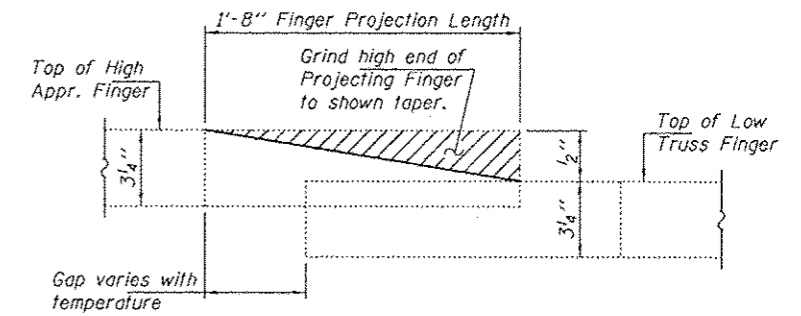


**TABLE OF REPAIRS**

2011 NBIS REPORT ITEM NO.	SPAN	MEMBER	LOCATION	DEFICIENCY	PROPOSED REPAIR
4	3 & 4	Finger $\ell$ Joint	Between W. Girder & Stringer 3	Missing Bolt	Replace $-\frac{7}{8}$ " $\phi$ x $2\frac{5}{8}$ " bolt with $3'' \times 3'' \times \frac{3}{8}''$ washer (top) and standard washer (bottom)
8	4	Floorbeam 29	at West Tie	Missing Bolt	Replace (Verify bolt $\phi$ & length in field)
91	4	Floorbeam 30	at Stringer 5, North Face	Broken Bolt at Stringer 5 Bearing	Replace $-\frac{3}{4}$ " $\phi$ x $4\frac{5}{16}''$ long
69	4	Catwalk	Conn. $\ell$ of Catwalk & Lat. brace, N. of FB35	Missing Bolt	Replace $-\frac{3}{4}$ " $\phi$ x $3\frac{1}{4}''$ long
98	4	Floorbeam 37	at Stringer 3, Top	Broken Bolt at Stringer 3 Bearing	Replace $-\frac{3}{4}$ " $\phi$ x $4\frac{7}{16}''$ long
102	4	Floorbeam 39	Connection $\ell$ at center	Missing Bolt	Replace $-\frac{7}{8}$ " $\phi$ x $1\frac{5}{16}''$ long
20	4	West Tie	W. Tie at T14, W. conn. $\ell$ to FB40	Missing Bolt	Replace (Verify bolt $\phi$ & length in field)
105	5	West Girder	at FB54 122	Missing Bolt	Replace $-\frac{7}{8}$ " $\phi$ x $3\frac{1}{4}''$ long
71	7	Railing	50' N. of Pier 7, W. side, SB Lanes	Damaged Bracket (3 locations)	* Replace
72	8	Railing	50' N. of Pier 8, W. Side, SB Lanes	Damaged Bracket (6 locations)	* Replace
106	8	East Girder	3rd stiffener from Pier 8, East face	$\frac{1}{2}''$ crack stiffener to web bottom	Stiffener Intersection Modification Repair
107	12	West Girder	Lower long. stiff. btwn. FB131 & 132, E. face	$\frac{1}{2}''$ crack in long. stiff. to web weld	Stiffener Intersection Modification Repair
74	12	East Girder	Botl. flange splice $\ell$ btwn. FB131 & FB132	Bolt Loose	Replace $-\frac{7}{8}$ " $\phi$ x $2\frac{1}{16}''$ long
29	12	Finger $\ell$ Joint	Between Stringer 6 & East Girder	Bolt Broken	Replace $-\frac{7}{8}$ " $\phi$ x $2\frac{5}{8}''$ bolt with $3'' \times 3'' \times \frac{3}{8}''$ washer (top) and standard washer (bottom)
77	13	Railing	W. side, SB Lanes, btwn. TB & T9	3 Damaged Brackets	* Replace
78	13	West Tie	Tie Reinforcement $\ell$ at T10	Missing Bolt	Replace (Verify bolt $\phi$ & length in field)
79	13	Railing	Throughout E. side, NB Lanes	11 Damaged Brackets	* Replace
81	13	West Tie	at T18, Bracket Conn., FB to W. Tie	Missing Bolt	Replace (Verify bolt $\phi$ & length in field)
82	14	Railing	20' N. of Pier 14, W Side, SB Lanes	Damaged Bracket	* Replace
84	16	Railing	50' N. of Pier 16, E. Side, NB Lanes	2 Damaged Brackets	* Replace
62	19	Railing	Throughout, N. of S. Aul. SB Lanes, W. Side	7 Damaged Brackets	* Replace

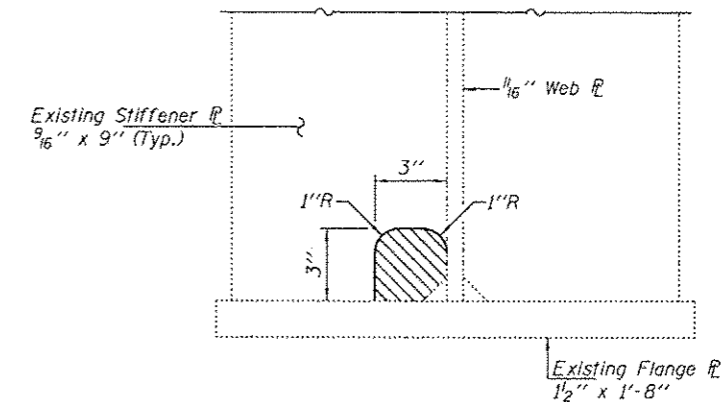
\* Remove and Replace damaged Handrail Posts at locations specified. 4 New  $\frac{3}{4}$ " $\phi$  Aluminum nuts and washers shall be provided at each location of the existing anchor bolts. This work shall be paid for at the contract unit price each for Replace Handrail Support, which price shall include all labor and materials except for the Handrail Posts, which shall be provided by IDOT District 9.

Notes:  
Fasteners shall be high strength bolts. Bolts  $\frac{7}{8}$ " $\phi$  with 2 standard washers, open holes  $\frac{15}{16}$ " $\phi$ , unless otherwise noted.  
Length of bolts indicates total thickness of connected material excluding thickness of washers.



**FINGER PLATE GRINDING DETAIL**

Typical at  $\pm 90$  Fingers / 30' width  
(Cost included with Structural Steel Removal)



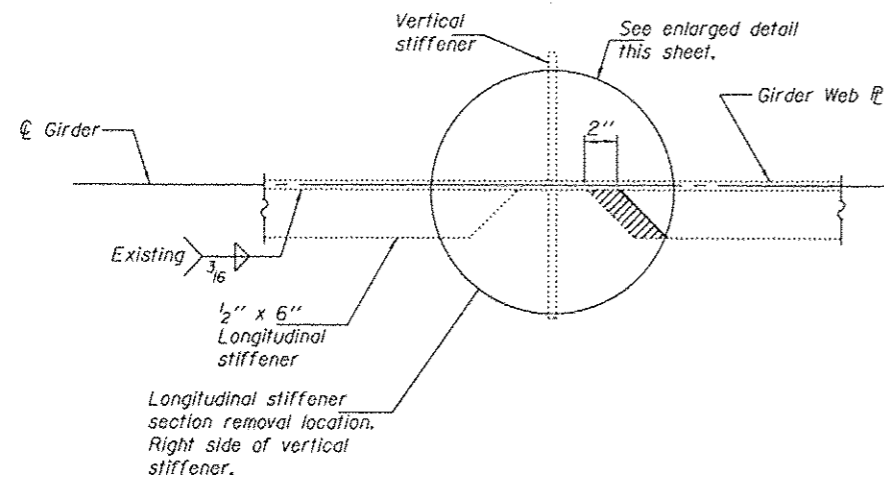
**ITEM 106 REPAIR DETAIL**

Remove portion of stiffener and grind flush stiffener to web weld. Care shall be taken to not remove any portion of the bottom flange to web weld. After removal and grinding operations are complete, inspect web to bottom flange weld as outlined in #3 below.

**Procedure for Stiffener Intersection Modification Repair Detail:**

- Cut areas of existing longitudinal stiffener and along web as shown, with a 1" R (Min) at Web. The minimum distance from cut to face of web shall be the larger of  $\frac{1}{4}''$  or web to plate weld size, with removal of remaining material by grinding as described below. The cut shall be made parallel to the web without angling the cut towards the web. Equipment and method of cutting shall be approved by the Engineer. Any method of removal to be used shall ensure that no damage is done to the existing web, vertical stiffener or welds connecting these elements. Cutting shall be done in a manner such that the paint on the opposite face of the web is not damaged. If damage occurs, the damaged area shall be repainted at the contractor's expense and procedures shall be modified to prevent damage at subsequent removal locations.
- Remove material between cut and web by grinding and grind smooth at web surface and cut end of stiffener. Web  $\ell$  surfaces and cut end of stiffener shall have a roughness average (Ra) of 250  $\mu$  in. or less. Grinding equipment shall be approved by the Engineer. The grinding operation should not gouge the girder web  $\ell$ .
- The web and or flange surface at the modification shall be inspected using dye penetrant or magnetic particle (MT) methods. Any cracks found shall be identified and reported to the Bureau of Bridges and Structures for further disposition.
- The exposed steel surfaces shall be cleaned and painted using an aluminum epoxy mastic primer according to Article 506.10 of the Standard Specifications.

Each stiffener removal area is to be considered as one retrofit. Accepted above referenced work will be paid for at the contract unit price each for Stiffener Intersection Modification, which price shall include all materials, equipment, labor, cleaning, testing and painting.



**ITEM 107 REPAIR DETAIL**

Hatched area indicates section removal.  
(Showing 1 location)

