

ITEM SPECIAL - OVERHEAD DOWEL GROUTING SYSTEM

I. DESCRIPTION: THIS WORK SHALL CONSIST OF THE DRILLING OF OVERHEAD HOLES INTO CONCRETE, THE FURNISHING AND PLACING OF THE RESIN CARTRIDGES IN ACCORDANCE WITH THESE SPECIFICATIONS IN REASONABLY CLOSE CONFORMITY WITH THE PLANS AND MANUFACTURER'S SPECIFICATION AND RECOMMENDATIONS AND AS DIRECTED BY THE ENGINEER.

II. MATERIAL: THE MATERIAL SHALL CONSIST OF POLYESTER RESIN CARTRIDGES WITH THE NECESSARY "RED CAP" AS MANUFACTURED BY CELTITE INC. LOCATED AT 150 CARLEY COURT IN GEORGETOWN, KY 40324 CELTITE'S TELEPHONE NUMBER IS (800) 626-2948.

ALL MATERIAL 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 THE OVERHEAD DOWEL GROUTING SYSTEM.

THE RESIN CARTRIDGE SIZE WILL BE #2212 WITH THE VISCOSITY AND GEL TIME BEING CHOSEN BY THE MANUFACTURER'S REPRESENTATIVE.

III. APPLICATION: THE HOLES SHALL BE DRILLED AT THE LOCATION AND DEPTH SHOWN ON THE PLANS PROVIDED REBAR IS NOT ENCOUNTERED DURING PACHOMETER CHECK (SEE NOTE: CHECKING FOR LOCATION OF EXISTING REBAR). THE HOLES SHALL BE FLUSHED CLEAN WITH AIR OR WATER. THE CARTRIDGE SHALL BE PLACED IN ACCORDANCE TO THE MANUFACTURER'S RECOMMENDATIONS. ALLOW THE RESIN AND DOWEL BAR, D601, TO SET FOR AT LEAST AN HOUR BEFORE COMPLETING THE DOWELING PROCESS.

IV. METHOD OF MEASUREMENT: MEASUREMENT OF THIS ITEM SHALL BE EACH DOWEL INSTALLED AND ACCEPTED IN AN OVERHEAD POSITION.

V. BASIS OF PAYMENT: THE ACCEPTED QUANTITIES OF THE OVERHEAD DOWEL GROUTING SYSTEM SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR EACH DOWEL HOLE, WHICH PRICE AND PAYMENT SHALL BE FULL COMPENSATION FOR DRILLING AND CLEANING THE HOLES, FURNISHING AND PLACING ALL MATERIALS, PACHOMETER TESTING AND ALL OTHER MATERIAL, LABOR AND EQUIPMENT NECESSARY TO COMPLETE THE OVERHEAD GROUTING. THE D601 AND D602 REQUIRED FOR THIS ITEM ARE INCLUDED FOR PAYMENT UNDER ITEM 509. PAYMENT FOR ITEM SPECIAL WILL BE MADE UNDER:

ITEM	UNIT	DESCRIPTION
SPECIAL	EACH	OVERHEAD DOWEL GROUTING SYSTEM

ITEM - SPECIAL - WEEP HOLE EXTENSION

I. DESCRIPTION: THIS WORK SHALL CONSIST OF FURNISHING AND PLACING A WATER-TIGHT WEEP HOLE EXTENSION IN ACCORDANCE WITH THESE SPECIFICATIONS.

II. MATERIAL: THE MATERIAL SHALL BE THE SAME DIAMETER PIPE AS EXISTING EITHER OF GALVANIZED STEEL PIPE, 707.08 OR PLASTIC PIPE, 707.19, A POLYURETHANE OR A POLYMERIC SEALANT WHICH MEETS THE REQUIREMENT OF FEDERAL SPECIFICATION TT-S-00227 E AND TYPE B WATERPROOFING, 512.06.

III. APPLICATION: THE INSIDE SURFACE OF THE EXISTING WEEP-HOLE SHALL BE THOROUGHLY CLEANED, DRY, AND ITS TEMPERATURE ABOVE 50 F. THE SEALANT SHALL BE PLACED ON THE INSIDE OF THE EXISTING WEEP-HOLE TO A DEPTH OF AT LEAST TWO INCHES INTO THE EXISTING WEEP HOLE. THE PIPE EXTENSION SHALL HAVE A LONGITUDINAL CUT SO THAT THE PIPE MAY BE SQUEEZED TO A SMALLER DIAMETER AND PLACED TWO INCHES INSIDE THE EXISTING WEEP-HOLE WITH THE CUT FACING UPWARD AND RELEASED SO THAT A TIGHT FIT IS INSURED BETWEEN THE TWO PIPES. THE LONGITUDINAL CUT SHALL BE SEALED WITH TYPE B WATERPROOFING.

IV. METHOD OF MEASUREMENTS: THE QUANTITY OF WEEP HOLE EXTENSIONS, FOR THE PRESCRIBED LENGTH, SHALL BE THE ACTUAL NUMBER OF EXTENSIONS THAT ARE COMPLETE, IN PLACE AND ACCEPTED.

V. BASIS OF PAYMENT: THE ACCEPTED QUANTITIES OF WEEP HOLE EXTENSION SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH EXTENSION, WHICH PRICE AND PAYMENT SHALL BE FULL COMPENSATION FOR PREPARING THE SURFACES, FURNISHING AND PLACING ALL MATERIALS, AND ALL OTHER MATERIAL, LABOR AND EQUIPMENT NECESSARY TO COMPLETE THE WEEP HOLE EXTENSION ACCORDING TO SPECIFICATIONS. PAYMENT WILL BE MADE UNDER:

ITEM	UNIT	DESCRIPTION
SPECIAL	EACH	WEEP HOLE EXTENSION

ITEM SPECIAL - EPOXY INJECTION

AN EPOXY INJECTION SHALL BE APPLIED TO THE AREA BETWEEN THE EXISTING SLAB AND THE PROPOSED WALL WHICH IS A RESULT OF CONCRETE SHRINKAGE. THE CONCRETE SHALL BE CURED FOR AT LEAST SEVEN DAYS BEFORE THE EPOXY IS INJECTED. SEE THE PROPOSAL FOR CONCRETE REPAIR BY EPOXY INJECTION FOR THE MATERIALS, APPROVALS, PROCEDURE AND METHOD OF MEASUREMENT.

ITEM SPECIAL - JOINT SEAL (BITUMEN IMPREGNATED FOAM)

I. DESCRIPTION: THIS WORK SHALL CONSIST OF SEALING JOINTS ON BRIDGES USING BITUMEN IMPREGNATED FOAM IN ACCORDANCE WITH THESE SPECIFICATIONS, IN REASONABLY CLOSE CONFORMITY WITH THE PLANS AND MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS AND AS DIRECTED BY THE ENGINEER.

II. MATERIAL: THE MATERIAL SHALL BE A PRECOMPRESSED BITUMEN IMPREGNATED FOAM JOINT SEALANT SUCH AS EMSEAL PCSA, PERMABAND 8100, ROYSTON UNIBAND OR AN APPROVED EQUAL. EMSEAL, U.S.A., INC. IS LOCATED AT 344 MILL ROAD IN STAMFORD, CT 06903 AND HAS A TELEPHONE NUMBER OF (203) 322-3828. PERMABAND IS AVAILABLE FROM PAMAQUIK (CANADA) LTD. WHICH IS LOCATED AT 3043 UNIVERSAL DRIVE IN MISSISSAGUA, ONTARIO L4X2E2; TELEPHONE (416) 625-9444. ROYSTON IS LOCATED AT 128 FIRST ST; PITTSBURGH, PA 15238; TELEPHONE (412) 828-1500.

ALL MATERIALS SHALL BE STORED AND INCORPORATED IN THE WORK AS RECOMMENDED BY THE MANUFACTURER.

III. SURFACE PREPARATION: THE CONCRETE JOINT FACE TO WHICH THE SEAL MUST ADHERE SHALL BE SANDBLASTED CLEAN AND BE FREE OF FOREIGN MATERIAL SUCH AS DIRT, DUST, GREASE, FORM OIL, RELEASE AGENTS AND ANY OTHER MATERIAL DETRIMENTAL TO ADHESION OF THE SEALANT.

IV. APPLICATION: JOINT SEALS SHALL BE INSTALLED ONLY WHEN THE CONCRETE JOINT IS DRY AND ITS TEMPERATURE IS ABOVE 60° F. THE CONCRETE SURFACES SHALL BE PRIMED AS RECOMMENDED BY THE MANUFACTURER. THE FOAM SEAL SHALL BE REMOVED FROM THE PACKAGING AND ITS NARROW EDGE INSERTED INTO THE JOINT OPENING. THE DEPTH FACE WITH THE SELF-ADHESIVE BACKING SHALL BE PRESSED AGAINST ONE SIDE OF THE CONCRETE JOINT SO THAT FOAM IS HELD IN PLACE WHILE IT RECOVERS.

AT TEMPERATURES ABOVE 70° F, THE MATERIAL WILL RECOVER IN A FEW HOURS. AT TEMPERATURES BELOW 70° F THE RECOVERY SHALL BE ACCELERATED BY HEATING THE MATERIAL WITH AN OPEN FLAME, GAS BURNER, INFRA-RED LAMP OR HOT-AIR BLOWER.

A CONTINUOUS LENGTH OF JOINT SEAL SHALL BE ACHIEVED BY JOINING INDIVIDUAL STRIPS ONLY BY MEANS OF SCARFED JOINTS CUT AT 45° OR LESS RELATIVE TO THE SIDES OF THE JOINT. THE SCARFED ENDS MUST BE PUSHED WELL PAST ONE ANOTHER. THE SEAL SHALL NOT BE PULLED OR STRETCHED SO THAT GAPS BETWEEN SUCCESSIVE LENGTHS ARE PREVENTED.

V. METHOD OF MEASUREMENT: FOOTAGE UNDER THIS ITEM SHALL BE THE LINEAR FEET OF BITUMEN IMPREGNATED FOAM SEAL INSTALLED IN THE JOINTS BETWEEN THE APPROACH SLAB AND THE DECK.

VI. BASIS OF PAYMENT: THE ACCEPTED QUANTITIES OF SEALED JOINT SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE BID PER LINEAR FOOT, WHICH PRICE AND PAYMENT SHALL BE FULL COMPENSATION FOR PREPARING THE SURFACES, FURNISHING AND PLACING ALL MATERIALS, SUPPLYING THE MANUFACTURER'S REPRESENTATIVE AND ALL OTHER MATERIAL, LABOR AND EQUIPMENT NECESSARY TO COMPLETE THE JOINT SEAL ACCORDING TO SPECIFICATIONS. PAYMENT WILL BE MADE UNDER:

ITEM	UNIT	DESCRIPTION
SPECIAL	LINEAR FOOT	JOINT SEAL (4" x 2" BITUMEN IMPREGNATED FOAM)
SPECIAL	LINEAR FOOT	JOINT SEAL (8" x 4" BITUMEN IMPREGNATED FOAM)

ITEM SPECIAL - POURED POLYURETHANE JOINT SEAL

I. DESCRIPTION: THIS WORK SHALL CONSIST OF SEALING JOINTS WITH POURED POLYURETHANE JOINT SEAL IN ACCORDANCE WITH THESE SPECIFICATIONS, IN REASONABLY CLOSE CONFORMITY WITH THE PLANS AND MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS AND AS DIRECTED BY THE ENGINEER.

II. MATERIAL: THE MATERIAL FOR THIS ITEM IS 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 SAND BLASTING. POLYURETHANE JOINT SEAL SHALL BE POURED OVER THE FULL LENGTH OF THE BITUMEN IMPREGNATED FOAM SEAL PREVIOUSLY INSTALLED IN THE OPEN CONCRETE JOINT AND SHALL BE APPLIED ONLY WHEN THE JOINT IS DRY AND ITS TEMPERATURE IS ABOVE 60°F. THE POURED JOINT SEALER SHALL ACT AS A SECOND SEAL ON TOP OF THE BITUMEN IMPREGNATED FOAM JOINT SEAL. THE INSTALLED AND CURED MATERIAL SHALL BE THE DEPTH SHOWN 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 URETHANE JOINT SEAL POURED OVER THE FOAM JOINT SEAL THAT ARE COMPLETE, IN PLACE AND ACCEPTED.

V. BASIS OF PAYMENT: THE ACCEPTED QUANTITIES OF POURED POLYURETHANE JOINT SEAL SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER LINEAR FOOT, WHICH PRICE AND PAYMENT SHALL BE FULL COMPENSATION FOR PREPARING THE SURFACES, FURNISHING AND PLACING ALL MATERIALS AND ALL OTHER MATERIAL, LABOR AND EQUIPMENT NECESSARY TO COMPLETE THE JOINT SEAL ACCORDING TO SPECIFICATIONS. PAYMENT WILL MADE UNDER:

ITEM	UNIT	DESCRIPTION
SPECIAL	LINEAR FOOT	POURED POLYURETHANE JOINT SEAL

STATE OF OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 12 BRIDGE DEPARTMENT				
GENERAL NOTES BRIDGE No LAK-2-1735 L&R S.R. 2 OVER RED CREEK				
DESIGNED B.B.T. DATE 6/87	TRACED K.R.D. DATE 6/87	CHECKED D.W.S. DATE 6/22/87	REVIEWED S.W.M. DATE 6/22/87	REVISED
LAKE COUNTY				OHIO
				SHEET 4 / 9