

Revised Draft Review of Previous Studies

PREPARED FOR: Gateway Corridor Policy and Technical Advisory Committees
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This technical memorandum summarizes the key findings of previously completed work relevant to the Gateway (I-94 East) Corridor, including transportation studies and community transportation plans.

1. Summary

Review of the transportation planning studies and documents described in this technical memorandum reveals several consistent themes regarding transit in the Gateway Corridor:

- Corridor communities express support for high-quality transit
- Corridor agencies identify the Gateway (I-94 East) corridor as meriting detailed evaluation for expanded transit opportunities
- Funding for additional roadway expansion will be significantly limited for the foreseeable future
- Corridor communities express support for multi-jurisdictional coordination to address transportation issues.

Studies, comprehensive plans, and transportation plans which address transit or multimodal transportation in the Gateway Corridor are summarized in the sections which follow. The Tri-State Rail Studies (summarized below in Sections 2.11 and 2.12) address to high speed, inter-city rail passenger service with few or no stops. Alignments included in these studies include portions of the Gateway Corridor. High speed rail in Minnesota and part of Wisconsin is again being studied in a separate study that Mn/DOT is leading. Therefore, this Alternatives Analysis will not study high speed rail. However, commuter rail service between the Twin Cities and Eau Claire will be studied.

2. Minnesota Studies: Regional/State

2.1 Metropolitan Council, 2030 Transportation Policy Plan (TPP), (2009 and 2010 Update)

The Metropolitan Council published the *2030 Transportation Policy Plan (TPP)* in 2009 and prepared an update in 2010 (approval pending). The TPP incorporates the transportation policies and plans that support the Metropolitan Council's Regional Development Framework and describes the Council's approach to transportation investments between now and 2030. The TPP was prepared pursuant to the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU)—the federal law governing surface transportation programs at the commencement of the Gateway Corridor Alternatives Analysis in the fall of 2010.

I-94 from the St. Croix River through St. Paul to Minneapolis is included the TPP as one of seven transitway corridor needing additional development.¹ Corridor studies should consider all modes (LRT, Busway, BRT and Commuter Rail) and include an initial screening to determine corridor potential, an alternatives analysis, a draft and final environmental impact statement, and preliminary engineering. Implementation may mean a rail-based solution, an exclusive busway, or other bus-based solution, including a mixed-traffic solution such as high-occupancy toll lanes, dynamic shoulder lanes or express buses with transit advantages.

The TPP includes low-cost/high-benefit projects to improve traffic flow by removing bottlenecks, improving geometric design and eliminating safety hazards. Mn/DOT recently implemented low-cost/high-benefit projects including the addition of a third lane on I-94 between Century and McKnight Avenues within the Gateway Corridor. Additional projects of this nature will be identified along congested corridors on a system-wide basis for construction (see the Draft Mn/DOT Metro District 20-year Highway Investment Plan 2011-2030).

2.2 Metropolitan Council: 2030 Transit Master Study (2008)

The Metropolitan Council's 2030 Transit Master Study provided detailed analysis for the information included in the 2030 TPP cited above. The ridership and costs of twenty-nine corridors were analyzed for their potential for commuter rail or LRT/busway investments.

Corridors recommended for transit improvements are illustrated in Figure 1.

Two of these corridors that relate to the Gateway corridor are shown in the following table.

FIGURE 1
Corridors Recommended for Transit Improvements

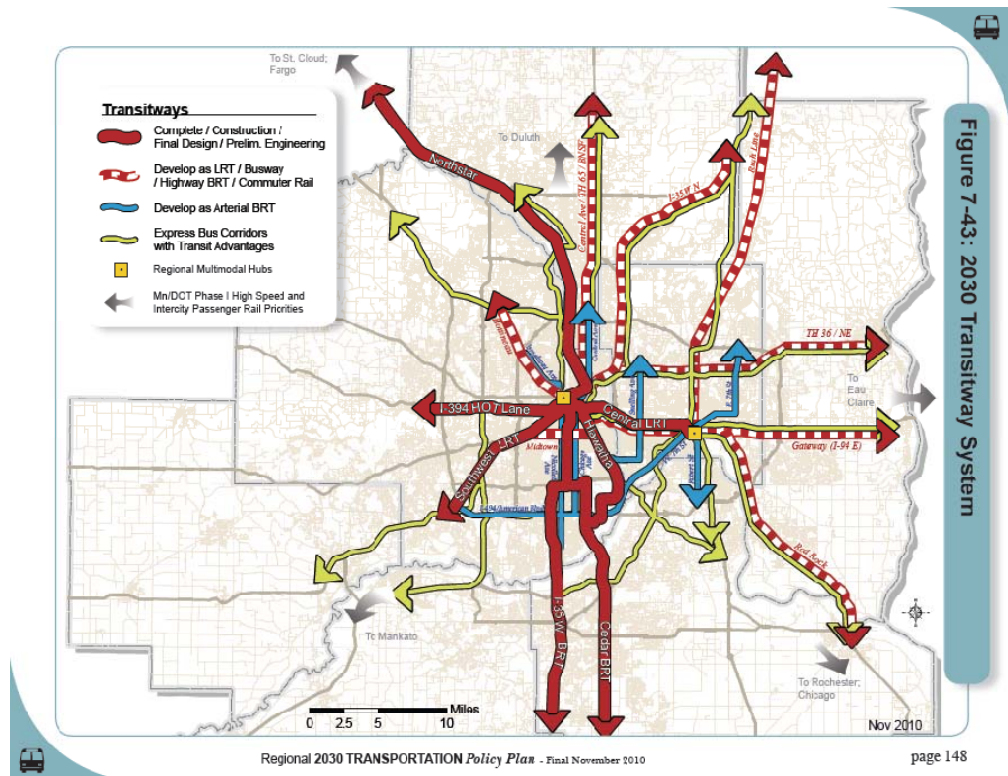


Figure 7-43: 2030 Transitway System

¹ These four corridors are: 1) I-94 east of downtown St. Paul and Minneapolis; 2) I-35W north of downtown Minneapolis; 3) Trunk Highway 36 / NE Corridor; 4) Rush Line Corridor; 5) Red Rock Corridor; 6) Bottineau Corridor; and 7) Trunk Highway 65/Central Avenue/BNSF. The Southwest LRT Corridor was amended into the TPP in early 2010.

TABLE 1

Corridors Relevant to the Gateway Corridor Considered in the Metropolitan Council 2030 Transit Master Study

Transit Corridor/Description	Mode	Terminus	Terminus	Alignment
Corridor 17) I-94 East- along highway	LRT	Hudson	Downtown St. Paul	LRT along highway
Corridor 17) I-94 East – along highway	Busway/BRT	Hudson	Downtown Minneapolis	Along Highway
Corridor 18) I-94 East- Commuter Rail	CR	Roberts, WI	Downtown St Paul	Union Pacific RR ROW

As noted in Table 1, in addition to LRT, Corridor 17, the I-94 East Corridor was analyzed as a busway alternative (17B), which substantially reduced costs. The new route also continued through St. Paul to Minneapolis (the original route ended in downtown St. Paul). This corridor was further modified as two separate runs, one as “17A” for St. Paul-destined service and “17B” for Minneapolis-destined service.

Projected ridership and annualized cost are the primary factors in determining transit corridor potential. Additional considerations that influence the readiness, cost, and impacts of transitway implementation include right-of-way considerations and potential transitway impacts on the road system, environment, land use, and other factors. The following table shows the results for each corridor for cost and potential ridership, and additional considerations in transitway implementation.

TABLE 2

Cost and Potential Ridership for Transitway Corridors Along I-94, Metropolitan Council 2030 Transit Master Study

Transit Corridor/Description	Mode Studied	Projected Ridership	Cost	Considerations
17) I-94 East–along highway	LRT	Medium	High	May require reconstruction, relocation of roadway, reconstruction of interchanges and purchase of additional ROW. River crossing at St. Croix. Wisconsin cost-sharing would have to be resolved.
17B1) I-94 East-along highway	Busway	Low	Medium	Alternative assuming busway to downtown St. Paul.
17B2) I-94 East-along highway	Busway	Low	Medium	Alternative assuming busway to downtown Minneapolis.
18) I-94 East Commuter Rail	Commuter Rail	Low	Low	River crossing at St. Croix. Operating railroad. Wisconsin cost-sharing would have to be resolved.

The study concluded that the I-94 East corridor should be studied to determine the most appropriate transit mode and alignment. This recommendation was also made for these other corridors: I-35W North, Central Avenue/TH 65, TH 36/NE, Red Rock, Bottineau, the Rush Line Corridor, and the Midtown Corridor.

2.3 Metropolitan Council: 2030 Park-and-Ride Plan (Adopted May 26, 2010)

The Metropolitan Council completed a park-and-ride plan for region in 2010. The Plan explains that facility size and transit service levels can influence both the extent and concentration of a facility’s market area. High capacity and high service levels strengthen

the market for a park-and-ride facility. Successful facilities are located with proximity and access to regional highways; this facilitates convenient access for both transit vehicles and park-and-ride customers. The Plan notes that few transit customers will backtrack to a park-and-ride facility, particularly if they must cross a natural feature, such as a river. The best geographic location for a park-and-ride market area is one that is downstream of a residential population of users and upstream from natural barriers or points of major congestion on a highway. Proper spacing is also important, as facilities that are spaced too closely together will compete with each other, and will dilute the effectiveness and efficiency of the park-and-ride service.

The 2030 Park-and-Ride Plan included a demand forecast to determine demand and unmet need in park-and-ride capacity for Minneapolis and St. Paul commuters. This modeling effort found that there is a much greater need for expanding capacity for Minneapolis bound users than St. Paul users. The I-94 East (Gateway) Corridor currently serves around 800 park-and-ride users travelling to downtown Minneapolis, and 200 traveling to St. Paul. There is currently a long-term capacity of 1,000 spaces in this corridor, leaving an unmet need of 500 spaces in 2020, and 1,300 spaces in 2030.

Three sites are identified for park-and-ride expansion or construction in the corridor:

- Guardian Angels Church Park-and-Ride was expanded in late 2008, adding 235 spaces for a total of 435 spaces.
- The Woodbury Theater Park-and-Ride with 550 spaces currently operates at capacity. The Metropolitan Council owns the theater property and could develop a parking ramp at this location that would serve increased growth and development in southern Woodbury.
- A new park-and-ride site has been identified at I-94 and Manning Avenue. This facility would have 550 spaces.

As noted above in Section 2.2, the I-94 East (now Gateway) corridor is identified as a future transitway in the Metropolitan Council's *2030 Transportation Policy Plan*. Development of any corridor as a transitway would create park and ride demand beyond the project results noted above.

2.4 Metropolitan Council: Metropolitan Highway System Investment Study (MHSIS), (2010)

This joint effort between the Metropolitan Council and Mn/DOT focused on identifying methods and improvements to achieve the greatest efficiency out of the region's highway system and managing congestion from a system-wide perspective. The findings of this study are reflected in draft amendments made in 2010 to the Metropolitan Council's *Transportation Policy Plan* and the Mn/DOT *Metro District Highway Investment Plan*.

The MHSIS was undertaken to address the current set of circumstances in which highway project development takes place, in which:

- Highway investment priorities should focus on maintaining and preserving the existing system and
- Improvements need to enhance the existing transportation system by managing and optimizing system effectiveness, and implementing strategic and affordable capacity expansions. Principles of safety, preservation, and congestion management should drive any system improvements.

- “Major expansions” identified in previous transportation plans should be reassessed with the intent of reducing project scope and cost, while still achieving substantial benefit.

This revised approach acknowledges that revenues needed to address congestion over the next 20 years are in excess of \$40 billion, although the most optimistic revenue projections show that just a fraction—approximately \$900 million - will be available to mitigate congestion. Other available funding will be dedicated to bridge, and preservation and maintenance projects.

Given this shortage in funding to address the capacity expanding projects previously identified in Metropolitan Council and Mn/DOT plan, these agencies have adopted a new system-wide management approach that is technology-based, multi-modal, and problem focused. Examples of types of projects that might be considered to achieve these goals include: managed lanes which could incorporate transit; traffic management techniques; strategic capacity enhancement projects; and access management for Interregional Corridors. Potential solutions developed under the MHSIS will be ranked according to defined principles, including specific methods for measuring performance.

2.5 Metropolitan Council: Transportation Demand Management (TDM) Strategic Study, (2010)

The Metropolitan Council, working in consultation with Mn/DOT and its regional partners in Travel Demand Management (TDM)² including Metro Transit and transportation management organizations (TMO) developed the *TDM Evaluation and Implementation Study* to outline a clear process for selecting, funding, and implementing TDM strategies and structuring and evaluating the TDM program in the Twin Cities.

The Metropolitan Council’s *2030 Transportation Policy Plan* acknowledges that TDM strategies advance a transportation system investment policy centered on managing congestion by increasing the person throughput carrying capacity of the transportation system. The *TDM Strategic Study* concluded with several recommendations that are aimed at achieving the policies set forth in the plan, with specific focus on reducing vehicle miles travelled.

2.6 Mn/DOT: St. Croix River Crossing Project Environmental Documentation

Mn/DOT has led the effort to complete numerous studies related to construction of a new Highway 36 bridge over the St. Croix River in Stillwater, Minnesota. This includes completion of the following environmental documents:

- Supplemental Draft Environmental Impact Statement (EIS) (2004)
- Supplemental Final EIS (2006)

Relative to the Gateway Corridor, these documents provide results of travel demand forecasting. However, Mn/DOT has completed updated travel demand modeling efforts since completion of the St. Croix River Crossing EIS. See the summary of Mn/DOT’s *I-94 East Metro Corridor Study, 2030 Traffic Forecasts and “State of the Corridor” (2011)*, below for details regarding the future travel demand over the St. Croix River at I-94 both with and without a new Stillwater Bridge.

² Transportation demand management (TDM) describes a wide range of strategies that make the most efficient use of the transportation system by increasing person-carrying capacity. These strategies include promotion of alternative modes (e.g., transit and increasing vehicle occupancy through ridesharing programs) and facilitating the shift of trips from peak-hour congested corridors to off-peak periods or eliminating trips through strategies such as teleworking.

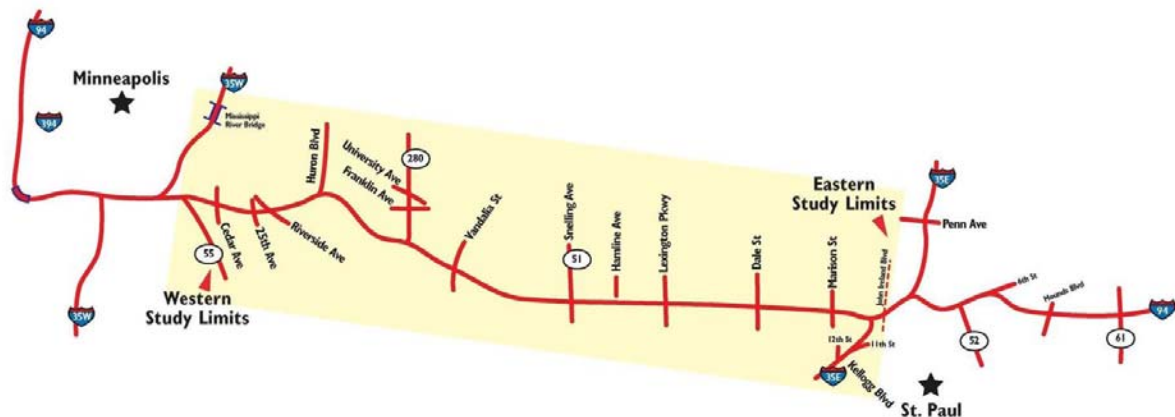
As noted in the St. Croix River Crossing EIS documentation, the St. Croix River Crossing project does not include direct changes to the existing transit system. A transit and land use workshop was held in December 2004. Additionally, Mn/DOT completed a *Transit Feasibility Study* as a follow-on to the Final EIS. A summary of this document is provided below in Section 2.10.

In 2010, the National Park Service issued a determination that the proposed St. Croix River Crossing Project would have direct and adverse effects on the scenic and recreational values of the Lower St. Croix National Scenic Riverway that cannot be avoided or eliminated (see Section 2.8 below for a summary of this determination). This finding has effectively stopped bridge construction unless congressional action is taken to authorize the project.

2.7 Mn/DOT: I-94 Managed Lane Study (2009)

Mn/DOT's analysis of the I-94 corridor from 6th Street in Minneapolis to John Ireland Boulevard in St. Paul (Figure 2) included strategies to improve the corridor's mobility and maintain transit advantages for the existing bus service, while utilizing the existing freeway cross-section. Implementation of study recommendations is expected to begin in 2010.

FIGURE 2
I-94 Managed Lane Study Area



Limited investments in the existing freeway were recommended, given that: 1) the limited availability of funding rules out major reconstruction and expansion of I-94 between Minneapolis and St. Paul, and 2) the impacts of the bottlenecks at the Lowry Tunnel to the west and the Capitol Interchange to the east will not disappear. Specific recommendations for the two segments of the I-94 corridor included in the Gateway Corridor Alternatives Analysis are summarized below.

I-94 between I-35W and TH 280:

- Provide four continuous lanes in each direction between I-35W and TH 280.
- Provide an active traffic management (ATM) system of variable speed and queue warning signs along with in-road lighting for the west bound right lane between the Dartmouth (I-94) Bridge and the downtown Minneapolis exit to provide improved reliability for Metro Transit bus operations.
- Eliminate lane drops and provide lane continuity on interchange ramps at I-35W and TH 280.

I-94 between TH 280 and Downtown St. Paul:

- Reconstruct I-94 to provide wider bus-on-shoulder (BOS) operations, to permit 45 mph operations of buses.
- In the short-term, mill and overlay the existing roadways to replace deteriorated pavement and to improve roadway drainage.
- In the long-term, provide a continuous managed lane in each direction in the median of I-94, along with direct connecting ramps to both downtown Minneapolis and downtown St. Paul. This would require major reconstruction of the interchange at TH 280 to eliminate the left hand ramps and require the replacement of many bridges that cross over I-94, including three railroad bridges.

FIGURE 3
Bus on Shoulder, Mn/DOT 2006



2.8 National Park Service, United States Department of the Interior: St. Croix River Crossing Project Evaluation and Determination Section 7(a) of the Wild and Scenic Rivers Act (2010)

The St. Croix River Crossing Project proposes construction of a highway-grade bridge across the river at Stillwater, Minnesota, to address regional transportation issues. This project is subject to review by the National Park service (NPS) under Section 7(a) of the Wild and Scenic Rivers Act (the Act). The NPS is responsible for evaluating and determining the effect of this project on the free-flowing condition, water quality and outstandingly remarkable scenic, recreational, and geologic values for which the St. Croix was designated a National Wild and Scenic River. The NPS cannot consent to any water resources project that would have a direct and adverse effect on these values.

Prior to the 2010, the NPS had assessed three different bridge proposals and prepared three different Evaluations under Section 7(a) of the Act (in 1996, 2000, and 2005). In 2005, the NPS determined that the preferred alternative, when taken along with its mitigation package, would not have a direct and adverse effect on scenic and recreational values. This determination was challenged in court and found to be arbitrary and capricious in March 2010. The FHWA requested that the NPS prepare a new Section 7(a) evaluation for the St. Croix River Crossing Project, to address the concerns expressed in the Court's decision.

The NPS conducted a new analysis of scenic impacts using standardized methodologies in response to the Court's order. Upon reviewing the Act and available guidance, and in consultation with the interagency Wild and Scenic Rivers Coordination Council, the NPS concluded that if it was determined that the St. Croix River Crossing Project has direct and adverse effects on the values for which the river was designated a National Wild and Scenic River, and if those impacts are unavoidable or cannot be eliminated, then the NPS cannot consent to the project. The NPS concluded that compensating for an impact by improving resource conditions elsewhere does not change the existence of any direct and adverse

effect. Also, minimizing a direct and adverse effect is not sufficient to allow the project to proceed under the Act.

The NPS determined that the proposed bridge would have direct, but not adverse effects on the free-flowing condition of the river associated with construction of bridge piers. The proposed bridge would create a strong visual contrast in the existing scenery of the river; therefore the NPS determined the project would result in a permanent direct and adverse effect on the scenic values for which the Riverway was established. Because of the unavoidable visual intrusion the proposed bridge would impose on the scenic character of the Riverway and the inherent link between the scenic character and the recreational enjoyment of the Riverway, the NPS determined that the project would have a direct and adverse effect on the recreational values for which the Riverway was established. The NPS determined that it cannot consent to the project because of the direct and adverse impacts to scenic and recreational values, despite efforts to minimize them.

2.9 Mn/DOT: I-94 East Metro Corridor Study, 2030 Traffic Forecasts and “State of the Corridor,” (2011)

Mn/DOT evaluated the state of the I-94 corridor in the eastern part of the Minneapolis/St. Paul Twin Cities metropolitan region—from TH 120 (Century Avenue) to the St. Croix River. This study documents current and projected future (year 2030) traffic volumes and operations, and considers opportunities to alleviate existing or future operating deficiencies.

Travel demand modeling completed for this study included the seven-county Metropolitan Council area, plus “collar counties,” including Pierce, Polk and St. Croix in Wisconsin. This study revealed the following relative to the I-94 bridge across the St. Croix River (as relevant to the I-94 Gateway Corridor):

- Existing (year 2008) daily traffic volume over the I-94 St. Croix River bridge is 89,000 vehicles per day
- Assuming that all programmed regional and local improvements—including a new TH 36 St. Croix River bridge in Stillwater, MN—are implemented, year 2030 daily traffic volume over the I-94 St. Croix River bridge are anticipated to be 109,000 vehicles per day
- Assuming that all programmed regional and local improvements are implemented—with the exception of the TH 36 St. Croix River Crossing—year 2030 daily traffic volume over the I-94 St. Croix River bridge are anticipated to be 122,000 vehicles per day.

The study identified several expected operational deficiencies in the I-94 corridor, and tested various changes to the roadway system to identify the impact of implementing changes. Based on this analysis, the following considerations were provided relative to improvements along the I-94 corridor:

- Projects showing merit for improving corridor operations without requiring major capital outlays include:
 - Auxiliary lanes between CSAH 19 (Woodbury Drive/Keats Avenue) and CSAH 13(Radio Drive/Inwood Avenue).
 - Split the access/egress points on the collector-distributor roadways on the I-94 C-D roads at the I-94/I-494/694 interchange (eastbound and westbound).
- Potential Overpasses at Weir Drive/Hadley Avenue and Bielenberg Drive/Helmo Avenue were found to provide local roadway system options for traffic that would otherwise use

congested local and regional interchanges. These overpasses would reduce traffic on I-494/694 through the high-weave I-94 interchange area by approximately 7,000 to 10,000 daily vehicles.

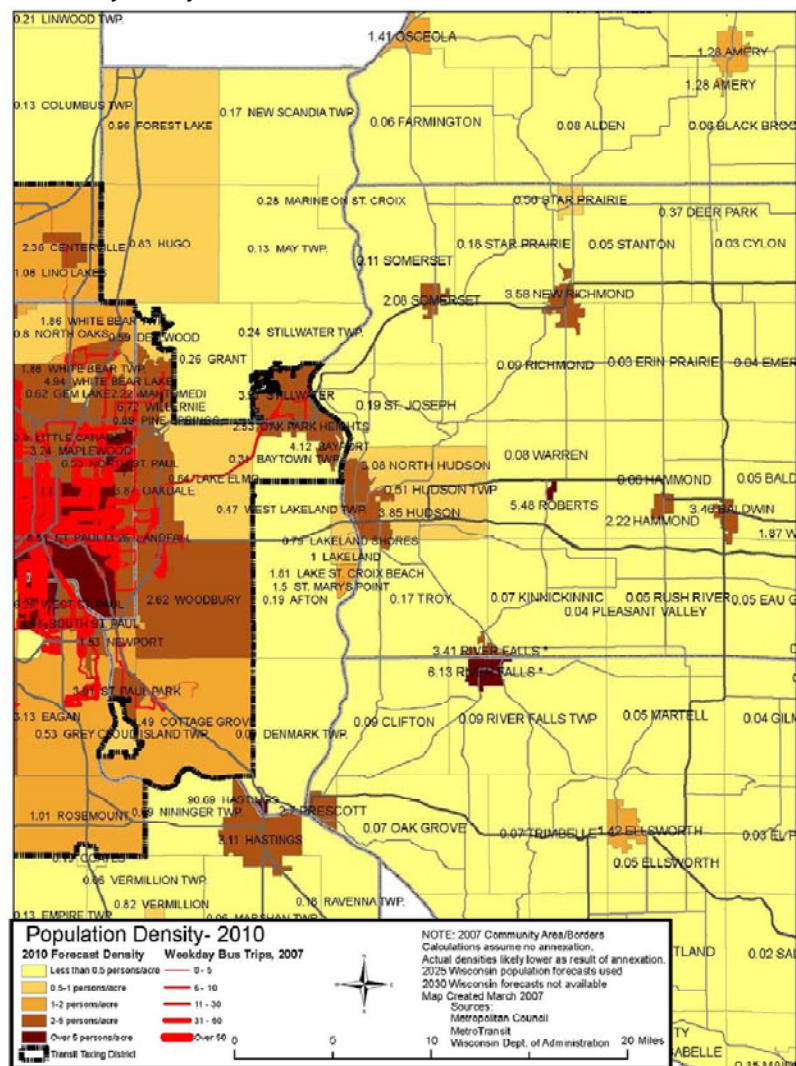
- Opportunities to modify the I-94/I-494/I-694 interchange could improve interchange operations. These improvements could include one or more of the following:
 - Splitting the I-494/I-694 collector-distributor (C-D) on ramps to I-94 into two separate entrances (eastbound and westbound)
 - Construct a directional ramp for the southbound to eastbound movement
 - Construct a northbound I-494/I-694 mini C-D road through bridge widening or construction of a new bridge adjacent to the existing northbound bridge

The 2030 no-build traffic forecasts that will be developed as part of this analysis will be used as a baseline for the Gateway Corridor Alternatives Analysis.

2.10 Mn/DOT: Transit Feasibility Study, St. Croix River Crossing Study (June 2008)

As part of the process for preparing the St. Croix River Crossing Project Supplemental Final Environmental Impact Statement, St. Croix Valley stakeholders initiated a transit feasibility study to explore bi-state transit planning, operations, authority, jurisdiction, and impediments to transit services. The study specifically investigated the feasibility of offering express buses, park-and-ride services, shared-ride taxis, dial-a-ride services, and other transit modalities for western Wisconsin.

FIGURE 4
2010 Population Density, St. Croix River Crossing Transit Feasibility Study 2008



The study found that while a commuter-oriented transit market may exist in Wisconsin, if growth trends continue as anticipated, addressing unmet transit demand from some Minnesota collar counties would remain a higher priority than expanding transit service outside the state. This suggested that western Wisconsin’s moderate transit demands may be adequately addressed through current and expanding in-place facilities and services. Expanded park-and-ride facilities in Minnesota’s east metro area would continue to benefit Wisconsin residents using the current transit system, and removing vehicles from congested roads in the east metro area. Added bus trips and new bus service within the Twin Cities metro area and collar counties would also provide new options to commuters; however, direct service into western Wisconsin is not included in the current expansion plans for Minnesota’s Metro Transit service.

The study further suggested that the need for intra-Wisconsin transit travel should continue to be fulfilled by local programs tailored to each community and funded by federal, state, and local sources. The study concluded that the next step in determining the feasibility of new transit service from western Wisconsin into the Twin Cities metro area would be the assembly of a steering committee to further evaluate the most viable transit services identified in the study, such as express buses with transit advantages along the I-94 corridor. In particular, the study recommended working with legislators from both Minnesota and Wisconsin to identify funding sources for the establishment of a new transit service operating across jurisdictional and state boundaries.

2.11 Illinois, Minnesota, and Wisconsin DOTs: Tri-State High Speed Rail Study (1991)

This study evaluated the potential for high speed rail along two corridors (see Figure 5):

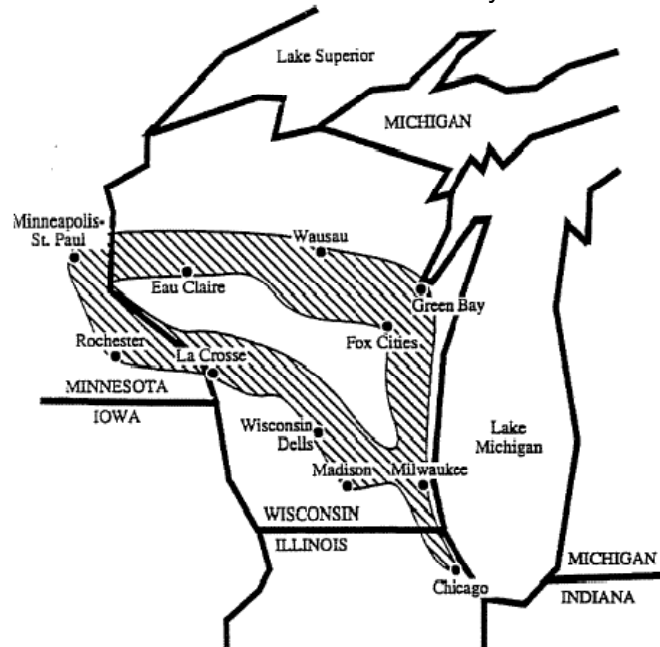
- Southern Corridor—would service Chicago, IL; Milwaukee, Madison, and La Crosse, in WI; and Winona, Rochester, Minneapolis, and St. Paul, in MN
- Northern Corridor—would service Chicago, IL; Milwaukee, Appleton, Green Bay, Wausau, Eau Claire, in WI; and Minneapolis and St. Paul in MN.

Examining 125 mph, 185 mph, and 300 mph technologies, this study concluded that a Chicago-Milwaukee-Twin Cities corridor “...appears very promising in terms of ridership, revenues, and financial and economic benefits that high speed rail could generate.”

Other study conclusions included:

- The southern corridor is preferred over the northern relative to environmental, economic, and financial terms.

FIGURE 5
Tri-State Northern and Southern Study Corridors



- A 125-mile per hour (mph) speed could generally be achieved with existing rights-of-way (ROW); the 185 mph and the 300 mph options would require additional ROW

Based on study findings, a more detailed and comprehensive feasibility study of the southern corridor was recommended to identify a preferred approach to high speed rail.

2.12 Minnesota and Wisconsin DOTs: Tri-State II High Speed Rail Feasibility Study (Chicago-Milwaukee-Twin Cities Corridor) (2000)

This study evaluated the potential of various rail options in the Chicago-Milwaukee-Twin Cities corridor. Using the Midwest Regional Rail Initiative (MWRRI) as a base case (up to 110 mph service), this study also considered 150 mph and 185 mph options. Route and technology alternatives were compared, as well as financial and institutional arrangements needed for successful implementation. The study concluded that:

...after build out of the 110-mph MWRRI service between Chicago, Milwaukee and Twin Cities, that the preferred High-Speed Rail system will be 150-mph service via Rochester on a new alignment. It is recommended that the service employ the 150-mph gas turbine technology. Planning for the new alignment should begin by 2005 in order to achieve implementation by 2012. The next logical step in this planning process is the preparation of a corridor EIS with a focus on 150-mph technology using a new alignment between Twin Cities and Ixonia (located in Wisconsin, just north of I-94 between Madison and Milwaukee).

2.13 Metropolitan Council: Draft Long-Distance Bus Route Study (February 2010)

This study examined the potential for long-distance bus routes from greater Minnesota and Wisconsin to the Twin Cities; including consideration of potential long-distance bus routes from St. Croix County, Wisconsin to both downtown St. Paul and Minneapolis from a location in Hudson, Wisconsin.

Results from existing and potential transit ridership analysis from Hudson, Wisconsin into St. Paul and Minneapolis are shown in Table 3. A potential new service to Minneapolis would draw an estimated 115 transit riders daily (230 total transit trips). A potential new service to St. Paul would attract an estimated 32 transit riders daily (64 total transit trips).

TABLE 3
St. Croix County Area Existing and Projected Transit User Demand

Market Area	Existing Commuters	Existing Transit Users	Estimated Demand on New Service	Estimated Daily Ridership
Hudson – Minneapolis	732	137	115	230
Hudson – St. Paul	755	37	32	64

To serve the estimated demand, a park-and-ride facility would need to be constructed in Hudson at a cost of approximately \$1,000,000, plus land acquisition costs for 2-3 acres. Additionally, Minneapolis and St. Paul services would require five peak hour buses at a cost of approximately \$2.6 million. Combined, the total capital costs required for a park-and-ride facility and buses would be \$1.6 to \$3.6 million. Table 4 shows additional estimates for annual operating costs and subsidies per passenger.

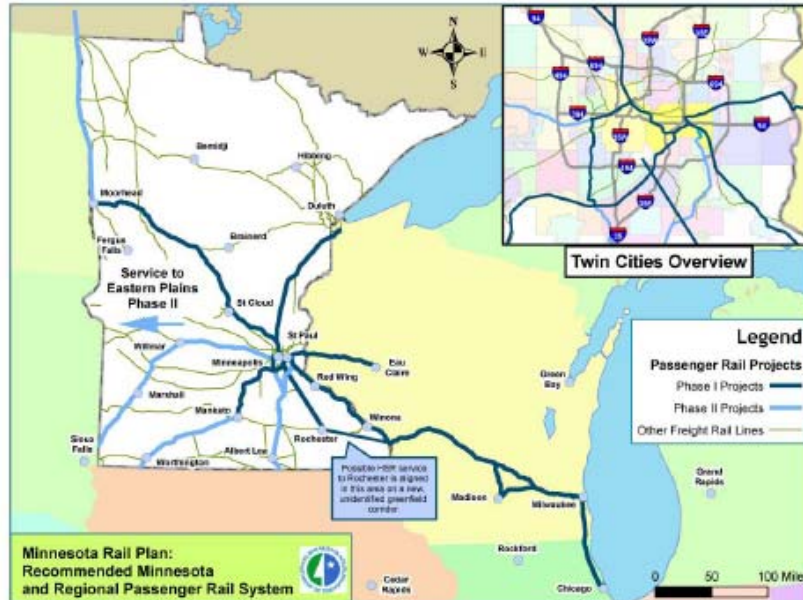
TABLE 4
St. Croix County Estimated Transit Service Costs and Effectiveness

Market Area	Estimated Daily Ridership	Annual Operating Cost	Subsidy per Passenger
Hudson – Minneapolis	230	\$282k – \$334k	\$2.61 - \$3.50
Hudson – St. Paul	64	\$94k – \$111k	\$3.57 - \$4.62

2.14 Mn/DOT: Minnesota Statewide Passenger and Freight Rail Plan (2010)

The *Minnesota Statewide Passenger and Freight Rail Plan* provides a long-term vision for Minnesota’s rail system (both freight and passenger) and includes prioritized improvements over the next 20 years. Figure 6 summarizes the recommended statewide and regional passenger rail system projects.

FIGURE 6
Recommended Minnesota & Regional Passenger Rail System



The Statewide Rail Plan noted that a proposed replacement of the Hudson Bridge over the St. Croix River on the Union Pacific’s Altoona Subdivision would cost an estimated \$87 million. This would replace the existing steel through-truss, center pivot swing span with a 160-foot-long single track vertical lift span.

2.15 Mn/DOT: Draft Metro District 20-Year Highway Investment Plan 2011-2030 (August 2010)

This draft *20-year Highway Investment Plan* revises Mn/DOT’s 2009 Plan primarily by reflecting the agency’s and the Metropolitan Council’s changed approach towards congestion mitigation [see the Metro Highway System Investment Study (MHSIS)].

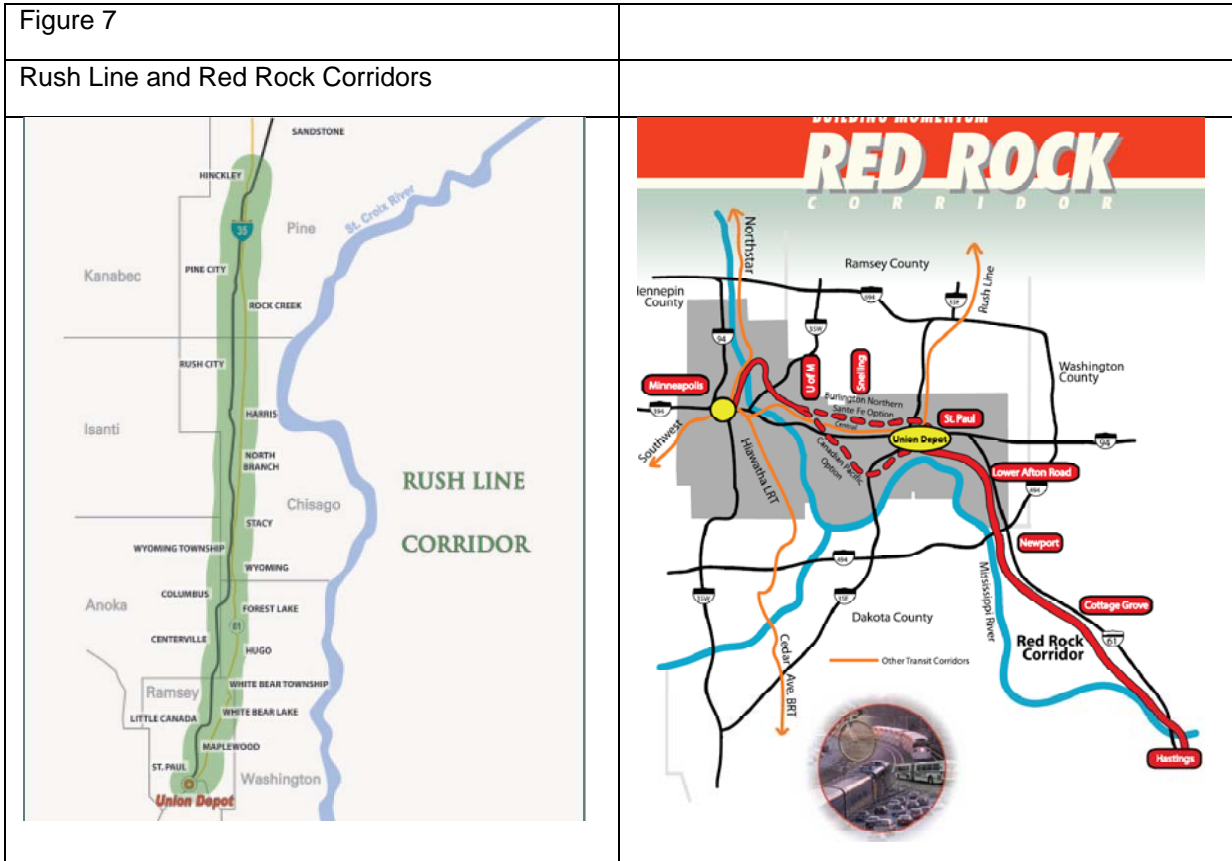
Mn/DOT *Metro District’s 20-Year Highway Investment Plan* provides the link between policies and strategies established in the *Statewide Transportation Policy Plan* and the capital improvements that are made to the state highway system. This 20-year plan is a guide for future capital investments in the state trunk highway system within the Metro area.

A vision for the Metropolitan transportation system was developed as part of the *MHSIS*. Relative to the I-94 Gateway Corridor, this vision includes: managed lanes from downtown Minneapolis to I-694 and lower-cost/high benefit projects at various points along I-94.

3. Minnesota Studies: County/Local

Research was conducted to identify which local jurisdictions along the study corridor have available transportation plans. The relevant transportation/transit related components from each are summarized below.

In addition, Washington and Ramsey County Rail Authorities have conducted alternatives analyses of two transit corridors, the Rush Line Corridor from downtown St. Paul through northeast metro suburbs to Hinckley, and the Red Rock Corridor from downtown St. Paul through southeast metro suburbs to Hastings (see Figure 7). Both studies connect to the Union Depot in St. Paul.



3.1 Washington County 2030 Transportation Plan (2009)

The 2030 Washington County Transportation Plan includes the following goals:

- Goal 1: Develop and maintain a roadway system that accommodates the safe and efficient movement of people and goods.
- Goal 2: Promote the development and utilization of a transit system that meets the existing and future travel needs of the public.
- Goal 3: Use effective transportation planning to accommodate existing and planned land uses, while preserving natural, cultural, and historic resources.
- Goal 4: Develop a non-motorized transportation system to provide mobility and recreational options to the public.

The plan includes a section which provides an overview of the overall transit services within the County. It also provides specific reference to the Interstate 94 East Corridor and references the formation of the I-94 East Corridor Commission which will lead the efforts to conduct a transit alternatives analysis for the corridor. The County also has a detailed Transit Study published in November 2008 which provides additional reference to the need to address transit potential in the I-94 corridor.

3.2 Ramsey County Comprehensive Plan (2008)

The County's comprehensive plan includes an extensive transit section which references the I-94 Corridor and efforts to pursue a study to determine the feasibility of a transitway in the corridor. The plan also references the high speed rail planning initiatives and on-going coordination between Ramsey and Washington counties.

3.3 Ramsey County Regional Railroad Authority (RCRRA): Union Depot Environmental Impact Statement (EIS) (2009) and Previous Phase I and II Studies

The RCRRA completed an environmental review of the Union Depot in 2009. This allows Ramsey County and its partner agencies to secure federal funding for the purchase and renovation of the Union Depot. Over 30 topics were examined as potentially being impacted by the reuse and rehabilitation of the Union Depot as a multi-modal transit hub. A number of primarily positive impacts were identified as a result of this study. A notice of availability was published in the August 24, 2009 EQB Monitor on behalf of FHWA and RCRRA in cooperation with FTA.

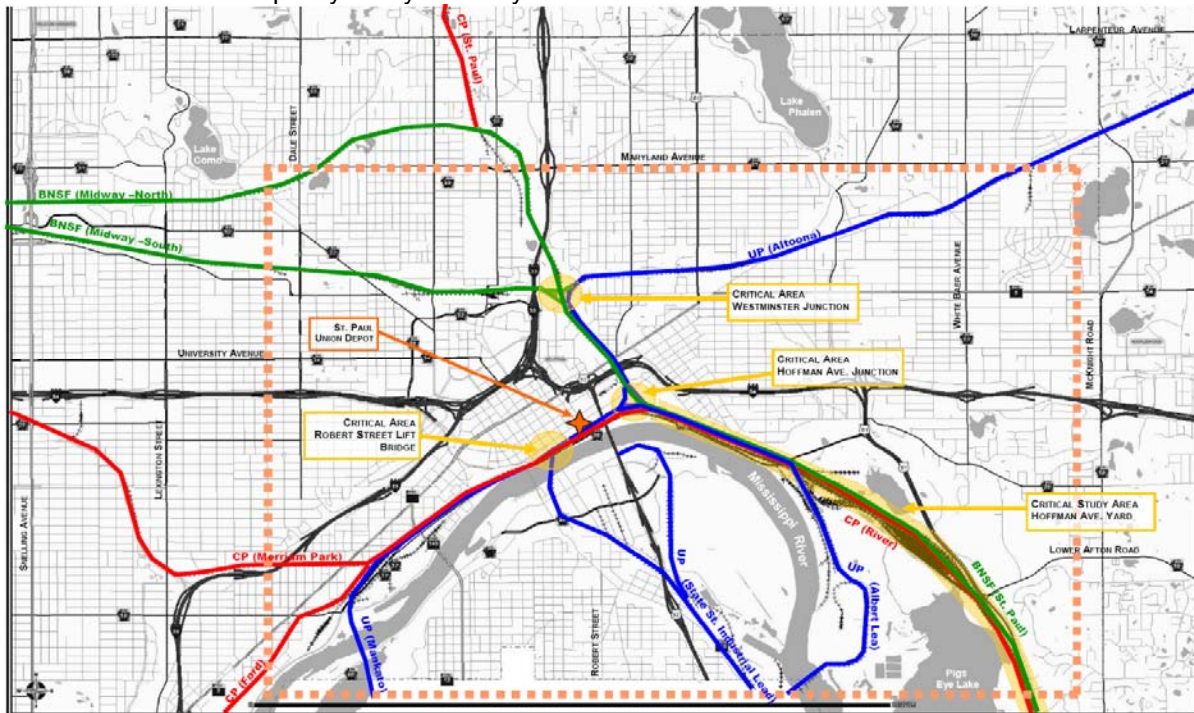
The study concluded that creation of a multi-modal passenger transportation facility would provide a safe and convenient connection between various modes and restore passenger transportation functions in the historic Union Depot, thereby meeting the project's purpose and need. The Union Depot is scheduled to reopen in 2012.

Prior to completion of the Union Depot EIS, the RCRRA completed two phases of study. The Phase I study analyzed various locations for a multi-modal transit terminal and determined the Union Depot as the preferred site. A Phase II study, completed in 2003, described how existing and planned public transportation serving downtown St. Paul could interrelate at the Union Depot. Following the completion of the Phase II study, the RCRRA purchased property around the Depot including its concourse and train deck. In June 2009, the RCRRA agreed to purchase the Depot's head house providing for complete public ownership of the facility.

3.4 Ramsey County Regional Railroad Authority: East Metro Railroad Capacity Analysis (2010)

The RCRRA is currently conducting a capacity analysis of the existing freight railroad network to identify needed capacity and operational improvements which will be required to accommodate the transit and passenger rail services planned in the Twin Cities Metropolitan Area. The study area focuses on the existing railroad network centered around downtown St. Paul, and incorporates current and planned freight service as well as passenger and commuter rail service.

FIGURE 8
East Metro Railroad Capacity Analysis Study Area



3.5 Hennepin County Regional Railroad Authority: 2030 Hennepin County Transportation Systems Plan (2008)

Hennepin County's Transportation Systems Plan indicates implementation of BRT extending east from downtown St. Paul along the I-94 corridor.

Hennepin County's plan includes the following transit related policies:

- The County will work to implement high priority transitway corridors including, but not limited to, the Central Corridor LRT, Southwest Corridor LRT, and Bottineau Transitway/
- The County will work with its partners to implement transportation investments and land development patterns to create an environment that supports all modes of transportation including automobile, transit, walking, and biking.
- The County will work with its partners to implement transitways that are a catalyst for transit oriented development.
- The County, acting as the Regional Railroad Authority, will work to continue to acquire abandoned freight rail corridors to preserve them for a future transportation use.

As noted in the 2030 Hennepin County Transportation Systems Plan, the County's vision for transit is a vision shared by the Regional Rail Authorities in Ramsey, Anoka, Carver, Dakota, Scott and Washington counties. It includes a network of transitways which encompasses LRT, commuter rail and high speed rail between downtown Minneapolis and downtown St. Paul, as well as BRT east from downtown St. Paul along the I-94 corridor.

3.6 City of St. Paul Transportation Plan, (2010)

The Transportation Plan proposes four strategies to guide investment in the transportation system:

- Provide a Safe and Well-Maintained System;
- Enhance Balance and Choice;
- Support Active Lifestyles and a Healthy Environment; and
- Enhance and Connect Neighborhoods.

The plan indicates the I-94 East Corridor as a transitway corridor for future LRT or BRT implementation. It also identifies I-94 East as an express route transit corridor for enhanced non-stop service between transit centers and park-and-rides.

The implementation section of the plan includes the following recommendation:

- Focus funding for bus service on the East Metro - Frequent and reliable bus service is critical to the strength of the overall transit system. The East Metro area is under-served and must be better connected by efficient transit to Downtown Saint Paul, its neighborhoods, and regional high employment destinations like Downtown Minneapolis and the I-494 Corridor in Bloomington. Work with Metro Transit to focus improved bus service, not just in areas of the region with the highest levels of traffic congestion but in places with a deficiency in transportation choices and a high dependency on transit.

3.7 City of Minneapolis: Access Minneapolis Ten Year Transportation Action Plan (2007 & 2009)

The City has prepared *Access Minneapolis* which is a ten year transportation action plan. A major component in the plan is the enhancement and expansion of transit services throughout the City to include local bus, express bus, street car, BRT and LRT services. The plan references construction of the Central Corridor LRT. No transit enhancements beyond which currently operate are noted on I-94.

3.8 City of Maplewood Comprehensive Plan—Transportation Chapter (2010)

The City's Transportation Plan does not include a specific reference to transit along the I-94 (Gateway) Corridor however it does include several transit policies including:

- Maplewood will work with regional transit agencies to help secure transit service that better serves the needs of the residents of the City.
- The City supports the expansion of the Metro Transit Rideshare carpool/vanpool rider matching and supports Metro Transit's Guaranteed Ride Home Program for transit riders.
- Maplewood supports Metro Transit's construction of new or improved bus stops and shelters.
- The City supports efforts by Metro Transit to focus service on the Maplewood Mall transit hub, improve off-peak service and improve express service to St. Paul and Minneapolis.
- Maplewood supports efforts by other agencies to improve transit service in the City by the addition of transitways on the arterial roadways. When transitways are added to



arterials, the City will encourage higher-density economic development and redevelopment near such corridors.

3.9 City of Oakdale Comprehensive Plan: Transportation Chapter (2010)

The City's Transportation Plan is built on the following goals:

- Goal 1: Collaborate with federal, state, regional agencies, and local jurisdictions on transportation issues to increase connectivity and achieve alternative forms of transportation.
- Goal 2: Develop and maintain a safe, efficient and environmentally sensitive transportation system.
- Goal 3: Promote a multi-modal transportation plan that is fully integrated with land use planning.

The plan further acknowledges that the I-94 Corridor is a candidate transitway undergoing additional study.

3.10 City of Woodbury Comprehensive Plan: Transportation Chapter (2010)

Woodbury's Transportation Plan includes the following goals relative to transit:

- To safely, conveniently and efficiently move people within the community.
- To provide convenient connections to regional transit services both for residents who work outside of Woodbury and for employees who live outside of Woodbury.
- To provide Woodbury residents an alternative means to travel other than the single occupant vehicle.
- To reduce total number of daily vehicle trips.

3.11 City of Lake Elmo Comprehensive Plan (2005)

The City's Comprehensive Plan states the following:

The transportation policy of the Lake Elmo Comprehensive Plan addresses the community's recognition of, and interest in, transit solutions to transportation issues. Transit alternatives to automobile travel are both encouraged and advocated.

3.12 City of Afton Comprehensive Plan (2009)

The City's Draft Comprehensive Plan includes the following relative to transit along the I-94 corridor:

The City, in conjunction with its neighboring St. Croix Valley communities and Washington County, may be an advocate for a light rail corridor along I-94 to the St. Croix River. As our population ages, our City may choose to explore the expansion of bus service into our community.

4. Wisconsin Studies: Regional/State

4.1 West Central Wisconsin Regional Planning Commission: Comprehensive Plan 2010 to 2030 (2010)

The West Central Wisconsin Regional Planning Commission serves the counties of Barron, Chippewa, Clark, Dunn, Eau Claire, Polk and St. Croix Counties. The Comprehensive Plan covering the years 2010 through 2030 was adopted in the fall of 2010. The plan steering committee developed the following vision statement regarding the future of this region:

West Central Wisconsin is a region of sustainable and identifiable communities working cooperatively and globally with strong social, physical, and economic linkages. Our cities and villages are vibrant, and our rural character and diverse resources are preserved.

Relative to transportation, this region's important conditions and trends include:

- St. Croix County has been the fastest growing county in Wisconsin since 1990.
- From 1998 to 2007, the percent increase in annual vehicle miles traveled (vmt) in the region was double that of the state of Wisconsin.
- The region's VMT is projected to increase by 30 percent by 2030; the increase for trucks is expected to be over 60 percent.
- Transit services in the region are fairly limited, but demand is increasing as the population ages and commuting distances grow.

The top three transportation issues cited in the plan include:

- Revitalization of freight and passenger rail is important for the development of the region, especially given rising fuel prices.
- Maintenance of aging transportation infrastructure will be critical in light of growth, increasing traffic volumes, and budget challenges.
- Intergovernmental coordination and other partnerships are important to providing alternative modes of transportation.

Selected recommendations included in the plan include:

- Coordinate regional efforts to bring passenger rail service to west central Wisconsin.
- Coordinate a transit service system that accommodates trips between the region's counties and beyond the region.

4.2 Chippewa-Eau Claire Metropolitan Planning Organization: Draft Long Range Transportation Plan Update for the Chippewa-Eau Claire Metropolitan Planning Area, 2010-2030 (2010)

The MPO's Long Range Transportation Plan includes the following goals:

- Goal I - Develop and maintain the transportation system to support the economic development of the area while minimizing social and environmental impacts.



- Goal II - Develop and maintain a balanced multi-modal transportation system which will allow for the safe, economical and efficient movement of people and goods, while optimizing the financial resources of area communities.
- Goal III - Coordinate the provision of transportation facilities and services with land use development plans and policies.

The plan includes the following in regards to transit services:

It is strongly recommended that studies and advocacy efforts by state and local agencies and organization be fully supported with the end result of the Chippewa-Eau Claire MPA become a stop on reestablished intercity passenger rail service between Chicago and the Twin Cities, as well as any additional services of the busy corridor between Eau Claire and the Twin Cities (p. 128).

4.3 Wisconsin Department of Transportation (WisDOT): Draft Wisconsin Rail Plan 2030 (2010)

Note: As of December 2010, completion of the Wisconsin Rail Plan 2030 has been postponed until further notice.

The draft *Wisconsin Rail Plan 2030*, the state's 20 year rail planning document, focuses on the role that freight, intercity passenger, and commuter rail play in the state's transportation system. A strong rail system is needed to maintain and grow the state's economy; support livable communities; and improve the efficiency of the state's transportation network. Rail service—both freight and passenger— provide an energy efficient way to move goods and people. Freight rail service also provides a low cost means to transport the high volume, low value commodities that are essential to the state's manufacturing industry. Intercity rail service provides a travel option for those who cannot or choose not to drive or fly.

Wisconsin's rail network includes approximately 3,600 miles of track, with just over 530 miles owned by the state. Eleven freight rail companies operate in Wisconsin. Amtrak provides intercity passenger service on two routes and Metro provides commuter rail service between Kenosha and Chicago.

Unlike the state's roadway system which is owned by either WisDOT or local governments, most of the state's rail system is privately owned and operated. Private companies drive track maintenance and operation decisions based on business needs and priorities. WisDOT rail investment decisions are focused on supporting the state's transportation network, economic growth, and passenger rail services. For these reasons, actions related to the state's rail system require coordination and cooperation among a variety of stakeholders from both the private and public sectors.

4.4 WisDOT: Connections 2030 – Wisconsin Statewide Long-Range Transportation Plan (2009)

Connections 2030 is the long-range transportation plan for the State of Wisconsin. This plan addresses all forms of transportation over a 20-year planning horizon: highways, local roads, air, water, rail, bicycle, pedestrian and transit. Relative to transit, the plan identifies "support development of fixed-guideway transit services" as necessary to meet the vision of providing mobility and transportation choice. This report does not specifically address the I-94 corridor.

4.5 WisDOT: West Central Regional Freeway System (2005)

WisDOT's *West Central Regional Freeway System* study examined capacity and operations, safety, pavement needs, and economic impacts along the I-94 from the St. Croix River to Eau Claire County. In 2006, a follow-up micro-simulation analysis was conducted along this segment of I-94, along with a western extension to County Road 19 in Washington County, Minnesota.

The West Central Freeway system (WCF) is a set of inter-dependent highways connecting western Wisconsin and the Chippewa Valley metropolitan area with the Twin Cities metropolitan area. Interstate 94 in St. Croix, Dunn and Eau Claire Counties is the backbone of this system, which also includes:

- Hwy. 65 in St. Croix, Polk, and Pierce Counties
- Hwy. 63 in St. Croix County
- Hwy. 35 between River Falls and Hudson in St. Croix County

This system of roads is being impacted by the rapidly expanding Twin Cities metropolitan area, the high rate of urban expansion into West Central Wisconsin, and by restrictions the river crossings place on traffic flow.

WisDOT has separated the WCF into two zones:

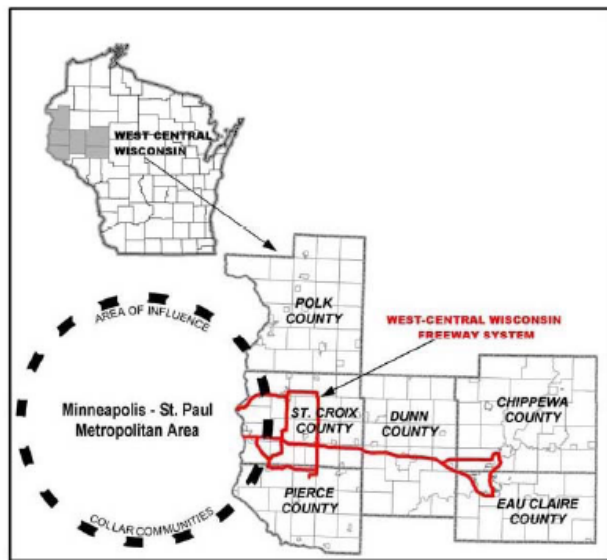
- **Intense Zone**—the area in Polk, St. Croix, and Pierce Counties that has been “intensely” impacted by growth of population and traffic rates since the mid 1990s.
- **Zone of Influence**—the area in Dunn, Chippewa, and Eau Claire Counties where the Chippewa Valley metropolitan area is influencing or being influenced by the same factors impacting the intense zone.

Portions of the intense zone already experience operational and capacity concerns. When this report was completed in 2005, it was anticipated that the entire intense zone would be experiencing capacity and operational issues by 2015. WisDOT's studies of the West Central Freeway indicate the following consequences will occur should no additional capacity (i.e. new road or additional lanes) be added to the WCF.

I 94 –‘Intense Zone’ from St. Croix River to Baldwin

- **DO NOTHING CONSEQUENCES:** Traffic projections indicate 4-lane capacity will be exceeded on the segment between Baldwin and Hudson within 10 years.
- **IMPROVEMENT NEEDED:** 1) Expand to a 6-lanes, 2) replace the interchange at STH 65, 3) upgrade interchanges at USH 12, STH 35, and Carmichael Road, and 4) eliminate hills, curves, and median widths from Hudson to Baldwin. The estimated costs are near

FIGURE 9
West Central Wisconsin Freeway System Area





\$125 million, of which over \$70 million is solely to replace the existing, 50 year old pavement structure.

I 94 –‘Zone of Influence’ from Baldwin to Eau Claire

- **DO NOTHING CONSEQUENCES:** Traffic projections indicate that 4-lanes will be sufficient for the next 25 to 30 years. However, the underlying pavements are at least 50 years old and will require pavement replacement in the near future. Failure to replace the pavement will result in ongoing overlay projects with only 5-7 year life expectancies.
- **IMPROVEMENT NEEDED:** Phased replacement of the existing pavement structure between Baldwin and Eau Claire. The cost for this pavement replacement is currently estimated at \$280 million.

Economics—I-94 accommodates a large volume of truck freight moving into, from, and through the region. Consumers and producers in the four county area receive and transport over 15 million tons of freight.

5. Wisconsin Studies: County/Local

5.1 Eau Claire County Comprehensive Plan, (2010)

The County’s comprehensive plan references the following applicable objectives:

- Enhance multi-modal opportunities for regional and multi-state travel for Eau Claire County citizens.
- Coordinate major transportation projects with Eau Claire County municipalities, adjoining counties, the WisDOT, and land use development. with respect to transit:

The plan also references the on-going efforts to plan for high-speed passenger rail service in the Midwest and the potential service to the Eau Claire region.

5.2 City of Hudson Comprehensive Plan

The City’s transportation chapter of the comprehensive plan indicates the following regarding potential transit considerations for the community:

Recently, Washington and Ramsey Counties in the Twin Cities metropolitan area have had discussions with Hudson and St. Croix County regarding participation in a study of transit alternatives for the I-94 Corridor. In recent years, many options for transit service in this area have been discussed but not formally studied. The options have included:

- The use of the existing Union Pacific freight railroad line adjacent to Lake Mallalieu for a commuter rail corridor to downtown St. Paul,
- Developing a railroad or Bus Rapid Transit (BRT) corridor along I-94, and
- Connecting to the federally designated high speed rail corridor line between Chicago and the Twin Cities.

5.3 City of Menomonie Comprehensive Plan (2007 & 2010)

Menomonie’s Comprehensive Plan has the following reference to transit along the I-94 corridor:



The I-94 Corridor Coalition is a non-profit multi-jurisdictional group. The group includes members from St. Croix, Dunn, Barron, Chippewa, and Eau Claire Counties. The group has been organized through West Wisconsin Regional Planning Commission. The Coalition's focus is all modes of transportation along the I-94 corridor.

5.4 City of Eau Claire Comprehensive Plan, (2005)

The City's Comprehensive Plan refers to the potential for both intercity and passenger rail service. Specifically it references the need to coordinate with WisDOT and other agencies in the planning for possible transit services.

5.5 City of New Richmond Comprehensive Plan, (2005)

New Richmond does not currently have a local transit system other than the state sponsored Shared Taxi system. The City's Comprehensive Plan documents that over 40 percent of New Richmond's commuters travel more than 30 minutes one way to their destinations. Two rail routes run through St. Croix County, including the Union-Pacific mainline that runs to Minneapolis-St. Paul. Passenger service to the Twin Cities metro area may be considered in the future. The City's Plan also mentions the need to plan for and site park and ride facilities within and around the community.