

STRUCTURAL GENERAL NOTES

PORTABLE CONCRETE BARRIER

FURNISHING, INSTALLING, MAINTAINING AND REMOVING PORTABLE BARRIER ON THE BRIDGE SHALL BE INCLUDED IN ITEM 614 OF THE ROADWAY QUANTITIES FOR PAYMENT.

UTILITY LINES

THE UTILITIES SHALL BORE ALL THE EXPENSE IN RELOCATING THE AFFECTED UTILITY LINES. THE CONTRACTOR AND THE UTILITIES ARE TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

ITEM SPECIAL, FORMLINER

A. GENERAL

THE WORK TO BE DONE UNDER THIS ITEM SHALL INCLUDE,

1. CONSTRUCT TEXTURED AND COLORED CONCRETE SURFACE USING MOLDS AND COLOR STAIN SYSTEM DESIGNED TO DUPLICATE CLOSELY THE APPEARANCE AND TEXTURE OF REAL ASHLAR CUT STONE.

USE MOLDS PROVIDING THE FINISHED APPEARANCE OF ASHLAR CUT STONE, WITH MAXIMUM RELIEF OF 1-1/4". ACCEPTABLE FORM LINERS ARE,

- a) SCOTT SYSTEMS, INC. #167C, ASHLAR STONE
- b) CUSTOM ROCK INTERNATIONAL #11003, RUSTIC ASHLAR
- c) FITZGERALD FORM LINERS #16999 GEORGIA ASHLAR
- d) GREENSTREAK FORM LINERS #330, ASHLAR STONE
- e) APPROVED EQUAL, ASHLAR CUT STONE FORM LINER, 1-1/4" MAX RELIEF

3. NO LESS THAN 60 DAYS PRIOR TO THE CONSTRUCTION OF THE FIRST MOLDED STONE SURFACE, SUBMIT TO THE ENGINEER A 24" SQUARE SAMPLE OF THE PROPOSED STONE MOLD INCLUDING MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS FOR ITS USE.

4. NO LESS THAN 30 DAYS PRIOR TO THE CONSTRUCTION OF THE FIRST MOLDED STONE SURFACE SUBMIT TO THE ENGINEER ONE COPY OF SHOP DRAWINGS SHOWING PLAN, ELEVATION AND DETAILS TO SHOW OVERALL PATTERN, JOINT LOCATIONS, FORM TIE LOCATIONS, AND END, EDGE, AND OTHER SPECIAL CONDITIONS.

5. A PRE-INSTALLATION MEETING IS REQUIRED. SCHEDULE MEETING AMONG MANUFACTURER'S REPRESENTATIVES, APPROPRIATE SUBCONTRACTORS, THE DISTRICT 12 PRODUCTION ADMINISTRATION OR HIS DESIGNEE, THE DISTRICT 12 AESTHETICS COORDINATOR OR HIS DESIGNEE, AND THE ENGINEER TO ASSURE UNDERSTANDING OF FORM LINER USE, STAIN APPLICATION, AND THE REQUIREMENTS OF THE MOCKUP CONSTRUCTION.

B. PRODUCTS

1. SIMULATED STONE MOLDS SHALL BE EASILY ATTACHABLE TO FORMS. MOLDS SHALL NOT COMPRESS MORE THAN 1/4" WHEN CONCRETE IS POURED AT RATE OF 10 VERTICAL FEET PER HOUR. MOLDS SHALL BE REMOVABLE WITHOUT CAUSING DETERIORATION OF SURFACE OR UNDERLYING CONCRETE.
2. USE A RELEASE AGENT THAT IS COMPATIBLE WITH MOLDS AND WITH THE SEALING SYSTEM TO BE APPLIED TO SURFACE. PROVIDE THE ENGINEER WITH THE MANUFACTURER'S SPECIFICATIONS FOR PRODUCT APPLICATION.
3. USE FORM TIES MADE OF EITHER METALS OR FIBERGLASS. METAL TIES WHICH WILL REMAIN PERMANENTLY EMBEDDED IN THE CONCRETE SHALL BE DESIGNED TO SEPARATE AT LEAST ONE INCH BACK FROM FINISHED SURFACE, LEAVING ONLY A NEAT HOLE TO BE PLUGGED WITH PATCHING MATERIAL. SUBMIT THE TYPE OF FORM TIES TO THE ENGINEER FOR APPROVAL PRIOR TO USE.

C. EXECUTION

1. CLEAN MOLDS AND MAKE FREE OF BUILDUP PRIOR TO EACH POUR. INSPECT FOR BLEMISHES OR TEARS. REPAIRS IF POSSIBLE FOLLOWING MANUFACTURER'S RECOMMENDATIONS. DAMAGED MOLDS SHALL BE REPLACED AT NO ADDITIONAL CHARGE TO THE STATE.
2. APPLY RELEASE AGENT IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
3. PLACE MOLDS WITH LESS THAN 1/4" SEPARATION BETWEEN THEM. ATTACH MOLDS TO FORM SECURELY FOLLOWING MANUFACTURER'S RECOMMENDATIONS.
4. WHERE FORM LINERS ABUT, CAREFULLY BLEND SURFACE TO MATCH THE BALANCE OF THE STONE PATTERN, AVOIDING VISIBLE SEAMS OR FORM MARKS.
5. PLACE FORM ITEMS AT THINNEST POINTS OF MOLDS (THE HIGH POINTS OF FINISHED SURFACE.) NEATLY PATCH THE HOLE REMAINING AFTER DISENGAGING THE PROTRUDING PORTION OF THE TIE SO THAT IT WILL NOT BE VISIBLE AFTER COLORING THE CONCRETE SURFACE.

D. METHOD OF MEASUREMENT AND BASIS OF PAYMENT

THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT PRICE BID FOR ITEM SPECIAL - FORM LINER. QUANTITIES ARE BASED ON SURFACE AREA, PER SQUARE FOOT, OF FORM LINER TEXTURED SURFACES.

ITEM SPECIAL - MISC.: ATT UTILITY WORK

WORK PERFORMED UNDER THIS ITEM SHALL INCLUDE REMOVAL OF EXISTING AND CONSTRUCTION OF NEW UTILITY CONDUIT AND SUPPORT STRUCTURES AND FACILITIES AS DETAILED IN THE PLANS. THE WORK SHALL INCLUDE BUT NOT NECESSARILY BE LIMITED TO, CONDUIT AND SUPPORTS ACROSS THE STRUCTURE AND IN-GROUND CONDUIT BEYOND THE APPROACH SLABS AS DETAILED IN THE PLANS.

PAYMENT FOR WORK AS LISTED ABOVE AND DETAILED IN THE PLANS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM SPECIAL - MISC.: ATT UTILITY WORK AND SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK IN CONFORMANCE WITH THESE REQUIREMENTS AND TO THE SATISFACTION OF THE ENGINEER.

ITEM SPECIAL - MISC.: DOMINION UTILITY WORK

THIS ITEM SHALL INCLUDE THE INSTALLATION OF LINK-SEAL WALL SLEEVES, AND ROLLER CHAIR SUPPORTS. INSTALLATION OF ADDITIONAL REINFORCING STEEL IN THE ABUTMENT DIAPHRAMS AROUND THE WALL SLEEVE SHALL ALSO BE INCLUDED IN THIS ITEM.

THE PIPE FOR THE GAS LINE AND SEALS AT WALL SLEEVES SHALL BE INSTALLED BY DOMINION EAST OHIO GAS (DEOG). THE BRIDGE CONTRACTOR SHALL COORDINATE INSTALLATION OF THE GS PIPE WITH DEOG PRIOR TO PLACING THE DECK CONCRETE.

THE FOLLOWING MATERIALS WILL BE PROVIDED BY DEOG AT ITS EXPENSE:

- ALL PIPE FOR THE GAS LINE
- 6 5/8" O.D. LINK-SEAL WALL SLEEVE (MODEL CS-10 PLASTIC SLEEVE) 2 EACH
- WALL SLEEVE SEALS 4 EACH
- LB&A INC. ROLLER CHAIR
- (6H NON-CONDUCTIVE ROLLER) 21 EACH

THE FOLLOWING MATERIALS WILL BE PROVIDED BY THE CONTRACTOR AND BE PAID FOR UNDER THE LUMP SUM ITEM SPECIAL - MISC.: DOMINION UTILITY WORK:

EPOXY COATED REINFORCING STEEL 34 POUNDS

ITEM 526 - REINFORCED CONCRETE APPROACH SLABS (T=17"). AS PER PLAN

THE CONTRACTOR SHALL CONSTRUCT THE APPROACH SLABS PER DETAILS PROVIDED IN THE PLANS (SEE SHEETS [41] [47] THRU [43] [47]) INCLUDING THE HMWM SEALER, THE CONSTRUCTION OF THE PARAPET/BARRIER CONCRETE, PARAPET SURFACE TREATMENT, AND ASSOCIATED REINFORCING. PAYMENT SHALL BE INCLUDED WITH ITEM 526, REINFORCED CONCRETE APPROACH SLABS (T=17"), AS PER PLAN.

ITEM 516, SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL, AS PER PLAN

INSTALL A 3 FOOT WIDE NEOPRENE SHEET AT LOCATIONS SHOWN IN THE PLANS. SECURE THE NEOPRENE SHEETING TO THE CONCRETE WITH 1 1/4" X #10 GAGE (LENGTH X SHANK DIAMETER) GALVANIZED BUTTON HEAD SPIKES THROUGH A 1 INCH OUTSIDE DIAMETER, #10 GAGE GALVANIZED WASHER. MAXIMUM FASTENER SPACING IS 9 INCHES. USE OF OTHER SIMILAR GALVANIZED DEVICES, WHICH WILL NOT DAMAGE EITHER THE NEOPRENE OR THE CONCRETE WILL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.

CENTER THE NEOPRENE STRIPS ON ALL JOINTS. FOR HORIZONTAL JOINTS, SECURE THE HORIZONTAL NEOPRENE STRIP BY USING A SINGLE LINE OF FASTENERS, STARTING AT 6 INCHES, +/-, FROM THE TOP OF THE NEOPRENE STRIP. FOR THE VERTICAL JOINTS SECURE THE VERTICAL NEOPRENE STRIP BY USING A SINGLE VERTICAL LINE OF FASTENERS, STARTING AT 6 INCHES, +/-, FROM THE VERTICAL EDGE OF THE NEOPRENE STRIP NEAREST TO THE CENTERLINE OF THE ROADWAY. FOR VERTICAL JOINTS, INSTALL 2 ADDITIONAL FASTENERS AT 6 INCHES, CENTER TO CENTER, ACROSS THE TOP OF THE NEOPRENE STRIP ON THE SAME SIDE OF THE VERTICAL JOINT AS THE SINGLE VERTICAL ROW OF FASTENERS IS LOCATED.

THE VERTICAL NEOPRENE STRIPS SHALL COMPLETELY OVERLAP THE HORIZONTAL STRIPS. LAP LENGTHS OF THE HORIZONTAL STRIPS THAT ARE NOT VULCANIZED OR ADHESIVE BONDED, SHALL BE AT LEAST 1 FOOT IN LENGTH, OR 6 INCHES IN LENGTH IF THE LAP IS VULCANIZED OR ADHESIVE BONDED. NO LAPS ARE ACCEPTABLE IN VERTICALLY INSTALLED NEOPRENE STRIPS.

THE NEOPRENE SHEETING SHALL BE 3/32" THICK GENERAL PURPOSE, HEAVY DUTY NEOPRENE SHEET WITH NYLON FABRIC REINFORCEMENT. THE SHEETING SHALL BE "FAIRPRENE NUMBER NN-0003", BY E.I. DUPONT DE NEMOURS AND COMPANY, INC., "WINGPRENE" BY THE GOODYEAR TIRE AND RUBBER COMPANY, OR AN APPROVED ALTERNATE. THE NEOPRENE SHEETING SHALL CONFORM TO THE FOLLOWING:

DESCRIPTION OF TEST	AST METHOD	REQUIREMENT
THICKNESS, INCHES	D 751	0.094" +/- 0.01
BREAKING STRENGTH, GRAB LBS. MINIMUM	D 751	700 X 700
ADHESIVE 1" WIDE X 2" LONG, LBS. MINIMUM	D 751	9
BURST STRENGTH, PSI MINIMUM	D 751	1400
HEAT AGING 70 HR. 212° F, 180° BEND WITHOUT CRACKING	D 2136	NO CRACKING OF COATING
LOW TEMPERATURE BRITTLENESS 1 HR., -40° F, BEND AROUND 1/4" MANDREL	D 2136	NO CRACKING OF COATING

IN LIEU OF THE NEOPRENE SHEETING THE CONTRACTOR MAY SUPPLY TYPE 3 MEMBRANE, 711.29.

METHOD OF MEASUREMENT: THE DEPARTMENT WILL MEASURE THE TOTAL LENGTH OF JOINT TO BE SEALED BY THE NUMBER OF FEET.

BASIS OF PAYMENT: THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516, SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL, AS PER PLAN.

ITEM 202 - APPROACH SLAB REMOVED, AS PER PLAN

THIS WORK CONSISTS OF THE REMOVAL OF APPROACH SLABS, INCLUDING PARAPETS, PRESSURE RELIEF JOINTS, AND SLEEPER SLABS.

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