A.1 Introduction

In October 2008, the study area for the Elgin O'Hare-West Bypass (EO-WB) study was enlarged to address projected changes in travel patterns related to the project alternatives under consideration. The study area was expanded farther west from its original boundary to contain corridors where supporting off-system capacity improvements may be needed, including the length of the existing Elgin O'Hare Expressway from I-290 to its western terminus in Hanover Park. The expanded study area (Exhibit 1-1A) includes the original study area described in the original *TSPR* and the area to the west containing the Elgin-O'Hare Expressway to its western terminus in Hanover Park. Transportation system alternatives to be considered for the project will be limited to the expanded study area.

This *Final Transportation System Performance Report (TSPR) Addendum* describes characteristics and performance of the transportation system in the expanded study area, and includes updated tables and exhibits presenting system features and performance.

A.2 Existing Demographics of Expanded Study Area

The expanded study area comprises 127 square miles and 27 communities in northwest Cook and DuPage counties. In addition to the four core communities identified in the original study area (Elk Grove Village, Bensenville, Itasca, Wood Dale), two core communities in the expanded study area (Schaumburg and Roselle) will most likely be directly affected by the system alternatives. The expanded study area remains urban in nature with transportation corridors surrounded by commercial and industrial areas and communities with established residential neighborhoods and commercial centers.

A.2.1 Land Use

The expanded study area remains a mix of land uses (see Table 1). The increase in the percentages of residential land use and open space in the expanded study area reflect the expansion into suburban communities. Exhibit 2-1A depicts land use in the expanded study area.

TABLE 1
Land Use in the Expanded Study Area

Land Use	Area (mi^2)	Acres	% of Study Area
Residential	47.3	30,250	37
Commercial	10.5	6,740	8
Institutional	4.6	2,970	4
Industrial	18.0	11,520	14
Transportation [a]	14.5	9,250	11
Open space [b]	32.6	20,870	26
Total	**127.5**	**81,600**	**100**

[a] Includes roadways, rail, and O'Hare International Airport.
[b] Includes park, forest preserve, and undeveloped land.

Residential land use increased from 33 percent initially to 37 percent in the enlarged study area, and is still less than the 46 percent in the Chicago metropolitan area (2001 Chicago Metropolitan Land Use Inventory). Residential areas in the study area are representative of typical suburban areas with moderately dense populations and little undeveloped land. The percentage of open space also increased, from 23 to 26. Notable areas of open space in the expanded study area include community parks, golf courses and lands which the Chicago Metropolitan Agency for Planning labels agriculture in the southwest portion of the expanded study area.

There was some change in the percentage of commercial land use as the communities in the expanded study area contain large commercial centers, including the Woodfield Shopping Center. Because industrial corridors are not as prevalent in the expanded study area as they are in the original study area, the percentage of industrial land use decreased. However, the percentage of industrial land use within the expanded study area (14 percent) is twice that of the Chicago metropolitan area (2001 Chicago Metropolitan Land Use Inventory).

A comparison between the land use makeup of the six core communities within the study area (see Table 2) and the greater Chicagoland area shows that the communities in the study area have more urban and built-up land use (75.9 percent and above) than the greater Chicago area (44 percent). These communities exhibit a large concentration of industrial and commercial land use. Elk Grove Village, with nearly 40 percent of land use designated as industrial, has the highest concentration. Similarly, four of the six core communities contain a lower percentage of residential land use than the Chicagoland area. Communities farther

from Chicago (Schaumburg and Roselle) exhibit higher percentages of residential and commercial land uses and lower industrial land use than the other core communities. The amount of vacant land in each community is 5.9 percent or less, so growth that occurs represents infilling or selective redevelopment.

A.2.2 Population

The population in the expanded study area increased by 100,000 to roughly 509,900 residents, or 5.3 percent of the Chicago metropolitan area's 9.7 million people. The six core communities (Elk Grove Village, Bensenville, Itasca, Wood Dale, Schaumburg, and Roselle) are mostly or entirely contained within the study area and are considered representative of the communities expected to be affected by the proposed improvements. Although population forecasts differ for individual communities in the study area, the expectation is that the population of the study area as a whole will grow (see Table 3). Population growth between 2000 and 2030 in the additional core communities is estimated at 34.2 percent in Schaumburg and 15.9 percent in Roselle. The number of households is expected to increase as well: 5.6 percent in Schaumburg and 16.4 percent in Roselle.

A.2.3 Employment

Communities within the study area exhibit large concentrations of employment. Based upon 2006–2007 estimates (CMAP), total employment with the expanded study area increased from 532,290 (original study area) to 569,500 with the expanded study area, representing a considerable percentage (11.08) of the overall metropolitan employment total of 5,141,090. Schaumburg has the highest employment in the study area while Roselle has the lowest.

TABLE 2
Land Use within the Core Communities in the Expanded Study Area

	Elk Grove Village		Bensenville		Itasca		Wood Dale		Schaumburg		Roselle	
	acres	**%**	**acres**	**%**	**acres**	**%**	**acres**	**%**	**acres**	**%**	**acres**	**%**
Residential	2,691	37.9	1,369	35.6	876	27.5	1,295	43.3	5,878	48.0	2,105	61.0
Commercial and services	390	5.5	211	5.5	393	12.3	142	4.8	2,727	22.3	298	8.6
Institutional	276	3.9	180	4.7	85	2.7	51	1.7	377	3.1	223	6.5
Industrial	2,777	39.1	1,378	35.8	674	21.1	849	28.4	504	4.1	200	5.8
Transportation, communication and utilities	148	2.1	104	2.7	330	10.4	49	1.6	510	4.2	100	2.9
Under construction	24	0.3	37	1.0	64	2.0	0	0.0	117	1.0	24	0.7
Total urban and built-up land uses	**6,306**	**88.8**	**3,279**	**85.3**	**2,422**	**75.9**	**2,386**	**79.8**	**10,113**	**82.7**	**2,950**	**85.5**
Agriculture	6	0.0	11	0.3	1	0.0	8	0.3	21	0.2	87	2.5
Open space (includes wetlands and water)	647	9.1	448	11.7	580	18.8	527	17.6	1,503	12.3	310	9.0
Vacant	146	2.1	106	2.8	187	5.9	69	2.3	601	4.9	102	3.0
Totals	7,105	100	3,844	100.1	3,190	100	2,990	100	12,239	100.1	3450	100

Source: Chicago Metropolitan Agency for Planning.

TABLE 3
Population and Household Projections for the Core Communities in the Expanded Study Area

	Population			Households		
	2000	**2030**	**Change (%)**	**2000**	**2030**	**Change (%)**
Elk Grove Village	34,727	36,948	6.4	13,278	14,030	5.7
Bensenville	20,703	19,048	-8.0	6,885	7,582	10.1
Itasca	8,302	10,706	29.0	3,179	3,912	23.1
Wood Dale	13,535	13,869	2.5	5,117	5,245	2.5
Schaumburg	75,386	83,284	34.2	31,799	33,571	5.6
Roselle	23,115	26,784	15.9	8,443	9,830	16.4
Total Core Communities	**175,768**	**190,639**	**8.5**	**68,701**	**74,170**	**8.0**

Source: Chicago Metropolitan Agency for Planning

The transportation hub formed by crossing interstate highways, railroads, and one of the world's largest airports is a factor that will continue to contribute to future growth. The 2030 employment forecast for the expanded study area is estimated at 680,500, an increase of more than 100,000 employees over the original study area. Estimates indicate that the core communities will gain 76,579 jobs, or over half of the overall growth projected for the entire study area (see Table 4). Schaumburg is expected to have the second highest increase in employment while Roselle is expected to have the second lowest.

TABLE 4
Employment Projections for the Core Communities in the Expanded Study Area

	2000	2030	Change	% Change
Elk Grove Village	61,121	97,974	36,853	60.3
Bensenville	28,903	31,862	2,959	10.2
Itasca	31,374	37,210	5,836	18.6
Wood Dale	24,897	29,273	4,376	17.6
Schaumburg	87,688	111,229	23,541	26.9
Roselle	8,862	11,876	3,014	34.0
Total	**242,845**	**319,424**	**76,579**	**31.5**

Source: Chicago Metropolitan Agency for Planning

Table 5 lists the largest employers within the core communities in the expanded project area. The major employers in the two core communities within the expanded study area include the international headquarters of the Motorola Corporation and Woodfield Shopping Center, which requires efficient transportation facilities for optimal access.

A.2.4 Other Socioeconomic Characteristics

Combined, the core communities in the expanded study area have a low minority population of approximately 19 percent (see Table 6). As a group, the six core communities in the expanded study area have minority population of approximately 18 percent, which is lower than for Cook County and the State of Illinois.

TABLE 5
Major Employers within the Core Communities in the Expanded Study Area

Company	Employees	Company	Employees
Elk Grove Village		**Bensenville**	
Alexian Brothers Medical Center	1,800	Sara Lee	750
Automatic Data Processing	850	Lifelink Corp.	500
Citigroup	600	Quebecor World (1130 W. Thorndale)	400
Metal Impact	315	U.S. Food Service, Inc.	400
Sizmons	300	Victor Envelope	320
American Academy of Pediatrics	300	Restoration Inc, JC	315
Bigston	270	Quebecor World (110 Foster)	300
RR Donnelly	250	A. S. G. Staffing, Inc.	250
Elk Grove High School	250	Allmetal, Inc.	200
Manor Care	230	ATA Trucking, Inc.	200
Itasca		**Wood Dale**	
Gallagher – Bassett Services, Inc.	675	Corning Clinical Laboratories	900
Boise Cascade Office Products	625	Videojet Systems International	900
Fellowes Manufacturing Company	600	Sales Force Cos. Inc.	625
Westin Hotel	320	Household Retail Services	600
Continental Web Press, Inc.	425	Market Day	450
Oce-Bruning	330	AEC Inc.	360
Nestle	320	Majesty Maintenance Inc.	350
		AAR Corporation	300
		Florstar Sales, Inc.	280
		Tempco Electric Heater	275
Schaumburg		**Roselle**	
Motorola	7,000	Service Decorating and Construction	250
Woodfield Shopping Center	3,800	NEC Technologies	200
School District 54	2,274	Roman, Inc.	160
Zurich American Insurance	1,600	Exhibit Group	158
Experian	1,400	Rich Graphics	150
Cingular	1,200	Compton Presentations	125
IBM	1,150	Genesis	125
Nation Pizza Products	1,000	Electri-Flex	90
G.E. Financial Assurance	800	Larson-Juhl	65
AC Nielson	610	Sony	62

Source: Illinois Department of Commerce and Economic Development, http://www.commerce.state.il.us/dceo/Bureaus/Community_Development/CommProfiles/Default.htm (2/12/09).

The median household income for the additional core communities in the expanded study area is $60,941 (Schaumburg) and $65,254 (Roselle), which is comparable to the income levels in the other core communities. The U.S. Department of Health and Human Services defined the 2008 poverty guideline for a family of three at $17,600. The 1999 median household income levels for core communities in the study area are well above the poverty threshold, and above the levels for Cook County and the State of Illinois (see Table 7).

Census data for the six core communities in the expanded study area indicate household and individual poverty levels to be a small percentage of the total population (see Table 8). The core communities have low poverty levels, with none having poverty levels exceeding 5 percent of the households. The core communities were very similar to DuPage County as a whole, and markedly lower than the average poverty level of Cook County or the State of Illinois.

TABLE 6
Median Household Income for the Core Communities in the Expanded Study Area

Elk Grove Village	$62,132
Bensenville	$54,662
Itasca	$70,156
Wood Dale	$57,509
Schaumburg	$60,941
Roselle	$65,254
DuPage County	$67,887
Cook County	$45,922
State of Illinois	$46,590

Source: U.S. Census Bureau, 2000.

TABLE 7
Core Community Poverty Levels (percentages) in the Expanded Study Area

	Elk Grove Village	Bensenville	Itasca	Wood Dale	Schaumburg	Roselle	DuPage County	Cook County	Illinois
Households below poverty level	1.5	4.2	3.1	2.9	2.0	1.3	2.4	10.6	7.8
Individuals below poverty level	2.0	6.5	4.7	4.1	3.0	2.0	3.6	13.5	10.7

Source: U.S. Census Bureau, 2000.

TABLE 8
Comparison of the Demographics of the Core Communities in the Expanded Study Area

	Elk Grove Village	Bensenville	Itasca	Wood Dale	Schaumburg	Roselle	DuPage County	Cook County	State of Illinois
White	29,874 (86.0%)	14,615 (70.6%)	7,309 (88.0%)	12,076 (89.2%)	59,391 (78.8%)	20,315 (87.9%)	759,924 (84.0%)	3,025,760 (56.3%)	9,125,471 (73.5%)
Black or African American	490 (1.4%)	579 (2.8%)	140 (1.7%)	78 (0.6%)	2,526 (3.4%)	383 (1.7%)	27,600 (3.1%)	1,405,361(26.1%)	1,876,875 (15.1%)
American Indian and Alaska Native	33 (0.1%)	94 (0.5%)	22 (0.3%)	20 (0.1%)	77 (0.1%)	48 (0.2%)	1,520 (0.2%)	15,496 (0.3%)	31,006 (0.2%)
Asian	3,051 (8.8%)	1,318 (6.4%)	484 (5.8%)	439 (3.2%)	10,697 (14.2%)	1,685 (7.3%)	71,252 (7.9%)	260,170 (4.8%)	423,603 (3.4%)
Native Hawaiian and other Pacific islander	15 (0.0%)	5 (0.0%)	2 (0.0%)	10 (0.1%)	43 (0.1%)	11 (0.0%)	217 (0.0%)	2,561 (0.0%)	4,610 (0.0%)
Some other race	797 (2.3%)	3,438 (16.6%)	143 (1.7%)	650 (4.8%)	1,307 (1.7%)	333 (1.4%)	28,166 (3.1%)	531,170 (9.9%)	722,712 (5.8%)
Population of 2 or more races	467 (1.3%)	654 (3.2%)	202 (2.4%)	262 (1.9%)	1,345 (1.8%)	340 (1.5%)	15,482 (1.7%)	136,223 (2.5%)	235,016 (1.9%)
Total Population	**34,727**	**20,703**	**8,302**	**13,535**	**75,386**	**23,115**	**904,161**	**5,376,741**	**12,419,293**
Percent minority of total population	14.0%	29.4%	12.0%	10.8%	21.2%	12.1%	16.0%	43.7%	26.5%
Percent Hispanic or Latino (of any race) of total population[a]	6.2%	37.1%	7.0%	13.1%	5.3%	5.2%	9.0%	19.9%	12.3%

Source: U.S. Census Bureau, 2000.

[a]Percent Hispanic or Latino of total population is calculated separately from percent minority of total population and is not represented in the minority percentages.

A.3 Existing Transportation System in Expanded Study Area

This section presents updates to the roadway, transit, freight, and bicycle and pedestrian system descriptions in the expanded study area. Each system component and its travel demand, desire, and characteristics is discussed below.

A.3.1 Existing Roadway System in Expanded Study Area

The roadway system is the expanded study area consists of an extensive network of roads that serve various trips. This section presents updated characteristics of the entire roadway system in the expanded study area as a result of the expanded study area boundaries.

A.3.1.1 Characteristics of the Existing Roadway System

The number of route- and lane-miles of roadway throughout the entire expanded study area by functional classifications is tabulated in Table 9 and depicted in Exhibit 3-1A. This represents an increase of 22 percent of total route miles and 20 percent total lane miles over the original study area. For the expanded study area, 46 percent of route miles and 49 percent of lane-miles are freeways, expressways, or principal arterials. These higher classes of highway account for roughly 81 percent of travel miles in the A.M. peak period and 78 percent in P.M. peak period. For an entire weekday, higher class roadways account for roughly 79 percent of daily vehicle miles of travel.

TABLE 9
Mileage of Expanded Study Area Highways—2007

Functional Class	Route Miles	Lane Miles
Freeway[a]	130.7	406.5
Principal arterial	87.2	376.3
Minor arterial	145.4	505.5
Collector	113.9	302.6
Total	**477.2**	**1590.9**

[a] Includes ramps.

A.3.1.2 Existing Travel Characteristics

This subsection summarizes existing (2007) roadway travel characteristics in the expanded study area. As for the original study area, the data herein are derived from the CMAP regional travel demand model, augmented by the more detailed focus-area travel demand model developed specifically for the EO-WB study.

Daily Travel. Total vehicle miles of travel (VMT) and vehicle hours of travel (VHT) in the expanded study area by functional classification and time period are listed in Table 10 and depicted in Exhibit 3-2A. This represents an increase of approximately 10 percent and 15 percent of VMT and VHT, respectively, over the original study area. The expanded study area accounts for roughly 7 percent of the total VMT and 6 percent of VHT in the 6-county Chicago metropolitan region. Freeways account for about 62 percent of total VMT, but because speeds are highest on freeways, that classification accounts for only 40 percent of VHT. Of the total VMT, 28 percent occurs in the combined A.M. and P.M. peak periods, 7 A.M. to 9 A.M. and 4 P.M. to 6 P.M. The percentage of VHT during peak periods accounts for a significant part of the overall daily VHT (17 percent A.M. peak period, 20 percent P.M. peak period) because of peak period congestion.

TABLE 10
Vehicle Miles and Vehicle Hours of Travel in the Expanded Study Area—2007

	A.M. Peak (7 A.M.–9 A.M.)		P.M. Peak (4 P.M.–6 P.M.)		Daily	
Functional Class	**Miles**	**hours**	**Miles**	**hours**	**miles**	**hours**
Freeway[a]	1,591,000	45,200	1,576,000	41,000	10,939,000	225,200
Principal arterial	381,000	22,000	434,000	26,500	2,954,000	139,800
Minor arterial	324,000	18,000	410,000	28,000	2,672,000	130,000
Collector	123,000	11,900	153,000	17,200	983,000	60,700
Total	**2,419,000**	**97,100**	**2,573,000**	**112,700**	**17,548,000**	**555,700**

[a] Includes ramps.

Traffic Volume. Peak period travel flow is one factor used to plan future roadway improvements. Within the expanded study area, traffic volumes across the system generally are highest in the P.M. peak period. Exhibit 3-3A depicts the current (2007) range of P.M. peak period volume of travel on roadways in the study area.

Trip Origins and Destinations. An understanding of regional and local travel patterns is vital to understanding current traffic routing choices, and to identifying the causes of current system performance issues. Travel in the study area is a component of total travel in the metropolitan region and, as such, is a function not only of trips having origins and destinations within the study area ("internal" trips) but also of those with one or both trip ends outside the study area ("external" trips). For analysis purposes, travel may be described as follows:

- Internal-Internal—Trips with both origin and destination within the study area
- Internal-External—Trips originating in the study area with a destination outside the area
- External-Internal—Trips originating outside the study area with a destination within it
- External-External—Through trips with neither origin nor destination within the study area

The distribution of daily trips (2007) in each of these categories for the expanded study area is shown in Exhibit 3-4A and summarized in Table 11. Trip patterns in the expanded study area are generally compatible with those in the original study area, with a slight increase in the percentage of internal-internal trips. Exhibit 3-5A depicts the proportion of trips in each category for daily travel and during the A.M. and P.M. peak periods.

The analysis of internal and external travel confirms the strong interrelationships between trip making in the expanded study area and travel demand outside the area.

A.3.2 Public Transit System in Expanded Study Area

This subsection describes public transit system features within the expanded part of the study area west of I-290 only. Characteristics of the transit system within the original study area east of I-290 remain unchanged and so are not discussed herein.

A.3.2.1 Existing CTA Rapid Transit

The expanded study area west of I-290 does not include any additional CTA services.

A.3.2.2 Metra Commuter Rail System

This subsection describes Metra service in the expanded part of the study area and presents an overview of ridership data and characteristics for additional transit elements in the expanded study area. Characteristics of the remainder of the Metra commuter rail system within the original study area east of I-290 remain unchanged, and therefore are not discussed herein.

TABLE 11
Trips by Autos and Truck by Trip Origin and Destination in the Expanded Study Area—2007

Trip Origin–Destination	Trips	%
Internal-Internal	1,364,000	33
Internal-External	913,000	23
External-Internal	918,000	23
External-External	877,000	21
Total	**4,072,000**	**100**

Metra System Description. Of the four Metra rail lines discussed in the original *TSPR*, only the Milwaukee District West (MDW) line is affected by the expansion of the study area.

TABLE 12
Milwaukee District West Line Tracks and Crossings in Expanded Study Area

Station	Tracks	Grade Crossings
Bartlett station zone	**2**	**3**
Hanover Park station zone	2	0
Schaumburg station zone	2	4
Subtotal (expanded study area)		**7**
Grade crossings in original study area		23
Total		**30**

The MDW line has three additional stations within the expanded study area (see Table 12) beyond the eight stations discussed in the original *TSPR*. Exhibit 3-6A shows Metra service in the combined expanded and original study area boundaries. The Bartlett Metra Station is not inside the new study area boundaries, but its proximity and contribution to ridership are important facets to commuting patterns on the alignment. Specifically, the station reinforces a pattern in the

MDW line; like the Hanover Park, Schaumburg, and Roselle stations, there is a much higher proportion of passengers who park and ride along this segment of the line.

Metra Ridership. Table 13 (see next page) presents ridership data for both the A.M. and P.M. peak periods along the length of the MDW line in the entire expanded study area. As noted, there is a substantial number of passenger boardings and alightings at the three additional MDW stations, representing an increase of 104 percent in total 2006 A.M. and P.M. peak boardings and alightings as compared to the original study area.

TABLE 14
Metra Parking Capacity and Use (2003) in Expanded Study Area

MDW Station	Parking Capacity	% Use
Bartlett	735	72
Hanover Park	1,385	90
Schaumburg	1,585	82
Subtotal	**3,705**	

Table 3-14 shows the parking capacity and use at each station along the MDW line within the expanded study area. The Bartlett, Hanover Park, and Schaumburg stations represent 56 percent of parking capacity along the MDW line and a 130 percent increase from the MDW parking capacity in the original study area.

A.3.2.3 Pace Bus System

This subsection describes Pace service within the expanded study area and provides an overview of updated ridership and characteristics. A map of the Pace bus system in the entire expanded study area boundaries is shown in Exhibit 3-7A. Characteristics of the Pace bus system within the original study area east of I-290 remain unchanged, and therefore are not discussed within this *TSPR Addendum*.

Pace System Description. In the expanded study area, four Pace bus routes (602, 554, 699, and 767) augment the 33 Pace routes in the original study.

Route 602 operates between Golf Road and the Schaumburg Metra station and is the only bus route serving the station. The route features two morning and two evening runs to accommodate rush period ridership.

TABLE 13
Commuter Rail Ridership Analysis (Milwaukee District West) in Expanded Study Area

Station	AM Peak Boardings (October)			PM Peak Boardings (October)			AM Peak Alightings (October)			PM Peak Alightings (October)		
	1999	**2002**	**2006**	**1999**	**2002**	**2006**	**1999**	**2002**	**2006**	**1999**	**2002**	**2006**
Bartlett	1,031	856	916	42	53	48	30	37	25	915	797	872
Hanover Park	1,299	1,221	1,190	39	49	69	32	42	29	1,187	1,092	1,092
Schaumberg	1,467	1,404	1,387	70	41	90	41	42	42	1,329	1,321	1,337
Original Study Area Total (8 Stations)	3,569	2,986	3,074	480	422	526	471	392	369	3,325	2,848	2,890
Subtotal	**7,366**	**6,467**	**6,567**	**631**	**565**	**733**	**574**	**513**	**465**	**6,756**	**6,058**	**6,191**

Station	Change in Peak Boardings 1999–2006				Change in Peak Alightings 1999–2006				Total Average Weekday Boardings			Change in Average Weekday Boardings			
	A.M.		P.M.		A.M.		P.M.					1999–2006		2002–2006	
	Total	%	Total	%	Total	%	Total	%	1999	2002	2006	Total	%	Total	%
Bartlett	-115	-11.2	6	14.3	-5	-16.7	-43	-912	1,173	1,027	1,064	-109	-9.3	37	3.6
Hanover Park	-109	-8.4	30	76.9	-3	-9.4	-95	-1,201	1,506	1,431	1,482	-24	-1.6	51	3.6
Schaumberg	-80	-5.5	20	28.6	1	2.4	8	-1,401	1,733	1,609	1,698	-35	-2.0	89	5.5
Original study area total (8 stations)	-495	-13.9	46	9.6	-102	-21.7	-435	-13.1	4,727	3,907	4,308	-419	-8.9	401	10.3
Total	**-799**	**-10.8**	**102**	**16.2**	**-109**	**-19.0**	**-565**	**-8.4**	**9,139**	**7,974**	**8,552**	**-587**	**-6.4**	**578**	**7.2**

Routes 554, 699, and 767 run primarily in the original study area but also serve the expanded study area. Within the expanded study area, route 554 operates east-west along Golf Road between Plum Grove and Roselle roads. The route provides an important connection between the Metra station, the Pace Northwest Transportation Center and Woodfield Mall. Route 699 also continues service from the west boundary of the original study area along Golf Road at Plum Grove Road. It provides connections to the northern part of the expanded study and to many important destinations within the original study area. Route 767 extends from the original study area through the expanded study area over the I-90 Tollway. The route runs express service making no stops through the entire section within the expanded study area, with a single run serving both morning and evening rush hour periods.

Pace Ridership. Overall ridership on Pace routes serving the expanded study area has decreased by roughly 30 percent since 1999 (see Table 15). Ridership dropped for each year shown below for routes 602 and 767 while routes 554 and 699 dropped from 1999 to 2002 but increased from 2002 to 2006. Note that, while portions of these routes are the only Pace services in the expanded study area, ridership reports do not segregate ridership volumes by geography. Therefore the volumes reported in the table below apply to the entirety of each route. Furthermore, 2006 was the most recent data analyzed in the TSPR *Addendum* to keep consistent with the data sets used in the original TSPR; however, 2008 data is now available and demonstrates that ridership on the 554 and 699 has experienced a moderate increase.

TABLE 15
Pace: Average Weekday Ridership (Total on Routes Serving the Expanded Study Area, Month of October

Name	Route Number	Service Type	Year			Change in Ridership 1999–2006	
			1999	2002	2006	Total	%
Elgin–Streamwood–Schaumburg	554	Suburban Link	101	90	120	19	18.8
Higgins–Salem–Cedarcrest	602	Metra Feeder/ Paratransit	35	13	n.a.[a]	-22[a]	-62.9[a]
Palatine–Woodfield–Elk Grove	699	Suburban Link	374	275	302	-72	-19.3
Subtotal			**510**	**378**	**422**	**-88**	**-17.3**
Congress/Douglas Prairie Stone Connection	767	CTA connector	181	127	50	-131	-72.4
Total			**691**	**505**	**472**	**-206**	**-29.8**

Source: RTAMS.org
n.a. means "not applicable." Service on routes so designated did not exist in 1999; therefore percentage changes in ridership are not calculated.
Designation under "Service Type" conforms to Pace's designation. Many of these routes connect to Metra stations

[a] Change in ridership for Route 602 is based on 1999–2002, since this service was made into paratransit in 2004 and no data are available after that time.

A.3.3 Freight System in Expanded Study Area

Freight rail facilities in the expanded study area west of I-290 are limited to the Canadian Pacific (CP) facilities. There are two at-grade crossing in the expanded study area: the CP mainline crossing at Roselle Road (which carries both freight rail and MDW commuter rail traffic), and the freight rail spur crossing of Irving Park Road. Exhibit 3-8A illustrates the network of freight

rail corridors in both the original and expanded study area. Characteristics of the freight system within the original study area east of I-290 remain unchanged, and therefore are not discussed within this *TSPR Addendum*.

A.3.4 Bicycle and Pedestrian System in Expanded Study Area

Within the expanded study area west of I-290, there are roughly 31.8 miles of dedicated bicycle trails, 26.5 miles of shared roadways rated "suitable" for biking, and 80.0 miles of shared roadways rated "caution advised" for bicycles traveling through the study area and near rail stations that are included in the analysis. There are also 130 miles of roadway not recommended for bicycle usage. Pedestrian accommodations at transit stations generally are good, but access to those facilities from nearby residential and commercial land uses often is lacking. Information pertaining to bicycle and pedestrian system conditions within both the original and expanded study area is shown in Exhibit 3-9A.

A.4 2030 Baseline Transportation System in the Expanded Study Area

This section discusses changes to the characteristics of the 2030 baseline transportation system, or "No-Action Alternative", related to the expanded study area.

A.4.1 2030 Baseline Demographics

There were no required updates to the 2030 baseline transportation system as defined in the original *TSPR*. Therefore, the 2030 baseline demographics referenced in the original *TSPR* were used as the basis for analysis of the baseline condition in the expanded study area.

A.4.2 2030 Baseline Roadway Network

The 2030 baseline roadway network identifies roadway capacity improvement projects that are to be in place by 2030, excluding the major transportation improvements to be considered by this study. As described in the original *TSPR*, the 2030 baseline roadway network was developed with input from each transportation agency in the study area (IDOT, ISTHA, Cook County, DuPage County, CDOT) and a review of regional and agency plan information. The 2030 baseline roadway network consists of the existing transportation network plus the following:

- Roadway improvements identified in the 2030 RTP, excluding the extension of the Elgin O'Hare Expressway and West O'Hare Bypass
- Programmed roadway capacity improvements located within the study area and included in published Transportation Improvement Programs
- Roadway capacity or access improvements within the study area expected to be built and funded beyond the end date of current Agency Transportation Improvement Programs through 2030

Exhibit 4-1A depicts the planned and programmed roadway projects included in the 2030 baseline network within the expanded study area boundaries.

A.4.3 2030 Baseline Transit Network

There are no new long-range transit projects within the expanded part of the study area.

A.4.4 Projected Roadway Travel Growth in Expanded Study Area

Projected future travel demand in the expanded study area was developed using the same subarea focus travel demand model referenced in the original *TSPR* and described in the *Travel Demand Modeling and Travel Forecasting Technical Report.*

A.4.4.1 2030 Baseline Traffic Volume

Modeled forecast 2030 P.M. peak period travel volume on streets and highways in the expanded study area is shown in Exhibit 4-2A. Table 16 summarizes the 2030 baseline VMT and VHT for the expanded study area. This represents a daily VMT growth of 3,385,000 (19 percent) and a growth in daily VHT of 139,000 (25 percent), as compared to current demand on the existing roadway system. Freeways account for about 61 percent of total VMT, but because speeds are highest on

freeways, that classification accounts for more than 46 percent of VHT. Of the total VMT, roughly 14 percent occurs in the A.M. peak period (7 A.M. to 9 A.M.) and 15 percent occurs in the P.M. peak period (4 P.M. to 6 P.M.). The percentage of VHT during the 4 hours of peak periods accounts for a significant part of the overall daily VHT (17 percent: A.M. peak period; 22 percent: P.M. peak period) because of peak period congestion.

TABLE 16
VMT and VHT in Expanded Study Area—2030 Baseline

Functional Class	A.M. Peak Period (7 A.M.–9 A.M.)		P.M. Peak Period (4 P.M.–6 P.M.)		Daily	
	miles	hours	miles	hours	miles	hours
Freeway[a]	1,759,000	60,800	1,693,000	54,400	12,711,000	322,100
Principal arterial	432,000	21,400	529,000	32,200	3,299,000	133,100
Minor arterial	441,000	23,900	585,000	41,000	3,436,000	158,100
Collector	190,000	11,700	259,000	23,700	1,487,000	81,400
Total	**2,822,000**	**117,800**	**3,066,000**	**151,300**	**20,933,000**	**694,700**

[a] Includes ramps.

It should be noted that the 2030 baseline travel demand model has been refined to reflect updated capacity thresholds on the freeway system. Hence, the distribution of traffic among various roadway classifications differs from the results presented in the *TSPR* for the original study area.

A.4.4.2 2030 Baseline Trip Origins and Destinations

As discussed in the *TSPR*, travel in the study area is a component of total travel in the metropolitan region. Table 17 summarizes projected (2030) baseline daily vehicle travel pattern for the expanded study area. The baseline travel pattern is similar to the existing (2007) trip distribution patterns. There is no significant change between 2007 and 2030 baseline trip origin and destination characteristics in the expanded study area. The through autos grow from 21 percent in 2007 to 23 percent in 2030. The external to internal autos reduce from 23 percent in 2007 to 21 percent in 2030. In 2007 and 2030 the internal travel market represented 33 percent of all travel in the study area and internal to external travel 21 percent. The total volume of through trips is projected to increase by over 232,000 by 2030. This underscores the importance of the study area as a regional transportation hub in the Chicago metro area.

TABLE 17
Area Trips by Trip Origin and Destination in the Expanded Study Area—2030 Baseline

Trip Origin–Destination	Trips	%
Internal-Internal	1,526,000	33
Internal-External	1,045,000	23
External-Internal	984,000	21
External-External	1,109,000	23
Total	**4,664,000**	**100**

Exhibit 4-3A represents the proportion of origin and destination trips for daily travel and during the A.M. and P.M. peak periods for the 2030 baseline scenario.

A.4.5 Projected Transit Travel Growth

Projected transit travel growth in the expanded study area is consistent with travel characteristics described in the original *TSPR*.

A.5 Existing and 2030 Baseline Transportation System Performance in Expanded Study Area

This section summarizes changes to the transportation system performance characteristics related to the expanded study area boundaries. The evaluation was performed using procedures described in the original *TSPR*, with an emphasis on performance characteristics affected by the expanded study area.

A.5.1 Roadway Transportation System Performance in Expanded Study Area

Performance of the existing and 2030 baseline roadway system in the expanded study area is described below. The roadway system performance analysis was structured to evaluate systemwide performance characteristics, and to identify the nature and location of performance gaps. The performance measures considered for the expanded study area are the same as those presented in the original *TSPR*.

A.5.1.1 Traffic Service Performance

Level of service is the best indicator of traffic service performance. Level of service was calculated for each roadway segment in the expanded study area for the critical (most heavily traveled) time period: P.M. peak (4 P.M. to 6 P.M.). Exhibit 5-1A indicates congested locations on the network, labeled moderate congestion, severe congestion, and extreme congestion. Exhibit 5-2A identifies network segments expected to operate at a congested level in the 2030 P.M. peak period for the baseline network. A review of 2007 and 2030 congested locations and levels demonstrates widespread and growing intensity of congestion on major roadways, similar to trends in the original study area. Roughly 90 percent of freeways/tollways and principal arterials will operate under congested conditions in the 2030 P.M. peak period, as compared to 88 percent in 2007. By comparison, 88 percent of the roads will operate at severe or extreme congestion levels by 2030, as compared to 79 percent in 2007. The increase in congestion severity will result in growing travel delays on study area roadways.

Table 18 summarizes change in VMT and VHT as a measure of growth in travel characteristics in the expanded study area between 2007 existing and 2030 baseline conditions. For the P.M. peak period, VMT is projected to increase at a moderate level (8 percent) on area freeways and tollways, with a much higher increase in VHT of 33 percent. Projected growth in VHT on principal arterials and minor arterials is comparable to the corresponding growth in VMT. For example, VMT on major arterials is projected to increase by 43 percent, but the corresponding increase in VHT is 46 percent. This trend underscores the expanding and intensifying congestion levels on the roadway network.

TABLE 18
Change in VMT and VHT between 2007 Existing and 2030 Baseline by Time Periods in the Expanded Study Area

	Functional Class				
	Freeway	**Principal Arterial**	**Minor Arterial**	**Collector**	**Total**
A.M. Peak Period (7 A.M.–9 A.M.)					
Δ VMT	168,000	51,000	117,000,	67,000	**403,000**
% growth	11	13	36	54	**17**
Δ VHT	15,600	-600	5,900	-200	**20,700**
% growth	35	-3	33	-2	**21**
P.M. Peak Period (4 P.M.–6 P.M.)					
Δ VMT	117,000	95,000	175,000	106,000	**493,000**
% growth	8	22	43	69	**19**
Δ VHT	13,400	5,700	13,000	6,500	**38,600**
% growth	33	22	46	38	**34**
Daily					
Δ VMT	1,772,000	345,000	764,000	504,000	**3,385,000**
% growth	16	12	29	51	**19**
Δ VHT	96,900	-6,700	28,100	20,700	**139,000**
% growth	43	-5	22	34	**25**

Within the expanded study area, 88 percent of freeways VMT, 69 percent of principal and minor arterial VMT, and 41 percent of collector VMT occur at a congested level in the P.M. peak period. By 2030, congestion will grow to 90 percent of VMT on freeways, 91 percent of VMT on principal and minor arterials, and 60 percent of VMT on collectors. Clearly, planned roadway capacity improvements contained in the 2030 baseline network will neither address current travel performance problems nor accommodate growing travel demand.

A.5.1.2 Congestion Performance

The effects of congestion on roadway system performance were evaluated in terms of delay, expressed as VHD. Table 19 summarizes existing and projected 2030 VMT, VHT, and VHD during the P.M. peak period on expanded study area roadways stratified by functional classification. Freeways, which account for only 27 percent of the lane-miles within the expanded study area, carry roughly 68 percent of congested VMT and 35 percent of VHD in 2007 during the P.M. peak period. Table 19 also lists the change in congested VMT, VHT, and VHD between 2007 and 2030 in the P.M. peak period, stratified by functional classification. For all roads, total VMT will increase by 19 percent and total VHT by 34 percent between 2007 and 2030. VHD will increase by 46 percent because of increased congestion. This dramatic deterioration of traffic performance indicates that the existing and committed facilities alone would not adequately handle future travel demand.

TABLE 19
Traffic Performance—2007 and 2030 P.M. Peak Period in the Expanded Study Area

Functional Class	P.M. Peak Period VMT					
	2007 Existing VMT			2030 Baseline VMT		
	Total	Congested	% Congested	Total	Congested	% Congested
Freeway[a]	1,576,000	1,381,000	88	1,693,000	1,522,000	90
Principal arterial	434,000	344,000	79	529,000	489,000	92
Minor arterial	410,000	241,000	59	585,000	526,000	90
Collector	153,000	62,000	41	259,000	155,000	60
Total	**2,573,000**	**2,028,000**	**79**	**3,066,000**	**2,692,000**	**88**

	2007 Existing	2030 Baseline	Δ	% Increase
P.M. Peak Period VHT				
Freeway[a]	41,000	54,400	13,400	33
Principal arterial	26,500	32,200	5,700	22
Minor arterial	28,000	41,000	13,000	46
Collector	17,200	23,700	6,500	38
Total	**112,700**	**151,300**	**38,600**	**34**
P.M. Peak Period VHD				
Freeway[a]	18,000	24,600	6,600	37
Principal arterial	10,100	16,200	6,100	60
Minor arterial	12,300	21,300	9,000	73
Collector	11,700	13,800	2,100	18
Total	**52,100**	**75,900**	**23,800**	**46**

[a] Includes ramps.

Congestion will continue to cause significant travel delays in the P.M. peak period in the expanded study area. An associated effect of these conditions is that the duration of peak travel periods will increase over time to accommodate growing travel demand. Future growth in travel demand will result in an increase in the duration of congestion in the peak period along with higher proportions of congestion during the shoulder periods (pre- and post-peak periods) resulting in longer peak conditions between 2007 and 2030.

A.5.1.3 Safety Performance

Safety performance analyses presented in Section 5.1.2.4 of the original *TSPR* conclude that at a system-level, crash characteristics within the study area are consistent with those in other urbanized areas of similar size in the Chicago metropolitan region. Therefore, no updates to the systemwide safety performance analyses were performed for the expanded study area.

A.5.1.4 Accessibility Performance

No update is necessary to the accessibility performance discussion in Section 5.1.2.4 of the original *TSPR*.

A.5.1.5 Findings and Conclusions

Key findings and conclusions of the roadway transportation system performance analyses for the expanded study area are as follows:

- More than 88 percent of travel on freeways/tollways and 79 percent of travel on principal arterials are congested in the P.M. peak period. By 2030, the proportion of congested travel during the P.M. peak period will increase to 90 percent and 92 percentage on freeways/ tollways and principal arterials, respectively.
- Widespread congestion results in significant travel delays in the expanded study area, and decreasing travel reliability. Congestion causes 158,000 vehicle hours of delay daily, which will grow to 209,500 vehicle hours of delay in 2030 with the baseline transportation system. This represents an increase of 24 percent over existing VHD and 20 percent over 2030 VHD in the original study area.
- Widespread congestion will result in extended durations of congested conditions on roadways in the expanded study area, as peak traffic demand spills over into the pre- and post-peak periods.
- Widespread congestion will result in increasing traffic demand on secondary collector roadways, resulting in decreasing travel efficiency and mobility. Specifically, by 2030 P.M. peak period vehicle hours of delay will increase by 60 percent on principal arterials and 73 percent on minor arterials. The increase in delay on the minor arterials is greater than that for freeway and principal arterials (primary roadways).

A.5.2 Transit System Performance in the Expanded Study Area

This subsection describes the updated performance of the portion of the existing and 2030 baseline transit system in the expanded study area west of I-290. As discussed in Section A.3.2, the expanded study area includes a larger section of the Metra MDW commuter rail line and four additional Pace bus transit routes (routes 602, 554, 699, and 767). The discussion below focuses on updated transit performance characteristics related to these services within the entire study area with a focus on ridership trends and potentially increasing future transit use. Physical characteristics of the transit system within the original study area east of I-290 remain unchanged, and therefore are not discussed herein.

A.5.2.1 Discussion of Performance Considerations

The same factors and measures used in the original *TSPR* report were used to evaluate Metra and Pace services in the expanded study area west of I-290, yielding results similar to those presented in the original *TSPR*. This is largely attributed to the minimal amount of existing services in the expanded study area compared to the large number of services evaluated in the original study area. The immediate service area is considered to be within ¼ mile of a Pace route or within ½ mile of a Metra station. An updated series of exhibits developed with these guidelines assesses both Pace and Metra coverage for the existing system in 2007 and the baseline system in 2030, as follows:

- Exhibit 5-3A shows that, in 2007, 20.4 percent of the area's population lived within ½ mile of a Metra station, a proportion projected to increase to 29.9 percent in 2030. This represents a slight decrease from population percentages for the original study area (23 percent in 2007

and 35 percent by 2030). Exhibit 5-4A displays similar information for employment served by Metra, with 15.3 percent of jobs within ½ mile, or walkable distance of a Metra station in 2007, increasing to 34.8 percent in 2030, with the implementation of the STAR line corridor. This projection may be refined as actual STAR line station locations are confirmed.

- Exhibit 5-5A shows that 43.6 percent of the area's population is within ¼ mile of Pace service in 2007, a proportion that decreases slightly to 43.1 percent in 2030. Exhibit 5-6A displays similar information for employment, with 64.4 percent of the study areas jobs within ¼ mile of a Pace route, projected to diminish somewhat to 58.9 percent in 2030. The percentages for population and employment percentages along Pace routes are comparable to those for the original study area. Although the densities of population and employment in the area covered by Pace are quite high, they do not correlate to actual use of the system. Although the alternatives analysis phase of the study will address major improvements to Pace's system, no improvements are reflected in the baseline, a fact that affects the output of the 2030 analysis displayed in the exhibits.

A.5.2.2 Performance Issues

This subsection provides an overview of the performance characteristics, and a discussion of potential service or ridership expansion strategies for the Metra and Pace transit systems in the expanded study area west of I-290 based on identified performance gaps.

Metra System Characteristics and Deficiencies. As noted in subsection A.3.2, only the MDW line operates in the expanded part of the study area. The Bartlett, Hanover Park, and Schaumburg stations significantly affect the performance of this line. These stations provide a significant amount of parking and opportunity to serve large numbers of system users.

Rider Trends. Ridership is projected to increase significantly in the expanded study area, consistent with the increases described for the original study area in the original *TSPR*.

Accessibility. The original *TSPR* discusses the importance of parking to serve most of the passengers who access stations by driving to them. This is a key issue in the expanded study area, where the three additional Metra MDW stations feature among the highest parking capacities of all stations serving the line.

In the original study area, the Roselle station featured the largest capacity parking lot along the MDW line: 1,068 spaces, of which 94 percent are used on an average weekday. In the expanded study area, the Schaumburg station features the largest capacity parking lot with 1,585 spaces of which 82 percent are used. The Hanover Park station features the second largest capacity parking facility, with 1,385 available spaces of which 90 percent are used on an average weekday. The Bartlett station ranks fourth behind the Roselle station with 735 spaces and 72 percent utilization. The four stations, concentrated in zone F of the MDW Metra line, illustrate the appreciable demand for parking spaces near the far end of this commuter rail line. This is to be expected, given the decrease in development density in suburban areas (as compared to downtown Chicago), necessitating driving as the primary means of accessing activity centers and, in this case, commuter rail stations.

Although the three additional stations provide a sufficient level of service in meeting parking demands, other modes of access to Metra train stations must also be considered to

accommodate future growth in transit use, particularly pedestrian connections and intermodal transit connections such as buses and light rail.

Capacity. There are no changes in train capacity as a result of the expanded study area.

Travel Time. There are no major changes in travel time as a result of the expanded study area.

Pace Bus Service Performance and Deficiencies. As noted in subsection A.3.2, four additional Pace routes operate in the expanded study area.

Rider Trends. A 17.3 percent drop in ridership occurred from 1999 to 2006 for three of the routes in the expanded study area (see Table 15). A more dramatic decrease in ridership occurred on Route767. However, as this route traverses the area but does not stop in it, and as the market served by that route may have changed substantially since its inception, its rider decline is not considered in the ridership trend analysis. The 17.3 percent ridership decline in the expanded study area compares to a decline of 7 percent on routes within the original study area. This difference in ridership decline can be attributed to a statistically smaller sample of routes analyzed (3 in the expanded area compared to 33 in the original study area). For instance, the several hundred riders affected in the expanded study area are a very small fraction of the roughly 25,000 riders in the original study area. Route 554 was the only route of the three to gain ridership, increasing from 101 in 1999 to 120 in 2006. This route provides a relatively limited schedule. Although it has grown only modestly, it serves many people who are making work trips into the study area. Because of poor ridership trends on Route 602, the type of service was changed by Pace, as discussed further in the next section.

Accessibility. Accessibility issues for the four Pace bus routes in the expanded study area are generally the same as those discussed for the Pace system in the original study area. Because of declining ridership, Route 602 was changed in 2004 from operating entirely as a Metra feeder to a route that operates two feeder trips in each weekday peak period. In midday, it operates as a dial-a-ride service.

Pace routes in the expanded study area provide limited and infrequent service that is mostly focused on fulfilling morning and evening peak period demands (see Table 20). Of the four routes, 554 and 602 provide links to Metra stations. Route 554 provides service to the Hanover Park station (which includes a 1 block walk from Church and Lake Streets), whereas Route 602 provides a direct connection to the Schaumburg station. Routes 699 and 767 provide stops and service in the original study area but only pass through the expanded part of the study area.

TABLE 20
Pace Service Levels in the Expanded Study Area

Route	Name	Frequency Range	First Bus	Last Bus
554	Elgin–Streamwood–Schaumburg	Scheduled to meet morning and evening peak period demand	5:53 a.m.	5:54 p.m.
602	Higgins–Salem–Cedarcrest	Provides rush hour feeder service; dial-a-ride during off-peak	5:41 a.m.	5:19 p.m.
699	Palatine–Woodfield–Elk Grove	25–35 min peak; hourly off-peak	5:35 a.m.	5:49 p.m.
767	Congress/Douglas Prairie Stone Connection	Limited stop service; provides reverse rush hour express service	5:35 a.m.	5:45 p.m.

Capacity. There are no major capacity issues for the routes in the expanded study area. While fewer Pace services operate in the expanded area as compared to the original study area, there is abundant seating capacity. Table 21 shows load and capacity data for the four routes.

TABLE 21
Pace Peak Period Capacity Use in the Expanded Study Area

		Peak Vehicle Capacity: 6:00 A.M. to 9:00 A.M.			Peak Vehicle Capacity 3:00 P.M. to 6:00 P.M.		
Route	**Name**	Top Load	Seating Capacity	% Capacity	Top Load	Seating Capacity	% Capacity
554	Elgin–Streamwood–Schaumburg	(See narrative below)					
602	Higgins–Salem–Cedarcrest	(See narrative below)					
699	Palatine–Woodfield–Elk Grove	64	54	118.5	n.a.	n.a.	n.a.
767	Congress/Douglas Prairie Stone Connection	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

While data remains unchanged for routes 699 and 767, route 602 provides unique circumstances for analyzing seating capacity and total loads. As noted, it operates scheduled bus service during peak periods and dial-a-ride service during off-peak periods, thus permitting passengers to make connections to Metra stations, employment centers, or other destinations. Given the fact that seating capacity is flexible by use of multiple paratransit vehicles, and that very low numbers of passengers use the scheduled bus service, seating capacity is variable but more than sufficient to accommodate demand. Route 554 also has sufficient seating capacity.

Findings and Conclusions. Transit system performance characteristics in the expanded study area are comparable to those for the original study area presented in the original *TSPR*.

A.5.3 Freight Rail Transportation System Performance in Expanded Study Area

This subsection describes the performance of the freight rail transportation system, with a particular focus on major conflicts with area roadway (at-grade railroad crossings) and transit systems in the expanded study area west of I-290.

A.5.3.1 Performance Considerations

As noted, there are minimal freight rail facilities in the expanded study area: the CP corridor, which shares mainline facilities with Metra's MDW service, and two freight rail spurs into industrial areas. The issues that affect these lines and the major grade crossings are similar to those in the rest of the study area.

A.5.3.2 Performance and Deficiencies

Table 22 lists the two at-grade freight rail lines crossings in the expanded study area, showing annual average daily traffic (AADT) and number of scheduled trains. Performance issues associated with these at-grade crossings are similar to those presented in the original *TSPR*.

TABLE 22
Major Grade Crossing Conflicts on the Milwaukee District-West / Canadian Pacific Railroad in the Expanded Study Area

Crossing Street Location	Functional Classification	AADT	Lanes of Roadway	Daily Scheduled Trains	
				Passenger	Freight
Roselle Rd. just south of Irving Park Rd.	Minor arterial (urban)	22,300	2 each way	72	18
Irving Park Rd. just west of Roselle Rd.	Minor arterial (urban)	12,500	1 each way	0	Local only, small volume

A.5.3.3 Intermodal Access Performance and Deficiencies

For the expanded study area, intermodal access, performance and deficiencies issues remain unchanged from those in the original study area. Two industrial parks in the expanded study area are served by both trains and trucks: one is just north of the Elgin-O'Hare Expressway between Rodenburg Road and Mitchell Boulevard, the other is just south of the Elgin O'Hare Expressway near the intersection of Gary and Central avenues. These are examples of facilities that may warrant access improvements over the long term. At present, however, volumes of trains that serve them are relatively low, with the trucks having convenient access to the Elgin-O'Hare Expressway.

A.5.3.4 Findings and Conclusions

Given the relatively minimal freight rail and intermodal facilities in the portion of the expanded study area west of I-290, there are no appreciable changes to the analysis findings described in the original *TSPR*.

A.5.4 Bicycle and Pedestrian Transportation System Performance in the Expanded Study Area

This subsection describes the performance of pedestrian and bikeway systems and facilities in the expanded study area west of I-290. System performance characteristics in the original study area are not affected by the expanded study area and therefore are not addressed herein.

A.5.4.1 Performance and Deficiencies

Site surveys were conducted to analyze bicycle and pedestrian access to the Schaumburg, Hanover Park, and Bartlett transit stations in the expanded study area. This information was supplemented by a brief analysis of bicycle trails and routing via the roadway system.

A.5.4.2 Safety

Pedestrian signals are typically installed at most street crossings at each station. There are some exceptions, such as at Bartlett Metra station where a pedestrian signal is needed for the Oak Avenue crossing on the north side of the rail tracks. Street lamps provide adequate lighting along sidewalks, crosswalks, parking lots, and the platform areas at the Schaumburg and Bartlett Metra stations. The rail track is guarded on both sides by fencing at all stations.

All three Metra stations feature enclosed and climate-controlled shelters with ticket offices. Ample lighting provides a secure environment at each location and Metra security personnel were observed at the Schaumburg station. Bus stops and bicycle lock-up locations are all well-

lighted, with each having a directly adjacent lamp post or overhead lighting, as are parking lots and sidewalks within the Metra facilities.

A.5.4.3 Accessibility

Ramps are located on both sides of Metra stations and are less than 50 feet from the platform boarding area. Multiple exits are present at each station. The Hanover Park station has four short concrete stairways spaced about 50 feet apart along the north side of the platform linking passengers to the north parking lot. Exhibit 5-7A shows bicycle paths and roadways rated by IDOT and designated as suitable or caution-advised for bicycle travel. These routes are buffered with a ½-mile radius to demonstrate areas adequately served for bicyclists. Some red areas – which are farther than ½ mile from bike routes – may have additional bike lanes along roadways not rated by IDOT. These areas include Schaumburg which has an extensive system of bicycle lanes. At the Bartlett Metra station, inbound and outbound trains stop at different segments of the platform, potentially creating a longer walk to the north parking lot for outbound travelers.

A.5.4.4 Access to Transit

Bicycle lock-up posts or facilities are present at the three transit stations. The Schaumburg station has two covered bicycle storage areas where locking mechanisms provide 76 usable bicycle spaces. The facility is less than 100 feet from the pedestrian crossing linking to the station platform. The Hanover Park station has metal posts for locking up to 18 bicycles. The location of the bicycle parking permits convenient access to the station platform. The Bartlett station also has storage facilities for up to 10 bicycles according to a 2003 survey, but renovations to the station now provide the same bike lockers featured at the Schaumburg station in addition to the metal posts.

Designated kiss 'n' ride areas are conveniently located near platform exits at each station. They feature convenient pedestrian links to transit stations:

- At the Bartlett station, the kiss 'n' ride driveway next to Railroad Avenue provides a means for passengers to be dropped off within 50 feet of the platform boarding area.
- At the Hanover Park station, a 10-minute parking zone extends the length of the platform on the north side of the tracks and fencing.
- At the Schaumburg station, roughly 20 diagonal parking spaces are designated as 15-minute waiting zones on the north side of the tracks and fencing.

A.5.4.5 Pedestrian Level of Service

Pedestrian level of service is generally very good at the three Metra stations (see Table 23). Clearly marked indicators and signage direct pedestrians towards exits, ramps, facilities, and boarding locations. Food and drink amenities are at each facility as are Metra system maps, information, and ticket offices. Bench seating is featured both inside enclosed station shelters and along platforms.

- The Bartlett station features paved sidewalks connecting nearby retail development to the station entrances. Brick pavers and concrete paving allow easy access to the platform and waiting areas as well as the station building. The station building features restrooms for men and women. The interior is spacious and well-lit by natural light.
- The Hanover Park station has fewer amenities than the other two stations, but it still meets basic pedestrian standards. There are vending machines, spacious walkways, and landscaping elements for pedestrian benefit.
- The Schaumburg station features the most pedestrian amenities of the three stations. A separate, partially-enclosed bus shelter on the north side of the rail tracks and contains bench seating and overhead lighting. The station has a coffee shop, and newspaper stands are conveniently located for pedestrians. A wide, brick-paved sidewalk runs the length of the north parking lot, allowing passengers a safe path to the station entrance. This and other walkways are flanked by multiple parking payment kiosks and landscaping elements.

TABLE 23
Metra Station Pedestrian and Bicycle Level of Service in Expanded Study Area

	Bartlett	Hanover Park	Schaumburg
Sidewalk condition in station area	+	0	+
Pedestrian connectivity to surrounding area	+	0	–
Availability of pedestrian crossings	+	+	n.a.
Bicycle connectivity to routes/paths	0	0	+

+ = good, generally satisfactory; 0 = fair with room for improvement;
– = poor, no adequate facilities

A.5.4.6 Findings and Conclusions

There are no appreciable changes to the bicycle and pedestrian system performance analysis findings presented in the original *TSPR*. Although bicycle as a mode of access to commuter rail has increased at Bartlett, it continues to serve a relatively small percentage of commuters traveling to Metra stations. Increasing the supply of lockup facilities may contribute to the continued increase of bicycles as a mode of access to Metra stations.

A.6 Stakeholder Input for Definition of Transportation Problems in Expanded Study Area

Continued opportunities were available for interested stakeholders – agencies, officials, interest groups, and the public at large – to provide input regarding transportation issues in the expanded study area. This included one-on-one meetings with agency and community officials, meetings and workshops with the Project Working Groups (Corridor Planning Group and Task Force members), and Public Information Meeting #3. The focus was to share information regarding the expanded study area boundaries, and to elicit input regarding transportation issues and gaps in the portion of the study area west of I-290 which should be addressed as part of the Elgin O'Hare-West Bypass project.

Table 24 summarizes stakeholder input opportunities related to the expanded study area.

TABLE 24
Stakeholder Input to Transportation Issues in Expanded Study Area

Activity	Objective
One-on-One Agency and Community Meetings (October 2008)	Preview traffic analysis findings and expanded study area Initiate context audit for expanded study area west of I-290
Joint CPG/Task Force Stakeholder Workshop (November 2008)	Complete context audit for expanded study area Validate supporting improvement requirements in original and expanded study area
Newsletter #3 (November 2008)	Describe expanded study area boundaries and alternatives development and evaluation updates
Public Information Meeting #3 (March 2009)	Present alternatives development and evaluation updates, including expanded study area boundaries and transportation issues and improvements west of I-290