

Seismic Analysis Evaluation

Bay View Federal Bank Building. 2121 S. El Camino Real, San Mateo, California

W. Charles Perry / January 17, 1996 / Ver. 1.0 / Confidential

1. Concurrence with Findings in Prior Analyses

- 1.1. Existing foundation will fail in M8 Earthquake**
 - 1.1.1. Building probably will lean after earthquake**
 - 1.1.2. Building will endure 20 inches to 40 inches of motion at top level**
- 1.2. Existing core will fail in tension, shear, and possibly compression in M8 Earthquake**
 - 1.2.1. Concrete will spall from core**
 - 1.2.2. Interstory drift will damage partitions**
 - 1.2.3. Building components suspended from floors will drop**
 - 1.2.4. Facade will be severely damaged**
 - 1.2.5. Occupants may be injured or killed by falling objects**
- 1.3. Enlarging foundation will prevent foundation failure in M8 earthquake**
- 1.4. Dampers between floors and core offer little protection in M8 earthquake due to large displacements of core**
- 1.5. Reinforcing core will limit damage to core in M8 earthquake**
- 1.6. Base isolation will limit damage to core in M8 earthquake**

2. New Findings Not Mentioned in Prior Analyses

- 2.1. Main floor beams (W30x172 & W30x132) will deform permanently in M8 earthquake from vertical accelerations**
 - 2.1.1. Floor displacement will damage partitions**
 - 2.1.2. Floor displacement will damage facade**
 - 2.1.3. Beams will need to be straightened after earthquake**
 - 2.1.4. Building components suspended from floors will drop**
- 2.2. Main floor beams can be strengthened by welding steel plates to their flanges**