

**GENERAL NOTES - STRUCTURE OVER 20 FT.**

FHWA REGION	STATE	PROJECT	
5	OHIO		

18  
32

LAKE COUNTY  
LAK-20-19.39

MATERIAL PROPERTIES: ELASTOMERIC STRIP SEALS SHALL MEET THE REQUIREMENTS OF ASTM D2628 (MODIFIED TO OMIT THE RECOVERY TEST) EXCEPT THAT THE TYPE A DUROMETER HARDNESS SHALL BE 60±7 PERCENT BASED ON ASTM METHOD D2240 (MODIFIED).

TESTING: EACH LOT OF STRIP SEALS SHALL BE TESTED BY THE MANUFACTURER OR AN ACCREDITED LABORATORY TO ENSURE COMPLIANCE WITH THESE PROVISIONS. TWO COPIES OF THE CERTIFIED TEST DATA INDICATING THAT THE TESTED MATERIALS COMPLY WITH THESE PROVISIONS SHALL BE SUBMITTED TO THE LABORATORY.

PREPARATIONS FOR INSTALLATION: TO AVOID THE SUBSEQUENT CONTAMINATION OF PREPARED SURFACES, ALL SURFACES OF ELASTOMERIC STRIP SEALS SHALL BE CLEANED WITH METHYL ETHYL KETONE (MEK) TOLUENE (T) OR OTHER APPROVED SOLVENT USING CLEAN DISPOSABLE CLOTHS. THE BONDING SURFACES OF THE STEEL EXTRUSION OR RETAINER (THE INTERIOR OF THE ANCHOR GROOVES) SHALL BE PREPARED TO GRADE SA3, ASTM D2200. PREPARATION SHALL BE ACCOMPLISHED NOT MORE THAN 24 HOURS PRIOR TO ADHESIVE BONDING.

INSTALLATION: IMMEDIATELY PRIOR TO ADHESIVE APPLICATION, BONDING SURFACES SHALL BE CLEAN, DRY, AND WARMER THAN 45 DEGREES FAHRENHEIT AND THEY SHALL BE MAINTAINED AT OR ABOVE THIS TEMPERATURE UNTIL THE ADHESIVE HAS CURED. IF NECESSARY, JOINT ENCLOSURES AND SUPPLEMENTAL HEATING SHALL BE FURNISHED TO ENSURE A RAPID AND COMPLETE ADHESIVE CURE OR THE INSTALLATION OF THE ELASTOMERIC SEAL SHALL BE POSTPONED UNTIL WARMER WEATHER WILL PERMIT THE INSTALLATION AND CURING AT TEMPERATURES ABOVE 45 DEGREES FAHRENHEIT.

ADHESIVE SHALL BE APPLIED TO BOTH THE STEEL AND ELASTOMERIC BONDING SURFACES USING A STIFF BRUSH IF NECESSARY TO ACHIEVE A COMPLETE AND RELATIVELY UNIFORM COATING. THEN THE BULBED EDGES OF THE ELASTOMERIC SEAL SHALL BE INSERTED INTO THE ANCHOR GROOVES. AFTER INSTALLATION, EXCESS ADHESIVE SHALL BE REMOVED FROM THE EXPOSED SEAL SURFACES.

SHOP DRAWINGS: SHOP DRAWINGS FOR THE EXPANSION JOINTS ARE REQUIRED. THE MANUFACTURER OF THE EXPANSION JOINTS SHALL SUBMIT COMPLETE DIMENSIONAL DETAILS OF THE PROPOSED JOINT EXTRUSIONS OR RETAINERS FOR APPROVAL. THE CONTRACTOR SHALL COORDINATE THE PREPARATIONS OF THE STRUCTURAL STEEL AND EXPANSION JOINT SHOP DRAWINGS TO ENSURE COMPLETE GEOMETRICAL AND DIMENSIONAL COMPATIBILITY.

PAINTING: FOR PAINTING REQUIREMENTS, SEE GENERAL NOTE 15.

MEASUREMENT FOR PAY PURPOSES SHALL BE BASED ON THE SEALED LENGTH OF JOINTS MEASURED ALONG THE JOINT CENTERLINE. PAYMENT PER LINEAR FOOT FOR ITEM 516-STRUCTURAL EXPANSION JOINTS INCLUDING ELASTOMERIC STRIP SEALS INCLUDES ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO FURNISH THE JOINTS COMPLETE AND ACCEPTABLE IN PLACE INCLUDING THE STRIP SEAL GLAND, STEEL EXTRUSIONS OR RETAINERS, AND THE STRUCTURAL STEEL JOINT ARMOR, INCLUDING 1/2" GUSSET PLATES, 3/8" STIFFENER PLATES AND ALL STEEL DETAILS IN THE EXPANSION JOINTS AT THE SIDEWALK, TEMPORARY CLASS C CONCRETE AND TEMPORARY STEEL PLATE INCLUDING STAGE CONSTRUCTION, DIAGONALS AND BOTTOM MEMBERS OF END CROSSFRAMES SHALL BE INCLUDED WITH ITEM 513.

PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE FOR:

ITEM	UNIT	DESCRIPTION
516	LINEAR FOOT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEALS.

19. BAR LAP LENGTHS

UNLESS OTHERWISE SHOWN, BAR LAPS SHALL BE NOT LESS THAN:

BAR NO.	4	5	6	7	8	9
LENGTH	1'-0"	1'-4"	1'-5"	2'-0"	2'-7"	3'-3"

20. MECHANICAL CONNECTORS FOR REINFORCING STEEL

AN APPROVED TYPE OF NON-PROTRUDING MECHANICAL CONNECTOR SHALL BE PROVIDED WHERE CALLED FOR ON PLANS. MECHANICAL CONNECTORS SHALL MEET THE REQUIREMENTS OF SECTION 509.08. INSTALLATION OF CONNECTORS SHALL CONFORM WITH MANUFACTURER'S RECOMMENDED PROCEDURES. MECHANICAL CONNECTORS SHALL BE EPOXY COATED FOR EPOXY COATED BARS. COATING FOR BOTH CONNECTORS AND BARS SHALL CONFORM TO THE SAME SPECIFICATION. COATINGS WHICH HAVE BEEN DAMAGED OR WHICH OTHERWISE DO NOT MEET SPECIFICATION WITH RESPECT TO COLOR, CONTINUITY AND UNIFORMITY MAY BE REPAIRED AS DIRECTED BY THE ENGINEER OR THEY SHALL BE REPLACED WITH MATERIAL WHICH MEETS THE SPECIFICATIONS. MECHANICAL CONNECTORS AND SPLICE BARS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR RESPECTIVE REINFORCING STEEL (ITEM 509) WHERE THEY ARE REQUIRED.

21. ITEMS NOT INCLUDED IN BRIDGE PLANS

THE FOLLOWING ITEMS ARE NOT INCLUDED IN THE BRIDGES PLANS. SEE ROADWAY PLANS FOR DETAILS.

A. EMBANKMENT AND EXCAVATION AT APPROACHES, GRADING, APPROACH SLABS, APPROACH SIDEWALKS AND APPROACH PAVEMENTS.

22. PROPOSED WORK NOTE:

IN GENERAL, THE PROPOSED WORK CONSISTS OF WIDENING THE EXISTING BRIDGE BY REMOVAL OF EXISTING BRIDGE DECK, APPROACH SLABS AND PORTIONS OF EXISTING ABUTMENTS AND WINGWALLS. INSTALLATION OF NEW PLATE GIRDERS AT THE SIDES OF THE BRIDGE, CONSTRUCTION OF NEW PIERS, WIDENING EXISTING ABUTMENTS AND CONSTRUCTION OF NEW WINGWALLS, DECK SLAB AND APPROACH SLABS, CLEANING AND FIELD PAINTING OF EXISTING STRUCTURAL STEEL AND INCIDENTAL ITEMS OF WORKS. TRAFFIC ON BRIDGE AS WELL AS ON THE S.R. 2 FREEWAY UNDER THE BRIDGE THROUGHOUT THE CONSTRUCTION HAS TO BE MAINTAINED AND THEREFORE, IT WILL BE NECESSARY TO COMPLETE VARIOUS ITEMS OF WORK IN STAGES. THE MAJOR ITEMS OF WORK REQUIRING STAGE CONSTRUCTION ARE DESCRIBED BELOW FOR INFORMATION. SOME OF THE PROJECT ITEMS OF WORK SUCH AS REPAIRS TO THE ABUTMENT, SOME OF THE CLEANING AND FIELD PAINTING OF STRUCTURAL STEEL ETC., MAY BE PERFORMED AT CONTRACTOR'S OWN SCHEDULE WITHIN THE TIME FRAME. HOWEVER, IT MUST BE COORDINATED FOR MAINTENANCE OF TRAFFIC AND SAFETY REQUIREMENTS.

NO LANE RESTRICTIONS SHALL BE IMPLEMENTED OR IN PLACE DURING THE PERIOD BEGINNING NOVEMBER 15 AND ENDING MARCH 15.

A. STAGE I CONSTRUCTION (SEE SHEET 3/32):

- MOVE THE EASTBOUND TRAFFIC TOWARDS THE SOUTH GUTTER LINE AND WESTBOUND TRAFFIC TOWARDS THE NORTH GUTTER LINE.
- REMOVE THE CONCRETE MEDIAN AT THE CENTERLINE OF S.R.20 AND SMOOTH THE EXISTING DECK SURFACE BELOW THE MEDIAN.
- INSTALL TEMPORARY CONCRETE BARRIER AT 2'-6" SOUTH OF CENTERLINE OF S.R. 20. SEE SHEET 3/32.
- DIVERT THE TRAFFIC (BOTH EASTBOUND AND WESTBOUND) TO THE NORTH SIDE OF THE BRIDGE.

- SAWCUT EXISTING CONCRETE DECK SLAB AT 4'-0" SOUTH OF CENTERLINE OF S.R. 20.
- REMOVE THE CONCRETE DECK SLAB, SAFETY CURB & PARAPET RAILING, SOUTH OF SAWCUT LINE, AS PER GENERAL NOTE 6B ON SHEET 2/18.
- REMOVE END DAMS, PORTIONS OF CONCRETE ABUTMENT, WINGWALLS, APPROACH SLABS AND OTHER ITEMS ASSOCIATED WITH THE EXISTING BRIDGE DECK, SOUTH OF SAWCUT LINE.
- CONSTRUCT NEW PIERS ON SOUTH SIDE OF CENTERLINE OF S.R. 20.
- CONSTRUCT ABUTMENT WALLS, WINGWALLS AND APPROACH SLABS ON SOUTH SIDE OF CENTERLINE OF S.R. 20
- INSTALL PLATE GIRDER, INTERMEDIATE AND END CROSSFRAMES AND END DAMS ON SOUTH SIDE OF CENTERLINE OF S.R. 20.
- PLACE THE FORMWORK, REINFORCEMENT, PARAPET CONCRETE AND DECK SLAB CONCRETE UP TO 4'-3 1/2" SOUTH OF CENTERLINE OF S.R. 20 FOR DECK SLAB AS SHOWN ON SHEET 15/18 AND INSTALL BRIDGE SIDEWALK RAILING OVER THE SOUTH PARAPET.
- INSTALL TEMPORARY CONCRETE BARRIER AT 5'-6" SOUTH OF CENTERLINE OF S.R. 20.

B. STAGE II CONSTRUCTION (SEE SHEET 3/32):

- DIVERT THE TRAFFIC TO THE SOUTH SIDE OF THE BRIDGE.
- REMOVE THE TEMPORARY CONCRETE BARRIER LOCATED AT 2'-6" SOUTH OF CENTERLINE OF S.R. 20.
- REPEAT THE OPERATIONS 6, 7 & 8 AS DESCRIBED UNDER STAGE I CONSTRUCTION, FOR THE NORTH SIDE.
- CONSTRUCT THE ABUTMENT WALLS, WINGWALLS AND APPROACH SLABS.
- INSTALL PLATE GIRDER, INTERMEDIATE AND END CROSSFRAMES AND END DAMS ON NORTH SIDE OF CENTERLINE OF S.R. 20.
- PLACE THE FORMWORK AND THE REINFORCEMENT FOR THE REMAINING PORTION OF THE DECK SLAB, NORTH SIDEWALK SLAB, AND NORTH PARAPET.
- PLACE CONCRETE FOR THE REMAINING PORTION OF THE DECK SLAB, NORTH SIDEWALK SLAB, AND NORTH PARAPET ON THE NORTH SIDE OF THE BRIDGE AND INSTALL BRIDGE SIDEWALK RAILING OVER THE NORTH PARAPET.
- DIVERT THE TRAFFIC TO THE NORTH OF CENTERLINE OF S.R. 20.
- INSTALL TEMPORARY CONCRETE BARRIER AT 14'-0" SOUTH OF CENTERLINE OF S.R. 20.
- REMOVE THE TEMPORARY CONCRETE BARRIER LOCATED AT 5'-6" SOUTH OF CENTERLINE OF S.R. 20.

C. STAGE III CONSTRUCTION

- DIVERT THE TRAFFIC AS SHOWN ON STAGE III CONSTRUCTION ON SHEET 3/32.
- PLACE THE FORMWORK AND THE REINFORCEMENT FOR THE SOUTH SIDEWALK SLAB AS SHOWN ON SHEET 15/18.
- PLACE CONCRETE FOR THE SOUTH SIDEWALK SLAB.
- SANDBLAST, CLEAN AND PAINT ALL STRUCTURAL STEEL AS PER GENERAL NOTE 15 ON SHEET 3/18.
- REMOVE THE TEMPORARY CONCRETE BARRIER, LOCATED AT 14'-0" SOUTH OF CENTERLINE OF S.R. 20.
- RESTORE NORMAL TRAFFIC MOVEMENT.

<b>POLYTECH, INC.</b>						4 / 18
CONSULTING ENGINEERS						CLEVELAND, OHIO
<b>GENERAL NOTES</b>						
BRIDGE NO. LAK-20-1939 OVER S.R.2. (EAST BOUND)						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CT	MAC	—	GA	BS	4/88	