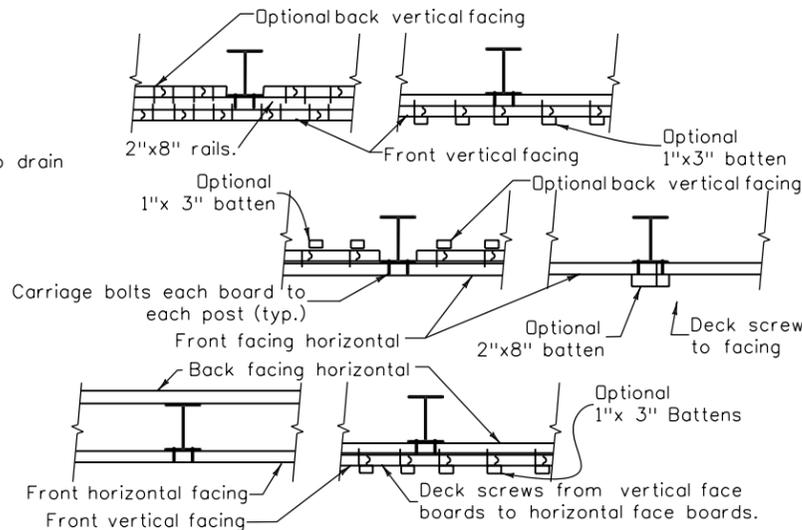


**TYPICAL FENCE ANGLE**



- Use a horizontal board facing on the front of the fence.
  - with 2"x8" vertical battens on the front face of post.
- Use a vertical board facing on the front of the fence mounted to 2x8 horizontal rails.
  - with 1"x3" vertical battens.
- Use a vertical board facing on the back of the fence mounted on the back of the front face rails of front horizontal face boards when available..
  - with 1"x3" vertical battens.
- Use a horizontal board facing on the back of the fence.
  - with 2"x8" vertical battens at post.
- Use 12 PSF design.
- Use treated wood for rails, fence boards, and battens.
- Point post in addition to galvanizing with a galvanizing compatible paint system. The color shall be \_\_\_\_\_, equivalent to Federal standard 595B, color No. \_\_\_\_\_.

Unless otherwise selected above use: 27 PSF. Face boards horizontal on front of fence. No back facing. No battens. Galvanize only, no paint. All wood untreated.

**FENCE POST INSTALLATION**

Height	27PSF DESIGN			12PSF DESIGN		
	L ▲	Post (min.)	N	L ▲	Post (min.)	N
6'-0"	4'-8"	W 6x9	4	3'-9"	W 6x9	3
8'-0"	5'-5"	W 6x9	5	4'-4"	W 6x9	3
10'-0"	6'-2"	W 6x12	6	4'-11"	W 6x9	4
12'-0"	6'-2"	W 6x15	7	5'-5"	W 6x9	5
14'-0"	6'-9"	W 8x18	8	5'-11"	W 6x12	6
16'-0"	7'-3"	W 8x18	9	5'-11"	W 6x15	6

▲ Minimum

**NOTES:**

Timber shall conform to Section 508 of the Standard Specifications. All wood dimensions are nominal sizes. All horizontal or vertical face boards shall be 2" nominal thickness and tongue and grooved.

All posts are A36 or A572 steel. All post, deck screws, carriage bolts, nuts, washers, and nails shall be galvanized.

Carriage bolts shall be 1/4" diameter and have nuts and lockwashers and peened threads. Tighten carriage bolts to set head flush with the surface of the wood. Deck screws shall be between 2 1/2" and 3" long.

The entire wood portion of the fence above ground shall receive a coat of boiled linseed oil at the rate of 150 sq.ft. max per gallon to retard weathering.

Use the 27 psf design in Boulder County, in the Front Range foothills, in exposed open terrain, high exposed locations, or within 10' of a high speed roadway pavement.

Rails or horizontal face boards shall be placed in accordance with combination simple span and two-span continuous layup of AITC Specification 118.

For fences with 5 or more rails, vertical facing boards may be full length or may be placed such the each board bears on at least 3 rails, and all butt joints fall over the rails and are staggered by at least one rail in adjacent boards.

Single faced fences shall have open knots plugged.

All timber shall have moisture content no higher than 17% at the time of installation.

1" x 3" vertical battens shall be attached with 10d ring shank nails at 2' max. 2" x 8" vertical battens shall be attached with deck screws at 2' max.

Top of the post may be flush with the top if the top horizontal rail or top horizontal face board.

The fence shall not retain more than 1' of fill.

**DESIGN DATA:**

AASHTO Standard Specifications for Structural Design of Sound Barrier, 1989.

Wind load = 27 lbs. per sq. ft. exposure C

Wind load = 12 lbs. per sq. ft. Exposure B1

Timber: Fb = 1000 psi. min. nominal. 1769 psi. min. for wind.  
Fv = 65 psi. min. nominal. 110 psi for wind.

Steel: ASTM A36, fy = 36,000 psi. ASTM A572 may be substituted.

**ASSUMED SOIL PROPERTIES:**

Weight = 120 lbs/cu. ft. θ = 32° or compact course and fine sand, medium stiff clay, or soil slope of height = post embedment suitable for a 2:1 depth, "L", and construction traffic.

Revision Dates (Preliminary Stage Only)	
12/95	3/99
11/99	4/02
3/07	10/13

Design		Detail		Quantities	
DATE	INITIAL	DATE	INITIAL	DATE	INITIAL
MM/YY	XXX	MM/YY	XXX	MM/YY	XXX
Checked By					

Print Date: \$DATE\$
File Name: Sheet_B-607-SB2.dgn
Horiz. Scale: NTS      Vert. Scale: As Noted
Staff Bridge Branch - Unit 022X    Unit Leader Initials

Sheet Revisions		
Date:	Comments	Init.

Colorado Department of Transportation  
 4201 East Arkansas Avenue  
 Room 107  
 Denver, CO 80222  
 Phone: 303-757-9309 FAX: 303-757-9197

**Staff Bridge Branch**      **Initials**

<b>As Constructed</b>
No Revisions:
Revised:
Void:

<b>WOOD SOUND BARRIER (STEEL POST)</b>			
Designer:	XXXXXXXX	Structure	X-XX-XX
Detailer:	XXXXXXXX	Numbers	X-XX-XX
Sheet Subset:	BRIDGE	Subset Sheets:	BXX of XXX

<b>Project No./Code</b>
Project Number
Code
Sheet Number