

Installer: Ram Jack Nevada · Sparks, NV · 775.284.1964



SITUATION

The South Demonstration Project is a small part of a larger 30+ mile long Nevada Stateline-to-Stateline Bikeway Project along the East shore of Lake Tahoe. The project is a result of a joint proposal by local, state and federal agencies. The intent of the project is to create a shared-use path that meets American Association of State Highway and Transportation Officials (AASHTO), and Americans with Disabilities Act (ADA) standards to serve a broad spectrum of users.

SOLUTION

Through a public competitive bidding process, Ram Jack Nevada / Versa-Grade, Inc. was awarded a subcontract to furnish and install Helical Piles and Helical Diagonal Braces to provide the foundation for a 250 ft. long x 13 ft. wide, timber framed and decked boardwalk across an environmentally sensitive area with a creek and within the limits a FEMA Flood Zone. The boardwalk was designed to meet AASHTO H-20 structural loads for occasional use by Wildland Fire Engines in emergency situations.

CONCLUSION

Design Loads ranged from 5 Kips to 12.5 Kips per pile and anchor. While the Design Loads were provided by the Project Structural Engineer, design of the helical piles and braces to withstand the design loads was performed by Ram Jack. Ram Jack's Engineering Department designed a 2-3/8" diameter pile with helix configurations to handle the design loads plus a minimum safety factor of 2. The 250 ft. long boardwalk has both a horizontal and vertical curve in it which required a high degree of precision in terms of pile location and elevation. Other challenges included: Field cutting and drilling of 296 ea. through-bolt holes for bracket installations where on-site inspectors monitored our activities to be sure drill cuttings or fluids did not touch the ground - Daily turbidity readings were taken from the creek just downstream of our installations. All materials, tools and installation equipment had to be manually packed into the work area - even the pile test frame had to be designed and fabricated in sections light enough to permit manual transport and then assembled in place at each test location. The helical piling work was completed successfully and ahead of schedule. Total No. of Helical Piles and Diagonal Braces installed: 148