

## **CONTEXT-SENSITIVE DESIGN CASE STUDY NO. 12**

### **Highway 61 - Minnesota**

#### **Location:**

Minnesota's North Shore Scenic Highway 61 along Lake Superior's Good Harbor Bay

#### **Project Description:**

Minnesota's Trunk Highway 61, North Shore Scenic Drive, runs northeasterly along the rock and heavily forested edge of Lake Superior, for than 150 miles, from the regional trade center of Duluth to Canada. TH 61 is both a scenic highway as well as a vital interregional and international trade corridor for northeastern Minnesota.

#### **Context-Sensitive Objectives:**

- Improve roadway safety and traffic flow
- Enhance the scenic and visual qualities of the corridor
- Preserve historic and traditional views and vistas from the highway.
- Preserve and enhance public access to the lakeshore.
- Avoid adverse impacts to residential and commercial property owners.
- Avoid adverse impacts to the environment and state parkland.
- Reduce erosion along the lakeshore and Cutface Creek.

#### **History:**

Visitors who travel along the North Shore Scenic Drive are able to experience the magnificent landscapes, the cascading rivers, the rugged shorelines, and the breathtaking vistas along with the other natural and cultural resources and history that abound along this Lake Superior region. The characteristics that draw visitors to this region are so unique that TH 61 was recently designated as an "All-American Road" in the National Scenic Byways Program.

Aside from being a tourist and recreational driving destination, within an environmentally challenging area, the North Shore Scenic Drive provides adequate safety, mobility and access for local residents, businesses, recreation areas and commercial trucking while accommodating bicyclists, pedestrians and rail crossings. Balancing transportation, community, environmental and stakeholder needs along this corridor was a tremendous challenge.

The Minnesota Department of Transportation's (MN/DOT's) reconstruction and realignment of TH 61, along Lake Superior's Good Harbor Bay, illustrates a context-sensitive design approach that balanced transportation, community and environmental needs without requiring exceptions to geometric design guidelines. This project also illustrates context-sensitive design that did not arise out of contentious public involvement and controversy but rather out of proactive project management and involvement of stakeholders.

## **Partnership Development and Involvement: Highway Agency, Resource Agencies, and Community**

MN/DOT's District One staff made the following commitments early in the project development process:

- To work closely with local communities and stakeholders to establish a highway corridor vision... a safe and aesthetic highway that enhances the local communities through which it passes.
- To make context-appropriate design decisions along the corridor.
- To apply design flexibility to preserve historic, natural and scenic corridor qualities.

Transportation, Community, Environmental and Stakeholder Objectives included:

- Improve roadway safety and traffic flow
- Meet current and future transportation demands
- Improve pavement quality
- Improve an existing limited-use safety rest area facility
- Minimize right-of-way, construction impacts and costs
- Remain consistent with north shore corridor visioning and management goals
- Enhance the scenic and visual qualities of the corridor
- Preserve historic and traditional views and vistas from the highway
- Preserve and enhance public access to the lakeshore
- Avoid adverse impacts to residential and commercial property owners
- Avoid adverse impacts to the environment and state parkland
- Reduce erosion along the lakeshore and Cutface Creek
- Consistent with MN/DOT's context-sensitive commitments and proactive stakeholder involvement, consensus was reached in:
  1. Determining project purpose and needs to balance transportation, community and environmental objectives.
  2. Selecting a lower design speed appropriate for the project characteristics and providing the flexibility to shift roadway alignment and balance project objectives without exceptions to geometric design standards.

### **Environmental Issues:**

#### **Natural Environment**

- Enhance scenic and visual qualities of the corridor
- Preserve and enhance public access to the lakeshore
- Reduce erosion along the lakeshore and Cutface Creek
- Avoid adverse impacts to the environment and state parkland

#### **Human Environment:**

- Preserve historic and traditional views and vistas from the highway
- Avoid adverse impacts to residential and commercial property owners

**Schedule of Activities:**

The project was approximately 2.0 miles long in the 150-mile corridor of Highway 61, which runs from Duluth to the Canadian border. Initial planning for the project began in the late 1980's, with more activity in the early 1990's. Initial construction began in late 1990's and was completed in 2001.

**Project Outcome and Lessons Learned:**

The decision to select the lower 55 mph design speed as opposed to 70 mph design speed previously considered and studied, afforded maximum flexibility to achieve the best balance among transportation, community and environmental objectives.

Proactive project management and stakeholder involvement accomplished the following project benefits:

- Geometric standards for the design speed were met without exceptions
- Safety and mobility improvements were added with the alignment shifts
- Right-of-way impacts and costs were minimized
- Unnecessary construction impacts and costs were minimized (rock cuts, disposal, etc.)
- The goals of the scenic north shore corridor vision were met
- Original and valued vistas of Lake Superior were preserved
- Public access to the lakeshore was preserved and enhanced
- Improvements to the limited-use safety rest area were added
- Eroding areas were stabilized along the alignment shift
- State park impacts and rock cuts were minimized by the alignment
- The alignment fit the landforms and context, both physically and visually

Four key measures of design excellence were met on the project:

- Community acceptance
- Environmental compatibility
- Engineering and functional credibility
- Financial feasibility





