4. Initial System Strategies (Module 2)

This section summarizes Module 2 of the alternatives development and evaluation process. The objective of this step was to develop, test, and identify the combinations of roadway system strategies that address the purpose of and need for the project, and to identify complimentary transit system strategies. Roadway system strategies that address Purpose and Need will be carried forward in Module 3 for further development as the roadway component of the Finalist System Alternatives. This section includes an overview of system design and evaluation procedures for Module 2, a description of the initial roadway and transit system strategies considered, location and access options, evaluation findings, and recommended strategies to be carried forward for development of Finalist System Alternatives.

4.1 Initial System Strategies Development and Evaluation Procedures

During Module 1, stakeholders suggested more than 300 individual roadway and transit improvements to address regional and local transportation issues in the study area. During Module 2, the project team combined the individual improvements into comprehensive system improvement strategies to form initial roadway and transit system strategies.

Initial strategies were developed at a sketch-planning level of detail. This allowed the project team to efficiently develop and test the effectiveness of a broad range of system strategies, with a focus on identifying improvement combinations that would address Purpose and Need. The following basic improvement features were identified:

- Locations of existing or new corridors proposed for improvement
- Improvement termini
- Roadway improvement type, including proposed facility type (arterial, freeway) and proposed number of through traffic lanes
- Interchange locations and types (full vs. partial)
- Transit improvement type, including proposed transit service type (express bus, train service, new bus rapid transit, new rail transit)

Initial roadway system strategies were evaluated through the aid of the travel demand model. With stakeholder input, the project team identified travel performance evaluation criteria and performance measures related to the four established project needs (improve local and regional travel, improve travel efficiency, improve access from O'Hare from the west, and improve modal opportunities and connections). Each initial roadway system strategy was coded in the travel demand model, and model output was used to compare the relative travel performance of each system strategy to the 2030 No-Action Alternative.

4.2 Initial System Strategies Considered

This section summarizes the initial system strategies considered, including initial roadway system strategies and initial transit system strategies. Various corridor location options and interchange options identified by stakeholders for the potential Elgin O'Hare Extension and West Bypass corridors are also discussed.

4.2.1 Initial Roadway System Strategies

The project team identified 13 roadway system strategies based on stakeholder suggested improvement corridors. Two additional system strategies were then developed based on additional stakeholder input. The strategies were grouped into three categories: Existing System (Group 1), System Expansion (Group 2), and Combinations (Groups 3 through 6). Group 1 strategies consist of capacity improvements to various freeways and major arterials within the study area. Group 2 strategies consist of construction of new freeway corridors. The combination strategies consist of both capacity improvements to existing roadways and construction of new freeway corridors.

Initial roadway system strategies were developed to a level of detail that would allow the project team to evaluate the ability of the system strategies to address travel issues defined in the project Purpose and Need. At this stage, the strategy was simply defined with the basic number of travel lanes, the limits of improvements, and interchange locations.

Initial Roadway System Strategies along with proposed improvement features are illustrated in Exhibits 4-1 through 4-15.

4.2.2 Corridor Location and Access Variations

Several locations along proposed new freeway corridors required a greater level of study to identify a range of potential corridor location and access options. These included the IL 83 Freeway connection with I-90 (Jane Addams Memorial Tollway), the West Bypass Freeway connection with I-90, and the West Bypass connection with I-294 (Tri-State Tollway).

The proposed West Bypass is a potential new north-south freeway corridor that would be sited along the west side of O'Hare Airport, potentially connecting with I-90 to the north and I-294 (Tri-State Tollway) to the south. From north of Devon Avenue to south of IL 19, the corridor could be located within O'Hare Airport property within a dedicated 300-foot transportation corridor. Beyond these points, the corridor would need to be constructed on new alignment with new system interchange connections at I-294 (south leg) and I-90 (north leg). Exhibits 4-16 through 4-18 summarize the location options and interchange locations.

4.2.2.1 South Leg

Three general corridor locations were identified in the vicinity of County Line Road, the Union Pacific Railroad (UPRR), and along IL 19 (Irving Park Road). Proposed interchange locations include IL 19 (full service interchange) and I-294 (full system interchange) (see Exhibit 4-16 for the range of corridor location options developed by stakeholders).

4.2.2.2 North Leg

Three general corridor locations were identified for the north leg of the West Bypass. The corridor would generally be located along Elmhurst Road or the UPRR, connecting with I-90 near IL 72 (Higgins Road), Elmhurst Road, or the Des Plaines Oasis. See Exhibit 4-17 for the range of corridor location options developed by stakeholders.

Conversion of the existing IL 83 corridor into a freeway facility was identified as an option to the West Bypass corridor, potentially connecting with I-90 to the north and I-290 to the south. The corridor would generally be located along existing IL 83, except in the vicinity of I-90 where it would need to be constructed on new alignment to provide connections to existing roadways. Two general location variations were identified, either following IL 83 to I-90, or connecting with I-90 west of the Metropolitan Water Reclamation District (MWRD) detention facility (see Exhibit 4-18 for the range of corridor location options developed by stakeholders).

The Elgin O'Hare Extension would provide a new freeway/tollway facility from the eastern terminus of the Elgin O'Hare Expressway at Meacham Road in an easterly direction to a potential connection with the West Bypass or IL 83 freeway corridors. The corridor would be located along Thorndale Avenue. Stakeholders emphasized the importance of convenient and effective local access along these corridors to serve existing and future land use, in particular commercial developments near I-290. Several potential interchange locations were identified, including Rohlwing Road, Park Boulevard, and Prospect Avenue.

4.2.3 Initial Transit System Strategies

The development of transit system strategies was another component of the alternatives process. The transit system strategy process began with identifying the travel markets in the study area, see Exhibit 4-19. After the travel markets were identified, a total of four Initial Transit System Strategies were developed; see Exhibits 4-20 to 4-23. The transit improvements identified with these strategies were carried forward for consideration as part of the Finalist System Alternatives evaluation in Module 3 (see Section 5.1.2).

4.3 Initial Roadway System Strategies Evaluation

The first step of the alternatives evaluation process focused on determining which of the 15 initial roadway system strategies satisfy the purpose of and need for the project. As described in Section 4.1, the project team used evaluation criteria and transportation performance measures to test the ability of the strategies to address transportation needs over baseline conditions. At this stage, Initial Roadway System Alternatives were modeled using the 2030 baseline socioeconomic forecasts

This section summarizes the evaluation criteria, performance measures, and evaluation findings related to the four basic project needs.

4.3.1 Improve Local and Regional Travel

Congestion on area interstates and major arterials is widespread. As of 2007, roughly 86 percent of these roadways in the original study area are congested during the afternoon peak travel period (4:00 P.M. to 6:00 P.M.), growing to 91 percent by 2030. As a result of growing congestion on major roadways and increasing travel demand, more than 81 percent of the

area's minor roadways will also be congested by 2030. These conditions are the result of substantial travel demand in the study area (nearly 4.3 million daily vehicle trips) and strong travel demand for trips that originate or end outside the study area (nearly 70 percent of all trips), and lack of capacity on major regional roadway corridors to effectively accommodate this travel demand. As the project progressed, the study area expanded and travel demand on area interstates and arterials was revisited (see Section 5.4.2).

Several evaluation criteria and performance measures were used to evaluate system-wide travel characteristics of the initial roadway system strategies and to compare their performance to the No-Action Alternative in 2030, as follows:

- **Vehicle Hours of Delay:** This is a commonly used measure that describes the overall traffic operating conditions on the roadway network. For purposes of this study, vehicle hours of delay (VHD) were calculated for individual links of the system using the formula below, then summed for all links on the network to yield a cumulative delay:

  $$VHD = volume \times (congested\ travel\ time - free\ flow\ travel\ time)$$

- **Congested Vehicle Miles of Travel**: This measure calculates the amount of travel that occurs in congested conditions. For purposes of this analysis, the focus was to compare the percentage of congested vehicle miles of travel (CVMT) on the secondary roadway system thus allowing a comparison of how well the initial roadway system strategies relieve growing congestion on the area's minor roadways. Congested conditions were defined as level of service (LOS) D, E, or F.

- **Travel Time Savings:** This measure assesses where travel performance will be improved by each initial roadway system strategy, based on areas that will realize travel time savings. For this analysis, three trip origins representing trips that could potentially be improved by the strategies under consideration were evaluated. For each trip origin, areas that would experience the following travel time savings to the study area were calculated: northwest (near I-90 and the Fox River)—greater than 5 percent; west (near US 20 and IL 59)—greater than 15 percent; and southwest (near I-88 and the Fox River) —greater than 5 percent.

Systemwide VHD for the initial roadway system strategies ranges from 5,700 to 28,900 hours (see Table 4-1). This represents a reduction in systemwide travel delay, as compared to the No-Action Alternative, with ranges between 3 and 17 percent.

The analysis results reveal that system strategies that include the Elgin O'Hare Expressway extension, in combination with major north-south capacity improvements provide the greatest reduction in systemwide travel delay (Groups 2, 4, and 5). By comparison, system strategies that do not include the extension (Groups 1, 3, and 6) provide only modest reductions in systemwide travel delay.

A comparison of CVMT was performed with a focus on congestion relief on the secondary roadway network (arterials only). Cumulative CVMT on the network ranges from 18.8 to 35.9 percent (119,675 to 229,280 CVMT) better than the No-Action Alternative (see Table 4-2). The initial roadway system strategies would result in a decrease of CVMT ranging from 19 to 36 percent in 2030 during the P.M. peak period (4:00 to 6:00 P.M.).

System strategies that include the Elgin O'Hare Extension and a full or partial West Bypass (Groups 2 and 4) provide the greatest congestion relief—33 to 36 percent (208,586 to 228,280

TABLE 4-1
Systemwide Vehicle Hours of Delay

Strategy Number	Change from Baseline (hr/day)
Group 2, Option 2	28,900
Group 2, Option 3	27,000
Group 2, Option 1	25,500
Group 4, Option 1	25,500
Group 4, Option 3	25,300
Group 2, Option 4	23,100
Group 4, Option 2	22,500
Group 5, Option 1	22,000
Group 4, Option 4	21,900
Group 2, Option 5	19,700
Group 3, Option 1	11,800
Group 3, Option 2	10,700
Group 1, Option 2	10,700
Group 1, Option 1	7,960
Group 6, Option 1	5,700

Note: Performance evaluations based on initial travel demand forecast estimates and assumptions.

TABLE 4-2
Congested Vehicle Miles of Travel: Secondary Roadways

Strategy Number	Change from Baseline (%)	CVMT
Group 2, Option 1	35.9	228,280
Group 4, Option 2	35.5	226,042
Group 2, Option 3	35.1	223,628
Group 4, Option 3	35.1	223,102
Group 2, Option 2	34.7	220,978
Group 2, Option 5	34.2	217,939
Group 4, Option 4	34.0	216,172
Group 4, Option 1	33.9	216,014
Group 2, Option 4	32.8	208,586
Group 1, Option 2	30.9	196,690
Group 5, Option 1	30.7	195,077
Group 3, Option 1	27.7	176,499
Group 3, Option 2	27.1	172,329
Group 1, Option 1	24.1	153,623
Group 6, Option 1	18.8	119,675

Note: Performance evaluations based on initial travel demand forecast estimates and assumptions.

CVMT)—on the secondary system. This may result from the redistribution of regional traffic from the secondary system to the primary system (freeways and arterials), which can more efficiently handle higher longer-distance traffic demand. Strategies that include the Elgin O'Hare Extension, West Bypass, or existing arterial improvements (Groups 1, 3, and 5) also provide measurable congestion relief on the secondary system. By comparison, Group 6 provides more modest (18.8 percent) reductions in CVMT on the secondary system.

Another measure used to evaluate relative regional and local travel improvements was travel times for representative regional trip origins northwest, west, and southwest of the study area. Of these three trip origins, travel from the west realized the greatest percentage reductions in travel times, in part due to the effect of the potential Elgin O'Hare Extension corridor. The results were expressed in terms of areas (sq. mi.) both within and adjacent to the study area that would experience travel time reductions of 5 percent or greater (from northwest and southwest) and 15 percent or greater (from west). Analysis results are presented in Table 4-3 summarized as follows:

- For regional trips originating from the west, areas realizing a 15 percent or greater travel time savings range from 1 to 105 square miles for the initial roadway system strategies. The best performing strategies were those that include the Elgin O'Hare Extension plus West Bypass (full or partial) (Groups 2, 4, and 5), which result in reduced travel times across a 48 to 105 square-mile area. Groups 1, 3, and 6 do not appreciably reduce travel times for regional trips originating west of the study area.

TABLE 4-3
Reduction in Travel Time

Strategy Number	To/From Northwest	Strategy Number	To/From West	Strategy Number	To/From Southwest
Group 2, Option 1	52	Group 2, Option 2	105	Group 2, Option 1	53
Group 2, Option 4	50	Group 2, Option 3	104	Group 2, Option 2	53
Group 4, Option 1	50	Group 2, Option 5	97	Group 2, Option 4	51
Group 4, Option 3	50	Group 4, Option 4	90	Group 5, Option 1	49
Group 2, Option 2	48	Group 2, Option 1	88	Group 2, Option 3	48
Group 5, Option 1	48	Group 2, Option 4	79	Group 4, Option 1	46
Group 2, Option 3	45	Group 4, Option 1	58	Group 4, Option 3	46
Group 4, Option 2	43	Group 4, Option 3	58	Group 4, Option 2	45
Group 2, Option 5	40	Group 4, Option 2	50	Group 2, Option 5	42
Group 4, Option 4	35	Group 5, Option 1	48	Group 4, Option 4	42
Group 3, Option 2	31	Group 1, Option 1	7	Group 3, Option 2	18
Group 1, Option 1	29	Group 6, Option 1	5	Group 1, Option 2	16
Group 1, Option 2	27	Group 1, Option 2	4	Group 3, Option 1	15
Group 6, Option 1	22	Group 3, Option 2	2	Group 1, Option 1	11
Group 3, Option 1	19	Group 3, Option 1	1	Group 6, Option 1	3

Note: Performance evaluations based on initial travel demand forecast estimates and assumptions. Change from baseline in mi^2.

- For regional trips originating from the northwest, areas realizing a 5 percent or greater travel time savings range from 19 to 52 square miles for the initial roadway system strategies. The results are similar to those for the west trips, with Groups 2, 4, and 5 providing the greater benefit, and groups 1, 3, and 6 providing lower benefit.
- For regional trips originating from the southwest, areas realizing a 5 percent or greater travel time savings range from 3 to 53 square miles for the initial roadway system strategies. Again, the best performing strategies are those in Groups 2, 4 and 5.

Exhibits 4-24 to 4-26 display the range of areas with travel time savings for trips originating northwest, west, and southwest of the study area.

4.3.2 Improve Travel Efficiency

Factors other than congestion that contribute to inefficient mobility in the study area include partial interchanges along the existing freeway system, poor accessibility to major business developments in the study area, at-grade railroad crossings along major arterial roadways, and operational issues at freeway-to-freeway system interchanges in the study area. These factors contribute to long travel times required to travel short distances, resulting in poor travel efficiency and constrained ability to reliably move persons and goods.

At this early stage of alternatives development, the one improvement feature identified is the proposed location of new interchanges along existing and new freeway corridors. Therefore,

the evaluation focused on how the various system strategies would improve access to and from the study area to major regional freeway corridors. Isochronal maps illustrating P.M. peak period travel times to interchanges were developed (see Exhibit 4-27, which illustrates the range of travel times to freeway connections for the initial roadway system strategies). The additional area and potential trips with convenient access to the freeway system were then calculated for each strategy, as compared to the 2030 No-Action Alternative. For purposes of this analysis, "convenient access" was defined as trips within 5 minutes' travel time to a freeway connection during the P.M. peak period.

Results of the freeway access improvement analysis are presented in Table 4-4 and summarized as follows:

- An additional 11 to 39 square miles within the study area would have P.M. peak period travel times of 5 minutes or less, as compared to the No-Action Alternative. Groups which include new interchanges along existing or new freeways (Groups 1, 2, 3, 4, and 5) provide convenient access to between 18 and 39 square miles with options proposing multiple new service interchanges naturally performing at a better level.
- Between 5,100 and 28,200 additional potential trips are within 5 minutes of a freeway connection during the P.M. peak period as compared to the No-Action Alternative. The best performing strategies are those with new interstate access in highly developed industrial and commercial corridor; in particular, strategies that include the Elgin O'Hare Extension with a full or partial West Bypass (Groups 2, 4 and 5). These groups provide convenient interstate access for between 14,800 and 28,200 potential trips during the P.M. peak period, resulting in potential future economic development opportunities.

TABLE 4-4
Interstate Access Improvements

Strategy Number	Additional Trips Peak Period (Travel < 5 minutes)
Group 4, Option 3	28,200
Group 4, Option 1	25,700
Group 2, Option 1	24,100
Group 2, Option 2	23,700
Group 4, Option 2	22,900
Group 2, Option 4	22,000
Group 5, Option 1	21,800
Group 2, Option 3	20,300
Group 2, Option 5	17,800
Group 4, Option 4	14,800
Group 1, Option 2	13,200
Group 3, Option 2	7,900
Group 1, Option 1	7,700
Group 3, Option 1	5,200
Group 6, Option 1	5,100

Note: Performance evaluations based on initial travel demand forecast estimates and assumptions.

4.3.3 Improve O'Hare West Access

The ongoing O'Hare Modernization Program (OMP) includes a reconfiguration of the airport runway layout and airside operations, as well as construction of a new western terminal and western airport entrance near the intersection of Thorndale Avenue and York Road/Elmhurst Road. A key transportation issue cited by stakeholders and identified in the *Transportation System Performance Report* (TSPR) was the need for a second high-type roadway access to the worlds' second busiest airport. Indeed, analyses of the 2030 No-Action Alternative indicate that travel times between the proposed west terminal and interstates will be among the

highest in the study area. Analyses of the No-Action Alternative suggest that improved transit connections are another required component of the solution.

The ability of the initial roadway system strategies to improve access to the proposed west terminal was evaluated by comparing travel times for five representative trip pairs between the west terminal and various locations within the study area (see Exhibit 4-28). Of the trip pairs tested, Trip Pair 1 (O'Hare West Terminal to Thorndale Avenue/I-290) and Trip Pair 2 (O'Hare West Terminal to Arlington Heights Road/I-90) experienced the greatest potential travel time savings as well as the greatest variation in travel times across the range of system strategies considered. Therefore, these two trip pairs were used to compare the ability of the initial roadway system strategies to improve western access to O'Hare Airport.

TABLE 4-5
Travel Time Savings: Representative O'Hare West Access Trips

Strategy Number	Change from Baseline (min)	Change from Baseline (%)
Group 2, Option 2	25.8	61.6%
Group 2, Option 3	25.7	61.3%
Group 2, Option 5	25.7	61.3%
Group 4, Option 4	25.7	61.3%
Group 2, Option 1	25.4	60.6%
Group 2, Option 4	23.7	56.6%
Group 5, Option 1	17.1	40.8%
Group 4, Option 2	16.7	39.9%
Group 4, Option 1	16.2	38.7%
Group 4, Option 3	16.2	38.7%
Group 3, Option 1	15.9	37.9%
Group 3, Option 2	14.4	34.4%
Group 1, Option 1	9.9	23.6%
Group 6, Option 1	8.5	20.3%
Group 1, Option 2	8.4	20.0%

Note: Performance evaluations based on initial travel demand forecast estimates and assumptions.

Results of the O'Hare west access improvement analysis are presented in Table 4-5 and summarized below:

- Cumulative travel time savings for the two trip pairs range from 20 to 61.6 percent across the range of system strategies.
- Strategies that include both the Elgin O'Hare Extension and the full West Bypass (Group 2) provide the greatest travel time saving, ranging from 56.6 to 61.6 percent.
- Strategies that include the Elgin O'Hare Extension with a partial West Bypass, or that include only the West Bypass (Groups 3, 4, and 5) provide less travel time savings, generally ranging from 34.4 to 61.3 percent.
- Strategies that include widening arterials or freeways (Groups 1 and 6) provide only modest travel time savings, ranging from 20 to 23.6 percent.

4.3.4 Improve Modal Connection Opportunities

The lack of public transportation options in the study area coupled with a fragmented pedestrian and bicycle system that impairs access to transit stations and other nodes were among the key transportation issues cited by stakeholders. With roughly 5 percent of all trips in the study area projected to be made via transit in the year 2030 (No-Action Alternative), the current and baseline transit system is clearly not viewed as a mode of

choice for most travelers in the study area. Given the magnitude of highway congestion and opportunities for enhancing transit in the study area, there is a need to expand both the number and percentage of future trips made by transit.

Moving forward, the alternatives development process has been structured to integrate viable transit, bicycle and pedestrian improvements as elements of a comprehensive multi-modal transportation system solution. At this early stage of the alternatives development process, a broad range of potential existing transit improvement corridors and new transit service corridors have been identified (see Section 4.2.3). For purposes of the current analysis, it was assumed that any roadway corridor proposed for improvement would be developed to accommodate needed improvements to existing transit service (e.g. arterial rapid transit service for buses) or new dedicated transit service (e.g. dedicated bus rapid transit or rail transit corridors). Each roadway strategy was evaluated for the ability to improve modal connection opportunities by comparing the total population/employment served along the overlapping roadway capacity and dedicated transit service corridors (see Exhibit 4-29). The estimated population/employment served was calculated to be between 24,000 and 152,000 people, which was within ¼ mile to 1 mile distance of the corridor governed by the type of transit improvements.

TABLE 4-6
Modal Connection Opportunities

Strategy Number	Population/Employment Served (Number of People)
Group 2, Option 3	152,488
Group 2, Option 1	140,188
Group 4, Option 3	136,747
Group 4, Option 2	135,276
Group 4, Option 1	133,018
Group 2, Option 2	132,366
Group 2, Option 5	128,647
Group 4, Option 4	120,917
Group 5, Option 1	110,309
Group 2, Option 4	109,270
Group 3, Option 1	71,394
Group 6, Option 1	48,944
Group 1, Option 2	32,172
Group 1, Option 1	28,352
Group 3, Option 2	24,415

Results of the modal connection opportunities analysis are presented in Table 4-6 and summarized below:

- Strategies which include both Elgin O'Hare Extension and/or the West Bypass (Groups 2, 4, and 5) provide the greatest transit market potential for new dedicated transit service, ranging from 109,270 to 152,488 people. This is due to the large concentration of employment and residential centers in close proximity to these corridors, in particular along the Elgin O'Hare corridor.
- Strategies which include the West Bypass only, or improvements to existing arterials or freeways (Groups 1, 3, and 6) provide only moderate new transit market potential for dedicated transit service, ranging from 24,415 to 71,394 people.

4.3.5 Purpose and Need Evaluation Summary

The project team performed a cumulative comparison of the relative performance of the 15 initial roadway system strategies on the basis of the performance measures described above. Each system strategy was rated on a scale of 1 to 15 from best to worst performing.

Ratings were summed for all performance measures considered, and a composite score was calculated for each option (see Table 4-7 and attached Table 4-8, which provides more detail of the individual scoring of each strategy). Thus, the lower the cumulative score, the better the option performed through all the evaluation criteria.

The composite scores reflect the relative ability of each system strategy to address the four identified transportation needs. As shown in Table 4-7 and discussed in the preceding sections, Groups 1, 3, and 6 would provide appreciably lower cumulative transportation performance benefits as compared to other strategies considered.

TABLE 4-7
Initial Roadway System Strategies Composite Score

Strategy Number	Rank (1–15)	Totals
Group 2, Option 1	1	21
Group 2, Option 2	2	24
Group 2, Option 3	3	30
Group 4, Option 3	4	39
Group 4, Option 1	5	43
Group 2, Option 4	6	48
Group 4, Option 2	7	51
Group 2, Option 5	8	55
Group 4, Option 4	9	59
Group 5, Option 1	10	62
Group 1, Option 2	11	99
Group 3, Option 2	12	100
Group 3, Option 1	13	102
Group 1, Option 1	14	105
Group 6, Option 1	15	112

4.4 Stakeholder Input

Opportunities for input from project stakeholders were available throughout the development and evaluation of initial system strategies. This included a series of project workshop meetings where preliminary strategies, evaluation procedures, and evaluation findings were shared, discussed, and made available for comment. Table 4-9 summarizes stakeholder input related to the initial system strategies development and evaluation process.

4.5 Conclusions and Recommendations

Fifteen initial roadway system strategies and four complementary initial transit system strategies were developed by the project team based heavily on stakeholder input. Roadway system strategies consist of improvements to various major roadway corridors and construction of new expressway corridors. These system strategies were assembled to address identified transportation needs in the study area. Travel performance of the 15 roadway strategies was then evaluated using the travel demand model with the objective of screening out strategies that would not adequately address Purpose and Need. It is important to note that the travel performance evaluations were based on initial travel demand model estimates and assumptions used for this stage in the screening process. Refinements and adjustments to the model were performed during Module 3 and were used in subsequent steps of the evaluation. During Module 2, four initial transit system strategies consisting of improvements to various existing transit services as well as construction of new dedicated transit corridors were also assembled. The strategies were compiled to address transit connectivity gaps and service gaps identified by stakeholders. The feasibility and performance of these transit strategies will be assessed during the next steps of the alternatives evaluation process.

TABLE 4-9
Summary of Stakeholder Input on Initial System Strategies

Event	Date	Objectives	Summary of Input
CPG/Joint Task Force Meeting #2	February 2008	Present initial findings of existing transportation system performance; present and discuss draft planning framework and alternatives development process; present and discuss "transportation toolbox"	Suggested refinements to the list of transportation improvement technologies and strategies ("toolbox") to be considered with the alternatives development process.
Stakeholder Meeting #2	March 2008	Present draft TSPR findings; conduct Modal Strategies Planning Charrette (stakeholder suggestions for the locations and types of improvements to be considered).	General agreement with transportation system performance findings. Stakeholders also identified a broad range of locations within the study area where various types of transportation improvements should be considered, including: improvements to area roadway, transit, bicycle/pedestrian and freight facilities; system operational improvements; and travel demand management strategies. (See Exhibits 3-1 thru 3-9).
CPG and Task Force Meeting #3	April 2008	Present preliminary Initial Roadway System Strategies developed based on March 2008 Stakeholder Workshop and obtain stakeholder comments.	General agreement with the Initial Roadway System Strategies, Suggested changes to the Initial Roadway System Strategies include the addition of upgraded facilities, new service interchanges, and a new strategy.
Stakeholder Meeting #3	May 2008	Present revised Initial Roadway System Strategies, Initial Transit System Strategies, transportation performance evaluation criteria, and preliminary evaluation findings. Obtain stakeholder input regarding typical cross section template for improvement corridors.	General agreement with the revised Initial Roadway System Strategies and Initial Transit System Strategies. Stakeholders provided suggestions regarding cross section templates, including local access requirements and shared use (roadway/transit) corridors. Stakeholders also noted that their ideas and input had been heard and captured into the proposed alternatives developed.
CPG/Joint Task Force Meeting #4	June 2008	Present results of the Initial Roadway System Strategies evaluation, and strategies to be eliminated from consideration based on Purpose and Need.	General agreement with roadway strategies dropped from consideration based on poor travel performance and not meeting Purpose and Need considerations.

Conclusions and recommendations of alternatives findings are as follows:

- Five initial roadway system strategies—Group 1, Arterial Improvements (Options 1 and 2); Group 3, West Bypass with Thorndale Widening (Options 1 and 2); and Group 6, Existing Expressway and Arterial Improvements—were dropped from further consideration as they would not adequately address Purpose and Need. These strategies

provide relatively low congestion relief on area regional and local roadways, and moderate improvements in access to major regional roadway corridors. They would not appreciably improve O'Hare west access and would provide only moderate new transit market potential.

- Ten roadway strategies—Group 2, Elgin O'Hare Extension with West Bypass (Options 1 through 5); Group 4, Elgin O'Hare Extension with Partial West Bypass (Options 1 through 4); and Group 5, Elgin O'Hare Extension with Arterial Improvements—address Purpose and Need and, therefore, are carried forward for further consideration (see Exhibit 4-30). During Module 3, an initial comparative evaluation of the environmental and social impacts of these 10 strategies will be performed, and strategies with disproportionate impacts will be eliminated. The remaining strategies will then form the basic roadway improvement elements of Finalist System Alternatives, and their overall performance will be evaluated on the basis of transportation, environmental, social, and financial factors.

- Four transit strategies—Existing System Improvements, Combination Strategies Option 1, Combination Strategies Option 2, and System Expansion—were developed to address identified transit connectivity and service gaps. During Module 3, transit strategies will be evaluated using a three-step process. Step one is the Fatal Flaw Analysis Screening. It will examine the individual elements (bus routes, rail connections, etc.) contained in the initial strategies with the objective of dismissing elements that fail certain criteria. Step two, Detailed Screening, will be applied to the transit alternatives. This will be a comprehensive evaluation of the alternative's ability to satisfy various evaluation criteria to allow comparison of the alternatives. Step three, preferred alternative screening, will be the most detailed step of the process. It will include refinements to the physical aspects of the alternatives consisting of modifications that align with the remaining roadway alternatives. Ultimately, the best performing transit alternative will be identified as an element of the Preferred System Alternative on the basis of potential transit ridership attracted, implementation costs, and environmental and social impacts.