

Executive Summary

Introduction

The Federal Highway Administration (FHWA) and Illinois Department of Transportation (IDOT) have identified a preferred alternative for the Elgin O'Hare - West Bypass (EO-WB) project as described in this Final Environmental Impact Statement (Final EIS). The Preferred Alternative emerged after an evaluation and screening process of many alternatives that considered their ability to satisfy the project's purpose and need, provide measured improvement in travel, limit adverse effects on the area's environmental and socioeconomic resources, and address critical needs of communities most affected by the project.

The EO-WB study area is bounded roughly by I-90 on the north, I-294 on the east, I-290 on the south, and the Elgin O'Hare Expressway on the west. This area is characterized as a transportation crossroads that includes O'Hare International Airport, a network of freeways and tollways, transit facilities (including Metra rail lines and Pace bus service), freight rail service, and multimodal transfer facilities. It also contains the second largest employment base in the Chicago metropolitan area.

Given its geographic position as a transportation and employment hub, 18 percent of all vehicle trips in the region occur in the EO-WB study area. This sizeable travel demand, however, has been outpacing the capacity of the transportation infrastructure resulting in severe traffic congestion, traffic delays, and reduced travel efficiency. In fact, as part of the 2005 *Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users* (SAFETEA-LU) Federal Transportation Bill, the U.S. Congress identified the EO-WB as a project of regional and national significance, one of only a dozen such projects nationwide.

Highway transportation planning has long focused on providing travel mobility in the study area. The Elgin O'Hare Corridor was first introduced as a proposed highway facility in 1967. Following environmental studies and engineering plans by IDOT in the late 1980's and 1990's, the first phase of the Elgin-O'Hare Expressway between Hanover Park and Itasca was completed in 1993. The Illinois State Toll Highway Authority (ISTHA) first studied the O'Hare West Bypass in 1987, and again in 1996. More recently, a proposal for western access to the O'Hare International Airport was adopted as part of O'Hare's Future Airport Layout Plan in 2005. In conjunction with the airport's plan, DuPage County

Study Area



prepared a long-term vision study for the West O'Hare Corridor examining both land development potential and transportation needs including the extension of the Elgin O'Hare Expressway and the development of the O'Hare West Bypass. As mentioned above, funding was included in the 2005 SAFETEA-LU for this project to initiate project development. IDOT's Highway Improvement Program for fiscal years 2010 to 2015 reflects allocations for planning, engineering and land acquisition monies to support the development of the EO-WB. Long-term transportation investments in the region are also identified in the Chicago Metropolitan Agency for Planning's (CMAP) Regional Transportation Plan (RTP) for 2030. The EO-WB has been included in the 2030 RTP for the region, and will be included in the 2040 plan as the preferred alternative identified in this document. Overall, a long history of local, regional, state and federal involvement has occurred in an effort to advance the EO-WB toward implementation.

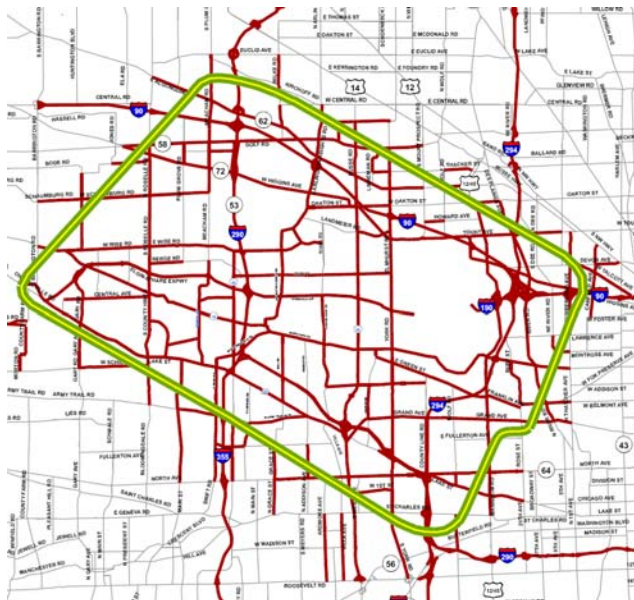
The EO-WB study was launched to identify an innovative solution to the transportation problems experienced in the study area. IDOT and FHWA identified several key objectives for the study:

- Provide for extensive stakeholder outreach to seek input to solutions that fit into and reflect their surroundings
- Identify the major transportation problems and issues
- Evaluate a broad-range of multimodal transportation solutions that lead to a preferred transportation system concept for the study area

A technical analysis of the transportation issues resulted in the following findings (see the EO-WB's *Transportation System Performance Report* [FHWA and IDOT, 2009] for details):

- Eighteen percent of all travel in the region enters, leaves, or passes through the study area. By 2030, that amount will grow to 19 percent.
- Roughly 86 percent of the area's interstate highways and major arterials are congested. That will grow to 91 percent by 2030.
- Congestion on major roads will spill over to secondary roads, with 92 percent of primary arterials and 90 percent of minor arterials congested by 2030.
- Travel times to interstate connections are longest in 40 percent of the study area, and much of the area consists of densely developed commercial and industrial uses that rely upon superior access to major transportation facilities.

2030 Baseline Congestion



- Travel times from the proposed O'Hare West Terminal to locations west and northwest are among the longest in the study area. Future travel demand with the construction of the new west terminal will warrant improved access compatible with a world class airport.
- Approximately four percent of all trips in the study area are made by transit, estimated to increase to five percent by 2030. More is needed to reduce dependence upon the automobile in the study area.

These findings, coupled with input obtained from stakeholders (see *Stakeholder Problem Definition* [FHWA and IDOT, 2008] for details), resulted in the development of the project's purpose and need, as follows:

- Improve regional and local travel by reducing congestion
- Improve travel efficiency
- Improve access to O'Hare Airport from the west
- Improve modal opportunities and connections

These four basic needs served as the foundation upon which the range of reasonable transportation alternatives were developed and the measures by which to comparatively evaluate their performance and identify a preferred alternative.

Process Leading to the Preferred Alternative

The Preferred Alternative emerged out of an alternatives development and evaluation process that was both comprehensive and structured. A broad range of alternatives was screened using appropriate technical data and stakeholder perspectives to distinguish alternatives that warranted further consideration. The process began with stakeholders identifying the transportation problems and locations where physical improvements were needed. Using that information, the project team assembled working concepts for roadway and transit system alternatives. Both roadway and transit concepts were screened in several cycles of evaluation using travel performance, environmental and social criteria, and costs. Existing and available geographical information systems (GIS) data was used to evaluate the alternatives' impacts to socioeconomic and environmental features in Tier One with detailed field studies to be conducted during Tier Two as agreed to by FHWA, IDOT, and regulatory resource agency groups early in the study process. (See Section 5.2.1 for a summary of the agency scoping meetings at which this topic was discussed).

The initial roadway analysis began with 15 concepts that were screened to 10 based on whether they satisfied purpose and need. A subsequent screening step examined the environmental and socioeconomic effects of the remaining alternatives and determined that three additional alternatives should be dismissed because of high socioeconomic impacts, leaving seven remaining roadway alternatives under consideration. The seven remaining roadway alternatives were refined in terms of roadway layout, footprint or right-of-way requirements, access requirements, and incorporation of transit improvements into corridors shared by roadways and transit. The criteria used to compare the alternatives were expanded to include travel performance, design feasibility, construction and right-of-way costs, and

environmental and socioeconomic impacts. The measured effects of each alternative (travel efficiency, travel times, acres affected, number of resources affected, residential and businesses displaced, and tax revenue loss) were analyzed using both quantitative and qualitative analyses supported by stakeholder input. The combination of these evaluation methodologies yielded justification to drop five of the seven alternatives, leaving only Alternatives 203 and 402 as the build alternatives to be considered in the Draft EIS. Parallel to this process was an analysis of options for connecting the O'Hare West Bypass element of the project to I-90 on the north and I-294 on the south. After completing this evaluation, North Bypass Connection Option D was selected as the preferred corridor for the northern portion of the O'Hare West Bypass alignment, and South Bypass Connection Options A and D were selected as corridors for the southern portion of the O'Hare West Bypass alignment warranting further consideration in the Draft EIS.

The evaluation of transit alternatives followed a path similar as the roadway alternative evaluation process, with more than 20 transit improvement corridors proposed initially, screened to 15 at the end of the process. The final transit corridors were refined in length and location, type of service, station locations, transit center locations, parking requirements, etc. The set of transit improvements associated with either roadway alternative is similar except for the STAR Line extending from I-90 to the proposed O'Hare West Terminal. Under Alternative 203, the north leg of the O'Hare West Bypass is freeway and the STAR Line would share the corridor. However, Alternative 402 provides an arterial improvement north of Thorndale Avenue but it cannot accommodate the STAR Line as well because of the limited width of the improvements. As such, the transit agency would have to implement an alignment for the STAR Line separately.

The roadway and transit improvements are supported by a common set of bicycle and pedestrian improvements. These improvements focus on filling the gaps in bicycle trail and pedestrian paths to provide better non-motorized connections to transit stations, park and ride facilities, community activity centers, regional trail systems, and employment areas.

The Draft EIS, completed in August 2009, presented a side-by-side comparison of Alternatives 203 and 402, South Bypass Connection Options A and D, and the No-Action (Baseline) Alternative to assist decision-makers in selecting a preferred system transportation concept for the study area. The document was available for public comment through October 26, 2009. A public hearing was held during the public comment period on October 8, 2009 to present the build alternatives to the public, obtain input on the alternatives, and answer questions. During the comment period, over 70 comments were received, most of which expressed a preference for Alternative 203 and/or Option D. In addition, four local governmental entities submitted resolutions passed in favor of either Alternative 203 or Option D.

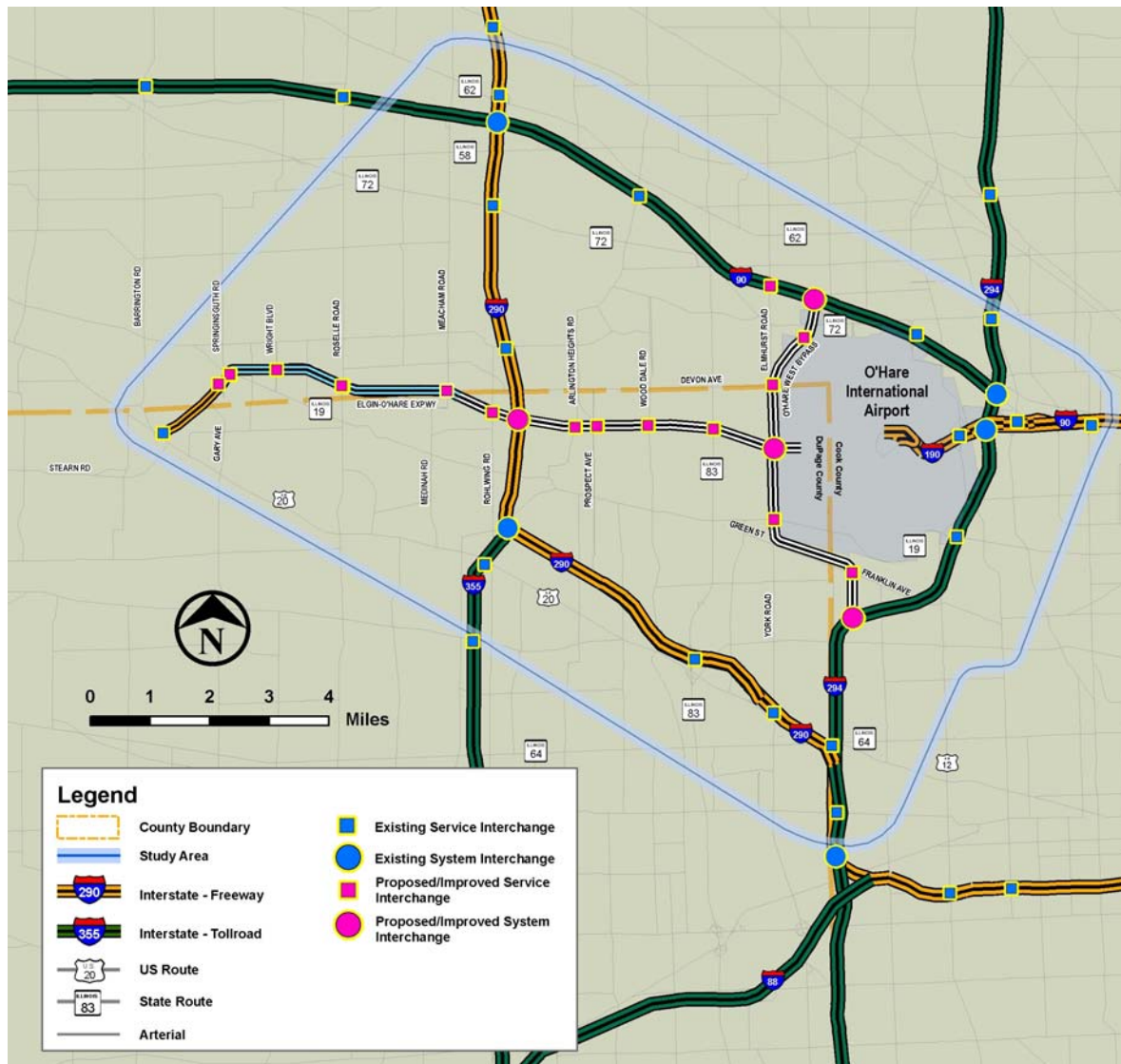
After considering each alternative's transportation benefits and reviewing input received from area residents, communities and stakeholders, IDOT and FHWA identified Alternative 203 with Option D as the Preferred Alternative. Alternative 203 offers slightly better travel performance, whereas Alternative 402 has less socio-economic impacts; both alternatives were comparable in terms of environmental impacts. An examination of economic benefit showed that Alternative 203 provides an additional one billion dollars in value added, and a greater potential for job creation in the region. The clear distinction between the alternatives was found in the overwhelming public and regulatory/resource agency support for

Alternative 203 and Option D. Five municipal entities passed resolutions supporting Alternative 203 and/or Option D and two-thirds of the comments from individuals received during the Draft EIS supported Alternative 203 and/or Option D. Further, regulatory/resource agencies unanimously concurred with Alternative 203 with Option D as the Preferred Alternative.

Description of the Preferred Alternative (Alternative 203 with Option D)

Alternative 203 consists of upgrading and extending the Elgin O’Hare Expressway between IL 19/Gary Avenue to the O’Hare West Bypass for about 10 miles. Between IL 19/Gary Avenue and I-290, the expressway would be widened and upgraded along the existing alignment. East of I-290, extending to the West Bypass and the proposed O’Hare West Terminal, Thorndale Road would be upgraded to a new full-access control freeway. The mainline facility would be three to four basic lanes in each direction, with additional

Preferred Alternative (Alternative 203 with Option D)



auxiliary lanes between high volume interchanges. A 70-foot median would accommodate potential dedicated transit service in the future. To accommodate local traffic circulation, frontage roads would be provided extensively throughout the corridor. Service interchanges would provide access at IL 19, Springinsguth Road, Wright Boulevard, Roselle Road, Meacham Road, Rohlwing Road, Park Boulevard, Arlington Heights Road/Prospect Avenue, Wood Dale Road, and IL 83. Access to other intersecting roadways would be provided by a frontage road system. A full-access system interchange would be provided at I-290. In many cases, crossroad improvements at interchange locations would extend several hundred feet north and south to accommodate increased traffic movements.

Alternative 203 also includes the O'Hare West Bypass, a freeway section that would extend from I-90 at the current location of the Des Plaines Oasis, south along the western edge of O'Hare Airport to the Bensenville Yard. The bypass would then tunnel under and extend east along the north side of Green Street/Franklin Avenue before turning south to connect with I-294.

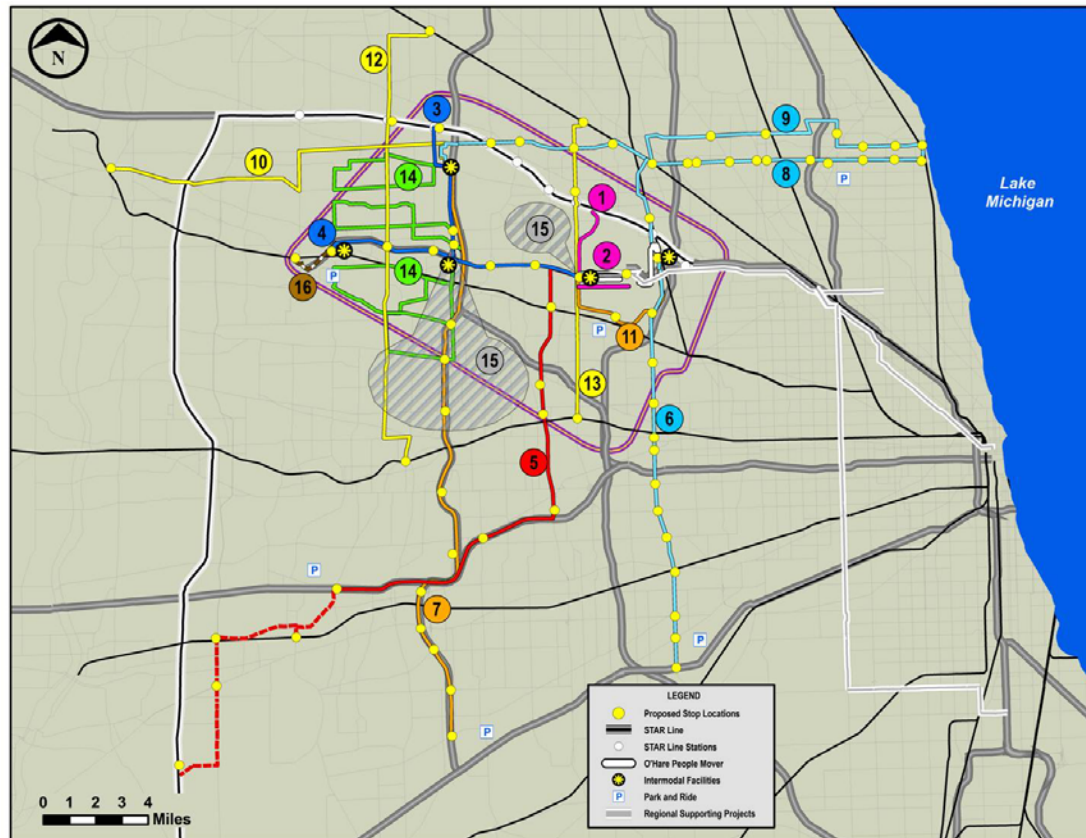
South Bypass Connection Option D was identified as the preferred alignment for connecting to I-294 beginning at the tunnel under the Bensenville Yard. The freeway generally would extend southeast along the north edge of Green Street, then cross the Union Pacific Railroad (UPRR) and proceed south, paralleling the east side of the railroad, to a new system connection with I-294 near Grand Avenue. A new bridge that reconnects Taft Road across the Bensenville Yard, linking Franklin Avenue and IL 19 would be constructed, and a full-access system interchange would be provided at I-294. Part of I-294, extending roughly from Grand Avenue south to North Avenue, would be improved to accommodate system ramp connections and lane balance requirements.

The overall length of the O'Hare West Bypass is 6.2 miles. The freeway would consist of four basic lanes in each direction with additional auxiliary lanes at interchanges, and a 70-foot median would accommodate transit service north of Thorndale Avenue. System interchanges are proposed at I-90, the Elgin O'Hare Expressway, and I-294. Service interchanges are proposed at IL 72, Devon/Pratt, the proposed O'Hare West Terminal, IL 19, and Green Street/Franklin Street.

Transit Improvements

New transit opportunities and connections in the study area are regarded an important objective, and consequently are a component of the project purpose and need. The set of proposed transit improvements has 16 elements (see figure). These elements consist of corridors providing commuter rail service, rail or bus rapid transit (BRT), express bus, local bus, and shuttles (to be built by others). Other facets include new stations, intermodal facilities or transit centers, and park and ride facilities. Improvements include a transit corridor along the J-Line west corridor from the proposed O'Hare West Terminal station to the Schaumburg Metra Milwaukee District West (MDW) station. This transit improvement would be either BRT or rail, and would be located in the median of the proposed roadway improvement. This particular improvement would link residents to jobs in the study area and to downtown Chicago.

Transit Improvements



Corridor Name (Mode)

- | | | | |
|---|--|----|---|
| 1 | Star Line Spur (Commuter Rail) | 10 | Golf West (Local Bus) |
| 2 | Blue Line Extension to West Terminal (Heavy Rail) | 11 | Irving Park (Express Shuttle Bus) |
| 3 | J-Line Northwest to Woodfield (Rail or Bus Rapid Transit) | 12 | Roselle Road (Local Bus) |
| 4 | J-Line West to Schaumburg MD-W Metra (Rail or Bus Rapid Transit) | 13 | York Road Shuttle (Local Bus) |
| 5 | J-Line South to Naperville and Aurora
(Bus Rapid Transit to Naperville; Link Service From Naperville to Aurora) | 14 | Circulators (Local Circulators) |
| 6 | Mannheim (Arterial Rapid Transit) | 15 | Employment Shuttle Zones |
| 7 | I-355 (Express Bus) | 16 | Shuttle Bus Service**
(between Schaumburg Metra Station and Hanover Park Metra Station) |
| 8 | Dempster (Arterial Rapid Transit) | | **As part of Tier Two Studies, an evaluation to extend
the "J-Line West Transit Corridor" west to the Hanover
Park Metra Station will be conducted. |
| 9 | Golf East (Arterial Rapid Transit) | | |

Another proposed transit improvement is the J-Line northwest that would extend from the Elgin O'Hare corridor north along IL 53 to the Woodfield Mall area. An element of the J-Line would be an express bus service extending south along IL 83 and then in a westerly direction to a terminus at the proposed STAR Line station in Aurora. Other elements of the transit plan include extending the Chicago Transit Authority (CTA) Blue Line service from O'Hare's terminal core to the proposed O'Hare West Terminal, and the STAR Line rail service from the O'Hare West Terminal to the I-90 corridor where the service would be extended west. Express bus service is proposed on I-355, Golf Road, Dempster Street, Irving Park Road, and Mannheim Road. Shuttle bus service is proposed between the Schaumburg Metra Station and Hanover Park Metra Station. Extending the J-Line as a higher capacity transit service to the Hanover Park Metra Station will be evaluated in Tier Two. Circulator bus routes and shuttles are planned to develop better connections to stations and employment and activity centers. Rail and BRT stations have been added at key locations, as well as park and ride facilities to provide convenience to the system. The sum of these

improvements is aimed at providing an alternative to the automobile for area residents and workers.

Supporting Improvements

Other supporting transportation improvements were considered in the development of a comprehensive transportation solution for the study area. In particular, non-motorized transportation is an important aspect of the plan that would benefit home to work trips, recreational opportunities, and linkages to transit facilities, activity centers, and employment centers. Each of these improvements would be common to the Preferred Alternative. The types of recommended strategies include bicycle and pedestrian improvements, including new bicycle trails and pedestrian paths that would provide better connections to transit stations, transportation centers, park and ride facilities, community activity centers, regional trail systems, and employment areas.

Effects of the Preferred Alternative

Travel Performance

The Preferred Alternative would improve travel in and through the study area in terms of improving regional travel, decreasing congestion on secondary roads, improving average speed throughout the system, and improving travel times to freeway connections and various destinations (see Table S-1).

TABLE S-1
Systemwide Travel Performance for Alternative 203

Percent Increase in Regional Travel Efficiency in Study Area	10%	Manages a higher number of vehicles more efficiently on the system
Percent Decrease in Congested VMT on Secondary Roadways (P.M. Peak)	15.2%	Keeps longer trips on major roads, thus relieves minor roads
Percent Increase in Network Speeds on Principal Arterials (P.M. Peak)	8%	Improves efficiency of local travel
Improve O'Hare West Access—Travel Time Savings from the Study Area West to O'Hare	49%	Enhances access to planned O'Hare West Terminal
Improve Accessibility—Percent Increase in Trips within Five Minutes to Interstate/Freeway facilities	50%	Improves access to freeway connection
Percent Increase in Transit Trips	37%	Addresses top stakeholder priority of increasing public transit facilities

Economic Effects

Alternative 203 is expected to stimulate the local and regional economies (see Table S-2). Transportation investment would flow through all areas of the economy that would provide stimulus far exceeding the original investment, which is known as the multiplier effect.

The “multiplier effect” is the phenomenon that the initial project costs, or investment, lead to the re-spending of those dollars in the region. Jobs would be created not only in the transportation construction industry, but also in service sectors that support construction workers, such as medical facilities, laundries, restaurants, and other services. Investments in transportation infrastructure are expected to spur private investment in the redevelopment of older or obsolete structures and the modernization of industrial parks, which would sustain long-term employment opportunities.

The annual construction cost during the three-year construction period is \$1.0 billion. This expenditure would result in 9,200 jobs created for the duration of construction and 21,600 jobs created when considering the multiplier effects in other industries. The value added to the regional economy from the construction of Alternative 203 is estimated to be \$1.6 billion per year, or almost \$5 billion over the construction period.

Environmental and Social Effects

The study is highly developed and urbanized; therefore, most environmental resources have been disturbed and are of relatively lower quality. Commercial and industrial development is abundant, thus total avoidance of these resources is not possible. However, with the use of existing public rights-of-way, airport property, and avoidance and minimization practices, resource impacts are reduced to the greatest extent possible based upon the current level of design and characterization of those resources. Further analysis and reduction of impacts are expected to occur in the Tier Two EIS process. The environmental and social effects of Alternative 203 with Option D are shown in Table S-3.

TABLE S-3
Summary of Environmental and Social Effects of Alternative 203 with Option D

Resource	Effect
Natural Resources	
Wetland impacts (acre) ^a	39.1
Stream crossings (total number)	22
Surface waters impacts (acre) ^a	18.1
Floodplain encroachments (acre)	24.7
Threatened and endangered species impacted	0
Noise	
Noise-sensitive residential areas	47

TABLE S-2
Economic Impacts from Construction of Alternative 203

Construction costs total	\$3.0 B
Construction costs per year ^a	\$1.0 B
Total value added per year ^b	\$1.6 B
Total value added^b	\$4.8 B
Direct jobs created per year ^c	9,200
Total jobs created per year^d	21,600

^a Assumes a three-year construction schedule.

^b This value is the measure of the contribution of economic activity by an industry to the region using the IMPLAN model.

^c These are jobs related to construction of the transportation improvement.

^d Includes all jobs created by the means of direct, indirect, and induced employment.

TABLE S-3
Summary of Environmental and Social Effects of Alternative 203 with Option D

Resource	Effect
Noise-sensitive, non-residential receptors (churches, schools, parks)	29
Cultural Resources and Section 4(f) Resources	
Cultural resources impacted	0
Acres of Section 4(f) resources impacted (number) ^b	0.95 (3)
Acres of non-Section 4(f) special lands impacted (number)	2.0 (1)
Socioeconomics	
Residential displacements	11
Commercial structure displacements	12
Industrial structure displacements	28
Employees displaced	1,277
Tax revenue loss	\$4.47M

^a Totals include impacts to potentially jurisdictional areas, such as stormwater facilities. Subject to regulatory review, several manmade stormwater facilities may be exempt from regulation.

^b One property purchased with OSLAD funds may be affected.

Public Involvement

Public involvement has been a cornerstone of the study process, and has been critical for developing consensus on a Preferred Alternative. The extensive stakeholder and public outreach framework, consistent with IDOT's Context Sensitive Solution (CSS) policy, has accompanied the technical work over the course of the planning process (see the *Stakeholder Involvement Plan (SIP)* [FHWA and IDOT, 2009] for details). The object of CSS is an interdisciplinary approach that seeks effective, multimodal transportation solutions by working with stakeholders to develop cost-effective solutions that fit into and reflect the project's surroundings. During the course of the study, dozens of meetings were held with communities, transportation providers, special districts, state and federal agencies, and the general public. Input was requested about transportation problems, the improvements needed, valued community resources that should be considered, the criteria and data that should be used to evaluate alternatives, the alternatives considered, and the process for evaluating alternatives. The alternative that emerged as the preferred set of improvements for the EO-WB study directly reflect the application of the CSS process and the valued input of the many stakeholders involved.

The public outreach program included the following major elements:

- Project working groups that essentially met monthly. A key element was the “workshop” format, which involved stakeholders literally drawing on study area maps to define the transportation issues and to facilitate development and evaluation of alternatives.
- Open house public meetings in November 2007 (transportation needs), September 2008 (initial alternatives), March 2009 (refined alternatives and expanded study area), and October 2009 (Draft EIS) yielded invaluable insights regarding stakeholder issues and priorities. Regular newsletters (six issues distributed prior to of the Draft EIS) provided detailed information on project activities and progress, and an opportunity for public comment (approximately 1,000 newsletters distributed).
- A Web site (www.elginohare-westbypass.org) provided study information, summaries of meeting minutes, reports, and an opportunity for the public to send comments and feedback to the project team. The website remains active and current.
- Speakers bureau events, based on the requests from individuals and groups, as a venue for putting the project message and information to the public.
- Extensive media coverage.

Stakeholder involvement helped develop the foundation upon which the study rests – the purpose of and need for the transportation improvements proposed within the study area. Stakeholders identified transportation problems and provided suggestions regarding potential types and locations of improvements, information that served as a starting point for developing the initial roadway and transit alternatives. Later stakeholders assisted in developing criteria used to evaluate and compare alternatives.

Transportation providers and other agencies provided valuable input regarding the development and evaluation of roadway, transit proposals, and refinements in the transportation concept that would avoid conflicts with their respective plans and operations. Planning and regulatory/resource agencies also have been integral to the process. The regulatory and resource agencies partnered with the project sponsors from the beginning to guide the project through the NEPA/404 Merger process, and the analysis techniques used to measure natural and socioeconomic impacts. For additional details regarding the EO-WB public involvement activities, refer to Section 5, *Coordination*.

Financing Strategies

Historically, transportation infrastructure projects have been funded with a combination of federal and state monies. In an era of increasing infrastructure needs across the country and constrained public funding, other funding mechanisms are being considered. With an estimated cost of \$3.6 billion, the preferred alternative for the EO-WB may likely be a candidate for a combination of funding strategies including federal and state monies, tolls, grants, bonds, and public-private partnerships. An important part of the work in the Tier Two process will be to develop a financial plan. This plan will identify reliable sources of funding and required and anticipated cash flow based on project sequencing. Ultimately, the financial plan will be linked to the development of a detailed implementation plan, per

Section 6002 guidance, establishing the proposed sequence for implementing highway projects with operational independence based on funding and schedules.

Summary

This Final EIS identifies the Preferred Alternative that is the outcome of Tier One of the EO-WB study. The selection of Alternative 203 with South Connection Option D was based upon a rigorous evaluation of many alternatives considering travel performance and cost, impacts and benefits to environmental and social resources, and considerable public input.

The Preferred Alternative best suits the needs of the communities and stakeholders most affected by the proposed action as demonstrated by its ability to:

- Best satisfy the objectives of the project's purpose and need.
- Limit impacts on natural and social resources in the area.
- Provide improved travel efficiency for local and long distance trips in ways that are most compatible with existing and planned community land use patterns.

The Final EIS is organized in the traditional format as described in the FHWA *Technical Advisory T6640.8A* (October 30, 1987). It builds on the Draft EIS text with modifications that identify the selection of the Preferred Alternative, update the information presented in the Draft EIS, and describe activities that have occurred since publication of the Draft EIS.

A 30-day waiting period will begin when the Notice of Availability for this Final EIS is published in the Federal Register. After the 30-day waiting period has concluded and all comments on the Final EIS have been satisfactorily resolved, FHWA will issue a Record of Decision (ROD) to identify the Selected Alternative. IDOT will make the ROD publicly available after it is issued by FHWA.

Following the ROD, the FHWA and IDOT will commence with Tier Two of the process, which will advance detailed engineering and environmental studies for the selected alternative. Coordination with affected communities, agencies and other stakeholders will continue throughout this phase of project development. There will be a focus on roadway design and design considerations that further minimize environmental and social effects, and mitigation measures for those unavoidable social and environmental effects.