CORY M. FRASER, PE
PH:206-941-3334
EMAIL: cory.fraser@gmail.com

Project: Snoqualmie Pass Foot Bridge
Address: 24 Kearney Dr
Snoqualmie Pass, WA 98068

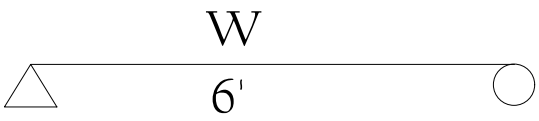
The following structural design is per the 2021 IBC/IRC:

Gravity Design: G1
Design Loads:
Bridge Live Load = 433 psf
Bridge Dead Load = 20 psf
Allowable Bearing Pressure = 1,500 psf

Cory M. Fraser PE - 09.03.24

Design Loads:
Snow: P_g = 433 psf (controls)
Dead: D = 20 psf

1: Bridge Joist:

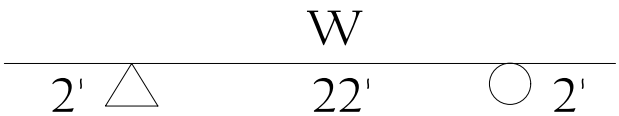


W = 453 psf

At 12"OC:
R = 1.36 k M = 2.04 k-ft
f_b = 1.14 ksi f_v = 110 psi
Δ = .08" L/862

2x10 @ 12"OC
(DF Material)

2: Bridge Beam:



W = 1.36 klf

R = 16.3 k M = 68 k-ft
f_b = 1.91 ksi f_v = 130 psi
Δ = .65" L/368

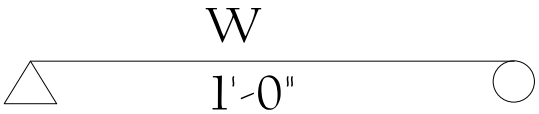
Wolmanized GL $6\frac{3}{4}$ x $19\frac{1}{2}$

3: New Footings below bridge posts:

P = 16.3 k/(3.5'*3.5') = 1.33 ksf
1.33 ksf < 1.5 ksf

3'-6" x 3'-6" ftg

4: Bridge Deck Finish:



W = 453 psf

R = .227 k M = .06 k-ft
f_b = .15 ksi f_v = 14.16 psi

2x decking or 1" plywood

CORY M. FRASER, PE
PH:206-941-3334
EMAIL: cory.fraser@gmail.com

Snoq Pass Residence
24 Kearney Dr
Snoqualmie Pass, WA 98068

Project #: 165
DATE: 09.03.24