

# Elgin O'Hare - West Bypass: Transit Alternatives Development and Evaluation

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## Introduction

The Elgin O'Hare - West Bypass (EO-WB) alternatives process was structured to consider a broad array of transportation system improvements aimed at addressing transportation problems and issues in the study area. These issues include:

- A high volume of daily travel within, to, from and through the study area - almost 4 million trips, or 16 percent of all vehicle trips in the Chicago metropolitan region.
- Over 90 percent of the major roadways are congested.
- Both traffic volumes and congestion on area roadways are projected to increase through 2030.
- Only 3 percent of existing daily work trips (the major market served by transit) are made by transit.
- Transit performance deficiencies are attributable to gaps in the system, capacity constraints, inconsistent on-time service, gaps in service to major employment areas, limited station parking, and inconsistent connectivity between stations and destinations.

As increasing transit's mode share would reduce travel demand on the roadway system, an important focus of the alternatives process was to identify options for improving transit access to the more than 500,000 jobs in the study area, and to major activity centers, including O'Hare International Airport. The objective was to identify transit improvements, which in combination with roadway improvements, bicycle/pedestrian and other multimodal improvements will address the complex transportation issues in the study area. Initially, improvements to the various transportation modes (e.g. roadway, transit) were considered independently, and were then combined to form complete multimodal Build Alternatives for detailed consideration in the *Tier One Draft EIS*.

This memorandum presents a summary of the process for identifying and evaluating potential improvements to the transit system, a description of the improvements considered, and a description of the characteristics of the transit improvements incorporated into the Build Alternatives.

Whereas improvements required to address the identified project Purpose and Need include a diverse set of multimodal improvements, detailed Tier Two NEPA analysis and actual implementation of any proposed transit improvements will be the responsibility of

transit service providers. The implementing agency will likely use the Tier One EIS and Tier Two EIS documents as a platform for performing additional NEPA studies as required to secure approvals for individual transit projects.

## **Transit Alternatives Development and Evaluation Process**

A multi-step process was used to identify and evaluate potential additions, modifications and upgrades to transit service in the study area. The process began with a review of available plan documents, including: the *2030 Regional Transportation Plan*; *Pace's Vision 2020*; *RTA's Moving Beyond Congestion*; the *DuPage Area Transit Plan 2020*; the *Cook-DuPage Corridor Study*; the *O'Hare Modernization Program*; pertinent land use plans; and later upon its release, the *Chicago Central Area Action Plan*.

Four alternative initial transit system improvement strategies were initially defined (see Appendix A). The strategies consisted of potential transit improvements identified by the project team based on a review of transit planning documents, as well as stakeholder suggestions. The transit system improvement strategies consisted of the following: Existing System Strategy, a low-investment proposal which relied entirely on improving the existing system; System Expansion Strategy, a high-investment proposal which relied on extensive new dedicated transit service, and two Combination Strategies (Option 1 and Option 2), which consisted of a combination of new services and existing service upgrades. After initial review, this approach, which considered packages of improvements as whole, was dropped in favor of an evaluation approach that considered each of the potential transit service improvements on its own merits. This revised approach made it possible to identify proposed transit system improvements on the basis of the strongest performing elements.

Potential individual transit improvements were then identified, refined and evaluated using a three-step process - Level One (Initial Screening), Level Two (Detailed Screening), Level Three (Transit Improvement Refinements). Potential improvements were identified both within the original and expanded study area boundaries. The focus of the effort was to identify the region's markets that should be connected to O'Hare International Airport and the study area with improved transit service, and logical connection routes. A particular goal was to establish improved connections from Chicago, the North Shore suburbs, southeast Cook County, and sub-regional areas to the north, south and west of the study area. Potential route corridors were reviewed by area transit operators and planning agencies (CTA, Metra, Pace, RTA, CMAP) to elicit their comments and recommendations, which were then considered as part of the transit alternatives evaluation.

Transit improvement evaluation criteria were developed to support the Level One and Level Two transit improvement screening. Initially, the project team reviewed Federal Transit Administration (FTA) Alternatives Analysis requirements and identified FTA criteria relevant for use during this early planning effort. Next, a literature review was performed to identify current and best practices in defining transit market thresholds and optimizing alignments to serve the markets. Finally, the project team considered stakeholder input regarding evaluation criteria pertinent to the Purpose and Need and project goals.

An important consideration in the transit improvement evaluation relates to land use densities and ridership volumes. These measures define densities required to support

various levels and modes of transit service within a transit corridor. For household density thresholds, the project team referred to Pushkarev and Zupan<sup>1</sup> who have long been considered a major resource for transit systems addressing new investments. Additionally, recently adopted density guidelines<sup>2</sup> for transit-oriented development and station location by BART (Bay Area Rapid Transit, San Francisco metropolitan region) were reviewed. Proposed density and volume thresholds appropriate for the EO-WB study area were then developed by the project team and validated as reasonable by the transit agencies. Density and volume thresholds used for the EO-WB study are listed in Table 1.

**TABLE 1**  
Density Thresholds for Transit Modes

	Households per sq mile (1/2 mile buffer)	Population per 1/2 mile buffer	Households per 1/2 mile station radius	Population in 1/2 mile station radius
<b>HRT</b>	4,840	13,552	3,850	10,780
<b>LRT</b>	4,203	11,768	3,300	9,240
<b>BRT</b>	3,503	9,808	2,750	7,700
<b>Commuter Rail</b>	3,184	8,915	2,500	7,000

*Sources:*

1. for housing units within 1/2 mile of rail station: *The Bay Area's Transit Expansion Plan: Resolution 3434*
2. Population derived from 2007 American Community Survey One-Year Estimates, based on people per household in NE IL.

## Transit Improvements Considered

### Level One Transit Screening

Early stakeholder input served as the starting point for defining the range of potential transit improvements in the study area. The focus of the Level One transit alternatives effort was to identify a full suite of potential transit system improvements, to perform an initial feasibility analysis of the suggested corridors, and to identify corridors for further consideration.

Twenty transit improvements were initially identified based on stakeholder input and review of various transit planning documents and ongoing initiatives. Once the various corridors and facilities were identified, they were reviewed to determine whether they connect key regional markets to the O'Hare area. Complementary elements to enhance intermodal connectivity and strengthen collection and distribution functions were then identified.

The potential transit improvement corridors were evaluated and screened using three categories of evaluation criteria: travel performance (ability to address travel needs in the study area); compatibility with adopted transportation plans; feasibility of implementation within the 2030 planning horizon (see Table 2).

<sup>1</sup> Source: Pushkarev, BS, and JM Zupan. 1982. Where Transit Works: Urban Densities for Public Transportation. *Urban Transportation: Perspectives and Prospects*, HS Levinson and RA Weant (eds.), Westport, CT: Eno Foundation

<sup>2</sup> Source: Metropolitan Transportation Commission Oakland, California MTC Resolution 3434 Transit-Oriented Development (TOD) Policy for Regional Transit Expansion Projects Adopted July 27, 2005

**TABLE 2**  
Level One Screening Criteria

<b>Criteria</b>	<b>Measures of Effectiveness</b>	<b>Factor</b>
<b>Travel Performance</b>		
Improve Travel/Service	Connect concentrations of population to work.	Households and employment per route mile  Study area workers by residence TAZ
	Serve major employment concentrations.	Sites with 75 or more employees
	Connect to O'Hare's air traveler markets.	Trips (daily origins and destinations) per route mile
Improve West O'Hare Access	Connect to O'Hare's west entrance.	Yes or no
<b>Other Criteria</b>		
Compatibility	With adopted transportation plans.	Yes or no
Implementation horizon	Can be implemented by 2030.	Yes or no

The ability of each corridor to address travel performance issues in the study area was reviewed. First, each alignment was buffered in its entirety at distances of ¼ mile, ½ mile, and 1 mile, and each of 4 travel performance evaluation measures was applied to every individual corridor for each zone. Second, household densities in the buffer zones were mapped along each corridor, permitting a review of whether densities meet the following threshold levels that can support transit service:

- Bus 2,000 or more households per square mile
- Commuter rail 2,800 or more households per square mile
- Bus rapid transit 3,500 or more households per square mile
- Light rail transit 4,200 or more households per square mile
- Heavy rail rapid transit 4,900 or more households per square mile

Of the twenty transit improvements evaluated, five were eliminated from further consideration with this study either because they do not directly address the key study area transit markets, or because they are physically infeasible. Five other improvements were modified to focus service on the transit markets. Findings of the Level One screening process are summarized in Table 3 and included in Appendix B

Following completion of the Level One screening, the study area was expanded westward as part of the roadway alternatives evaluation process and additional transit improvements were identified for consideration in the expanded study area. Further refinements at this stage addressed intermodal connections and closing the “last mile” gap between transit stations and activity centers. Specifically, the following additional transit improvements were identified for consideration with the Level Two screening:

- J-Line extension from West O'Hare to the Schaumburg Metra Milwaukee District West (MDW) station,
- Upgrading Pace Route 554 (Golf West) service from Elgin to the Northwest Transportation Center,

- Establishing local bus service on Roselle Road from the Palatine Metra Union Pacific-Northwest (UP-NW) station to the Glen Ellyn Metra Union Pacific-West (UP-W) station,
- Adding local circulator routes connecting residential sites and activity centers to the fixed route services, and,
- Adding employer shuttles connecting fixed rail and bus stations to employment sites.

**TABLE 3**  
Level One Transit Screening Results

<b>Mode</b>	<b>Alignment or Facility</b>	<b>Result</b>
<b>Rail or Bus Rapid Transit Alternatives</b>		
	STAR Line connection to West Terminal	Retained for screening
	CTA Blue Line Extension to West Terminal	Retained for screening
	CTA Blue Line Express Track from Chicago Loop	Retained for screening
	J-Line: West O'Hare to IKEA and STAR Line	Retained for screening
	J-Line: IL-83 to Aurora and Naperville	Retained for screening
	Inner Circumferential	Eliminate 2030 and beyond
	Rail Connector: Metra UP-NW Line to UP-W Line	Eliminated: not in 2030 Regional Transportation Plan; freight conflicts; high cost-low benefit
	Mid-City Connector	Modified: retained for screening as express bus or BRT; rail eliminated
	CTA Yellow Line Extension to Old Orchard Shopping Center, Skokie	Eliminated: too far from study area
<b>Arterial Rapid Transit or Express Bus</b>		
	Golf: Evanston to Woodfield	Retained for screening
	Dempster: East O'Hare to Yellow Line, Skokie	Retained for screening
	I-94 Yellow Line Transfer: Jefferson Park to Yellow Line Dempster terminal	Retained for screening
	I-294 North to Lake County: East O'Hare to Gurnee	Modified: route shortened to terminate at Lake-Cook Rd because of low densities farther north
	I-294 South to Homewood: East O'Hare to Homewood	Modified: route shortened to terminate at Ogden because of low densities farther south
	Mannheim: East O'Hare to Orland Park	Modified: route shortened to terminate at I-55 because of low densities farther south
	I-355: Thorndale to Shorewood	Modified: route shortened to terminate at I-55 because of low densities farther south, and at Higgins to conform to Pace plans
<b>Local Limited Stop Bus Service</b>		
	East Airport to West Airport via Irving Park	Retained for screening
	West Airport Metra Connector via York, UP-NW to UP-W	Retained for screening
<b>Other Facilities</b>		
	Metra Transfer Station: NCS to UP-NW at Des Plaines	Eliminated: physically infeasible
	Metra Transfer Station: STAR Line and proposed N-S rail connector	Eliminated: N-S rail connector is eliminated

## Level Two Transit Screening

The object of the Level Two evaluation was to assess the feasibility of the transit routes remaining following the Tier One screening. At this point, more precision and definition were established for each improvement, including potential station locations. Data from the Level One screening was a key resource in that it permitted identification of population and activity clusters. The following additional factors were also considered:

- Transfer opportunities focusing on intermodal connections and intersecting transit routes.
- Physical feasibility of transfer connections (this is a particular concern on interstates, which often are inaccessible to crossing traffic).
- Station spacing. This is an important issue for express bus or higher levels of service (arterial rapid transit, bus rapid transit, passenger rail service). It is necessary to balance the needs of the market with travel time efficiencies requisite to making transit service an effective alternative. For this study, a station spacing criterion of one to two miles generally was used to achieve high levels of service. In a few instances (primarily in express bus or arterial rapid transit corridors), shorter station spacing was used where there were multiple major activity centers less than one mile apart.

The potential transit improvement corridors were evaluated and screened using three categories of refined evaluation criteria: travel performance (ability to address travel needs in the study area); compatibility with adjacent land uses; and compatibility with adopted transportation plans and technology compatibility. Level Two evaluation criteria are listed in Table 4.

The Level Two evaluation criteria include a change in the travel/service criterion. Whereas Level One screening measured household densities per square mile based on U.S. Census data, Level Two screening evaluated where study area workers live based on travel analysis zones that were normalized to cover one square mile. A travel analysis zone is a special area used by transportation planners to tabulate travel data, particularly journey-to-work statistics. It usually consists of one or more census blocks, block groups, or census tracts.

**TABLE 4**  
Level Two Screening Criteria

<b>Criteria</b>	<b>Measures of Effectiveness</b>	<b>Factor</b>
<b>Travel Performance</b>		
Improve Travel/Service	Connect to concentrated employment sites	Sites with more than 75 employees
	Connect study area residents to work	Densities within 1 mile of station areas
	Connect study area workers to residence	
	Serve region's air traveler markets	
Improve West O'Hare Access	Connect to O'Hare's west entrance	Yes or No
Modal Connections	Availability of intermodal connections	Number of connections
<b>Societal Effects</b>		
Land Use	Compatible with existing land use	Yes or No
<b>Other Criteria</b>		
Compatibility	With adopted transportation plans	Yes or No
Technology	Capacity compatible with market conditions	Yes or No

Travel performance for the remaining transit corridors was evaluated by applying one-mile buffer zones around each station, and subsequently, applying the evaluation criteria to those buffer zones.

A total of 20 transit improvements were considered during the Level Two screening, including 15 carried forward from Level One plus five potential improvements in the expanded study area. Of the improvements considered, five were eliminated and two were not evaluated at this stage. The two not evaluated were circulators and employer shuttles, which will need to be addressed and refined as part of future detailed studies by others. Two transit improvements – the CTA Blue Line Express Track and Mid-City Connector – were eliminated from further consideration, as were three express bus corridors. Although they will not be evaluated further as part of this study they are in baseline conditions. In addition, both the rail and the bus rapid transit projects that were eliminated are identified in other regional plans, and exhibit strong demand outside of the study area. They are, therefore, identified as “Regional Supporting Projects” for consideration independently of the EO-WB study. Results of the Level Two screening are summarized in Table 5 and presented in Appendix C.



**TABLE 5**  
Level Two Transit Screening Results

<b>Alignment or Facility</b>	<b>Result</b>
<b>Rail or Bus Rapid Transit Alternatives</b>	
STAR Line connection to West Terminal	Retained
CTA Blue Line Extension to West Terminal	Retained
CTA Blue Line Express Track from Chicago Loop	Eliminated following completion of Level One screening. Most of alignment is beyond the study area; retained on maps as a "Regional Supporting Project"
J-Line: West O'Hare to IKEA and STAR Line	Retained
J-Line: IL-83 to Aurora and Naperville	Retained
J-Line: West O'Hare to Schaumburg Metra MDW station	Retained for screening. Alignment added to alternatives following completion of Level One screening to address markets in expanded study area.
Mid-City Connector	Eliminated. Ranks low in air traveler markets; does not serve study area residents; is too far removed from study area. Serves employment market in its corridor and study area workers who live in corridor. Retained on maps as a "Regional Supporting Project"
<b>Arterial Rapid Transit or Express Bus</b>	
Golf: Evanston to Woodfield	Retained for screening
Dempster: East O'Hare to Yellow Line, Skokie	Retained. Corridor extended to Evanston, consistent with Pace plans;
I-94 Yellow Line Transfer: Jefferson Park to Yellow Line Dempster terminal	Eliminated: low market potential for express service
I-294 North to Lake County: East O'Hare to Gurnee	Eliminated: low market potential
I-294 South to Homewood: East O'Hare to Homewood	Eliminated: low market potential related to EO-WB study area
Mannheim: East O'Hare to I-55	Retained
I-355: Higgins to I-55	Retained
<b>Local Limited Stop Bus Service</b>	
Irving Park, East Airport to West Airport	Retained
York Road Shuttle, UP-NW to UP-W	Retained
<b>Local Services</b>	
Golf West, Northwest Transportation Center to Elgin	Retained
Roselle Road, Palatine to Glen Ellyn	Retained
Circulators	To be evaluated in Level Three
Employer Shuttles	To be evaluated in Level Three

## Identification of Potential Station Locations

As noted previously, potential station locations were identified to aid in the Level Two transit improvement screening process. Potential station locations were identified based on a combination of the following factors:

- *Market Data.* Building upon the market analysis performed in Screen One, areas of potential market densities were identified along each corridor. Specific measures used included: Population Density (year 2000 by census tract), Where Study Area Workers Live (year 2000 by residence TAZ), Where Study Area Residents Work (year 2000 by place of employment TAZ), O'Hare Air Traveler Origins and Destinations (year 2003 by O/D TAZ), and the location of employment centers with at least 75 employees (year 2006). Referring to the buffer analysis that was performed during Screen One, stations were located in the highest density areas along each corridor.
- *Land Use Patterns.* General land use patterns, based on aerial photos, knowledge of the corridors, and locations of major activity centers, were used to identify and refine stop locations. Stop locations were considered at major activity centers such as employment centers, large shopping centers, hospitals, and schools. Also, stops were positioned to maximize access to surrounding destinations, transit operations, and pedestrian safety. In general, for mixed traffic modes such as local or express bus, far-side stops were chosen to decrease run-time delay due to red lights.
- *Intermodal Connections.* Another consideration when choosing stop locations along each corridor was provision for intermodal transit connections. As a result, stops for connecting services were added at existing or proposed Metra, BRT and express bus stations, along with intermodal facilities such as auto and bike parking to allow a transfer between various proposed corridors and service routes.
- *Station Spacing.* Average station spacing along each corridor was set to correlate to the industry standards for each transit mode. In general, higher capacity modes, such as rail or BRT will be spaced further apart than lower capacity modes such as local bus service.
- *Local services.* Stop locations were not identified for the local bus or local circulator alternatives, because these modes would typically have stop spacing approximately every ¼ mile (or at each major intersection). Stops for the employment shuttles were identified during the Screen Three process based on the location of major employers and corresponding transit station
- *Stakeholder Input.* Preliminary stop locations were further refined based on input from stakeholders and transit agencies.
- *Thorndale Corridor Stations.* Additional factors were considered in locating the Thorndale corridor BRT stations. This included a field check of conditions to verify:
  - locations of major employment centers and the routes into them for pedestrian and circulator/shuttle access,
  - availability of space for parking as appropriate, and,
  - residential development patterns.

## Consideration of Transit Improvements with Draft EIS Build Alternatives

A total of 15 transit improvements were carried forward as the transit element of the Build Alternatives for detailed consideration with the *Tier One Draft EIS*. The proposed improvements include a mix of regional, local and distributor services (light rail, commuter rail, bus rapid transit, arterial rapid transit, express bus, local bus, or local circulators). Because of the nature of these transit services, many extend outside the proposed Build Alternative improvement limits and outside the study area in general. Transit improvements carried forward are illustrated in Exhibit 1.

In addition to the fifteen proposed transit corridor improvements, three new intermodal transportation facilities as well as upgrades to two existing intermodal facilities were identified by the project team with input from transit agencies and stakeholders (see Exhibit 1). These intermodal facilities, or transportation centers, provide connections and transfer points between modal services and are vital to the overall function of the system. They add opportunities and convenience for improved automobile connections, passenger drop-off, bus-to-bus interconnections, bus-to-rail and airport-to-bus or rail interconnections which are expected to result in the following benefits:

- Provide enhanced and more convenient transit services to both air travelers and the residents and workers in the surrounding communities.
- Provide a vital transit link between the city and suburban residents and job markets.
- Relieve traffic and parking pressure on the airport and surrounding roadways.
- Reduce pollutant emissions from transport in the area.

The following proposed intermodal facility improvement locations were identified, with the understanding that detailed planning studies of each location would be performed in the future by others:

- **West Terminal Intermodal Center.** This new facility was identified on the basis of prior planning studies and stakeholder input from the EO-WB study. A conceptual plan was developed to integrate the following existing and potential new transit services at the planned intermodal center, including: existing area Pace (local) bus routes; proposed new express and local bus services as identified with the Build Alternatives; CTA Blue Line extension as identified with the O'Hare Modernization Program (OMP); Metra STAR line terminal to accommodate a potential spur connection; potential High Speed and Intercity Rail. A representative conceptual layout was developed for the West Terminal Intermodal Center (see Appendix D). Whereas the West Terminal design will be developed and implemented as part of the ongoing OMP, it is assumed that this conceptual layout will be considered in more detail as part of future studies by OMP.
- **Thorndale Transportation Center.** A new intermodal facility is proposed along the Elgin O'Hare Expressway in the vicinity of Rohlwing Road. This facility would include features such as bus stands, bicycle and pedestrian access, bicycle storage, and real-time displays of service information. Timed coordination of bus schedules is important to allow easy transfer between the various transit services. At this location, provisions for transfers between J-Line to Woodfield, the J-Line to the Schaumburg Metra Station and O'Hare Airport, Park-N-Ride and Kiss-N-Ride could be provided. A representative

conceptual layout of the Thorndale Transportation Center was developed to illustrate potential linkages and the estimated footprint requirements for the proposed facility (see Appendix D), with the understanding that the intermodal center will need to be evaluated as part of future detailed studies by transit agencies. Whereas the center is located within the Build Alternative roadway improvement limits, it was incorporated into the overall conceptual layout and associated footprint requirements.

- **East O'Hare Transportation Center.** This existing intermodal facility on the east side of O'Hare Airport would be enhanced to accommodate connections to additional routes and services, including transfers between current and proposed new transit facilities on the east side of the airport. Potential features include bus stands, bicycle and pedestrian access, bicycle storage, and real-time displays of service information. Timed coordination of bus schedules is important to allow easy transfer between transit services including Metra's North Central Service, local and express bus routes, the airport people mover and the intermodal facility. This location would serve as a new centralized intermodal transit hub for the airport and the communities in the area. A representative conceptual layout of the East O'Hare Transportation Center was developed to illustrate potential linkages and features.
- **Northwest Transportation Center and Schaumburg Metra Station Improvements.** Proposed improvements include upgrades to these two existing intermodal facilities. Upgrades would include bus stands, bicycle and pedestrian access, bicycle storage, and real-time displays of service information. Timed coordination of bus schedules is important to allow easy transfer between transit services and between bus routes and the intermodal facility. At these locations, upgrades could also consist of connecting to the proposed J-Line branches and provisions for additional or shared use parking at the Schaumburg Flyers Stadium parking facility (see Appendix D).

At this stage, transit improvements along with other identified modal improvements were incorporated into the two remaining roadway system alternatives to form complete multimodal Build Alternatives 203 and 402. This allowed a comprehensive evaluation of transportation benefits and potential impacts of the Build Alternatives as needed to support a decision regarding the Preferred System Alternative for the EO-WB study.

*It should be noted that prioritization, detailed planning, design and implementation of transit improvements included in the Build Alternatives considered with this study will be the responsibility of the appropriate transit implementing agency. Thus, the potential location, service, and operating characteristics of transit improvements identified with this study are conceptual in nature, and subject to future detailed study by transit agencies in compliance with FTA procedures.*

Procedures used to incorporate the aforementioned transit improvements into the Build Alternatives development and evaluation are described below.

### **Build Alternative Conceptual Layout Refinements and Impact Analyses**

Proposed transit improvements include both corridors within and outside the EO-WB study area. Whereas proposed roadway improvements under consideration with the Build Alternatives are generally limited to the Elgin O'Hare and West Bypass corridors, and individual transit improvements will be subject to future detailed planning studies by transit agencies, only those transit improvements within the proposed roadway

improvement limits were incorporated into the Build Alternative conceptual layouts. Thus, the focus was to provide a reservation in shared roadway/transit improvement corridors for high type transit service (either rail or BRT), with the understanding that a decision on transit service type would be made as part of future detailed planning studies by transit agencies.

The following dedicated high-type transit corridors, as well as the aforementioned Rohlwing Road Transportation Center were included in the Build Alternatives conceptual layout:

- **J-Line West to Schaumburg Metra.** This is envisioned as a high capacity transit corridor connecting West O'Hare Terminal station to Schaumburg Metra MDW station with stop locations at the West Terminal, IL 83, Wood Dale, Prospect, Meacham, and Roselle Roads, and Schaumburg Metra. The J-Line would provide approximately 10 miles of new transit service within the median of the Elgin-O'Hare corridor. Whereas the transit modal alternatives (e.g. bus rapid transit, heavy rail, light rail) would need to be evaluated in detail by the appropriate transit agency with future studies, Bus Rapid Transit was assumed as a representative transit mode for purposes of the EO-WB Tier One studies. Preliminary analyses suggest that the BRT or rail transit service could be accommodated within the Elgin O'Hare corridor roadway layout. Specifically, a 70'-144' median ROW is reserved that can accommodate either two rail tracks (one track each direction) with provisions for a platform or two BRT lanes (one lane each direction) with a platform. The BRT lanes would be separated from the eastbound and westbound lanes by a barrier.
- **STAR Line Spur.** The STAR Line Spur is envisioned as a rail spur that connects the proposed West O'Hare Terminal station to the planned Metra STAR Line located within the median of I-90 (a proposed 2030 Baseline improvement). The spur provides approximately 3 miles of a new dedicated commuter rail connection from the I-90 corridor to the proposed O'Hare West Terminal, with the West Terminal being the only stop along the spur section. Transit improvements included in the conceptual layout of the Build Alternatives begin at the I-90 and West Bypass system interchange complex and extend to the south along the West Bypass corridor. Conceptually, the STAR Line Spur corridor would consist of two rail tracks (one in each direction) located within the median of the proposed West Bypass freeway, with a physical separation between rail and freeway. The STAR Line Spur is only proposed with Build Alternative 203, which includes the proposed north leg of the West Bypass freeway corridor.

Environmental and socioeconomic impacts of Build Alternatives 203 and 402 were evaluated on the basis of proposed multimodal improvements, their refined conceptual layout, and associated estimated footprint requirements.

### **Build Alternatives Transportation Performance Evaluation**

All proposed transit improvements carried forward from the Level Two screening were reflected in the travel demand modeling and systemwide transportation performance evaluation of the Build Alternatives. In order to assess the effect of proposed transit improvements on systemwide travel characteristics, potential physical and operating characteristics had to be established for each corridor. The location, modal and operating

assumptions were identified (see Table 6 attached) and then reflected in the Finalist Build Alternative travel demand model.

Improvements in transit ridership and transit mode split in the study area were estimated and reflected in the Build Alternatives systemwide transportation performance evaluation. Additionally, socioeconomic characteristics adjacent to transit improvement corridors were reviewed and summarized (see Table 7 attached). This socioeconomic data provides insights to ridership potential along each corridor.

## **Transit Agency Coordination**

Extensive coordination was conducted with regional transit planning agencies and service boards throughout the EO-WB Tier One study. The goal was to develop and gain support for a framework of future transit improvements in the study area that is consistent with regional and service board transit planning principles. Summaries of transit agency meetings are included in Appendix E.

### **Attachments:**

Table 6: Corridor Definitions for Proposed O'Hare Bypass Transit System

Table 7: Socioeconomic Measures for Screen Three EO-WB Transit Corridors

Exhibit 1: Elements Proceeding to Level Three Screening

Appendix A: Initial Transit System Strategies

Appendix B: Level One Transit Screening

Appendix C: Level Two Transit Screening

Appendix D: Intermodal Transportation Facilities

Appendix E: Transit Agency Meeting Summaries