8.0 Other Factors

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This section describes other factors that are expected to contribute to the success of the Transport 2020 project. These factors focus on both the physical and transportation characteristics of the corridor and region, that are anticipated to further enhance confidence in the ridership projections and user benefits generated by the project:

- Economic development impacts;
- Geographic constraints; and
- Demonstrated transit usage in the corridor.

8.1 Economic Development Impacts

As part of the planning for the Madison Transport 2020 Project, a market assessment was conducted in 2006 to determine the projected residential, office, and retail development potential between 2005 and 2020 in station opportunity areas.[1] The assessment was based on a review of current development trends, forecast population and employment growth in the corridor, land use plans and development opportunity sites, and interviews with local officials, developers, property owners, and real estate experts.

The total estimated potential through 2020 in the subareas served by the locally preferred alternative (LPA) includes just over 3,000 dwelling units, 2.2 million square feet of office space, and 1.1 million square feet of retail space. This translates into a potential of approximately 6,000 new residents and 13,400 new employees in proposed station areas. In terms of transportation impacts, the number of new daily trips generated by this development is estimated at 154,000. These estimates do not include classroom space or special purpose buildings at the University of Wisconsin campus.

Major focus areas for development in the corridor include:

- The Hill Farms area, which is seeing the redevelopment of an shopping area and state office buildings;
- Significant institutional expansion on and near the University of Wisconsin campus;

[1] Valerie S. Kretchmer Associates, Inc. *Transit Supportive Land Use Report.* Transport 2020 Environmental Impact Statement and New Starts Application - Appendix A, November 2006.

- Infill sites in the downtown area, which are seeing mixed-use residential, commercial, and retail development; and
- Underutilized industrial and warehousing sites in the east Isthmus area, such as Union Corners and along the Washington Street corridor.

While some of this development is likely to occur with or without the Transport 2020 Project, the transit project also is likely to further stimulate development in station areas. Transit-supportive policies have been adopted by the Cities of Madison, Middleton, and Shorewood Hills which will help channel compact, walkable development into the station areas. The rate at which this development occurs will be influenced by overall regional growth trends, as well as the growth in the market specifically for transit-oriented development. The Madison region is projected to continue experiencing growth – 35 percent between 2000 and 2030 – and transit-supportive policies enacted in conjunction with the Madison Transport 2020 project will help accommodate this growth in a more sustainable manner. In fact, recent population estimates from the U.S. Census shows that Dane County has the largest population growth in the state between 2000 and 2006; over 50 percent more than the second highest county in Wisconsin (Waukesha County).

Furthermore, the Madison area real estate market is exhibiting a number of characteristics and trends that could positively influence the demand for transit-oriented development. Some of these noteworthy trends include:

- Strong development activity, as measured in terms of building permits issued and increases in retail space;
- A relatively high share of multi-family housing (62 percent of building permits issued by the City of Madison and 47 percent issued by Dane County between 2000 and 2006);
- Housing values that are relatively high for the metro area's size;
- Concentration of a significant proportion of the region's office space (21.5 percent), including the vast majority of Class A space, in downtown Madison;
- Relatively low commercial vacancy rates - 8.7 percent in downtown and 9.2 percent in the west submarket in 2005;
- The University of Wisconsin (UW) as a major activity generator with over 41,000 undergraduate and graduate students, and 18,000 faculty members, academic staff, researchers, and UW Hospital employees; and
- Strong interest in a return to a more traditional "urban" living environment, as evidenced by recent mixed-use infill projects as well as new traditional neighborhood developments and community centers in suburban locations.

8.2 Geographic Constraints

The study areas for the Transport 2020 project has a unique land use pattern resulting from 19th century decisions that sited Madison on a narrow isthmus between two lakes with the State Capitol at the center. The orientation of the isthmus dictated urban growth in a concentrated land use pattern on an east/west axis. A mile west of the State Capitol, the state established the University of Wisconsin-Madison. Growth in state government and the university, plus growth in other regional functions occurred in the context of the existing concentrated land use on this east/west axis. While the 19th century Madison isthmus could easily accommodate such uses, the 21st century continues to present challenges to this historic and very efficient regional land use pattern.

Specifically, the unique geography of the isthmus does not allow for easily increasing roadway capacity without major impacts to existing neighborhoods. Providing convenient transit is particularly important in reducing congestion and providing a realistic option to driving in these areas.

This was one of the key issues in the Madison Comprehensive Plan, and is supported by levels of congestion throughout the corridor. As Figures 8.1 and 8.2 show, the Madison Area Transportation Planning Board (the local MPO), the east-west arterial streets through the Isthmus are currently congested and will continue to be congested in the future, even with transportation projects proposed in the area's long range transportation plan.[2] "Congested" levels indicated on both figures represent Level of Service (LOS) D, while "Very Congested" levels represent LOS E, or worse.

LOS D describes road conditions where speeds are somewhat reduced and vehicles are closely spaced. Under LOS E, traffic becomes more unstable and speeds rarely reach the posted limit. LOS F describes forced traffic flow with frequent stops.

While the Baseline Alternative would use exclusive lanes on many portions of arterial streets, buses would still need to operate in existing traffic lanes on University Avenue west of Campus Drive and on E. Washington Avenue east of Fourth Street. Both of these streets currently operate under congested or very congestion conditions, and will continue to do so in the future. As Figure 8.2 shows, even with planned transportation improvements, local roads through the Isthmus will continue to be congested.

[2] *Regional Transportation Plan, 2030*. Madison Area Metropolitan Planning Organization , page 34. http://www.madisonareampo.org/Plan%20Elements/Streetnomaps.pdf

Figure 8.1

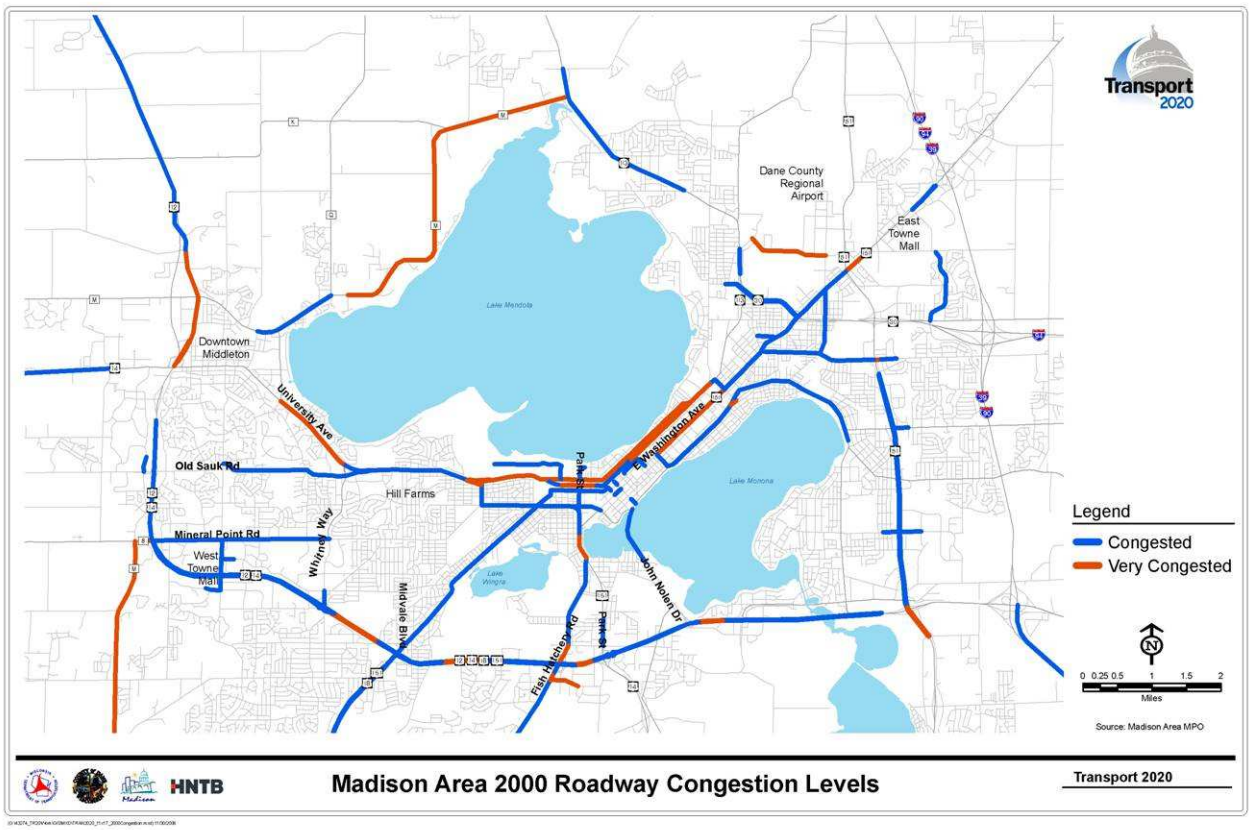
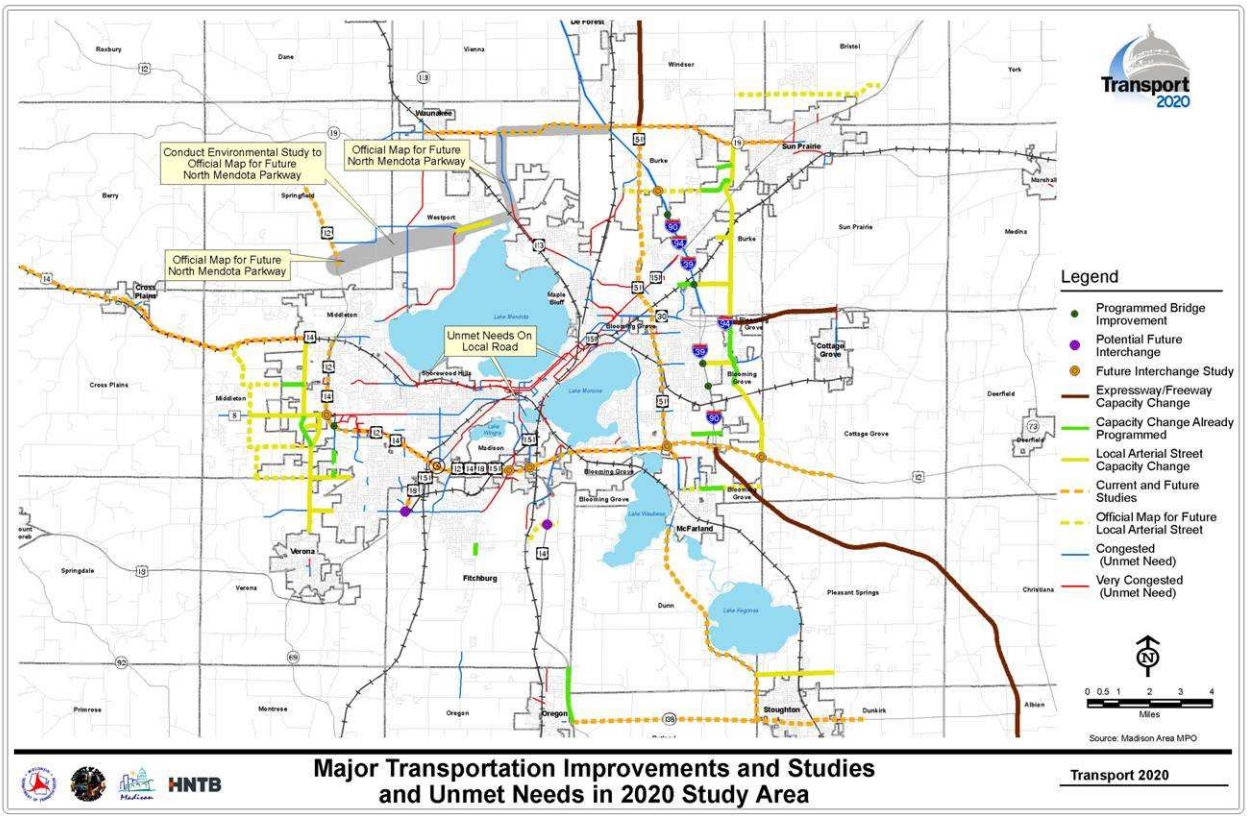
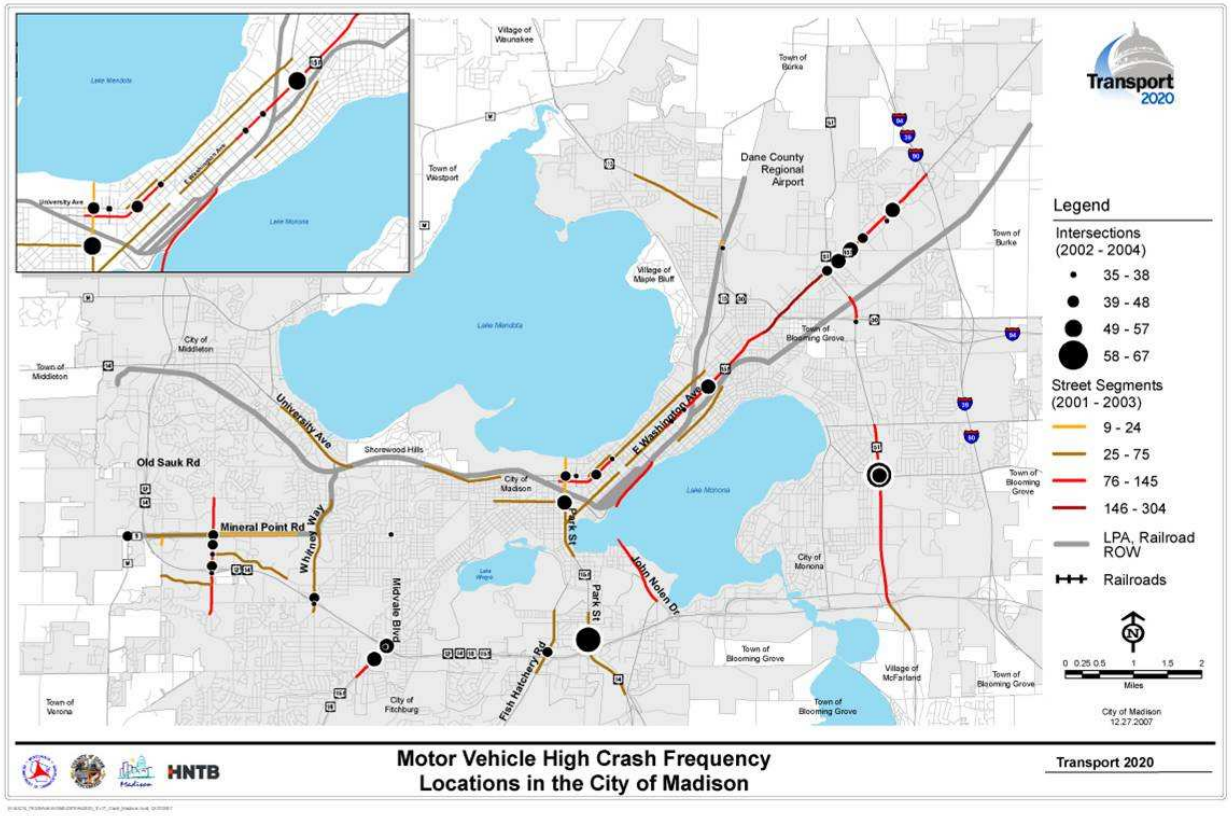

Transport 2020
Dane County Regional Airport
East Towne Mall
Lake Mendota
Downtown Middleton
University Ave
Old Sauk Rd
Hill Farms
Mineral Point Rd
West Towne Mall
Whitney Way
Midvale Blvd
Lake Wingra
Fish Hatchery Rd
Park St
John Nolen Dr
Washington Ave
Lake Monona
Legend
Congested
Very Congested
0 0.25 0.5 1 1.5 2
Miles
Source: Madison Area MPO
HNTB
Madison Area 2000 Roadway Congestion Levels
Transport 2020

Figure 8.2


Conduct Environmental Study to Official Map for Future North Mendota Parkway
Official Map for Future North Mendota Parkway
Official Map for Future North Mendota Parkway
Unmet Needs On Local Road
Transport 2020
Legend
Programmed Bridge Improvement
Potential Future Interchange
Future Interchange Study
Expressway/Freeway Capacity Change
Capacity Change Already Programmed
Local Arterial Street Capacity Change
Current and Future Studies
Official Map for Future Local Arterial Street
Congested (Unmet Need)
Very Congested (Unmet Need)
0 0.5 1 2 3 4
Miles
Source: Madison Area MPO
HNTB
Major Transportation Improvements and Studies and Unmet Needs in 2020 Study Area
Transport 2020

With the existing congested conditions on arterial streets through the Isthmus come high crash frequencies. The most recent crash report from the City of Madison shows that 10 of the 25 street segments with the highest crash frequencies are located on East Washington Avenue, East Johnson Street and University Avenue.[3] Figure 8.3, illustrates arterial streets on which the Baseline Alternative travels have some of the highest crash frequencies in the area.

Figure 8.3



The densely developed Isthmus also creates unique physicial constraints during periods of heavy snowfall. As evidenced by recent snowstorm events, there is little physical space to plow snow on arterial streets during successive and heavy snowfalls. Bus and parking lanes become severely constricted. Photos below (Figures 8.4 and 8.5) document recent snowfall events and constrictions placed on outside lanes, where exclusive lanes would be placed for the Baseline Alternative.

[3] *2003 Traffic Crash Report*. City of Madison, page 3.
http://www.cityofmadison.com/trafficEngineering/documents/CrashReport2003/crashc03.pdf

Figure 8.4

Figure 8.5

Finally, Baseline Alternative requires removing approximately 436 on-street parking spaces through the Isthmus, which would not be replaced. This reduction is significant as parking is already in limited supply where there is little to no available low cost land in this densely populated section of the city.

Achieving the vision for the Madison region, which includes vitality, livability, and economic viability, cannot be achieved by simply adding more bus service in the corridor. Rather, by shifting significant trip making to the currently underutilized rail corridor that skirts the downtown area, sustainable growth plans can be achieved while reducing impacts to the existing roadway network and to neighborhoods.

8.3 Demonstrated Transit Usage

Madison currently operates a well-utilized bus system that achieves significant performance as compared to its peer systems across the country. Among 10 other transit systems serving a similar size region in 2006 as shown in Table 8.1 below, Madison Metro Transit delivered the largest number of transit trips, at over 12 million, and significantly outperformed its peers in terms of both trips and passenger-miles per capita.

Table 8.1 Metro Transit Peer System Comparisons

Peer Transit System	UZA Population	Annual Linked Trips (millions)	Passenger-Miles Per Capita	Trips Per Capita
Metro Transit, Madison, WI	329,533	12.3	127.5	37.3
CATA, Little Rock, AZ	360,331	2.4	24.6	6.7
CARTA, Chattanooga, TN-GA	343,509	3.1	34.4	9.0
SCAT, Oxnard, CA	337,591	3.4	20.9	10.2
LeeTran, Cape Coral, FL	329,757	3.1	53.8	9.3
Spokane Transit, Spokane, WA	334,858	8.3	122.2	24.7
RRTA, Lancaster, PA	323,554	2.3	36.5	7.3
WTS, Mobile, AL	317,605	0.9	18.7	3.0
San Joaquin RTD, Stockton, CA	313,392	4.0	111.2	12.8
RTC, Reno, NV	303,689	9.0	102.4	29.5
CATA, Lansing, MI	300,032	10.0	100/3	33.4

Further Metro Transit's ridership in 2006 was the highest in 20 years, with service available within one-quarter mile to 97 percent of its service area population and 91 percent of its housing units. These statistics suggest a positive perception by Madison region residents of transit, and a predisposition to utilize at disproportionately high levels transit services provided.