

GENERAL NOTES

LAK-91-3.83

OHIO
FHWA
REGION 5

38
44

ITEM SPECIAL - PATCHING CONCRETE STRUCTURE WITH TROWELABLE MORTAR

- A. DESCRIPTION: THIS ITEM CONSISTS OF THE REMOVAL OF ALL LOOSE AND DISINTEGRATED CONCRETE, PREPARATION OF THE SURFACE, AND THE MIXING, PLACING, FINISHING AND CURING OF THE PATCHES AS DIRECTED BY THE ENGINEER. THE WORK SHALL BE PERFORMED IN ACCORDANCE WITH THESE SPECIFICATIONS, AND IN REASONABLY CLOSE CONFORMITY WITH THE PLANS AND THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
- B. MATERIALS: THE PATCHING MATERIAL SHALL BE SIKATOP 122 AND 123, POLY-CARB MARK 193.4 AND 194.4, FIVE STAR HIGHWAY PATCH, UPKO BOSTICK 964, EUCLID CHEMICAL EUCO VERTICOAT, MASTER BUILDERS EMACO, DURALTOP AND DURALPATCH GEL, OR THERMAL-CHEM PRODUCT NO. 3. THE MATERIAL SHALL BE TINTED TO CURE TO THE COLOR OF THE EXISTING CONCRETE. ALL MATERIALS SHALL BE STORED AND INCORPORATED IN THE WORK AS RECOMMENDED BY THE MANUFACTURER. A MANUFACTURER'S REPRESENTATIVE SHALL BE PRESENT AT THE JOB SITE UNTIL SUCH TIME AS HE AND THE ENGINEER ARE SURE THAT THE CONTRACTOR IS QUALIFIED IN ALL ASPECTS OF PATCHING CONCRETE STRUCTURES WITH THE SELECTED MATERIAL.
- C. REMOVAL OF CONCRETE: THE CONTRACTOR SHALL SOUND THE STRUCTURE (TO BE INCLUDED IN ITEM SPECIAL SOUNDING CONCRETE BRIDGE COMPONENT) AND THE ENGINEER WILL OUTLINE THE AREAS TO BE REMOVED. ALL LOOSE, SOFT, HONEY-COMBED AND DISINTEGRATED CONCRETE, PLUS ONE-FOURTH OF AN INCH DEPTH OF SOUND CONCRETE SHALL BE REMOVED. WHERE THE BOND BETWEEN THE CONCRETE AND A REINFORCING BAR HAS BEEN DESTROYED, OR WHERE MORE THAN ONE-HALF OF THE PERIPHERY OF SUCH A BAR HAS BEEN EXPOSED, THE ADJACENT CONCRETE SHALL BE REMOVED TO A DEPTH THAT WILL PROVIDE A MINIMUM ONE-HALF OF AN INCH CLEARANCE AROUND THE BAR EXCEPT WHERE OTHER REINFORCING BARS MAKE THIS IMPRACTICAL. AFTER COMPLETION OF THE REMOVAL OPERATION, THE ENGINEER WILL RESOUND THE AREAS TO ENSURE THAT ONLY SOLID CONCRETE REMAINS. ALL WORK SHALL BE DONE IN A MANNER THAT WILL NOT DAMAGE OR SHATTER THE CONCRETE THAT IS TO REMAIN AND WILL NOT CUT, ELONGATE OR DAMAGE THE REINFORCING STEEL IN ANY WAY. CONCRETE MAY BE REMOVED BY CHIPPING OR HAND DRESSING. WHERE EXISTING REINFORCING BARS WOULD BE LESS THAN ONE INCH FROM THE PROPOSED FINISHED SURFACE OF CONCRETE, THEY SHALL, IF PRACTICAL, BE DRIVEN BACK INTO RECESSES CUT IN THE MASONRY TO OBTAIN THAT COVERAGE UNLESS OTHERWISE APPROVED BY THE ENGINEER. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NORMAL 35-POUND CLASS.
- D. SURFACE PREPARATION: THE SURFACE TO BE PATCHED SHALL BE THOROUGHLY CLEANED BY SANDBLASTING FOLLOWED BY AN AIR BLAST. IT MAY BE NECESSARY TO USE HAND TOOLS TO REMOVE SCALE FROM THE REINFORCING STEEL. THE SURFACE SHALL BE MADE FREE OF SPALLS, LAITANCE AND ALL TRACES OF FOREIGN MATERIAL. IF NECESSARY, DETERGENT CLEANING SHALL PRECEDE BLAST CLEANING TO ENSURE THE REMOVAL OF CONTAMINANTS THAT ARE DETRIMENTAL TO ACHIEVING AN ADEQUATE BOND. THE PREPARED SURFACE SHALL BE LEFT IN THE CONDITION AS RECOMMENDED BY THE MANUFACTURER. ANY ADDITIONAL SURFACE PREPARATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS FOR PATCHING MATERIAL WHICH IS USED. ALL UNCHIPPED SURFACES THAT WILL RECEIVE NEW MATERIAL SHALL BE MECHANICALLY ROUGHENED.
- E. PATCHING: THE MIXING, PROPORTIONING, PLACING AND CURING PROCEDURES AND TOOLS, EQUIPMENT, LABOR AND MATERIALS USED SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS. THE SURFACE OF THE REPAIR AREA SHALL BE FLUSH WITH THE SURROUNDING AREA.
- F. CURING: PATCHES SHALL BE CURED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- G. INSPECTION AND SOUNDING OF CONCRETE PATCHES: AFTER CURING AND BEFORE FINAL ACCEPTANCE, ALL PATCHED AREAS SHALL BE SOUNDED. ALL UNSOUND AREAS AND AREAS EXHIBITING CRACKING SHALL BE REMOVED AND REPATCHED ACCORDING TO THIS NOTE.

ALL SOUNDING, AND REPLACEMENT OF REJECTED AREAS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AND INCLUDED IN THE UNIT BID PRICE FOR THIS ITEM.
- H. METHOD OF MEASUREMENT: THE QUANTITY SHALL BE THE ACTUAL AREA IN SQUARE FEET OF THE EXPOSED SURFACE OF ALL COMPLETED PATCHES, IRRESPECTIVE OF DEPTH OR THICKNESS OF THE PATCH, COMPLETE, IN PLACE AND ACCEPTED. IF THE PATCH INCLUDES CORNERS OR EDGES OF MEMBERS, ALL OF THE EXPOSED SURFACES SHALL BE INCLUDED, OR IF A PATCH EXTENDS COMPLETELY THROUGH A MEMBER, BOTH EXPOSED SURFACES SHALL BE INCLUDED. THE COST OF ALL LABOR, EQUIPMENT, INCIDENTALS AND MATERIALS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THIS ITEM.

I. BASIS OF PAYMENT: PAYMENT WILL BE MADE AT THE CONTRACT PRICE BID FOR:

ITEM	DESCRIPTION	UNIT
SPECIAL	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR.	SQUARE FEET

ITEM SPECIAL - SOUNDING CONCRETE BRIDGE COMPONENT

THIS WORK SHALL CONSIST OF SUPPLYING THE MATERIALS, LABOR, AND EQUIPMENT NECESSARY FOR SOUNDING AND MARKING CONCRETE BRIDGE COMPONENTS IN ORDER THAT THE ENGINEER MAY OUTLINE THE SPALLED AND DELAMINATED AREAS TO BE REMOVED. THE CONTRACTOR SHALL SOUND THE CONCRETE COMPONENTS LISTED BELOW WITH HAMMERS, AND THE ENGINEER SHALL OUTLINE ALL UNSOUND AREAS FOR CONCRETE RESTORATION. THE FOOTAGE UNDER THIS ITEM SHALL BE THE NUMBER OF SQUARE FEET OF CONCRETE SURFACE THAT IS SATISFACTORILY SOUNDED AND ACCEPTED. THE ACCEPTED QUANTITIES OF SOUNDING WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT, WHICH PRICE AND PAYMENT SHALL BE FULL COMPENSATION FOR FURNISHING ALL MATERIAL, LABOR, AND EQUIPMENT NECESSARY FOR SOUNDING CONCRETE BRIDGE COMPONENTS. PAYMENT WILL BE MADE FOR SOUNDING THE FOLLOWING CONCRETE COMPONENTS:

BRIDGE NO. LAK-91-0455

- 1. BRIDGE CURBS, SIDEWALKS, AND PARAPETS.
- 2. PIERS, INCLUDING COLUMNS AND CAPS.
- 3. MEDIAN AREA, AFTER REMOVAL OF EXISTING MEDIAN.

BRIDGE NO. LAK-91-0547

- 1. BRIDGE DECK AND RAMPS WHERE PATCHING IS CALLED FOR.

ITEM SPECIAL - CONCRETE REPAIR BY EPOXY INJECTION

THIS WORK SHALL CONSIST OF THE REPAIR OF CRACKS OR FRACTURES IN THE CONCRETE DECK OF BRIDGE NO. LAK-91-0547 BY MEANS OF AN EPOXY INJECTION SYSTEM IN ACCORDANCE WITH THESE SPECIFICATIONS, IN REASONABLY CLOSE CONFORMITY WITH THE PLANS AND MANUFACTURER'S RECOMMENDATIONS OR AS DIRECTED BY THE ENGINEER.

SEE THE PROPOSAL NOTE "CONCRETE REPAIR BY EPOXY INJECTION" FOR MATERIALS, APPROVALS, PROCEDURES, METHOD OF MEASUREMENT, AND PAYMENT. AREAS TO BE REPAIRED UNDER THIS ITEM SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.

ITEM SPECIAL - CLEANING AND SEALING BRIDGE DECK EXPANSION JOINTS

THIS ITEM SHALL CONSIST OF ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY FOR CLEANING THE BRIDGE DECK EXPANSION JOINTS AT BRIDGE NO. LAKE-91-0455 OF ALL FOREIGN MATERIALS BY A METHOD APPROVED BY THE ENGINEER, AND THEN SEALING THE JOINTS WITH A POLYURETHANE SEALANT CONFORMING TO ITEM 516 - JOINT SEALERS.

PAYMENT WILL BE MADE UNDER:

ITEM	DESCRIPTION	QUANTITY
SPECIAL	CLEANING AND SEALING BRIDGE DECK EXPANSION JOINTS	LIN. FT.

ITEM SPECIAL - CONTRACTION JOINT REPAIR

- I. DESCRIPTION: THIS ITEM SHALL CONSIST OF ALL LABOR, MATERIAL AND EQUIPMENT NECESSARY TO CLEAN THE RAMP CONTRACTION JOINTS AT BRIDGE NO. LAK-91-0547 OF ALL DETERIORATED SEALANT AND FILLER MATERIAL AND OF ALL FOREIGN MATERIALS BY A METHOD APPROVED BY THE ENGINEER, AND THEN INSTALL NEW FILLER MATERIAL AND SEAL THE TOP OF THE JOINTS WITH A POURED POLYURETHANE JOINT SEAL IN ACCORDANCE WITH THESE SPECIFICATIONS, IN CONFORMITY WITH THE PLANS, MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS AND AS DIRECTED BY THE ENGINEER.
- II. MATERIALS: THE NEW JOINT FILLER MATERIAL SHALL BE BACKING ROD OR EMSEAL.

THE POURED POLYURETHANE JOINT SEAL SHALL BE A TWO-PART, COLD APPLIED, CHEMICALLY CURING, SELF LEVELING, ELASTOMERIC, POLYURETHANE JOINT SEALANT. IT SHALL BE "FX-551" AS MANUFACTURED BY FOX INDUSTRIES INCORPORATED, "UREXPAN NR-200" AS MANUFACTURED BY PECORA CORPORATION OR AN APPROVED EQUAL. ALL MATERIALS SHALL BE STORED AND INCORPORATED IN THE WORK AS SPECIFIED BY THE MANUFACTURER.
- III. APPLICATION: THE CONCRETE SURFACES TO WHICH THE SEALER IS TO ADHERE SHALL FIRST BE THOROUGHLY CLEANED BY SANDBLASTING. POLYURETHANE JOINT SEAL SHALL BE POURED OVER THE FULL LENGTH OF THE JOINT FILLER MATERIAL AND SHALL BE APPLIED ONLY WHEN THE CONCRETE IS DRY AND ITS TEMPERATURE IS ABOVE 50°F. THE INSTALLED AND CURED MATERIAL SHALL BE 1/1-2 INCHES IN DEPTH AND SHALL BE BONDED TO THE CONCRETE SIDES OF THE JOINT. ANY UNBONDED SECTION SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE. DAMS AS REQUIRED TO CONTAIN THE POURED SEALER SHALL BE INCIDENTAL TO THIS ITEM OF WORK.
- IV. METHOD OF MEASUREMENT: FOOTAGE UNDER THIS ITEM SHALL BE THE LINEAR FEET OF CONTRACTION JOINT REPAIRED COMPLETE, IN PLACE AND ACCEPTED.
- V. BASIS OF PAYMENT: PAYMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE PER LINEAR FOOT FOR ITEM SPECIAL - CONTRACTION JOINT REPAIR, WHICH PRICE AND PAYMENT SHALL BE FULL COMPENSATION FOR CLEANING AND PREPARING THE SURFACES, FURNISHING AND PLACING ALL MATERIALS AND ALL OTHER MATERIAL, LABOR AND EQUIPMENT NECESSARY TO COMPLETE THE JOINT REPAIR ACCORDING TO SPECIFICATIONS. PAYMENT WILL BE MADE UNDER:

ITEM	DESCRIPTION	UNIT
SPECIAL	CONTRACTION JOINT REPAIR	LIN. FT.


ITEM SPECIAL - BEARING REPAIR

BEARING REPAIR SHALL BE ACCOMPLISHED IN ACCORDANCE WITH SHEET 8/8 OF THE PLANS AND SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE BID FOR ITEM SPECIAL - BEARING REPAIR. THIS PRICE SHALL BE PAYMENT IN FULL FOR MATERIAL, EQUIPMENT AND LABOR NECESSARY TO COMPLETE THIS WORK, INCLUDING THE REMOVAL AND REPLACEMENT OF THE INDICATED ELEMENTS AS REQUIRED BY THIS WORK.

ITEM SPECIAL - ABUTMENT DRAIN EXTENSION

THIS ITEM SHALL CONSIST OF ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY FOR INSTALLING THE ABUTMENT DRAIN EXTENSIONS AT BRIDGE NO. LAK-91-0455, INCLUDING THE CUTTING AND REMOVING OF PORTIONS OF THE EXISTING ABUTMENT DRAINS, CLEANING THE EXISTING ABUTMENT DRAINS, INSERTING THE NEW 5-INCH P.V.C. DRAIN, PACKING THE OPENING WITH 3/8-INCH DIAMETER BACKING ROD AND ENCASING THE DRAIN EXTENSION IN CONCRETE AT THE ABUTMENT OPENING AS SHOWN IN THE DETAIL ON SHEET 4A/8. PAYMENT WILL BE MADE UNDER:

ITEM	DESCRIPTION	UNIT
SPECIAL	ABUTMENT DRAIN EXTENSION	EACH

Burgess & Niple, Limited  2 / 8
Engineers and Architects

STRUCTURE GENERAL NOTES
BRIDGE NO. LAK-91-0455
BRIDGE NO. LAK-91-0547

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
WAC	PRD		RBB	7-20-90	