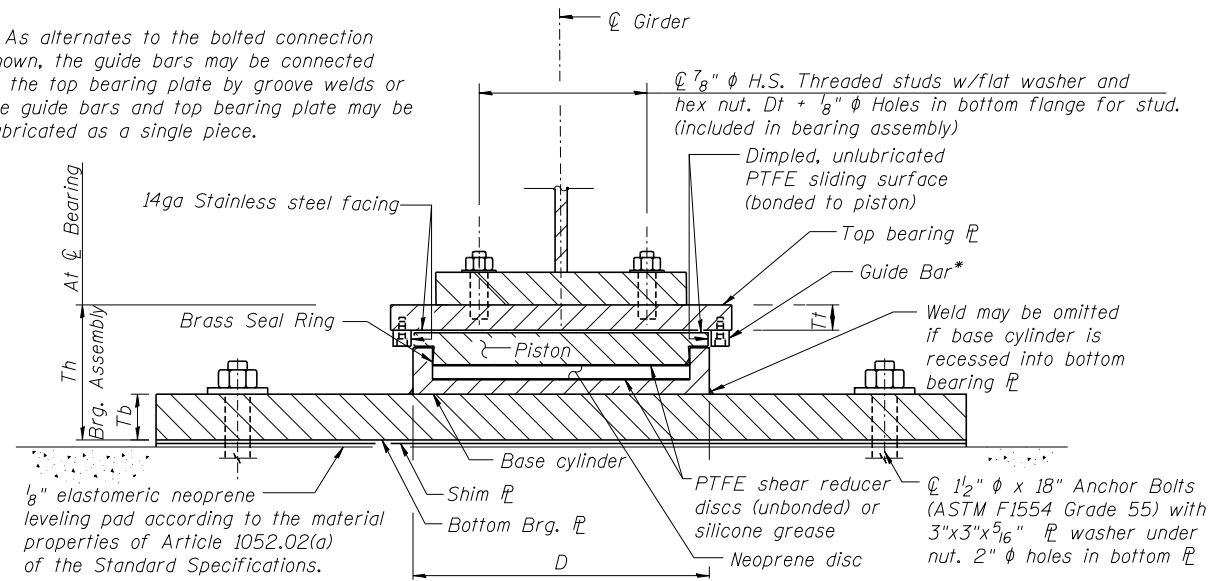


\* As alternates to the bolted connection shown, the guide bars may be connected to the top bearing plate by groove welds or the guide bars and top bearing plate may be fabricated as a single piece.



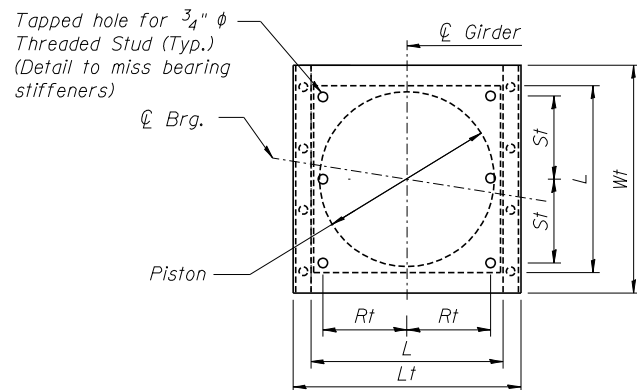
**GUIDED EXPANSION HLMR BEARING**

**BILL OF MATERIAL**

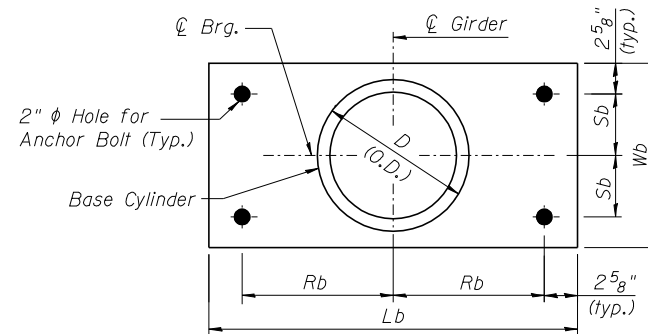
Item	Unit	Total
High Load Multi-Rotational Bearings, Guided Expansion, 550 kips	Each	13
Anchor Bolts, 1 1/2"	Each	52

**NOTES:**

- The structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M 270 Grade 50.
- Cost of top and bottom bearing plates, 1/8" elastomeric neoprene leveling pad, adjusting shims and threaded studs with washers shall be included with "High Load Multi-Rotational Bearings, Guided Expansion, 550 kips".
- Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternative material) of the grade and diameter specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
- Anchor bolts shall be placed in holes drilled in the concrete through holes in the bottom bearing plate after members are in place.
- Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
- Two 1/8" adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.
- The 1/8" PTFE sheet shall be bonded directly to the piston with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.



**TOP BEARING PLATE - PISTON PLAN**



**BOTTOM BEARING PLATE AND BASE CYLINDER PLAN**

**HIGH LOAD MULTI-ROTATIONAL BEARING SCHEDULE**

Location	Quantity Each	Service Vertical Design Load * (kips)	Lateral Design Load (kips)	Total Required Movement (in)	Rotation (radians) **	D (in)	L (in)	Th (in)	Top Plate / Bearing Assembly					Masonry Plate				
									Wt (in)	Lt (in)	Tt (in)	Rt (in)	St (in)	Wb (in)	Lb (in)	Tb (in)	Rb (in)	Sb (in)
Pier	13	492	67	1"	0.005	17.75"	18"	10 7/8"	22"	24"	2 3/4"	7"	8"	20"	33 1/2"	2 1/4"	14 1/8"	7 3/8"

\* No Impact

\*\* Maximum Factored Ultimate (Strength) Design Rotation