

South Central Wisconsin Commuter Transportation Study **Executive Summary**

Approved by SCWCTS Steering
Committee on July 18, 2008

Prepared for:
SCWCTS Steering Committee



 **EarthTech**

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South Central Wisconsin Commuter Transportation Study

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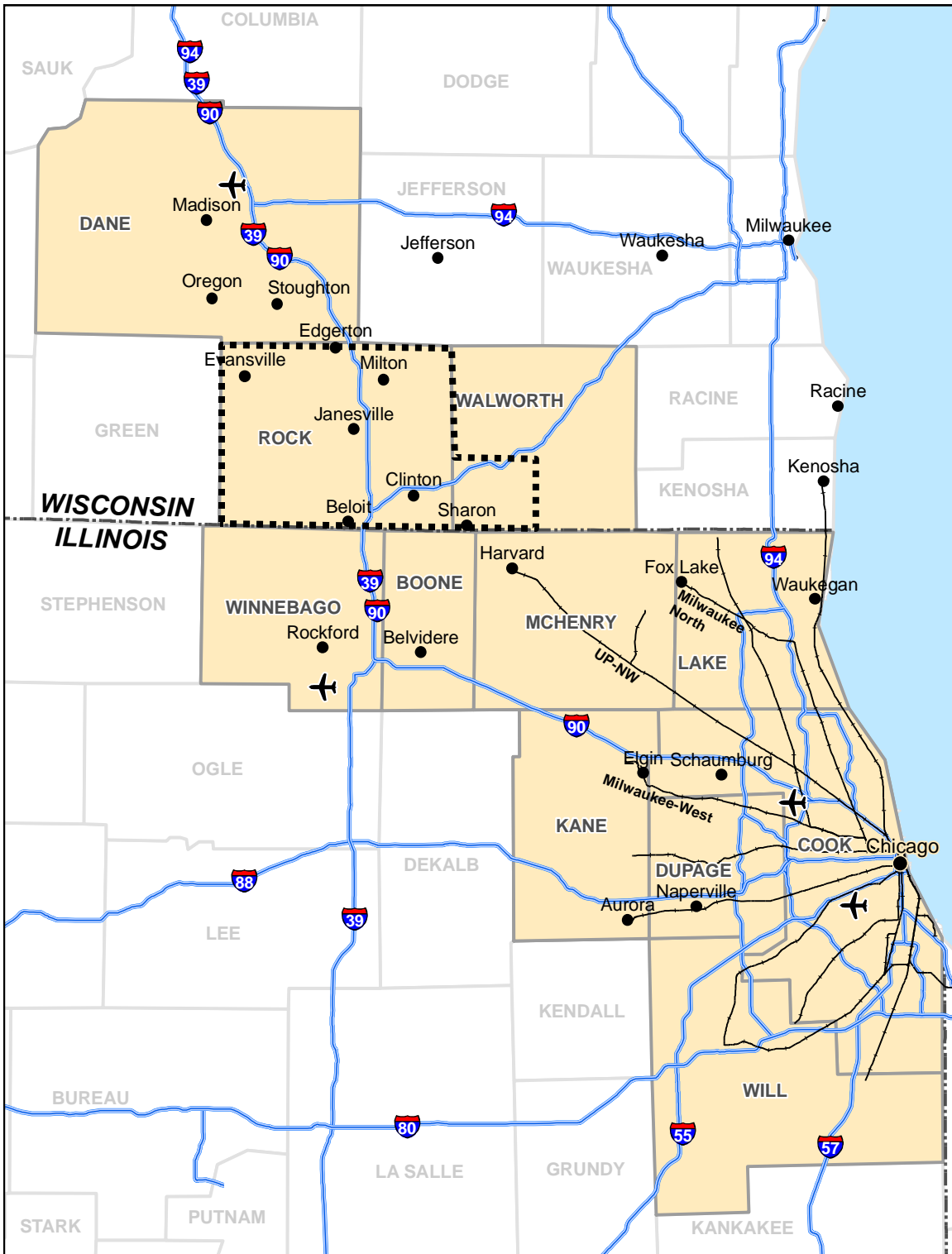
In 2002, a study to connect Metra's Chicago-based UP-Northwest Line service from Harvard, Illinois, to Clinton was completed. Through the sponsorship of Wisconsin State Senator Judy Robson, a Wisconsin Department of Transportation (WisDOT) grant was obtained to advance the concept for service further, and examine bringing commuter rail from Harvard to the Janesville/Beloit area. The unique location, commuter traveling patterns, and transportation infrastructure in this area led to an expansion of the study area to include Madison and Rockford, and a widened range of transit modes and infrastructure improvements. This Executive Summary describes the approach, findings and recommendations of the project. A listing of reports completed during the conduct of the study is also provided.

Study Background and Purpose

The overall study purpose is to evaluate the need for, and feasibility of, new or enhanced regional transit in South Central Wisconsin. The study is overseen by the South Central Wisconsin Commuter Transportation Study (SCWCTS) Steering Committee, which is comprised of representatives of the Cities of Beloit and Janesville, the two metropolitan planning organizations in Rock County, the Villages of Clinton and Sharon, Rock County, Wisconsin Department of Transportation, and Wisconsin State Senator Judy Robson. An extensive e-mail list of other interested parties has been maintained, and used to send notices of upcoming Committee meetings and study products. A large part of the motivation for the study was to enhance economic development by tying the greater Rock County area to Northeast Illinois through improved commuter transportation.

Figure 1 presents a map of the project's study area which includes three counties in Wisconsin (Dane, Rock and Walworth) and eight counties in Illinois. The Illinois areas covered are the six counties of Northeastern Illinois, which has traditionally defined metropolitan Chicago. The north central Illinois counties of Winnebago and Boone are also included, in which Belvidere and Rockford are located. The area defined as South Central Wisconsin (shown as dashed line on Figure 1) includes all of Rock County and the southwest corner of Walworth County.

Figure 1. South Central Wisconsin and SCWCTS Area of Study



Beloit and Janesville are 85 miles northwest of Downtown Chicago, 25 miles north of Rockford, and 40 miles south of Madison, Wisconsin. These two cities have historically functioned largely as stand-alone communities, each with its strong manufacturing base providing sufficient jobs for area residents. Recent declines in manufacturing have been partly responsible for an increased number of local residents seeking employment elsewhere. A primary aim of the study, therefore, is to determine if there is a need to improve regional transportation links to employment centers outside the Beloit/Janesville area.

It was decided at the onset of the project to broaden the study scope to include additional geographic corridors and transportation services. Given the limited funding available, it was felt that the study should be conducted using a staged approach. Results from the initial tasks formed the basis for subsequent work. In this way, there was reduced risk of expending limited resources on service concepts that could ultimately prove to be less desirable or infeasible. There were three study phases, including:

1. Initial Study Tasks – This phase laid the groundwork on establishing need, identifying existing and potential transit resources, and gauging local interest.
2. Pivot Summit Meetings - Assimilating results from the Initial Study Tasks, including a long list of new and enhanced potential transit services, meetings were convened with the Steering Committee and local stakeholders to decide the set of service concepts most deserving of follow-on study.
3. Final Work Tasks – Using the outcome of the Pivot Summit meetings as policy direction, the technical work associated with this program of activities was completed.

During the course of the study, work was prepared in a manner consistent with Federal Transit Administration (FTA) guidelines for Alternatives Analysis (AA) studies and its New Starts program. In this way, if a worthy service concept emerges from this planning work; officials in South Central Wisconsin would be in a stronger position to secure funding to prepare a formal AA and would potentially be able to shorten the typical timeframe required. Examples of this consistency with AA requirements was preparing a Purpose and Need report and identifying a full range of service improvements, some of which could be used as Transportation System Management (TSM) alternatives.

Initial Study Tasks

This study evolved from a feasibility study of commuter rail in the Harvard-Beloit/Janesville corridor to a broader-based transit planning study covering a much larger transportation corridor. Thus, instead of evaluating a specific service concept, the study became a search for viable

candidate concepts that would address identified travel needs. The research included studies in five areas described as follows,

Stakeholder Survey - A survey of elected officials, governmental staff, transportation providers, business leaders, chambers of commerce, social service providers was made. The principal objective of the survey was to determine the perception stakeholders have of the following:

- Need to improve regional transit links
- Relative need for enhanced regional transit versus other transportation investments
- Quality of current regional transportation services in accessing diverse locations
- Maximum acceptable commuting distances and travel times

Of 200 surveys mailed to area stakeholders, 84 were returned. The survey findings can be summarized as follows:

- There is support for regional transit.
 - Inadequate regional transit was considered to be the top problem among six transportation issues.
 - Expanding regional transit to Madison and to Chicago was considered to be an important transportation investment.
 - Expanding regional transit was rated very important in enhancing economic prosperity.
- Connecting area residents to job centers in Madison was felt to be most important, followed by Rockford. Demand to Chicago jobs centers was judged to be comparatively less important.
- Connecting area jobs to labor markets in Madison was rated highest followed by Rockford. Demand to access Chicago labor markets was felt to be comparatively less important.
- Connecting area residents to non-work destinations was rated high for Madison and Chicago, less so for Rockford.
- Elected officials and business leaders rated transit less important than respondents representing other groups surveyed.
- Maximum distances and times for commuting were judged to be 40 miles and 60 minutes.

Transportation Inventory – The inventory cataloged transportation corridors, facilities, and services that could serve as regional transit links connecting South Central Wisconsin to destinations in metropolitan Chicago, Rockford/Belvidere and/or Madison. The inventory included,

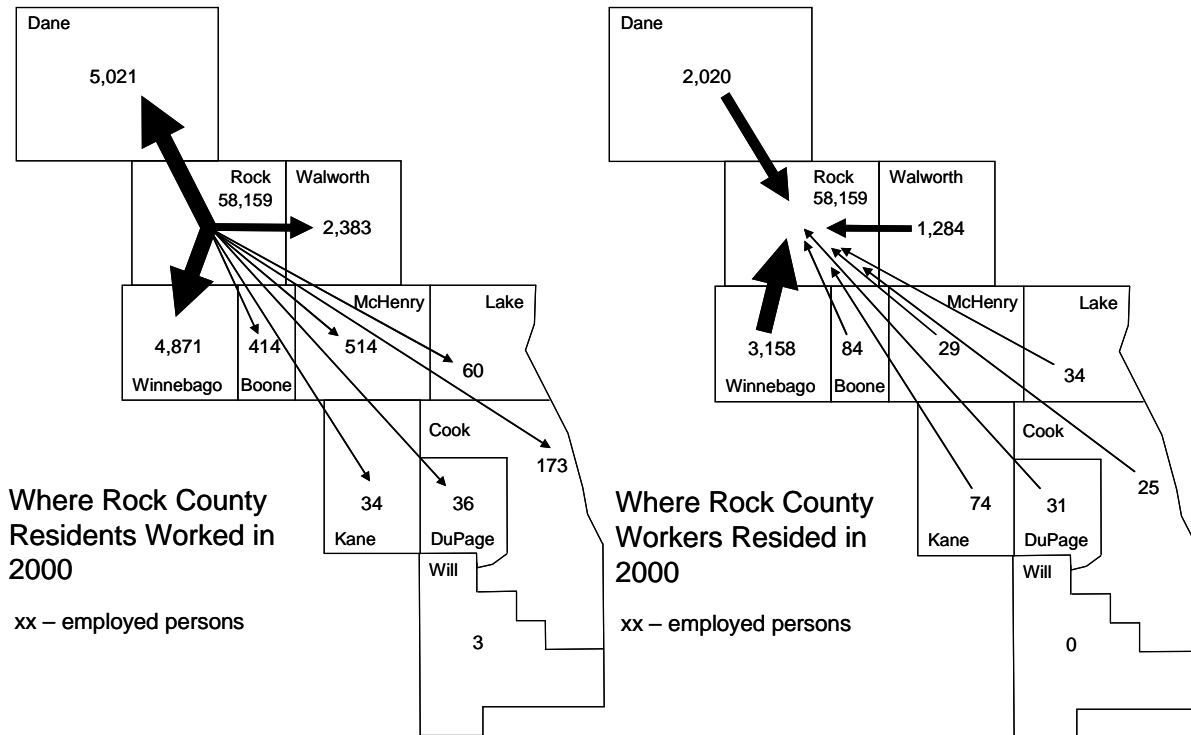
- Railroads – existing and abandoned freight rail lines,
- Bus Service – privately-operated services and selected public transit services that perform a regional function,
- Major Roadways - principal highways in the corridor that could be considered for new or expanded transit service, and
- Proposed Services or Facilities – initiatives that have been previously proposed by others.

Market Analysis – Travel markets within the South Central Wisconsin area were analyzed to provide supporting data to the development of the Purpose and Need Statement. The key aim was to understand the base and future year travel markets through an analysis of available data sources, including the 2000 U.S. Census, metropolitan planning organizations serving the larger study area, data used in the Wisconsin Statewide Transportation Model, and Metra.

A useful way to assess the adequacy of a regional transportation system is to study the origin and destinations of workers. The work trip frequently is the focus of transportation planning exercises because work travel tends to be concentrated in peak travel periods, and usually form the basis for determining required transportation capacity. Moreover, work trips (and school trips) are considered to be non-discretionary because they have specific destinations and arrival time requirements. Discretionary travel, conversely, allows travelers the choice of where and when trips are made. Deficiencies in the transportation system (e.g., congestion) can be dealt with more easily by discretionary travelers than non-discretionary travelers, whom have fewer choices in completing his/her journeys (e.g., to avoid congestion). Therefore, and as emphasized by FTA, journey to work data was the foundation for defining the need for additional transit resources.

As illustrated in **Figure 2**, year 2000 regional commuting showed the strongest county-to-county flows for Rock County residents and workers were to/from the Madison and Rockford areas. The left-hand map illustrates the work location of Rock County residents. The most significant flows are to Dane County (5,021 Rock County residents) and Winnebago County (4,871 residents). The right-hand map illustrates the home origins of Rock County workers. Winnebago, Dane and Walworth Counties were the largest sources of external labor for Rock County employers in 2000.

Figure 2. Where Rock Co. Residents Worked and Where Rock Co. Workers Lived in 2000



Although the number of workers commuting into Rock County (i.e., 6,739) was about half of the number commuting out (i.e., 13,510), this may nonetheless suggest a need by local employers for improved transit systems to provide these labor markets an alternative to the auto. The lack of regional transit links could limit employee recruitment by local business.

Table 1 presents the work locations of Rock County residents as a percentage share for 1990, 2000 and 2006. The 2006 data is from the Census Bureau’s American Community Survey. Of particular interest is the decline in the share of Rock County residents who work locally. This was likely caused by a combination of two factors, (1) growth in employment in Wisconsin outside of Rock County (most likely in Dane and Walworth Counties) and (2) the relatively lower cost of living in Rock County. This table also reveals a decline in the share of Rock County residents working outside of Wisconsin (most likely in Illinois).

Table 1. Job Location of Rock County Residents

	1990	2000	2006
Rock County	80%	78%	74%
Wisconsin Outside of Rock Co.	10%	14%	20%
Outside of Wisconsin	10%	9%	6%

Purpose and Need Report – This report documents the rationale for consideration of regional transit investments or improvements in South Central Wisconsin, as demonstrated by current and anticipated future transportation deficiencies. As required by the FTA, the Purpose and Need Statement sets the stage for consideration of alternatives, and is one of the first steps in an AA process. The Statement articulates the transportation needs of the community, and expresses the desired outcome of implementing a transportation improvement that best addresses those identified needs. The Purpose and Need Statement not only identifies there are transportation needs; it also gives evidence there is a purpose behind taking actions that address those needs.

A potentially critical factor in establishing the need for enhanced regional transit is the balance between jobs and housing. A balanced community is one in which residents can both live and work. A balance between an area's jobs and households can result in less congestion and shorter commutes, to the extent residents work in their immediate area. A low ratio of jobs to housing indicates a housing-rich 'bedroom community' in which many residents need to travel to external areas for work (i.e., employed residents are 'exported'). A high ratio of jobs to housing indicates an 'employment center' where many travel to work from external areas (i.e., workers are 'imported').

Table 2 states jobs and household data as ratios for each of the eleven counties of the larger study area. In 2000, the overall ratio for the study area was 1.47 jobs per household. Areas with rates higher than the average have excess jobs, while areas with lower rates have insufficient jobs. Of note is Rock County's low ratio of 1.15 jobs per household, which suggests that it is an 'exporter' of workers. The imbalance in Rock County is projected to increase by 2030, as households grow faster than jobs. In contrast, Dane County exhibited a high ratio in 2000, indicating a need to 'import' workers. Given the pattern of commuter travel from Rock County to Dane County, as well as their current and future Jobs-Household ratios, these trends indicate a reason to improve transit links between the counties.

Table 2. Jobs-Household Ratios by County, 2000 and 2030

Area	Sub-Region	Jobs per Household		Rank		
		2000	2030	2000	2030	
<i>Importers of Workers in 2000</i>	DuPage County	IL-NE	2.00	2.29	1	1
	Lake County	IL-NE	1.63	1.58	2	2
	Dane County	WI-Dane	1.60	1.53	3	3
	Kane County	IL-NE	1.54	1.46	4	5
	Walworth County	WI-SC	1.50	1.30	5	7
Grand Total			1.47	1.51		
<i>Exporter of Workers in 2000</i>	Cook County	IL-NE	1.42	1.48	6	4
	Boone County	IL-NC	1.38	1.31	7	6
	Winnebago Co.	IL-NC	1.25	1.30	8	8
	McHenry County	IL-NE	1.18	1.08	9	10
	Rock County	WI-SC	1.15	1.02	10	11
	Will County	IL-NE	0.99	1.24	11	9

SOURCES: US Census Bureau, Chicago Metropolitan Agency for Planning, Wisconsin Transportation State Model.

The findings of the Purpose and Need research were used to identify specific transportation-related problems that could be addressed by an investment in new or enhanced regional transit, including:

- Rock and Walworth county population is expected to grow at rates exceeding the overall study area, which could place added burden on the South Central Wisconsin transportation system.
- Rock County's Jobs-Housing ratio was the second lowest among the eleven counties in 2000 and is projected to have the lowest ratio in 2030. This imbalance indicates that some residents must commute to areas outside of the County.
- Dane County had a higher Jobs-Housing ratio than the 11-county average, which indicates a need to import workers.
- Inadequate regional transit could be a recruiting impediment to local businesses in attracting workers.
- Jobs in Rock and Walworth Counties are more concentrated in manufacturing. Rock County has the highest proportion of residents with occupational skills aligned with this sector. A projected lack of growth in manufacturing employment indicates the potential need for some employees with these skills to seek employment elsewhere, or to gain new skills.
- The rate of unemployment is higher in Rock County than the 11-county area overall.
- Median household incomes in Rock and Walworth Counties were lower than eight of the other nine counties in the study area.

- Wages of jobs were lower in Rock and Walworth Counties than the other nine counties of the study area, which provide an incentive for residents to commute to external areas to earn higher incomes.
- Beloit has a relatively low labor participation rate. The percentage of families below the Census definition of poverty was higher in Beloit than the study area average.
- The rate of households without an auto was high in Beloit, an area not well served by regional transit.
- The population of South Central Wisconsin, as well as all areas of the 11-county corridor, is aging, which will increase demand for transit.
- Transit serves about 1% of the South Central Wisconsin work commuter trips.
- There are regional destinations not accessible by transit to South Central Wisconsin travelers, especially if a car is not available to them.
- Regional transit tends to be slower than the use of auto.
- Regional transit is often more costly (for users) than the auto.

Identification and Screening of Alternatives - Based on the research of need and inventory of transportation resources, conceptual alternatives were proposed. In many cases, the physical and institutional feasibility of surviving alternatives will need to be confirmed in follow-on studies. Five general service types were considered, including commuter rail, bus rapid transit, express bus, feeder bus, and specialized transit. Twenty-eight alternatives were identified, which can be summarized as follows,

- Commuter Rail
 - 9 alternatives linked to Metra and Northeast Illinois
 - 4 alternatives in the Madison-Janesville-Beloit-Rockford Corridor
 - Rail Preservation Network
- Exclusive Busways, including bus shoulder-running lanes on I-90
 - Madison-Rockford
 - Madison-Northwest Cook County
- Express Bus Routes
 - 5 alternatives in Madison-Rockford Corridor
 - Janesville-Whitewater Corridor
 - 2 alternatives to offer Discounted Commuter Fares on existing regional service

- Feeder Bus Routes to Metra
 - Janesville-McHenry Station
 - Beloit/Janesville-Harvard Station
- Specialized Transit Alternatives
 - Vanpools
 - Subscription Bus

The 28 conceptual alternatives were then subjected to the following screening criteria,

- Address Purpose and Need – alternatives rated on four sub-criteria using a 3-point scale
 - Extent SCW residents are connected to external jobs
 - Extent external workers are connected to local jobs
 - Extent SCW residents are connected to schools of higher education
 - Extent transit dependent populations are served
- Technical Feasibility - alternatives rated on four sub-criteria using a 3-point scale
 - Right-of-Way is available
 - Alignment is suitable for 50 mph
 - Infrastructure has available capacity
 - Owners of Right-of-Way are open to transit
- Cost – based on rough order-of-magnitude project capital costs
- Population and Jobs served – sum of population and jobs in analysis zones served
- Connectivity with Existing Transit Service – count of number of transit systems interfaced
- Institutional Issues – sub-criteria factors and operational arrangements (each factor that applies counts once; lower score is better)
 - Funding a Private Transit Operator
 - Interstate Service
 - Coordination with Metra, cross-platform transfers
 - Metra Operates
 - One Railroad Involved
 - More than One Railroad Involved

- New Operating Agency Required
- Opportunity for Development – rating based on transit access facility
 - Rail station (highest)
 - Bus Rapid Transit station
 - Express bus stop
 - Local bus stop (lowest)
- Side Benefits – indirect benefit factors (each factor that applies counts once; higher score is better)
 - Investment in passenger rail benefits freight rail
 - Local jobs created to build and operate
 - Local bus system strengthened
 - Positive public image

All 28 alternatives were evaluated by computing a composite score. The detailed results were presented to the Steering Committee as part of the Technical Pivot Summit workshop.

Pivot Summit Meetings

The second phase of the study was to convene meetings of decision-makers to present the research results and the alternative services. The choice of the word *pivot* was to convey a pause in the process, then a turning to a new study direction.

Technical Pivot Summit – this half-day workshop held on August 17, 2007, was comprised of members of the SCWCTS Steering Committee. Topics included background on transit project planning & development, transit modes and technologies, study research findings, description of the 28 conceptual alternatives, screening criteria and methodology, and screening results of alternatives.

The primary objective of the workshop was to reduce the number of alternatives for further study. As a part of the Committee deliberations, consensus was reached on the following points:

- Efforts should be taken to study all existing freight rail corridors for future transit, and to formulate a preservation strategy and priority listing of alignments.
- Existing rail lines intersect in downtown Janesville, which makes it the logical location for the area's future passenger rail hub.

- The study of alternative alignments should consider a range of transit modes and technologies.
- The area near the I-90/STH-11 interchange, and adjacent to the UP, could serve as a potential site for an intercept passenger rail station serving I-90 travelers.
- The potential for providing direct regional transit access to the Southern Wisconsin Regional Airport located between Janesville and Beloit should be considered.
- Surviving alternatives should represent the longest feasible corridors possible. Follow-on study should evaluate logical shorter segments within each of these longer corridors.

The Steering Committee recommended six alternatives, plus one provisional alternative, for further study.

1. Commuter Rail, Madison to Rockford with routing variants through Milton and Evansville, Wisconsin
2. Express Bus using enhancements to I-90 including high speed lanes and ramps, Madison to Northwest Cook County, Illinois
3. Express Bus serving corridor downtowns, Madison to Rockford
4. Discounted Commuter Fares on existing regional bus service, Madison to Chicago
5. Feeder Bus service to Metra, Beloit/Janesville to Harvard Metra Station
6. Van Pools or Subscription Bus Service, Beloit/Janesville to Madison, Rockford, and/or Chicago

A seventh alternative was given a provisional recommendation, subject to review and discussion by stakeholders. This involved the concept of implementing commuter rail service from Janesville (and/or Beloit) to Harvard, which would connect to Metra service (i.e., not an extension of Metra service). The discussion of this question included the apparent lower demand than other commuter rail corridors. On the other hand, the excellent condition of the Harvard-Janesville UP alignment and the potential for demand to grow in the future may justify this alternative.

Stakeholder Pivot Summit – this September 14, 2007 meeting of area stakeholders was attended by twenty-five persons. The session was a condensed version of the Technical Pivot Summit workshop, and was intended to provide feedback on the recommendations that emerged from the Technical workshop. The attendees to the Stakeholder meeting affirmed the recommendations of the Technical group, including the Janesville-Harvard commuter rail link.

Defining the Final Work Program – Using the input from the Pivot Summit process, a program of study was defined to use the remaining contract funds. A list of seventeen possible study tasks that were estimated to cost more than twice the available funding was identified. The study tasks fell into eight categories, including:

1. Commuter Rail
2. Bus Rapid Transit
3. Express Bus
4. Existing Regional Bus Service Fare Discount
5. Feeder Bus
6. Subscription Bus & Van Pools
7. Public Involvement
8. Future Work Plan and Final Report

As a way of culling the list of activities to match the funding level, the Committee decided to drop #2 Bus Rapid Transit due to the upcoming WisDOT project to rehabilitate and expand I-39/I-90 between the Illinois-Wisconsin state line and Madison. It was felt that consideration of bus treatments would be more appropriately incorporated into the highway redesign process. It was also decided to not include work on the #5 feeder bus work and to drop consideration of subscription bus in #6. The final set of nine work tasks approved by the Steering Committee included the following:

1. Commuter Rail Station Locations - recommend generalized sites for five rail route segments
2. Commuter Rail Costs – develop conceptual operating plans and estimate capital costs for five rail route segments
3. Express Bus – develop service plans and estimate costs for a Madison-Rockford route
4. Discounting Fares – study offering a discounted commuter fare on an existing regional bus service
5. Investigate Vanpools – research current programs that could serve South Central Wisconsin
6. Assist Convening of Public Meeting – June 18, 2008 public open house
7. Develop Project Website – repository of study products
8. Future Project Work Plan – develop guidebook on possible areas for future study phases
9. Prepare Final Report – wrap-up activity.

Final Work Tasks

A summary of each task covered in the third phase of the study includes the following,

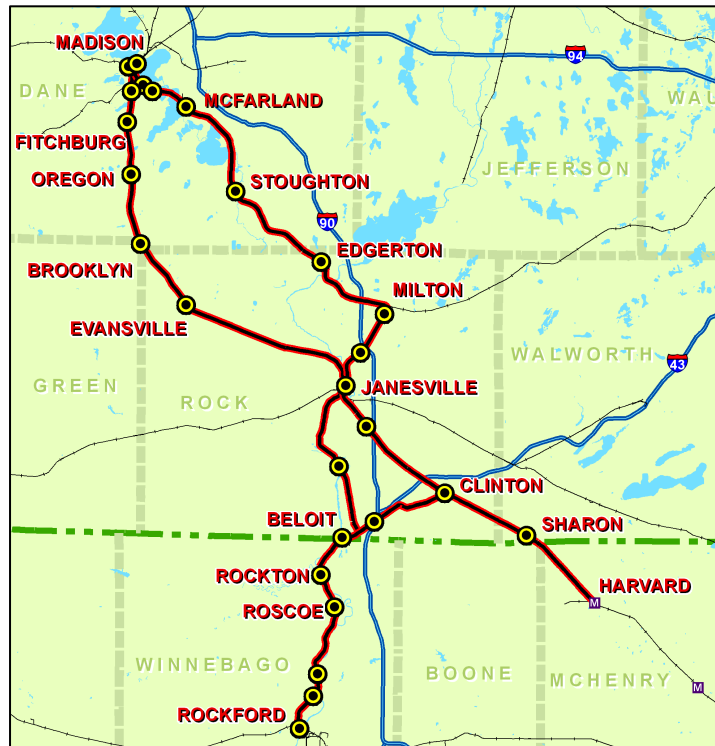
Commuter Rail Station Locations – Generalized locations of potential commuter rail stations on the five possible rail route segments were recommended. Sites were not intended to present the entire universe of station sites, but rather a reasonable set of locations for each route segment. This task identified key transportation nodes on a future transit network serving the area. These locations can be used to guide community land use decisions to improve the transit supportive nature of future development, which could enhance the feasibility of commuter rail in the future.

The potential commuter rail station locations within the rail corridors were identified based on a process that considered: 1) station locations from prior study tasks, 2) past planning efforts, 3) discussions with municipal and regional stakeholders, and 4) physical inspection of the recommended rail corridors. Each identified site was evaluated based on the following criteria,

- **Station Area Physical Characteristics** - Sites must meet the spatial needs for parking, platforms, waiting and circulation. They should be located in highly visible locations on tangent track (i.e., straight track). Site development issues such as high embankments should be avoided.
- **Transit-Supportive Land Use** - Sites should be compatible with local comprehensive plans, zoning policies and provide opportunities for future transit-oriented land use.
- **Site Accessibility** - Sites should have multi-modal access (auto, bus, bike, and walk). Local and regional access should be good, while minimizing impacts on local neighborhoods.
- **Environmental** - Avoid environmental concerns including air-quality; land acquisition and relocation; floodplain and water-quality; noise and vibration; and parks and natural areas.
- **Mobility** - Sites should be located in areas of current or planned higher population density, improve access to employment, education or shopping, and insure equity of benefits to transit dependents.
- **Public Support** – Sites should have wide public acceptance and support.
- **Station Spacing** – Sites should be far enough apart from one another to allow trains to achieve speed, but close enough to serve riders and destinations.

Figure 3 presents a map illustrating the 25 station locations (note, some sites are included on more than one rail route).

Figure 3. Potential Commuter Rail Station Locations



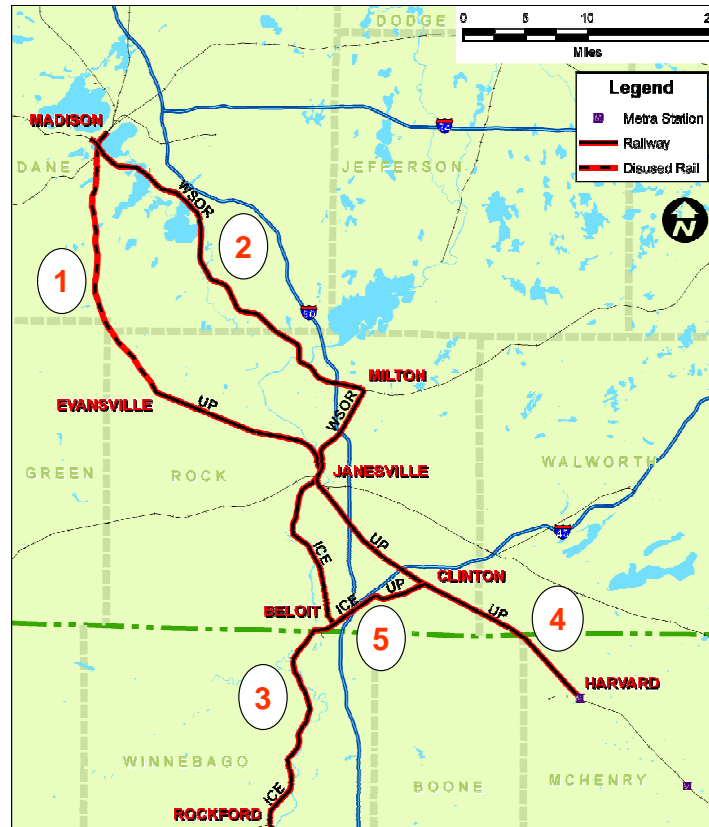
A summary of the locations is provided by rail route on **Table 3**. The average distance between stations is consistent with guidelines for commuter rail, which ideally have a station spacing of between 3 and 5 miles.

Table 3. Recommended Station Locations by Route

Route	Route Length	Station Sites	Miles between Stations
Madison-Evansville-Janesville	37.9	7	5.4
Madison-Milton-Janesville	40.8	9	4.5
Janesville-Rockford	34.4	8	4.3
Janesville-Harvard	28.8	5	5.8
Beloit-Clinton	9.8	3	3.3

Commuter Rail Costs – The Steering Committee selected five rail corridors (see **Figure 4**) that it believed have the greatest potential to be developed into commuter rail routes in the future. The five potential rail corridors lend themselves to several potential combinations to form a regional commuter rail service network depending on ridership projections and other factors.

Figure 4. Commuter Rail Corridors



Preparing reliable capital cost estimates for implementing commuter rail requires knowledge of the railroad conditions at the time of service start-up. While the railroads currently operating on the five corridors are well defined, a wide variety of changes in the future can be postulated. These changes could relate to ownership of the rail lines, levels of freight traffic, other regional transit expansion, or institutional changes in the way regional rail passenger services are funded and operated. These future assumptions must define the train operation and service variables well enough to allow determination of the basic requirements for right-of-way, tracks, signals, stations, overnight layover locations and maintenance facilities. A long list of possible future rail scenarios were developed for each rail corridor from which the Steering Committee selected two, including,

1. Madison-Evansville-Janesville (MEJ)

Scenario 1b: Public ownership, current freight operators, low freight traffic level.

Scenario 1c: Existing ownership, current freight operators, low freight traffic level, Madison implements commuter rail service.

2. Madison-Milton-Janesville (MMJ)

Scenario 2a: Public ownership, current freight operators, moderate freight traffic level.

Scenario 2b: Public ownership, current freight operators, moderate freight traffic level, Madison implements commuter rail service.

3. Janesville-Beloit-Rockford (JBR)

Scenario 3c: Public ownership, no freight service.

Scenario 3d: Existing ownership, current freight operators, low freight traffic level, Rockford implements commuter rail service.

4. Janesville-Harvard (JH)

Scenario 4a: Existing Union Pacific Railroad (UPRR) ownership and operation, moderate freight traffic level.

Scenario 4c: Public ownership, UPRR operation, moderate freight traffic level.

5. Beloit-Clinton Jct. (BC)

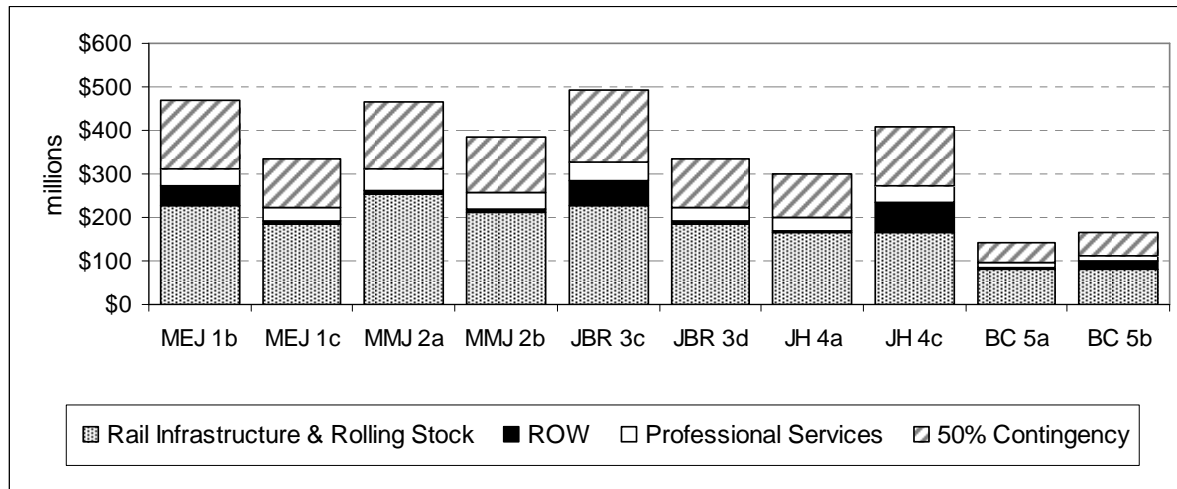
Scenario 5a: Existing ownership, current freight operators, low freight traffic level.

Scenario 5b: Public ownership, UPRR operation, low freight traffic level.

The objective was to provide a first order of magnitude capital cost estimate in current dollars for commuter rail service for both scenarios in each of the five rail corridors. Using the ten corridor/scenarios selected by the Steering Committee, conceptual operating plans were developed. This work was described as conceptual planning, which normally includes the completion of engineering design at the 5% or 10% level. While no engineering was undertaken to support this effort, the preparation of the concept plans included a solid understanding of railroad engineering requirements and principles. The main consequence of formulating these plans without benefit of formal engineering is the higher uncertainty in the identified project elements and their associated costs.

A summary of the capital cost data by corridor-scenario is provided in a stacked-bar graph format on **Figure 5**. The graph includes a 50% cost contingency.

Figure 5. Summary Capital Costs by Corridor and Scenario
With 50% Contingency



These costs represent only part of the economics associated with the provision of commuter rail service. While the capital costs address the question of investment requirements to implement service, the cost to operate and maintain service on an ongoing basis is also important. It is only after these costs are combined with estimated annualized capital costs can a complete understanding of the costs by corridor be known. Of course, the anticipated passenger demand and fare revenue for service will ultimately be required to advance service on any (or all) of the corridors.

Express Bus – This report recommended several express bus alternatives in the Rockford - Madison corridor. The intent of the service was to directly serve the downtowns along the corridor using arterial roadways, and not duplicate the Van Galder/Coach USA service which operates on I-90. Bus service in this corridor can be provided using a wide variety of routes, schedules and operators. Therefore, a series of alternatives were prepared to illustrate the various options. Decision-makers will be able to tradeoff operating cost, speed, access, links to other services, and other factors in considering a service to implement. One potential opportunity to secure funding would be to operate the service as a congestion mitigation tactic during the WisDOT reconstruction and expansion of I-90. Major highway projects of this scale often include set-asides to fund services that reduce construction-induced congestion.

A number of planning considerations guided the development of the bus routes, schedules and operating options examined, including,

- Balance local access with travel time
- Maximize connections with existing transit services
- Integrate with existing Beloit-Janesville Express service

- Explore integration with Wisconsin State Vanpool and Park-and-Ride efforts
- Explore the integration of express bus with services provided by Val Galder/Coach USA.

Figure 6. Express Bus Routes

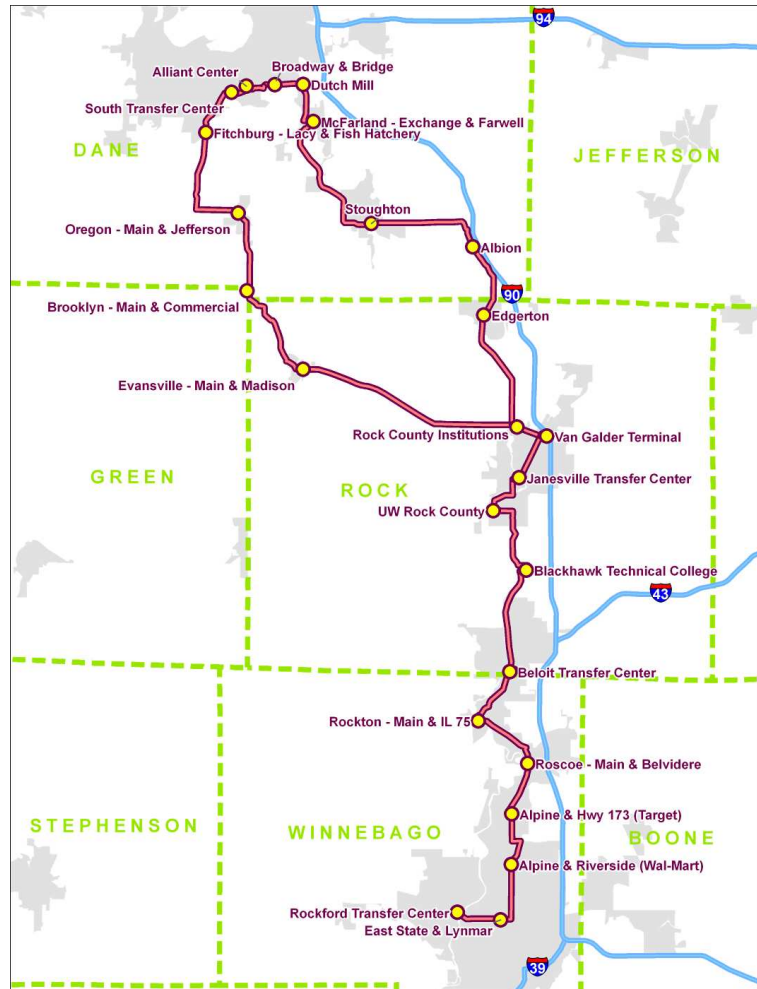


Table 4 presents the estimated annual operating costs for each of the express bus alternatives.

Table 4. Estimated Annual Costs of Express Bus Alternatives

Express Bus Alternative	Transit Operators	Est. Annual Operating Cost
1 Rockford-Madison via Stoughton	Janesville & Beloit	\$789,000
1A Rockford-Madison via Stoughton	Janesville, Beloit, Madison & Rockford	\$831,000
2 Rockford-Madison via Evansville	Janesville & Beloit	\$789,000
2A Rockford-Madison via Evansville	Janesville, Beloit, Madison & Rockford	\$818,000
3 Rockford-Madison, Park-n-Ride Focus	Janesville & Beloit	\$663,000
4 Rockford-Madison, P-n-R & Van Galder Integration	Janesville & Beloit	\$557,000

Discounting Existing Regional Bus Service Fares – This task investigated the economics of offering a discounted fare for commuters on the existing, privately-operated Van Galder/Coach USA intercity bus service. Unlike other options that would require significant financial resources to implement, minimal funding would be needed to initiate and sustain this program. The rationale for studying this concept included,

- The current premium service is designed primarily for persons making occasional trips, mostly to O'Hare Airport
- One-way fares are priced appropriately for occasional trips, but considered prohibitively high by commuters when traveling on a daily basis
- While some multi-ride discounts are currently offered, the cost of using Val Galder/Coach USA is still too high to encourage daily commuting

Several alternative approaches were discussed with the President of Van Galder/Coach USA. The conclusion of these discussions was a verbal agreement by the company to conduct a discounted commuter fare test for travel between Janesville and Madison. The program will be designed with an evaluation framework in mind to enable the measurement of results. Communities will be expected to actively promote the program to resident commuters. Information was provided to Van Galder/Coach USA to register as an eligible transit provider for area commuter benefit programs, which allows riders to shelter up to \$115 per month in transit payments from their federal income taxes. It is anticipated that the test will be launched in fall 2008 with a press conference attended by local officials. Ideally, the test will be in place for a minimum of two years, to allow the full evaluation of impacts.

Investigate Vanpools – These programs can offer a cost-effective means to addressing an area’s regional transit needs. The research found three programs that currently serves, or potentially can serve, South Central Wisconsin, including,

- State of Wisconsin Vanpool Rideshare Program - provides vanpools to Madison. Requires that at least one pool member be a state employee.
- Pace Vanpool Incentive Program (VIP) - allows residents from outside the six-county Northeastern Illinois area to form and use vanpools for commuter travel to work locations in NEIL.
- VPSI - private vanpool operator that will sponsor a vanpool if sufficient demand exists.

Develop Project Website – repository of study products; project site is hosted by Rock County (<http://www.co.rock.wi.us/Dept/SCWCTS/index.htm>).

Convene Public Open House – on June 18, 2008, a public open house was held at Blackhawk Technical College in Janesville. The Open House was held to exchange ideas, information, and opinions with the citizens of the study area. The principal input sought was to the question of “where do we go from here?” Specifically, public reaction to a list of possible planning activities for subsequent study phases was requested. A handout survey form was used to collect structured input on these possible activities. The results shown on **Table 5** indicate broad interest in several of the areas of study.

The survey requested that respondents choose one of three levels of interest for each of the ten topics, including ‘Very Interested,’ ‘Somewhat Interested’ and ‘Not at all Interested.’ Many respondents left some topics blank, which was interpreted as not being interested. An evaluation score for each topic was computed by weighting ‘Very Interested’ responses by two, ‘Somewhat Interested’ responses by one and excluding ‘Not at All Interested’ responses. The highest scores (all at 1.2) were for Madison-Evansville-Janesville Commuter Rail, Janesville-Beloit-Rockford Commuter Rail, Express Bus Beloit-Janesville-Madison, Van Galder Commuter Fare Discount and Vanpools/Carpools/Park-and-Rides.

Table 5. Respondent Level of Interest by Corridor/Travel Mode

Future Study Topic by Corridor and Travel Mode		Very Interested	Somewhat Interested	Not at all Interested	Not Answered	Average Score*
Commuter Rail	Madison-Evansville-Janesville	10	10	5	0	1.2
	Madison-Milton-Janesville	7	8	7	3	0.9
	Janesville-Beloit-Rockford	9	11	2	3	1.2
	Janesville-Clinton-Harvard	8	8	6	3	1.0
	Beloit-Clinton-Harvard	4	7	9	5	0.6
Express Bus Beloit-Janesville-Madison		12	6	5	2	1.2
Express Bus Rockford-Beloit-Janesville		5	9	7	4	0.8
Van Galder Commuter Fare Discount		12	6	4	3	1.2
Feeder Bus to Metra Harvard Station		9	10	4	2	1.1
Vanpools/Carpools/Park-and-Rides		12	5	7	1	1.2

*Very Interested=2, Somewhat Interested=1, Not at All interested=0; Not Answered=0

Future Work Plan

Another Study work task involved preparation of a list of recommended future planning activities. The identification of these topics can serve as the basis for seeking grants, although some planning projects can potentially be undertaken using local resources (e.g., through a metropolitan planning organization). The program includes ideas involving both short-term and long-term timeframes. For example, promoting and evaluating a commuter discounted fare on the Van Galder/Coach USA service would be a near-term project. Implementing commuter rail service, on the other hand, will require many discrete steps and long lead times. These steps could include developing strategies to preserve rail rights-of-way and encouraging transit supportive land uses at recommended future station locations.

The following candidate planning tasks are organized by service type, including commuter rail, express bus service, Van Galder/Coach USA fare discount, feeder bus service, and vanpools/carpools/park-and-rides.

- Commuter Rail
 1. Develop ridership forecasts
 2. Prepare Right-of-Way Preservation Plan
 3. Prepare Transit Oriented Development Plans for potential station locations
 4. Coordinate with other corridor communities, nearby service providers and railroads
 5. Identify and evaluate implementation alternatives (management, governance, financing)
- Express Bus Service
 6. Prepare plans in sufficient detail for possible WisDOT I-90 mitigation funding
 7. Coordination with State agencies and transit providers (e.g., Val Galder/Coach USA, Madison, Rockford)
 8. Recommend park-and-ride locations
 9. Research on market potential
 10. Identify and evaluate implementation alternatives (management, governance, financing)
- Val Galder/Coach USA Fare Discount
 11. Develop marketing plan to promote pilot fare program

12. Prepare evaluation framework to assess impacts of test program
 13. Monitor and evaluate test program
 14. Prepare evaluation report of test program with recommendations
- Feeder Bus Service
 15. Develop service plan for feeder bus routes from Beloit and Janesville connecting to Metra service at the Harvard Station
 16. Estimate costs and potential demand
 17. Identify and evaluate implementation alternatives (management, governance, financing)
 - Vanpools/Carpools/Park-and-Rides
 18. Develop and implement marketing program
 19. Recommend park-and-ride locations
 20. Confirm south central Wisconsin coverage of WisDOT computer-based ride-share program; promote locally

At its July 18, 2008 meeting, the SCWCTS Steering Committee recommended a future program of study. The Committee drew its recommendations from the list presented above. While individual future work tasks were not prioritized, the Committee identified a sub-set of tasks that should be acted upon in the near term. The overall philosophy of the Committee in making its recommendations was to pursue cost-effective opportunities that would serve current needs and possibly establish the foundation for investment in fixed guide-way transit in the future. The Committee was also sensitive to the need to preserve and protect rail corridors in the study area. The list of recommended near term tasks included the following,

- Follow-through on Van Galder Fare demonstration – Van Galder/Coach USA verbally agreed to test a reduced fare for commuters traveling between Janesville and Madison. Communities should assist in the promotion and evaluation of the fare program. A report assessing impacts and identifying opportunities to expand to other portions of the Rockford-Madison corridor should be prepared.
- Promote vanpools to area residents - The State of Wisconsin Vanpool Rideshare Program and the Pace Vanpool Incentive Program should be promoted to local commuters.
- Coordinate with WisDOT RIDESHARE program – While the State ridershare program currently can facilitate the formation of carpools for south central Wisconsin and Illinois

border county commuters, the program has not aggressively marketed those capabilities in the region. Representatives of the Steering Committee should suggest that the State re-brand the Milwaukee area-focused “Southeastern Wisconsin Rideshare” program into a statewide Wisconsin and bordering counties program. Local communities should offer to assist in promotion.

- Coordinate with WisDOT on matching park-and-ride lot demand with supply – Currently, both large park-and-ride lots in the Madison-Janesville corridor often operate at above functional capacity. The State-built Dutch Mill Park-and-Ride lot near I-90 at USH 12/18 in Madison is drastically in need of expansion. The privately provided Van Galder lot on Pontiac Drive in Janesville also frequently has capacity problems. Local planning agencies should work with WisDOT in identifying existing “informal” park-and-ride locations along with identifying potential locations for future facilities that could support increased vanpools, ridesharing, and bus service. The I-90 reconstruction project could be a cost-efficient mechanism to implement one or more lots, but the planning should begin now.
- Coordinate with WisDOT on I-90 project – The multi-year State reconstruction and widening of I-39/I-90 between the Illinois/Wisconsin state line and Madison is anticipated to begin by 2016. During the construction period, the project is expected to fund certain activities to mitigate congestion. Other large scale highway projects have funded construction congestion mitigation efforts including additional transit services, new park-and-ride lots and work with large employers in managing employee and raw material/finished product travel.
- Revise Long Range Transportation Plans – Updates of the long range transportation plan documents of the Stateline Area Transportation Study (SLATS) and the Janesville Area Metropolitan Planning Organization (JAMPO) should reflect the regional transit opportunities identified in the SCWCT Study. Coordination with long range transportation plans in the Rockford and Madison areas should also be conducted.
- Recommend Preservation of Rail Facilities and Rights of Way – It is important to communicate to policy-makers the need to preserve privately-owned rail corridors and facilities for the continued use of freight rail and potential future use of passenger rail. This would include the preparation and approval of a formal resolution by the SLATS and JAMPO policy boards. Communication with staff of the WisDOT Freight Rail Preservation Program should also be initiated. Also, other MPOs and local units of government as appropriate should be asked to consider the resolution to preserve privately-owned rail corridors and facilities. This is because these are critical regional facilities affecting

overall economic development, wealth creation, and jobs retention and creation in south central Wisconsin and north central Illinois. The rail corridors are:

1. Janesville – Harvard
2. Beloit – Clinton
3. Janesville – Rockford
4. Madison – Milton – Janesville
5. Madison – Evansville - Janesville

Follow-up work should also include communicating to State and federal officials on the need to provide adequate funding for programs that could be used to advance the ideas of this Study. This would include, for example, the State's Multi-Modal Planning program and highway reconstruction mitigation funding programs as well as the Federal Transit Administration's Section 5309 "New Starts" program. Since infrastructure funding programs are relatively dynamic, MPO staff should review the applicability of programs on a regular basis (e.g., annually). In addition, opportunities for creative funding sources should be considered, including public-private cooperative efforts such as commercial development at park-and-ride and transit transfer locations.

The recommendations of the Steering Committee will be presented to the policy boards of the two metropolitan planning organizations that represent the study area (i.e., SLATS and JAMPO) for their input. It is anticipated that Rock County and the State of Wisconsin will play important roles in this discourse. In addition, discussions with areas outside of South Central Wisconsin should be initiated, related to the regional commuter options. The potential for multi-county collectives being formed could be an outcome of these discussions (e.g., Rock and Dane Counties, Rock and Winnebago Counties, or a combination of all three counties).

SCWCTS Deliverables

A series of reports have completed during the course of this Study, which will hopefully serve as a foundation for future studies of regional transit needs and opportunities. Study products listed on **Table 6** are available at the project website <http://www.co.rock.wi.us/Dept/SCWCTS/index.htm>, or from the SLATS and JAMPO offices.

Table 6. List of South Central Wisconsin Commuter Transportation Study Deliverables

SCWCTS Deliverable	Status	Date
Stakeholder Survey Report	final	Apr-07
Initial Transportation Inventory Report	final	Apr-07
Technical Pivot Meeting Materials	final	Aug-07
Stakeholder Pivot Meeting Briefing Paper	final	Sep-07
Draft Purpose & Need Statement	final	Jul-08
Market Analysis Technical Memorandum	final	Jan-08
Vanpool Programs	final	Mar-08
Commuter Rail Station Location Report	final	Mar-08
Discounting Regional Bus Service Fares for Commuters	final	Apr-08
Conceptual Commuter Rail Operating Plan and Capital Cost Estimates	final	May-08
Express Bus Schedule & Cost Report	final	May-08
Public Open House, Report of Documentation and Public Input Received	final	Jul-08
Executive Summary	final	Jul-08