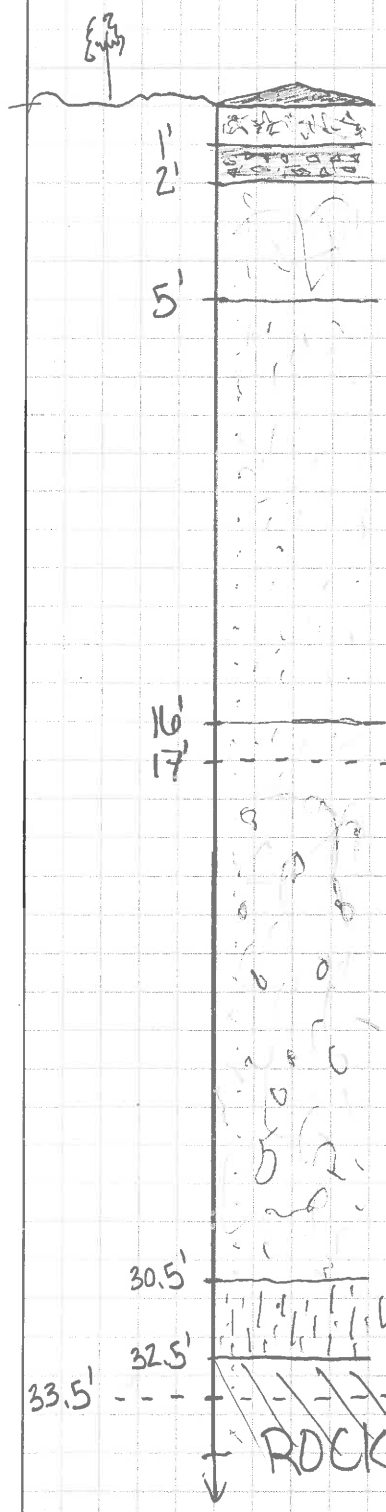
PROJECT: Esco. Creek Pipe X-ing	DESIGN BY: A.B.	REVIEWED BY:	SHEET NO. 1
NOTE: Soil Pressures	DATE: 02/28/2020		



Vertical Pressures

$\sigma_{v5'} = (108 \times 5) = 540$ psf

$\sigma_{v16'} = 540 + (108 \times 11') = 1728$ psf

$\sigma_{v17'} = 1728 + (107.1 \times 1) = 1835.1$ psf

$\sigma_{v30.5'} = 1835.1 + (107.1 \times 13.5') + (62.4 \times 12.5') = 4060.95$ psf

$\sigma_{v32.5'} = 4060.95 + (122 \times 2') + (62.4 \times 2') = 4429.75$ psf

$\sigma_{v33.5'} = 4429.75 + (168 \times 1') = 4597.75$ psf

@ Bottom of Bore Pit

PROJECT: Esco. Creek Pipe X-ing	DESIGN BY: A.B.	REVIEWED BY:	SHEET NO. 2
NOTE: Soil Pressures	DATE: 02/28/2020		

Lateral Stress Ratio (K_o)

$$K_o = [1 - \sin(\phi')]OCR^{\sin(\phi')}$$

* Assume OCR = 1, will compact soil @ site

* $\phi' = 21°$ According to Figure B-6 provided by Vinyl & More Geotech Shear Test Results @ Site

$$K_o = [1 - \sin(21°)]\,1^{\sin(21°)}$$

$$K_o = [1 - 0.358](1)$$

$$\boxed{K_o = 0.64}$$

Horizontal Soil Pressure @ Bottom of Bore Pit (Max Pressure on Temp. Structure)

$$\sigma_H = K_o \sigma_v = (0.64)(4597.75) = \boxed{2950 psf}$$

* Temp structure must be designed to withhold against 2950psf soil pressure.