

PROPOSED WORK

THE WORK IN THIS PROJECT SHALL INCLUDE THE REPAIR AND RESURFACING OF THE BRIDGE DECK AND APPROACH GUARDRAIL, CLEANING AND PAINTING OF PART OF THE STRUCTURAL STEEL, CLEANING OF BRIDGE SEATS AND THE SEALING OF CONCRETE SURFACES OF THE BRIDGE NO. LAK-528-0192 AS SHOWN IN THESE PLANS.

SPECIFICATIONS

ALL MATERIAL AND ITEMS OF WORK SHALL CONFORM TO THE CONSTRUCTION AND MATERIAL SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION DATED JANUARY 1, 1981.

DESIGN LOADING

THESE REPAIRS WILL NOT AFFECT THE ORIGINAL DESIGN LOADING OF CF 130(57).

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM THE PLANS OF THE EXISTING STRUCTURE AND/OR 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 CDS SECTIONS 102.05, AND 513.02.

CONTRACT BID PRICES SHALL BE BASED UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE BY THE CONTRACTOR. HOWEVER, ALL PROJECT WORK SHALL BE BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED BY THE CONTRACTOR IN THE FIELD.

ITEM SPECIAL - EPOXY SEALING OF CONCRETE

THIS ITEM SHALL CONSIST OF CLEANING, BY ABRASIVE BLASTING OR APPROVED HIGH-PRESSURE WATER BLASTING, EXISTING CONCRETE SURFACES AND SEALING BY APPLYING TWO COATS OF AN EPOXY SEALER. THE SEALER SHALL BE AMERICAN META SEAL P.E. 1854 OR OTHER EPOXY SEALER WITH AT LEAST 50% SOLIDS CONTENT AS DETERMINED BY TEST METHODS OUTLINED IN MCHRP 244 TO BE EQUAL IN PERFORMANCE TO P.E. 1854. AFTER BLASTING AND AIR CLEANING THE EPOXY SHALL BE APPLIED TO THE CONCRETE SURFACES UNDER CONDITIONS AND IN THE MANNER SPECIFIED BY THE MANUFACTURER AT THE RATE OF 120 SQUARE FEET PER GALLON FOR EACH COAT. PAYMENT WILL BE MADE FOR THE NUMBER OF SQUARE YARDS OF SURFACE TREATED, INCLUDING SURFACE PREPARATION, MATERIAL MIXING, APPLICATION, PROTECTION AND CURING. ALL EXPOSED CONCRETE SURFACES OF THE PARAPETS, CURBS, SIDEWALKS, ABUTMENTS, AND DECK SHALL BE SEALED. DO NOT SEAL THE UNDERSIDE OF THE DECK BETWEEN THE GIRDERS, THE LMC OVERLAY OR THE BRIDGE PIERS.

ITEM SPECIAL - BRIDGE SEAT CLEANING

THIS ITEM SHALL CONSIST OF REMOVING ALL DIRT AND DEBRIS FROM ABUTMENT BRIDGE SEATS AND BEARINGS. DIRT AND DEBRIS REMOVED FROM THIS STRUCTURE DURING THE CLEANING PROCESS SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR. THIS ITEM SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIAL NECESSARY TO COMPLETE THIS WORK.

ITEM 514 - FIELD PAINTING OF EXISTING STEEL

GENERAL

THIS ITEM SHALL CONSIST OF SURFACE PREPARATION, A SPOT PRIME, A COMPLETE PRIME COAT AND TWO COMPLETE FINISH COATS OF THE SPECIFIED AREAS. THE FIRST FINISH COAT WILL BE AS PER ITEM 708.09 AND THE SECOND, TOP COAT, AS PER ITEM 708.08. THE AREAS TO BE PAINTED SHALL BE ALL THE STRUCTURAL STEEL BETWEEN THE ENDS OF THE BRIDGE, BOTH NORTH AND SOUTH, AND THE SECOND SET OF CROSSFRAMES. THE AREAS TO BE PAINTED ARE APPROXIMATELY 25 FEET LONG ON EACH END OF THE BRIDGE AND INCLUDE THE ABUTMENT BEARINGS AND CROSSFRAMES.

COOPERATION OF CONTRACTOR

THE CONTRACTOR SHALL LEAVE HIS LADDERS, PLATFORMS, OR SCAFFOLDS IN PLACE FOR A SUFFICIENT LENGTH OF TIME AND IN SUCH A MANNER AS TO PERMIT THE ENGINEER OR INSPECTOR TO SAFELY EXAMINE THE WORK PERFORMED.

PROTECTION OF PERSONS OR PROPERTY

THE CONTRACTOR SHALL COLLECT, REMOVE AND DISPOSE OF ALL BUCKETS, RAGS, OR OTHER DISCARDED MATERIALS AND HE SHALL LEAVE THE JOB SITE IN A CLEAN CONDITION.

THE CONTRACTOR SHALL PROTECT ALL PORTIONS OF THE STRUCTURE, WHICH ARE NOT TO BE PAINTED, AGAINST DAMAGE OR DISFIGUREMENT BY DRIPS, SPLASHES AND SPATTERS OF PAINT.

WHEN OR WHERE ANY DIRECT OR INDIRECT DAMAGE OR INJURY IS DONE TO PUBLIC OR PRIVATE PROPERTY BY OR ON ACCOUNT OF ANY ACT, OMISSION, NEGLIGENCE OR MISCONDUCT IN THE EXECUTION OF THE WORK, OR IN CONSEQUENCE OF THE NONEXECUTION THEREOF BY THE CONTRACTOR, HE SHALL RESTORE, AT HIS OWN EXPENSE, SUCH PROPERTY TO A CONDITION SIMILAR OR EQUAL TO THAT EXISTING BEFORE SUCH DAMAGE OR INJURY WAS DONE, BY REPAIRING, REBUILDING, OR OTHERWISE RESTORING AS MAY BE DIRECTED, OR HE SHALL HAVE GOOD SUCH DAMAGE OR INJURY IN AN ACCEPTABLE MANNER.

POLLUTION CONTROL

THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO COMPLY WITH POLLUTION CONTROL LAWS, RULES OR REGULATIONS OF FEDERAL, STATE OR LOCAL AGENCIES.

IN ADDITION, THE ENGINEER SHALL HAVE THE CONTRACTOR CEASE OPERATIONS IF THE WIND OR OTHER CONDITIONS ARE SUCH THAT THE SURROUNDING ENVIRONMENT IS BEING DETRIMENTALLY AFFECTED DUE TO THE WORK.

THICKNESS OF COATS

THE TOTAL DRY FILM THICKNESS OF EACH COAT APPLIED SHALL BE NOT LESS THAN 1.5 MILS WHEN AVERAGED FROM MEASUREMENTS TAKEN FROM NOT LESS THAN FIVE LOCATIONS. DRY FILM THICKNESS READINGS SHALL BE MADE AFTER EACH COAT. A TOOE GAUGE SHALL BE USED TO MAKE THE DRY FILM THICKNESS READINGS. TOOE GAUGE READINGS SHALL BE MADE BY THE ENGINEER.

ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN

GENERAL

THIS ITEM OF WORK IS TO BE USED AS DIRECTED BY THE ENGINEER TO REPAIR SPALLED OR UNSOUND SURFACE AREAS OF CONCRETE ON THE FACES OF THE CURBS, PARAPETS, OR OTHER CONCRETE SURFACES. IN ADDITION OR EXCEPTION TO THE REQUIREMENTS OF ITEM 519, THE FOLLOWING PROVISIONS SHALL APPLY.

519.01

MINIMUM THICKNESS SHALL NOT BE LESS THAN 1/4 INCHES. WELDED STEEL WIRE FABRIC SHALL NOT BE REQUIRED.

519.02 MATERIALS

MATERIALS SHALL BE MAGNESIUM PHOSPHATE CONCRETE, WHICH IS A CHEMICAL CONCRETE THAT CONTAINS NO PORTLAND CEMENT, GYPSUM OR EPOXY RESINS. MPC IS A TWO COMPONENT PRODUCT COMPRISED OF A POLY-LINED BAG OF CONCRETE AND A FLUID CHEMICAL AGENT. NO WATER IS TO BE ADDED. THE CONTRACTOR SHALL USE ONE OF THE FOLLOWING PRODUCTS OR AN APPROVED EQUAL.

- HORN 240 CONCRETE
- FAST CRETE
- BOSTIK 276
- MAGNA-CRETE

519.03 REMOVAL OF CONCRETE

WHERE THE BOND BETWEEN THE EXISTING CONCRETE AND REINFORCING STEEL HAS BEEN DESTROYED OR WHERE MORE THAN ONE HALF THE PERIPHERY OF THE STEEL IS EXPOSED THE CONCRETE ADJACENT TO THE BAR SHALL BE REMOVED TO A DEPTH OF ONE INCH WHICH WILL PERMIT THE MPC TO BOND TO THE ENTIRE PERIPHERY OF THE BAR SO EXPOSED.

BEFORE REPAIRS BEGIN AND WITHIN 24 HOURS OF CONCRETE PLACEMENT, THE ENTIRE CONCRETE SURFACE SHALL BE SANDBLASTED AND REBARS SHALL BE SANDBLASTED TO WHITE METAL. IF THE SURFACE CONTAINS GREASE, OIL, DIRT, OR OTHER FOREIGN MATTER, SANDBLASTING, DETERGENT CLEANING, WATERBLASTING, AND/OR AIR BLASTING OR ANY COMBINATION THEREOF, SHALL BE REQUIRED TO INSURE BOND.

519.04 PREPARATION

THE PREPARED MASONRY SURFACE SHALL BE COMPLETELY DRY PRECEDING THE PLACEMENT OF THE NEW CONCRETE.

519.06 PATCHING

ALL REPAIRS SHALL BE MADE WITH MAGNESIUM PHOSPHATE CONCRETE. THE MIXING, PROPORTIONING AND CURING PROCEDURES, INCLUDING THE TOOLS, EQUIPMENT, LABOR AND MATERIALS NECESSARY SHALL BE ACCORDING TO THE MPC MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS. THE SURFACE OF THE REPAIR AREA SHALL BE FLUSH WITH THE SURROUNDING AREA.

519.08 BASIS OF PAYMENT

ALL COSTS OF REMOVAL OF OLD CONCRETE, FORMING, AND OF PLACING NEW CONCRETE, INCLUDING ALL TOOLS, EQUIPMENT, LABOR, AND MATERIALS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN.

CONTINGENCY QUANTITY

THE FOLLOWING QUANTITY IS INCLUDED IN THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER. ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN - 200 SQ. FT.

ESTIMATED QUANTITIES			
BRIDGE LAK-528-0192			
ITEM	TOTAL	UNIT	DESCRIPTION
202	3284	SQ.YDS.	WEARING COURSE REMOVED
202	2	EACH	ANCHOR ASSEMBLY REMOVED
404	1	CU.YD.	ASPHALT CONCRETE, AC-20
404	5	CU.YDS.	BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC
606	225	LIN.FT.	GUARDRAIL, TYPE 5
606	2	EACH	ANCHOR ASSEMBLY, TYPE A, MODIFIED
621	0.35	MILES	CENTERLINES
621	0.40	MILES	EDGELINES
614	0.23	MILES	TEMPORARY CENTER LINES, CLASS II
614	0.11	MILES	TEMPORARY CENTER LINES, CLASS I (TAPE)
614	48	LIN.FT.	TEMPORARY STOP LINES, CLASS I (TAPE)
845	3284	SQ.YDS.	LATEX MODIFIED CONCRETE OVERLAY (1-1/4" THICK)
845	219	CU.YDS.	LATEX MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS)
845	2	CU.YDS.	FULL DEPTH REPAIR
519	200	SQ.FT.	PATCHING CONCRETE STRUCTURES, AS PER PLAN
SPECIAL	LUMP	LUMP	CLEANING BRIDGE SEATS
SPECIAL	2726	SQ.YDS.	EPOXY SEALING OF CONCRETE
514	LUMP	LUMP	FIELD PAINTING OF EXISTING STEEL - SURFACE PREPARATION, AS PER PLAN
514	LUMP	LUMP	FIELD PAINTING OF EXISTING STEEL - SPOT PRIME, AS PER PLAN
514	LUMP	LUMP	FIELD PAINTING OF EXISTING STEEL - COMPLETE COAT PRIME, AS PER PLAN
514	LUMP	LUMP	FIELD PAINTING OF EXISTING STEEL - COMPLETE COAT FINISH 708.09, AS PER PLAN
514	LUMP	LUMP	FIELD PAINTING OF EXISTING STEEL - COMPLETE COAT FINISH 708.08, AS PER PLAN
614	LUMP	LUMP	MAINTAINING TRAFFIC
624	LUMP	LUMP	MOBILIZATION, AS PER PLAN

STATE OF OHIO
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 DISTRICT 12 BRIDGE DEPARTMENT

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STRUCTURE NOTES AND ESTIMATED QUANTITIES

BRIDGE LAK-528-0192
 OVER GRAND RIVER

DESIGNED	DRAWN	TRACKED	CHECKED	REVIEWED	DATE	REVISED
DWA	YES	YES	GWM	DAS	5-6-82	