

Hoover Dam Bypass Project Transportation Project Profile

HDR Engineering/Hoover Support Team

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The Hoover Dam Bypass helps ensure personal safety, smooth-flowing commerce and homeland security for one of the nation's national treasures.

Project Overview

Designed to relieve congestion on U.S. 93, a major east/west North American Free Trade Agreement (NAFTA) route, the Hoover Dam Bypass, Sugarloaf Mountain Alternative, is the culmination of 10 years of project development. Led by HDR Engineering, the Hoover Support Team applied MicroStation® and GEOPAK® Civil Engineering Suite software to complete the design of this 3.5-mile bypass and 1,900-foot bridge, which crosses culturally and environmentally sensitive areas. GEOPAK Criteria afforded rapid startup and helped the team meet increasingly compressed deadlines as the project gained momentum to protect and secure the Hoover Dam area. This national treasure receives more than one million visitors annually.

Project Objectives

- Function as a team to meet the needs of numerous government agencies
- Measure feasibility and cost in today's terms and finalize budget
- Minimize the project footprint—environmentally and culturally
- Add pedestrian and visitor amenities that preserve the value of the site and its history
- Leverage site conditions and improve constructability

Fast Facts

- GEOPAK software facilitated rapid exploration of five scenarios to improve safety and optimize traffic flow
- Alignments and earthwork were generated in a matter of days
- Concept refinement minimized all environmental, wildlife and cultural impacts
- GEOPAK simplified coordination between project clients and engineering consultants
- HDR modified FHWA's Criteria files for custom construction output

- HDR ranks #20 in the ENR 2002 Top 500 Design Firms in the United States and #14 in the ENR 2002 Top 50 in Transportation.

Bentley Products Used

MicroStation

GEOPAK Civil Engineering Suite

Organization

HDR Engineering is the lead of the Hoover Support Team (HST), which also includes Sverdrup Civil and T.Y. Lin International. Project clients: Federal Highway Administration (FHWA), the state Departments of Transportation of Arizona and Nevada, the U.S. Bureau of Reclamation, the National Park Service and the Western Area Power Administration.

www.hooverdambypass.org

www.hdrinc.com

Location

Hoover Dam

Colorado River, between Nevada and Arizona, USA