GUIDED EXPANSION BEARING DIMENSIONS TABLE

Brg. Location	Vertical Design Load (kips)	Lateral Design Load (kips)	Total Required Movement (inches)	Bottom Bearing Plate Tb in.	Lb in.	Wb in.	Top Bearing Plate: Top Plate Tt1 in.	Tt2 in.	Lt in.	Wt in.	N in.	R in.	S in.	Th1 in.	Th2 in.	L in.	Dia. in.	Anchor Bolt ϕ in.	Anchor Bolt Specification Grade	A ℄ Girder Tangent to Direction of Movement	C Setting Angle (Degrees)
S.N. 082-0322																					
Unit 1, W. Abut.	200	68	4 1/4	1 1/2	28	20	1 1/2	2	18	17	6	3 3/4	5	8	8 1/2	10	11 3/4	1	Gr. 55	1°47'24"	1°47'24"
Unit 1, Pier 1	600	93	2 3/8	2 1/8	39	30	2 1/2	3 3/8	29	25	7	6	6	12 7/8	13 3/4	21	21 3/8	1 1/4	Gr. 36	Girders 1, 2 0°21'0" Girders 4-8 1°51'25"	Girders 1, 2 1°51'25" Girders 4-8 1°51'25"
Unit 1, Pier 3	200	84	2	1 1/2	28	20	1 1/2	1 1/2	18	17	5	3 3/4	5	8	8	10	11 3/4	1	Gr. 55	Girders 1-3 2°54'7" Girders 4-8 1°26'11"	Girders 1-3 1°26'11" Girders 4-8 1°26'11"
Unit 2, Pier 3	250	102	4 1/2	1 1/2	29	21	1 1/2	1 1/2	19	17	6	3 3/4	5	8 1/2	8 1/2	11	12 7/8	1 1/4	Gr. 36	Girders 1-4 1°58'0" Girders 7-11 3°26'0"	Girders 1-4 3°26'0" Girders 7-11 3°26'0"
Unit 2, Pier 4	700	92	2 3/8	2 1/8	40	35	2 3/4	2 5/8	30	26	7	6	6	13 1/4	13 1/8	22	23 5/8	1 1/4	Gr. 36	Girders 1-5 0°55'12"	Girders 1-5 1°6'50"
	700	92	2 3/8	2 1/8	40	35	2 7/8	2 5/8	30	26	7	6	6	13 3/8	13 1/8	22	23 5/8	1 1/4	Gr. 36	Girders 7-9 1°6'50"	Girders 7-9 1°6'50"
	700	92	2 3/8	2 1/8	40	35	3	2 5/8	30	26	7	6	6	13 1/2	13 1/8	22	23 5/8	1 1/4	Gr. 36	Girder 11 2°57'5"	Girder 11 1°6'50"
Unit 2, Pier 6	250	125	2	1 1/2	29	21	1 1/2	1 1/2	19	17	5	3 3/4	5	8 1/2	8 1/2	11	12 7/8	1 1/4	Gr. 55	3°30'20"	3°30'20"
Unit 2, Pier 1	200	56	1 3/4	1 1/2	28	20	1 3/4	1 1/2	18	17	6	3 3/4	5	8 1/4	8	10	11 3/4	1	Gr. 36	0°	0°
Unit 3, Pier 6	200	85	4 3/4	1 1/2	28	20	1 1/2	1 1/2	18	17	5 1/2	3 3/4	5	8	8	10	11 3/4	1 1/4	Gr. 36	9°54'34"	9°54'34"
Unit 3, Pier 10	200	80	4 3/4	1 1/2	28	20	1 3/4	1 1/2	18	17	5 1/2	3 3/4	5	8 3/8	8	10	11 3/4	1	Gr. 55	9°54'34"	9°54'34"
Unit 4, Pier 10	200	67	3 1/2	1 1/2	28	20	1 3/4	1 1/2	18	17	5	3 3/4	5	8 3/8	8	10	11 3/4	1	Gr. 36	6°56'26"	6°56'26"
Unit 4, Pier 13	500	67	1 5/8	2 1/8	38	28	3 3/4	2 3/8	28	23	6	6	5	12 7/8	11 1/2	20	19 3/8	1	Gr. 36	3°10'38"	3°10'38"
Unit 4, E. Abut.	200	102	3 1/2	1 1/2	28	20	2 1/4	1 1/2	18	17	5	3 3/4	5	9	8	10	11 3/4	1 1/4	Gr. 36	6°54'6"	6°54'6"
S.N. 082-0324																					
Pier 1	200	66	5 7/8	1 1/2	28	20	1 3/4	1 1/2	18	17	6	3 3/4	5	8 1/4	8	10	11 3/4	1	Gr. 36	8°26'0"	8°26'0"
Pier 2	500	80	4 3/8	1 3/4	38	31	3	2 1/4	28	26	7 1/2	6	6	11 3/4	11	20	19 3/8	1 1/4	Gr. 36	7°50'39"	7°50'39"
Pier 5	700	127	3 1/2	1 5/8	41	36	4 1/4	2 5/8	31	29	7 1/2	7	7	14 1/4	12 5/8	23	23 5/8	1 1/4	Gr. 55	4°15'6"	4°15'6"
Pier 6	700	124	6	1 5/8	41	36	4 1/2	2 5/8	31	33	7 1/2	8	8	14 1/2	12 5/8	23	23 5/8	1 1/4	Gr. 55	2°9'28"	2°9'28"
E. Abut.	200	77	7 5/8	1 1/2	28	20	2 1/2	1 1/2	18	18	6	3 3/4	5	9	8	10	11 3/4	1	Gr. 55	1°33'23"	1°33'23"

Notes:
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.

SHIM TABLE

Structure Number	Unit Number	Pier Number or Abutment	Girder Number	Shim Depth (in.)
S.N. 082-0322	Unit 1	W. Abut.	6	1/8
S.N. 082-0322	Unit 1	W. Abut.	7	1/4
S.N. 082-0322	Unit 1	Pier #3	1	1 1/8
S.N. 082-0322	Unit 1	Pier #3	2	1 1/8
S.N. 082-0322	Unit 2	Pier #3	4	3/8
S.N. 082-0322	Unit 1	Pier #3	5	3/8
S.N. 082-0322	Unit 1	Pier #3	6	1/4
S.N. 082-0322	Unit 1	Pier #3	7	3/8
S.N. 082-0322	Unit 1	Pier #3	8	1 1/8
S.N. 082-0322	Unit 2	Pier #1	1	7/8
S.N. 082-0322	Unit 2	Pier #1	2	3/8
S.N. 082-0322	Unit 2	Pier #1	3	1/8
S.N. 082-0322	Unit 2	Pier #1	5	1/4
S.N. 082-0322	Unit 2	Pier #3	4	3/8
S.N. 082-0322	Unit 3	Pier #6	1	3/4
S.N. 082-0322	Unit 3	Pier #6	2	1
S.N. 082-0322	Unit 3	Pier #6	3	1 1/4
S.N. 082-0322	Unit 3	Pier #6	4	1 1/2
S.N. 082-0322	Unit 3	Pier #6	5	1/8
S.N. 082-0322	Unit 3	Pier #6	6	1/4
S.N. 082-0324	-	Pier #1	4	1/8

The cost of shim plates is included in the cost of the bearings.
Shim plates shall match the dimensions of the bearing bottom plates.

BILL OF MATERIAL

Item	Unit	Total
High Load Multi-Rotation Bearings, Guided Expansion 200K.	Each	54
High Load Multi-Rotation Bearings, Guided Expansion 250K.	Each	14
High Load Multi-Rotation Bearings, Guided Expansion 500K.	Each	11
High Load Multi-Rotation Bearings, Guided Expansion 600K.	Each	7
High Load Multi-Rotation Bearings, Guided Expansion 700K.	Each	19
Anchor Bolts, 1"	Each	192
Anchor Bolts, 1 1/4"	Each	228