

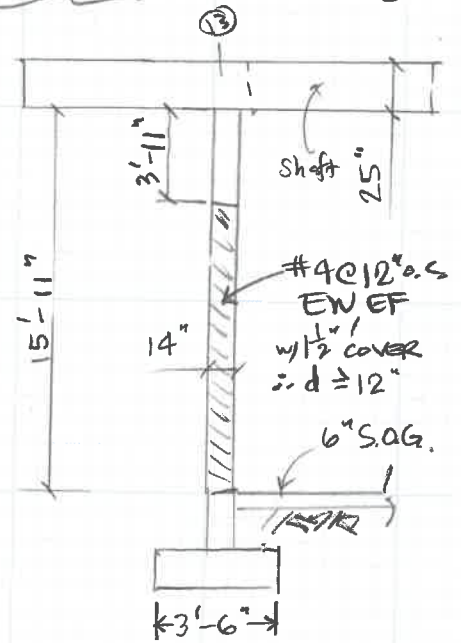
CUT NEW 12'x12' OPENING IN (E) CONC WALL BTWN (A) & (B) - 26' BAY @ (3)

WAFFLE LL = 250 PSF

- shaft is located @ new opening  $\therefore$  3'-11" depth is OK by inspection, wall piers also OK for reaction
- check out-of-plane load

WIND  $\approx$  15 PSF (1.6) =  $24 \frac{lb}{ft^2}$

SEISMIC = 0.4 SDS 1 W  
 $\approx 2.4 \cdot (.84) \cdot 1.0 (175) = 59 \frac{lb}{ft^2}$  (GOVERNS)



**4' WALL PIER**

$w_{wind} = 24 \frac{lb}{ft^2} (6' + 4') = 240 \frac{lb}{ft}$

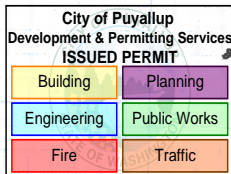
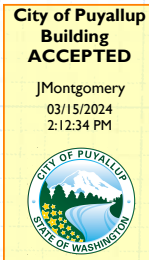
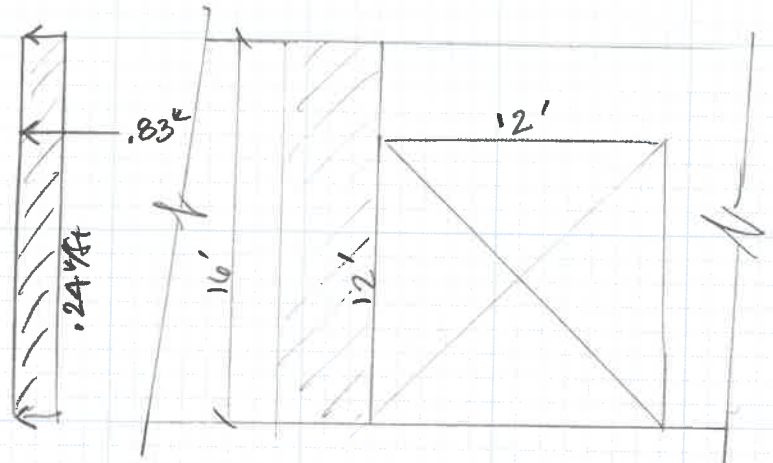
$w_{seismic} = 59 \frac{lb}{ft^2} (4') = 236 \frac{lb}{ft}$   
 + point load

SEISMIC POINT LOAD

$P = .34 (10 \frac{lb}{ft^2} (\frac{12'}{2} \times \frac{12'}{2})) + 59 \frac{lb}{ft^2} (\frac{4'}{2} \times \frac{12'}{2})$   
 $= 122 + 708 = 830 lb$

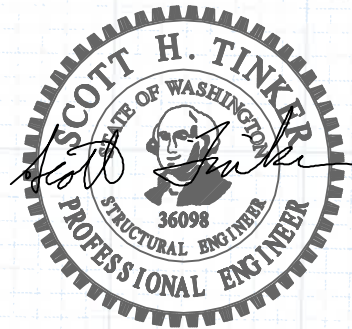
$M_{vmax} \leq \frac{wL^2}{8} + \frac{PL}{4}$   
 $= \left[ \frac{.24(12^2)}{8} + \frac{.83(12)}{4} \right] 12'$   
 $= 52 + 30 = 82 k \cdot in$

As req'd  $\approx \frac{M_u}{\phi f_y d (90\%)}$   
 $= \frac{82}{.9(60)12(.9)} = 0.14 in^2$



PRCTI20240250

OK to cut opening, no reinf req'd



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project

10/6/23

date

23414.01

project no.

ST

designer

sheet

BENAROYA

client

checked by