DESIGN DATA

Design AASHTO LRFD Bridge Design Specifications, 4th Edition with California Amendments

**N**
- 33 psf on Sound wall

**L**
- Varied surcharge on level ground surface

**E**
- Mononobe-Okabe Method
  - k = 0.5

**S**
- g = 34°
- y = 1200 psf

**R**
- Reinforced
  - Concrete: $f_c = 3600$ psi
  - Soil: $K_h = 0.3$

Load Combinations and Limit States

- Service 1: $Q = 1.00DC + 1.00EV + 1.00EH + 1.00EQD + 1.00EQE + Td$
- Service 2: $Q = aDC + BEV + 1.50EH + 1.40WS + Td$
- Service 3: $Q = 1.00DC + 1.00EV + 0.30WS + Td$
- Extreme I: $Q = 3600 + 1.00EV + 1.00EQD + 1.00EGE + Td$
- Extreme II: $Q = 1.00DC + 1.00EV + 1.00WS + 0.30WS + Td$
- Extreme III: $Q = 1.00DC + 1.00EV + 1.00LS + 1.00WS + Td$

**N**
- Force Effects
  - $a$ = 1.2 or 0.90, whichever controls design
  - $b$ = 1.5 or 1.00, whichever controls design
  - $c$ = Load of Structure Components
  - $d$ = Live Load Surcharge
  - $e$ = Vertical Earth Fill Pressure
  - $f$ = Line Load Surcharge
  - $g$ = Seismic Earth Pressure
  - $h$ = Soil and Structure Components inertia
  - $i$ = Wind load on Sound wall
  - $j$ = Anchor Design Load

NOTES:

1. For Sound wall and retaining wall architectural finish or texture see details elsewhere in Project Plans.
2. For details not shown and drainage notes, see Sheet "SOUND WALL - MASONARY BLOCK ON RETAINING WALL" sheet.
3. Footing cover, 2'-0" minimum.
4. For Sound wall reinforcement details, see "SOUND WALL - MASONARY BLOCK ON RETAINING WALL" sheet.
5. Shift @ bars and @ bars as required to clear formed hole for ground anchor.
6. Footing is designed to resist 1.33 Td assuming the maximum anchor spacing shown in the table.

**SOUND WALL**