

**GENERAL NOTES**

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LAK-44-5.10

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ITEM 516 - RESET BEARINGS

RESETTING BEARINGS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH SHEET 10/15 OF THE PLANS AND SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE BID FOR ITEM 516 - RESET BEARINGS. THIS PRICE SHALL BE PAYMENT IN FULL FOR MATERIAL, EQUIPMENT AND LABOR NECESSARY TO COMPLETE THIS WORK.

ITEM SPECIAL - SEALING OF CONCRETE SURFACES

AN EPOXY CONCRETE SEALER SHALL BE APPLIED TO THE FACES OF THE ABUTMENTS, BACKWALLS, WINGWALLS AND ABUTMENT SEATS, AN EPOXY CONCRETE SEALER SHALL BE APPLIED TO THE SUPERSTRUCTURE CONCRETE SURFACES SHOWN ON SHEETS 6/15 AND 8/15 AND A NON-EPOXY SEALER SHALL BE APPLIED TO ALL ABOVE-GROUND SURFACES OF THE PIERS. SEE THE PROPOSAL NOTE NO. 110, "SEALING OF CONCRETE SURFACES" FOR MATERIAL REQUIREMENTS AND APPLICATION RATES AND PROCEDURES.

PAYMENT SHALL BE MADE UNDER THE SQUARE FOOT UNIT PRICE FOR ITEM SPECIAL-SEALING OF CONCRETE SURFACES, EPOXY OR ITEM SPECIAL-SEALING OF CONCRETE SURFACES, NON-EPOXY.

ITEM 516 - VERTICAL EXTENSION OF STRUCTURAL EXPANSION JOINTS, INCLUDING ELASTOMERIC STRIP SEALS, AS PER PLAN

I. DESCRIPTION: THIS ITEM SHALL INCLUDE ALL WORK REQUIRED TO REMOVE PORTIONS OF CONCRETE IN CURBS, SIDEWALKS, AND PARAPETS AT LOCATIONS AS DETAILED IN THESE PLANS, TO PROVIDE AND INSTALL IN THE ROADWAY ALL STUDS, STEEL PLATES, STEEL BARS, BOLTS, STEEL EXTRUSIONS, NEOPRENE STRIP SEAL, AND ANY ADDITIONAL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO COMPLETE THIS WORK.

II. FOR MATERIAL SPECIFICATIONS, INSTALLATION PROCEDURES, AND METHOD OF MEASUREMENT, SEE STANDARD DRAWING EXJ-4-87, SHT. 5/5.

III. INSTALLATION: THE CONTRACTOR SHALL INSTALL STEEL EXTRUSIONS IN MAXIMUM LENGTHS TO MINIMIZE WELDED BUTT JOINTS.

IV. BASIS OF PAYMENT: THE ACCEPTED QUANTITIES OF SEALED JOINTS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER LINEAR FOOT, WHICH PRICE AND PAYMENT SHALL BE FULL COMPENSATION FOR ALL NECESSARY REMOVALS, FURNISHINGS AND PLACING ALL MATERIALS, AND ALL LABOR AND EQUIPMENT NECESSARY TO COMPLETE THE SEALING OF EXPANSION JOINTS ON THE ROADWAY AS SHOWN ON SHEET 10/15. PAYMENT WILL BE MADE UNDER THE FOLLOWING:

ITEM	DESCRIPTION	UNIT
516	VERTICAL EXTENSION OF STRUCTURAL EXPANSION JOINTS, INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN	LIN. FT.

BARRIER SPLASH GUARD DEFLECTION JOINTS

DEFLECTION JOINTS ON LAK-44-0510 MATCHING EXISTING PARAPET DEFLECTION JOINT SPACING SHALL BE PLACED IN THE CONCRETE BARRIER SPLASH GUARDS BY EITHER OF THE FOLLOWING METHODS:

1. CONCRETE BARRIER SPLASH GUARDS SHALL BE PLACED IN ALTERNATE SECTIONS BY THE USE OF BULKHEADS. CLOSING SECTIONS SHALL BE PLACED AFTER REMOVAL OF BULKHEADS AND AFTER PLACEMENT OF SPONGE FILLER. FILLER SHALL BE FLUSH WITH SURFACE OF CONCRETE AND EXPOSED EDGES SHALL BE FREE OF MORTAR.
2. DEFLECTION JOINTS SHALL BE MADE VERTICALLY OR AT A RIGHT ANGLE TO THE DECK BY SAWING. THE SAWING SHALL BE DONE AFTER THE CONCRETE HAS TAKEN ITS INITIAL SET AND BEFORE ANY SHRINKAGE CRACKS CAN DEVELOP. THE USE OF AN EDGE GUIDE, FENCE OR JIG IS REQUIRED TO INSURE THAT THE CUT OF THE JOINT IS STRAIGHT, TRUE AND ALIGNED ON ALL FACES OF THE PARAPET. THE NEED FOR A GUIDE ON THE BACK SIDE MAY BE ELIMINATED IF THE INITIAL CUT ON THE FRONT SIDE OF THE PARAPET EXTENDS AT LEAST TWO-THIRDS OF THE WAY THROUGH THE PARAPET. THE REAR CUT WOULD THEN BE GUIDED BY THE SLOT OF THE FIRST CUT, AND BY THE EXISTING DEFLECTION JOINT SLOT. A SAW BLADE SUFFICIENTLY LARGE TO SAW THROUGH THE ENTIRE PARAPET WOULD BE ACCEPTABLE. THE MINIMUM DEPTH OF SAW CUT SHALL BE 3 INCHES. THE JOINT WIDTH SHALL BE THE WIDTH OF THE SAW BLADE, NOT TO EXCEED ONE QUARTER INCH. THE OUTSIDE ONE INCH OF THE PERIMETER OF THE DEFLECTION JOINT SHALL BE SEALED WITH A POLYURETHANE OR POLYMERIC JOINT SEALANT MEETING THE REQUIREMENTS OF FEDERAL SPECIFICATION TT-S-00227E. THE BOTTOM ONE QUARTER INCH OF BOTH THE INSIDE AND OUTSIDE FACES OF THE PARAPET SHOULD BE LEFT UNSEALED TO ALLOW ANY WATER WHICH MAY ENTER THE JOINT TO ESCAPE.

ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN

THIS ITEM SHALL CONSIST OF PATCHING EXISTING STRUCTURAL CONCRETE AT THE LOCATIONS AS SHOWN ON THE PLANS IN ACCORDANCE WITH ITEM 519 AND THE FOLLOWING ADDITIONAL REQUIREMENTS:

1. CONCRETE MATERIAL SHALL BE AS PER 519.02 (CLASS S).

2. REMOVAL OF CONCRETE SHALL BE IN ACCORDANCE WITH ITEM 519.03. AFTER COMPLETION OF THE REMOVAL OPERATION, THE ENGINEER WILL SOUND THE AREAS TO ENSURE THAT ONLY SOLID CONCRETE REMAINS.
3. SURFACE PREPARATION SHALL INCLUDE THE THOROUGH SANDBLASTING AND AIR CLEANING OF ALL SURFACES WHICH ARE TO BE IN CONTACT WITH THE PATCHING MATERIAL.

PAYMENT SHALL BE MADE UNDER THE SQUARE FOOT UNIT PRICE FOR ITEM 519-PATCHING CONCRETE STRUCTURES, AS PER PLAN.

ITEM SPECIAL - PATCHING CONCRETE STRUCTURES 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 EUCCO VERTICOAT, MASTER BUILDERS SET VERIPATCH, 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 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 RE-SOUND 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 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN AND ITEM SPECIAL - PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR

THESE ITEMS SHALL BE USED AS DIRECTED BY THE ENGINEER TO REPAIR DAMAGED CONCRETE AREAS OUTLINED BY THE ENGINEER.

GENERALLY, ITEM SPECIAL - PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR MAY BE USED WHERE THE SURFACE TO BE REPAIRED CANNOT READILY BE FORMED AND POURED OR THE REPAIR DEPTH IS 3 INCHES OR LESS. ITEM 519 (CONCRETE) SHALL BE USED WHERE THE REPAIR DEPTH IS OVER 3 INCHES AND THE SURFACE CAN BE READILY FORMED AND POURED.

CLEANING SHALL PRECEDE APPLICATION OF THE EPOXY BONDING AGENT OR ERECTION OF THE FORMS BY NOT MORE THAN 24 HOURS.

ALL ACCESSIBLE SURFACES TO BE PATCHED WITH ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN SHALL BE COATED WITH A TWO-COMPONENT EPOXY BONDING AGENT CONFORMING TO AASHTO M-235-731, CLASS III. THE BONDING MATERIAL SHALL BE MIXED AND PLACED AS PER THE MANUFACTURER'S RECOMMENDATIONS.

PAYMENT FOR THE ABOVE REQUIREMENTS SHALL BE INCLUDED WITH THE APPROPRIATE ITEM.

ITEM SPECIAL - SOUNDING CONCRETE BRIDGE COMPONENTS

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:

1. ABUTMENTS, INCLUDING BACKWALLS AND WINGWALLS
2. PIERS, INCLUDING COLUMNS AND CAPS.
3. SIDEWALKS AND PARAPETS AND DECK EDGES.

ITEM SPECIAL - SOUNDING OF CONCRETE DECK BOTTOMS

THIS WORK SHALL CONSIST OF SUPPLYING THE MATERIALS, LABOR AND EQUIPMENT NECESSARY FOR SOUNDING DECK BOTTOMS IN ORDER THAT THE ENGINEER MAY OUTLINE THE DELAMINATED AREAS. AFTER ALL OVERLAY REMOVAL OPERATIONS ON THE BRIDGE ARE COMPLETED, THE CONTRACTOR SHALL SOUND THE ENTIRE DECK BOTTOM WITH HAMMERS AND THE ENGINEER SHALL OUTLINE ALL UNSOUND AREAS FOR EPOXY INJECTION. THE FOOTAGE FOR THIS ITEM SHALL BE THE NUMBER OF SQUARE FEET OF DECK BOTTOM THAT ARE SATISFACTORILY SOUNDED AND ACCEPTED. THE ACCEPTED QUANTITIES OF DECK BOTTOM 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 DECK BOTTOMS. PAYMENT WILL BE MADE UNDER ITEM SPECIAL-SOUNDING CONCRETE DECK BOTTOMS.

Burgess & Niple, Limited  
Engineers and Architects

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**STRUCTURE GENERAL NOTES**

BRIDGE NO. LAK-44-0510  
JACKSON STREET OVER S.R. 44

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
SJS	JLP		WAC	WAC 12/89	