

FHWA REGION	STATE	PROJECT	
5	OHIO		

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LAKE COUNTY  
LAK-90-23.42 (L & R)

GENERAL NOTES

**REFERENCE** shall be made to Standard Drawing:

BR-1 Dated 5-29-79

And to Supplemental Specifications:

836 Dated 11/12/75  
853 Dated 06/26/78  
956 Dated 06/26/78

**DESIGN SPECIFICATIONS:** This structure conforms to "Standard Specifications for Highway Bridges" adopted by the American Association of State Highway and Transportation Officials, 1983, including the Interim Specifications, and the Ohio "Supplement" to these Specifications.

**DESIGN DATA:** New materials incorporated in the structure conform to the following:

Design Loading - None (No Strengthening to Structure)  
Concrete Class S - Unit Stress 1500 P.S.I.  
Concrete Class C - Unit Stress 1330 P.S.I.  
Reinforcing Steel ASTM A615, A616, or A617 - Grade 60 - Unit Stress 24,000 P.S.I.  
Structural Steel ASTM A36 - Unit Stress 20,000 P.S.I.  
Deck Protection Method - Superplasticized dense concrete overlay.

**EXISTING STRUCTURE PLANS** may be examined by prospective bidders at the Ohio Department of Transportation, District 12 office, Cleveland, Ohio.

**EXISTING STRUCTURE VERIFICATION:** Details and dimensions shown on these plans pertaining to the existing structure have been obtained from plans of the existing structure and/or from field observations and measurements. Consequently, they are indicative of the existing structure and the proposed work but they shall be considered tentative and approximate. The Contractor is referred to CMS Sections 102.05, 105.02 and 513.02.

Contract bid prices shall be based upon a recognition of the uncertainties described above and upon a pre-bid examination of the existing structure by the Contractor. However, all project work shall be based upon actual details and dimensions which have been verified by the Contractor in the field.

**PROPOSED WORK:** The proposed work includes rehabilitation of existing railing, replacement of wearing surface, concrete deck overlay, modification of expansion joints, modification of the drainage system, installation of inspection walks and ladders, and field coating structural steel. Incidental to the project are the maintenance of traffic and all work shown in these plans.

**SEQUENCE OF WORK** is as follows:

1. Establish traffic zones for Phase I.
2. Remove wearing surface, waterproofing and scarify concrete.

3. Install structural steel, manholes, strip seal extrusions and reconstruct railing.
4. Place concrete overlay on roadway.
5. Place Verglimit asphalt wearing surface.
6. Install temporary strip seal in rebuilt joint.
7. Remove Phase I and establish Phase II traffic zone.
8. Repeat item 1-5 for Phase II.
9. Install permanent strip seals.

Perform items of work not specifically ordered as appropriate throughout the construction operations except that structural steel shall be cleaned and coated only after all other work on a bridge has been completed.

**DIMENSIONS** Dimensions given for the existing structure are from original construction plans. Some variations from plan dimensions are expected. The Contractor shall be responsible for proper fit-up between the proposed and existing construction. Adequate measurements shall be made in the field prior to fabrication or installation of any part to insure that all parts can be properly assembled as specified in the plans. The cost of field measurements shall be included in the unit price bid for the various related items of work. Any additional cost resulting from variations from plan dimensions is the responsibility of the Contractor and no additional payment will be awarded.

**UTILITY LINES:** All expenses involved in permanent relocation of the affected utility lines shall be borne by the owners. The Contractor and owners are requested to cooperate by arranging their work in such a manner that inconvenience to either will be held to a minimum.

**SHOP DRAWINGS, SUBMITTALS AND RECORDS:** Shop drawings are required to be submitted per CMS 501.05.

Shop drawings per 501.05 will be required for all Items 513; 516 (except preformed expansion joint filler); and 518.

The Project Engineer will maintain a file of shop drawings and keep a set of plans marked to "as-built" conditions in the project field office.

**PORTIONS OF STRUCTURE REMOVED** <sup>AS PER PLAN</sup> shall include the elements indicated in the plans and general notes and are not separately listed for payment, except for wearing course removal. Items to be removed include all existing materials being replaced by new construction, and miscellaneous items that are not shown incorporated in the final construction and are directed to be removed by the Engineer. The following major items are included:

- Item
- Aluminum parapet railing
  - Concrete Safety Walk
  - Concrete Overlay
  - Membrane Waterproofing
  - Bulb Angle Gutter
  - Steel Reinforced Elastomeric Expansion Joint
  - Full Depth Concrete Deck
  - Downspouts and Brackets
  - Loose or Unsound Parapet Concrete
  - Wingwall Parapet in Transition Length

All the posts, curved terminal ends and pipe of the aluminum bridge railing shall remain ODOT property and be carefully removed and stored for subsequent transportation by the contractor. See note on sheet 23

Concrete shall be removed by means of approved pneumatic hammers employing pointed and blunt chisel tools. Backhoe-rams will not be permitted. The weight of hammer shall be approved by the Engineer. All work shall be done in a manner that will not cut, elongate or damage the reinforcing steel in any way.

Chipping hammers shall not be heavier than the nominal 90-pound class. Pneumatic hammers shall not be placed in direct contact with reinforcing steel that is to be retained in the rebuilt structure.


Exposed reinforcing steel shall be cleaned by sandblasting to Grade SA-1 to remove all loose particles of concrete or rust. Existing reinforcing steel shall be cut and/or maintained as indicated in the plans, or as directed by the Engineer, to serve as dowels or principal reinforcement in the re-built structure. These bars shall be cleaned to remove concrete fragments and foreign matter. Care shall be taken to preserve the bond of such dowels or principal reinforcement to the existing concrete. Where bond between existing concrete and reinforcing steel that is to be retained has been destroyed, the unbonded concrete adjacent to the bar shall be removed to a depth which will permit new concrete to bond to the entire periphery of the bar so debonded. A minimum of 1 1/2 in. clearance around the perimeter of the steel shall be provided. Damaged areas of reinforcement that are to remain shall be cut and stress transfer shall be accomplished by either a lapped or mechanical splice as approved by the Engineer. Other existing reinforcement within the removal limits shall be removed and disposed of. All necessary labor, equipment and material required to cut and clean existing reinforcing steel shall be provided by the Contractor and included with item 202-Portions of Structure Removed, for payment. Lapped or mechanical splices required for stress transfer where existing reinforcement is damaged by the Contractor shall be provided by the Contractor at his expense. The parapet surface to be in contact with new concrete shall be cleaned by sand blasting followed by an air blast.

**WELDING TO EXISTING STEEL:** The original design plans for the bridge indicate that ASTM A7-33 structural steel was used. The contractor shall submit to the engineer a list of electrodes and flux electrode combinations for each process that he proposes to use. All welding shall be performed in accordance with the current AASHTO/AWS D1.5-88 Bridge Welding Code and ODOT SS 1011.

**LAKE COUNTY METROPOLITAN PARK DISTRICT** is on both sides of the right of way. The Contractor shall at all times protect the users of the Park, the waterway, and the animals from the park.

**ENDANGERED WILD LIFE:** The Contractor shall not disturb the nests of any endangered species of bird while fledglings or eggs are present in the nest.

GENERAL NOTES CONTINUED  
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		<b>RICHLAND ENGINEERING LIMITED</b> MANSFIELD, OHIO		3 / 19
		<b>GENERAL NOTES</b> SUPERSTRUCTURE BRIDGE NO. LAK-90-2342 (L&R) OVER THE GRAND RIVER		
LAKE COUNTY				I.R.90
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED
DHT	JRS	JRS	DT	DAP
				9/13/89