

B311

Curved Plate Bearing Assembly (Prestressed Concrete Beams) (Expansion)

Re-Approved, and signed, December 20, 2018. Last date revised: December 21, 2022.

Revised 12-21-2022

At SECTION X-X and SIDE ELEVATION:

- Added a callout to denote the sole plate.

At SECTION X-X:

- Added cross hatch pattern to the sole plate.

At DESIGN DATA block:

- Removed the "Design Data Block" from the lower right corner of the detail. The information that was included in the Design Data Block has been added to the MnDOT LFRD Bridge Design Manual.

Revised 12-02-2020

At PLAN:

- At the request of fabricators/galvanizers, changed the note: “½” dia. handling hole” to “¾” dia. handling hole”.

Revised 10-22-2019

Under NOTES:

- Within the notes: Changed the term “per spec.” to “in accordance with spec.” in all instances.

At the Table:

- In the Beam Size column, added the under bars (_ _) to the beam types to designate the appropriate beam size when filling out the chart.

At the Designer Note:

- Added – “Insert table values as needed and delete unused data.”

Re-Approved 12-20-2018

In the TABLE:

- For all beam sizes, populated the column labeled “Shape Factor”.
- Second row (MW Shape only), changed Laminate Thickness from ½” to ¾”.
- Third row, added bearing pad and plate size information for MH shape beams.

At Designer Note:

- Added bearing pad size for MH shape beams.

At Plan (upper left corner):

- To left of dimension “B”, changed “1" CLR. (TYP.)” to “1" (TYP.)”.

Revised 11-08-2018

Under NOTES:

- Changed numbered note ④ *from* “Refer to bearing pad restraint sheet for additional information and details” *to* “Refer to bearing pad restraint B-Detail for additional information and details”.

Revised 11-02-2017

Under NOTES:

- Changed the numbered note ④ to read: Refer to bearing pad restraint sheet for additional information and details.

At the SIDE ELEVATION and SECTION X-X:

- Added the restraint bars under the bearing plate.
- Changed the note pointing to both details *to*: MN shape shown (other shapes similar)
- Added the sole plate in Section X-X and adjusted the sole plate look in the Side Elevation.

At SECTION Y-Y:

- Changed the note *from*: Welded Bar (Typ.)^④ *to*: Restraint Bar (Typ.)^④.
- Removed the weld symbol pointing to the restraint bar.

At the DESIGNER NOTE:

- At the Minimum Size for Bearing Pad note: Removed the words “is shown” for the different pad sizes.
- Added note: Per note^④ include B307 and modify as necessary.

At the bearing TABLE:

- Added the RESTRAINT PATTERN ^④ column and the A-1 & A-2 designation within the column pertaining to the restraint pattern type.
- Moved the “R ^①” from the Curved Plate column to the Curved Plate Size column then removed the Curved Plate column.

Changed the DESIGN DATA box to read:

- MAX. FACTORED SHEAR RESISTANCE:
- 50.3 KIPS PER 1½” DIA. PINTLE

Revised 11-03-2015

At SECTION Y-Y:

- Changed from welded “keeper” studs” to a welded “keeper” bar.
- Added the 3/16” fillet weld symbol to the welded bar on the lower left side of the detail.
- Changed the “Welded Stud (Typ.) ^④” *to* “Welded Bar (Typ.) ^④”

At SECTION X-X:

- Changed the shape of the beam *from* an M *to* a MN shape. Also made the change at the “Side Elevation”.
- Changed the note pointing to the beam to read: MN shape (other shapes similar).

Under NOTES:

- Changed all notes to “Active Voice” if needed.
- Changed numbered note ^③ to read: 3/8" x 3/8" bar installed on bearing plate around perimeter of bearing pad. Bar length is 2" less than adjacent pad dimension, centered on pad. Centerline of bar to edge of pad dimension = 1/2".

ADDED:

- “RB” (to represent the Rectangular Beam) to the Beam Size column in the TABLE.
- Added “RB” to accompany the M, & MN shapes within the Designer Note.

Re-Approved 09-22-2011

Updated the detail to include MW shape prestressed beams.

At TABLE: under the Beam Size column, added “M & MN” to the first row of dimensions.

- Added another row of dimensions for the MW shape to the table.

Under NOTES: Removed the slash from the Mn/DOT designation to read MnDOT throughout the sheet.

Changed the Designer Note to read: “Minimum size of bearing pad, 12” x 24”, is shown for M & MN shapes 16” x 36”, is shown for MW shapes”

Revised 03-30-2010

At SECTION X-X: Removed subtitle “2’-2” BOTTOM FLANGE SHOWN”.

- Added dashed line representing the MN SHAPE.
- Added labels to the M SHAPE and the MN SHAPE lines.

THROUGHOUT SHEET: Made adjustment to the “hatching” on multiple details for consistency.

Revised 10-28-2008

At SECTION Y-Y: changed THE PINTLE-TO-CURVED PLATE WELD DETAILS TO MATCH THE WELD SYMBOL.

Revised 08-10-2006

Under NOTES: Revised ① *from* THE MIN. RADIUS OF THE CURVED PLATE IS SHOWN. THE MAX. RADIUS IS 30". FINISH TO ... *to* THE MIN. RADIUS SHALL BE 16" UNLESS OTHERWISE SPECIFIED IN THE TABLE. THE MAX. RADIUS SHALL BE 24". FINISH TO ...

Re-Approved 10-26-2005

At SECTION X-X: Added subtitle: 2'-2" BOTTOM FLANGE SHOWN

Revised 04-20-2004

In the TABLE:

- Added CURVED PLATE column
- Changed dimension F *from* 1 ³/₈" *to* 1 ¹/₂"
- Changed dimension J *from* 1 ³/₈" *to* 1 ¹/₄"

Under NOTES: Revised ① *from* THE RADIUS OF THE CURVED PLATE SHALL BE 1'-4" MINIMUM AND 2'-0" MAXIMUM. FINISH TO 250 ... *to* THE MIN. RADIUS OF THE CURVED PLATE IS SHOWN. THE MAX. RADIUS IS 30". FINISH TO 250 ...