A LOOK AT OUR NATION'S HIGHWAYS:

PRESERVING URBAN AND HISTORIC DISTRICTS

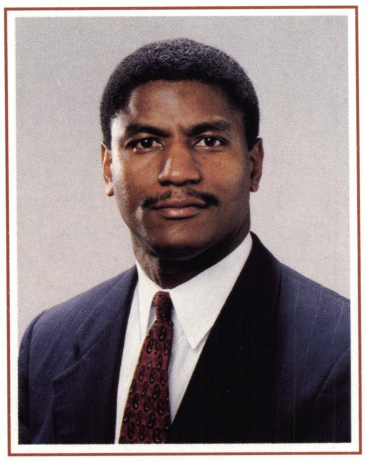
U.S. Department of Transportation
Federal Highway Administration

Cover Photo:

Features along newly constructed College Street Bridge reflect the historical character of downtown Providence, Rhode Island.

Additional information is on pages 2-3.

ADMINISTRATOR'S MESSAGE



Secretary of Transportation Peña and I are pleased to share examples by our partners in State and local governments of successful urban highway reconstruction projects. We recognize the unique challenges encountered when integrating transportation needs with other community and historic preservation concerns, and applaud their innovative design solutions.

Cut-and-cover tunnels, pedestrian parks and walkways, and the use of historic design features are good examples of solutions used by our partners to build and reconstruct highways that revitalize urban areas and preserve the historic character of communities.

These innovative ideas demonstrate the Federal Highway Administration's (FHWA) commitment to transportation projects that beautify the environment, revitalize the economy, and improve the quality of life for all our citizens.

Rodney E. Slater
Federal Highway Administrator

Rediscovering the Waterfront in Providence, Rhode Island

The Challenge

Providence has always had a rich, historic tradition of maritime commerce with its rivers playing a prominent role. But for decades, the Providence River and its tributaries lay forgotten, hidden beneath expansive bridge decks and railroad tracks built over the rivers. In 1982, part of the construction of the Civic Center Interchange along I-95 involved removing the railroad tracks that covered a section of the western tributary, re-routing them to a new train station further north. Although this re-opened part of the waterfront and generated new development, much of the waterfront still remained covered and underutilized. At the same time, the Rhode Island Department of Transportation (RIDOT) needed to provide a more efficient roadway network from the new interchange into downtown.

Legend:

1. *Civic Center Interchange*
2. *Old Train Station*
3. *New Train Station*
4. *Providence River*
5. *Woonasquatucket River*
6. *Moshassuck River*
7. *Location of new Memorial Boulevard*

The newly constructed riverwalk and Memorial Avenue Bridge enhance the Woonasquatucket River.

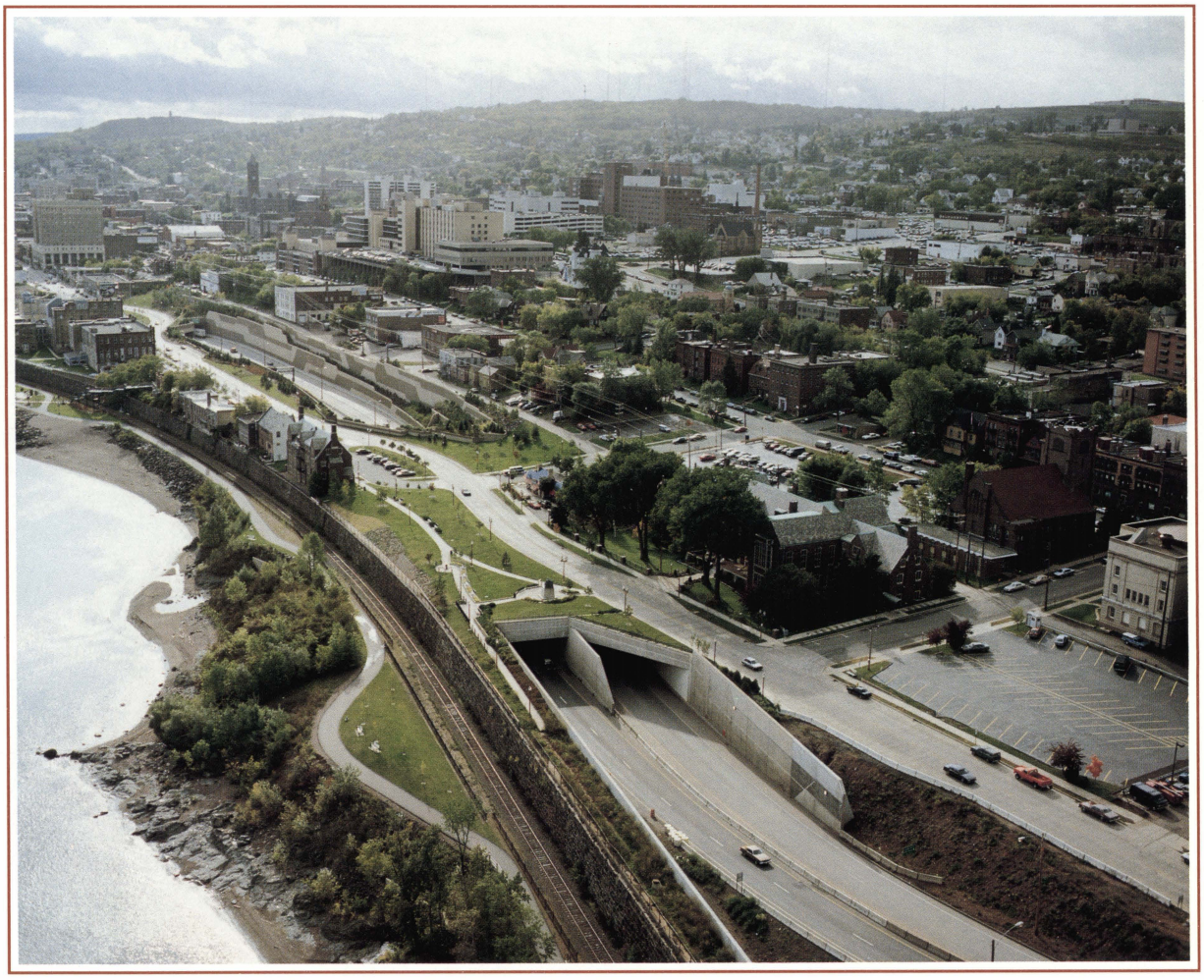
One of the new pedestrian bridges spanning the Providence River.

The Solution

Recognizing the potential in re-exposing its rivers, the City of Providence, State of Rhode Island, and the Providence Foundation created a development plan for the area. Surprisingly, this plan called for moving two of the rivers, the Woonasquatucket and Moshassuck, to bring them out of hiding, and to make room for the new arterial through downtown. In keeping with the city's design, the RIDOT moved the tributaries, shifting their confluence approximately 60 meters (200 feet) to the east. This was accomplished by digging new channels lined with granite stones, then breaking the old retaining walls, allowing the rivers to flow along new beds. This opened up land needed to construct Memorial Boulevard. The arterial connects the Civic Center Interchange to downtown and I-195 further to the south, greatly improving traffic flow.

In conjunction with the project, RIDOT removed a wide concrete deck that covered much of the Providence River, replacing it with an attractive riverside walkway and nine pedestrian and vehicular bridges. Each bridge, integrated into the downtown street network, is designed to reflect the character of this important historic waterfront.

Reviving Lake Superior: The I-35 Extension in Duluth, Minnesota



An aerial view of I-35 through downtown Duluth shows MnDOT's efforts to enhance the city's waterfront and preserve historic structures.

The Challenge

When the I-35 freeway extension was proposed between Duluth's downtown district and Lake Superior, many were concerned that it might divide these two areas of the city. Although Duluth's waterfront area consisted primarily of abandoned warehouses and a busy railroad yard, citizens saw the Lake Superior shoreline as a major asset. They were concerned that I-35 would obscure views of the lake, thereby ending hopes of ever reconnecting the shoreline to the downtown area. The Brewery Historic District, located in the proposed path for I-35, also would have to be demolished.

The Solution

Working closely with the city and many concerned residents, the Minnesota Department of Transportation (MnDOT) developed a new design that not only reconnected downtown Duluth to its waterfront and preserved the historic district, but also integrated the 3.7-kilometer (2.3-mile) freeway segment into the rest of the city.

The design consisted of a carefully planned corridor alignment, cut-and-cover tunnels, architectural design treatments, and extensive landscaping. One special design feature is Lake Place Park, a 1 hectare (2.5-acre) park near the corner of Lake Superior atop a cut-and-cover tunnel. The park links the lakeshore to downtown Duluth and provides an entrance to the city from the waterfront. Situated 12 meters (40 feet) from the shoreline and 12 meters (40 feet) above the water level, the park also provides a panoramic view of the lake and has become a city focal point.

In addition to successfully mitigating the divisive nature that the railroad corridor had for the lake and downtown, I-35 now provides convenient access to Duluth and has improved air quality by reducing traffic congestion on downtown streets. Other project amenities include 2.5 hectares (6.3 acres) of public land and beachfront along the lakeshore and more open space and streetscaping in the downtown area. I-35 is proof that urban freeways can be aesthetic and can improve downtown areas.

The jewel of the I-35 project is Lake Place Park, a bridge over the freeway that has reunited the city of Duluth with its waterfront on Lake Superior.

Restoring Historic Bellevue Avenue in Newport, Rhode Island

The Challenge

Bellevue Avenue in Newport, Rhode Island, is one of the significant historical roadways in the Northeast. Grand turn-of-the-century summer residences line the road and such famous landmarks as the Newport Casino and the Redwood Library are within the area's historical districts. The century-old roadway was first constructed with portland cement concrete (using a local stone mixture) in 1925, and after 65 years of use, was unsafe and in irreparable condition. The only roadway updates had been the replacement of the original gas lamp fixtures with modern highway lighting. The rough appearance of the road surface and the new lighting detracted from the grandeur of the architecture, iron gates, masonry walls, and ornamental landscapes that line the avenue.

The Solution

The RIDOT determined that reconstruction of Bellevue Avenue was needed to improve the road's appearance and unsafe condition. However, RIDOT officials recognized that any improvements to the roadway may have an adverse, rather than beneficial, effect if the historical and aesthetic qualities of the area were not considered. To ensure a suitable design, RIDOT officials worked closely with the Rhode Island State Historic Preservation Office, the Advisory Council on Historic Preservation, and the FHWA to review the project, consider alternatives, and finally, to sign an agreement stipulating the specific road design requirements.

Historic lamp fixtures and slate, bluestone, and brownstone sidewalks line the residential portion of Bellevue Avenue.

Due to their historic significance, the original brick sidewalks along Bellevue Avenue's commercial corridor were preserved when possible.

Working within the guidelines of the agreement, the RIDOT restored the appearance of the road surface as it first looked in 1925, using a similar portland cement concrete mixture. A citizen's group, the Bellevue Avenue Project Advisory Committee (BAPAC), formed to ensure that the needs of the community were met, requested that the RIDOT make every effort to repair the original slate and brick sidewalks and bluestone curbing. If replacement was necessary, the RIDOT used new brick, bluestone, or brownstone sidewalks and new granite curbing. Wheelchair ramps, free from obstructions, were located at all intersecting sidestreets and at several midblock locations near major attractions.

The BAPAC researched the appearance of the original gas lamp fixtures, enabling the RIDOT to replace the modern lighting with replicas of the turn-of-the-century light fixtures. Particular attention was paid to preserving the century-old beech trees that line the avenue and new trees were planted when necessary. The end result of the Bellevue Avenue reconstruction is a roadway that is safer, more visually appealing, and one that retains its historical significance.

Preserving a Community: I-696 in Oakland County, Michigan

The Challenge

Highways constructed in long-established urban communities often create problems, especially for residents who rely on walking as a means of transportation. The Michigan Department of Transportation (MDOT) identified such a problem when developing plans for I-696 through Oakland County. The preliminary design divided a large Orthodox Jewish community that stretched from Royal Oak to Southfield, where residents walked to synagogues on the Sabbath.

An aerial view of one of the landscaped platforms over I-696.

The Solution

The MDOT constructed three platforms in the airspace over I-696 to provide safe pedestrain access across the highway. In these areas, I-696 was constructed below ground. This lessened the visual and noise impacts of the highway on the neighboring communities. The platforms measure 213.4 meters (700 ft), 198.2 meters (650 ft), and 152.4 meters (500 ft) in length and fully span the width of the eight lane highway. Parks created on the platforms, designed to blend into the community, were given extensive landscaping treatment. Pedestrian bike paths, seating areas, recreational equipment, and furniture were integrated into the design, and encourage even greater use of the neighborhood parks.

Summary of Ideas:

- The historical significance of the project area was identified, with historic preservation efforts included as part of the design process.
- In addition to working with the State historic preservation officer and local governments, the concerns of interest groups and residents directly affected by the project were identified and considered carefully.
- Opportunities were sought to improve pedestrian access.
- Recreational features such as parks, playgrounds, and pedestrian walkways were incorporated into the projects as an added benefit to the community.

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