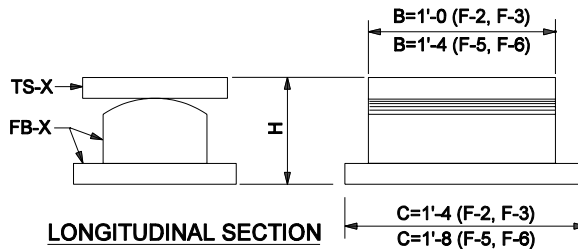


**FIXED SHOE ASSEMBLY**



**LONGITUDINAL SECTION**

| Shoe Type | Maximum Reaction | Shoe Assembly |      | H     |
|-----------|------------------|---------------|------|-------|
|           |                  | TS-X          | FB-X |       |
| F-2       | 177 k            | TS-2          | FB-2 | 7 1/8 |
| F-3       | 245 k            | TS-3          | FB-3 | 7 1/4 |
| F-5       | 225 k            | TS-5          | FB-5 | 7 1/8 |
| F-6       | 309 k            | TS-6          | FB-6 | 7 3/4 |

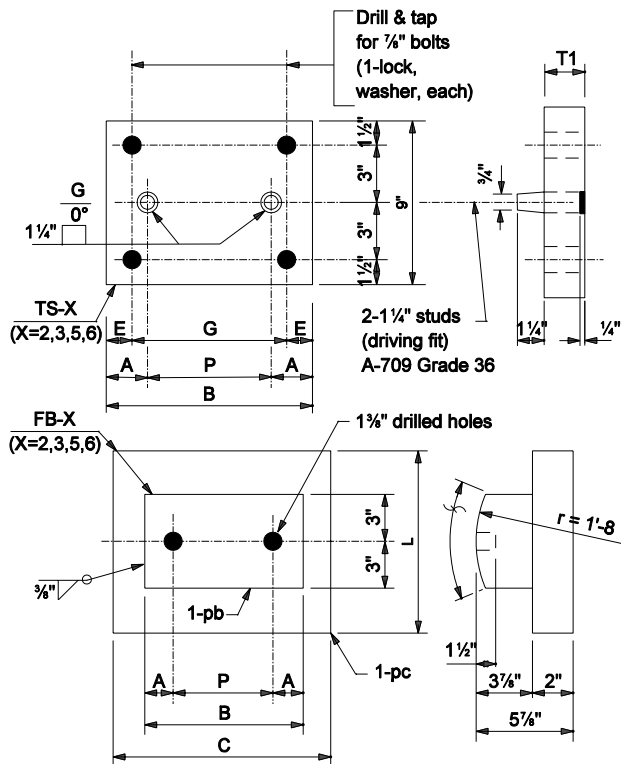
**NOTES :**

1. Curved surfaces of shoes to be machined after weldments have been completed. At the contractor's option the following substitutions of materials will be allowed at no increase in unit price of material:

- a). A-709 Grade 50W steel may be used in lieu of A-709 Grade 36 steel.
- b). A-709 Grade 100 steel may be used in lieu of A-709 Grade 50W or A-709 Grade 36 steel.

2. Section "pb" to be finished from 4" thickness while Section "pc" is to be straightened.

3. Maximum horizontal thrust per Fixed Shoe = 5000 lb.



| TS-X  | B     | T1    | E     | G     | A     | P     | Section     | Material        |
|-------|-------|-------|-------|-------|-------|-------|-------------|-----------------|
| TS-1* | 1'-0" | 1 1/4 | 2 1/4 | 7 1/2 | 2 1/4 | 7 1/2 | ℙ 9 x 1 1/4 | A-709 Grade 36  |
| TS-2  | 1'-0" | 2     | 2 1/4 | 7 1/2 | 2 1/2 | 7     | ℙ 9 x 2     | A-709 Grade 50W |
| TS-3  | 1'-0" | 1 1/4 | 2 1/4 | 7 1/2 | 2 1/4 | 6 1/2 | ℙ 9 x 2     | A-709 Grade 100 |
| TS-4* | 1'-4" | 1 1/4 | 3     | 10    | 3     | 10    | ℙ 9 x 1 1/4 | A-709 Grade 36  |
| TS-5  | 1'-4" | 2     | 3     | 10    | 3 1/4 | 9 1/2 | ℙ 9 x 2     | A-709 Grade 50W |
| TS-6  | 1'-4" | 1 1/4 | 3     | 10    | 3 1/2 | 9     | ℙ 9 x 2     | A-709 Grade 100 |

\* Top shoe used with Expansion Steel Shoe only.

**TOP SHOE**

| FB-X | C    | L    | B    | A      | P      | Sections |          |
|------|------|------|------|--------|--------|----------|----------|
|      |      |      |      |        |        | pb       | pc       |
| FB-2 | 1'-4 | 1'-0 | 1'-0 | 2 1/2" | 7      | ℙ 6 x 4  | ℙ 12 x 2 |
| FB-3 | 1'-4 | 1'-4 | 1'-0 | 2 3/4" | 6 1/2" | ℙ 6 x 4  | ℙ 16 x 2 |
| FB-5 | 1'-8 | 1'-0 | 1'-4 | 3 1/4" | 9 1/2" | ℙ 6 x 4  | ℙ 12 x 2 |
| FB-6 | 1'-8 | 1'-4 | 1'-4 | 3 1/2" | 9      | ℙ 6 x 4  | ℙ 16 x 2 |

**FIXED BASE**

INDIANA DEPARTMENT OF TRANSPORTATION

**FIXED STEEL SHOE DETAILS**

MARCH 2005

STANDARD DRAWING NO. E 711-BSTS-01

|  |                           |         |
|--|---------------------------|---------|
|  | /s/ Richard L. VanCleave  | 3-01-05 |
|  | DESIGN STANDARDS ENGINEER | DATE    |
|  | /s/ Richard Smutzer       | 3-01-05 |
|  | CHIEF HIGHWAY ENGINEER    | DATE    |

DESIGN STANDARDS ENGINEER