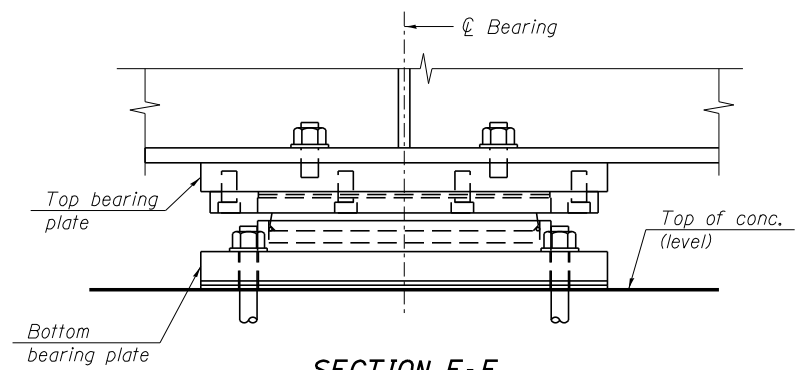
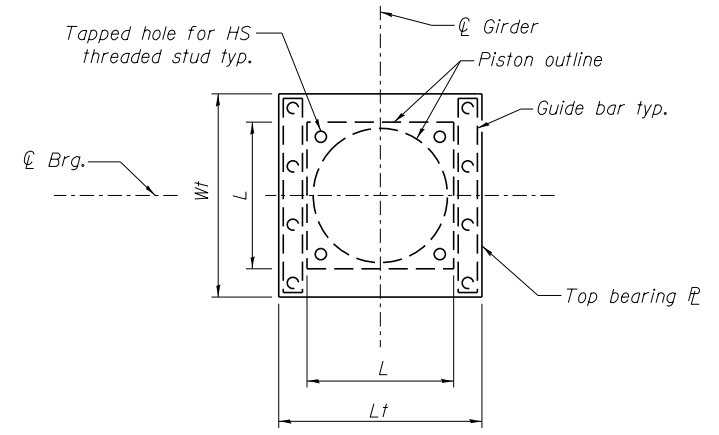


SECTION E-E

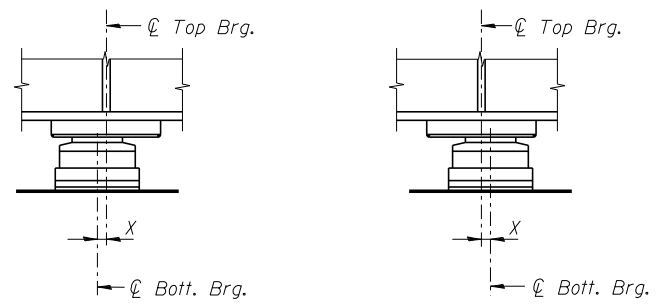
$\frac{1}{8}$ " Elastomeric neoprene leveling pad according to the material properties of Article 1052.02(a) of the Standard Specifications. Cost included with HLMR bearing.



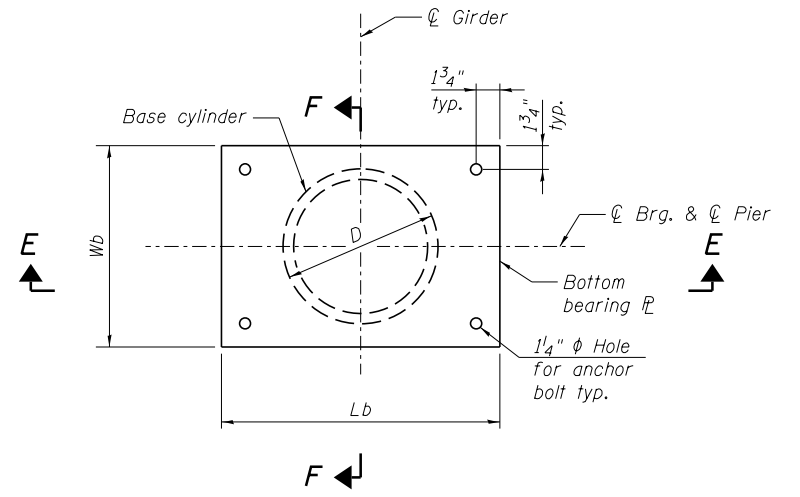
SECTION F-F



TOP BEARING PLATE AND PISTON PLAN



SETTING ANCHOR BOLTS AT EXP. BRG.
 (Move bottom brg. away from fixed brg.) (Move bottom brg. toward fixed brg.)



BOTTOM BEARING PLATE AND BASE CYLINDER PLAN

BILL OF MATERIAL

Item	Unit	Total
High Load Multi-Rotational Bearings, Guided Expansion, 250K	Ea.	2
High Load Multi-Rotational Bearings, Guided Expansion, 300K	Ea.	2
Anchor Bolts, $\frac{3}{4}$ "	Ea.	16

BEARING DIMENSIONS

Location	Pay Item Designation (kips)	Vert. Design Load** (kips)	Hs** (kips)	θ_s (radians)	Max. Theor. Thermal Mvmt from 50 °F	Top Plate				Bearing Assembly		Bottom Plate		Total Ht.		
						Wt	Lt	Tt (min.)	Bevel	Threaded Stud ϕ	L	D	Wb		Lb	Tb
Pier 1	250	238	48	0.02	1"	1'-7 $\frac{1}{4}$ "	1'-7 $\frac{3}{8}$ "	1 $\frac{1}{2}$ "	N/A	$\frac{3}{4}$ "	1'-1 $\frac{5}{8}$ "	1'-1 $\frac{5}{8}$ "	1'-6"	2'-3"	1 $\frac{3}{8}$ "	7 $\frac{1}{2}$ "
Pier 3	300	293	59	0.02	1"	1'-8 $\frac{1}{4}$ "	1'-8 $\frac{5}{8}$ "	1 $\frac{3}{4}$ "	N/A	$\frac{3}{4}$ "	1'-2 $\frac{5}{8}$ "	1'-2 $\frac{5}{8}$ "	1'-6"	2'-3"	1 $\frac{3}{8}$ "	8 $\frac{1}{2}$ "

* As an alternate 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.
 ** Design Loads are the governing loads with no dynamic load allowance.

NOTES:

- All steel for bearings shall conform to the requirements of AASHTO M270 Grade 50, unless otherwise noted.
- Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554. Anchor bolts may be either cast in place or installed in holes drilled after the supported member is in place. Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
- Total bearing height (Th) is estimated based on manufacturer data. Actual bearing height may differ from contract plans. The Contractor shall be responsible for verifying bearing heights and adjusting seat elevations, if required, prior to placing pier concrete.
- Two $\frac{1}{8}$ in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.



FILE NAME =	USER NAME = jsurber	DESIGNED - DTS	REVISIED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	HLMR GUIDED EXPANSION BEARING DETAILS STRUCTURE NO. 016-0483	F.A.P. RTE. = 372	SECTION = 2013-038B-R	COUNTY = COOK	TOTAL SHEETS = 821	SHEET NO. = 512
0160483.60J16.028.Bearing_Details.2.dgn	PLOT SCALE =	DRAWN - KMS	REVISIED -			CONTRACT NO. 60J16				
	PLOT DATE = 12/20/2013	CHECKED - AJK	REVISIED -			SHEET NO. SE28 OF SE46 SHEETS				
						ILLINOIS FED. AID PROJECT				

Y:\chicago\100005\10093\Eng_Docs_Phase_1\SN_016_0483_0985_1st_Ave_Over_Des_Plaines_River\Final\0160483_60J16_028_Bearing_Details.2.dgn 5:24:05 PM 8/11/2014