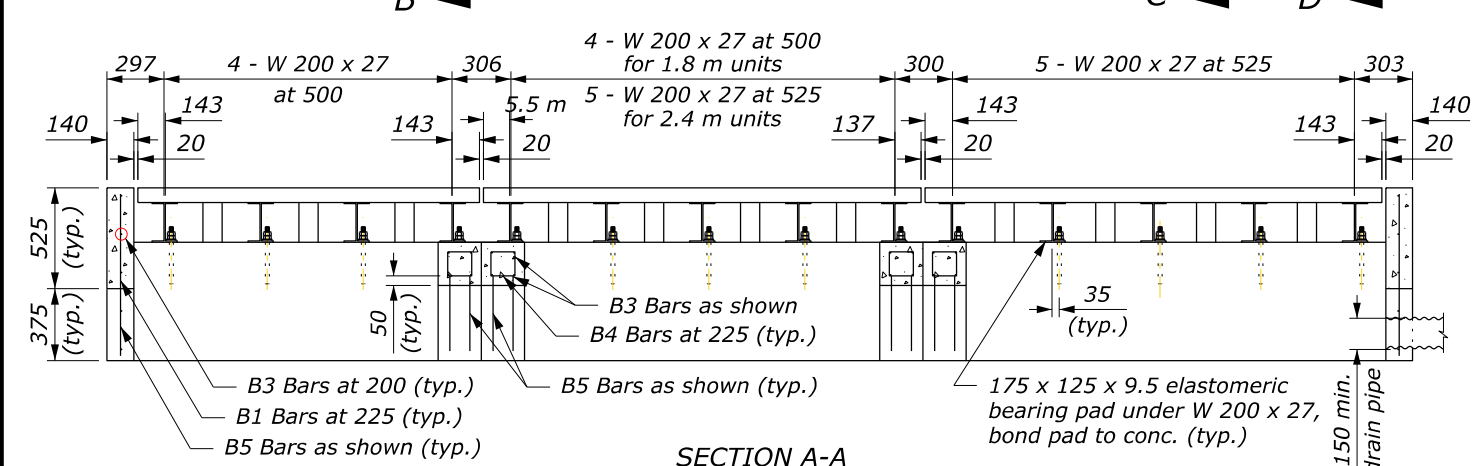
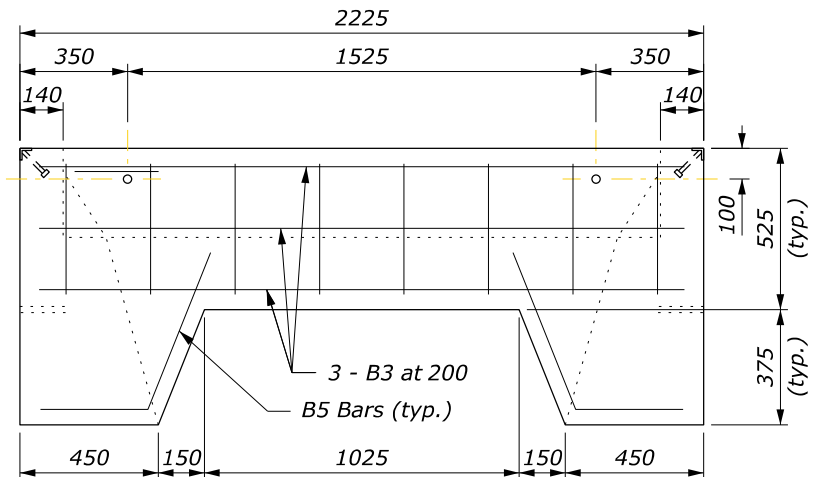


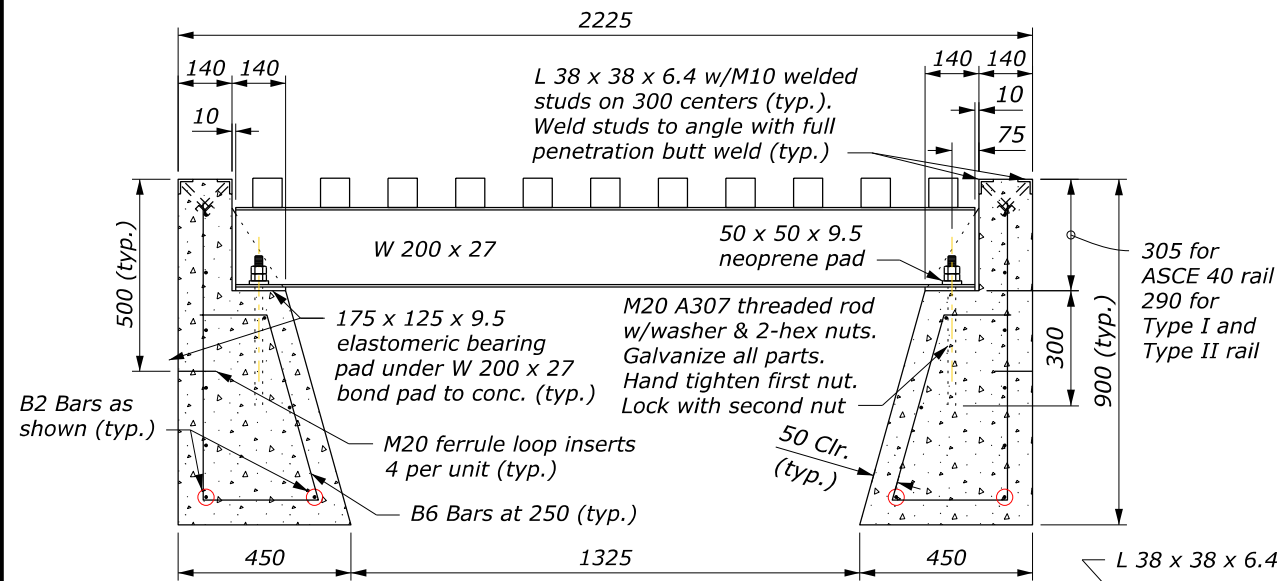
SECTION B-B



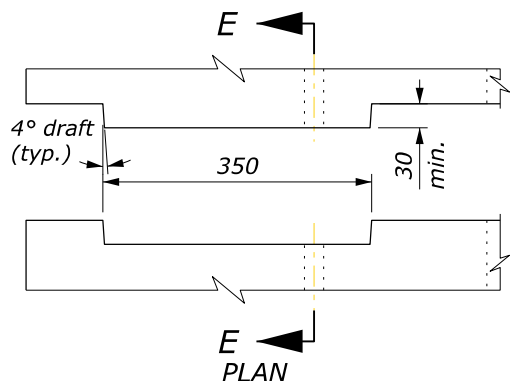
SECTION A-A



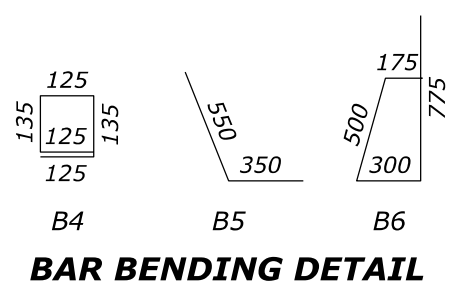
SECTION D-D



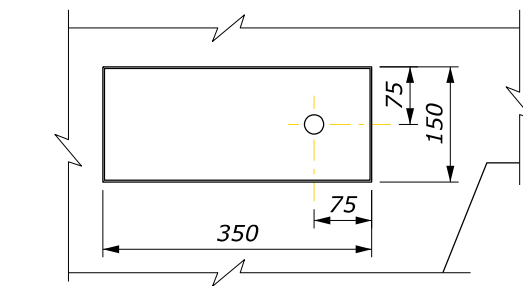
SECTION C-C



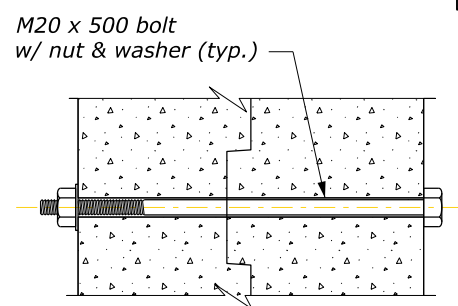
ELEVATION



BAR BENDING DETAIL



KEY DETAIL



SECTION E-E

NOTE:

1. See Standard M619-1 for reinforcing steel size and grade.
2. See Standard M619-1 and 2 for cattle guard wing details. Fabricate end units to accommodate selected cattle guard wing.
3. Minimum soil bearing 19,500 kg/m². Place units in fine aggregate bed 75 mm thick over hand leveled soil compacted to not less than 95% density.
4. Chamfer exposed concrete edges 20 mm unless otherwise shown. Give all concrete surfaces a Class 1 finish.
5. Approved alternate designs may be used.
6. Dimensions without units are millimeters.

PRECAST CATTLE GUARD					
REINFORCING STEEL AND CONCRETE					
UNIT	No. of BARS	BAR MARK	LENGTH	MASS kg	CONCRETE m ³
1.8 m END	7	B3	2100	14.6	1.40
	10	B2	1850	18.4	
	8	B1	425	3.4	
	6	B4	650	3.9	
	18	B6	1750	31.3	
1.8 m INTERIOR	6	B5	900	5.4	1.41
	8	B3	2100	16.7	
	10	B2	1650	16.4	
	12	B4	650	7.8	
	18	B6	1750	31.3	
2.4 m INTERIOR	8	B5	900	7.2	1.73
	8	B3	2100	16.7	
	10	B2	2250	22.4	
	12	B4	650	7.8	
	20	B6	1750	34.8	
2.4 m END	8	B5	900	7.2	1.72
	7	B3	2100	14.6	
	10	B2	2450	24.4	
	8	B1	425	3.4	
	6	B4	650	3.9	
	20	B6	1750	34.8	
	6	B5	900	5.4	

U.S. DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION
 OFFICE OF FEDERAL LANDS HIGHWAY

METRIC FLH STANDARD

**CATTLE GUARD
 PRECAST FOUNDATION**

STANDARD APPROVED FOR USE 3/1996
 REVISED: 11/1997 6/2005
 DRAFT: 10/2016

STANDARD M619-3

NO SCALE

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