BARRIERS SHALL INITIALLY BE PLACED CLOSED TOGETHER SO BOLTS CAN BE EASILY INSERTED THROUGH HINGE BAR LOOPS.

**Joint Connection Details**

1. **Closed Joint**
   - BARRIERS SHALL BE FULLY OPENED BEFORE NUT IS TIGHTENED ONTO BOLT.

2. **Open Joint**
   - JOINTS SHALL BE FULLY OPENED BEFORE INSERTING BOLTS.

**General Notes**

- **BARRIERS:** Clearly mark all barrier segments on the top as shown. X indicates the year the barrier was cast. These bars shall be permanently impressed in the barrier using a minimum of 2" high lettering. Each segment shall have on its top, a unique identification as to its manufacturer, and, somewhere on the barrier, the day and month the barrier was manufactured.

- **Handling Devices:** May be used in lieu of the lifting slot for moving the barrier. The design of the devices shall be sufficient to handle the weight of the section being lifted. Remove all portions of handling devices that protrude above the barrier surface.

- **Project Plans:** The designers shall indicate the following information on the project plans: number of anchors per segment, special anchor requirements (if necessary) and the location of the barrier on the bridge deck.

- **J-J Hooks:** End connections may be utilized in lieu of the end connections detailed. No modifications to the reinforcing steel layout detailed herein will be allowed. Transition barrier sections with pin and loop connections on one end and "J-J Hooks" on the other shall be used to connect runs of "J-J Hooks" barrier to other permitted barrier types. The heights of the transition sections shall be the same as the barrier runs being connected. "J-J Hooks" is a trademark of East-Set Industries, P.O. Box 300, Midland, VA 22728, 1-540-439-8611 or 1-800-547-4045.