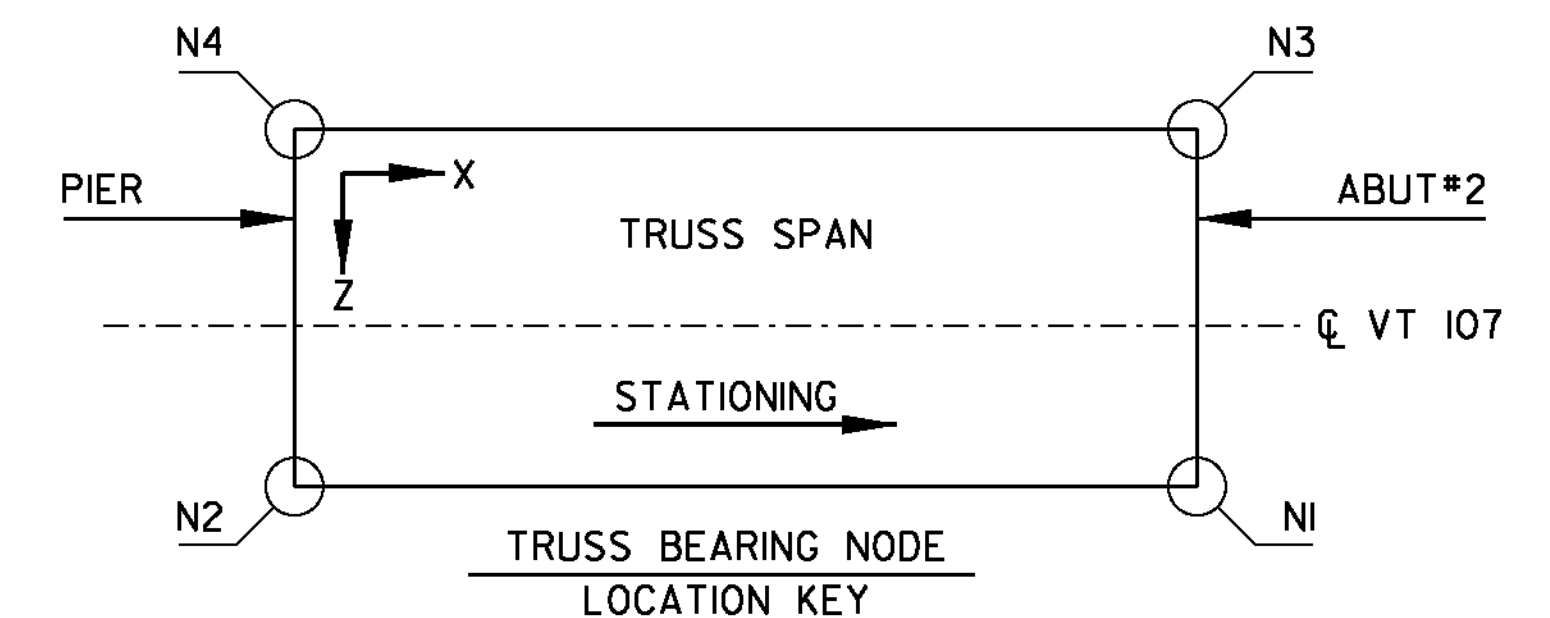


TRUSS BEARING NOTES

- 1) TRUSS FIXED AND EXPANSION BEARINGS SHALL BE PAID FOR UNDER THE ITEM 531.12 "BEARING DEVICE ASSEMBLY, POT" AND SHALL CONFORM TO APPLICABLE SUBSECTIONS OF SECTION 531 AND 731.
- 2) ALL MATERIALS SHALL CONFORM TO SECTION 14 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS AND SECTION 18 OF AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS AND ALL AASHTO OR ASTM SPECIFICATIONS SPECIFIED IN THIS SECTION.
- 3) THE ELASTOMERIC COMPOUND SHALL BE VIRGIN CRYSTALLIZATION RESISTANT POLYCHLOROPRENE (NEOPRENE) OR VIRGIN NATURAL POLYISOPRENE (NATURAL RUBBER) AS THE RAW POLYMER, EXCEPT WHEN USING A DISC THE COMPOUND SHALL BE BASED ON POLYETHER URETHANE, USING ONLY VIRGIN MATERIALS. THE RESULTING PRODUCT SHALL BE FREE OF POROUS AREAS, WEAK SECTIONS, BUBBLES, FOREIGN MATTER, OR OTHER DEFECTS AFFECTING SERVICEABILITY. IT SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 251.
- 4) ELASTOMER WAS DESIGNED USING METHOD A, WITH A NOMINAL HARDNESS OF 50 +/- 5 ON THE SHORE A SCALE, EXCEPT FOR DISCS WHICH SHALL HAVE A HARDNESS OF 50 +/- 5 ON THE SHORE D SCALE. IT IS ACCEPTABLE TO TEST PER AASHTO M 251 APPENDIX X1. ELASTOMER SHALL MEET THE REQUIREMENTS FOR LOW-TEMPERATURE ZONE D, GRADE 4.
- 5) STAINLESS STEEL SHALL CONFORM TO THE SPECIFICATIONS CONTAINED IN THE LATEST EDITION OF THE SECTION 14 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS AND SECTION 18 OF THE AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS. STAINLESS STEEL USED AS A MATING SURFACE WITH PTFE AND INCORPORATED IN BEARING DEVICES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A167 TYPE 304 OR A 240/A 240M, TYPE 304.
- 6) BRASS SEALING RINGS SATISFYING SUBSECTION 14.7.4.5.2 AND 14.7.4.5.3 OF AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SHALL CONFORM TO ASTM B36 (HALF HARD) FOR RINGS OF RECTANGULAR CROSS-SECTION, AND ASTM B121, FOR RINGS OF CIRCULAR CROSS-SECTION. THEY SHALL BE IN ACCORDANCE WITH SECTION 18 OF THE AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS.
- 7) PTFE (POLYTETRAFLUOROETHYLENE) MATERIAL INCORPORATED IN BEARING DEVICES SHALL BE ALL NEW MATERIAL CONSISTING OF (1/8 INCH) MINIMUM THICKNESS CONFORMING TO THE REQUIREMENTS OF SUBSECTION 14.7.2 OF AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS AND SECTION 18 OF AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS.
- 8) ALTERNATE CONFIGURATIONS FOR BEARINGS MAY BE SUBMITTED FOR APPROVAL. ANY ALTERNATE SUBMITTED SHALL BE DESIGNED AND CERTIFIED TO MEET THE DESIGN LOADS AND CRITERIA SHOWN ON THIS SHEET. THE ALTERNATE SHALL MAINTAIN THE ANCHORAGE SYSTEM SHOWN AND SHALL BE DESIGNED PER THE LATEST EDITION OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATION. BRIDGE SEAT ELEVATIONS MAY BE REVISED TO ACCOMMODATE AN ALTERNATIVE CONFIGURATION.
- 9) HIGH LOAD MULTI-ROTATIONAL BEARINGS, EXTERNAL LOAD PLATES, AND GUIDES SHALL BE WITHIN THE TOLERANCES GIVEN IN SECTION 18 OF THE AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATION.
- 10) THE THICKNESS OF THE STAINLESS STEEL SHEET SHALL BE AT LEAST 1.9 MM (14 GAUGE) WHEN THE MAXIMUM DIMENSION OF THE SURFACE IS LESS THAN OR EQUAL TO 305 MM (12 INCHES), AND AT LEAST 3.0 MM (11 GAUGE) WHEN THE MAXIMUM DIMENSION IS LARGER THAN 305 MM (12 INCHES).
- 11) EITHER PTFE SHEETS OR OTHER APPROVED MATERIAL SHALL BE PROVIDED TO LUBRICATE COMPRESSIVE SURFACES OF THE ELASTOMER.
- 12) THE STEEL HOUSING SHALL BE MANUFACTURED BY WELDING OR MACHING FROM A SINGLE PIECE OF PLATE. THE SHEAR RESTRICTION MECHANISM SHALL BE CONNECTED TO THE BEARING PLATE BY MECHANICALLY FASTENING, WELDING, OR OTHER MEANS APPROVED BY THE ENGINEER.
- 13) HIGH LOAD MULTI-ROTATIONAL BEARINGS SHALL BE TESTED IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS AND SECTION 18 OF THE BRIDGE CONSTRUCTION SPECIFICATIONS.
- 14) EXPOSED PTFE MATERIAL ON A GUIDE BAR OR OTHER COMPONENT SHALL BE PIGMENTED TO PREVENT PENETRATION OF ULTRAVIOLET LIGHT.
- 15) THE SOLE PLATE DIMENSIONS SHOWN ARE BASED ON POT DIMENSIONS OBTAINED FROM MANUFACTURER CATALOGS. THE MANUFACTURER SHALL VERIFY THE SOLE PLATE LENGTH AND WIDTH IS SUFFICIENT TO ACCOMMODATE THE ACTUAL BEARING DEVICE AND REQUIRED MOVEMENTS AND INDICATE ANY ADJUSTMENTS REQUIRED ON THE FABRICATION DRAWINGS.
- 16) THE MANUFACTURER SHALL DESIGN THE POT BEARING ASSEMBLY AND GUIDE BARS. FABRICATION DRAWINGS SHALL INCLUDE THE TOTAL ASSEMBLED BEARING HEIGHT AT THE CENTER OF THE BEARING SO THAT ANY ADJUSTMENTS TO MASONRY ELEVATIONS CAN BE DETERMINED. THE SHOP DRAWINGS SHALL ALSO INCLUDE A PROCEDURE FOR FUTURE BEARING REPLACEMENT WITH A MAXIMUM BEARING POST LIFT OF 1/4".
- 17) THE PREFORMED BEARING PAD BENEATH THE MASONRY PLATE SHALL HAVE THE SAME SIZE AND ANCHOR BOLT HOLE LAYOUT AS THE CORRESPONDING MASONRY PLATE.

- 18) BEARING SHALL BE SET LEVEL AND PARALLEL WITHIN 0.03125 IN./FT. WITH FULL AND UNIFORM BEARING. PEDESTALS DETAILED TO BE ON A SLOPE SHALL BE SET AT THE ELEVATION AND POSITION SPECIFIED. THE CONCRETE UNDER THE BEARING DEVICE SHALL BE LEVEL.
- 19) DURING ANY WELDING, SURFACES IN CONTACT WITH THE ELASTOMER SHALL BE RESTRICTED TO 200 DEGREES FAHRENHEIT, AND SURFACES IN CONTACT WITH PTFE SHALL BE RESTRICTED TO 300 DEGREES FAHRENHEIT. TEMPERATURE SHALL BE DETERMINED BY TEMPERATURE INDICATING WAX PENCILS OR OTHER SUITABLE MEANS. NO WELDING CURRENT SHALL BE PERMITTED TO PASS BETWEEN THE POT AND PISTON COMPONENTS.
- 20) THE WELDS FOR THE SOLE PLATE CONNECTION SHOULD ONLY BE ALONG THE LONGITUDINAL BOTTOM CHORD AXIS. TRANSVERSE JOINTS SHOULD BE SEALED WITH AN ACCEPTABLE CAULKING MATERIAL.
- 21) PRIOR TO ORDERING MATERIALS AND STARTING THE WORK, THE CONTRACTOR SHALL SUBMIT A DRILLING AND MORTARING PROPOSAL TO THE ENGINEER FOR APPROVAL, INCLUDING A PREMIXED MORTAR MATERIAL BRAND NAME.
- 22) THE DRILLED HOLES TO BE MORTARED SHALL BE THOROUGHLY CLEANED, WETTED, AND FREE OF STANDING WATER.
- 23) THE MORTAR SHALL BE MIXED IN A MECHANICAL MIXER ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS AND SHALL BE READILY POURABLE SO THAT WHEN POURED IT COMPLETELY FILLS THE REMAINING HOLE CAVITIES. THE PLACEMENT OF MORTAR FOR EACH BEARING SHALL BE CONTINUOUS AND COMPLETE AT ALL HOLE LOCATIONS.
- 24) ALL EXPOSED MORTAR SHALL BE CURED FOR A PERIOD OF NOT LESS THAN THREE (3) DAYS BY THE WETTED BURLAP METHOD IN ACCORDANCE WITH SECTION 501. CURING SHALL COMMENCE AS SOON AS PRACTICAL AFTER MORTAR PLACEMENT. THE CONTRACTOR SHALL NOT APPLY ANY FORCES TO THE ANCHOR BOLTS DURING THE CURING PERIOD.
- 25) ANCHOR BOLTS TO BE DOUBLE NUTTED SHALL USE THE FOLLOWING PROCEDURE: INSTALL THE LOWER NUT IN CONTACT WITH TOP OF SOLE PLATE, AND THEN BACK OFF 1/2 TURN. INSTALL UPPER NUT SNUG TIGHT TO PREVENT LOWER NUTS FROM LOOSENING.
- 26) PTFE AND STAINLESS STEEL SLIDING SURFACES SHALL BE PROTECTED FROM SPLATTER DURING THE WELDING, GROUTING, OR PAINTING OPERATIONS IF APPLICABLE.
- 27) THE BEARING MANUFACTURER SHALL INCLUDE A TEMPERATURE SETTING TABLE ON THE FABRICATION DRAWINGS.
- 28) TRUSS SEAT ELEVATIONS ARE BASED ON THE BEARING HEIGHT SHOWN. PRIOR TO CASTING THE PIER OR ABUTMENT 2, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER THE PROPOSED BEARING HEIGHT AS PROVIDED BY THE MANUFACTURER AND ANY ELEVATION MODIFICATIONS REQUIRED BEFORE CONSTRUCTING THE PIER AND ABUTMENT 2.
- 29) BOLTS INSTALLED IN GALVANIZED STRUCTURAL COMPONENTS SHALL BE TYPE 1, THEY SHALL BE PROVIDED WITH APPROPRIATE NUTS AND WASHERS, AS REQUIRED, AND THE COMBINATION OF BOLT, NUT, AND WASHER SHALL BE MECHANICALLY GALVANIZED IN ACCORDANCE WITH AASHTO M 298, CLASS 50, TYPE 1.
- 30) BOLTS FURNISHED FOR BEARINGS SHALL CONFORM TO SUBSECTION 714.08. THE BOLTS, NUTS, AND WASHERS FURNISHED SHALL BE TESTED AND CERTIFIED AS MEETING THE REQUIREMENTS OF THE ZINC THICKNESS TEST AS SPECIFIED IN SUBSECTION 714.05, IN ADDITION TO ANY OTHER TEST AND CERTIFICATION REQUIREMENTS.
- 31) GALVANIZING THAT HAS BEEN DAMAGED SHALL BE REPAIRED IN ACCORDANCE WITH ASTM A780, STANDARD PRACTICE FOR REPAIR OF DAMAGED HOT DIPPED GALVANIZED COATINGS, ANNEX A2. THE PAINT USED IN THE REPAIR SHALL BE ORGANIC-RICH, CONTAINING 92 PERCENT (MIN.) ZINC BY WEIGHT IN THE DRY FILM. THE PAINT SHALL BE APPLIED PER MANUFACTURER'S RECOMMENDATIONS TO A THICKNESS EQUIVALENT TO THE SURROUNDING GALVANIZING.
- 32) METALIZING THAT HAS BEEN DAMAGED SHALL BE REPAIRED USING THE METHODS DESCRIBED IN NOTE 31.
- 33) DESIGN CRITERIA:
 - A) MASONRY PLATE TO CONCRETE DESIGN PRESSURE = 1000 PSI
 - B) HORIZONTAL CAPACITY SHALL BE MINIMUM OF 20% VERTICAL LOAD IN ANY RESTRAINED DIRECTION.
 - C) SHALL BE DESIGNED FOR FORCES, TRANSLATIONS, AND ROTATIONS SHOWN IN PLANS

DESIGN LOAD (KIPS)	SERVICE LIMIT STATE	VERTICAL			
		MAX.	924		
DESIGN LOAD (KIPS)	SERVICE LIMIT STATE	MIN.	681		
		PERMANENT	663		
		TRANSVERSE	18		
	STRENGTH LIMIT STATE	LONGITUDINAL	114		
		VERTICAL	STRENGTH I	1195	
		TRANSVERSE	STRENGTH III	477	
TRANSLATION (INCHES)	SERVICE LIMIT STATE	N1	TRANSVERSE	0.0"	
			LONGITUDINAL	0.0"	
		N2	TRANSVERSE	0.0"	
			LONGITUDINAL	3.65"	
		N3	TRANSVERSE	0.384"	
			LONGITUDINAL	0.0"	
	N4	TRANSVERSE	0.384"		
		LONGITUDINAL	3.65"		
	ROTATION (RADIAN)	SERVICE LIMIT STATE	N1	X	0.0049
				Y	0.0038
				Z	0.0055
			N2	X	0.0070
Y				0.0004	
Z				0.0055	
N3			X	0.0056	
			Y	0.0058	
			Z	0.0050	
N4			X	0.0037	
			Y	0.0029	
			Z	0.0049	



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SHEET	76 OF 148