



ELGIN-O'HARE WEST BYPASS ADVISORY COUNCIL

FINAL REPORT TO GOVERNOR PAT QUINN

June 30, 2011



ELGIN-O'HARE WEST BYPASS ADVISORY COUNCIL

PAT QUINN, GOVERNOR

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Kristi Lafleur

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Frank Soto
Thomas Villanova

Dear Governor Quinn,

It is with great pleasure that we present to you the final report of the Elgin-O'Hare West Bypass Advisory Council (the "Advisory Council").

Understanding the importance of this project of national, statewide and regional significance, you established the Advisory Council on October 5, 2010, by Executive Order, to collectively explore opportunities to advance this project. By bringing together state and regional transportation agencies, elected officials; planning, labor, business and public finance groups; and other community leaders, what resulted was meaningful dialogue and analysis in a truly bi-partisan fashion, to develop consensus around how to make this project a reality. After many months of hard work, the Advisory Council developed key recommendations about how to move this project forward in an environmentally and financially sustainable manner while enhancing economic opportunities for all stakeholders.

At the outset, the Advisory Council formed four working groups –Economic Impact, Financing, Sustainability and Diversity. After much critical analyses and many spirited discussions, these working groups came back with recommendations, goals and guiding principles that are critical to advancing this project. Specifically, this report includes a set of robust recommendations on how to maximize long-term economic growth, incorporate sustainable planning and practices, and ensure a diverse workforce throughout the project's development. It also includes principles that will guide the financing and implementation of the Elgin-O'Hare West Bypass and that represent the strong regional consensus of the Advisory Council. The members of the Advisory Council realize the scope and magnitude of this project and have reached a consensus to proceed with an initial construction plan to improve access and reduce congestion in the area surrounding O'Hare International Airport ("O'Hare"). But there was also agreement that the ultimate goal is to deliver the fully-planned, multi-modal project with access to a new Western Terminal at O'Hare.

As Co-Chairs, we have reviewed these recommendations and are pleased to pass them along to you on behalf of the hard-working stakeholders who served on the Elgin-O'Hare West Bypass Advisory Council.

We thank you, Governor, for giving the members of the Advisory Council an opportunity to make thoughtful recommendations and identify key goals and guiding principles that will serve to advance the Elgin-O'Hare West Bypass.

Sincerely,

Gary Hannig
Co-Chair

Kristi Lafleur
Co-Chair

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President, Chicago and Cook County Building and Construction Trades Council

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EXECUTIVE SUMMARY

Introduction

The EOWB is a project of national, statewide, and regional significance. Located west of O'Hare International Airport (O'Hare), the 120 square mile project area serves as a major transportation hub in the region. In addition to O'Hare, the area includes major freight rail corridors and intermodal facilities, transit services, and major interstate highways. It also contains the second largest employment base in the Chicago metropolitan area, with more than 500,000 jobs. With the extension of the Elgin-O'Hare Expressway, the creation of a Western Bypass along the west side of O'Hare that connects I-90 and I-294, and space to accommodate mass transit, the EOWB will sustain the area's global competitiveness, promote business retention and attraction, and create new jobs.

The EOWB was designated as a project of regional and national significance, one of only a dozen such projects in the nation, by the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). The Chicago Metropolitan Agency for Planning's (CMAP) *GO TO 2040 Comprehensive Regional Plan* identified EOWB as one of the top major capital projects that would provide congestion relief and enhanced accessibility to the area surrounding O'Hare, a major economic driver in the region. The Urban Land Institute Chicago also named the EOWB as one of the major infrastructure "game changers" needed to maintain the region's competitive edge, as well as foster equitable growth and increase connectivity.

Recognizing the significance of the project, in October 2010, Governor Pat Quinn established the Elgin-O'Hare West Bypass Advisory Council (the "Advisory Council") to advance the project in an environmentally and financially sustainable manner while enhancing economic opportunities for all stakeholders. To achieve the Governor's objective, the Advisory Council formed four working groups - Economic Impact, Financing, Sustainability, and Diversity - to focus on each key component of the project. As further detailed in the following sections and in particular in the "Guiding Principles" summary of the Financing section, the Advisory Council supports a package of improvements that includes the full build out of the Elgin-O'Hare West Bypass, including transit and a Western Terminal at O'Hare. While the ultimate goal is to pursue the full complement of infrastructure improvements, there is support from the Advisory Council for a sequential implementation of the EOWB, which will allow the benefits of the project to be realized as they are completed.

Economic Impact

The EOWB encompasses a unique and special set of physical and economic relationships that together offer tremendous economic benefit to the area west of O'Hare, the Chicago region and the State of Illinois. The attributes that were attractive to new development in the past are changing today with declining travel conditions, aging infrastructure, and outdated and obsolete development. Since 2007, employment in the project area has declined by 70,000 jobs, or almost 14 percent. Although the loss of employment has been seen across the country, a 14 percent decline in the area is well above national (9 percent) and regional (7 percent) averages. Even more concerning is that the analysis shows that employment in the area will not return to 2007 levels over the course of the next 30 years and may never return without significant transportation improvements.

Thus, transportation improvements that bring with them a new modern and diverse economic base are greatly needed. A package of improvements that embraces the EOWB and O'Hare's proposed Western Terminal will fully address the declining economic condition of the area and improve travel efficiency for

several intermodal freight yards in the area. The projects are integrally linked, each supporting the other. While the projects have different construction time tables, the EOWB will advance with compatibility for the Western Terminal. The EOWB provides the needed access and visibility to stimulate greater and more varied development than what exists today, and the Western Terminal builds on the growth associated with the roadway by adding diverse and high quality collateral development. The economic synergies of the two projects will markedly change the future of the area west of O'Hare.

The analysis conducted by the Economic Impact Working Group supports the national, statewide and regional significance of this project. As a result of the EOWB, there is projected to be significant job creation, as well as fiscal and economic benefits which are critical to the area west of O'Hare, the Chicago region and the State of Illinois. The analysis examined short- and long-term economic effects, travel time savings, and the cumulative economic growth. The benefits of the EOWB are not only compelling, but in combination with the Western Terminal, would completely transform the economy of the region. The economic impact findings of the Advisory Council include:

- Opportunity exists to create 65,000 permanent jobs in the project area by 2040.
- The EOWB and O'Hare's Western Terminal together will transform the economic base of the area to new levels.
- Local tax revenues have the potential to increase by \$29 million (2010 \$) annually.
- 13,450 jobs will be created annually in the region during construction.
- \$750 million in federal, state, and local tax revenue will be generated during the construction period.
- Travel delays will be reduced, saving \$145 million annually by 2040.
- Taking no action will cause the area to stagnate and employment will not return to 2007 levels by 2040.

Financing

While the substantial benefits of the EOWB outweigh the cost, the Advisory Council dealt with the critical question of how to finance and deliver this project. Fiscal constraints, competing needs, and escalating costs are driving a focus to new sources and methods to finance projects, as well as a phased approach to implement projects across the nation. The consideration of new innovative funding options is essential to determining the financing and implementation plan for a project of this size in the midst of today's conditions.

Reflecting on emerging trends and best practices from other states and even other countries, the Advisory Council evaluated a number of potential funding sources and financing strategies. The following "Guiding Principles," adopted by a unanimous roll-call vote of the Financing Working Group on June 24, 2011, represent the consensus agreement among members of the Advisory Council on financing and implementing the EOWB.



FINANCING AND IMPLEMENTATION GUIDING PRINCIPLES FOR THE ELGIN-O’HARE WESTERN BYPASS/ACCESS

June 24, 2011

Introduction

In October 2010, Governor Pat Quinn formed the Elgin-O’Hare West Bypass Advisory Council (the “Advisory Council”) to make recommendations on the implementation, financing and operating structure for the extension of the Elgin-O’Hare Expressway, a Western Bypass and a complimentary transit network. One of the objectives of the Advisory Council was to prepare a report for the Governor identifying a financing and implementation strategy for these improvements.

The Advisory Council recognizes that all levels of government must perform their governmental responsibilities in the consideration and implementation of public policy objectives. At the same time, the Advisory Council recognizes that in order for a project of such national and regional significance to be financed and implemented, government agencies will need to reach consensus and identify innovative funding arrangements, financing approaches and/or implementation strategies for the project to become a reality. The Advisory Council concludes that by endorsing key goals or guiding principles, a successful project can be crafted to serve the needs of the specific governmental interests and the critical infrastructure needs of the citizens and businesses of the broader metropolitan region and the State of Illinois. The Advisory Council supports the following guiding principles to facilitate the financing and implementation of the Elgin-O’Hare Western Bypass/Access.

Guiding Principles

No. 1 Regional Consensus and Continued Discussion

The Guiding Principles outlined in this document represent the strong regional consensus of the Advisory Council, and are critical to the project becoming a reality. Additional work needs to be done to complete the alignment of sources and uses of project funding so that agreement can be achieved to begin construction. Therefore, the Financing Working Group must continue its collective progress in partnership with the two lead state transportation agencies, the Illinois Department of Transportation (IDOT) and the Illinois State Toll Highway Authority (the “Tollway”), beyond the Advisory Council’s final report to the Governor.

No. 2 Design and Implementation

It is the consensus of the Financing Working Group that the implementation of the Elgin-O’Hare Western Bypass/Access should be consistent with the overall master plan for improving travel efficiency and western access to O’Hare International Airport, as well as enhancing multi-modal connections, and reducing congestion. Should financial constraints limit the ability to complete the full-build master plan, the project should be constructed with design configurations consistent with IDOT’s initial construction plan as of June 2011, with that phase being constructed in its entirety. As IDOT completes the Tier Two environmental and engineering studies required by federal law, the Tollway should engage in the necessary activities to advance the project to construction. In addition, federal, state and local leadership should vigorously advocate for the Western Terminal at O’Hare International Airport, an integral component of the larger Western Access plan.

No. 3 Continued Federal Government Support

It is the consensus of the Financing Working Group that the project is nationally significant and the Illinois congressional delegation should be actively and aggressively engaged in securing federal support. Continued federal support should be broadly and aggressively pursued and include legislation, loans, grants, or other forms of assistance consistent with that obtained for projects of similar size and complexity.

No. 4 Stakeholder Support and Participation

It is the consensus of the Financing Working Group that its work continue in order to further develop both workable and innovative financing options that will support the construction of the project in its entirety. The project is nationally and regionally significant and all governments that will reap positive economic development benefits from its enhanced access and mobility improvements participate in supporting the project. Recognizing the complexity and expense of the project, government financial support should be broadly reviewed and may include contributions such as past and future right-of-way donations from both public and private owners. Care should be taken to ensure that any proposed contributions are equitable and proportionate to the economic benefits derived from the project and the economic benefits generated by assets of a particular local government. Consideration of any cost participation will require continued discussion, analyses and consensus among the project stakeholders.

No. 5 Tolling

It is the consensus of the Financing Working Group that tolling the Elgin-O'Hare Western Bypass/Access should be among the financial strategies considered for implementation of the project. Toll rates on the existing tollway system should be raised to levels consistent with national averages if raising toll rates will generate additional revenue to assist in providing funding for the Elgin-O'Hare Western Bypass/Access in its entirety. Toll rates for any new projects should be consistent with the level of other new toll projects nationwide. In addition, regional road pricing strategies, including congestion pricing, can provide for more balanced and efficient utilization of the regional transportation network and should be considered. Any future toll rate increase should be indexed consistent with regional inflation and/or congestion levels. Further study should be given to tolling and managed lanes on critical and adjacent freeways and, where necessary, the Illinois congressional delegation should be aggressively and creatively engaged to secure any required federal approvals. The Tollway's bond term should be extended up to a 40-year maturity to support additional bonding for the Elgin-O'Hare Western Bypass/Access to fully leverage the recommended toll rate increase and align with federal financing mechanisms available through the Transportation Infrastructure Financing and Innovations Act (TIFIA).

No. 6 Transit and Other Modal Choices

It is the consensus of the Financing Working Group that the project design should embrace and include travel choices, including transit, provided that there is demand and a mechanism to finance additions to the regional transit system, as well as sidewalks and trails for pedestrians and bicyclists. Rights-of-way should be of sufficient width to not preclude the accommodation of future transit and non-motorized travel alternatives. The level of investment in transit and other modes should provide capacity that satisfies the demand. A viable plan to fund the operating expenses of these alternative modes should be developed prior to implementation.

No. 7 Alternative Delivery Options – Public-Private Partnerships

It is the consensus of the Financing Working Group that all available financing and operation options should be considered with a view towards completing the financing and construction of the project. However, care must be taken not to disadvantage any public entity in the decision-making process. A public-private partnership (P3) arrangement with a public equity contribution may be among the project delivery options under consideration. Private sector engagement must be consistent with federal and state law and the private sector must be required to comply with, but not limited to, detailed operating standards and maintain the improvements at industry-accepted levels of service. The agreement with the private sector must also address capital expenditures, contain provisions for new technology, and must comply with strict environmental and safety standards for toll facility operation. No unfair advantage should be given to the private sector with respect to toll rates relative to public entities.

No. 8 Transparency and Accountability

It is the consensus of the Financing Working Group that future activities regarding the project and any engagement with the private sector should be conducted in a transparent and accountable manner in order to continue to provide the highest level of integrity and openness.



Sustainability

Sustainable design has risen to new levels and is now spreading across the world as a practice widely recognized for its benefits. It is no longer an afterthought—it is integrated into the process from the onset. The Sustainability Working Group focused on the importance and implementation of sustainable design as part of the EOWB project. The main objective being the “triple bottom line” or the reduction of environmental impact, the creation of social benefits for current and future generations, and the realization of short-term and long-term financial and operational benefits to the project.

Nine categories in which sustainable practices could be implemented were identified – Planning, Design, Environment, Energy, Water, Materials and Resources, Construction, Operations and Maintenance, and Users. The Advisory Council made recommendations to achieve the following goals in each of the categories:

Planning

- Expand the sustainable framework established in the planning phase throughout all phases of the project.
- Continue to engage stakeholders in the final design and construction phases.
- Expand the range of sustainable practices applicable to the EOWB with new and innovative ideas.
- Plan and manage the EOWB development process within the bounds of all regulations to ensure compliance.
- Incorporate multiple modes of travel, including transit and trails for pedestrians and bicyclists. Seek ways to advance detailed planning, design, and implementation of the transit and bike and pedestrian travel components of the EOWB plan.

Design

- Ensure that project design maintains operational efficiencies in the movement and safety of vehicle operations.
- Adjust highway features using design and environmental flexibility.
- Minimize the overall construction footprint to eliminate right-of-way takes.
- Incorporate native materials.

Environment

- Minimize impacts to natural and physical environmental features.
- Preserve and enhance historic, scenic, and aesthetic contexts.
- Develop a wetland mitigation plan that goes beyond legal requirements to mitigate project impacts.

Energy

- Design electrical-powered systems to reduce lifetime energy consumption for occupied or unoccupied structures associated with the roadways.
- Perform and update a life-cycle analysis for infrastructure that uses energy.
- Incorporate at least two alternative or renewable energy applications for the project that are above and beyond common practice.
- Obtain Leadership in Energy and Environmental Design (LEED) certification for new facilities that meet the standards of the U.S. Green Building Council (USGBC).

Water

- Capture and reuse first-flush runoff of stormwater.
- Develop a water quality monitoring regime to follow before, during, and after construction.
- Quantify and track roadway de-icing materials applied to mainline pavement during storms.
- Incorporate demonstration projects to improve water quality.

Materials and Resources

- Promote sustainable design and construction by developing contract specifications and pavement/structural designs that allow extensive use of reclaimed, recycled, renewable, and local materials.
- Eliminate project waste, and use, as much as possible, the wastes of other projects (such as construction and demolition debris from other roadways, runways, or private developments).
- Develop a recycling program that encompasses all aspects and wastes of the project.

Construction

- Develop green construction management (CM) guidelines.
- Use clean and green construction practices and equipment.
- Educate contractors of sustainability components and sensitive environmental features.
- Develop a “green construction incentive” for contractors that embrace measures beyond project specifications.

Operations and Maintenance

- Develop and implement an accountability plan for sustainable maintenance and operational functions, and report on them annually.
- Use ecologically friendly products for daily maintenance and operations.
- Quantify and track roadway de-icing materials applied to mainline pavement during storms.

Users

- Offer more accommodating and appropriate infrastructure that provides users with alternative fuel choices.

Diversity

Diversity is a major factor guiding and influencing all institutional and individual decisions that promote the betterment of our community. The aim of a diversity program is to ensure that qualified businesses, regardless of the size and the owner's race, gender, or background, participate in procuring professional services and contracts. The Diversity Working Group focused on how to improve access for disadvantaged, minority, and women's business enterprises (D/M/WBE), as well as small and medium-sized businesses, to future procurements associated with implementation of the EOWB project.

Three categories in which diversity practices could be implemented were identified – D/M/WBE Procurement, Regional Workforce Development, and Compliance Monitoring and Reporting. The Advisory Council made recommendations to achieve the following goals in each of the categories:

D/M/WBE Procurement

- Develop a supportive services program.
- Establish a communications/outreach plan methodology.
- Expedite certification and prequalification.
- Establish a mentor/protégé program.
- Enact a fast-pay process.
- Establish sanctions/liquidated damages.
- Unbundle contracts.

Regional Workforce Development

- Assess union workforce availability.
- Establish training/readiness requirements.
- Enact an earned credit program.

Compliance Monitoring and Reporting

- Create an independent compliance monitoring entity.
- Develop real-time electronic reporting.
- Establish an enforcement program.
- Institute quarterly update meetings.

Conclusion

The EOWB, complemented by O'Hare's Western Terminal, would create a fundamental shift in the competitive position of the project area. These transportation improvements will bring with them a more modern, diverse, and higher value economic base that is more closely aligned with long-term economic trends. The Advisory Council agrees that major infrastructure investments in the area will bring the biggest return to the State of Illinois. The investment in the EOWB will not only improve the transportation system, it will allow the area to achieve new economic highs, create thousands of jobs, and enhance the overall livability in the region.

The findings of the Advisory Council serve as a starting point for this incredibly important project. Our collaborative effort produced innovative and meaningful results and while this report may be final, the journey to implement this regionally and nationally significant project is only beginning. With the goals, guiding principles and recommendations in this report, we stand firmly in support of this project and are fully committed to continuing to work collaboratively with the Illinois Department of Transportation (IDOT), the Illinois State Toll Highway Authority (the "Tollway"), and others to identify a consensus financing and implementation strategy to make this project a reality.

ECONOMIC IMPACT

Overview

The EOWB project encompasses a unique and special set of physical and economic relationships that together offer tremendous economic benefit to the area west of O’Hare, the Chicago region and the State of Illinois. This project along with the new Western Terminal at O’Hare will provide Illinois with the greatest potential for economic growth than any other planned project in the state. The combination of a world class airport, interstate highways, and intermodal freight facilities has already created one of the world’s largest industrial developments and the second largest employment center in the Chicago region. The attributes that were attractive to new development in the past are changing today with declining travel conditions, aging infrastructure, and outdated and obsolete development. Since 2007, employment in the area has declined by 70,000 jobs, or almost 14 percent for the area as a whole. Although the loss of employment has been seen across the country, a 14 percent decline in the project area is well above national (9 percent) and regional (7 percent) averages. Even more disturbing is that the analysis shows that employment in the area will not return to 2007 levels within the period of the study (2040) and may never return without this project being built with the Western Terminal.

Reversing these declining conditions was the focus of the Advisory Council’s Economic Impact Working Group, which asked “What does it take to create a different economic future for the area west of O’Hare?” We argue that the transportation issues in the area are nationally and regionally significant as recognized by SAFETEA-LU, as well as by the CMAP *GO TO 2040 Comprehensive Regional Plan* and the Urban Land Institute Chicago’s Infrastructure Initiative. Our examination of the economic interrelationships in the area has concluded that a comprehensive solution of sizable scope and scale is needed to provide a new future for the area.

Thus, a “Transportation–Economic Development Program” is needed where transportation improvements, not only improve access and travel efficiency for millions of tons of freight that move in and out of the area, but bring with them a new modern and diverse economic base that will transform the area. Central to this recommendation is a comprehensive transportation program that embraces the development of both the EOWB and O’Hare’s proposed Western Terminal. The projects are integrally linked, each supporting the other. While the projects have different construction time tables, the EOWB

Findings and Recommendations:

- ✓ *The EOWB should be developed as a “Corridor of the Future” that embraces new technologies, multi-modal travel, sustainability, and improved access to O’Hare from the west as a “Gateway.”*
- ✓ *Opportunity exists to create 65,000 permanent jobs in the project area by 2040.*
- ✓ *The EOWB and O’Hare’s Western Terminal together will transform the economic base of the area to new levels.*
- ✓ *Improvements should be implemented as a comprehensive “Transportation–Economic Development Program.”*
- ✓ *Local tax revenues have the potential to increase by \$29 million (2010 \$) annually.*
- ✓ *13,450 jobs will be created annually in the region during construction.*
- ✓ *\$750 million in federal, state, and local tax revenue will be generated during the construction period.*
- ✓ *Travel delay will be reduced, saving \$145 million annually by 2040.*
- ✓ *Taking no action will cause the area to stagnate and employment will not return to 2007 levels by 2040.*

will advance with compatibility for the Western Terminal. Our analyses show that the package of improvements will fully address the declining condition of the area. The EOWB provides the needed access and visibility to stimulate greater and more varied development than what exists today, and the Western Terminal builds on the growth associated with the roadway by adding diverse and high quality collateral development and full access to one of the world's busiest airports. The economic synergies of the two projects will markedly change the future of the area west of O'Hare and impact the entire region.

The economic future for the area is complemented by a perspective that the EOWB will be a "Corridor of the Future," one that is an appropriate solution for a project of regional and national significance. The perspective on this theme is that building a 21st century corridor will raise the profile of the area and attract next generation businesses. The concept for the "Corridor of the Future" is one that provides for transit and bike and pedestrian travel, incorporates sustainable practices, fits into the community surroundings, incorporates the latest technology for efficient travel, and provides a sense of place by serving as a gateway to the communities that it passes through and to O'Hare.

Our findings of the economic benefits of the EOWB are compelling, even more so with the development of O'Hare's Western Terminal. It is estimated that almost 10 million square feet of new office, retail, and industrial space, and almost 7,000 hotel rooms would be developed with the improvements. The increase in new development corresponds to 65,000 more jobs with the improvements by 2040. Of the 65,000 new jobs, 46,000 are attributable to the road improvements and 19,000 to the Western Terminal. The communities that gain the most employment with the improvements are those west of O'Hare, with almost 70 percent of the new jobs located in those communities. Growth there would be attributable directly to the greater visibility of properties in those areas from the new roadway and collateral development would occur there because of the new Western Terminal. Other community benefits with the new development would be an estimated \$29 million annually by 2040 in new tax revenue. In addition to the permanent jobs created by new development, construction of the project would have a sizable impact on job creation, estimated to be more than 13,000 jobs annually for the period of construction. The other benefits of construction yield an estimated \$750 million in federal and state tax revenue and a total regional output of \$6 billion. One other economic benefit is the cost savings associated with more efficient travel with the EOWB, estimated to be \$145 million annually by the 2040.

We, in assessing the economic impact of the project, have concluded that together the EOWB and the Western Terminal would facilitate a fundamental shift in the competitive position of the project area. It allows for the transformation to a more modern, diverse, and higher value economic base that is more closely aligned with long-term economic trends and provides more fiscal stability to the local municipalities. We believe that major infrastructure investments in the area will bring the biggest return to Illinois. The investment in the EOWB and O'Hare's Western Terminal, and the attributes already present in the project area, together will create diversity in development that will achieve new economic highs.

Economic Impact Analyses

Building upon the work of CMAP and DuPage County, our studies examined both the short- and long-term economic impacts of the project. The expenditure required to construct the project would have short-term economic effects within both the project area and the region in terms of job creation, tax revenue, and additional economic factors. The long-term evaluation of economic impacts analyzed the potential for new development and redevelopment within the project area, and the resulting effect on long-term job growth and future tax revenue. We also estimated how the project would provide more efficient travel and time savings, and considerable annual cost savings. Lastly, we analyzed the cumulative and synergistic economic effects of the EOWB project in connection with other major infrastructure projects occurring in the same time frame. These analyses paint a picture of a critical infrastructure project that offers significant employment, fiscal, and economic benefits to the project area, the region, and the state.

Long-Term Economic Benefits

The EOWB project area encompasses more than 120 square miles and overlaps 33 communities (Figure 1). The long-term economic forecasts were developed for the project area using a market-based approach that considered the market position of the project area in the context of the proposed transportation improvements, regional employment and population growth forecasts, long-term real estate development trends, community plans and aspirations, the potential for change at the site level and site suitability of development for various real estate product types. As noted, the long-term economic impacts examine the difference in economic growth between two future transportation investment scenarios. In one, the EOWB and the Western Terminal at O’Hare would be built by 2040. In the other, neither would be developed within the 30-year analysis period.

Figure 1: EOWB Project Area for Long-Term Economic Impact Analysis



The two different scenarios of transportation investments are projected to result in two dramatically different long-term economic outcomes for the project area by 2040. Table 1 shows the aggregate long-term economic growth for each scenario, and the difference between the two scenarios representing the net economic impact for the project area. The economic growth for each scenario and net impacts are presented in terms of:

- Net new development potential
- Net new jobs added
- Annual taxes from net new development in 2040

Table 1. Long-Term Economic Impact for the Project Area

	EOWB & Western Terminal Developed	EOWB & Western Terminal Not Developed	Net Long-Term Economic Impact
Net New Development (2010–2040)			
Office	12,840,000 ft ²	5,160,000 ft ²	7,680,000 ft ²
Retail	2,690,000 ft ²	2,180,000 ft ²	510,000 ft ²
Industrial/business park	3,310,000 ft ²	1,840,000 ft ²	1,470,000 ft ²
Hotel rooms	10,600	3,900	6,700
Residential units	17,600	17,400	200
Job growth (2010–2040)	104,000	39,000	65,000
Annual municipal tax revenues in 2040 from net new development (2010 \$) ^a	\$94,800,000	\$66,100,000	\$28,700,000
<p><i>Note:</i> The analysis does not include the school district portion of property taxes.</p> <p>^aAnnual municipal tax revenues include hotel taxes, sales taxes, and property taxes for all property types (commercial, industrial, residential, etc). For property taxes, a combined tax rate has been created for each community that includes overlapping parks, library, and fire protection districts. Since some communities include these services in their base rate and others do not, this allows for better comparison of overall community impacts.</p>			

As shown in Table 1, investment in the EOWB, in combination with other economic stimuli in the area and the new Western Terminal, is forecast to generate significant new development potential and roughly 104,000 jobs by the end of the 30-year analysis period. New development will yield an estimated \$94.8 million (2010 \$) in annual municipal taxes in 2040. These taxes include the municipal part of hotel and sales taxes and property taxes for core municipal services.

Without the EOWB and Western Terminal, the project area would have limited development potential and a more constrained growth of 39,000 jobs. The relatively limited new development would provide \$66.1 million (2010 \$) in annual municipal taxes in 2040 within the project area.

The significant difference between the economic growth projections of the two transportation investment scenarios reflects the economic impact associated with the combined EOWB and the Western Terminal. If the EOWB and the Western Terminal were developed, there would be 65,000 more jobs and \$28.7 million in additional annual municipal tax revenues by 2040 within the project area than if neither transportation investment occurred. The job and tax revenue growth are a result of the increased development potential of 9.7 million square feet of office, retail, and industrial uses and 6,700 hotel rooms.

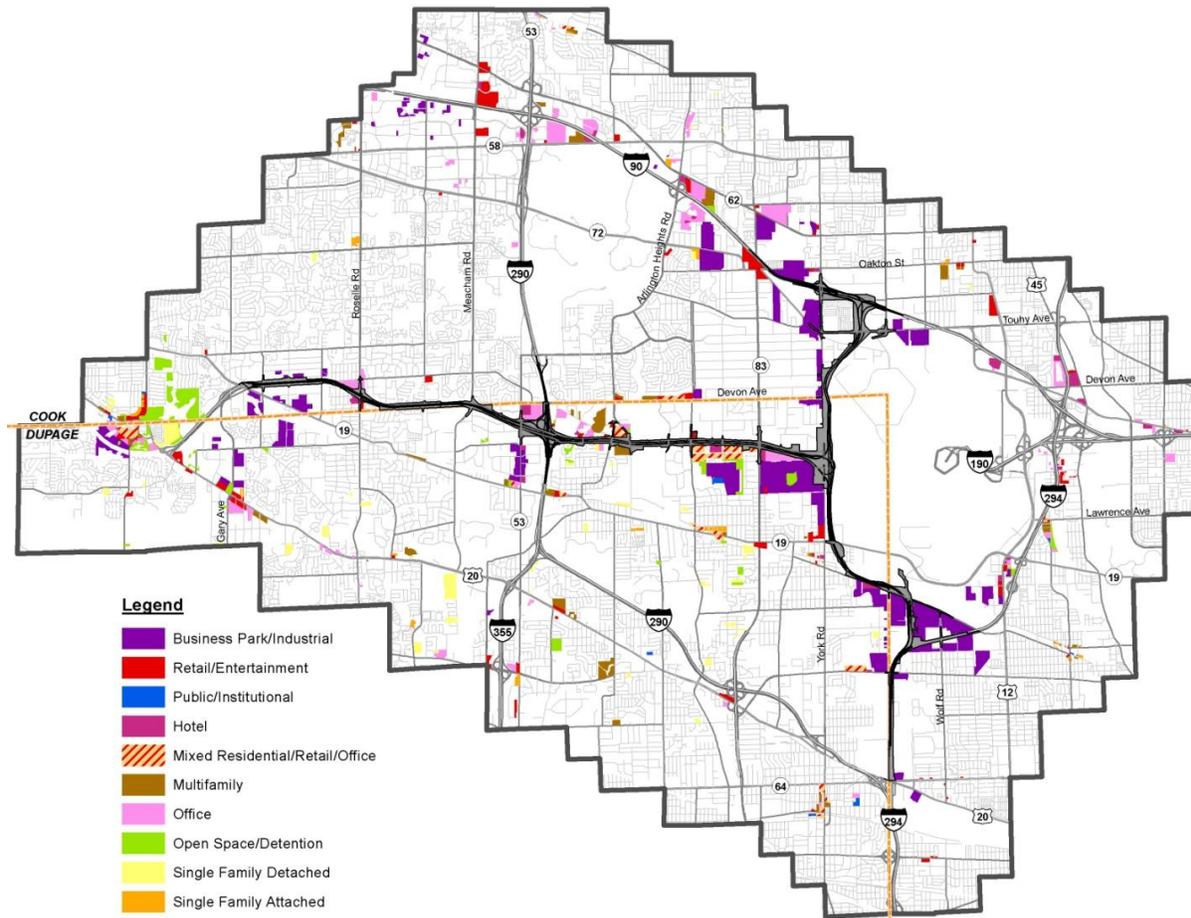
This tremendous growth potential with the proposed investments is driven by the synergy between the EOWB and the surrounding development and infrastructure. The EOWB would be an important addition to the transportation hub that would create further connectivity to multiple highways (I-290, I-94, I-294) and other modes of transportation, and provide access to numerous local roads in the project area, reducing congestion in the region and making the project area one of the most accessible parts of the region. The EOWB would also function as the western gateway to one of the world’s busiest airports. These factors, combined, would have the following effects:

- **Stimulate New Development.** The EOWB and the Western Terminal are projected to fundamentally change the competitive position of the area and to attract corporate offices, hotels, modern industrial/business parks, and retail uses. Figure 2 shows potential future land use for key areas within the project area that are forecast to redevelop over the next 30 years if the EOWB and the Western Terminal are developed. The new development pattern is a shift away from the current predominance of industrial

development to a more modern and diverse commercial center that, on average, has higher job density and a higher tax base. Corporate office developers and a major industrial developer in the region confirm that this is the likely outcome. The emergence of a new mixed use employment center in the Chicago region that includes office, hotel, retail and industrial uses west of O’Hare is a unique opportunity being facilitated by the convergence of major transportation investments.

- **Improve the Performance of Existing Development.** Existing development within the project area is experiencing relatively high levels of vacancy related to the nationwide recession. The proposed transportation investments would make existing industrial and commercial real estate more attractive for businesses, and vacancy levels are projected to return to pre-recession lows as new businesses seek space in the project area.

Figure 2: Future Land Use for Areas Projected to Change by 2040



Regional growth will be constrained because the lack of a Western Terminal will result in less development and associated job growth. Airports are a major economic engine, and constraining flights (by not constructing a Western Terminal) at O'Hare would result in significant negative economic impacts, particularly in economic sectors such as management of companies and enterprises, professional scientific and technical services, hospitality, and other service sectors that have a relatively strong dependency on air travel. There will also be limited job growth for industrial and service sectors that are dependent on supplying goods and services to the airline industry.

Figure 3 shows the distribution of the projected 2040 long-term job impact or the difference in job growth in the two transportation investment scenarios by subzone.¹ The area that stands to experience the greatest benefit if both the EOWB and the Western Terminal are developed is the one with direct frontage and access to the improvements. Many communities along the proposed EOWB have begun planning for the development potential catalyzed by the improvements. They are changing their zoning codes to be able to take advantage of the significant real estate opportunities projected to be brought about by the transportation investments. With the proposed improvements, the western communities have the opportunity to transform into a modern employment center with corporate office, hotel, industrial/business park and retail uses. The result would be 44,000 more jobs in DuPage County communities and 21,000 more jobs in Cook County (see the table in Figure 3).

For the purposes of comparing new development potential, job generation and tax revenues across municipalities, the subzone-based analysis was summarized to generate community-based estimates. Table 2 shows the net economic impact or the difference in economic growth between the two transportation investment scenarios by community.

The communities showing the greatest gain in development potential, employment and tax revenues are the communities directly fronting the EOWB. The economic analysis specifically accounts for both community development goals and market potential. Communities such as Itasca, Wood Dale, Bensenville and Roselle are positioning themselves to capture development potential from the EOWB by working to plan for and implement catalytic redevelopment. Therefore, these communities show the greatest potential economic benefits: 0.9 to 2.4 million square feet of commercial and industrial development potential, 475 to 1,575 new hotel rooms, 2,700 to 9,500 new jobs, and \$1.7 million to \$5.7 million in new municipal tax revenues.

As noted, if no new Western Terminal is developed, the constraints on flights at O'Hare will impede job growth in the entire project area, particularly in service and hospitality sectors. Conversely, certain communities with non-EOWB frontage within the project area, such as Rolling Meadows and Arlington heights, will experience significant benefits that relate primarily to the Western Terminal and O'Hare expansion and, to a limited extent, the greater regional accessibility provided by the EOWB.

¹ Subzones are a geographic unit CMAP uses for transportation modeling purposes.

Figure 3: Spatial Distribution of Projected Long-Term Job Impact (2010–2040)

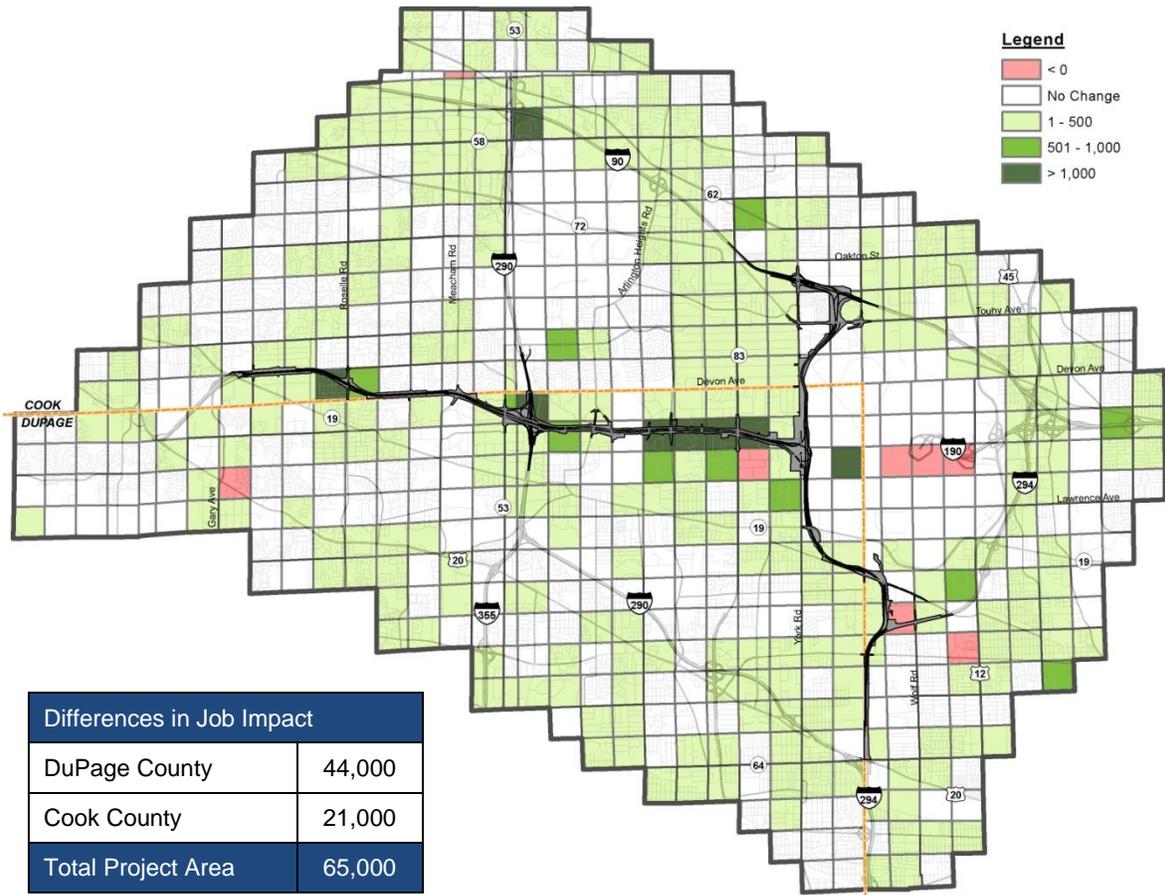


Table 2. Long-Term Economic Impacts by Community

Municipality	Net New Development Potential			Net Job Impact	Net Annual 2040 Taxes from New Development (2010 \$s)
	Commercial ft ²	Industrial ft ²	Hotel Rooms ^a		
Addison	16,000	4,000	—	1,500	\$44,000
Arlington Heights	131,000	8,000	300	1,300	\$1,106,000
Bartlett	—	—	—	50	\$—
Bellwood	—	—	—	130	\$—
Bensenville ^b	960,000	600,000	1,575	5,100	\$4,219,000
Berkeley	—	—	—	500	\$10,000
Bloomingtondale	25,000	—	—	600	\$19,000
Chicago ^c	75,000	—	—	10,000	\$172,000
Cook County	—	—	—	1,000	\$—
Des Plaines	(161,000)	147,000	450	1,800	\$1,809,000
DuPage County	—	—	—	700	\$—
Elk Grove Village	108,000	142,000	175	4,800	\$903,000
Elmhurst	19,000	—	—	1,600	\$39,000
Franklin Park ^b	(81,000)	193,000	—	1,600	\$1,273,000
Glendale Heights	—	—	—	10	\$—
Hanover Park	239,000	97,000	190	1,200	\$439,000
Hillside	—	—	—	10	\$—
Hoffman Estates	—	—	—	70	\$—
Itasca ^b	2,377,000	—	1,225	9,100	\$4,527,000
Melrose Park	—	—	—	200	\$—
Mount Prospect	360,000	442,000	100	1,600	\$1,400,000
Norridge	—	—	—	30	\$—
Northlake	—	100,000	—	400	\$178,000
Park Ridge	11,000	—	—	300	\$25,000
River Grove	—	—	—	70	\$—
Rolling Meadows	661,000	(40,000)	375	2,800	\$2,141,000
Roselle ^b	641,000	224,000	475	2,700	\$1,747,000
Rosemont	76,000	—	350	1,300	\$1,048,000
Schaumburg	165,000	449,000	350	4,700	\$1,824,000
Schiller Park	42,000	15,000	—	500	\$92,000
Streamwood	—	—	—	80	\$—
Villa Park	—	—	—	200	\$—
Wood Dale ^b	2,531,000	(906,000)	1,125	9,500	\$5,710,000
Total	8,195,000	1,475,000	6,690	65,450	\$28,725,000

^aFive of the area municipalities are non-home rule, so all local hotel taxes must be used for tourism under current statute. For the taxes to be used more broadly, statutes would have to be changed to allow a broader set of uses for hotel taxes or these communities would have to pass a referendum to convert to home rule status.

^bNon-Home Rule municipalities.

^cCity of Chicago sales tax estimates do not include potential sales taxes at a new Western Terminal, which could generate significant restaurant and retail sales.

Short-Term Economic Impacts

The dollars expended to construct the transportation improvements would lead to short-term economic benefits during the construction period, including job creation (direct, indirect, and induced jobs), added federal and state tax revenue (business profit, indirect business, personal income, social insurance taxes), value added (the difference between the sale price of a product and the cost of its inputs), and economic output (the measure of total goods and services used and produced). The spending and respending of construction dollars in the area/region is expected to lead to increased income and, hence, increased consumer spending.

The economic effects of the investment in infrastructure were estimated using the economic model “IMPLAN PRO.”² The model estimates the economic impacts of construction on the economy³ by tracing spending and consumption among various economic sectors, including businesses, households, government, and “foreign” economies in the form of exports and imports. IMPLAN estimates economic impacts in terms of four components: value added, employment, increased tax revenues, and economic output.

For this analysis the following assumptions were used:

- A cost of \$3.021 billion (2009 dollars) for construction and \$550 million for right-of-way⁴.
- It was assumed the construction costs would be evenly spread over a 3-year period.

The IMPLAN model generates annual outputs. For this analysis, the annual outputs were summed when appropriate for the 3-year construction period. An exception to totaling for the construction period was the number of jobs created, which is presented as an annual number.

Table 3 details the results of the analysis. Construction of the proposed roadway elements would result in creation of 13,450 jobs per year over the construction period. Of those, 7,430 would be direct jobs in the highway industry (those created as part of roadway construction) and 6,020 would be indirect and induced jobs. (Indirect jobs are those held by employees working for producers of material, equipment, and services used on the construction project. Induced jobs are those created by wages spent on consumer goods and services.)

Table 3. Economic Impacts from Construction

	Roadway	Transit
Construction costs	\$3 billion	
Total jobs created (per year)	13,450	1,355
Total value added	\$3.3 billion	\$330 million
Added federal tax revenue	\$522 million	\$54 million
Added state tax revenue	\$225 million	\$22.5 million
Economic output	\$6 billion	\$600 million
<i>Note: Economic benefits assume a 3-year construction period and are for the area including Cook, DuPage, Kane, Lake, McHenry, and Will counties, Illinois; and Kenosha County, Wisconsin.</i>		

² IMPLAN is an economic impact software model that predicts the way a dollar injected into one sector of the economy is spent and respent in other sectors, generating waves of economic activity, or “economic multiplier” effects. The model uses national industry data and county-level economic data to generate a series of multipliers that in turn estimate the total economic implications of economic activity.

³ For this analysis, the region of influence—the area assumed to experience most of the economic impacts from the project—includes Cook, DuPage, Kane, Lake, McHenry, and Will counties, Illinois; and Kenosha County, Wisconsin.

⁴ Right-of-way costs typically are treated as transfer payments, and therefore do not contribute to an increase in economic activity in terms of jobs and value added.

Value added—the value of commodities produced by the industries in the region over and above the cost of commodities used from the previous stage of production—would be an estimated \$3.3 billion over the 3-year construction period.

- Construction of the EOWB would generate an estimated \$522 million in federal income taxes over the 3-year construction period (\$174 million per year), and an estimated \$225 million in state and local taxes (\$75 million per year).
- Economic output⁵—the measure of total goods and services used and produced by the industries in the region—would be \$6 billion over the 3-year construction period (or \$2 billion per year).

The economic impact of constructing the transit element of the project was evaluated separately because of uncertainty surrounding the timing of its implementation. Economic impacts have been estimated for transit service in the east-west corridor of the EOWB. Whereas the roadway component will provide a reservation for transit in the east-west corridor only, the economic impacts are based on transit costs associated with the construction of dedicated travel lanes for bus rapid transit or rail for the light rail option, as well as stations, parking, station access, and other appurtenances required for operation. That analysis of the economic benefit from an expenditure of the \$325 million result in creation of 1,355 jobs per year during the 3 years of construction. Value added would be an estimated \$330 million over the 3-year construction period (\$110 million per year). The transit component would also would generate an estimated \$54 million over the construction period in federal income taxes (\$18 million per year), and an estimated \$22.5 million in state and local taxes (\$7.5 million per year). Finally, economic output would be \$600 million over the construction period (or \$200 million per year).

Cumulative Economic Impact

The potential for induced economic effects from the proposed build alternative is substantial for the region, and is more prominent when considering the combined, or cumulative, effects of the other reasonably foreseeable local actions. Cumulative economic effects were estimated using IMPLAN PRO and included the following projects, to be constructed between 2014 and 2019:

- The O'Hare Modernization Plan (OMP) improvements (completing runway 10-C and constructing runway 10-R and other enabling projects), which began in 2011 and will continue through 2015
- Interim transit improvements along the Elgin-O'Hare Expressway (express bus service routed in mixed traffic, using strengthened shoulders where needed) planned for 2018
- I-90 resurfacing between the Elgin Plaza and the Kennedy Expressway, slated for 2015
- The York Road/Irving Park Road grade-separated intersection, to be constructed between 2012 and 2014
- I-90 reconstruction and lane addition project, between IL 53 and the Kennedy Expressway, to occur between 2016 and 2018

Cumulative economic impact from construction of the EOWB combined with the other improvements would result in \$4.3 billion in construction costs over the 5½-half year period of 2014 to 2019 (Table 4). Annual construction costs would range from \$27 million in 2019 to \$86 million in 2015.

The cumulative total number of jobs created (including direct, indirect, and induced) range from 3,668 jobs created in 2019 to 11,471 jobs in 2015. Between 2014 and 2018, more than 10,000 jobs would be created annually, and only in the last year, as construction is completed, would jobs decrease to 3,000. Other cumulative effects include total value added as \$4.63 billion and total output as \$8.55 billion.

⁵ Economic output is subject to double counting, as it does not net out the intermediate sales of goods and services. Nevertheless it provides a measure of economic activity in terms of sales in the region.

Table 4. Cumulative Economic Impacts of EOWB Construction and Concurrent Projects (2009 \$)

	Construction Costs	Total Value Added	Total Output	Direct Jobs Created	Total Jobs Created
2014	\$830 million	\$890 million	\$1.64 billion	5,873	11,071
2015	\$860 million	\$920 million	\$1.70 billion	6,086	11,471
2016	\$770 million	\$830 million	\$1.53 billion	5,449	10,270
2017	\$770 million	\$830 million	\$1.53 billion	5,449	10,270
2018	\$810 million	\$870 million	\$1.61 billion	5,732	10,804
2019	\$270 million	\$290 million	\$540 million	1,946	3,668
5½-year total (2014–2019)	\$4.31 billion	\$4.63 billion	\$8.55 billion	—	—

Travel Cost Saving

The project would provide marked improvement in travel performance throughout the roadway system in the project area. The reduction in delays resulting from the transportation improvements would result in a large cost savings for travelers (Table 5). The cost savings were estimated by applying an hourly value of time to the motorist and an hourly operating cost of the vehicle of \$43/hour in 2010 and \$90/hour in 2040 dollars. The project’s travel model generated the total annual hours of eliminated delays. The EOWB project would produce an annual cost savings of about \$400 per motorist in the project area, or \$145 million for all motorists in the project area.

Table 5. Cost Savings for Reduced Travel Delay

	Cost Savings
Annual Cost Savings per Motorist	\$405
Annual Cost Savings All Motorists	\$144,821,700

Economic Opportunities at Risk

Since 2007, employment in the project area has declined by nearly 66,000 jobs, about 14 percent. Loss of employment has been seen across the country, but the 14 percent decrease within the project area is above the national average and higher than the Chicago metro area average of 7 percent for the same period. The predominance of manufacturing businesses contributes to the higher than average loss, because the manufacturing sector has low long-term growth prospects and high potential employment declines in recessionary periods. Without the proposed highway and the Western Terminal, the prospect of achieving the pre-recession highs in employment within the project area is unlikely. The projections show that without the proposed improvements, employment in the area would grow by only 39,000 jobs over existing levels by 2040 and there would still be 27,000 fewer jobs than in 2007. In addition, most of the projected growth is likely to occur along I-90 and in the area east of the O’Hare, leaving the area west of O’Hare in a state of stagnation.

The scenario with the proposed highway and the western terminal, however, shows tremendous ability to attract new development, resulting in increases in employment of 104,000 over current levels. The combination of the new transportation facilities and the Western Terminal would facilitate a fundamental shift in the competitive position of the project area and allow it to achieve a more modern and diverse economic base more nearly aligned with long-term economic trends and to provide more fiscal stability to the local municipalities. The improvements likely will lead to short term development opportunities and further provide the area with competitive advantages needed to sustain long-term growth. By 2040, the infrastructure proposed for the EOWB and the Western Terminal would contribute to a significant permanent job impact of 65,000 net new jobs within the project area.

FINANCING

Overview

The following “Guiding Principles,” adopted by a unanimous roll-call vote of the Financing Working Group of the Advisory Council on June 24, 2011, represents the consensus agreement among the members of the Advisory Council on financing and implementing the EOWB.



FINANCING AND IMPLEMENTATION GUIDING PRINCIPLES FOR THE ELGIN-O’HARE WESTERN BYPASS/ACCESS

June 24, 2011

Introduction

In October 2010, Governor Pat Quinn formed the Elgin-O’Hare West Bypass Advisory Council (the “Advisory Council”) to make recommendations on the implementation, financing and operating structure for the extension of the Elgin-O’Hare Expressway, a Western Bypass and a complimentary transit network. One of the objectives of the Advisory Council was to prepare a report for the Governor identifying a financing and implementation strategy for these improvements.

The Advisory Council recognizes that all levels of government must perform their governmental responsibilities in the consideration and implementation of public policy objectives. At the same time, the Advisory Council recognizes that in order for a project of such national and regional significance to be financed and implemented, government agencies will need to reach consensus and identify innovative funding arrangements, financing approaches and/or implementation strategies for the project to become a reality. The Advisory Council concludes that by endorsing key goals or guiding principles, a successful project can be crafted to serve the needs of the specific governmental interests and the critical infrastructure needs of the citizens and businesses of the broader metropolitan region and the State of Illinois. The Advisory Council supports the following guiding principles to facilitate the financing and implementation of the Elgin-O’Hare Western Bypass/Access.

Guiding Principles

No. 1 Regional Consensus and Continued Discussion

The Guiding Principles outlined in this document represent the strong regional consensus of the Advisory Council, and are critical to the project becoming a reality. Additional work needs to be done to complete the alignment of sources and uses of project funding so that agreement can be achieved to begin construction. Therefore, the Financing Working Group must continue its collective progress in partnership with the two lead state transportation agencies, the Illinois Department of Transportation (IDOT) and the Illinois State Toll Highway Authority (the “Tollway”), beyond the Advisory Council’s final report to the Governor.

No. 2 Design and Implementation

It is the consensus of the Financing Working Group that the implementation of the Elgin-O'Hare Western Bypass/Access should be consistent with the overall master plan for improving travel efficiency and western access to O'Hare International Airport, as well as enhancing multi-modal connections, and reducing congestion. Should financial constraints limit the ability to complete the full-build master plan, the project should be constructed with design configurations consistent with IDOT's initial construction plan as of June 2011, with that phase being constructed in its entirety. As IDOT completes the Tier Two environmental and engineering studies required by federal law, the Tollway should engage in the necessary activities to advance the project to construction. In addition, federal, state and local leadership should vigorously advocate for the Western Terminal at O'Hare International Airport, an integral component of the larger Western Access plan.

No. 3 Continued Federal Government Support

It is the consensus of the Financing Working Group that the project is nationally significant and the Illinois congressional delegation should be actively and aggressively engaged in securing federal support. Continued federal support should be broadly and aggressively pursued and include legislation, loans, grants, or other forms of assistance consistent with that obtained for projects of similar size and complexity.

No. 4 Stakeholder Support and Participation

It is the consensus of the Financing Working Group that its work continue in order to further develop both workable and innovative financing options that will support the construction of the project in its entirety. The project is nationally and regionally significant and all governments that will reap positive economic development benefits from its enhanced access and mobility improvements participate in supporting the project. Recognizing the complexity and expense of the project, government financial support should be broadly reviewed and may include contributions such as past and future right-of-way donations from both public and private owners. Care should be taken to ensure that any proposed contributions are equitable and proportionate to the economic benefits derived from the project and the economic benefits generated by assets of a particular local government. Consideration of any cost participation will require continued discussion, analyses and consensus among the project stakeholders.

No. 5 Tolling

It is the consensus of the Financing Working Group that tolling the Elgin-O'Hare Western Bypass/Access should be among the financial strategies considered for implementation of the project. Toll rates on the existing tollway system should be raised to levels consistent with national averages if raising toll rates will generate additional revenue to assist in providing funding for the Elgin-O'Hare Western Bypass/Access in its entirety. Toll rates for any new projects should be consistent with the level of other new toll projects nationwide. In addition, regional road pricing strategies, including congestion pricing, can provide for more balanced and efficient utilization of the regional transportation network and should be considered. Any future toll rate increase should be indexed consistent with regional inflation and/or congestion levels. Further study should be given to tolling and managed lanes on critical and adjacent freeways and, where necessary, the Illinois congressional delegation should be aggressively and creatively engaged to secure any required federal approvals. The Tollway's bond term should be extended up to a 40-year maturity to support additional bonding for the Elgin-O'Hare Western Bypass/Access to fully leverage the recommended toll rate increase and align with federal financing mechanisms available through the Transportation Infrastructure Financing and Innovations Act (TIFIA).

No. 6 Transit and Other Modal Choices

It is the consensus of the Financing Working Group that the project design should embrace and include travel choices, including transit, provided that there is demand and a mechanism to finance additions to the regional transit system, as well as sidewalks and trails for pedestrians and bicyclists. Rights-of-way should be of sufficient width to not preclude the accommodation of future transit and non-motorized travel alternatives. The level of investment in transit and other modes should provide capacity that satisfies the demand. A viable plan to fund the operating expenses of these alternative modes should be developed prior to implementation.

No. 7 Alternative Delivery Options – Public-Private Partnerships

It is the consensus of the Financing Working Group that all available financing and operation options should be considered with a view towards completing the financing and construction of the project. However, care must be taken not to disadvantage any public entity in the decision-making process. A public-private partnership (P3) arrangement with a public equity contribution may be among the project delivery options under consideration. Private sector engagement must be consistent with federal and state law and the private sector must be required to comply with, but not limited to, detailed operating standards and maintain the improvements at industry-accepted levels of service. The agreement with the private sector must also address capital expenditures, contain provisions for new technology, and must comply with strict environmental and safety standards for toll facility operation. No unfair advantage should be given to the private sector with respect to toll rates relative to public entities.

No. 8 Transparency and Accountability

It is the consensus of the Financing Working Group that future activities regarding the project and any engagement with the private sector should be conducted in a transparent and accountable manner in order to continue to provide the highest level of integrity and openness.

Financing Working Group Roll Call:

- Andolino Aye
- Barrett Aye
- Blankenhorn Aye
- Craig Aye
- Cronin Aye
- DiCianni Aye
- Gates Aye
- Hartwig Aye
- Johnson Aye
- Larson Aye
- Meister Aye
- Moylan Aye
- Pandolfi Aye
- Pedersen Aye
- Pruyn Aye
- Pulice Aye
- Schillerstrom Aye
- Smolinski Aye



The following sections of the Financing section of this report are an attempt to summarize the lengthy work of the Financing Working Group but do not represent the consensus agreement among the members of the Advisory Council.

Construction Sequencing Plan

Fiscal constraints, competing needs, and escalating costs necessitate a phased approach to the implementation of major transportation projects across the nation. These conditions require transportation agencies to identify a full-build master plan for major projects and also a construction sequencing plan. The full-build master plan for the EOWB comes at high cost (\$3.6 billion) and includes features that may not be needed initially to serve near-term travel demand. With the present uncertainties regarding the level and timing of funding availability, a construction sequencing plan is necessary.

An initial construction phase of the EOWB has been developed with the objective of building a financially attainable plan that maintains the integrity of the overall master plan by addressing the transportation needs and goals of the area. The initial construction phase serves the area's travel needs within an interim design period and satisfies federal requirements for operational independence and logical termini (Figure 4). This plan is broadly supported by local governments and represents a fiscally-responsible approach for addressing the area's diverse travel needs - improving travel efficiency, western access to O'Hare, multi-modal connections, and reducing congestion.

Initial Phase: Roadway and Transit

When compared to the ultimate plan for the EOWB, the initial construction phase represents a scaled-down version. The initial roadway plan includes the construction of the Elgin-O'Hare Expressway Extension (from I-290 to the proposed West Bypass) and West Bypass (between I-90 and I-294); however, the initial plan provides fewer travel lanes along the mainline, fewer interchanges, and (in some cases) interim layouts for new interchanges.

The initial plan transit service includes express bus service along the Elgin-O'Hare corridor in mixed traffic (shared lanes with other drivers) and a shoulder-riding option during heavily congested periods. The bus service would use exit and entrance ramps along the facility with intermediate stations located for passenger drop-off/pick-up along the ramps or frontage road. This plan is estimated to cost \$53 million (includes rolling stock, stations, parking improvements, signing, and shoulder pavement upgrades) and represents a lower-cost means to expand transit service and encourage long-term growth in market demand and ridership. The service, anticipated to be provided by Pace suburban bus, would likely be the largest single capital project ever attempted by Pace and would represent about half of its 2011 capital program.

The cost of the initial construction plan in present year (2010) terms is estimated at \$2.2 billion. The total includes the estimated construction costs, remaining engineering costs, remaining right-of-way acquisition costs, and the transit costs. Costs at the time of actual project implementation will depend on future labor and material costs, competitive market conditions, actual site conditions, final project scope, implementation schedule, and other variable factors. Although contingencies have been included in the current cost (25 percent for construction costs, 50 percent for right-of-way acquisitions), actual costs will depend on the schedule and conditions in place at time of project implementation. Construction costs historically have escalated at an average annual rate of about 3.5 percent (*Associated General Contractors of America*, FY 2011–12).

Engineering costs were assumed to be 20 percent of the total construction cost. The costs for the current preliminary engineering and detailed environmental studies (roughly \$47 million to date) are not included. In addition, acquisition costs were estimated based on the area required to accommodate both the roadway and transit improvements (Table 6). Public and privately owned properties are included in the estimate.

Figure 4: EOWB Construction Sequencing

WEST

- Widen and resurface existing Elgin O'Hare Expressway
- Provide express bus transit in mixed traffic
- Estimated Costs:
 - Construction and Engineering (Roadway): **\$53M (2010 \$)**
 - Right-of-Way: **\$0**
 - Transit: **\$27M (2010 \$)**
- Future Phase: Mainline widening/reconstruction, existing interchange improvements, and dedicated transit corridor

NORTH

- Construct new West Bypass as 4-lane access controlled facility
- Improve/construct interchanges at I-90 at Elmhurst Road, I-90, and Touhy Avenue
- Estimated Costs:
 - Construction and Engineering (Roadway): **\$279M (2010 \$)**
 - Right-of-Way: **\$188M**
- Future Phase: Mainline widening and new interchange construction

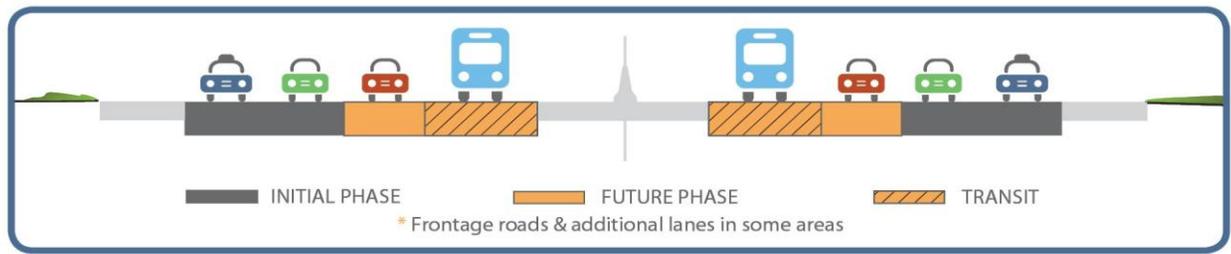
CENTRAL

- Construct new Elgin O'Hare as 4-lane access controlled facility with frontage roads
- Improve/construct interchanges at Meacham Road, Rohlwing Road, I-290, Park Boulevard/Prospect Avenue, Wood Dale Road, IL 83, and West Bypass
- Provide express bus transit in mixed traffic
- Estimated Costs:
 - Construction and Engineering (Roadway): **\$764M (2010 \$)**
 - Right-of-Way: **\$77M**
 - Transit: **\$26M (2010 \$)**
- Future Phase: Mainline widening, existing interchange improvement, and dedicated transit corridor

SOUTH

- Construct new West Bypass as 4-lane access controlled facility
- Improve/construct interchanges at I-24 at IL 64, I-294, Franklin Avenue/Green Street/County Line Road, IL 19
- Construct Taft Road Connector
- Estimated Costs:
 - Construction and Engineering (Roadway): **\$574M (2010 \$)**
 - Right-of-Way: **\$207M**
- Future Phase: Mainline widening and existing interchange improvements

Initial Construction Phase:
\$2.2 B (2010 \$)
 Future Phase(s):
 \$1.4 B (2010 \$) (Excludes Transit Costs)



Future Phases: Roadway and Transit

Future improvements along the Elgin-O’Hare and West Bypass corridors would build upon the initial construction phase to continue to address the long-term travel needs in the area. Future phases include additional travel lanes, interchange improvements, and a dedicated transit corridor. The “envelope” for high-capacity transit to be co-located in the median of the Elgin-O’Hare corridor and along the east side of the north leg of the West Bypass would be provided, but would need to be implemented by the appropriate transit service provider.⁶

Maintenance and Operations Costs: Roadway and Transit

Consideration of maintenance and operation costs is crucial to understanding the financial requirements of the EOWB. As with all transportation projects, costs include both the up-front investment (to cover the initial capital costs) and ongoing investment in the maintenance and operation of the facility. The operating and maintenance costs for a tolled facility are estimated to be \$175,000 per lane-mile. The cost reflects ongoing administrative costs for a tolled facility, including maintenance of the roadway and roadside; daily review of the system, revenue, and violation performance to identify trends; support for state police patrol and enforcement and maintenance of field-level toll system equipment.

The estimated operating/maintenance cost of the dedicated express bus service in mixed traffic is \$2.7 million annually. The cost is estimated by a vehicle-per-hour rate (including vehicle operation, maintenance, and non-vehicle maintenance) of bus service and represents a small portion (1.5 percent) of Pace’s 2011 overall operating expense.

Table 6. Initial Construction Phase: Detailed Breakdown of Required Right-of-Way by Property Owner

Property Ownership ^a	Acres
Chicago	203.50
Elk Grove Village	2.97
MWRDGC	4.33
Tollway	27.79
Forest Preserve	0.89
Illinois Dept. of Transportation	10.08
Public Ownership Total	249.56
Railroad	35.35
Utility	41.04
Other	299.21
Private Ownership Total	375.60

^aBensenville, Des Plaines, Itasca, and Northlake each own properties within the project right-of-way less than 1 acre each.

Traditional Funding Sources

Federal Government

SAFETEA-LU is the current funding and authorization bill that governs federal surface transportation spending. Highway and transit programs are funded through the Federal Highway Trust Fund. Funding allocations to individual states is determined by a federal formula. Additionally, SAFETEA-LU provides funding for congressionally designated projects, including \$140 million provided for the EOWB which initiated its planning process. The primary revenue source for the Highway Trust Fund is the federal motor fuel tax, which since 1993 has been set at 18.4 cents per gallon.

The imbalance between infrastructure needs and resources is growing due to a combination of factors: escalating improvement needs, declining tax receipts, and the declining purchasing power of funds. A particular concern is the lack of the sustainable revenue source for the Federal Highway Trust Fund, which continues to experience declining revenue streams due to several factors, including the shift to

⁶ Future phase transit costs (\$425 million) were estimated based on the assumption of the implementation of BRT along the Elgin-O’Hare corridor and commuter rail (STAR Line segment) along the north leg of the West Bypass. However, this cost is not included in the total sum of future phase improvements for the ultimate project.

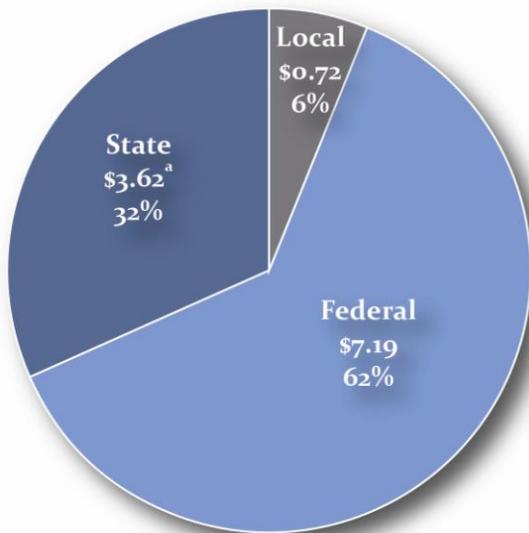
more fuel-efficient and alternative-fuel vehicles. Recognizing this trend, SAFETEA-LU provides the flexibility to leverage funding from various sources, including toll revenues, for infrastructure improvements. For example, Section 129 of Title 23 of the United States Code allows federal participation in the form of funding or loans to support projects with a dedicated revenue stream from tolls or other forms of taxes or fees. More than 75 Section 129 agreements currently are in place across the country (FHWA, *Tolling and Pricing Program 2010*).

With SAFETEA-LU set to expire on September 30, 2011, and its reauthorization under discussion, the scale and structure of the future federal surface transportation program remains uncertain. In a time of budget austerity, there is growing support for the concept that scarce federal dollars for infrastructure should be guided by cost-benefit principles rather than by the current formula-based grants and congressional earmarks. This principle has sparked calls from both the administration and a bipartisan legislative group for creation of a national infrastructure bank that would focus on projects with clearly demonstrated benefits, particularly transformative projects of national significance and major multi-year projects that require a reliable long-term source of financing. The EOWB project is clearly a strong candidate for continued federal support. The project would address demonstrated travel needs within a transportation hub of regional and national significance and also offers clear benefits in the form of measurable travel improvements and economic growth potential. Further, the project provides an opportunity to develop transformational “Corridors of the Future,” which accommodate multiple travel modes, fit their surroundings, and incorporate the latest technologies for efficient travel.

Illinois Department of Transportation

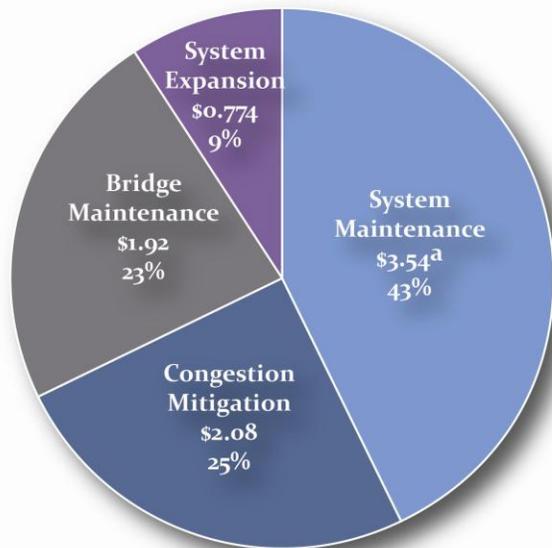
The IDOT is responsible for maintaining and operating the highway system of roads and bridges, as well as airports, rail and transit systems. The current \$11.5 billion FY 2012–2017 Proposed Highway Improvement Program, adopted in April 2011, identifies improvements to the state and local highway system based on anticipated funding levels from federal, state, and local funding sources, including proceeds from recent state bond sales.

FY 2012-17 State Program Funding (\$ Billions)



^a Includes \$230 million in bonds from Governor Quinn's Jump Start Capital Program and \$2.044 billion from the Illinois Jobs Now! bond program.

FY 2012-17 State Program Allocations (\$ Billions)



^a Includes \$0.843 billion allocated to interstate resurfacing projects and \$0.479 for safety improvements.

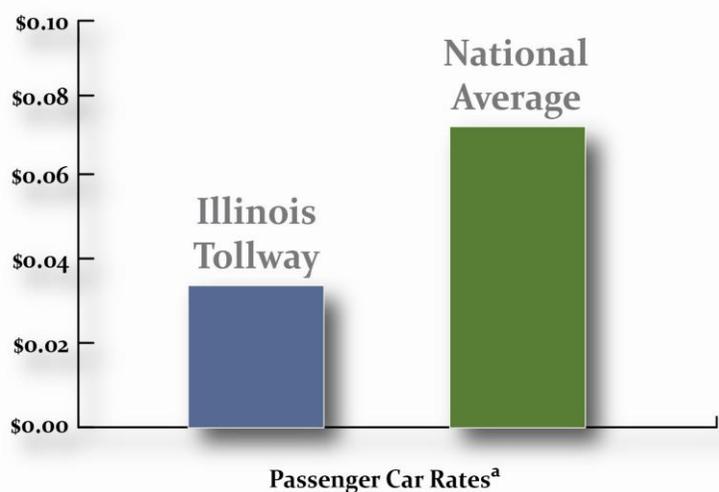
The program provides improvements to 3,248 miles of highways and 611 bridges throughout Illinois, with a focus on preserving and maintaining the existing roads and bridges, congestion mitigation, and system expansions to enhance economic development. It includes \$84.5 million in programmed funding for engineering and land acquisition for the EOWB project, including the \$35 million state match to the SAFETEA-LU funds.

Preservation and maintenance of the existing system will remain a core focus of the statewide program. About 11 percent of state highway mileage and 8 percent of state bridges are in need of repair, underscoring the need for continuing investments in the existing infrastructure as a statewide priority. Although IDOT is leading the necessary environmental and engineering work for the EOWB project, IDOT will be unable to implement and maintain the EOWB as a free highway on its system.

Illinois State Toll Highway Authority

Tolling is another common source of funding for major highway projects, wherein revenues are generated through direct facility user fees. Tolling is used extensively across the U.S. and internationally. In Illinois, tolling was first instituted with the construction of the original 187-mile Illinois Tollway system in 1958. Revenue from tolls has since been used to support ongoing operations and improvements to the original system and to construct and operate 99 miles of tollway extensions and capacity improvements. The Illinois Tollway system has historically been financially self sustaining and required no federal or state money. The Illinois Tollway system is among the lowest cost toll road systems in the U.S.

How the Tollway Compares (Cost/Mile)

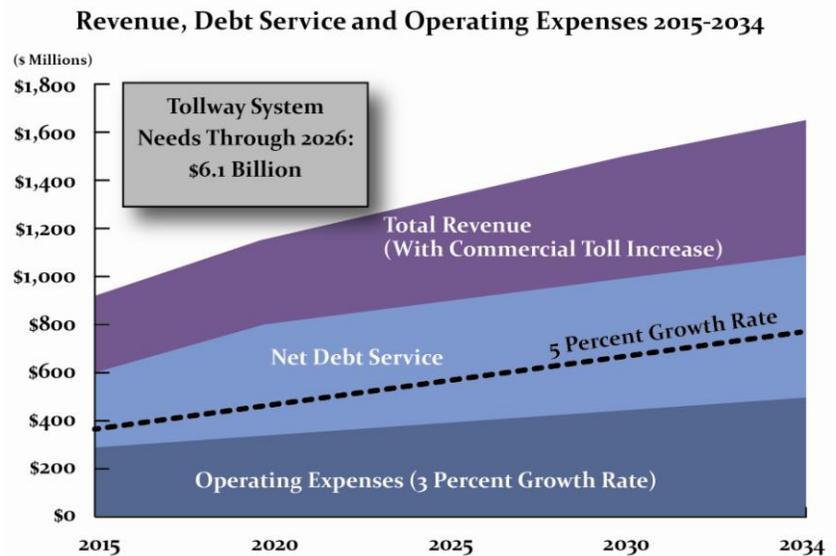


^a Illinois Tollway has second lowest passenger car toll rate in the U.S.

Note: Illinois Tollway commercial truck rates reflective of the scheduled increase January 1, 2016 are comparable to the national average (\$0.56 to \$0.51, respectively).

Both the Toll Highway Act and the Trust Indenture require that revenue generated on the system be used to fund Tollway projects, and stipulate how funds are to be used. Requirements of the Toll Highway Act stipulate that funds should be expended only on goods and services that protect and enhance the efficiency, safety, and environmental quality of the toll highway system. Revenues should be used first to maintain the toll highway system and to meet the Tollway obligations to its bondholders, with additional revenues to be spent only for reasonable and necessary Authority purposes that cost-effectively will enhance the toll highway system. Further, the Trust Indenture requires a balanced annual budget that addresses operating costs and debt service payment deposits into a Renewal and Replacement account to adequately address condition needs of the infrastructure; and minimum coverage ratios on current debt service. These limits help ensure that the capital markets view the Tollway as a stable and reliable borrower.

The Tollway is facing financial pressures similar to other transportation agencies: stagnant revenue receipts, diminishing purchasing power, and the need to address a backlog of infrastructure renewal and replacement needs. The Tollway has recently revised its revenue estimates downward by \$18 million in 2010 and nearly \$60 million in 2011, because of the impact of the slow economy on passenger vehicle traffic and investment income. Over the last 10 years, Tollway operating expenses have grown at a rate of about 5 percent annually because of increases in pension costs, worker compensation, health care, the cost of salt, and others. Although the Tollway is doing its part to control expenses and to control future operating expenses to a 3 percent growth rate, the agency's net revenues after operating and costs are expected to be below its targeted coverage ratio of two times debt service in the near term.



The Tollway is working on its 10-year capital plan, as required by the Toll Highway Act. The preliminary plan indicates a need for \$6.1 billion through 2026 to address existing system needs, compared to an estimated \$5.1 billion in revenue based on current forecasts that reflect the commercial toll increase slated for January 1, 2016. These costs do not include any future projects that the Illinois Tollway Board of Directors evaluated in 2010, collectively estimated to cost up to \$16 billion. Any expansions of the Illinois Tollway system require legislative approval under state law. In 1995, the Illinois Senate enacted Senate Joint Resolution 45, which authorized the Tollway to expand the Illinois toll highway system to include the extension of the O'Hare Bypass and an easterly extension of the Elgin-O'Hare. Under state law and the Tollway's indenture, the Tollway could provide funding for building and operating the EOWB project if that project is deemed part of the toll highway system.

Regional Transportation Authority

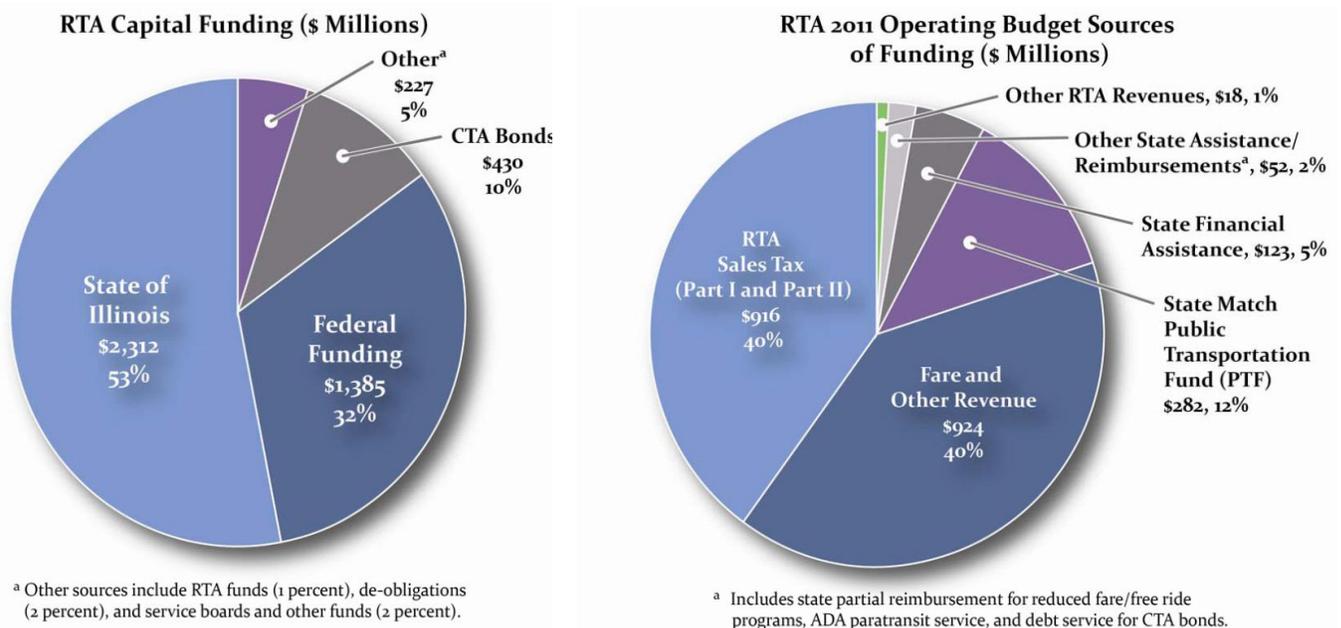
The Regional Transportation Authority (RTA) provides funding, planning, and fiscal oversight for regional bus and rail operations in the six-county Northeastern Illinois areas. The RTA's three operating agencies—the Chicago Transit Authority (CTA), Pace suburban bus, and Metra commuter rail—carry more than 2 million daily trips within a 3,700 square-mile service area. Construction, maintenance, and operation of the regional transit system is paid for with a combination of federal, state, and local sources and programs, and fares paid by riders.

The RTA's current 2011–2015 Capital Program totals \$4.4 billion and is funded primarily through federal and state sources, including funding enacted through the Illinois capital program, Jump Start, and *Illinois Jobs Now!* The 2011 Capital Budget for the regional transit system is \$859.2 million. Given the overall size, scope, age, and condition of the system, 97 percent of the RTA 2011 Capital Budget is allocated to maintaining the current system, leaving very little for system enhancement or expansion. Further, the RTA's 2011 operating budget for the regional transit system is more than \$2 billion, and is funded primarily with a combination of passenger fares, the RTA-imposed sales tax in northeastern Illinois, the RTA real estate transfer tax in the City of Chicago, and state funds. Actual operating costs greatly exceed passenger fare collections. The RTA Act requires transit system revenues (mostly from fares) to cover at least 50 percent of the cost of providing public transit service on an annual basis. The overall amount of

available operating funding, together with the farebox recovery ratio, limits the size and scope of the transit system. In recent years, managing the transit system budget has become more difficult for the RTA and the service boards due to escalating costs and revenue constraints. On a long-term basis, the cost to operate the transit system is rising faster than the RTA sales tax, causing service reductions and transfers of funding from the capital program.

Capital costs for new transit service, such as the express bus service in mixed traffic along the Elgin-O’Hare corridor, would traditionally rely on a combination of federal and state capital grants. A rigorous and lengthy multistep project planning and development process would need to be conducted to determine if this project could qualify to compete for federal funding under the Federal Transit Administration New Starts program.

At this time, neither the operating nor capital financial funds are available through traditional sources to start or sustain significant new transit service in the Elgin-O’Hare Corridor or anywhere else in the Chicago region. Transit operating costs greatly exceed fare revenue on an individual route basis and for the system as a whole. Furthermore, there is limited ability to redistribute resources within the operating budgets of individual service boards (CTA, Pace, Metra), meaning that starting new service in the Elgin-O’Hare corridor would most likely require a reduction of service elsewhere. Because of the size, scope, age, and condition of the regional transit system, most of the capital resources are needed to maintain it, leaving very little for system enhancement or expansion at this time.



Illinois Finance Authority

The Illinois Finance Authority (IFA) is the designated conduit issuer with jurisdiction for the entire state of Illinois. Created by statute, it is a body politic and corporate that can issue all types of federal and state tax exempt and taxable bonds. Because of the broad powers afforded the agency by statute, the IFA serves as the agency which can finance all aspects of the EOWB project through intergovernmental cooperation agreements between federal, state and local governmental units. Under federal proposals to create a national infrastructure bank, it would be logical to designate entities like the IFA as the delegated agent/representative of any federal infrastructure bank. It may also issue bonds on behalf of any state agency which does not have bonding authority. Because of its double tax exemption for other units of

government, the IFA may issue bonds on behalf of other issuers at a lower rate that would result in greater leverage for the EOWB project.

Innovative Financing Tools

Federal Credit Assistance Tool

The Transportation Infrastructure Finance and Innovations Act (TIFIA) was enacted in 1998 and later extended as part of SAFETEA-LU as a federal credit assistance program for eligible projects of national and regional significance. The provided credit assistance can take the form of a loan, loan guarantee, or line of credit for up to 33 percent of project costs. The credit instruments offer advantages, including competitively priced secure long-term loans and lines of credit, to boost debt service coverage.

Extensions of SAFETEA-LU have funded roughly \$120 million per year in TIFIA subsidy, which is adequate to leverage around \$2 billion annually. While highly competitive and oversubscribed, the momentum and importance of increasing funding for TIFIA is led by such initiatives as the *America Fast Forward Plan*. On behalf of the EOWB project, IDOT submitted a letter of interest for fiscal year 2011. Should the project be selected for consideration by USDOT, an extensive application process would be required and an applicant would need to be determined.

Federal Debt Financing Tool

Another financing mechanism is the Grant Anticipation Revenue Vehicle (GARVEE), which allows for the use of future federal aid highway apportionments to pay debt service and other bond-related expenses for major transportation projects. GARVEE can be used to generate up-front capital for major highway projects. It also provides the ability to accelerate construction timelines and to spread the cost of the transportation facility over its useful life rather than just over a construction period. A unique requirement, however, is that project sponsors reserve part of the funds used to finance near-term projects, which may hinder the ability to make necessary improvements to the overall highway system based on the ever-expanding backlog of needs. For this very reason, IDOT believes that the use of GARVEE for this project will negatively impact its ability to fulfill its statewide public mission unless alternative revenue sources can be developed and relied upon.

Stakeholder Support and Participation

The U.S. is experiencing a dramatic shift in its approach towards funding major infrastructure projects. Constrained federal and state resources are allocated to maintenance and repair of the existing system, leaving limited funding for new projects. These conditions are driving a focus to new sources and methods to finance projects, and the need to seek support for major new projects from all levels of government. In this new economic reality, government agencies throughout the country have been exploring financing mechanisms that leverage other resources to fund a portion of major transportation projects. The rationale behind seeking other contributions is the well-recognized relationship between transportation investments and economic development potential at the local level. Further, other contributions illustrate support for a transportation project and, therefore, provide a competitive edge to project applications seeking federal support.

However, in the case of the EOWB, much more work needs to be done to develop regional consensus and appropriate tools on this point. No other agreement with respect to stakeholder support and participation was reached other than the “Guiding Principles” adopted by the Financing Working Group on June 24, 2011.

Value Capture

The value capture concept was vigorously debated and analyzed during the work of the Financing Working Group. Strong objections were raised by some members of the Financing Working Group to this concept on the grounds of economics, public policy, equitable and proportionate distribution of costs and benefits, and local control and decision-making.

Value capture could be one method by which other resources are leveraged. In theory, it may capture, via a tax or a fee, a portion of the estimated increase in private property value that is gained from the construction of a major public infrastructure improvement. Research generally indicates that highway access and visibility may result in positive property value impacts over time, particularly for commercial properties within the first half mile and with diminishing effects out to one-and-a-half to two miles.

The following arrangements are mechanisms that could be used to administer value capture:

- **Tax Incremental Financing (TIF)**—TIF involves a defined area or district within which taxes on property values above a base assessed value are diverted to the TIF district to fund infrastructure improvements.
- **Development Impact Fees**—One-time fees related to traffic impacts are levied on new or redeveloped sites within a defined area.
- **Special Service Area (SSA)**—An additional property tax or assessment is levied on the full value of a property within a defined district that benefits from the improvement.
- **Business District (BD)**—An additional sales tax on retail sales and/or hotel taxes on hotel revenues may be levied within a defined district.

Any further work on this concept should be done with the support and participation of regional and local stakeholders with the goal of reaching consensus among those stakeholders. When and if consensus is reached, changes in state law could be pursued.

Conceptual Value Capture Test

Consultants of IDOT performed a very preliminary conceptual analysis of value capture to test the revenue generation potential for the EOWB. Consistent with the literature, a one-mile and a one-and-a-half mile buffer from the proposed EOWB corridors were used as a preliminary boundaries. An SSA

Example:

The Route 28 Highway Transportation Improvement District was formed in 1987 in Fairfax County, Virginia. The district formed a joint-county commission to provide improvements to State Route 28. Industrial and commercial property owners were subject to a maximum additional tax assessment of 20 cents per \$100 of market value. Collected payments to date are around \$111 million. Initially, tax collections were not enough to pay debt obligation in full, but the difference has been made up by the Northern Virginia State Highway allocation.

Value Capture Concept for EOWB:

- ✓ *Special Service Area (SSA) approach.*
- ✓ *District boundaries extend up to 1.5 miles beyond the proposed EOWB improvements.*
- ✓ *Taxes levied only on nonresidential properties over the period 2014–2040 using a graduated scale that accounts for variations in assessment practices between Cook County and DuPage County.*
- ✓ *Revenues used to support new local bonds with an assumed 25-year term.*
- ✓ *Baseline development characteristics for the area reflect anticipated conditions without the EOWB project and Western Terminal.*
- ✓ *Growth-driven development characteristics for the area reflect additional development potential with the EOWB project and Western Terminal.*

mechanism was assumed for this analysis because it provides a relatively stable revenue flow for bonding purposes. Research indicates that the positive value impacts on property diminish with distance from the highway improvement and generally affect non-residential property. Therefore, a graduated tax rate based on Cook and DuPage County assessment practices was applied to non-residential property.

The conceptual analysis was performed using a set of preliminary assumptions (regarding the format and size of the district, and the rate of taxes to be levied) and potential future development characteristics in the area. Depending on specific bonding assumptions, the analysis suggests that an SSA-like value capture funding mechanism could potentially generate \$80 to \$130 million in a one-mile district and \$100 to \$150 million in a one-and-half mile district.

No consensus was reached on the Financing Working Group with respect to value capture. Further development and analyses must be done in the context of further work among stakeholders with a view towards reaching consensus. Again, no other agreement was reached other than the “Guiding Principles” adopted by the Financing Working Group on June 24, 2011.

Other Resources for Local Contribution

The following other resources to generate a local contribution were discussed by the Financing Working Group in varying degrees of detail:

- **In-Kind Contributions**—Significant right-of-way property acquisitions are needed for the EOWB. Stakeholders could contribute “in-kind” to the extent that they own property within the ROW. However, federal consent or waiver would be necessary to allow for contribution of land acquired using federal resources.
- **General Sales Tax and Hotel Tax**— Northeastern Illinois already has higher than national average sales tax rates, accordingly, the potential of adding additional sales taxes may be limited. Also, additional purposes for hotel tax increases would require changes to state legislation. However, committing a portion of the existing sales and/or hotel tax rates to the EOWB costs could be explored.
- **Other Local Taxes**—Other local funding sources such as car rental, water/soda bottle, utility and telecom taxes could be explored in combination with other taxes and mechanisms.

No agreement was reached with respect to other resources for local contribution other than the “Guiding Principles” adopted by the Financing Working Group on June 24, 2011.

Key Considerations

The ultimate form and size of local other resources will require extensive intergovernmental cooperation and regional consensus. Key considerations include:

- **Proportionality to Benefits**—Contributions should equitably align with anticipated economic benefits from new development potential and from value increases to existing properties. Stakeholders that proactively work to plan for and implement redevelopment potential associated with the EOWB should receive credit for their effort. Stakeholders who will benefit from the EOWB project, but have not been integrated into the process to date, should be involved in further work.
- **Selection of Mechanism(s)**—It will be critical to work collaboratively with stakeholders to generate consensus on the specific mechanism(s) utilized to generate other resources to support the construction of the project in its entirety.
- **District Size**—If other resources are generated from a district, that district should be as large as possible in order to proportionally allocate the benefits and costs of the project.

No other agreement with respect to stakeholder support and participation was reached other than the “Guiding Principles” adopted by the Financing Working Group on June 24, 2011.

Tolls and Pricing

At the request of local mayors and officials, the Financing Working Group reviewed various tolling scenarios to support implementation of the EOWB project. Constrained funding has made it clear that toll revenues will be a vital component of the project's financial plan. Thus, the tolling and pricing scenarios outlined in this section assume that the entirety of the Elgin-O'Hare and West Bypass corridors would be implemented and operated by the Tollway.

The EOWB project represents a major infrastructure investment that would need to be financed through a variety of sources, including a potentially substantial investment by the Tollway to support the projects' up-front capital costs as well as long-term costs. Recognizing the financial challenges that the Tollway faces today and the current lack of funding to address potential future regional projects collectively estimated to cost \$16 billion, a broad range of tolling and pricing scenarios were suggested by local officials (see previously Revenue, Debt Service, and Operating Expenses 2015–2034).

Tolling Scenarios Considered:

Pricing options for the EOWB corridors

Systemwide toll rate increases

Implementing tolling along the north-south portion of I-290

A sketch-level assessment of anticipated toll revenue and associated bonding capacity was prepared to provide insights into the additional financing capacity that could be generated with each scenario. For planning purposes, a set of assumptions was used to approximate toll revenue and associated bonding capacity potential for each scenario. A comprehensive traffic, revenue and financing study would be required to support a final decision on tolling strategies and subsequent financing efforts. Key assumptions for this initial analysis included the following:

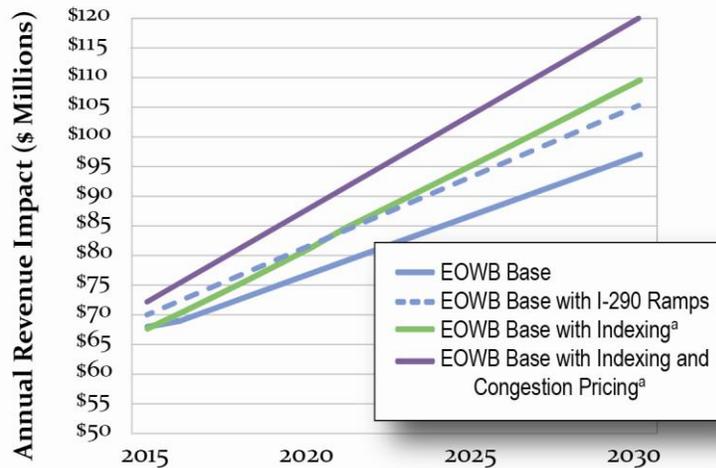
- EOWB project characteristics as identified in the initial construction phase with the planned initial travel lanes, interchange locations, and frontage roads
- A closed all-electronic toll collection system on the EOWB
- Approximate net toll revenues generated across the Illinois Tollway system accounting for diversions from existing toll roads
- A hypothetical tolling start date of 2015 on the entirety of the EOWB corridors

Standard Tolling

The baseline tolling scenario consists of standard tolling and pricing along the entirety of the Elgin-O'Hare and West Bypass corridors, including the frontage roads, with no adjustments to toll structure and rates along the existing Illinois Tollway system. An assumed average toll rate of \$0.20 per mile for passenger cars was used to test the scenario, with truck rates priced at the prevailing Tollway multipliers. The base case assumes the commercial vehicle toll rate increase approved in November 2008 by the Illinois Tollway Board. The commercial vehicle toll rate increase includes a three-step series of increase from 2015 to 2017, and then indexed to inflation beginning in 2018. While the assumed passenger car toll rate is appreciably higher than current rates on the Illinois Tollway system, it is comparable to national average rates for recently constructed toll roads, reflecting today's costs of financing major new infrastructure projects.

The baseline tolling scenario is expected to generate \$67 million to \$97 million in annual toll revenues that can be used for the EOWB. The tolling configuration analyzed does not include tolling of many of the movements at the I-290 interchange. The movements remain free to provide access to properties adjacent to I-290, including the Hamilton Lakes development east of I-290 and developments along Rohlwing Road

EOWB Base Scenario with I-290 Ramps, Indexing, and Indexing and Congestion Pricing



^a Revenues would increase proportionately with I-290 ramp tolling.

and Meacham Road west of I-290. If the ramps to/from I-290 were tolled, the expected annual revenue would be increased in 2020 by about \$7 million and in 2030 by about \$9 million.

Indexing

Like the baseline scenario, the indexing scenario consists of standard tolling and pricing along the entirety of the EOWB corridors, with no adjustments to toll structure and rates along the existing Illinois Tollway system. However, toll rates along the EOWB would be “indexed” to rise with inflation over time at an assumed rate of 2 percent per year. This pricing structure acknowledges that costs to operate and maintain infrastructure rise over time with inflation, and proactively addresses these trends with the toll pricing structure. The indexing tolling scenario is expected to generate \$68 million to \$110 million in annual toll revenues. When compared to the baseline tolling scenario, indexing provides the means to keep pace with inflation.

Congestion Pricing

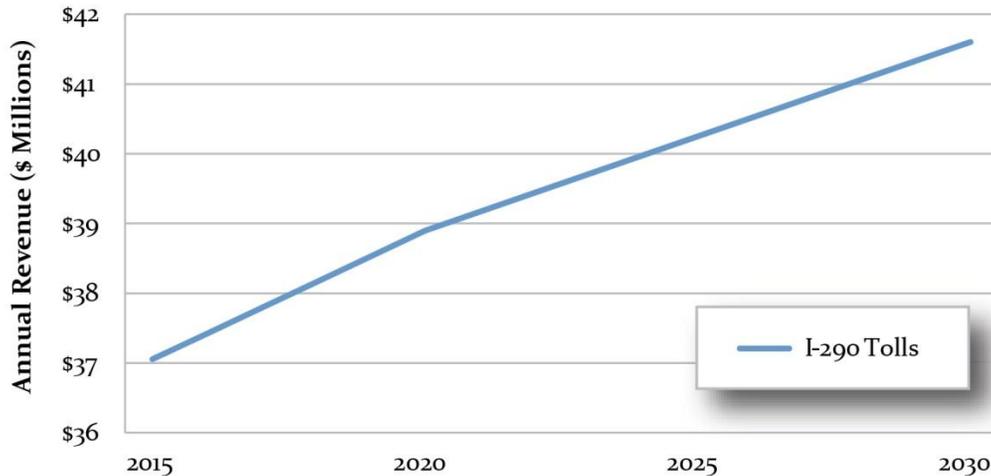
Congestion pricing is a form of transportation demand management, offering an efficient way to rebalance the traffic conditions on road (Metropolitan Planning Council, *The Road Less Traveled: Exploring Congestion Pricing in Chicagoland*). Such pricing includes cordon pricing (tolls to enter and leave a city/designated area), variable pricing (where tolls are charged based on congestion), and fixed pricing (tolls that vary by time of day). Congestion pricing encourages drivers to make better choices as to when they travel and by what mode, the object being to reduce congestion on roadways, particularly during peak travel

Congestion Pricing

The SR-91 Express Lanes project in Orange County, California, connects major employment centers and residential developments in Orange County and Los Angeles. The roadway accommodates almost 40,000 vehicles every day. Express lanes priced on an hourly basis based offer a travel-time savings of up to 20 minutes.

Minnesota recently (2005) converted 9 miles of carpool lanes to toll lanes, known as MnPass. Congestion pricing offers drivers the ability to drive at an average of 45 mph nearly 95 percent of the time.

I-290 (North-South) Tolling



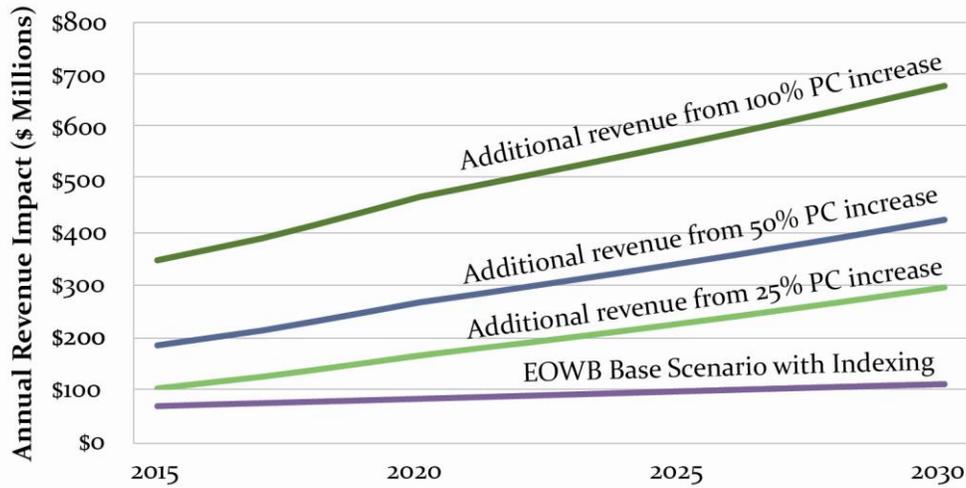
city centers whereby all traffic entering and exiting an area is priced or tolled. Imposing cordon tolling in a large geographic area that spans 33 communities and includes numerous “free” arterial and local roads presents numerous difficulties with respect to implementation and enforcement such as collecting tolls at every entry point into the 120 square-mile zone. This pricing scenario was deemed impractical by the Financing Working Group. However, no agreement with respect to tolling was reached other than the “Guiding Principles” adopted by the Financing Working Group on June 24, 2011.

Conceptual Systemwide Toll Increases

The following preliminary analysis of new, theoretical toll revenues through increases and bond authorization, such that the theoretical revenues could provide support for the EOWB project, was prepared by consultants working under the direction of the IFA at the request of public members of the Council, not the Tollway. This analysis and its conclusions do not represent the view of the Tollway, its members or staff. Any toll revenue increases would need to be presented, considered and approved by the Illinois Tollway Board of Directors through its public processes. This analysis was prepared at a conceptual level, not at either a feasibility or an investment grade-level, for the sole purpose of evaluating one potential source of funding to support the construction of the EOWB project. The last toll increase for passenger vehicles traveling on the Illinois Tollway system without an I-PASS was in 1983. Currently passenger vehicle tolls on the Illinois Tollway system do not have an automatic cost of living or inflationary adjustment.

Three potential toll rate increase scenarios were tested for passenger cars only along the entirety of the existing Illinois Tollway system: (1) a 25 percent increase that, for a typical mainline plaza, would be an increase from \$0.40 to \$0.50 for I-PASS customers and from \$0.80 to \$1.00 for cash customers, (2) a 50 percent increase that, for a typical mainline plaza, would be an increase from \$0.40 to \$0.60 for I-PASS customers and \$0.80 to \$1.20 for cash customers, and (3) a 100 percent increase that, for a typical mainline plaza, would be an increase from \$0.40 to \$0.80 for I-PASS customers and \$0.80 to \$1.60 for cash customers. After 2012, passenger car toll rates on the system would be indexed to inflation, assumed to be 2 percent per year. These scenarios were tested in combination with the “indexed” toll pricing for the proposed EOWB corridors.

Systemwide Revenue Increase Scenarios



As shown in the chart above, a 25 percent or 10 cent systemwide toll rate increase would generate \$71 million in 2012, growing to \$294 million in annual revenues by 2030; a 50 percent or 20 cent systemwide toll rate increase would generate \$142 million, growing to \$423 million, and a 100 percent or 40 cent systemwide toll rate increase would generate \$283 million, growing to \$679 million.

Table 8, prepared by consultants working under the direction of the IFA, shows an approximation of available bonding capacity under various Tollway systemwide toll rate increase scenarios. It is important to note that all of the additional revenue from the first 25 percent systemwide toll rate increase scenario would need to be assigned toward addressing the Tollway's existing needs as a priority. The projected available revenue under the 50 percent and 100 percent systemwide toll rate increase scenarios assume that 25 percent of the incremental revenue generated from either scenario could be available to finance the EOWB. This 25 percent does not represent the view or commitment of the Tollway, its members or staff but is an assumption made by consultants working under the direction of the IFA in connection with its conceptual analysis. The IFA's analysis indicates that, in addition to the bonding capacity range of the EOWB baseline tolling scenario, the available bonding capacities range from \$755 to \$855 under the 50 percent systemwide toll rate increase scenario and \$1,235 to \$1,385 under the 100 percent systemwide toll rate increase scenario. These bonding capacity numbers represent a conservative maintenance and operation cost of \$175,000 per lane-mile and a 25-year bond term as currently limited by statute. A detailed analysis of traffic and revenue forecasts, costs, and financing methods would need to be performed before drawing any firm conclusions on the magnitude of the funding gap. No agreement with respect to tolling was reached other than the "Guiding Principles" adopted by the Financing Working Group on June 24, 2011.

Table 8. Tollway Systemwide Bonding Capacity

	Bonding Capacity Available to EOWB (\$M)	
	50% Systemwide Increase Scenario (\$ Millions)	100% Systemwide Increase Scenario (\$ Millions)
EOWB Only Toll	\$515 - \$585	\$515 - \$585
Systemwide Toll Increase	\$240 - \$270	\$720 - \$805
Total Bonding Capacity	\$755 - \$855	\$1,235 - \$1,390
Capital Requirement	\$2,200	\$2,200
Estimated Funding Gap	\$1,345 - \$1,445	\$810 - \$965

Private Financing

Public-private partnerships (P3) offer an innovative approach to project delivery by providing a means to access private financing investments to implement public infrastructure improvements. P3s are contractual agreements between government agencies and private firms for the provision of public infrastructure or services. They can take many forms and could include private sector involvement in financing, designing, constructing, or operating and maintaining a transportation asset.

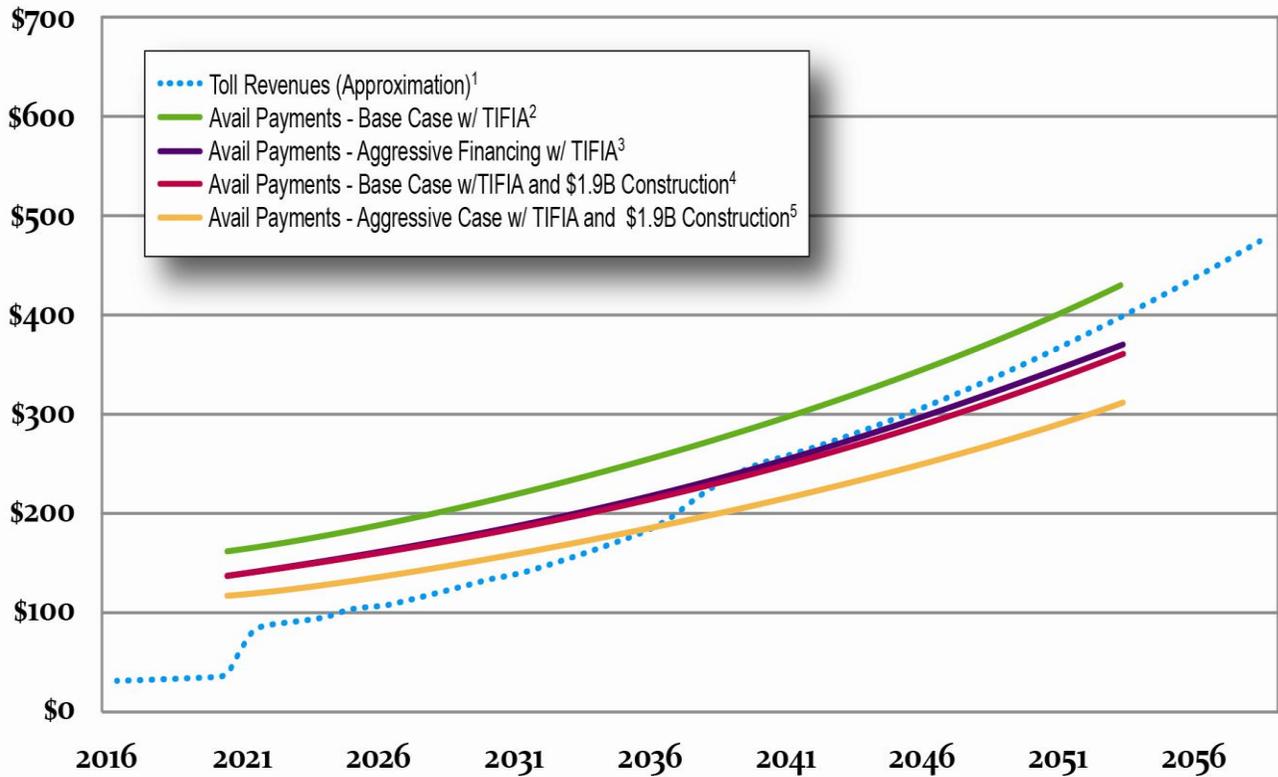
P3 projects commonly leverage private financing in combination with some form of public financing – such as public grants or loans – and aggressively employ measures to reduce the initial investment costs. The advantage of a P3 is that the private investor has the ability to leverage private sector techniques (accelerated delivery, extended debt repayment periods, lower coverage ratios, lower life-cycle costs, and prioritization of revenue-generating features) to advance improvements that otherwise could not be leveraged with public sources. However, a P3 does not fund the project. The money borrowed must be paid back along with a reasonable rate of return to the private sector investors. A sufficient revenue stream, such as user fees, taxes, and tolls, is necessary to pay back the borrowed money plus a reasonable rate of return on capital. The amount of private sector financing that may be available to a public project is related directly to the revenue stream. For example, the revenues available to the private operator of the Chicago Skyway and the Indiana Toll Road, which has raised tolls substantially in recent years, is fundamentally different from the pricing strategy of a public toll authority.

The private sector is taking on increasing responsibility for delivering, financing and maintaining infrastructure systems both in the U.S. and internationally. In Illinois, legislation was recently passed (HB 1091) giving P3 authority to IDOT and the Tollway. Under the legislation, the Tollway may enter into P3 for new toll highways and non-highway projects on toll highway systems, such as transit. Economic benefits of both the roadway and transit service would need to be considered.

The possibility of delivering the EOWB through a P3 was reviewed as an alternative to the traditional public sector implementation approach. This sketch-level review was structured primarily to illuminate the key issues to be addressed if a P3 were pursued, and to assess what type of public financial support may be needed. The review compared the anticipated costs (initial construction, maintenance and operations, and long term renewal and replacement) versus approximated toll revenues generated by the EOWB through the term (“life”) of a P3 concession. Two basic P3 scenarios were tested through which a concessionaire would design, build, finance, operate and maintain the facilities for an assumed number of years. Under a toll revenue scenario, the concessionaire would be paid via direct toll revenue receipts and therefore assume risk for potential toll revenue shortfalls. Under an availability payment concession, the concessionaire would receive a schedule of payments (tied to the availability of lanes maintained to established standards) from the public sector partner, and the public sector would bear the risk of potential shortfalls between toll revenues and availability payments. For each scenario, a wide range of sensitivities and financial assumptions were tested to develop a preliminary understanding of the project’s ability to self-finance.

Results suggest under a toll revenue concession a Concessionaire would be unable to self-finance the entire project solely through the currently approximated toll revenues (Table 9). Even under a set of aggressive financing assumptions and potential cost reductions, a substantial public subsidy would be required. Likewise, under an availability payment concession, the public sector would face a substantial gap between required payments and expected toll revenues for an extended period. A detailed analysis of traffic and revenue forecasts, costs, and financing methods would need to be performed before drawing any firm conclusions on the magnitude of the funding gap. No agreement with respect to private financing was reached other than the “Guiding Principles” adopted by the Financing Working Group on June 24, 2011.

Availability Payment Sensitivities vs. Approximated Toll Revenues¹ (millions of escalated dollars)



¹ Availability payment concession with an assumed duration of 41 years, reflecting potential of low-cost federal TIFIA loan or similar mechanism for all cases tested. Toll revenue approximated based on an initial average \$0.20 per mile toll rate along the EOWB (extrapolated from preliminary toll revenue forecasts generated by the Illinois Tollway prior to April, 2011), indexed at a 3% rate of inflation.

² Estimated payments assuming current preliminary estimates for initial construction phase plan (\$2.2B) and reasonably conservative financial model assumptions.

³ Estimated payments assuming current preliminary estimates for initial construction phase plan (\$2.2B) and more optimistic financial model assumptions.

⁴ Estimated payments assuming potential reduced costs (\$1.9B with possible cost reduction measures) for the initial construction phase and reasonably conservative financial model assumptions.

⁵ Estimated payments assuming potential reduced costs (\$1.9B with possible cost reduction measures) for the initial construction phase and more optimistic financial model assumptions.

Table 9. Toll Revenue Concession Sensitivities^a

Construction Cost Scenarios ^b	Base Case ^c	+ Early Toll Collections ^d	+ Aggressive Financing Assumptions ^e
\$2.2B no TIFIA	Gap > \$1B	Gap > \$1B	Gap < \$1B
\$2.2B with TIFIA	Gap > \$1B	Gap > \$1B	Gap < \$1B
\$1.9B but no TIFIA	Gap > \$1B	Gap > \$1B	Gap < \$1B
\$1.9B with TIFIA	Gap > \$1B	Gap < \$1B	Gap < \$500M

^aToll revenue concession with an assumed duration of 50 years. Toll revenue assumptions include an initial average \$0.20 per mile toll rate along the EOWB (extrapolated from preliminary toll revenue forecasts generated by the Tollway prior to April, 2011) indexed at a 3% rate of inflation.

^bEstimated implementation costs of initial construction phase in 2010 \$. Scenarios tested compare current preliminary estimates (\$2.2B) versus potential reduced costs (\$1.9B with possible cost reduction measures), as well as a potential low-cost federal TIFIA loan or similar mechanism.

^cBase case assumptions include: toll collection commencing upon completion of the entirety of the initial construction phase; financial model assumptions which reflect reasonably balanced conditions (e.g. debt service coverage ratios, creditworthiness, forward rates).

^dIntroduces early toll collection along portions of the EOWB as construction activities are completed.

^eIntroduces more optimistic financial model assumptions.

SUSTAINABILITY

Overview

The Brundtland Commission of the United Nations (1987) defines sustainability as “meeting the needs of the present generation without compromising the ability of future generations to meet their own needs.” The application of sustainable practices to our built environment has three intended purposes:

- To reduce environmental impact,
- To create social benefits for current and future generations, and
- To realize short-term and long-term financial and operational benefits to the project.

The sum of these purposes is known as the triple bottom line – environmental, social, and financial benefits. Although, sustainable techniques have been implemented for decades, their application has been uneven and consisting of common sense solutions or refinements in processes that produce greater efficiencies. Only recently have efforts been made to bring together the practices into a disciplined structure that collectively reduces our impact on the environment and lowers life-cycle costs. When implemented correctly, sustainable practices can save money. What might cost a little more upfront has proven to save money in long-term operations and maintenance activities. The importance of sustainable design has risen to new levels and is now spreading across the world as a practice widely recognized for its benefits. Sustainable design no longer is an afterthought—it is integrated into the process from the onset.

We, the Advisory Council, desire not only to achieve the benefits of sustainability, but also to showcase sustainable practices with the EOWB project. This required our Sustainability Working Group to reflect on innovative ideas that went beyond traditional highway engineering and environmental considerations. We identified nine categories in which sustainable practices could be implemented – Planning, Design, Environment, Energy, Water, Materials and Resources, Construction, Operations and Maintenance, and Users. For each category, we identified broad and overarching goals for sustainability and then developed recommendations to reflect how those goals could be achieved. The recommendations in each of the nine categories contain specific ideas that could be implemented as a whole suite or as individual initiatives based on the project constraints, support, feasibility, and available budget.

Planning

The EOWB planning process has integrated sustainable practices throughout IDOT environmental studies and engineering plans in ways that have influenced all aspects – large and small – of the project, including design, construction, operation, and maintenance. The framework for sustainable practices has been the Illinois – Livable and Sustainable Transportation Rating System and Guide (I-LAST), which contains 153 practices specific to roadway development. As applied to the EOWB project, the process has emphasized extensive stakeholder involvement, which has helped to identify transportation needs, project alternatives, preferred solutions that fit the community and the environment, and the means to avoid or minimize environmental and social impacts of transportation.

As we proceed, sustainable planning practices will be used to develop a financing plan, innovative mitigation approaches that offset unavoidable impacts, and management plans that address construction practices, water quality practices, soil management practices, and more. The planning process, as conceived and implemented, will reduce the environmental impact of the built environment and will create financial, operational, and social benefits. We identified goals and recommendations, as listed below, to implement a streamlined, coordinated, and collaborative planning process.

Goal Expand the sustainable framework established in the planning phase throughout all phases of the project.

Recommendations

- ▶ Use I-LAST as the overarching framework applied to all phases of the project.
- ▶ Select a sustainability “czar” who is responsible for continued coordination and communication of sustainable practices throughout the project design, construction, and operation phases.
- ▶ Develop educational materials that are regularly provided to staff and stakeholders at project-related meetings.

Goal Continue to engage stakeholders in the final design and construction phases.

Recommendations

- ▶ Expand the stakeholder involvement plan to address other phases of the project, tailoring communications that result in the best ways to convey material and obtain stakeholder input.
- ▶ Organize EOWB working groups to fit the needs of future project phases and provide the best arrangements for stakeholder input.

Goal Expand the range of sustainable practices applicable to the EOWB with new and innovative ideas.

Recommendations

- ▶ Establish a “blue ribbon” panel of experts in the region who will meet periodically to discuss new sustainable practices that might be applicable to EOWB.
- ▶ Research other sustainable programs across the country to add new ideas to the menu of practices for the EOWB.
- ▶ Identify two new practices annually from the sources above and fund pilot testing to develop and apply the practice.

Goal Plan and manage the EOWB development process within the bounds of all regulations to ensure compliance.

Recommendations

- ▶ Develop an inventory of relevant federal and state laws applicable to implementing the EOWB, and highlight regulations required for environmental and regulatory approval (including status reports) of the project.
- ▶ Develop a master schedule of the regulatory approvals required in advance or in conjunction (including any recurring updates) with the construction of the project, identifying the responsible agency, submittal requirements, review process, and expected date of approval.

Goal Incorporate multiple modes of travel, including transit and trails for pedestrians and bicyclists. Seek ways to advance detailed planning, design, and implementation of the transit and bike and pedestrian travel components of the EOWB plan.

Recommendations

- ▶ Preserve and maintain the reservation of transit and bike and pedestrian travel within the EOWB plan. The EOWB process and environmental documentation provides a starting point for transit providers to advance their individual facility development processes.
- ▶ Conduct detailed travel market analyses and research to identify travel and market specifics for transit service. The level of investment in a transit mode/technology should provide capacity that satisfies the demand.
- ▶ Consider shared-use facilities (managed lanes) that transit and other vehicles could use as an interim alternative to separate dedicated transit facilities.

Design

The design process builds upon planning activities and continues the process of incorporating sustainability into project details. For the EOWB project, the goals and recommendations we have provided below involve design considerations of general location and routing alternatives to avoid or minimize impacts to the environment and community resources.

Goal Ensure that project design maintains operational efficiencies in the movement and safety of vehicle operations.

Recommendation

- ▶ When performing the required traffic, geometric, and safety analyses for transportation infrastructure, expand the analyses to include additional environmental features.

Goal Adjust highway features using design and environmental flexibility.

Recommendations

- ▶ Configure design to fit within physical context of the location.
- ▶ Provide a flexible highway that operates on or intersects with the facility. Interchanges should allow transit vehicles to enter and exit the facility in all directions. Short of a dedicated transit facility, shoulders should be designed with sufficient width to allow bus-on-shoulder operations during congested conditions.
- ▶ Minimize earthwork movements, and match proposed vertical alignments as closely as possible to existing grades. Balance cuts and fills and maintain excess soils onsite.
- ▶ Consider pavement modifications, such as tining, for traffic noise reduction.

Goal Minimize the overall construction footprint to eliminate right-of-way takes.

Recommendations

- ▶ Perform a cost-benefit analysis regarding the use of retaining walls versus property acquisition, or the use of other features that might be added to the project.
- ▶ Consider shared-use facilities (e.g., managed lane) that might reduce the overall footprint of the facility, earthwork, and materials consumed in construction.

Goal Incorporate native materials.

Recommendations

- ▶ Use plant material instead of or to enhance structural features.
- ▶ Develop site-specific vegetation and tree replacement strategy to protect soils, provide water quality benefits, and reduce maintenance costs.
- ▶ Encourage contractors to use locally produced (within 200 miles) and recycled materials for applications in roadway infrastructure where possible.

Environment

The environment includes both natural and physical features. Natural features, such as wildlife, wetlands, trees and vegetation, waterways, soils, air, aquatic and biotic species, are found within the project area. Physical features, such as noise walls, lighting, pavement and associated roadway infrastructure, will be constructed or modified as a result of the project. Both natural and physical features are assessed and impacts to such features are noted in the National Environmental Policy Act (NEPA) documentation

process. We developed the goals and recommendations listed below to address the natural and physical features of the EOWB project, and to embrace sustainability beyond traditional requirements.

Goal Minimize impacts to natural and physical environmental features.

Recommendations

- ▶ Shift the roadway to minimize impacts to special natural and physical features.
- ▶ Acquire parcels of land within the watershed or parcels identified by resource agencies that provide special protection, enhance the greenways, or meet mitigation needs.

Goal Preserve and enhance historic, scenic, and aesthetic contexts.

Recommendation

- ▶ Use aesthetic design elements in the project to highlight historical or scenic themes in the corridor where such treatment is incorporated into landscape features or structural items, such as bridge columns, buttresses, and retaining walls.

Goal Develop a wetland mitigation plan that goes beyond legal requirements to mitigate project impacts.

Recommendation

- ▶ Implement an adaptive management strategy that encompasses various approaches to wetland mitigation within watersheds affected by the project.

Energy

All transportation and supporting infrastructure requires power and natural resources to construct, operate, and maintain. The goal of energy reduction is to reduce lifetime energy consumption of pavement systems and associated roadway facilities. Energy reduction techniques have been proven to provide long-term, construction and post-construction, operational and maintenance benefits that will result in an overall savings in energy usage. We are presenting the following goals and recommendations as best management practices that exemplify green and sustainable technologies applicable for roadway systems and facilities for the EOWB project.

Goal Design electrical-powered systems to reduce lifetime energy consumption for occupied or unoccupied structures associated with the roadways.

Recommendations

- ▶ Use retro-reflective technology to improve visibility of roadway signage and eliminate a light source where one is not needed.
- ▶ Verify that energy-related systems are installed and calibrated and that they perform according to design and construction requirements.

Goal Perform and update a life-cycle analysis for infrastructure that uses energy.

Recommendations

- ▶ Audit existing roadway infrastructure, such as roadway and underpass lighting, signage, and buildings, to determine energy consumption, as well as ways to eliminate or reduce usage.
- ▶ Evaluate the costs of upgrading technology for the construction, operations, and maintenance of infrastructure needing power.

Goal Incorporate at least two alternative or renewable energy applications for the project that are above and beyond common practice.

Recommendation

- ▶ Solar, wind, and geothermal sources are all researched and available technologies designed to reduce electricity and natural gas consumption. Select two that fit the project needs (excluding temporary and permanent solar-powered traffic control/sensor devices).

Goal Obtain LEED certification for new facilities that meet the standards of the USGBC.

Recommendations

- ▶ Certify all buildings (existing and new), stations, and toll booths within the project area meet the occupancy and square footage requirements established by USGBC as LEED or LEED-Existing Buildings: Operations and Maintenance (EBOM).
- ▶ All new roadway infrastructure should strive for green certification or comply with accreditation programs, such as Green Roads developed by U.S. Environmental Protection Agency.

Water

Sustainable practices for protecting the water quality in an area include minimizing the affects of flooding and stormwater runoff. These practices reduce water pollution and help conserve water. Sustainable technologies that protect the water supply, as well as the water quality in the area, are described in our goals and recommendations below.

Goal Capture and reuse first-flush runoff of stormwater.

Recommendations

- ▶ Determine life-cycle costs and savings associated with low-impact development techniques and best management practices for stormwater management.
- ▶ Include vegetation types that do not need irrigation to the greatest extent possible. Where necessary, consider opportunities for rainwater harvesting through use of aboveground or underground storage systems, which could be used for irrigation.

Goal Develop a water quality monitoring regime to follow before, during, and after construction.

Recommendation

- ▶ Work with the DuPage River Salt Creek Workgroup to design the monitoring regime and plan for its implementation.

Goal Quantify and track roadway de-icing materials applied to mainline pavement during storms.

Recommendation

- ▶ Use the latest technology to track and quantify de-icing material application rates, spreading techniques, weather data, pavement conditions and other necessary data to make informed decisions to best manage a storm and minimize the use of de-icing material.

Goal Incorporate demonstration projects to improve water quality.

Recommendations

- ▶ Use the same level of care on erosion and sedimentation control that was used in the I-355 areas that affected the Hines emerald dragonfly.
- ▶ Incorporate a vegetative swale/bio-swale—a stormwater conveyance system that effectively removes water contaminants before reaching surface or ground waters.
- ▶ Include permeable and porous pavements in mostly non- or low-traffic areas, such as parking areas, roadway shoulders, and maintenance roads.

Materials and Resources

Sustainable practices for materials and resources are intended to promote conservation and to protect the environment by reducing the use of natural resources. This reduction will be accomplished by increasing the use of recycled, reused, and reclaimed materials, and will help protect air quality. Additionally, the carbon footprint will be reduced by minimizing truck hauling, by building cost-effective pavement systems and associated roadway facilities, and by providing support for innovative thinking and practices. We have provided the following goals and recommendations that highlight green and sustainable uses of materials and resources.

Goal Promote sustainable design and construction by developing contract specifications and pavement/structural designs that allow extensive use of reclaimed, recycled, renewable, and local materials.

Recommendations

- ▶ Specify the base stone of all pavements and structures to allow the use of 100 percent recycled concrete or recycled asphalt pavement as an aggregate source.
- ▶ Specify special processing techniques to allow for increased percentages of recycled materials (such as recycled asphalt pavement, roof shingles, or ground-up tires) to be used in asphalt mixes for bituminous pavements.
- ▶ Specify the uses of concrete pavement that was made by using maximum percentages of reclaimed materials.

Goal Eliminate project waste, and use, as much as possible, the wastes of other projects (such as construction and demolition debris from other roadways, runways, or private developments).

Recommendations

- ▶ Require contractors to develop a project-recycling plan.
- ▶ Consider locations for berm sites to be used both to decrease noise along the corridor and to allow for onsite disposal of excessive excavated soil material, where the corridor design suggests there might be extreme excavation.
- ▶ Specify that any concrete/asphalt pavement or structural material waste would not be allowed to leave the project site and give the location where onsite equipment will be set up to reprocess such materials into reusable aggregates for pavement mixes or bases.

Goal Develop a recycling program that encompasses all aspects and wastes of the project.

Recommendations

- ▶ Develop specifications to allow processed or recycled demolition debris from other pavements or structures (excavated roadways or runways and demolished bridges or buildings) from other sites as sources for recycled aggregates in new pavements and mixes for the project
- ▶ Track and evaluate all project-related waste. Develop ways to eliminate, reduce, or reuse appropriate waste streams.

Construction

Although temporary, sustainable construction practices are proven to reduce environmental impacts of the construction itself, surrounding roadways, waterways, and air quality, and save time and money compared to traditional construction practices. We have provided goals and recommendations below that highlight sustainable construction practices for the EOWB project.

Goal Develop green construction management (CM) guidelines.

Recommendations

- ▶ Consider publicly accessible office space options that are open to transit. Consider publicly accessible office space options that are open to transit.
- ▶ Consider the applicability of hybrid vehicles for the project.
- ▶ Require that “green” office initiatives be implemented, such as energy-efficient appliances/equipment, paper reduction, and car-pooling incentives.

Goal Use clean and green construction practices and equipment.

Recommendations

- ▶ Establish, implement, and maintain a Construction Waste Management Plan during roadway construction.
- ▶ Require construction vehicles to meet higher emission standards than specified by state and federal regulations.
- ▶ Establish and enforce an anti-idling policy for construction vehicles.
- ▶ Require non-potable water for construction purposes (not clean potable water), and require that water supply sources be monitored to avoid environmental impacts.

Goal Educate contractors of sustainability components and sensitive environmental features.

Recommendations

- ▶ Institute an internal education and training program related to the sustainability initiatives of the project.
- ▶ Provide a preconstruction education and training seminar to CM staff and contractors.
- ▶ Install signage throughout the construction corridor, highlighting environmentally sensitive areas and providing field reminders of sustainability objectives.
- ▶ Include weekly updates on sustainability initiatives and goals during weekly construction meetings.

Goal Develop a “green construction incentive” for contractors that embrace measures beyond project specifications.

Recommendation

- ▶ Develop an incentive program, such as credit for future work, for the avoidance of environmental violations, dedication of a sustainable construction steward, or implementation of a sustainability plan developed by the contractor.

Operations and Maintenance

Operations and maintenance accounts for sizable costs over the life of a project. Sustainable practices would provide long-term cost savings and benefits to the environment. We have identified the following goals and recommendations of green and sustainable technologies for the operation and maintenance of the EOWB.

Goal Develop and implement an accountability plan for sustainable maintenance and operational functions, and report on them annually.

Recommendation

- ▶ Document how all sustainable elements of the EOWB project will be maintained and operated in perpetuity. The purpose of documentation is to provide guidelines that define acceptable maintenance and operational practices, employee training, and strategies to keep improvements in a state of good repair.

Goal Use ecologically friendly products for daily maintenance and operations.

Recommendation

- ▶ Minimize the use of non-biodegradable cleaning products, traditional lighting infrastructure, and outdated heating and cooling technologies.

Goal Quantify and track roadway de-icing materials applied to mainline pavement during storms.

Recommendation

- ▶ Use current technology to track and quantify de-icing material application rates, spreading techniques, weather data, pavement conditions, and all other necessary data to make informed decision to best manage a storm and minimize the use of de-icing materials.

Users

The user or the “traveling public” would readily engage in the use of alternative fuel technology, if there were broader distribution of fuel choices. As automobile technology advances with alternative fuel usage, service station complexes must adapt their services to a wider range of fuel options. We have provided the following goal and recommendations that promote consideration of facilities that accommodate the changing automobile technology and fuel types.

Goal Offer more accommodating and appropriate infrastructure that provides users with alternative fuel choices.

Recommendations

- ▶ Install technology at truck rest stops that allows for reduction of air-polluting emissions and reduces fuel costs for drivers when idling during rest periods.
- ▶ Equip oases, rest stops, and transit parking facilities with alternative fuel options such as solar-powered electrical charging facilities or compressed natural gas.

DIVERSITY

Overview

Our mission, as the Advisory Council, is to promote awareness and appreciation of the importance of diversity in all aspects of highway and transit project delivery, from planning through construction of the EOWB corridor. Diversity is a major factor guiding and influencing all institutional and individual decisions that promote the betterment of our community. The aim of a diversity program is to ensure that qualified businesses, regardless of the size and the owner's race, gender, or background, participate in procuring professional services and contracts. The Advisory Council's Diversity Working Group focused on how to improve access for D/M/WBE firms, as well as small and medium-sized businesses, to future procurements associated with implementation of the EOWB project.

IDOT and the Tollway have adopted diversity programs and are continually seeking ways to improve them. In addition, the RTA and the three service boards—the CTA, Metra commuter rail and Pace suburban bus—have DBE programs. Previous IDOT and Tollway construction projects, such as the Dan Ryan Expressway and the I-355 extension, resulted in major increases in D/M/WBE firms participating with active roles in the completion of such projects. Diversity practices associated with the major undertakings, however, required diligent, focused activities and implementation of firm requirements that helped to alleviate barriers often encountered by the D/M/WBEs, regardless of funding mandates.

We, the Advisory Council, have reviewed best practices generally associated with ensuring real participation of D/M/WBE contractors, professional consultants and suppliers in this regard and have made recommendations consistent to successful inclusion to the completion of the EOWB project. We identified categories for which we then developed guidelines for D/M/WBE procurement goals, for promoting regional workforce development, and for establishing a framework for compliance monitoring and reporting.

D/M/WBE Procurement

The importance of diversity crosses many interests. A successful program will expand opportunities for Illinois businesses at the same time the program diversifies the field of qualified vendors who will be critical in the delivery of a major transportation project. We hope to see a commitment to promoting, assisting, and ensuring the participation of minority and women tradespersons in all future employment opportunities. Measures can be taken to ensure equitable opportunities for D/M/WBE firms in all potential future procurements. We identified the following goals and make the following recommendations to assist in establishing D/M/WBE procurement guidelines for the EOWB project.

Goal Develop a supportive services program.

A key element in establishing a foundation of successful participation by D/M/WBEs is the development of a supportive services program at the onset of the EOWB project and throughout its completion. IDOT and the City of Chicago have used various consultants over the years in support of their DBE and MBE programs. Those same consultants, or others, could be brought into the early part of the EOWB process to secure a clear understanding of the project's goal and potential barriers to D/M/WBEs to work in concert with EOWB bidding lettings and preparation. Supportive services contracts for electronic monitoring/compliance, business development, certification assistance and bonding assistance will be advertised by a request for proposal (RFP). We recommend the following supportive service training tracks/events.

Recommendations

- ▶ Develop industry-specific support programs to aid in the design and execution of startup and growth plans for individual businesses.
- ▶ Educate firms on the certification process to increase the pool of qualified D/M/WBEs able to bid competitively for and be bonded on projects, and to become LEED-certified firms.
- ▶ Promote licensing opportunities and strategies for local D/M/WBEs, including the establishment of expectations for vendor candidates, licensing plans, RFPs, and franchising requirements (including financial expectations, traffic projections and supplier delivery terms).
- ▶ Develop training programs for D/M/WBEs that focus on critical financial capabilities, including access to capital, bonding, and working capital management
- ▶ Encourage direct investment in D/M/WBEs by working with long-term capital sources (e.g., private equity/venture capital) to make direct investments in D/M/WBEs positioned in industries that support the EOWB.
- ▶ Improve access to capital by encouraging investment in D/M/WBE community banks and by developing program-related investments. Work with national, regional, and community-based D/M/WBE financial institutions (including nontraditional lending institutions and credit unions) to develop a payroll process that allows flexible invoicing and swift payment of subcontractors.
- ▶ Promote LEED and green businesses by encouraging D/M/WBEs to meet or exceed local requirements or objectives.

Goal Establish a communications/outreach plan methodology.

Education and outreach programs would facilitate the advancement, increased knowledge, and provide networking opportunities for D/M/WBE firms and employees. Such programs have the potential to gain valuable momentum for the EOWB project by providing significant opportunities, as well as an explanation of the processes and procedures required for bid. Training programs would be beneficial once the design process has begun. Our recommendations are designed to emphasize a clear understanding of recruitment and effective networking components associated with the supportive services recommendations stated previously and pre bid-events.

Recommendations

- ▶ Develop a program to educate stakeholders about the economic opportunities and benefits that the EOWB project will bring to the region. Implement a community outreach plan targeting D/M/WBEs through business associations and community organizations to assist agencies in disseminating construction opportunities and to coach businesses on bid-related processes.
- ▶ Conduct pre-bid information sessions and industry-specific technical workshops for clarifying the bid process and for information sharing. Develop a program to provide operational or managerial assistance to D/M/WBEs, including bid assistance, technical and pricing support, bonding, estimating, change orders, and closeouts.
- ▶ Conduct and host matchmaking and networking events for mentor/protégé participants as soon as possible.
- ▶ Develop a program to host sector-specific networking events focused on the development of joint ventures and partnerships with local businesses and key capital sources.
- ▶ Develop a community employment initiative, in conjunction with the unions, to facilitate employment, recruitment, and training programs that focus on fostering and managing relationships with construction-related employees and employers, as well as residents throughout the EOWB targeted area.
- ▶ Develop a program to solicit feedback from D/M/WBE firm owners and leaders related to the design of the procurement policy.
- ▶ Publish a “How-To” Guide of step-by-step instructions on how to compete for contracts related to the EOWB project.

Goal Expedite certification and prequalification.

We have found that both D/M/WBE certification and prequalification processing delays can profoundly affect diversity goals. Most D/M/WBEs have one form or another of certification in place and are familiar with such processes. To require new certification applications would be cumbersome, overwhelming and costly to such firms.

Prequalification remains a mystery to many D/M/WBE firms since achieving this status applies mainly to prime contractors and consultants. An element of reciprocity exists among various agencies for certifications, such as through the Illinois Unified Certification Program, but prequalification requirements differ among those same agencies.

Recommendations

- ▶ Accept the prequalification authorizations of IDOT and the City of Chicago for the EOWB project. Then, follow through with a timely outreach initiative to increase and expedite D/M/WBEs prequalification status for interested firms led by established supportive services companies and personnel from each agency.
- ▶ Accept a broad set of certifications for D/M/WBEs and Business Enterprise Programs (BEP) to streamline the process (such as Chicago Minority Business Development Council, Inc. [CMBDC], Women Business Development Center [WBDC], City of Chicago, Cook County, and State of Illinois).

Goal Establish a mentor/protégé program.

A sound incentive component to established prime contractors in using D/M/WBEs is necessary to achieve diversity goals for both construction and professional services. The contracting community sees incentives on federal-level projects and more specifically on local IDOT projects. A mentor/protégé program can assist D/M/WBEs with oversight and participation on the EOWB project. It provides a capacity-building aspect that strengthens the firms for future bidding needs. It also provides incentives to prime contractors, along with financial assistance for their administrative costs in participating as a mentor.

Recommendation

- ▶ Set the EOWB project to serve as a model project and enhance IDOT's current program, so as to ensure maximum participation by industry. The program has specified requirements for both mentor and protégé and has established a list of groups meeting the criteria for participation.

Goal Enact a fast-pay process.

The most critical need that the D/M/WBE community faces is working capital to sustain operations. In today's government contracting sectors, processing pay requests and invoices has reached delays well beyond 180 days. Programs or initiatives established to maximize EOWB diversity goals will struggle without a strategic fast-pay process in place.

Recommendation

- ▶ Require that the entity responsible for administering the project pay adhere to prompt payment laws in place, and strive to develop processes for prompt payment to consultants and contractors participating on the EOWB project.

Goal Establish sanctions/liquidated damages.

Recommendation

- ▶ Ensure that contractors and subcontractors adhere to the contract. Failure to comply would result in sanctions, liquidated damages, or both.

Goal Unbundle contracts.

The assurance of diversity goals being achieved in the overall procurement process will be greatly assisted by establishing an initiative to “unbundle” contracts, which would open the bidding process to smaller D/M/WBE firms. D/M/WBE firms remain more competitive in the prime and subcontracting sectors when contracts are broken out for smaller bidding. Moreover, the EOWB project will contribute in expanding capacity and independence of D/M/WBES through an unbundling approach.

Recommendation

- ▶ Establish target market opportunities where applicable. This can be done through a threshold limit set as high as warranted without having to attain a performance bond and that would be competitively bid by D/M/WBE firms. Whereas final funding sources might not support a target market program (federal), consideration might be given to a “small business market” program that can target firms earning under \$10 million annually (3-year average) in a race-neutral environment.

Regional Workforce Development

We encourage a commitment to statewide economic development by cultivating a well-trained workforce. The EOWB project affords an opportunity to provide skills training that can lead to the development of a skilled, strong, and competitive workforce while also providing opportunities for those who are underemployed or unemployed. The following goals and recommendations will promote regional workforce development with the EOWB project.

Goal Assess union workforce availability.

Recommendation

- ▶ Unions associated with highway construction will conduct an internal audit of their workforces within the area of the project and recommend those minority and woman qualified to participate on the EOWB project.

Goal Establish training/readiness requirements.

The state also offers the Employment Opportunities Grant Program, which creates a strong pipeline of trained workers who have the skills to obtain and keep jobs in the construction trades. By opening these doors, we are increasing the diversity within this industry and preparing more people for careers in this vital field, which will help keep our workforce strong and competitive and will provide better opportunities for our working families.

*The **Earned Credit Program** is a voluntary program administered by the Illinois Tollway for contractors aimed at promoting the State of Illinois's employment initiative by encouraging contractors and fabricators to sponsor into applicable unions, employ and retain qualified and eligible disenfranchised African- and Hispanic-Americans, women, ex-offenders, and veterans on any construction-related project in the State.*

Goal Enact an earned credit program.

Recommendation

- ▶ Consider a program, similar to the Illinois Tollway's Earned Credit Program, for the EOWB project, if permissible under the sponsorship of project financing.

*The **Highway Construction Careers Training Program** was established by IDOT through the Illinois Community College Board. The community college training program holds 8-week sessions (2 to 3 sessions per academic year) in which minorities, women and disadvantaged individuals will receive intensive training in highway construction-related skills, e.g., math for the trades, job readiness, technical skills coursework (carpentry, concrete flatwork, blueprint reading, site plans, site work, use of tools, etc.) and OSHA 10-hour certification.*

Compliance Monitoring and Reporting

The effectiveness of a diversity program must be measured and monitored to quantify its level of success. We have outlined a series of goals and initiatives to measure, report, and enforce compliance with established diversity program goals. The following goals were established, and recommendations were made for monitoring and reporting diversity on the EOWB project.

Goal Create an independent compliance monitoring entity.

Recommendation

- ▶ Solicit by an RFP organizations or companies familiar with federal and state DOT workforce and D/M/WBE business regulations and statutes.

Goal Develop real-time electronic reporting.

Recommendation

- ▶ Solicit by an RFP technology and software capable of assisting the state and supportive service provider with real-time workforce reports and real-time payment for online public viewing.

Goal Establish an enforcement program.

Recommendation

- ▶ Establish an enforcement program to ensure that contractors and subcontractors adhere to D/M/WBE requirements throughout all phases of the EOWB project.

Goal Institute quarterly update meetings.

Recommendation

- ▶ Require that contractors, subcontractors, consultants, subconsultants, and supportive service providers attend quarterly meetings to discuss the progress of the project and challenges faced by stakeholders.

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