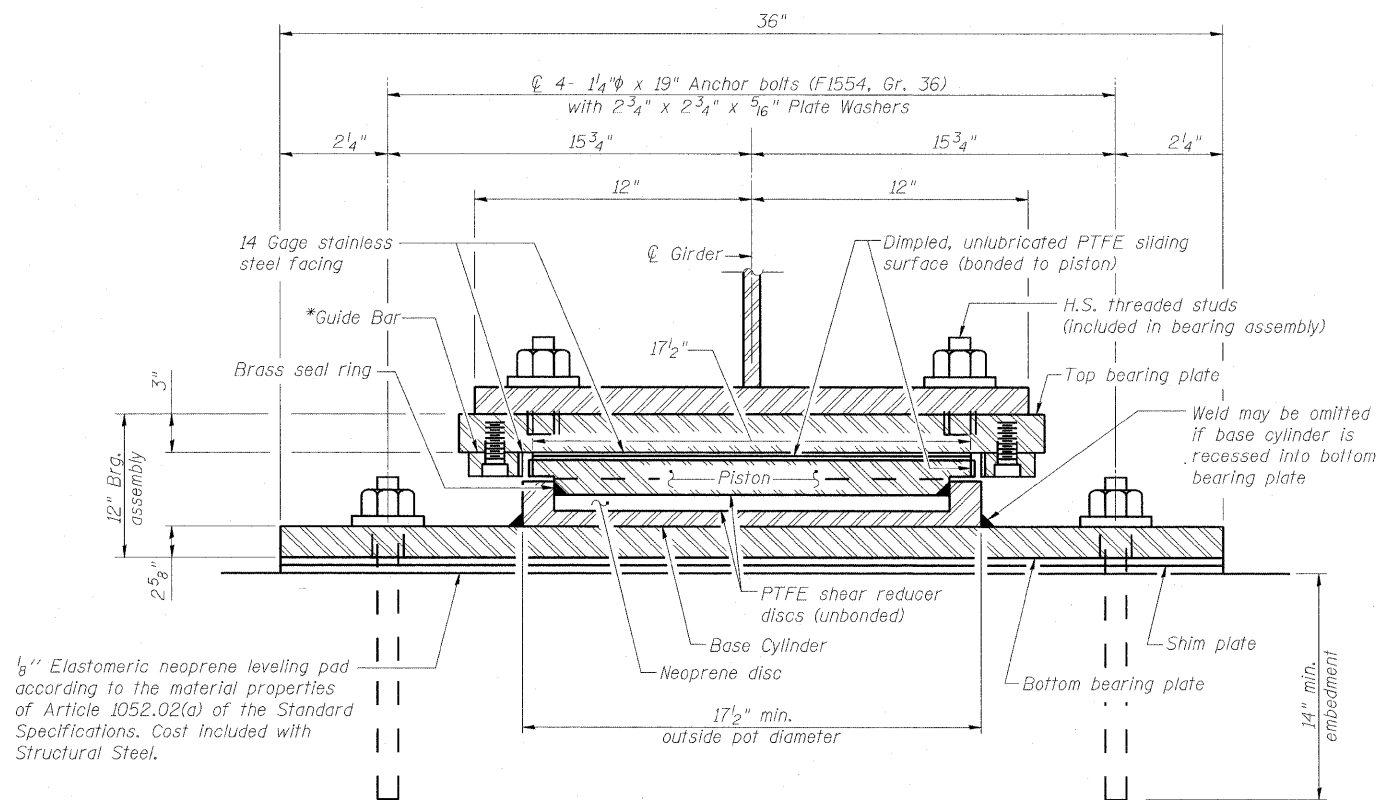
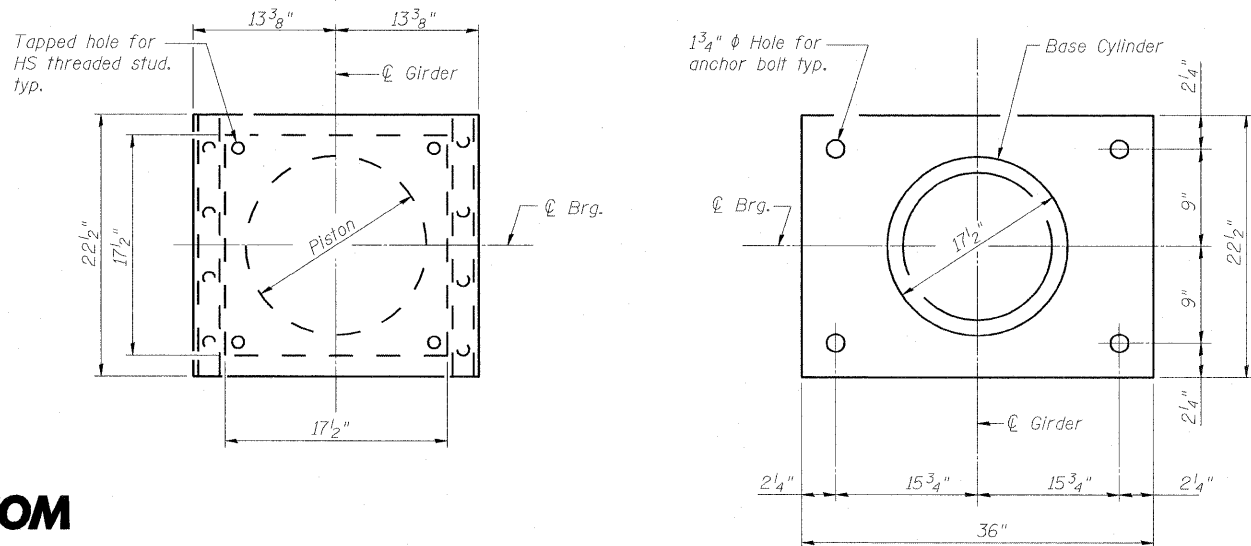


STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

\* 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.

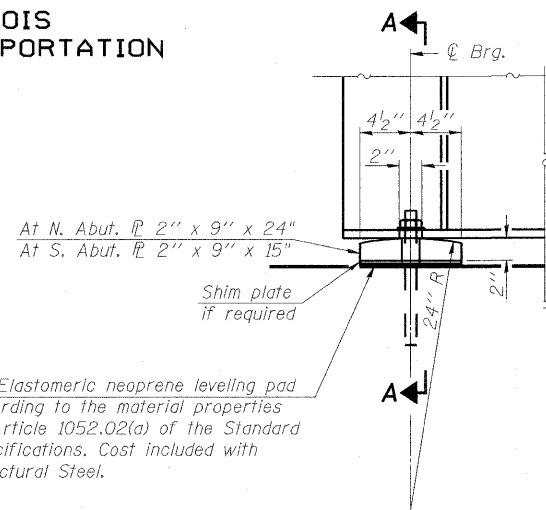


**GUIDED EXPANSION  
POT BEARING AT PIER  
(6 Required)**



**TOP BEARING P  
AND PISTON PLAN**

**BOTTOM BEARING P AND  
BASE CYLINDER PLAN**

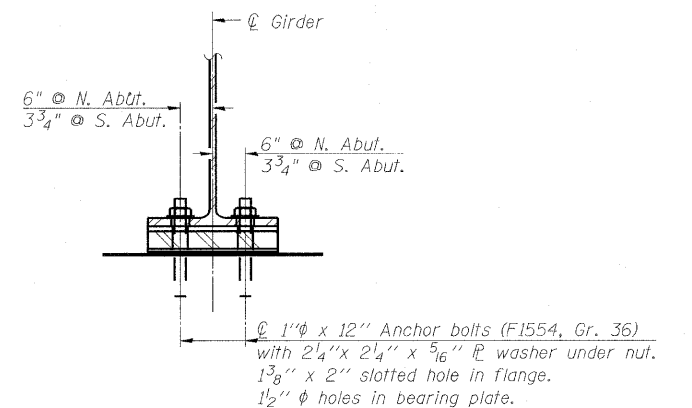


**ELEVATION AT ABUTMENT**

**FIXED BEARING AT ABUTMENTS  
(12 Required)**

**POT BEARING INFORMATION**

Item	Unit	Guided Pier
Service Load Reactions		
Dead Load	Kips	377.7
Live Load (No Impact)	Kips	233.8
Total	Kips	611.5
Design Rotation From Service Loads (DL + LL)		
Fabrication Tolerance (0.01 Radian), Uncertainties (0.01 Radian), and Girder Slope from Vertical Curve.	Radians	0.030
Total Required Movement (Expansion + Contraction)	Inch	2"
Number of Bearings	Each	6



**SECTION A-A**

Notes:  
Anchor bolts shall conform to Article 1006.09 of the Standard Specifications.  
All anchor bolts, washers and nuts shall be galvanized according to Article 1006.09 of the Standard Specifications.  
H.S. bolts in the bearing assembly shall be galvanized according to AASHTO M298, Class 50.  
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.  
Anchor bolts at fixed Abutment bearings may be either cast in place or installed in holes drilled after the supported member is in place.  
Anchor bolts for Pier bearings 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.  
The 1/8" PTFE sheet shall be bonded directly to the piston plate 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.  
Bonding of 1/8" PTFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.  
Two 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.  
The structural steel plates of the Pot Bearing Assembly and the Fixed Bearing shall conform to the requirements of AASHTO M270, Grade 50.

**BILL OF MATERIAL**

Item	Unit	Total
HLMR Bearings, Guided Expansion, 650K	Each	6
Anchor Bolts 1"	Each	24
Anchor Bolts 1 1/4"	Each	24

**BEARING DETAILS  
STRUCTURE NO. 082-0326**

SHEET NO. S23	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-1-3HB, 82-2N, 82-1-12RS	ST. CLAIR	352	225	
S36 SHEETS	F.A.U. 9166 / F.A.U. 9180	CONTRACT NO. 76C51			
	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

**AECOM**

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DRAWN	-BRD
CHECKED	-P.JL

03/31/2011