

FHWA REGION	STATE	PROJECT	
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LAKE COUNTY
LAK-90-23.42 (L & R)

GENERAL NOTES

SAFETY CLIMBING SYSTEM:

A. **DESCRIPTION:** This work shall consist of furnishing and installing safety climbing systems on all access manhole locations in accordance with these specifications in reasonably close conformity with the plans and manufacturer's recommendations and as directed by the Engineer.

B. **SYSTEM COMPONENT AND MANUFACTURERS:** The system shall consist of a Saf-T-Notch rail, ladder rung clamps, Saf-T-Mount section at the bottom of the ladder and removable extension mandril at the top of the ladder. Also included shall be a total of 2 removable extension rails and 2 tie-down rods which shall be delivered to the Engineer.

All components shall be standard galvanized Saf-T-Climb fall prevention system as manufactured by North Consumer Safety Products at 2664-B Saturn Street, Brea CA 92621, (714) 524-1655.

C. **MEASUREMENT AND PAYMENT:** This item shall be measured by the linear foot, in place and accepted. Payment will be at the contract price bid for Item Special, Safety Climbing System. This price shall be payment in full for furnishing and installing the safety climbing system and all other material, labor and equipment necessary for the installation according to plans and specifications.

~~**FIELD PAINTING EXISTING STEEL:** Both of the structures except for the following areas are to be prepared and painted in their entirety with the OZEU system specified in Proposal Note No. 119-88. The areas not to be painted are:~~

1. The new galvanized steel.

~~The finish coat shall be blue matching Federal color standard number FS-595A-15450.~~

~~**CAULKING EXISTING STEEL:** The existing steel work will be prepared and caulked as specified in Proposal Note No. 119-88. The areas to be caulked are shown on sheet 19 of 19.~~

STRIP SEAL JOINT, INCLUDING ELASTOMERIC SEALS: The materials and methods used under this item shall comply with Standard Drawing EXJ-4-87 except the extrusions shall be installed as shown on sheet 13 of 19.

Shop drawings covering all details for the expansion joints are required, per 501.05.

PAYMENT: Payment will be made at the contract unit price per lineal foot for:

Item 516 - 5" strip seal joints, including elastomeric seals, as per plan.

The contract price shall be payment in full for furnishing all materials, equipment, and labor to complete the work as specified, including elastomeric seals, STEEL RETAINERS, WELDING and joint armor and all structural steel shop welded thereto, temporary support bars and fasteners, material testing, and shop drawings.

EPOXY SEALING OF CONCRETE SURFACES: After all the concrete repairs have been made, all exposed existing and new concrete surfaces of the parapet railing abutments, abutment seats, abutment backwalls, wingwalls, piers, and pier seats, shall be sealed with an epoxy sealer per Proposal Note No. 110-84.

SCUPPER ABANDONED: Each of the scuppers marked to be abandoned shall have the following work performed. After the wearing surface and waterproofing membrane have been removed, the bar screen shall be removed. If the scupper is above the remaining concrete, the steel plates will be trimmed to be flush with the deck. Any rough spots from the trimming will be ground smooth to minimize wear on the new waterproofing system. The scupper will be cleaned by sandblasting and air cleaning. The downspout will be closed with plywood, or sheet metal. The scupper will be filled with Magnesium Phosphate Concrete (MPC) or Class "S" concrete.

MPC may be Steelcote FC-100 as manufactured by Steelcote Manufacturing Company, Bostik 276 as manufactured by the UPCO Company, Horn 240 as manufactured by A.C. Horn, Inc., or Set 45 as manufactured by Set Products, Inc. or an approved equal. Coarse aggregate may be added in accordance with the manufacturer's instructions. MPC materials shall be mixed and placed as per manufacturer's recommendations.

The concrete or MPC will be allowed to sufficiently cure before any further work shall be placed over the abandoned scupper.

Payment will be made for the unit price bid for each Item Special - Scupper Abandoned. This unit price will include all tools, material, equipment and labor required. No extra payments will be permitted.

PATCHING CONCRETE STRUCTURES: A contingency quantity of 100 S.F. of Item 519 "Patching Concrete Structures" has been included in the estimated quantities for use as directed by the Engineer.

CRUSHED AGGREGATE SLOPE PROTECTION: A contingency quantity of 500 S.Y. of Item 601 "Crushed Aggregate Slope Protection" has been included in the estimated quantities for use by the Engineer to dress up existing areas of slope protection damaged by the 603 and 604 operations.

1" WELDED GALVANIZED STEEL GRATING, CATWALKS: The rectangular welded steel bar grating shall be made with 1" x 3/16" bearing bars at 1-3/16" centers and twisted square cross bars at 4" centers. Material shall be ASTM A-569 steel fabricated per Item 513 and N.A.A.M.M. Mark W-19-4 (1 x 3/16).

The steel grating shall be manufactured by Borden Metal Products company, Elizabeth, N.J.; Reliance Steel Products Company, McKeesport, PA.; the Ametco Manufacturing Corporation, 4326 Hamann Parkway, Willoughby, OH 44904, Phone -(216) 951-4300; the I.K.G. Industries, P.O. Box 479, Nashville, Tennessee 37202; or the Alabama Metal Industries Corporation; P.O. Box 3928, Birmingham, Alabama 35208.

ITEM 850 SUPERPLASTICIZED DENSE CONCRETE OVERLAY VARIABLE THICKNESS, AS PER PLAN
SDC overlay variable thickness shall conform to SS 850 except payment for this item shall be for the SDC (material only), furnished to the job site in place. No separate payment shall be made for placement of the concrete or for any tools, labor, equipment or incidentals necessary for such placement, complete and in conformance with plan notes and SS 850. The intent of this item is to pay material costs only for all material beyond that used for item 850 Superplasticized Dense Concrete Overlay (1 3/4" Thick) as per plan, regardless of depth of removal incurred and including any material required for grade correction.

ACCESS MANHOLES: The work under this item includes the furnishing and installation of a new manhole casting on the structural steel frame detailed on sheet 12 of 19. The manhole casting shall be either a Neenah R-1915-N made by Neenah Foundry Company, Box 729, Neenah WI 54956, a Watertite 1580PT made by the East Jordan Iron Works, P.O. Box 439, East Jordan, Michigan 49727 or an approved equal.

Shop Drawings, per 501.01, are required.

The following items have to be coordinated with the work done under this item:

- a. Reinforcing & Concrete Removal paid for under Item 502 - Portions of Structure Removed.
- b. Support Frame paid for in Item 513 - Structural Steel (AISC certification not required).
- c. Concrete is paid for under Item 511 - Class "S" concrete deck repair.

Parapet Deflection Joints: Deflection joints shall be placed in the new concrete parapets at the same location as the existing. 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 enough to saw through the entire parapet is acceptable, but the minimum depth of the saw cut shall be two 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. Cost of deflection joints shall be included in the price bid for Item 511-class S concrete, super-structure railing.

ITEM 850, SUPERPLASTICIZED DENSE CONCRETE OVERLAY, (1 3/4" Thick), As Per Plan

1. See proposal note entitled Concrete Bridge Deck Surface Preparation Using Hydrodemolition
2. The overlay shall be finished to a height of 3/4" above the existing portland cement concrete surface.
3. SDC overlay (1 3/4" thick) shall be measured as per SS 850. The price bid for this item shall include the cost of furnishing, placing, finishing, texturing and curing the 1 3/4" thick overlay. It also includes the cost of all other labor, material and equipment required to complete this work and item 850 - Superplasticized Dense Concrete Overlay, Variable Thickness, As per plan, but not specifically included in other items for payment.

REVISED 1-3-91
REVISED 11-19-90

5/19



GENERAL NOTES

SUPERSTRUCTURE
BRIDGE NO. LAK-90-2342 (L&R)
OVER THE GRAND RIVER

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DHT	JPS	JPS	DT	DAP	5/13/89	2-20-91 5-12-90 10/90

Revised 4/17/90