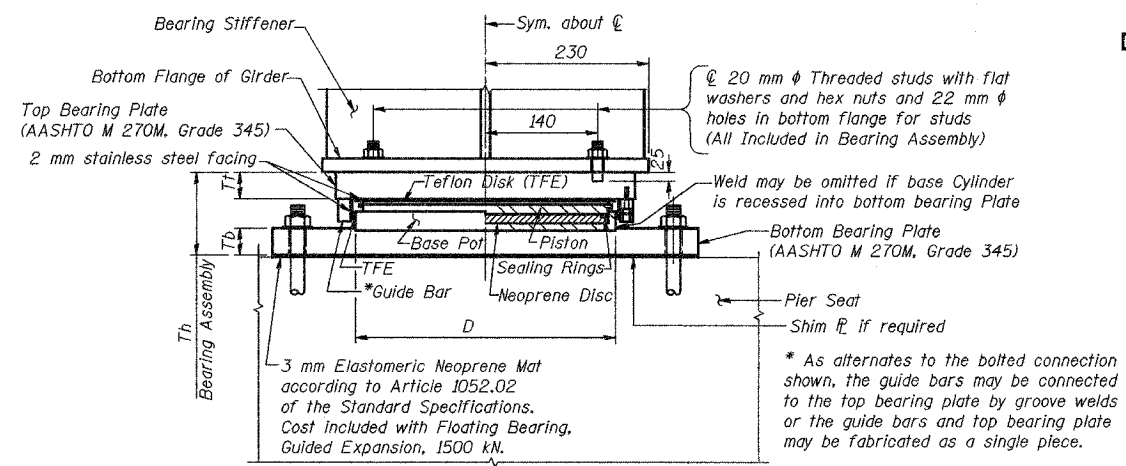


ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	90-13HVBY	TAZEWELL	1366	487
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

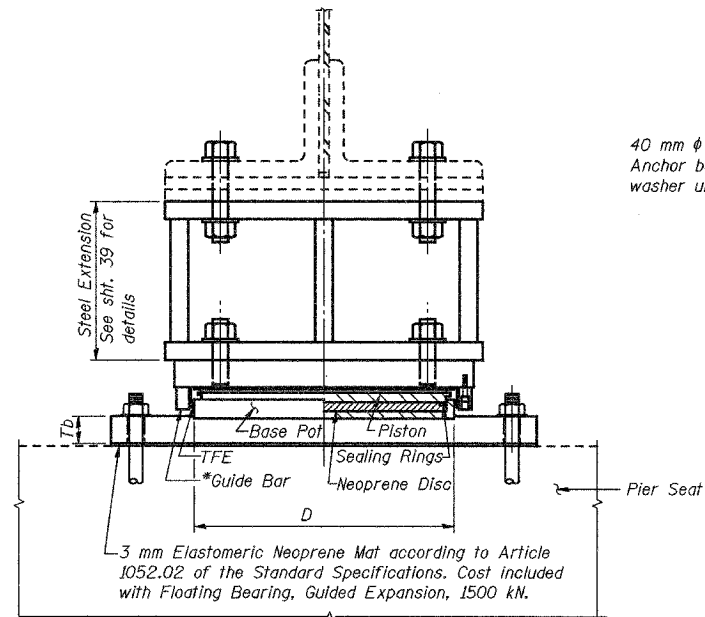
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



HALF SECTION THRU GUIDED EXPANSION BEARING (AT GIRDER IN, PIERS 3 & 5)

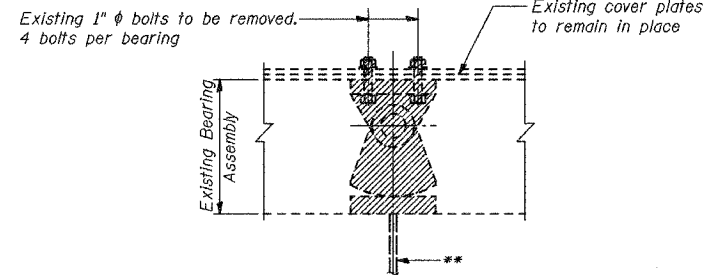
1 Required at Pier 3
1 Required at Pier 5

R_{Total} - Total axial DL+LL w/o impact 1381 kN
Expansion Length..... 46.787 m
L - Transverse Length of piston..... 340 mm
D - Outside pot diameter..... 340 mm
Tt - Thickness of top plate..... 70 mm
Tb - Thickness of bottom plate..... 50 mm
Th - Total height of bearing assembly..... 237 mm



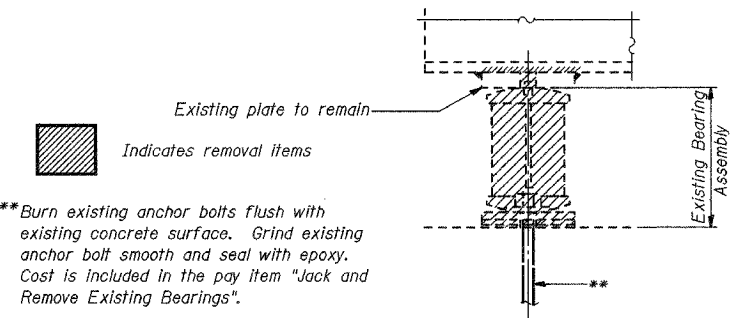
HALF SECTION THRU GUIDED EXPANSION BEARING AND STEEL EXTENSION (AT EXISTING GIRDERS, PIERS 3 & 5)

(Other information not given same as shown for New Girders)
5 Required at Pier 3
5 Required at Pier 5



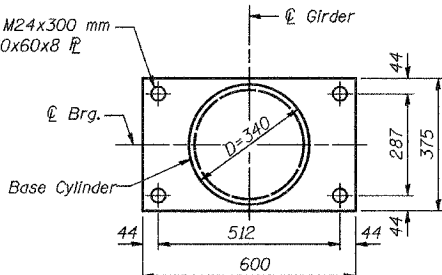
PIERS 3 & 5 EXIST. BEARING REMOVAL DETAIL

5 Required at Pier 3
5 Required at Pier 5

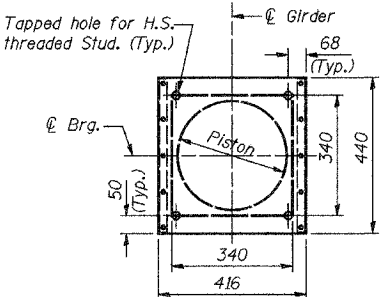


N. & S. ABUTMENT EXIST. BEARING REMOVAL DETAIL

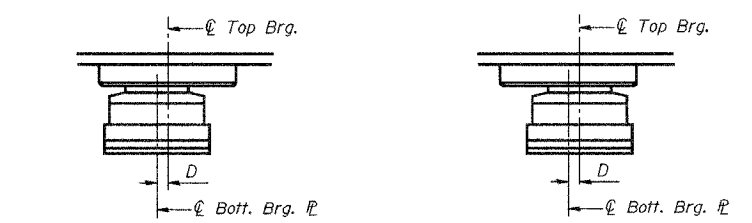
5 Required at North Abutment
5 Required at South Abutment



BOTTOM BEARING PLATE & BASE CYLINDER PLAN



TOP BEARING PLATE & PISTON PLAN



BELOW 10° C. (Move bott. brg. away from fixed brg.)
ABOVE 10° C. (Move bott. brg. toward fixed brg.)

ANCHOR BOLT SETTING DETAILS AT EXP. BRG.

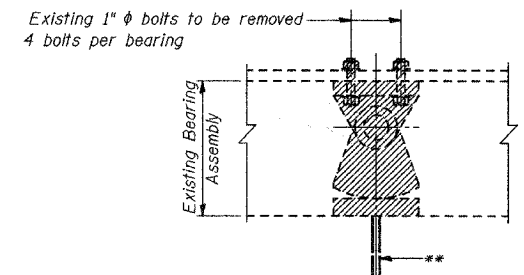
D = 1 mm per each 10 m of expansion for every 8° C temp change from the normal temp. of 10° C.

DEAD LOAD REACTIONS (STEEL ONLY)

Location	Reaction (kN)	Min. Jack Capacity (kN)
N. Abut. & S. Abut.	73	146
Pier 1	106	212
Pier 2 & Pier 3	230	460
Pier 4 (N)	69	138
Pier 4 (S)	24	48
Pier 5	227	454
Pier 6	235	470
Pier 7	80	160

JACK AND REMOVE EXISTING BEARING PROCEDURE

- The Contractor shall submit for approval by the Engineer, plans for jacking prior to commencing any work at the bearings.
- Jacking and removing bearings shall be done after removal of existing deck is complete.
- The maximum differential lift between beams or girders at any one substructure unit shall be limited to 7 mm. If simultaneous jacking of all beams or girders at a substructure unit is utilized, then the maximum total lift shall be limited to 19 mm.
- The new bearings shall be in place and the jacks lowered before the new concrete deck is poured.



PIER 1 & PIER 7 EXISTING BEARING REMOVAL DETAIL

5 Required at Pier 1
5 Required at Pier 7

BILL OF MATERIAL

Item	Unit	Total
Floating Bearings, Guided Expansion, 1500 kN.	Each	12
Jack and Remove Existing Bearings	Each	30

Notes:
1. See Sht. 41 for Anchor Bolt Installation.

FLOATING BEARING DETAILS

Date	Designed AEU	WESTBOUND F.A.I. ROUTE 74 OVER CAMP STREET, FARM CREEK, AND TP&W RR F.A.I. RTE. 74 SECTION (90-13HVBY) TAZEWELL COUNTY STATION 153+625.193 STRUCTURE NO. 090-0009	Sheet No. 39 of 68
Revisions	Drawn SOI		
	Checked NPP		
	Approved NPP		
Prepared By: BRW, Inc. A Division of URS		1701 Golf Rd., Suite 1000 Rolling Meadows, IL.	BRW Job No. 17049-071