STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):

AS-2-15 REVISED 7/21/2023

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION(S):

844 REVISED 1/17/2025
848 REVISED 7/19/2024

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.

PROPOSED WORK

MAH-680-4.734 (SFN 5006864), MAHONING AVE
- *SEAL EXISTING CONCRETE WEARING SURFACE WITH GRAVITY FED RESIN, INCLUDING THE APPROACH SLABS*
- *PATCH ALL UNSOUND AREAS OF THE CONCRETE WEARING SURFACE, INCLUDING THE APPROACH SLABS*
- *PATCH ALL UNSOUND AREAS OF THE CONCRETE PIERS*
- *SEAL THE CONCRETE PIERS WITH EPOXY-URETHANE SEALER (MATCH EXISTING COLOR)*
- *SPALL REMOVAL IN THE DECK UNDERSIDE BEAM HAUNCHES OVER TRAFFIC LANES*

Removed Neoprene Trough Gland Replacement proposed work

MAH-680-4.955 (SFN 5006902), GLENWOOD AVE
- *PATCH ALL UNSOUND AREAS OF THE CONCRETE WEARING SURFACE, INCLUDING THE APPROACH SLABS*
- *RESET AND REFURBISH ABUTMENT BEARINGS*
- *PATCH ALL UNSOUND AREAS OF THE CONCRETE PIERS AND ABUTMENTS, SEAL PATCHES WITH EPOXY-URETHANE SEALER (MATCH EXISTING COLOR)*
- *SPALL REMOVAL IN THE DECK UNDERSIDE BEAM HAUNCHES OVER TRAFFIC LANES*

MAH-680-5.132 (SFN 5006937), OVER EDWARDS ST
- *SEAL EXISTING CONCRETE WEARING SURFACE WITH GRAVITY FED RESIN, INCLUDING THE APPROACH SLABS*
- *OVERLAY THE APPROACH SLABS WITH A MICRO SILICA FIBER REINFORCED CONCRETE OVERLAY*
- *REMOVE AND REPLACE THE ELASTOMERIC STRIP SEALS*
- *PATCH ALL UNSOUND AREAS OF THE CONCRETE PIERS, SEAL PATCHES WITH EPOXY-URETHANE SEALER (MATCH EXISTING COLOR)*
- *RESET AND REFURBISH ABUTMENT BEARINGS*
- *SPALL REMOVAL IN THE DECK UNDERSIDE BEAM HAUNCHES OVER TRAFFIC LANES*

PROPOSED WORK CONT...

MAH-680-5.601 (SFN 5006961), OVER OAK HILL AVE
- *SEAL EXISTING CONCRETE WEARING SURFACE WITH GRAVITY FED RESIN, INCLUDING THE APPROACH SLABS*
- *PATCH ALL UNSOUND AREAS OF THE CONCRETE WEARING SURFACE, INCLUDING THE APPROACH SLABS*
- *PATCH ALL UNSOUND AREAS OF THE CONCRETE PIERS AND ABUTMENTS, SEAL PATCHES WITH EPOXY-URETHANE SEALER (MATCH EXISTING COLOR)*
- *RESET AND REFURBISH ABUTMENT BEARINGS*

MAH-680-6.037 (SFN 5007089), W WOODLAND AVE
- *PATCH ALL UNSOUND AREAS OF THE CONCRETE PIERS, SEAL PATCHES WITH EPOXY-URETHANE SEALER (MATCH EXISTING COLOR)*

MAH-680-6.116 (SFN 5001986), MARKET ST
- *PATCH ALL UNSOUND AREAS OF THE CONCRETE PIERS, SEAL PATCHES WITH EPOXY-URETHANE SEALER (MATCH EXISTING COLOR)*
- *PATCH UNSOUND AREAS OF THE CONCRETE RETAINING WALL ADJACENT TO THE STRUCTURE*
- *SEAL THE RETAINING WALLS ADJACENT TO THE STRUCTURE WITH NON-EPOXY SEALER*

MAH-680-6.377 (SFN 5007143), OVER US 62D & SR 7D
- *SEAL EXISTING CONCRETE WEARING SURFACE WITH GRAVITY FED RESIN, INCLUDING THE APPROACH SLABS*
- *PATCH ALL UNSOUND AREAS OF THE CONCRETE PIERS, SEAL PATCHES WITH EPOXY-URETHANE SEALER (MATCH EXISTING COLOR)*

MAH-680-6.421 (SFN 5007178), WAYNE AVE
- *PATCH ALL UNSOUND AREAS OF THE CONCRETE PIERS, SEAL PATCHES WITH EPOXY-URETHANE SEALER (MATCH EXISTING COLOR)*

MAH-62-17.499 (SFN 5007208), OVER IR 680
- *SEAL EXISTING CONCRETE WEARING SURFACE WITH GRAVITY FED RESIN, INCLUDING THE APPROACH SLABS*
- *PATCH ALL UNSOUND AREAS OF THE CONCRETE PIERS, SEAL PATCHES WITH EPOXY-URETHANE SEALER (MATCH EXISTING COLOR)*

MAH-680-6.933 (SFN 5007232), OVER DELASON AVE
- *SEAL EXISTING CONCRETE WEARING SURFACE WITH GRAVITY FED RESIN, INCLUDING THE APPROACH SLABS*
- *SEAL THE CONCRETE PARAPETS WITH EPOXY-URETHANE SEALER (MATCH EXISTING COLOR)*

MAH-680-6.983 (SFN 5007267), OVER YOUNGSTOWN & SE RR
- *SEAL EXISTING CONCRETE WEARING SURFACE WITH GRAVITY FED RESIN, INCLUDING THE APPROACH SLABS*
- *SEAL THE CONCRETE PARAPETS WITH EPOXY-URETHANE SEALER (MATCH EXISTING COLOR)*

MAH-680-7.126 (SFN 5003350), SOUTH AVE
- *REMOVE THE EXISTING FORWARD AND REAR SLIDING PLATE EXPANSION JOINTS AND REPLACE WITH AN ADHESIVE JOINT SEAL SYSTEM*
- *REMOVE THE EXISTING CENTERLINE EXPANSION JOINT AND REPLACE WITH AN ADHESIVE JOINT SEAL SYSTEM.*
- *PATCH ALL UNSOUND AREAS OF THE CONCRETE WEARING SURFACE, INCLUDING THE APPROACH SLABS*
- *SEAL EXISTING CONCRETE WEARING SURFACE WITH GRAVITY FED RESIN, INCLUDING THE APPROACH SLABS*
- *RESET AND REFURBISH ABUTMENT BEARINGS*
- *PATCH ALL UNSOUND AREAS OF THE CONCRETE PIERS, ABUTMENTS AND BACKWALLS, SEAL PATCHES WITH EPOXY-URETHANE SEALER (MATCH EXISTING COLOR)*

MAH-680-7.297 (SFN 5007291), GIBSON ST
- *PATCH ALL UNSOUND AREAS OF THE CONCRETE PIERS, SEAL PATCHES WITH EPOXY-URETHANE SEALER (MATCH EXISTING COLOR)*

PROPOSED WORK CONT...

MAH-680-6.347SE (SFN 5007119), RAMP IR 680 SB TO US 62 EB
- *SEAL EXISTING CONCRETE WEARING SURFACE WITH GRAVITY FED RESIN, INCLUDING THE APPROACH SLABS*
- *PATCH ALL UNSOUND AREAS OF THE CONCRETE PIERS, SEAL PATCHES WITH EPOXY-URETHANE SEALER (MATCH EXISTING COLOR) AND COMPOSITE FIBER WRAP*

ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN

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

CUT LINE CONSTRUCTION JOINT PREPARATION

PRIOR TO REMOVING THE DECK EDGE, PLACE A 1-IN (+0-IN,-1/4-IN) DEEP SAW CUT AT THE BOUNDARIES OF PROPOSED CONCRETE REMOVALS. IF THERE ARE INTEGRAL CONCRETE PIER CAPS WITHIN THE PROPOSED REMOVAL LIMITS, ALSO SAWCUT THE DECK CONCRETE ALONG THE INTERFACE OF THE DECK AND PIER CAP. 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 509 - REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN

REPLACE ALL 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 516 - REFURBISHING BEARING DEVICES, AS PER PLAN

THIS ITEM SHALL INCLUDE ALL WORK NECESSARY TO PROPERLY ALIGN BRIDGE ABUTMENT BEARINGS, AS WELL AS THEIR CLEARNING AND PAINTING. INCLUDED SHALL BE THE DISASSEMBLY OF THE BEARINGS, HAND TOOL CLEANING (GRINDING IF NECESSARY), PAINTING ACCORDING TO ITEM 514, REPLACEMENT OF ANY DAMAGED SHEET LEAD WITH PREFORMED BEARING PADS (C&MS 711.21), INSTALLATION OF ANY NECESSARY STEEL SHIMS OF THE SAME SIZE AS THE BEARINGS TO PROVIDE A SNUG FIT, REALIGNMENT O FTHE UPPER BEARING PLATE BY REMOVING EXISTING WELDS AND REWELDING SO THAT THE BEARINGS ARE VERTICALLY ALIGNED AT 60 DEGREES FARENHEIT, LUBRICATING SLIDING SURFACES, AND REASSEMBLY OF THE BEARINGS. ASSURE ALL BEARINGS ARE SHIMMED ADEQUATELY AND THAT NO BEAMS AND/OR BEARING DEVICES ARE "FLOATING". AT NO ADDITIONAL COST TO THE STATE, THE CONTRACTOR MAY INSTALL NEW BEARINGS OF THE SAME TYPE AS THE EXISTING IN PLACE OF REFURBISHING THE BEARINGS. ALL WORK SHALL BE TO THE SATIFACTION OF THE ENGINEER. PAYMENT FOR ALL OF THE ABOVE DESCRIBED LABOR AND MATERIALS WILL BE MADE AT THE CONTRACT PRICE BID FOR ITEM 516 - REFURBISH BEARING DEVICES, AS PER PLAN.

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

THIS WORK CONSISTS OF RAISING OR RE-POSITIONING EXISTING STRUCTURES TO THE DIMENSIONS AND REQUIREMENTS DEFINED IN THE PROJECT PLANS. SUBMIT CONSTRUCTION PLANS IN ACCORDANCE WITH C&MS 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 A DISTANCE OF THE SEPARATION IN ACCORDANCE WITH C&MS 512.07. THE DEPARTMENT WILL NOT PAY FOR THE COST OF THIS EPOXY INJECTION OR OTHER REQUIRED REPAIRS. THE BRIDIGE BEARINGS SHALL BE FULLY SEATED 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 - ARMORLESS PREFORMED JOINT SEAL

THIS ITEM OF WORK CONSISTS OF CLEANING, INSPECTING, REMOVING AND INSTALLING NEW ARMORLESS PREFORMED JOINT SEALS. PRIOR TO REMOVING THE EXISTING SEAL THE CONTRACTOR SHALL CLEANOUT AND INSPECT EACH JOINT. ALL DAMAGED OR TORN JOINT SEALS SHALL BE REPLACED UPON THE DIRECTION OF THE ENGINEER. FOR ADDITIONAL NOTES AND DETAILS, SEE SCD AS-2-15.

STRUCTURE NOTES
VARIOUS STRUCTURES ON IR 680
IN MAHONING COUNTY

SFN
VARIOUS

DESIGN AGENCY

DESIGNER	CHECKER
JF	MJA

REVIEWER
TJP 08-08-25

PROJECT ID
121474

SUBSET	TOTAL
1	10

SHEET	TOTAL
P.11	20

MAH-680-4.58 PART 2

MODEL: Sheet 1 PAPERSIZE: 34x22 (in.) DATE: 2/2/2026 TIME: 1:29:11 PM PLTDRV: OHDOT_PDF_E+.pltcfg PENTBL: OHDOT_Pen.tbl USER: Joel.Fitzsimmons@dot.ohio.gov WORKSPACE: OHDOTCEv02 WORKSET: 121474 PRODUCT: OpenRoadsDesigner 24.00.00.205
pw:\\ohiodot-pw.bentley.com:ohiodot-pw-02\Documents\01 Active Projects\District 04\Mahoning\121474\400-Engineering\Roadway\Sheets\121474_SN001.dgn

ITEM SPECIAL - PATCHING CONCRETE STRUCTURES, MISC.:
VES-LMC (VERY EARLY STRENGTH LATEX MODIFIED CONCRETE) CONT...

1.COMPRESSIVE STRENGth, MINIMUM, CONCRETE ASTM C39:
3 HOURS: 2500 PSI
1 DAY: 3500 PSI
7 DAYS: 5000 PSI

2. PRIOR TO PLACING PATCHES THE CONCRETE WILL DEM-STRATE THAT THE CONCRETE MIXTURE WILL OBTAIN A COMPRESSIVE STRENGHT OF AT LEAST 2500 PSI WITHIN THE CURING PERIOD AND AT THE CURING TEMPERATURES IN WHICH THE PATCHES WILL BE PLACED.

3.PERMEABILITY, MAXIMUM AT 28 DAYS, AASHTO T277: 1000 COULOMBS. PERMEABILITY SAMPLES WILL BE MOIST CURED 2 DAYS IN THE MOLDS (1 DAY AT THE JOB SITE AND 1 DAY IN THE LAB). AIR CURED 5 DAYS IN THE MOLDS IN THE LABORATORY, AND 21 DAYS OUT OF THE MOLDS AT 100°F AIR TEMP.

4.BOND STRENGHT, MINIMUM AT 7 DAYS, ASTM C1583 USING TYPE 1, SELF-ALIGNMENT ADHESION TESTER PER ASTM D4541 = 150 PSI.

(NOTE 3): THE LATEX EMULSION WILL BE PROTECTED FROM FREEZING AND PROLONGED EXPOSURE TO TEMPERATURES IN EXCESS OF 85°F. EMULSIONS IN STORAGE FACILITIES WILL BE RE-CIRCULATED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

PROPORTIONING AND MIXING:
ALL MIXING OF MATERIALS WILL BE DONE ON SITE IN A CON-TINUOUS MOBILE MIXER. PRIOR TO EACH DAY'S PLACEMENT, EACH MIXER WILL BE CHECKED TO ASSURE THAT SPECIFIED AIR CONTENT, SLUMP, AND YEILD HAVE BEEN ATTAINED. TRIAL CONCRETE WILL NOT BE INCORPORATED INTO THE WORK. PROPORTIONING AND ALL OTHER REQUIRED CHARACTERISTICS OF THE MIX WILL BE ADJUSTED OFF THE DECK BEFORE PLACEMENT OF THE PATCHES BEGIN.

THE MIXTURE WILL CONSIST OF A WORKABLE MIXTURE OF UNIFORM COMPOSITION AND CONSISTENCY WITH THE FOLLOWING QUANTITIES OF MATERIALS PER CUBIC YARD (DRY WEIGHT):

QUANTITIES OF MATERIALS PER CUBIC YARD (DRY WEIGHT):

TYPE OF COARSE AGGREGATE	FINE AGGREGATE (LB)	COARSE AGGREGATE (LB)	CEMENT (LB)	LATEX EMULSION (GAL)	MAX. NET WATER (GAL)
GRAVEL	1645	1300	658	24.5	17.5
LIMESTONE	1645	1315	658	24.5	17.5
SLAG	1645	1140	658	24.5	17.5

SLUMP: 4 TO 6 INCHES
AIR CONTENT OF PLASTIC MIX WILL NOT EXCEED 7 PERCENT

NOTE: THE SPECIFIC GRAVITY USED FOR DETERMINING THE ABOVE WEIGHTS ARE: NATURAL SAND 2.62, GRAVEL 2.62, LIMESTONE 2.65, AND SLAG 2.30.

NOTE: THE DRY WEIGHTS ARE APPROXIMATE. THIS PROPORTION SHOULD PRODUCE GOOD WORKABILITY, BUT DUE TO GRADATION VARIABILITY, THE FINE AGGREGATE CONTENT MAY BE INCREASED WITH APPROVAL BY THE ENGINEER, AS MUCH AS 8 PERCENT BY WEIGHT IF THE COARSE AGGREGATE IS REDUCED AN EQUAL VOLUME.

NOTE: THE SLUMP WILL NOT BE MEASURED UNTIL AFTER THE CONCRETE HAS BEEN DISCHARGED FROM THE MIXER AND LEFT UNDISTURBED FOR 4 TO 5 MINUTES. THE WATER CONTENT MAY BE ADJUSTED TO CONTROL THE SLUMP WITHIN THE PRESCRIBED LIMITS.

CONTINUOUS MOBILE MIXER:
REQUIREMENTS FOR CONTINUOUS MOBILE MIXERS FOR LATEX MODIFIED CONCRETE ARE AS FOLLOWS: THE PROPORTIONING AND MIXING EQUIPEMENT WILL BE AN INTEGRAL MOBILE UNIT HAVING CAPACITY AND CONTINUOUS MIXING CAPABILITY TO PERMIT THE FINISHING OPERATIONS TO PROCEED AT A CONSTANT RATE SO THAT THE FINAL FINISHING CAN BE COMPLETED PRIOR TO THE FORMATION OF A PLASTIC FILM ON THE VES-LMC SURFACE. IT WILL CONSISTENTLY PRODUCE UNIFORMLY BLENDED MIXTURE WITH THE SPECIFIED AIR CONTENT AND SLUMP LIMITS.

THE MIXER WILL ALSO:
-BE CAPABLE OF PRODUCING NOT LESS THAN 6 CUBIC YARDS OF VES-LMC WITHOUT RECHARGING
-BE EQUIPED WITH A RECORDING METER WITH A TICKET PRINTOUT DEVICE TO RECORD AN INDICATION OF THE CEMENT QUANTITY BEING INTRODUCED INTO THE MIX. THE METERING DEVICE WILL BE ACCURATE WITHIN A TOLERANCE OF -1 TO +3 PERCENT.
-BE EQUIPED WITH A LATEX METERING DEVICE TO INDICATE VOLUME DISPENSED. THE METERING DEVICE WILL BE ACCURATE TO WITHIN A TOLERANCE OF -1 TO +2 PERCENT. IN ADDITION THE LATEX TANK WILL HAVE A STAND PIPE MARKED GALLONS.
-BE EQUIPPED WITH A WATER FLOW INDICATOR AND HAVE A WATER FLOW CONTROL THAT IS READILY ADJUSTABLE TO PROVIDE FOR MINOR VARIATIONS IN AGGREGATE MOISTURE CONTENT. THE FLOW INDICATOR WILL BE ACCURATE WITHIN A TOLERANCE OF +1 PERCENT IN THE RANGE OF EXPECTED USE.
-BE EQUIPPED WITH A CONTROL TO REGULATE THE QUANTITY OF EACH OF THE VES-LMC COMPONENTS TO PERMIT THE PRODUCTION OF THE MIX HAVING THE SPECIFIED COMPOSITION. TO ENSURE THAT THE MIXER CAN ACCURATELY PROPORTION AND BLEND ALL COMPONENTS OF THE VES-LMC ON A CONTINUOS OR INTERMITTENT BASIS. THE MIXER WILL BE CALIBRATED PRIOR TO THE PRODUCTION OF THE MATERIAL.
-THE ENGINEER MAY REQUIRE RE-CALIBRATION OF THE CEMENT, LATEX AND WATER METERING DEVICES AS HE DEEMS NECESSARY.
-BE CAPABLE OF DISCHARGING MIXED VES-LMC THROUGH A CONVENTIONAL CHUTE DIRECTLY IN FRONT OF THE FINISHING MACHINE.
-BE KEPT CLEAN, FREE OF PARTIALLY DRIED OR HARDENED MATERIALS, AND PROPERLY OPERATED AT ALL TIMES.

PLACING, CONSOLIDATING AND FINISHING:
IMMEDIATELY PRIOR TO PLACING THE PATCHES, CLEAN AND WET ALL EXPOSED CONCRETE SURFACES.

CONTINUOUSLY FOG THE VES-LMC MATERIAL FROM THE TIME OF PLACING UNTIL COVERED WITH WET BURLAP. APPLY THE FOG UNIFORMLY OVER THE ENTIRE SURFACE OF THE PATCH AREA WITHOUT PRODUCING STANDING WATER.

SCREEDING:
THE PATCHING MATERIAL WILL BE PLACED, CONSOLIDATED, AND FINISHED TO THE ADJACENT GRADE. PATCHES EXCEEDING 50 SQ FT (4.6 SQ M) WILL BE LEVELED AND CONSOLIDATED WITH A MECHANICAL VIBRATING SCREED. SMALLER PATCHES WILL BE HAND VIBRATED AND LEVELED WITH A STRAIGHTEDGE. THE SCREED WILL BE PLACED PARALLEL TO THE BRIDGE CENTERLINE SO THAT THE DECK PROFILE REMAINS CONSISTENT WITH THE WORN SURFACE.

DO NOT ADD WATER TO AID THE FINISHING AND AN EVAPORATION RETARDANT MAY NOT BE USED.

AFTER THE PATCHES HAVE BEEN CONSOLIDATED AND FINISHED THEY WILL BE TEXTURED IN ACCORDANCE WITH 451.09.
THE CONCTRACTOR WILL TEST THE SURFACE OF THE PLASTIC CONCRETE FOR TRUENESS AND FOR BEING FLUSH WITH THE EDGES OF THE ADJACENT SURFACES BY USE OF A STRAIHT EDGE. THE STRAIGHTEDGE WILL BE DONE BY PLACING THE STRAIGHTEDGE PARALLEL TO THE BRIDGE CENTERLINE WITH THE ENDS RESTING ON THE EXISTING WEARING SURFACE ADJACENT TO THE PATCH AND DRAWING THE STRAIGHT EDGE ACROSS THE PATCH. ANY HIGH OR LOW AREAS EXCEEDING 1/8 INCH IN 10 FEET (3 MM IN 3 M) WILL BE CORRECTED. IF ANY CORRECTIONS ARE MADE, THE SURFACE WILL BE RECHECKED.

CURING:
COVER THE FINISHED PATCHED SURFACES WITH A SINGLE LAYER OF CLEAN WET BURLAP AND COVER THE BURLAP WITH A 4-MIL WHITE OPAQUE POLYETHYLENE FILM FOR A MINIMUM OF 4 HOURS FOLLOWED BY A MEMBRANE CURE PER 511.17 METHOD (B).

ADEQUATE PRECAUTIONS WILL BE TAKEN TO PROTECT THE FRESHLY PLACED VES-LMC FROM RAIN.

THE CONTRACTOR WILL SUPPLY A PROPERLY CALIBRATED IMPACT REBOUND HAMMER TO VERIFY THAT THE PATCHES HAVE REACHED 3000 PSI COMPRESSIVE STRENGTH PRIOR TO OPENING TO TRAFFIC.

INSPECTION AND SOUNDING OF CONCRETE PATCHES:
AFTER CURING AND BEFORE FINAL ACCEPTANCE, ALL PATCHED AREAS WILL BE SOUNDED. ALL DELAMINATED AREAS WILL BE REMOVED AND REPATCHED ACCORDING TO THIS NOTE. ALL PATCHES WHICH ARE SOUND BUT SHOW SIGNS OF CRACKING WILL BE SEALED AND THE PERIMETER OF ALL PATCHES WILL ALSO BE SEALED WITH GRAVITY FED RESIN.

ALL SOUNDING AND REPLACEMENT OF REJECTED AREAS WILL BE THE RESPONSIBILITY OF THE CONCTRACTOR AND INCLUDED IN THE UNIT BID PRICE FOR THIS ITEM.

METHOD OF MEASUREMENT:
PAYMENT WILL BE MADE AT THE CONTRACTOR PRICE PER CUBIC YARD FOR ITEM SPECIAL - PATCHING CONCRETE STRUCTURES, MISC.: VES-LMC (VERY EARLY STRENGTH LATEX MODIFIED CONCRETE) WHICH WILL INCLUDE ALL MATERIALS AND LABOR REQUIRED TO PERFORM THIS WORK INCLUDING REMOVAL AND DISPOSAL OF THE EXISTING MATERIAL.

Removed "Neoprene Trough Gland Replacement" note.

STRUCTURE NOTES
VARIOUS STRUCTURES ON IR 680
IN MAHONING COUNTY

SFN
VARIOUS
DESIGN AGENCY

DESIGNER	CHECKER
JF	MJA

REVIEWER
TJP 08-08-25
PROJECT ID
121474
SUBSET 3 | TOTAL 10
SHEET P.13 | TOTAL 20

MAH-680-4.58 PART 2

MODEL: Sheet 3 PAPERSIZE: 34x22 (in.) DATE: 2/2/2026 TIME: 8:16:51 AM PLTDRV: OHDOT_PDF_E+.pltcfg PENTBL: OHDOT_Pen.tbl USER: Joel.Fitzsimmons@dot.ohio.gov WORKSPACE: OHDOTCEv02 WORKSET: 121474 PRODUCT: OpenRoadsDesigner 24.00.00.205
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CALC:	JF	DATE:	5/29/2025
CHECKED:	MJA	DATE:	9/8/2025

ESTIMATED QUANTITIES

BRIDGE NO. / STRUCTURE FILE NO.															ITEM	EXTENSION	UNIT	DESCRIPTION	SEE SHEET
MAH-680-4.734 5006864 03/IMS	MAH-680-4.955 5006902 03/IMS	MAH-680-5.132 5006937 03/IMS	MAH-680-5.601 5006961 03/IMS	MAH-680-5.815 5007054 03/IMS	MAH-680-6.037 5007089 03/IMS	MAH-680-6.116 5001986 03/IMS	MAH-680-6.377 5007143 03/IMS	MAH-680-6.421 5007178 03/IMS	MAH-62-17.499 5007208 03/IMS	MAH-680-6.933 5007232 03/IMS	MAH-680-6.983 5007267 03/IMS	MAH-680-7.126 5003350 03/IMS	MAH-680-7.297 5007291 03/IMS	MAH-680-6.3475E 5007119 03/IMS					
												LS			202	11201		PORTIONS OF STRUCTURE REMOVED, AS PER PLAN	1 / 10
												4088			509	10000	LB	EPOXY COATED REINFORCING STEEL	
												100			509	20001	LB	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN	1 / 10
				292	845	1352									512	10050	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)	
354	23	9	30		9	6	23	23	17	329	349	12	6	25	512	10100	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
1171		1707	2141				2643		1317	2401	2586	1413		1551	512	73500	SY	TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN	
										329	349				512	74000	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	
625		1477	1386				1566		247	1674	1861	965		1001	512	74500	FT	REMOVAL OF EXISTING PAVEMENT MARKING	
		192										128			516	10010	FT	ARMORLESS PREFORMED JOINT SEAL	
	16	28	24									24			516	45305	EACH	REFURBISH BEARING DEVICE, AS PER PLAN	1 / 10
	LS	LS	LS									LS			516	47001		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN	1 / 10
														454	SPECIAL	51900100	SF	COMPOSITE FIBER WRAP SYSTEM	
7	10		23									9			SPECIAL	51910000	SY	PATCHING CONCRETE BRIDGE DECK OVERLAY WITH MICRO-SILICA MODIFIED CONCRETE	
100	205	75	265		75	50	200	200	150			100	50	220	519	11101	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	2 / 10
												26			SPECIAL	51911900	CY	PATCHING CONCRETE STRUCTURE: VES-LMC (VERY EARLY STRENGTH-LATEX MODIFIED CONCRETE)	2 / 10
												LS			SPECIAL	51960000		PATCHING CONCRETE STRUCTURE: TRIAL BATCH VES-LMC	2 / 10
5	5	5													SPECIAL	53000800	SY	STRUCTURES: CONCRETE SPALL REMOVAL	2 / 10
												582		440	844	20000	EACH	GALVANIC ANODE PROTECTION	2 / 10
		532													848	10000	SY	MICRO SILICA MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION (T = 1 1/4")	
		532													848	20000	SY	SURFACE PREPARATION USING HYDRODEMOLITION (T = 1 1/4")	
		9													848	30000	CY	MICRO SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY	
		16													848	50000	SY	HAND CHIPPING	
		LS													848	50100		TEST SLAB	
																			3 / 10
												133			516	14600	FT	STRUCTURAL JOINT OR JOINT SEALER, MISC.: CENTERLINE EXPANSION JOINT	
												40			SPECIAL	53000600	SF	STRUCTURES: REMOVAL OF ASBESTOS CONTAINING MATERIAL	4 / 10

Removed Item 516, Structural Joint or Joint Sealer, Misc.: Neoprene Trough

STRUCTURE ESTIMATED QUANTITIES
VARIOUS STRUCTURES ON IR 680
IN MAHONING COUNTY

SFN
VARIOUS

DESIGN AGENCY

DESIGNER	CHECKER
JF	MJA

REVIEWER
TJP 08-08-25

PROJECT ID
121474

SUBSET	TOTAL
5	10

SHEET	TOTAL
P.15	20

MAH-680-4.58 PART 2

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 2/2/2026 TIME: 8:18:02 AM PLTDRV: OHDOT_PDF_E+.pltcfg PENTBL: OHDOT_Pen.tbl USER: Joel.Fitzsimmons@dot.ohio.gov WORKSPACE: OHDOTCEv02 WORKSET: 121474 PRODUCT: OpenRoadsDesigner 24.00.00.205
pw:\\ohiodot-pw.bentley.com:ohiodot-pw-02\Documents\01 Active Projects\District 04\Mahoning\121474\400-Engineering\Roadway\Sheets\121474_SQ001.dgn