



EASTGATE ROAD EXTENSION HENDERSON, NEVADA

Application: The extension of Eastgate Road, located in the southeast quadrant of the Las Vegas metropolitan area, required a grade separation bridge over railroad tracks serving an industrial manufacturing facility. Documents issued by the City of Henderson called for the construction of four bridge approach mechanically stabilized earth (MSE) retaining walls over the relatively flat grade.

The Challenge: Nevada DOT (NDOT) standards specified the use of metallic soil reinforcement with select backfill for the MSE walls. The city excavated and stockpiled approximately 100,000 cubic yards of material from a source adjacent to the project site for use as backfill as well as roadway fill.

Site Conditions: Subsequent soil tests revealed that the stockpile of select fill did not meet NDOT's electrochemical requirements for metallic soil reinforcement as specified; the corrosive elements within the fill would have seriously compromised the long-term performance of the reinforcement. City officials were left with the option of removing at least 65,000 cubic yards of the material and replacing it with imported fill which met contract requirements, or with sourcing an alternative MSE wall system that complied with the aesthetic facing criteria and incorporated non-corrodible reinforcement.

Alternative Solutions: City engineers originally evaluated the use of cast-in-place retaining walls, but determined them to be too costly and specified MSE walls instead. There were, in effect, no practical alternative solutions.

The Solution: G.C. Wallace, Inc., design engineer, contacted representatives of Tensar International regarding the ARES® Retaining Wall Systems. "Our Tensar representative really knew the product and provided the information on its structural characteristics that we needed to develop the bid," remarked G.C. Wallace's Matthew Meyer, P.E., Associate Engineer. Engineers from both companies worked closely and quickly to develop alternate



The ARES® System delivered an economical and corrosion-resistant solution.

PROJECT HIGHLIGHTS

Project:

Eastgate Road – Auto Show Drive to
Lake Mead Parkway

Location:

Henderson, Nevada

Installation:

Winter 2009 (opened for traffic in
August 2009)

Product/System:

ARES® Retaining Wall Systems

Quantity:

60,000 sq ft precast panels,
60,000 sq yds Tensar® Uniaxial (UX) Geogrid

Owner:

City of Henderson

Design Engineer:

G.C. Wallace, Inc.

Geotechnical Engineer:

Converse Consultants

General/Installation Contractor:

Capriati Construction Corp.



specifications. The City of Henderson issued an addendum deleting the use of metallic soil reinforcement and replacing it with polymer geogrid reinforcement.

Installation of the ARES walls was a first for the design engineer and the contractor. "Construction went better than expected. We had a good crew, and we beat our budgets," remarked Joe Riggs, Construction Manager with Capriati Construction. Riggs added that "whenever we had field changes, Tensar technical representatives were on-site to advise us within 24 hours." Crews erected the four approach walls, each with 5 ft x 5 ft panels cast with a fractured fin (ribbed) finish. Scott Fiedler, P.E., Construction Manager with the City of Henderson, noted that the MSE walls are the first built by the city as well and credited Tensar representatives' "expertise" for their successful completion.

The ARES System Advantage: Versatility proved key to Nevada's first DOT-specified project featuring an ARES System. With soil reinforcement that's 100% synthetic, ARES Retaining Wall Systems are proven concrete panel wall solutions that eliminate corrosion concerns. ARES Systems offer the cost advantages of a MSE retaining wall without the long-term consequences from exposure to chlorides, sulfates or low-resistivity soils. The panels, which met the facing criteria, were quickly cast. The system's integrated components and

positive mechanical connection assured full load transfer to the geogrid reinforcement for long-term structural integrity. Construction proved to be simple and straightforward.

Already in use in hundreds of transportation projects, ARES Systems ensure high performance, cost-effective and aesthetic solutions.

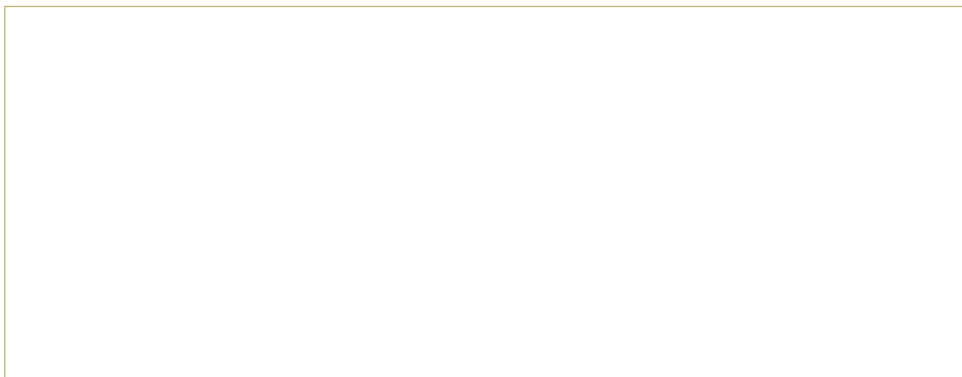
Additional Information and Services:

Tensar International Corporation specializes in solutions for site development problems such as grade changes requiring retaining walls and poor soil conditions affecting the cost of roadways, parking lots and building structures. Our solutions use proprietary engineered systems and our own unique products, services and application technologies. Our products and technologies, backed by the most thorough quality assurance practices, are at the forefront of the industry. Highly adaptable, cost-effective and installation-friendly, they provide exceptional, long-term performance under the most demanding conditions. Our support services include site evaluation, design consulting and site construction assistance.

For innovative solutions to your engineering challenges, rely on the experience, resources and expertise that have set the industry standard for more than two decades.

For more information on the ARES Retaining Wall Systems or other Tensar Systems, call **800-TENSAR-1**, e-mail info@tensarcorp.com or visit www.tensar-international.com.

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