



## Storm Damage Repair Project – Glenwood Drive

County of Santa Cruz

Civil and Structural Engineering



14 inches of rain fell in 14 days during a series of storms that hit the County in March 2011 resulting in damages to 35 County maintained roads including Glenwood Drive three miles north of Scotts Valley.

Public Works retained MME to design a repair and we developed plans for an 84ft-long and 8ft-tall wall.

Our Geotechnical Engineer determined the failure at this site occurred in loose fill 14 to 16 feet below the surface and that the bedrock was located unusually deep at 25-35 feet below the road. 35-45 feet deep beams were designed to secure the new wall into the bedrock. To reduce the beam weight and strength needs we designed horizontal, drilled, tie-backs to anchor the top of the wall into bedrock on the uphill side of the road and this strategy reduced the construction cost and improved constructability.



### Client Reference:

Russell Chen, P.E.  
County of Santa Cruz  
Department of Public Works  
(831) 454-3419

### Budget:

\$500,000

