

PINTLE SPACING TABLE

| BEAM SIZE | K |
|---------------------|----|
| 28" | 4" |
| 36" | 6" |
| 40", 45M | 8" |
| 54M, 63", 72" & 81" | 8" |
| Bulb Tee | 9" |

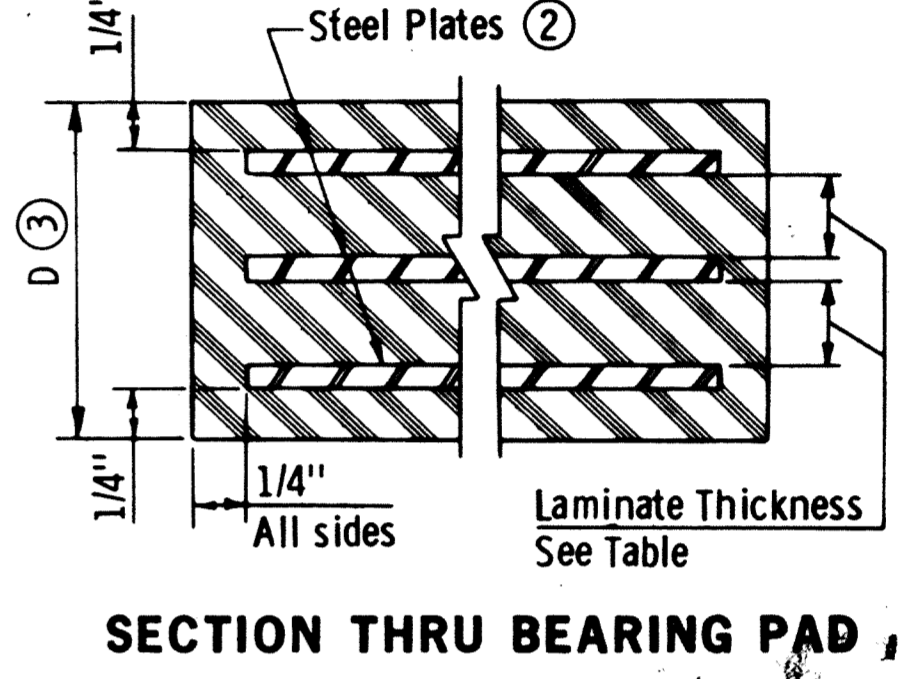
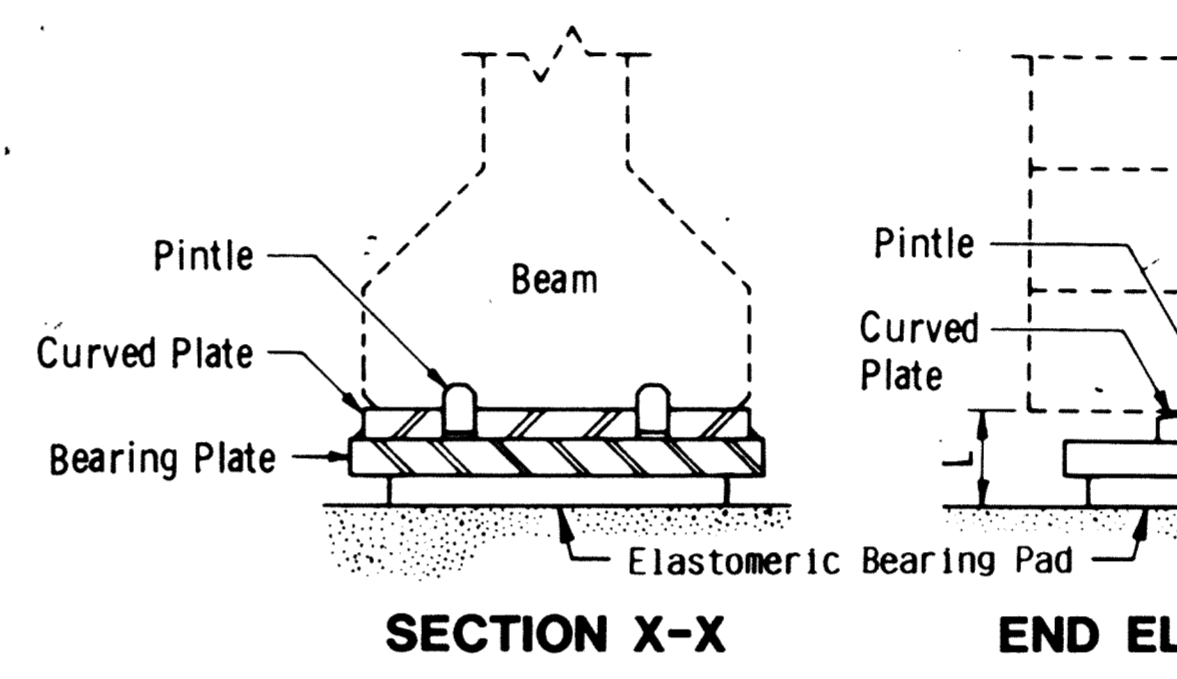
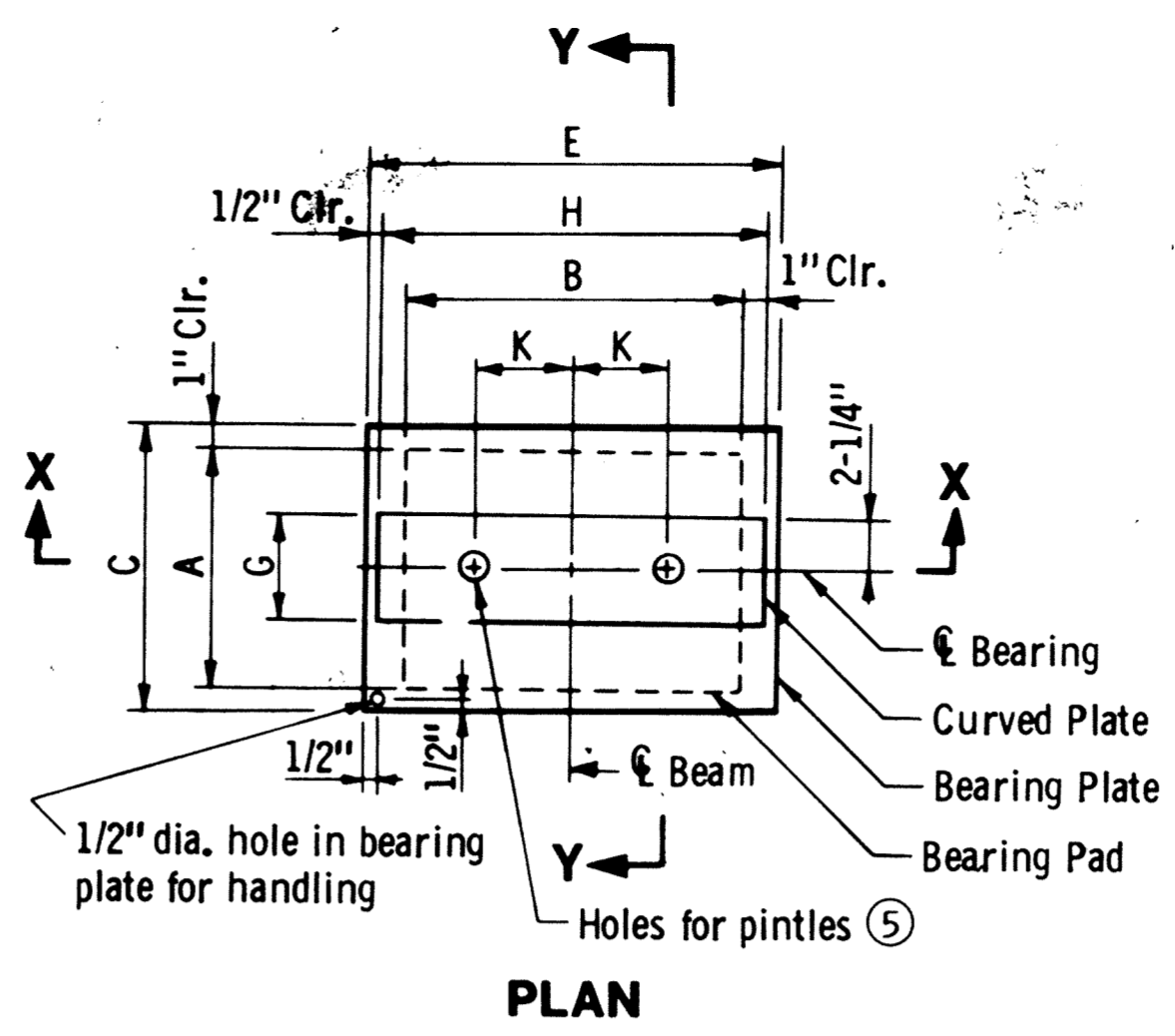
TABLE ②

| Beam Size | Bearing Pad Size | | | Steel Plates | | Laminates | | Shape Factor | Bearing Plate Size | | | Curved Plate Size | | | Pintle Dia. | Pintle Spacing | Anchor Rod Offset | Assy. Height | Assembly Type |
|-----------|------------------|-----|--------|--------------|--------|-----------|--------|--------------|--------------------|-----|--------|-------------------|--------|--------|-------------|----------------|-------------------|--------------|---------------|
| | A | B | D | No. | Thick. | No. | Thick. | | C | E | F | G | H | J | | | | | |
| | 12" | 24" | 1 1/4" | 2 | 1/8" | 1 | 1/2" | | 8.0 | 14" | 34" | 1 1/4" | 4 1/2" | 26" | | | | | |
| 72" | 12" | 24" | 1 1/4" | 2 | 1/8" | 1 | 1/2" | 8.0 | 14" | 34" | 1 1/4" | 4 1/2" | 26" | 1 1/4" | 1 1/2" | 1'-4" | 0" | 3 3/4" | |

NOTES:
 For elastomeric materials & pad construction, see Spec. 3741 and special provisions, except as noted.
 All steel plates & anchor rods shall comply with Spec. 3306, except as noted.
 All plates shall be flat after fabrication and galvanizing. Welding distortion of bearing plates shall be straightened to within 1/16" of flatness by mechanical means without damage to the zinc coating.
 Pintles shall comply with Spec. 3314, Type II
 Galvanize anchor rods and structural steel bearing assembly after fabrication per Spec. 3394, except as noted.
 Payment for bearing assembly shall include all material on this detail.

- ① The radius of the curved plate shall be 1' 0" min. & 1' 6" max. Finish to 250 Micro. The finished thickness of the plate may be 1/16" less than shown.
- ② See Bridge Design Manual for design requirements.
- ③ 1-1/4" dia. pintle for total loads to 200 Kips. 1-1/2" dia. pintle for total loads over 200 Kips.
- ④ For bearing plate thicknesses up to 1-1/2" use 5/16" fillet welds; for thicknesses over 1-1/2" to 2-1/4" use 3/8" fillet welds; for thicknesses over 2-1/4" use 1/2" fillet welds with minimum preheat of 300°.

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|--------------------------|---|----------|---------------------------|
| APPROVED: August 4, 1987 | STATE OF MINNESOTA DEPARTMENT OF TRANSPORTATION CURVED PLATE BEARING ASSEMBLY PRESTRESSED CONCRETE BEAMS (FIXED) | REVISION | DETAIL NO. B310 |
|--------------------------|---|----------|---------------------------|



PINTLE SPACING TABLE

| BEAM SIZE | K |
|---------------------|----|
| 28" | 4" |
| 36" | 6" |
| 40", 45M | 8" |
| 54M, 63", 72" & 81" | 8" |
| Bulb Tee | 9" |

TABLE ④

| Beam Size | Bearing Pad Size | | | Steel Plates | | Laminates | | Shape Factor | Bearing Plate Size | | | Curved Plate Size | | | Pintle Dia. | Pintle Spacing | Assy. Height | Assembly Type |
|-----------|------------------|-----|--------|--------------|--------|-----------|--------|--------------|--------------------|-----|--------|-------------------|--------|--------|-------------|----------------|--------------|---------------|
| | A | B | D | No. | Thick. | No. | Thick. | | C | E | F | G | H | J | | | | |
| | 12" | 24" | 3 3/4" | 6 | 1/8" | 5 | 1/2" | | 8.0 | 14" | 27" | 1 1/4" | 4 1/2" | 26" | | | | |
| 72" | 12" | 24" | 3 3/4" | 6 | 1/8" | 5 | 1/2" | 8.0 | 14" | 27" | 1 1/4" | 4 1/2" | 26" | 1 1/4" | 1 1/2" | 1'-4" | 6 1/4" | |

NOTES:
 For elastomeric materials & pad construction, see Spec. 3741 and special provisions, except as noted.
 All steel plates shall comply with Spec. 3306, except as noted.
 All plates shall be flat after fabrication and galvanizing. Welding distortion of bearing plates shall be straightened to within 1/16" of flatness by mechanical means without damage to the zinc coating.
 Pintles shall comply with Spec. 3314, Type II
 Galvanize structural steel bearing assembly after fabrication per Spec. 3394, except as noted.
 Payment for bearing assembly shall include all material on this detail.

- ① The radius of the curved plate shall be 1' 0" min. & 1' 6" max. Finish to 250 Micro. The finished thickness of the plate may be 1/16" less than shown.
- ② Do not galvanize these plates.
- ③ The total thickness shown includes the steel plates.
- ④ See Bridge Design Manual for design requirements.
- ⑤ 1-1/4" dia. pintle for total loads to 200 Kips. 1-1/2" dia. pintle for total loads over 200 Kips.
- ⑥ For bearing plate thicknesses up to 1-1/2" use 5/16" fillet welds; for thicknesses over 1-1/2" to 2-1/4" use 3/8" fillet welds; for thicknesses over 2-1/4" use 1/2" fillet welds with minimum preheat of 300°.

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| APPROVED: August 4, 1987 | STATE OF MINNESOTA DEPARTMENT OF TRANSPORTATION CURVED PLATE BEARING ASSEMBLY PRESTRESSED CONCRETE BEAMS (EXPANSION) | REVISION | DETAIL NO. B311 |
|--------------------------|---|----------|---------------------------|

S.P. 204-113-03

DETAILS

| | | | |
|------------|---------------|------------------|---------------------|
| DES: MNDOT | DR: MNDOT/GLA | APPROVED: 7-2-92 | Bridge No. 71517 |
| CHK: DRM | CHK: RLD | | |

Sheet No. 18 of 24 Sheets