

**FOR CONTRACT NO.: 08-0L9304**

# **INFORMATION HANDOUT**

## **MATERIALS INFORMATION**

**FOUNDATION RECOMMENDATION**

**ROUTE: 08-Riv-10-15.8**

**Memorandum***Flex your power!  
Be energy efficient!*

**To:** JOE ESFANDIARY  
Branch Chief  
Office of Transportation Architecture  
Structures Design Services & Earthquake Engineering  
Division of Engineering Services

**Date:** July 14, 2010  
**File:** 08-0L9300  
Desert Hills TIF  
08-Riv-10 PM 15.78

Attention: Tahir Rashid

**From:** DEPARTMENT OF TRANSPORTATION  
DIVISION OF ENGINEERING SERVICES  
GEOTECHNICAL SERVICES  
OFFICE OF GEOTECHNICAL DESIGN – SOUTH 2  
DESIGN BRANCH C, MS #5

**Subject:** Foundation Report

**Introduction**

This Memorandum presents our Foundation Recommendations for the proposed expansion project of the Desert Hills Truck Inspection Facility (TIF) located in the City of Banning, Riverside County, California. Information provided to this Office by the Office of Transportation Architecture, indicates that the expansion project consists of constructing a new, one story office building measuring 45' X 166' adjacent to the existing truck inspection building. The office building will be constructed with structural steel columns supported on square spread footings in an existing truck parking lot that is currently paved with Asphalt Concrete (AC).

**Site Geology and Seismic Data**

The site is underlain by fan deposits of Holocene alluvium consisting of layers of sandy silts, silty sands, gravels, cobbles, and boulders. The site was formally a batch plant during the construction of the 10 freeway and there is a potential for buried man-made objects to be uncovered during construction. According to the 1996 California Seismic Hazard Map, the site is located approximately 3 miles south of the San Andreas/SW fault (SAW 7.5), and the site has the potential to have an estimated Peak Bedrock Acceleration (PBA) of 0.6g

**Groundwater**

No groundwater was encountered during our subsurface investigation. Based on the Percolation Test Results for the Desert Hills TIF dated June 24, 2010, groundwater is believed to be greater than 100 feet below the existing ground surface.

**Subsurface Investigation**

The subsurface exploration phase of this project utilized a trailer mounted drill rig which advanced 4 bore holes to a maximum depth of 40 feet below the existing surface during the week of April 12, 2006. During our subsurface investigation, very dense Silty Sands with Gravels were encountered. Cobbles up to 6 inches in diameter were also encountered during excavation of percolation testing test pits for the site. In-situ testing including Standard Penetration Tests

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(SPT) were performed every 5 feet and blow counts from the SPT were recorded in the Log of Test Boring sheets (LOTBs). With the exception of one SPT test, all penetration testing required 50 blows or more in order to advance the SPT sampler 12 inches. Soil samples were collected from auger cuttings and delivered to the Sacramento Laboratory for testing. The test results and LOTB will be provided to your office as they become available.

#### Foundation Recommendations

The following Foundation Recommendations are based on the Foundation Request dated April 8, 2010, and updated by email dated July 6, 2010. The email indicated the typical spread footing will need to support a maximum of 2500 lbs/ft<sup>2</sup> and will measure 4 feet by 4 feet square, 2 feet thick and the bottom of footing will be 3.5 feet below finished grade. Using the above soil parameters and footing dimensions this office has determined that the recompacted material will provide an allowable bearing capacity of 2500 lbs/ft<sup>2</sup>.

#### Construction Considerations

Due to the potential presence of man made obstacles and or pockets of loose material from the pre-existing batch plant at the building site, sub excavation and recompaction may be required. If man made objects or pockets of loose material are uncovered during excavation for the spread footings, any resulting voids or loose areas will be filled with native material and compacted to at least 95% relative compaction. It is believed the existing material is non-corrosive per Caltrans standards, and corrosion test results will be provided as they become available

Any questions regarding the above recommendations should be directed to the attention of Brian Gutierrez, (916) 227-1222, at the Office of Geotechnical Design-South II, Branch C

Prepared by:

Date:

*Brian Gutierrez*

7/14/2010

Brian Gutierrez, P.E.  
Design Branch C  
Office of Geotechnical Design-South II

cc: Shawn Wei - OGDS-II *SW*  
GS Corporate  
Project File-South  
District 8 Materials Engineer  
Tahir Rashid

