The handrail shall be 1¼" STD. PIPE, ASTM A53 GR. A or B. All hardware shall be hot dipped galvanized.

2. The intermediate clips shall be ASTM A 992 OR ASTM A572 GR 50, galvanized after fabrication. High strength bolts shall be ASTM A 325, galvanized. Nutset bolts may be utilized in the vicinity of girders field splices, properly tightened and tack welded see detail C.

3. FASTEN TO BRIDGE AFTER GIRDERS ARE SHOP PAINTED. OVERSPRAY FROM FIELD PAINTING IS PERMITTED.

4. Handrail is designed to be used with short length, fixed lanyards. Design loading is 200 LB VERTICAL AND HORIZONTAL, ACTING CONCURRENTLY. ONLY ONE PERSON IS PERMITTED TO ATTACK WITHIN EACH 8 FOOT BAY.

NOTES:

1. **END CONNECTION DETAIL**

2. **SECTION A**

3. **SECTION B**

4. **DETAIL C**

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CLIP DETAIL

**USE CLIP DETAIL(S) BETWEEN WEB STIFFENERS TO PROVIDE SUPPORT AT 8'-0" MAXIMUM SPACING.**

- **CUT 1¾" HOLE FOR 1¼" STD. PIPE HANDRAIL (TYP.)**
- **WT 5 X 15 X 0'-4" (GALV.)**
- **CLIP ¾" (TYP.)**
- **TACK WELD 3 PLACES, REPAIR GALVANIZING**
- **END CAP FOR 1¼" STD. PIPE (GALV.)**

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END CONNECTION DETAIL

- **JACKING STIFFENER**
- **TRANSVERSE STIFFENER**
- **DEE CLIP DETAIL**
- **BRO AND BEARING STIFFENER**
- **THREADED COUPLERS LOCATED AT CROSSFRAME**
- **ELEVATION GIRDER WITH HANDRAIL**

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**LAST REVISION 12-11-2014**

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**Washington State Department of Transportation**

**Bridge and Structures Office**

**EXAMPLE - HANDRAIL**