

# **LESSON 6**

## **TOPIC 1**

### **Embankment Settlement**

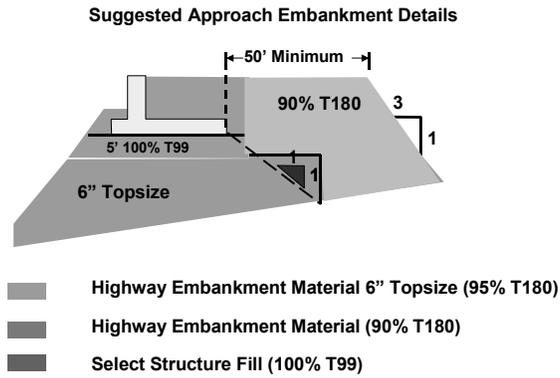








**To Eliminate Settlement Within Embankment**



Slide 6-1-7



Slide 6-1-8

































# SOILS AND FOUNDATIONS WORKSHOP

## ***Student Exercise NO. 3***

### ***SPT Correction and C' Value***

***GIVEN:  $P_o$  values at the depths  
Where SPT's were taken.***

***Soil is fine to coarse sand***

| <b><i>DEPTH</i></b> | <b><i>SPT N-VALUE</i></b> | <b><i><math>P_o</math> (PSF)</i></b> |
|---------------------|---------------------------|--------------------------------------|
| <b><i>5'</i></b>    | <b><i>6</i></b>           | <b><i>550</i></b>                    |
| <b><i>10'</i></b>   | <b><i>10</i></b>          | <b><i>1100</i></b>                   |
| <b><i>15'</i></b>   | <b><i>15</i></b>          | <b><i>1650</i></b>                   |
| <b><i>20'</i></b>   | <b><i>17</i></b>          | <b><i>2200</i></b>                   |
| <b><i>25'</i></b>   | <b><i>16</i></b>          | <b><i>2438</i></b>                   |

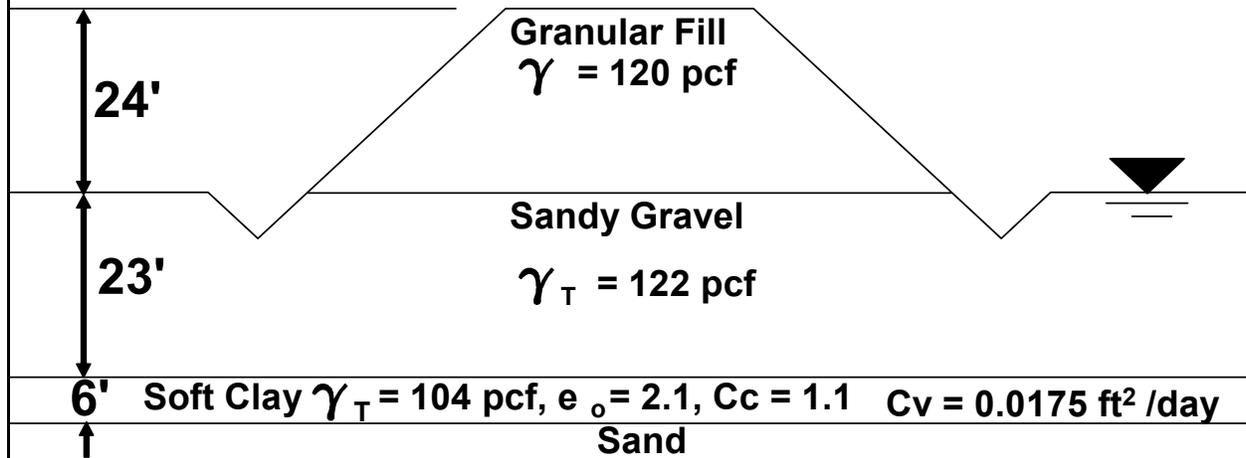
***FIND: 1.  $N'$  (SPT value corrected for  
 $P_o$  effect - Fig. 6-5)***

***2.  $C'$  (Bearing capacity index  
-Fig. 6-6)***

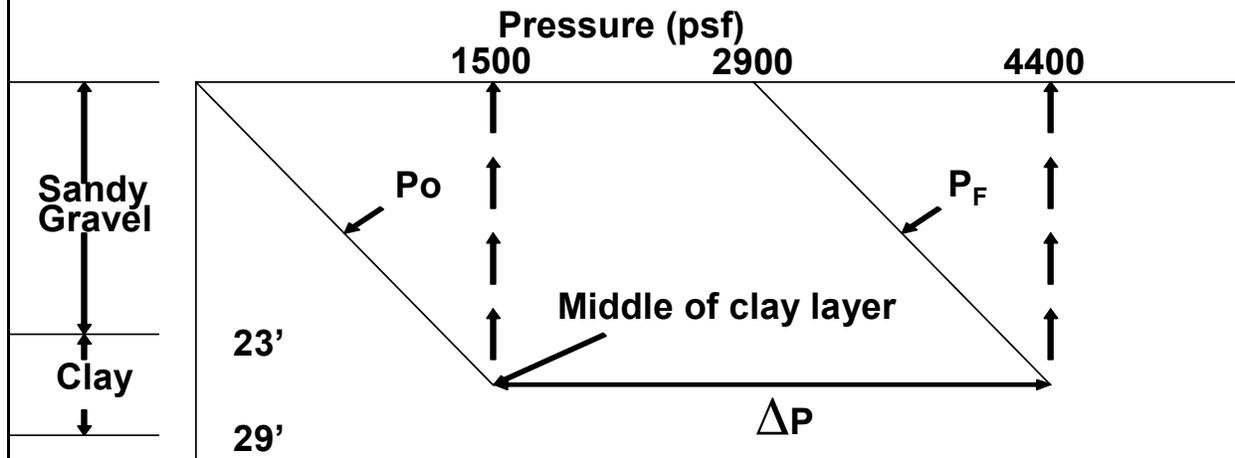
# SOILS AND FOUNDATIONS WORKSHOP

## Student Exercise No. 4 - Settlement Problem

### Given: 1. Soil profile



### 2. Pressure diagram



### Compute:

1. Primary settlement of normally consolidated clay due to fill load.
2. Time (mos.) for 90% primary settlement to occur in clay