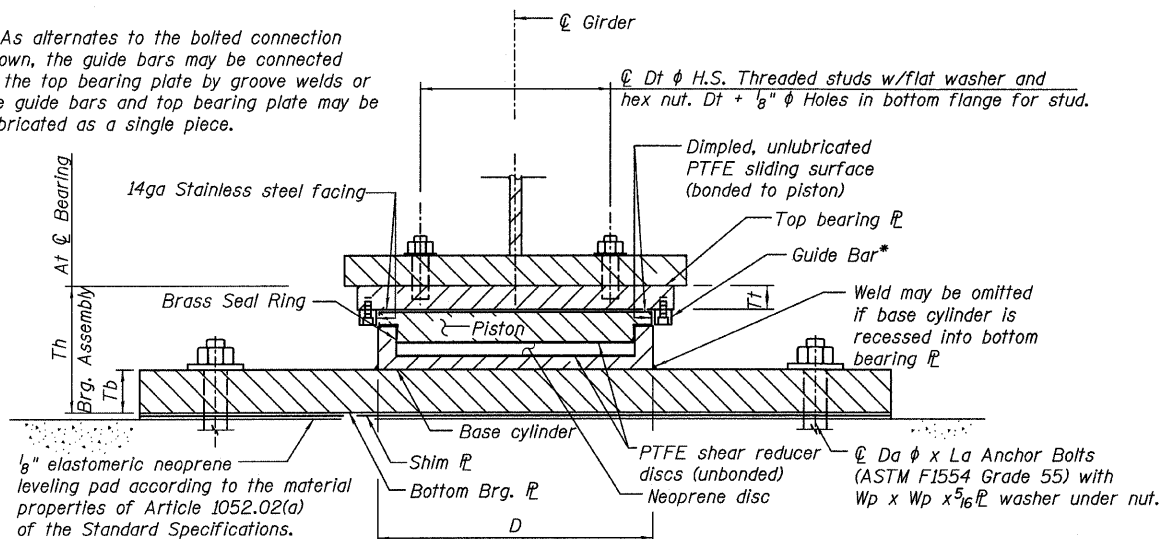


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 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.



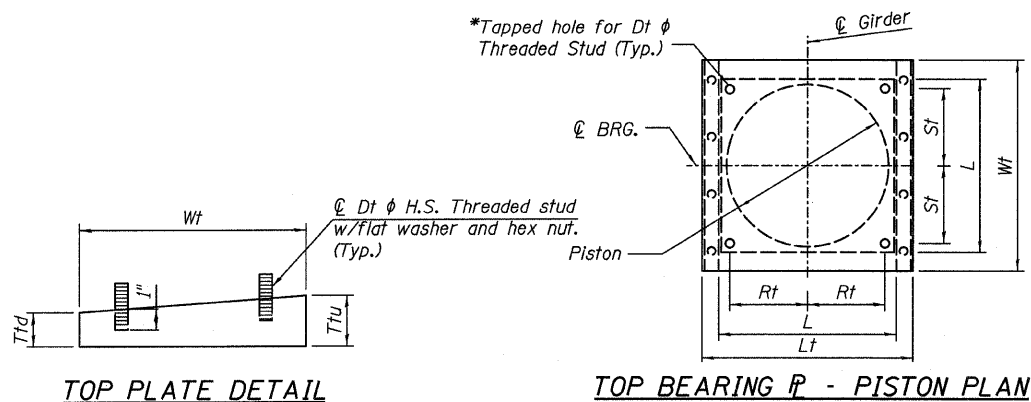
GUIDED EXPANSION HLMR BEARING

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Erecting HLMR Bearings, Guided Expansion, 450 kips	EACH	17
Anchor Bolts, 1 1/2"	EACH	34

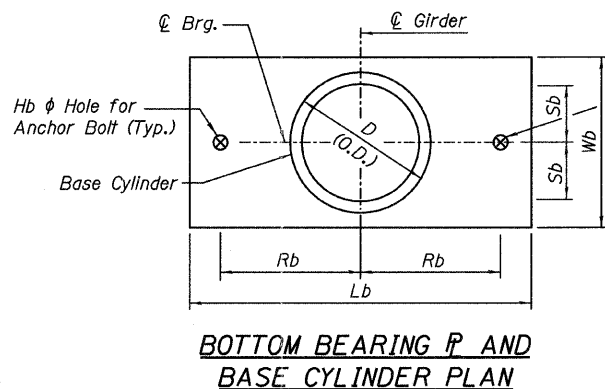
NOTES:

- All structural steel for the top and bottom bearing plates shall conform to the requirements of AASHTO M 270 Grade 50, unless otherwise noted.
- Anchor bolts shall be F1554, Gr. 55.
- Top and bottom bearing plates, 1/8" elastomeric neoprene leveling pad, adjusting shims, threaded studs with washers and other items required for the bearing are furnished under a separate contract. Installation of these items is included in the cost of Erecting HLMR Bearings of the type specified.
- 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.
- Top plate shall be beveled to match the slope of girder flanges. Work this sheet with top of steel elevation sheets.



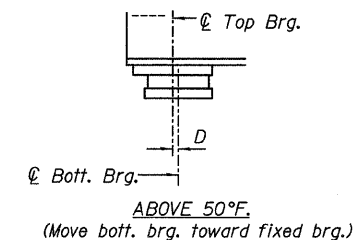
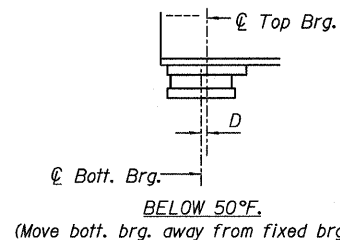
TOP PLATE DETAIL

TOP BEARING P - PISTON PLAN



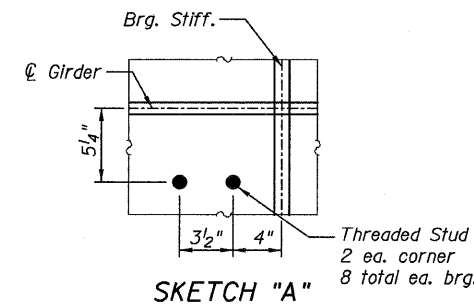
**BOTTOM BEARING P AND
BASE CYLINDER PLAN**

Anchor bolt holes when 2/ Bearing



SETTING ANCHOR BOLTS AT EXP. BRG.

D = 1/8" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.



SKETCH "A"

BEARING SCHEDULE

Type	Vertical Capacity (kips)	Lateral Capacity (kips)	Quantity Each	Location	Girders	Total Required Movement (in)	D (in)	L (in)	Th (in)	Top Plate / Bearing Assembly					Masonry Plate				Anchor Bolts				
										Wt (in)	Lt (in)	Tt (in)	Dt (in)	Rt (in)	St (in)	Wb (in)	Lb (in)	Tb (in)	Rb (in)	Hb (in)	Qty per Brg.	Da (in)	La (in)
HLMR Guided Expansion	450	70	14	Pier 10	A - P	2 1/2	14 1/2	14 1/2	8 7/8	19 1/2	22	2	1	Sketch A	15 1/2	33	2 1/2	13 3/4	2	2	1 1/2	18	3
HLMR Guided Expansion	450	70	3	Pier 10	NG11, NG12 and NG13	2 1/2	14 1/2	14 1/2	8 7/8	19 1/2	22	2	1	Sketch A	15 1/2	33	2 1/2	13 3/4	2	2	1 1/2	18	3

**HIGH LOAD
MULTI-ROTATIONAL
BEARINGS GUIDED EXPANSION
STRUCTURE NO. 016-3240**

TYLIN INTERNATIONAL	DESIGNED - EKH, PK	REVISIONS		SHEET NO. 52A	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.				
	CHECKED - AMD,	NAME	DATE		55					0711.2R & 1011.1BR	COOK	741	655A
	DRAWN - EKH, PK				73 SHEETS					CONTRACT NO. 60999			
	CHECKED - AMD,				FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT								
	DATE - 03/25/2011												