

## International Examples

This section of the report presents some examples of freeway projects from beyond the United States. In comparison with U.S. examples, it is more difficult to develop comprehensive international case studies, due to limited access to data. Also, these examples have limited direct applicability to domestic situations, due to very different policies, regulations, design standards, and cultural expectations. However, this cursory overview offers some compelling design concepts.



In Europe, there are very few highways that have penetrated city centers, as European cities have primarily developed ring road networks with streets and transit entering the city cores. It is common for European cities to go to great lengths to separate highways from their cities, as shown in the photo at left of an elevated highway constructed in a manner that protects the village below.

### *Bologna, Italy*

Located at a central transportation crossroads, Bologna is creating a long-term transportation program as part of its strategy to become an increasingly important economic development center and to reverse the trend of declining population yet expanding urban area. Like Syracuse, Bologna is promoting “the knowledge economy,” highlighting the University of Bologna, the oldest university in the western hemisphere, which is currently home to 70 departments and over 100,000 students. In the center city, pedestrian movements are given very high priority. This choice is facilitated by the mix of perimeter parking areas and the strength of the transit system.

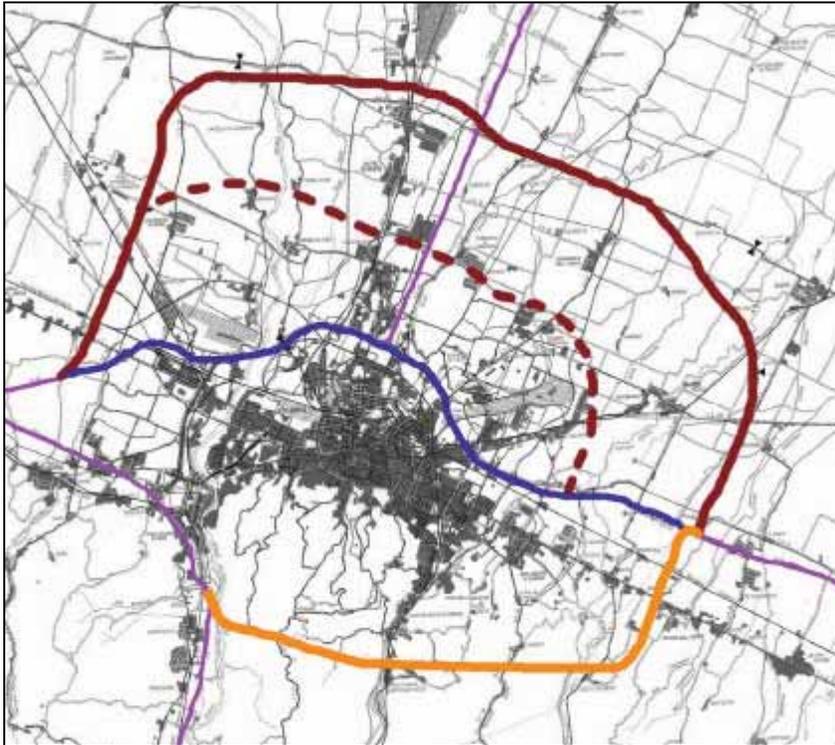
Proposed transportation projects include upgrades for the rail, transit, and highway systems. Rather than expand the highway, which runs along the edge of the central district, the region is creating a new northern by-pass as a secondary growth corridor.

To help strengthen the city center and the regional economy, the proposed “*Passante Nord*” bypass will be supplemented by a monorail linking the train station/central business district and the airport, the new tram-subway line, expanded perimeter parking lots outside the central city, and upgraded transit



(rail and bus) facilities and services. The new highway corridor will make an old 1950s East-West Freeway obsolete. The city is planning to redevelop the former freeway corridor, including demolition of the 50-year-old tangential

highway and construction of an “eco-boulevard” with a high-tech surface “green” tram and landscaped parallel service streets.



*Regional Transportation Plan showing the new Passante Nord alternatives in red, and the “Nuovo Eco Boulevard” in blue. Images to the right show simulations of growth planned for the Eco Boulevard, along the former highway right-of-way.*

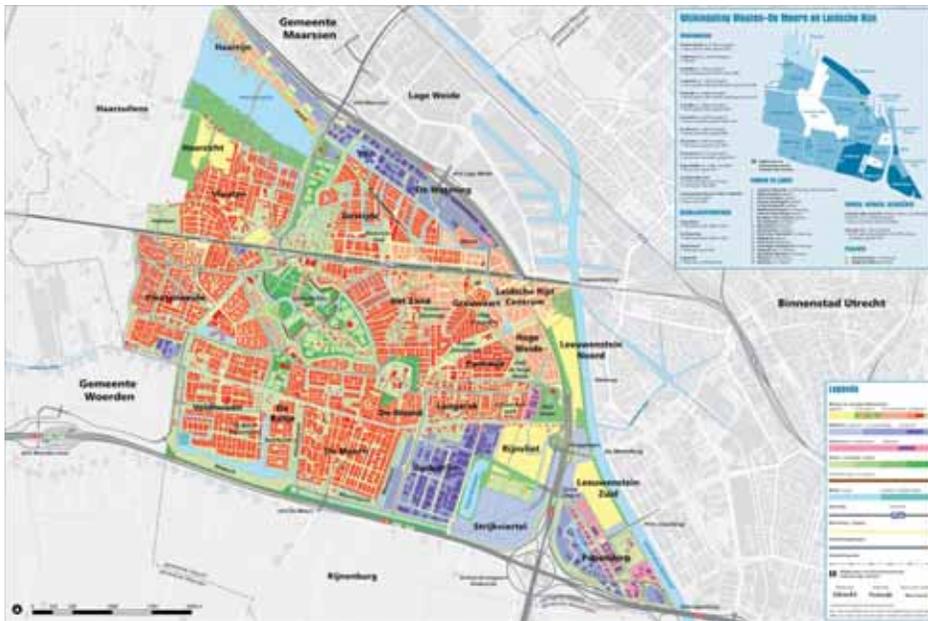
*Bologna Master Plan for the Freeway Corridor*



<http://www.avoe.org/bologna2020.html> (images used with permission)

***Utrecht, The Netherlands***

This city is combining the development of a new growth area with the expansion and modernization of an existing major motorway. The widened highway will be covered through the area where new residential growth is planned. The new development area will be served by transit and a bicycle network, while the highway will serve primarily through traffic and will have limited connection to the new development. The design reinforces the European approach where major highways are limited to long distance travel, and intra-city travel is by the slower modes: transit, bicycling and walking.



Source: Gemeente Utrecht, Projectbureau Leidsche Rijn (used with permission)

***Sydney, Australia***

As part of the 2030 vision, Sydney is working on a long term plan to remove the barriers that separate three key attractions: Darling Harbour, the western waterfront, and Pyrmont-Ultimo. One element of the plan is to bury the Western Distributor highway, which would improve pedestrian access to the western waterfront, and create a new urban park at the Darling Harbour. Substantial redevelopment would be possible with this scheme, including an expanded convention center.



*Before*



*After*

***Seoul, South Korea***

Seoul's Cheonggyecheon elevated expressway, constructed over a stream starting in 1958, was demolished in 2004, allowing the corridor to be restored as a linear park. This project had significant and positive economic and revitalization impacts. The highway had served about 170,000 cars per day, and the freeway removal was accompanied by a new bus rapid transit network and travel demand management policies for downtown Seoul.

*Before: Cheonggyecheon Freeway*



*After: River Front Park and Boulevard*

**Conclusions**

In each of these cases, there is recognition of the economic importance of creating high quality urban environments while continuing to provide transportation facilities. The reduction or elimination of the highway structure from these important community centers also included significant additional transportation investments in local and regional street and transit systems.