



Credit: Jacobs

Elgin O'Hare West Bypass Project

Illinois Department of Transportation

Cook and DuPage Counties, Illinois

Construction of new toll highway and conversion of existing highway to a tolled facility.

NOTABLE PRACTICES

✓ Tiered Environmental Reviews

- Used tiered NEPA process to introduce funding/financing options

✓ Environmental Analysis

- Early dialogue between FHWA and project sponsors helped determine how to measure tolled and non-tolled alternatives in relation to Purpose & Need

✓ Meaningful Public Involvement

- Extensive stakeholder engagement directly influenced aesthetics and multimodal features

✓ Travel Forecasting & Traffic Impacts

- Coordinated with metropolitan planning organization (MPO) on modeling
- Analyzed off-system impacts and toll diversion

Addams Tollway (I-90) with the Tri-State Tollway (I-294). See Figure 1.

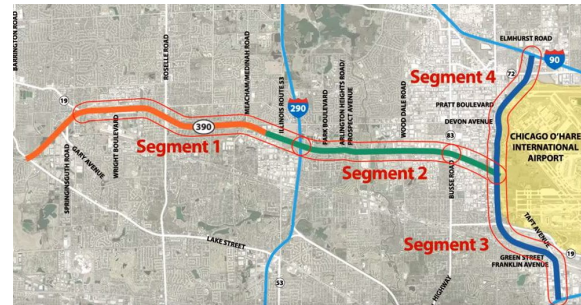


Figure 1. Map of the study area. Segment 1 involved widening existing highway; Segment 2 extending the highway; and Segments 3 and 4 construction of new highways on the western edge of O'Hare International Airport. Credit: Illinois Department of Transportation.



INTRO & BACKGROUND

The Elgin O'Hare West Bypass (EOWB) Project consisted of widening existing Illinois 390 (formerly known as the Elgin-O'Hare Expressway), converting it from a free facility to all-electronic toll road, extending it east along Thorndale Avenue to Chicago O'Hare International Airport, and constructing a new roadway around the western border of the airport to connect the Jane

The EOWB was the first highway project in Illinois to use a tiered Environmental Impact Statement (EIS) process. Overall, the project involved 27 miles of freeway and toll road improvements and 31 miles of improvements to urban arterials and local roads. The improvements included four major freeway-to-freeway interchanges and 13 service interchanges. Additionally, the National Environmental Policy Act (NEPA) process evaluated over 200 miles of transit routes and bicycle and pedestrian facilities.

The Tier 2 Record of Decision (ROD) was issued six months ahead of schedule. The key factors contributing to this success included:

1. Thoughtful and extensive public engagement, including persistent outreach

activities and the use of multiple advisory groups to provide input on different topics.

2. Early conversations about how to evaluate tolling in the alternatives analysis through the tiered NEPA process.
3. Assessment of how tolling may impact alternatives' ability to achieve the Purpose and Need.
4. Prior Concurrence from FHWA on the Tier 1 and Tier 2 Draft and Final EIS.

The Illinois Department of Transportation (IDOT) led the preliminary engineering and NEPA phase of the project. Upon completion of the NEPA process, the Illinois Tollway, renamed the project the Elgin-O'Hare Western Access project during design and construction.



TIERED ENVIRONMENTAL REVIEWS

With a study area of more than 112 square miles and a wide range of multi-modal alternatives, the use of a tiered NEPA process enabled IDOT and the other project sponsors to first focus on the “big picture” questions, including high level considerations of project funding, at a reasonable level of detail.

The Tier 1 EIS explored modal and corridor location options for the proposed improvements, starting with 15 concepts. Screening for the concepts that satisfied purpose and need reduced the list to 10 alternatives. Further screening based on environmental and socioeconomic effects reduced the list to 7 alternatives. The ROD for the Tier 1 EIS approved the selection of the preferred type of improvement (a set of roadway, transit, and bicycle/pedestrian improvements) and a preferred corridor (location). The Purpose and Need chapter of the Tier 1 EIS included a discussion of funding and financing, but none of the Tier 1 alternatives included tolling.



ENVIRONMENTAL ANALYSIS

Funding and financing mechanisms were part of early discussions of the project. Recognizing limited public funding at the State level, the project sponsors and FHWA discussed

how to address funding choices, which were likely to include tolling, in the Tier 1 EIS. It was important to establish an approach early on to ensure that alternatives analyses considered:

- The impact of tolling on performance relative to the Purpose and Need;
- The degree to which the NEPA document should discuss funding and in what context; and
- How to address and mitigate diverted traffic on the adjacent transportation network.

Because the Tier 1 EIS focused on general corridor location and modal alternatives over a large study area, it lacked sufficient detail to develop analyses comparing free facilities to tolled roadways and evaluate the impact of tolling on the public. The Tier 2 EIS focused within the recommended build corridor, developing both engineering and traffic analyses needed to distinguish between the effects of free and tolled roadways.

During the Tier 2 EIS process, the Governor's EOWB Advisory Council completed a report recommending that the Illinois Tollway be the implementing agency. To develop guiding principles for financing options, an Advisory Council had examined a range of potential funding and financing sources, including traditional federal-aid funding, innovative financing tools (e.g. federal credit assistance tools (TIFIA), federal debt financing tools (GARVEE bonds), private financing/public-private partnerships, and value-capture), and tolls and pricing.

Traffic modeling demonstrated that the potential diversion of traffic due to tolling was low (1 to 5 percent). The modeling showed that this level of diversion would not create a noticeable impact on the adjacent roadway systems. Additionally, the use of advisory groups ensured buy-in from stakeholders on tolling.

To help ensure that impacts to the local roadways would be minimal, the selected alternative did not include a contiguous frontage road system. A frontage road would encourage

use of local roads for trips intended for the new facility. However, IDOT reconfigured local roadways to allow local trips to be made without paying a toll to ensure access for those in the communities surrounding the project.

The project also provided for other transportation modes, including transit and bicycle and pedestrian facilities. The Tier 2 ROD was issued in December 2012. The project is currently under construction, and IDOT anticipates it to be operational by 2025.



MEANINGFUL PUBLIC INVOLVEMENT

IDOT engaged community stakeholders to ensure the EOWB Project included Context Sensitive Solutions/Design (CSS/D). The project team provided information on corridor designs early in the process, listened to feedback from stakeholder groups, and developed solutions to minimize impacts and maximize benefit, including solutions that incorporated context sensitivity while fulfilling mobility needs throughout the corridor. The outreach efforts persisted throughout project development. Funding and financing, and particularly tolling, were key topics in discussions with stakeholders, especially the potential conversion of the existing free portion of the Elgin-O'Hare Expressway to a tolled facility.

A local advisory committee formed to work with IDOT to address local issues relating to construction, such as noise abatement, landscaping, land acquisition, drainage and utility issues, aesthetics, bike and pedestrian enhancements, and sustainability and economic initiatives. IDOT invited each of the 19 communities and townships along the EOWB corridor to designate a member for the committee. Implementation of CSS/D and coordination with the advisory committee led to the development of an aesthetic theme for bridges and retaining walls.

Stakeholder input also led to adding multimodal options in the project. The project included the construction of 16 miles of bicycle and pedestrian paths, which provided connections to

north-south regional and community trails and bicycle/pedestrian facilities in the area including the North DuPage Regional Trail, the Salt Creek Greenway Trail, and the Schaumburg Bicycle Path.

In addition to the public and advisory committee meetings, the project team formed a “speakers bureau” approach to outreach, attending more than 200 community/social organization events to present information about the project and seek input.

IDOT conducted three public meetings, a public hearing, eleven Corridor Planning Group/Task Force meetings, and five interactive workshops. The largest public meeting had more than 10,000 attendees, and over 38,000 comment letters supported the preferred alternative.



TRAVEL FORECASTING & TRAFFIC IMPACTS

With four freeway-to-freeway interchanges and substantive improvements to urban arterials, the EOWB project had the potential to change the transportation landscape for a large metropolitan area. It was important, therefore, that the travel demand modeling, forecasting, and traffic analysis consider the regional context. The study team met regularly with the MPO, the Chicago Metropolitan Agency for Planning, throughout the NEPA process to ensure that the project modeling methodology was consistent with the MPO's travel demand modeling and forecasting methods.

Understanding travel demand and traffic characteristics was a key component in determining the tolling and pricing components for the corridor. The measures of effectiveness used to evaluate alternatives included access, land use, revenue, and changes in travel characteristics. These, in turn, influenced decisions about corridor sizing and access locations.

The project sponsors developed a phased approach to tolling and pricing which they applied iteratively as they refined the alternatives. The model output provided an

understanding of the impacts on travel demand and travel characteristics for the corridor and the impacted sub-area.

The initial phase used the regional model tolling and pricing framework to generate a reasonable assessment of travel demand related to tolling/pricing the corridor. It also informed corridor sizing, access considerations, and sub-area impacts to the secondary roadway network.

The next phase of tolling and pricing considerations focused on testing pricing scenarios to achieve the best corridor throughput while maintaining consistency with Illinois Tollway pricing policy and other parts of the existing tollway system. The project sponsors used the refined pricing to continue analyzing impacts to parallel roadway networks and modal shifts. The project sponsors used this analysis to inform the environmental justice analysis.



COMMUNITY BENEFITS

When complete, the project sponsors expect the project to generate many benefits to the community, including reducing travel time by more than seven minutes for the 11-mile trip between the west side of O'Hare Airport and Lake Street (U.S. Route 20), a savings of 20 percent. The project will relieve congestion near the existing I-290 and Thorndale Avenue Interchange, where construction of new interchanges are anticipated to reduce travel times by up to 35 percent. Additionally, the project is expected to decrease traffic on local roads by more than 16 percent during rush hour and reducing delays on local roads by 24 percent. The travel time savings and congestion relief would save drivers \$145 million in time and fuel annually by 2040.



FOR MORE INFORMATION, CONTACT

Vanessa Ruiz
Chief, Environmental Unit, District One
Illinois Department of Transportation
(847) 705-4627
vanessa.ruiz@illinois.gov



RESOURCES

FHWA, IDOT, and Illinois Tollway
<http://www.trb.org/NCHRP/Blurbs/177062.aspx>

Elgin-O'Hare West Bypass Tier 1 Draft and Final Environmental Impact Statements
<http://www.idot.illinois.gov/projects/Elgin-OHare>

Elgin-O'Hare West Bypass Tier 2 Final Environmental Impact Statement
<https://apps.dot.illinois.gov/eplan/desenv/environment/Elgin-Ohare%20Final%20EIS/Tier%20Two/Tier%20Two%20Final%20EIS/Tier%20Two%20Final%20EIS.pdf>

Elgin-O'Hare West Bypass Tier 2 ROD
https://www.illinoistollway.com/documents/20184/106941/2012-12-12_EOWB-Tier2-ROD_FinalSigned.pdf/6648ce11-0556-4e37-87bd-879c98cdd466



PHOTO CREDITS

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