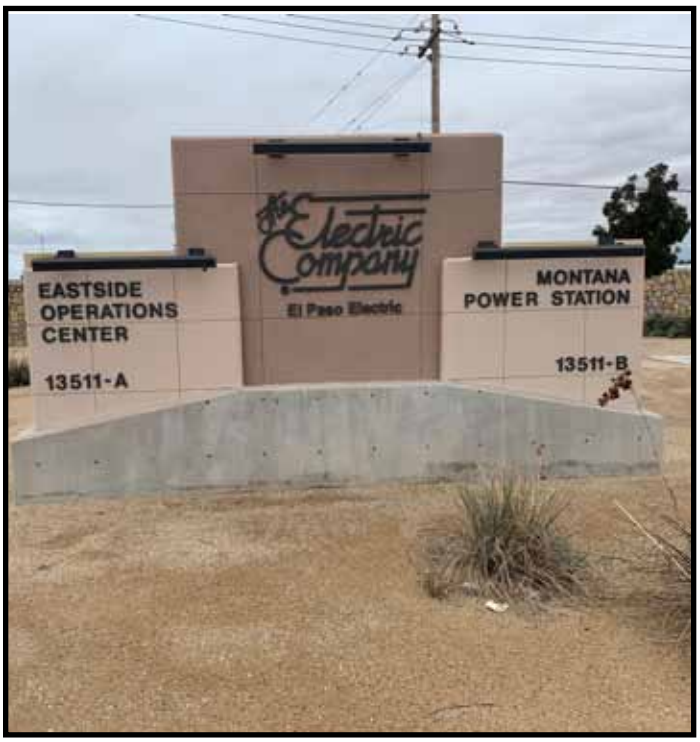
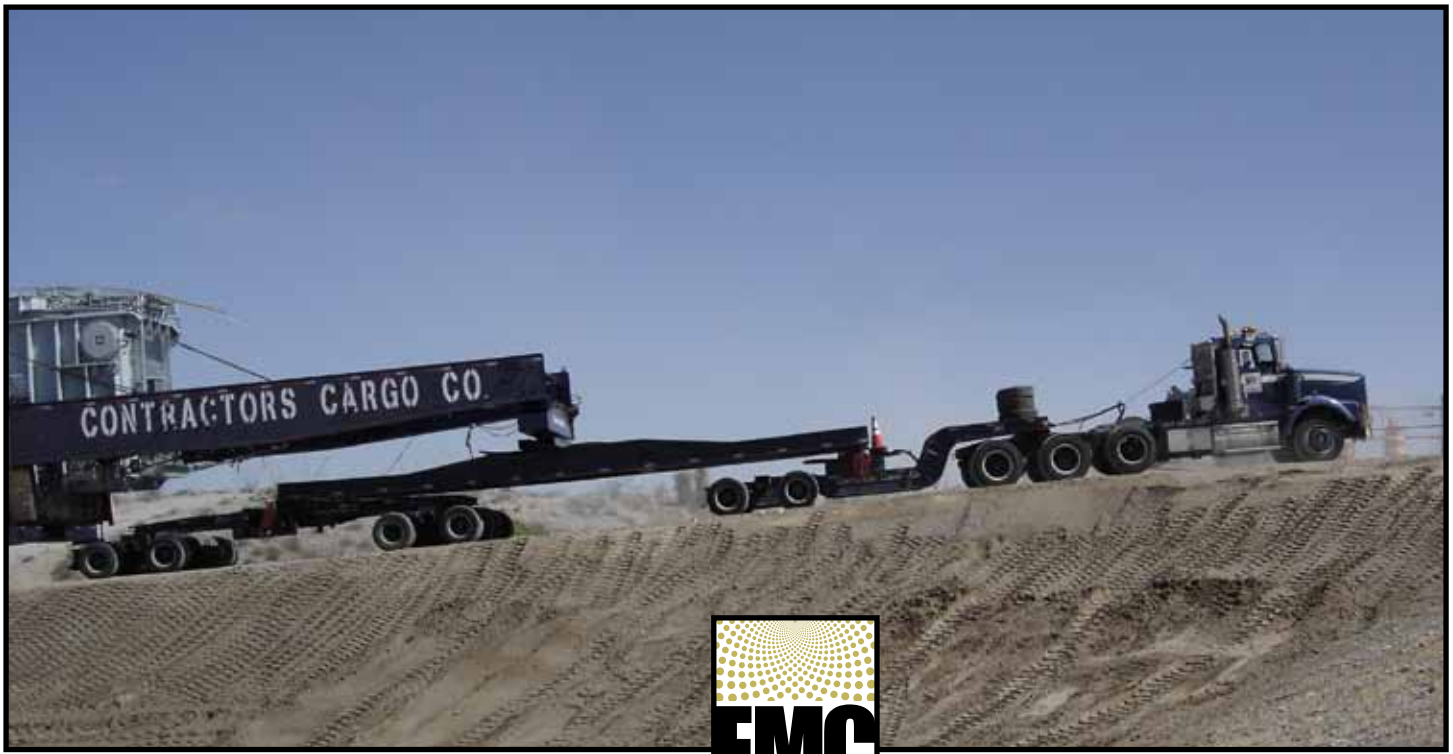
Texas-Based Public Utility Takes Advantage Of Innovative Stabilization Technology

El Paso Electric (EPE) is a Texas-based public utility that calls themselves The Electric Company and services customers from El Paso north into New Mexico, south into Mexico and southeast along the Rio Grande River.



Their construction and maintenance crews are required to transport, erect, and maintain tremendously heavy power station and substation components such as transformers weighing 200 tons, or more, towers for high power transmission lines and extra tall power poles. As an example, when it came time to replace two heavy transformer units at the company's Arroyo Substation facility in Las Cruces, New Mexico, they needed to be absolutely sure they could safely support a huge heavy haul truck with a Gross Vehicle Weight (GVW) over 325 tons, or 650,000 pounds, when transporting each transformer up the steep hill to this location at the substation. The existing unpaved road lacked adequate bearing capacity to support a load that would exceed the typical maximum load weight allowed on interstate freeways by thirteen times. The load bearing capacity of the access road needed to be greatly increased and the surfacing would need to provide sufficient traction for a heavy haul train to push and pull the 325 ton load up the steep grade. While asphalt or concrete pavement would be the traditional design response, the cost for the thick pavement structural section required to support this extremely heavy load would have been exorbitant. While a thick layer of hot mix asphalt would be slightly



less expensive to construct than a reinforced concrete pavement, the asphalt would be at high risk of permanent deformation under such a heavy load, or use during the hot weather season. Conventional design practice would have left them with no option other than concrete pavement. Fortunately, the company engineering staff were aware of an economical alternative already well-proven for supporting heavy loads in severe service applications. Select aggregate materials mixed with EMC SQUARED Stabilizer solutions typically test five to ten times higher in modulus, or stiffness, than the untreated aggregate, and the performance of the layers constructed with the stabilized materials are far superior to hot mix asphalt when subjected to slow moving heavy loads or loading during hot weather conditions. The stabilized aggregate replaced the need for construction of a paved access road. Click on the previous page's transport photo for more photos of the transformer move on the stabilized road. Details are given in this case study entitled Stabilized Aggregate Road Surface Supports Super Heavy Haul.

When the time came for EPE to construct a training complex at their Montana Power Generating Station on the east side of El Paso, the design engineers were again faced with a similar situation, minus the steep grade. The training complex included perimeter roads and yard areas where construction and maintenance staff would be practicing operation of large trucks and construction equipment transporting and lifting super heavy loads and extra-long loads. While many acres of thick concrete pavement would have been the traditional answer, they once again turned to the EMC SQUARED Stabilized Aggregate in place of concrete pavement to safely support the movement and turning action of heavily loaded trucks and equipment. The structural section of the practice yards and perimeter roads consisted of six inches of EMC SQUARED treated native soil covered by a surface course of ten inches of EMC SQUARED Stabilized Aggregate. EMC SQUARED stabilized soil and aggregate was once again, for EPE, the performance-rich and low-cost alternative to placement of expensive traditional pavement materials.