7. Overall Conclusions

The EO-WB Bypass study area is densely developed with a mix of residential, commercial, and industrial land uses. The population there has remained relatively stable in recent years, but employment has exceeded regional growth averages for several decades. Regional population and employment growth forecasts indicate a continuation of these trends through the project design year (2030). Land use characteristics in the study area are influenced by the presence of such nationally and regionally significant transportation facilities as O'Hare International Airport, major freight rail corridors, major interstate (freeway/tollway) corridors, and commuter rail corridors. Collectively, the study area represents a major regional transportation and economic development hub, one that relies on efficient and reliable transportation to move persons and goods to their destinations.

The study area contains a broad array of surface transportation facilities: regional and local roadways, rail transit, bus transit, freight rail, and bicycle/pedestrian facilities. As presented in Sections 5, Existing and 2030 Baseline Transportation System Performance, and 6, Stakeholder Input to Definition of Transportation Problems, each element of the system presents unique performance issues. These issues must be considered collectively in order to develop a comprehensive and effective transportation system solution—one that optimizes mobility into, from, and through the study area. Key performance analysis findings are summarized below, along with recommendations for addressing these performance issues for each element of the surface transportation system.

7.1 Roadway System Conclusions

Travel demand on the area transportation system is significant, especially vehicular travel, which constitutes 96 percent of all travel in the study area. A large amount of roadway traffic—3,700,000 vehicle trips—enters, leaves, travels within, or passes through the study area daily. This represents more than 16 percent of all daily vehicular travel in the Chicago metropolitan region as a whole. By 2030, the total number of vehicle trips is projected to exceed 4,375,000. The proportion of roadway traffic that begins or ends outside the study area is quite large: 48 percent. This underscores the area's reliance on good connections to and from major regional roadway corridors.

The significant and growing travel demand on area roadways creates severe congestion and results in poor traffic service throughout the roadway system. Ninety-one percent of the area's freeways, tollways, and major arterials are congested during the P.M. peak period (4 P.M. to 6 P.M.), and that percentage is predicted to grow to 94 percent by 2030. In the P.M. peak period alone, congestion results in more than 25,750 hours of delay daily, or more than 67 million hours of delay over an entire year. Area roadways cannot accommodate traffic demand in the traditional peak travel periods, and the duration of peak travel periods on an average weekday is increasing. Widespread congestion will result in extended duration of congestion on area roadways, as peak traffic demand spills over into the pre- and post-peak periods.

The lack of convenient access to regional freeways and tollways also contributes to poor traffic service. While more than 48 percent of trips in the study area begin or end outside the study area, 40 percent of the study area does not have convenient full access to area freeways and tollways, defined as areas in which motorists must travel more than 10 minutes to get to an interstate roadway. This is particularly noteworthy given the major commercial and industrial land uses in the study area.

Analyses and stakeholder input suggest several other impacts of congestion levels on major area roadways:

- Crash rates increase proportionately during congested travel conditions.
- Congestion adversely affects emergency services in area communities.
- Increases in traffic demand and congestion on major area roadways (freeways/tollways and major arterials) will cause traffic to spill on to collector and local roadways.

Given the extent and level of performance issues on the roadway system, all the identified issues cannot practically be addressed within the context of this project alone. The focus should be on strategies to improve travel efficiency and to reduce travel delays on major regional roadway corridors as a means of improving systemwide travel performance to the maximum extent practical, such as the following:

- Capacity improvements should be considered to improve travel performance within major regional roadway corridors to the maximum practical extent.
- Enhanced access to major regional roadways should be considered to accommodate the significant percentage of area travel that has trip origins or destinations outside the study area. Strategies to consider include provision of full access interchanges along existing freeways and tollways, and new major freeways and tollways to serve regional trip patterns.
- Enhanced traffic service is needed near major developments and destinations in the study area. Strategies to consider include improving design and operational features of existing system (interstate-to-interstate) interchanges.
- Strategies for reducing conflicts between roadway and freight rail systems should be considered to reduce congestion and travel delays on the numerous at-grade railroad crossings in the study area.
- Strategies for promoting use of other travel modes (rail transit, bus transit, bicycle/ pedestrian) should be considered as a means to temper the traffic demand and congestion levels on area roadways.
- Operational techniques and strategies (such as intelligent transportation systems) should be considered as a means of optimizing the performance of the transportation system.
- System demand management strategies (for example, constructing “managed” lanes such as high-occupancy vehicle lanes) should be considered to reduce traffic demand on area roadways, particularly during peak travel periods.

7.2 Transit and Freight Rail System Conclusions

Transit performance gaps coupled with freight rail conflicts at roadway crossings contribute to the overall travel mobility issues within the study area. The efficiency and effectiveness of the transit system are and will continue to be affected by capacity constraints, inadequate reinvestment in infrastructure for some system elements, roadway congestion, and accessibility issues. These conditions constrain ridership on the system, and prevent the transit system from serving a greater proportion of trips in the area. Where the freight rail system conflicts with roadway traffic, it causes costly delays for motorists.

Capacity is constrained on select elements of both the Metra and Pace systems. In the peak periods, ridership on several UP-NW and UP-W trains exceeds 100 percent of the seating capacity, and the maximum passenger load exceeds seating capacity on several bus routes. The widespread roadway congestion in the study area also adversely affects schedule adherence on the Pace system. Of 24 routes analyzed, only 2 were on time more than 80 percent of the time. Fifteen of the 24 routes adhered to schedule less than 70 percent of the time, including some "express" or "limited" routes. Growing roadway congestion levels will continue to adversely impact bus system performance, including potential ridership loss.

The accessibility of the transit system is characterized by several significant gaps that collectively constrain transit ridership. Only 36 percent of Pace's current riders live within ¼ mile of Pace service. Also, only 4 percent of Metra's riders access the system by connecting transit service, demonstrating that bus service to and from Metra stations is inadequate. Although there are more than 530,000 jobs in the study area, total daily ridership on the Pace system there is about 23,700. The accessibility gaps reinforce the need to address overall roadway congestion by increasing transit's share of work trips.

Vehicular and pedestrian/bicycle access to transit is also constrained. Fifty-five percent of Metra's riders drive to the station and park. However, parking capacity is stressed at both Metra and CTA stations. In the study area, usage exceeds 90 percent at seven Metra stations. A large percentage of rail transit passengers walk to their destinations, making the availability of attractive, direct, safe pathways critical.

Several other concerns related to the current transit system are also noteworthy. Transit system connectivity appears to be affected by the barriers presented by large tracts of land, including O'Hare International Airport and the forest preserves. Deteriorating transit infrastructure, most notably on the CTA Blue Line, causes substantial increases in travel times, potentially eroding ridership. Finally, the freight rail system in the study area is extensive and serves as an important hub for the movement of goods through the Chicago metropolitan region. It is important to the region's economy, and when it is inefficient, it is costly to the freight rail companies. Where the system conflicts with traffic throughout the study area, it also causes costly delays for motorists, as evidenced by the significant congestion and traffic delays at the numerous at-grade rail crossings along major area roadways.

The following improvement strategies should be considered in the alternatives development process along major improvement corridors in order to promote expanding use of transit, to mitigate travel demand on local roadways, and to improve overall freight mobility:

- Opportunities to eliminate accessibility gaps in the transit system should be considered. Strategies to consider include instituting connecting bus or shuttle services to employment, activity centers, and residential concentrations; increasing availability of parking facilities at station areas; and improving transfer connections in the suburban bus system.
- Opportunities to improve connectivity between transit corridors should be explored. Strategies to consider are express bus and bus rapid transit services in arterial or interstate corridors not served by rail; light rail lines in strategic locations; and new connections between CTA, Metra, and Pace.
- Grade crossings should be improved at high volume freight rail and roadway crossings.

7.3 Bicycle and Pedestrian System Conclusions

The bicycle and pedestrian system in the study area includes over 300 miles of bicycle routes and trails, but the system is greatly fragmented and constrains bicycling or walking as desirable travel options. Gaps in access, defined as points more than ½ mile away from a safe route or path, occur, especially in the southwestern and northern parts of the study area. Gaps between bicycle and pedestrian routes and transit facilities are prevalent throughout the area. Even in locations with sidewalks, psychological or physical barriers that diminish a pedestrian's perceived safety and comfort may discourage walking.

The following improvement strategies should be considered as part of the alternatives development process to support nonmotorized travel options, and to improve connections to the area transit system:

- Opportunities to improve connectivity in the bicycle and pedestrian network should be examined, with a focus on ensuring safe routes for nonmotorized travel. Bicycle routes should be upgraded to eliminate the worst unsafe conditions, in other words route segments not recommended for bicycle travel.
- The bicycle network should be completed to provide safe routes or exclusive lanes within a ½ mile of major activity centers and transit stations. A long-term strategy may be to establish a grid system of safe routes.
- Opportunities to improve the quality and safety of pedestrian routes throughout the study area should be explored and fostered by community zoning and land use plans. Safe crossings at signalized intersections and safe direct access to transit stations and bus routes are key components.