TEMPORARY STORM WATER RUN-ON BYPASS & EXCAVATION DEWATERING INFORMATION PACKAGE

Data For Estimating Dewatering Quantities

The soils that may be encountered in the project area can be summarized in descending order as follows:

1. Thick layer of Asphalt concrete between 2' (0.61 m) and 8' (2.43 m) thick
2. Thin layer of artificial fill (Silty Sand, Sand, and Gravel)
3. Engineered Fill up to 15' (4.6 m)
4. Young Bay mud, dark grayish green, organic rich clay, containing occasional gravel and sand layers up to 50' (15.3 m) deep

According to the Log of Test Borings carried out by Caltrans in 2002 and 2001, the soil profile of the project area mainly consists of the following soils (Refer to the Logs of Test Borings):

Unified Soil Classification	**Coefficient of Permeability K (cm./day)**	***Coefficient of Permeability K (ft./day)**
Silty Sand (SM)	$82.3X\ 10^{-4}$ to 42.7	$2.7X\ 10^{-4}$ to 1.4
Silty gravel (GM)	$82.3\ X10^{-4}$ to 823	$2.7X\ 10^{-4}$ to 27
Bay Mud (CH)	$82.3X10^{-7}$ to $82.3X10^{-5}$	$2.7X10^{-7}$ to $2.7X10^{-5}$
Clayey Sand (SC)	$82.3X\ 10^{-5}$ to 4.27	$2.7X\ 10^{-5}$ to 0.14
Elastic Silt with Sand (MH)	$82.3X\ 10^{-6}$ to $82.3X10^{-4}$	$2.7X\ 10^{-6}$ to $2.7X\ 10^{-4}$
Well graded Sand (SW)	42.7 to 4175.8	1.4 to 137
Poorly graded Sand (SP)	4.27 to 42.7	0.14 to 1.4
Clay (CL)	$82.3X10^{-5}$ to $82.3X10^{-3}$	$2.7X10^{-5}$ to $2.7X10^{-3}$
Silt (ML)	$82.3X\ 10^{-5}$ to 4.27	$2.7X\ 10^{-5}$ to 0.14
Clay with Sand (CH)	$82.3X10^{-7}$ to $82.3X10^{-5}$	$2.7X10^{-7}$ to $2.7X10^{-5}$
Poorly graded Gravel (GP)	417.6 to 835152	13.7 to 27,400
Gravel with clay (GC)	$82.3X10^{-5}$ to $82.3X10^{-2}$	$2.7X10^{-5}$ to $2.7X10^{-2}$

*Federal Highway Report No. FHWA-TS-80-224

Our estimate of the seepage rate (flow rate) for the project area varies from approximately 5 gallons/day/ft^2 (204 liters/day/m^2) in areas with thick Bay Mud deposits to approximately 15 gallons/day/ ft^2 (611 liters/day/m^2) of cross-sectional area of excavation below the groundwater table.

These estimates are provided for estimating purposes only and shall not be made a part of the contract documents. The Bidders may use the coefficients of permeability listed above in conjunction with the boring logs to compute his/her own flow rates.