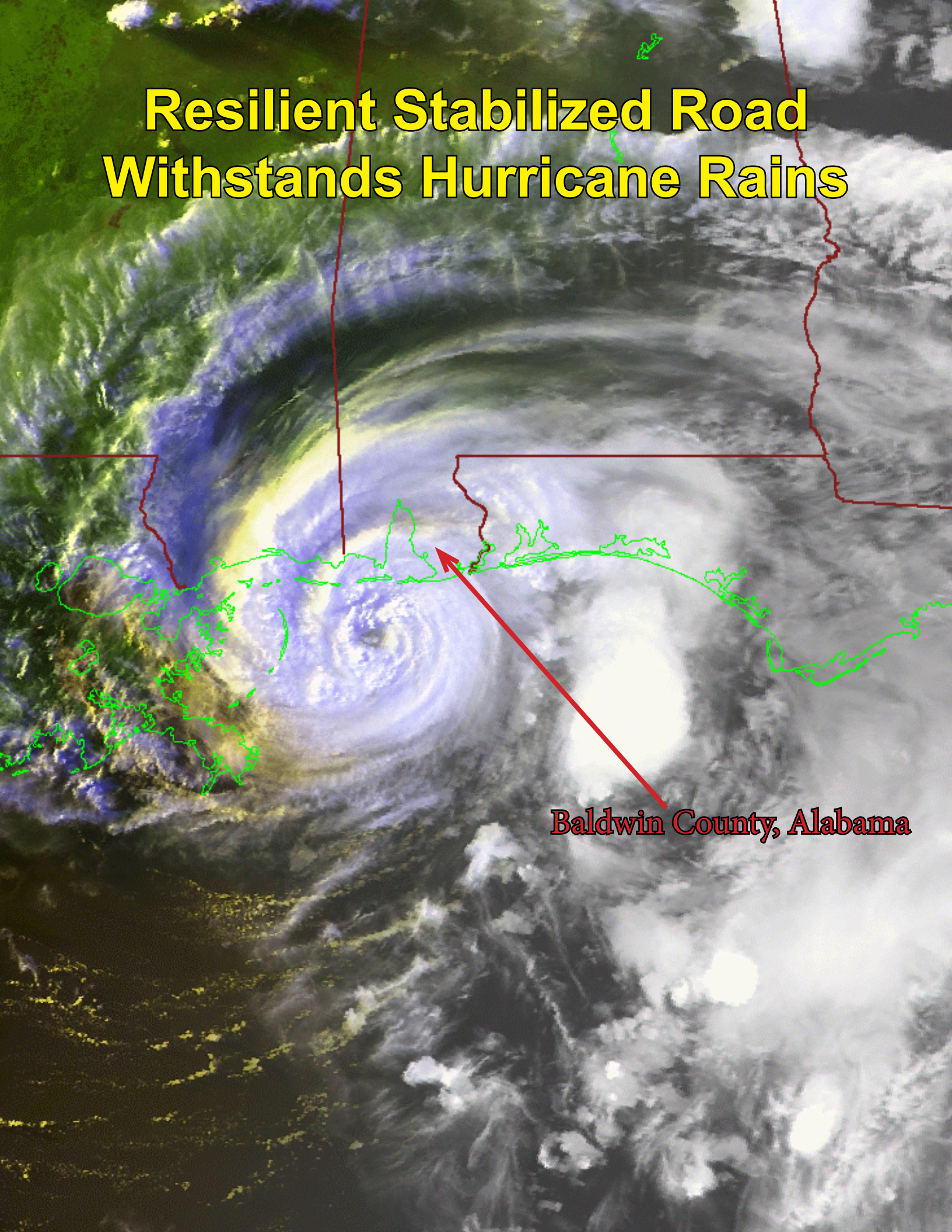
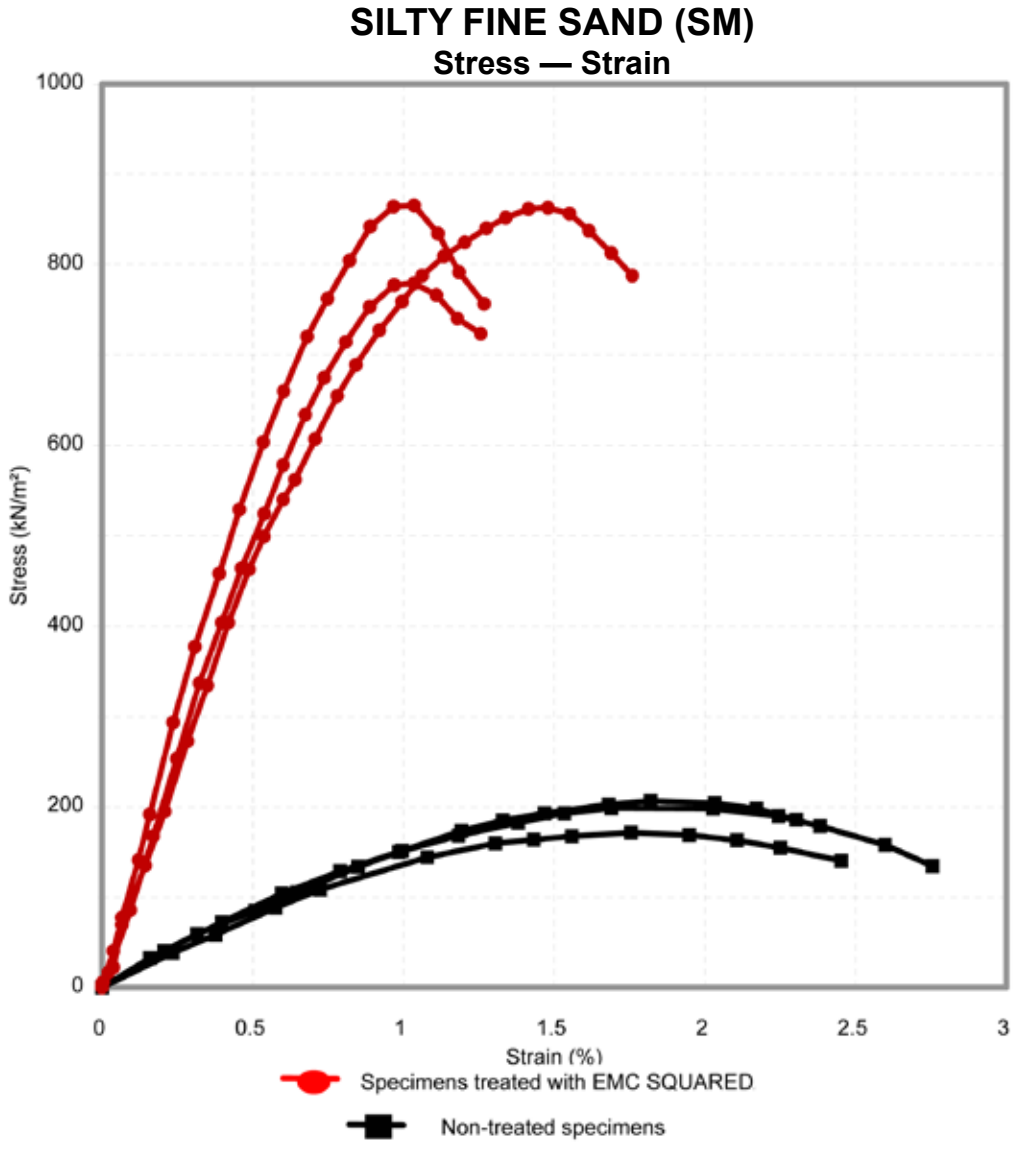

Resilient Stabilized Road
Withstands Hurricane Rains
Baldwin County, Alabama

Hurricane Danny hit the Mobile Bay area and dropped 48 to 60 inches (122 to 152 cm) of rain (depending upon the specific location with the area) in a period of days. Even prior to this event, a road in Baldwin County, Alabama, rutted so badly during wet weather and driving conditions became so hazardous that school buses were unable to service the area, a situation that drew repeated coverage from a local TV station. The need to reduce maintenance costs and improve the quality of the road as an all-weather running surface spurred the decision to use the **EMC SQUARED®** System treatment to stabilize a six-inch deep (150 mm) running surface. The product proved to be the answer especially soon after application when the average annual rainfall doubled over the year (from 60 to 120 inches /152 to 305 cm) and almost equaled by the single hurricane rainfall event.

The laboratory tests below show excellent correlation with the field performance of this stabilized soil when utilized as a running surface for a county road in the Mobile Bay area of Alabama's Gulf Coast. As demonstrated in the strength tests graphed below, the **EMC SQUARED** treated material (a silty fine sand) showed to be more than four times as strong as the untreated material. Another treated specimen retained full strength when evaluated after a ten-day period of saturation in the triaxial cell. The stabilized soil performed so well in actual field service that county engineering staff reported that the stabilized surface retained full traction and felt as solid as a concrete pavement during the extremely heavy hurricane rainfall. Typical of many similar stabilization installations, after more than a year of supporting traffic without a protective surface, this county placed hot mix asphalt pavement directly on the stabilized soil base, further upgrading the road as part of a "staged" or incremental road improvement project. In the meantime, school buses and county motorists had a near maintenance-free, all-weather road, and the sensitive Mobile Bay estuary was protected against further sedimentation by the erosion resistant stabilized soil.



EMC SQUARED System Application to unpaved road material in Baldwin County, AL

Test Sample: Reddish brown silty fine SAND (SM)

Unconfined Compression Tests performed by TERRA-MAR, Inc. TMI Report #DE97-057

The **EMC SQUARED** product is unique among stabilizers in its performance and cost-effectiveness in treating a wide range of problem soils. Silty soils and silty fine sands are typically poor load bearing materials and erosive in nature. In the Baldwin County case, because of the high fines content of the particular soil tested, the standard rates for cement treatment would have ranged from seven percent by weight of soil and higher. The resulting costs would have been several times the expense of **EMC SQUARED** treatment, which, as demonstrated in field service, fully met the project requirements for stabilization of locally available soil materials for service as a road surface and then a pavement base course. With unpaved roads and other areas of bare earth coming under increasing scrutiny for their contribution to air and water pollution through fugitive dust emissions and sedimentation of nearby waterways, **EMC SQUARED** System treatments are increasingly being called upon for stabilization of unpaved roads and runways, test ranges, landfill covers in arid and semi-arid areas, and for other projects where large areas of compacted soil must be hardened to resist wind and rain erosion without additional protective cover.

EMC SQUARED Liquid Stabilizer products being applied in Baldwin County, Alabama.

Stabilizer products being mixed into road soil before compaction in Baldwin County, Alabama.

Stabilized road in service. Prior to stabilization, the road rutted so badly and driving conditions became so hazardous that school buses were unable to service the area.

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