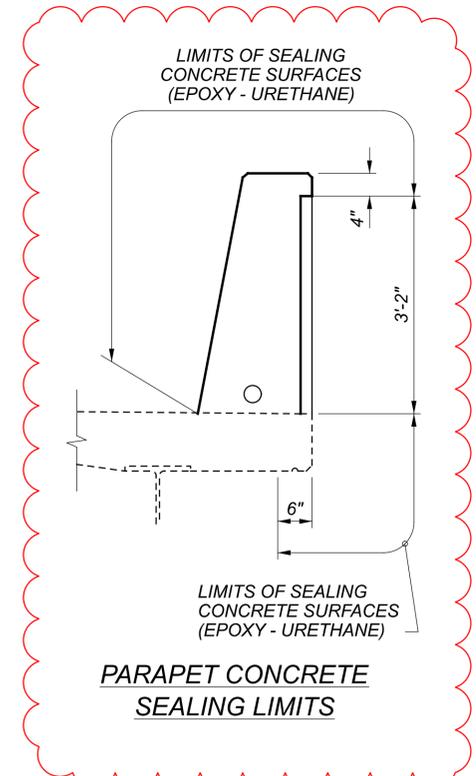
SECTION B-B



SECTION C-C



SECTION D-D



NOTES:

1. SEE STD. DWG. SBR-1-20 FOR DETAILS NOT SHOWN.
2. SEE GENERAL NOTES FOR PARAPET FORMLINER.
3. FOR DIMSION "A", "B", "C" AND "D", SEE SHEET 17/18.
4. FOR SECTION E-E, F-F AND G-G, SEE SHEET 17/18.
5. FOR WINGWALL DETAILS, SEE SHEET 11/18.