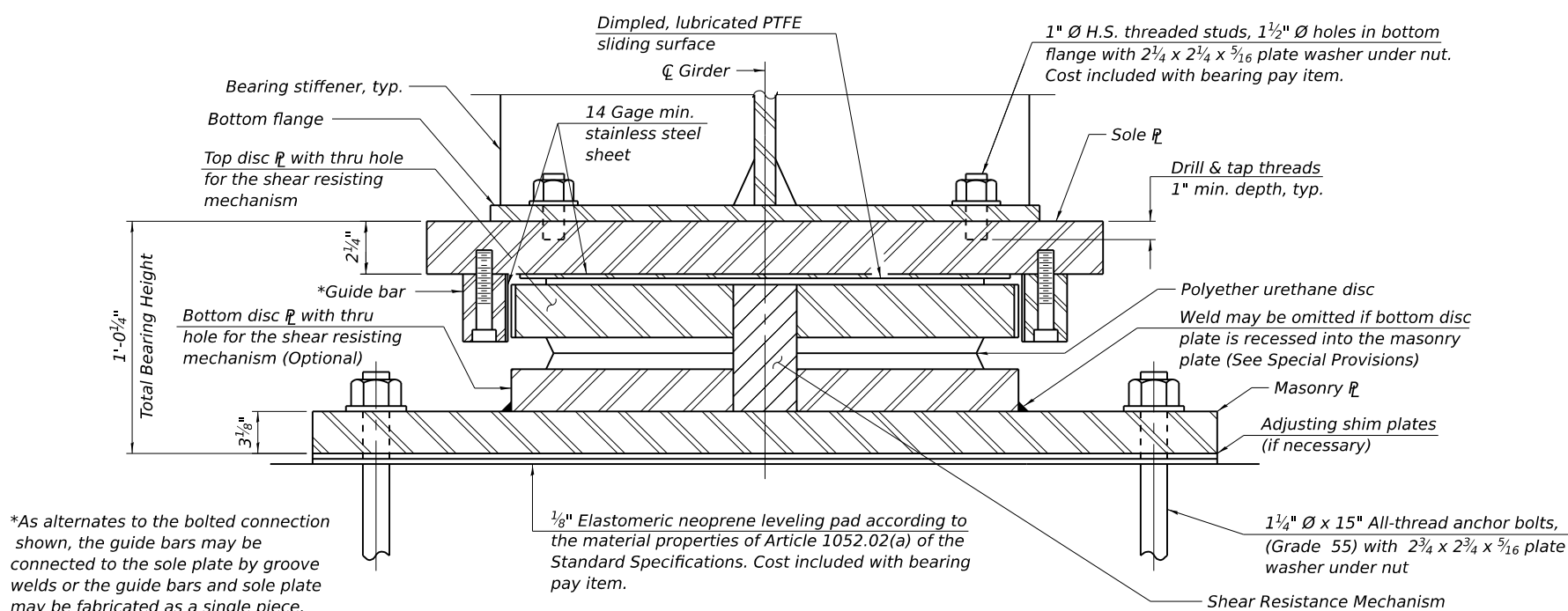
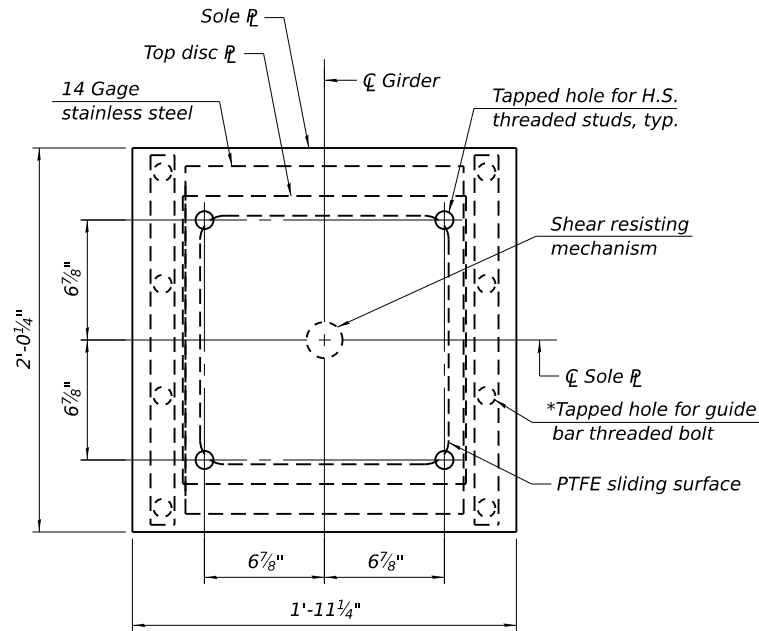


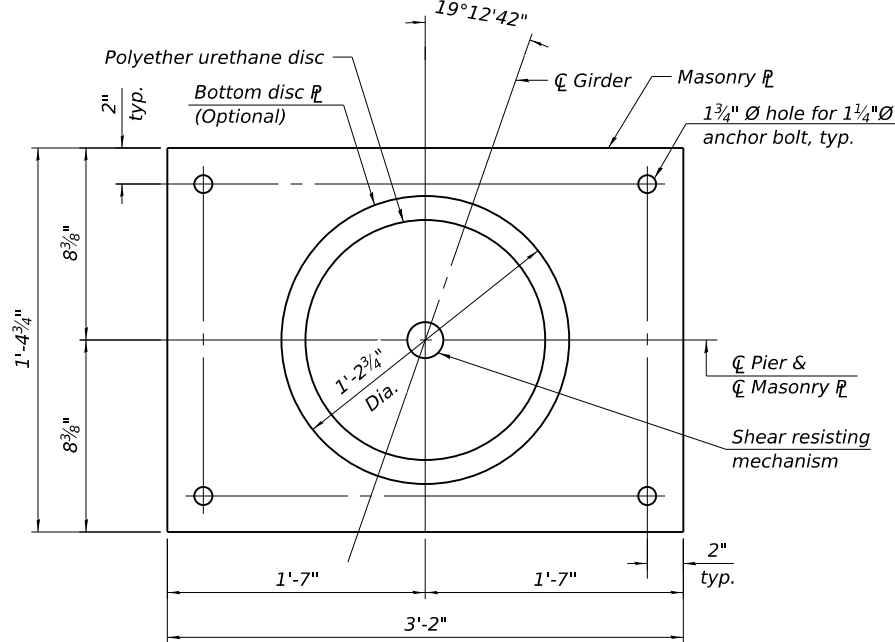
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FILE NAME: pw:/transsystems-pw/bentley.com/transsyscorp-pw1-hosted/Documents/Projects_2018/CH401/401180022/03-WSP/CAD/62R22-INT-4 (Center)/Sheets/Structural/SN-099-8332/0998332-62R22-SB-34-Bearing Details
7/21/2025 3:58:20 PM



SECTION THRU BEARING



SOLE PLATE AND TOP DISC PLATE PLAN



MASONRY PLATE AND BOTTOM DISC PLATE PLAN

GUIDED EXPANSION HLMR DISC BEARING AT PIER
(12 required)

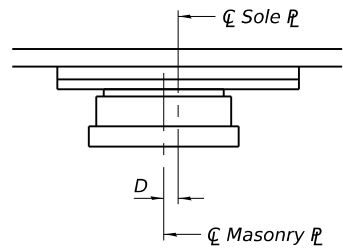
NOTES:

- Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other fill plates or shims and placed as shown on bearing details. Fill Plates and Shim plates not included in total bearing height. Cost included with bearing pay item.
- Total bearing height 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 or abutment concrete.
- Anchor bolts at all supports shall be installed as each member is erected unless an equivalent temporary means of lateral restraint is used.
- The structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M270 Grade 50.
- All (embedded and separate) bearing plates, side retainers, anchor bolts, nuts, washers and pintles shall be galvanized according to AASHTO M111 or M232 as applicable.

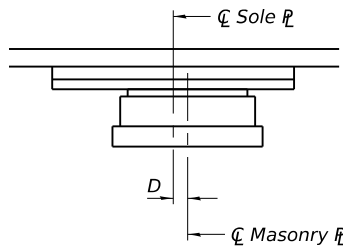
DESIGN DATA - PIER

Unfactored Vertical Dead Load Reaction (R _{DC})	253.7 kips
Unfactored Vertical Wearing Surface Reaction (R _{WS})	47.8 kips
Unfactored Vertical Live Load without Impact Reaction (R _{LL})	189.4 kips
Maximum Strength or Extreme Event Lateral Reaction (H _u)	144.1 kips
Maximum Strength Limit State Rotation (Θ _u according to Article 14.4.2.2)	0.0079 rad
Unfactored Design Thermal Movement from 50° F (ΔT)	1.642 in.
Service I Factored Lateral Reaction	98.2 kips
Service I Rotation	0.0052 rad
Strength I Factored Longitudinal Movement	1.970 in.
Service I Factored Vertical Reaction	490.9 kips
Strength I Factored Vertical Reaction	720.3 kips

Service I Load Factors = 1.0DC + 1.0DW + 1.00LL
Strength I Load Factors = 1.25DC + 1.5DW + 1.75LL + 1.2TU
Extreme Event Load Factors = 1.0EQ



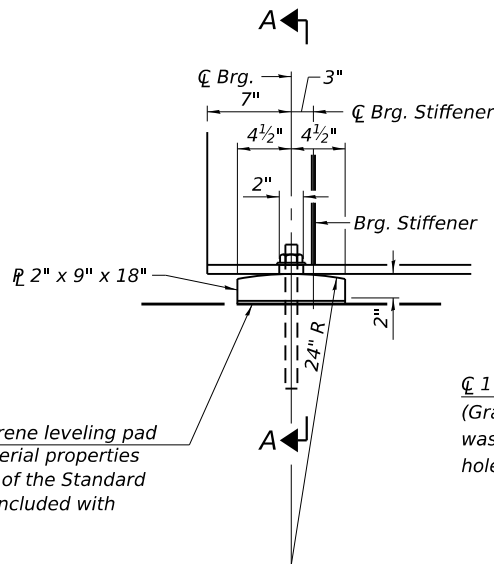
BELOW 50°F.
(Move masonry plate away from fixed bearing)



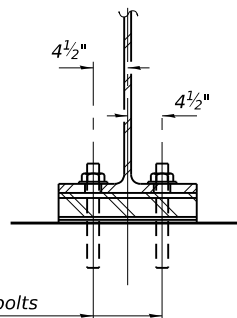
ABOVE 50°F.
(Move masonry plate toward fixed bearing)

SETTING ANCHOR BOLTS AT EXPANSION BEARING

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



ELEVATION AT ABUTMENT



SECTION A-A

FIXED BEARING AT ABUTMENTS
(25 required)

BILL OF MATERIAL

Item	Unit	Total
High Load Multi-Rotational Bearings, Disc, Guided Expansion-500K	Each	12
Anchor Bolts, 1 1/4 inch	Each	48
Anchor Bolts, 1 inch	Each	50

** The value specified in the pay item name is an approximate vertical load capacity that is used for letting and bidding purposes only. Exact bearing capacity will vary subject to final design.

REVISED SHEET 7/22/2025



USER NAME =	DESIGNED - PG	REVISED 2 7/21/2025 PG
	CHECKED - MI, JJS	REVISED -
PLOT SCALE =	DRAWN - PG	REVISED -
PLOT DATE =	CHECKED - MI, JJS	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEARING DETAILS
STRUCTURE NO. 099-8332

SHEET SB-35 OF SB-48 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	FAI 80 21 INTERCHANGE	WILL	1209	690
CONTRACT NO. 62R22				
ILLINOIS FED. AID PROJECT				