



# Environmental Justice Analysis



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As part of the Madison Area MPO's continuing efforts to comply with Title VI and address environmental justice, both a qualitative and quantitative analysis was conducted to evaluate the impacts of the Regional Transportation Plan (RTP) 2030 on minority populations, low-income households, and those households without access to an automobile. Efforts were also made throughout the planning process to ensure that minority and low-income populations were provided with an opportunity to fully participate in planning and decision making processes. (See discussion of public involvement efforts on pages 8-9).

Title VI of the 1964 Civil Rights Act (42 U.S.C. 2000d-1) states that "No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance." To further amplify Title VI, President Clinton issued Executive Order 12898 in 1994, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*. The purpose of the order is to make achieving environmental justice part of each Federal agency's mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of government programs, policies, and investments, such as transportation facilities, on minority and low-income populations. The goal is to ensure that the benefits and burdens of government actions and investments are fairly distributed, and that minority and low-income populations are not disproportionately affected in an adverse way. In 1997, the U.S. Department of Transportation (USDOT) issued an order to summarize and expand upon the requirements of Executive Order 12898 on Environmental Justice. The Order generally describes the process for incorporating environmental justice principles into all DOT existing programs, policies, and activities.

Title VI, Executive Order 12898, the USDOT order, and other USDOT guidance do not contain specific requirements in terms of evaluating the impacts of transportation plans and programs on environmental justice populations. For this plan, a qualitative analysis was conducted of the impacts of proposed transportation projects on areas with high concentrations of these populations. In addition, a quantitative analysis was done using the regional travel model on the impacts of the recommended transit and roadway improvements on the accessibility to major employment, retail, educational, and recreation centers for these areas. It is anticipated that in the future, these analyses will be refined and improved.

## ***Environmental Justice Population and Areas of Concentration Within the Madison MPO Planning Area***

The minority population within the Madison Area MPO Planning Area is just under 45,000 or around 13% of the total population of 350,250. African Americans account for around 5% of this total and Asians account for another 4%. Other racial categories covered include American Indian or Alaskan Native, Native Hawaiian or other Pacific Islander, and multi-racial persons. The Hispanic or Latino population is just under 14,000 or around 4% of the entire planning area population. Table 31, on the next page, lists the number and percentage of minority and Hispanic populations in "selected" cities and villages within the planning area and in the Town of Madison. The table also lists autoless households and low-income population in those communities. The "low-income" population in the table includes persons aged 5 and over for whom poverty has been determined and is defined as those individuals and families with incomes less than 150% of the federal poverty level. Around 7.5% of the households in these communities are autoless and a little less than 18% are low-income. The larger cities and Town of Madison all have significant minority, Hispanic, and/or low-income populations.

Minority and low-income populations are fairly dispersed throughout the Madison area. However, there is a concentration of these environmental justice (EJ) populations in the south Madison area along the Beltline corridor. These areas include: Allied-Dunn's Marsh neighborhood east of Verona Road; Burr Oaks and Arbor Hills neighborhoods in south central Madison; the areas west of Fish Hatchery Road in north Fitchburg; Southdale area in the Town of Madison west of Rimrock Road; Moorland-Rimrock neighborhood in the City of Madison; and the Broadway-Lakepoint neighborhood in Madison. There is also a concentration of low-income families/individuals and households with no vehicle available in the Park Street and downtown/UW-Madison campus areas, many of whom are students. In addition to the south side and downtown area, Madison's north side is the area with probably the next heaviest concentration of EJ populations.

Figures 45 through 48 on pages 176 to 179 show the areas with concentrations of EJ populations in relation to planned transportation projects. Areas highlighted as having concentrations of minority populations in Figures 45 and 47 include Census Block Groups with more than 36% minority population and a minimum of 50 persons. Areas highlighted in

Figures 46 and 48 include traffic analysis zones (which are larger than Census Block Groups) with over 170 families or individuals with incomes less than 150% of the federal poverty level and/or over 100 households with no motor vehicle available.

**TABLE 31**  
**ENVIRONMENTAL JUSTICE POPULATIONS IN SELECTED MUNICIPALITIES<sup>1</sup> WITHIN**  
**THE MADISON METROPOLITAN PLANNING AREA**

Municipality	Minority <sup>2</sup> Population		Hispanic <sup>3</sup> Population		Autoless Households		Low Income Population <sup>4</sup>	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Madison, City	33,365	16.0	8,512	4.1	10,483	11.8	40,545	21.9
Cottage Grove, Village	174	4.3	73	1.8	20	1.4	260	7.4
Fitchburg, City	3,648	17.9	1,327	6.5	433	5.2	2,145	11.7
Maple Bluff, Village	39	2.9	9	0.7	7	1.3	60	4.7
McFarland, Village	179	2.8	73	1.1	66	2.7	295	5.0
Middleton, City	1,249	7.9	444	2.8	396	5.6	1,195	8.2
Monona, City	505	6.3	256	3.2	287	7.6	765	10.0
Shorewood Hills, Village	139	8.0	55	3.2	8	1.2	65	4.2
Stoughton, City	513	3.3	153	1.2	221	4.6	1,125	10.2
Sun Prairie, City	1,492	7.3	555	2.7	331	4.2	1,665	9.0
Verona, City	179	2.5	50	0.7	139	5.4	420	6.5
Waunakee, Village	174	1.9	86	1.0	181	5.7	335	4.1
Madison, Town	2,661	38.0	1,455	20.8	390	12.1	2,195	33.4
<b>Total</b>	<b>44,217</b>	<b>19.2</b>	<b>13,048</b>	<b>5.7</b>	<b>12,962</b>	<b>7.5</b>	<b>51,070</b>	<b>17.7</b>

<sup>1</sup>Includes all cities and villages and the Town of Madison.

<sup>2</sup>Includes Black/African American, American Indian and Alaska Native, Asian, Native Hawaiian and other Pacific Islander, other race, or two or more races.

<sup>3</sup>Includes Hispanic or Latino Population of any race. This includes Mexican, Puerto Rican, Cuban, or Other.

<sup>4</sup>Includes persons aged 5 and over for whom poverty status has been determined. Low-income is defined as less than 150% of the federal poverty level.

### *Means of Transportation and Travel Time to Work for Environmental Justice Populations*

A higher percentage of minority, Hispanic, and low-income persons residing in the Madison Urban Area use alternative means of transportation to work than white, non-Hispanic persons and those that are not low-income. According to 2000 Census data, around 74% of white, non-Hispanic persons drove alone to work compared to only 56% of minority and 59% of Hispanic persons. Around 39% of persons with incomes below the federal poverty level drove alone, and 55% of those with incomes less than 150% of the poverty level drove alone. Around 12.7% of minorities and 6.6% of Hispanic persons took the bus to work compared to 4.2% of the white, non-Hispanic population. For minority persons, Asians had the highest percentage of alternative transportation use with 15.5% carpooling, 15.5% using the bus, 16% walking, bicycling, or using other means. Around 51% drove alone. Around 34.8% of persons with incomes below the federal poverty level walked or bicycled to work and another 13% took the bus.

The 2000 Census data also shows that minority and Hispanic persons had somewhat longer travel times to work than white, non-Hispanic persons. Around 19.5% of minority persons and 18.2% of Hispanic persons had travel times of 30 minutes or greater compared to 15.8% of white, non-Hispanic persons. Around 55.5% of minorities had travel times of less than 20 minutes compared to 56.8% of white, non-Hispanic persons. In contrast to minority persons as a whole, Asians actually had somewhat shorter travel times compared to white, non-Hispanic persons. Around 61.2% of Asians had a travel time less than 20 minutes. The percentage with the longest travel times (30+ minutes) was about the same.

The higher travel times for minorities overall can perhaps be partially attributed to their far greater use of car/vanpools and the bus. The mean travel time for those using 3+ person carpools was 20.6 minutes and the mean time for those using the bus was 25.5 minutes compared to 15.6 minutes for those driving alone. Because Asians' travel times are shorter even though they have the highest use of car/vanpools and the bus, a higher percentage must live closer to where they work. This is consistent with the fact Asians have the highest percentage use of walking and bicycling for which the mean travel time is the shortest (13.8 minutes).

### ***Transportation Project Analysis***

A qualitative transportation project analysis was conducted comparing the location of projects in relation to areas with concentrations of EJ populations. Figures 45 through 48, on the following pages, overlay the recommended major transportation improvements (primarily capacity expansion) and studies and the roadway preservation and high priority off-street bicycle facility projects on maps highlighting the areas with high concentrations of minority populations and high concentrations of low-income (less than 150% of the poverty level) families/individuals and/or households with no vehicle available. Roadway capacity expansion projects improve auto mobility for persons residing in or traveling to areas in the general vicinity of the roadway, but can have negative impacts on persons residing adjacent to or in close proximity to the roadway. Roadway preservation projects are generally considered to have a positive impact on the adjacent community, particularly when they include pedestrian/bicycle facilities and safety and/or streetscape improvements. Some negative impacts may occur during construction of the project (e.g., noise, dust, etc.), however the potential benefits of the project (e.g., improved safety and traffic flow, smoother pavement, improved pedestrian and bicycle facilities, streetscape amenities) are assumed to outweigh the negative impacts. Off-street bicycle facilities also have a positive impact on the adjacent community by improving non-motorized accessibility.

All of the recommended local arterial capacity expansion projects are located on the urban periphery, primarily the rapidly developing East and West sides of the greater Madison area. Major capacity expansion projects (i.e., addition of general purpose travel lanes) on arterials inside the Beltline and Interstate system are typically not feasible due to right-of-way limitations and impacts to adjacent development and the neighborhoods. Other capacity expansion projects include the Interstate system projects, which are addressing inter-regional mobility needs, and USHs 14 and 51 (north of STH 19). Figures 45 and 46, on pages 176-177, show that none of these projects is located in an EJ area.

The only other location where a major capacity expansion is being considered is Verona Road (USH 18/151) and the West Beltline (USH 12/14). The Verona Road/West Beltline project is currently under study and a recommendation on the type of improvements is pending completion of a Final Environmental Impact Statement (FEIS) and identification of funding. The long-term improvements being considered would have both positive and negative impacts on the Allied-Dunn's Marsh neighborhood. As part of development of the Draft EIS, which was completed in 2004, an extensive EJ analysis was conducted and measures identified to minimize and mitigate the adverse impacts, including extension of Raymond Road across Verona Road into the neighborhood (under the Freeway alternative) and adding and improving pedestrian and bicycle accommodations to improve neighborhood access. WisDOT also funded a physical improvement plan for the neighborhood to plan for residential and commercial redevelopment and other public infrastructure (e.g., traffic calming, lighting). As this study continues and short-term and long-term improvements are implemented, WisDOT and the City of Madison will continue efforts to minimize and mitigate impacts on the neighborhood and utilize opportunities to improve access for the neighborhood and stimulate development of affordable housing and neighborhood-oriented businesses.

The plan also recommends continued study of TSM/safety improvements to the Beltline and in particular the interchanges. There are high concentrations of EJ populations in close proximity to the Fish Hatchery Road and Park Street interchanges and any redesign of those facilities could potentially impact these areas. An EJ impact evaluation should be done as part of the study and measures identified to reduce any impacts and provide treatments that increase the safety and accessibility of these interchange areas for all modes of transportation and improve overall aesthetics (e.g., landscaping). Potential short- and long-term improvements are also being studied for the Stoughton Road (USH 51) corridor. There are two small areas with minority populations in the corridor, including near the East Washington Avenue intersection. It is unknown at this time what the recommended improvement projects will be, however impacts to these areas should be considered as part of the study and efforts made to make the corridor as safe and accessible as possible for people using all modes of transportation.

Figures 47 and 48, on pages 178-179, show the location of programmed and other planned roadway preservation projects in relation to areas with concentrations of EJ populations. Many of these projects are located in and will benefit EJ areas. These include the following:

- State Street reconstruction;
- East Washington Avenue reconstruction;
- University Avenue reconstruction and pavement replacement projects;
- Monona Drive reconstruction;

- West Main Street in the City of Sun Prairie; and
- STH 113 (Packers Avenue/Northport Drive) resurfacing.

Most of these projects incorporate significant pedestrian/bicycle, safety, and streetscape improvements. For those that may not, such as the STH 113 resurfacing project, it is recommended that such improvements (e.g., sidewalk repair, pedestrian crossings) be incorporated as part of the project to the extent feasible.

Figures 47 and 48 also show the programmed and planned high priority off-street bicycle/pedestrian projects that are part of the recommended regional bicycle way system plan. Many of these projects are located in or near EJ areas and will greatly improve non-motorized accessibility and strengthen the social fabric of these neighborhoods. These projects include:

- *Starkweather Creek (W. Branch) path and overpasses* of East Washington Avenue and Aberg Avenue, which will provide safe, convenient crossings over these major roadways and connect the Worthington Park and Truax neighborhoods to shopping, recreational, and other areas and the rest of the Madison area bicycle network.
- *Sherman Flyer path*, which will provide North side neighborhoods, including Vera Court and Berkly Oaks, with a safe, convenient route to schools, parks, potential employment areas, and into downtown. Sherman Avenue currently presents a major barrier to bicycling on the North side and there is no alternative route.
- *Beltline bicycle/pedestrian overpass at Perry Street*, which will connect the Burr Oaks neighborhood to the employment area south of the Beltline.
- *Cannonball Trail and Beltline overpass*, which will provide the Arbor Hills and north Fitchburg neighborhoods along Fish Hatchery Road with a safe, direct route into downtown Madison and connect them to the commercial area along the Beltline, Leopold School, the Capital City Trail, and other destinations.
- *Ice Age Junction Trail*, which will provide the Park Ridge and other southwest neighborhoods with convenient access to existing and planned commercial areas along McKee Road, parks, and the Military Ridge Trail.
- *Junction Ridge overpass of Beltline*, which will connect the Wexford Ridge neighborhood with commercial and employment areas west of the Beltline.
- *Campus Drive/University Avenue Rail Corridor path projects*, which will provide a direct, continuous route into downtown and destinations along University Avenue for Madison neighborhoods in the corridor and Middleton.
- *USH 151 Corridor path/underpass*, which will provide Sun Prairie residents with safe, direct access to the East Towne area and into Madison.

In conclusion, EJ areas are only negatively impacted by one potential roadway capacity expansion project, the Verona Road/West Beltline project, which is not a part of the fiscally constrained plan at this point in time. The impacts of the project are being evaluated as part of the EIS process and strategies have been proposed to minimize and mitigate these impacts. Neighborhood access would actually be improved under the freeway alternative being considered. In addition, a relatively high proportion of the roadway preservation and off-street bicycle projects, which benefit neighborhoods in these corridors, are located in or near identified EJ areas.

### ***Transit Service Analysis***

Figures 45 through 48 show the 2005 Metro Transit fixed-route system service area boundary and the communities (Cities of Sun Prairie and Stoughton) with shared ride taxi systems. One can see from these figures that these transit service areas encompass all of the EJ areas. The level of transit service to these areas is good with multiple routes serving most areas, reflecting the different functional systems operated by Metro (core, commuter, connector, peripheral, circulator routes). The level of service is particularly good for EJ areas considering that most are located towards the edges of Metro's ser-

vice area boundary outside the transfer points. Metro's transit system is set up to provide the highest levels of service in the arterial corridors leading to the downtown/UW-Madison campus area where multiple routes converge providing higher effective bus frequencies.

While transit service to two of the major employment/activity centers (American Center, Fitchburg Center) is limited, the service to most of them is excellent with midday as well as peak service. Transit service to the intercity bus station is excellent and service to the airport is good having been improved in 2004. There is no weekend service to the airport, but private taxi service (including less expensive shared-ride service) is available 24 hours a day.

As part of its Title VI compliance monitoring, Metro Transit updated its Title VI Plan in 2004 to provide detailed comparative information about transit services being provided in minority versus non-minority neighborhoods.<sup>17</sup> The analysis conducted for the Title VI Plan looked at the level of service (peak vehicle loads, average age of vehicles, headways, amenities) for identified minority neighborhoods and compared the quality of service (travel time to downtown, regional malls, MATC) for minority vs. representative non-minority neighborhoods.

According to the analysis, 36 of 49 (73%) of Metro routes had at least 1/3 of its mileage within a minority area in 2004. The headways for the minority areas meet Metro's standards for the different functional route systems with a few exceptions for the south central and northwest areas where service levels are determined by contracting jurisdictions.<sup>18</sup> The minority areas compared favorably with non-minority areas in the other service level categories. The travel times from minority areas to the major transit destinations were comparable overall to those from representative non-minority areas. Travel times to the regional malls were longer, but times to MATC were shorter. The longest travel times to the malls were for the South side where multiple jurisdictions fragment Metro's routing and impact service levels.<sup>19</sup>

Metro also looked at work trip travel patterns, using Census Transportation Planning Package (CTPP) data provided by Madison Area MPO staff. The analysis found that the highest percentage of both minority and representative non-minority area commuters worked in the downtown, UW campus, and West Towne areas, but that the work trips were very dispersed. Thirteen of the fourteen major employment destinations were served by Metro.

Metro implemented major service improvements for the West and South sides of the Madison area in August 2006. These improvements implemented many of the recommendations in the *2004-2008 Transit Development Program for the Madison Urban Area*. Many of these service improvements benefit EJ areas. These include:

- Addition of new connecting service on Route 16 between the South and East Transfer Points, which provides South side neighborhoods with much faster service to LaFollette High School, East Towne, southeast industrial area, and other destinations.
- Faster, more frequent peak hour service on Route 47 serving the Arbor Hills and Fish Hatchery corridor neighborhoods.
- New direct connection from the South Transfer Point into the UW campus via Park and Mills Streets on new Route 44.
- Faster, more direct service between the South and East Transfer Points through the Isthmus on Route 5 serving the Park Street corridor. Routes 5 and 44 together provide a higher frequency of service in the Bram/Beld Street area.
- Higher level of service on Sheboygan Avenue during peak hours. This area has a high concentration of low-income and autoless households and is one of the largest generators of transit trips.
- Faster, more direct service to downtown on Route 14, serving the Wexford Ridge neighborhood.

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<sup>17</sup> See Title VI Compliance Monitoring: Supplement to Title VI Information for the Madison Urbanized Areas – 2002 Update, prepared by the Madison Metro Transit System (December 6, 2004).

<sup>18</sup> Service improvements implemented in August 2006 addressed most or all of the deficiencies in these areas.

<sup>19</sup> Service improvements implemented in August 2006 added a connector route between the South and East Transfer Points substantially reducing the travel time from South side neighborhoods to the East Towne Mall.

- Expansion of service between Middleton and Madison and introduction of new transfer opportunities for intra-Middleton travel.

Some trade-offs had to be made with the August 2006 service improvements as they resulted in an actual net reduction in the overall number of service hours due to budgetary constraints. For example, convenient service from the Regent Street/West Washington Avenue area to Meriter Hospital was lost with the elimination of Route 8. However, the redistribution of service hours significantly improved overall service and benefited many EJ areas in particular.

The Regional Transportation Plan (RTP) recommends continued efforts to improve local bus service, including addition of express routes from peripheral neighborhoods and outlying communities. Because many of the EJ areas are located on the periphery of the service area, addition of express service would be particularly beneficial for these areas. It would also make trips from one side of the urban area to the other (e.g., South/Southwest side to Dane County Job Center on the North side) much more convenient. The plan also recommends working to reach regional agreement on and implement the service and finance/governance recommendations of the Transport 2020 (East-West Transit Corridor) Study. This study is looking at implementing a long-standing RTP recommendation to develop high capacity fixed-guideway transit service in the corridor with complementary express and local bus service. As illustrated by Figure 21 on page 62, this corridor accounts for a very high percentage of all transit riders. While there are not many EJ areas within the fixed-guideway corridor, residents of these areas would still benefit from the rail and bus service, which would provide shorter travel times to many key destinations. See the accessibility analysis below.

### ***Accessibility Analysis***

Accessibility is another indication of how well the current transportation system serves EJ areas and the impact that the RTP 2030 projects will have on these areas. How accessible are major employment/activity centers by auto and transit? How will EJ areas be affected by implementation of projects recommended in this plan that increase auto or transit capacity? Will accessibility be disproportionately gained in one area over another?

Using the Madison Area MPO's regional travel model, a travel time analysis was conducted for seven different EJ areas. The analysis looked at current auto and transit travel times from the EJ areas to selected major employment, shopping, educational, medical, and recreational centers, and then looked at the change in accessibility (i.e., auto and transit travel times) after implementation of the capacity expansion roadway projects in the recommended, fiscally constrained plan and the recommended transit system improvements. For the analysis of current transit travel times, travel time data was obtained from Metro Transit's Trip Planner software rather than the regional travel model for two reasons. First, this data reflects the most current transit system, including service changes implemented in August 2006. Secondly, work is still being done to refine the calibration of the mode choice/transit portion of the model as part of the Transport 2020 Study. The model is still useful for comparing travel times before and after implementation of recommended regional transit improvements, but at this point cannot accurately replicate "real world" transit travel times between all of the origin-destination pairs.

The transit system improvements assumed for the analysis of the recommended plan included a hybrid rail system in the East-West Transit Corridor—one of the alternatives being considered as part of the Transport 2020 Study—with complementary express bus service. Some local bus service was also added. This was primarily new service to developing areas, but also included new South to East Transfer Point connecting service that was implemented in August 2006.

The EJ areas and employment and other centers were selected for the analysis based upon the number of trips from/to the areas, their significance as important destinations, and their geographic distribution within the Madison urban area. The purpose was to analyze a representative sample of EJ areas and centers spread throughout the Madison urban area. Because the analysis included a transit travel time component, only areas within the current Metro Transit service area were selected. Figure 49, on the next page, shows the locations of the EJ areas and centers for which the accessibility analysis was conducted.

Table 32, on page 184, shows the current weekday peak period transit travel times from the EJ areas to all of the centers. Both in-vehicle travel time and walk time are shown. The in-vehicle time includes the transfer time where a transfer is

**TABLE 32**  
**2006\* WEEKDAY A.M. PEAK PERIOD TRANSIT TRAVEL TIMES FROM EJ AREAS TO**  
**MAJOR EMPLOYMENT, OTHER CENTERS**

Centers	Broadway/Lakepoint			Northport (Vera Ct.)			Allied Drive			Sheboygan Avenue						
	In Vehicle Time (minutes)	Route(s)	Walk Distance (miles)	Walk Time	In Vehicle Time (minutes)	Route(s)	Walk Distance (miles)	Walk Time	In Vehicle Time (minutes)	Route(s)	Walk Distance (miles)	Walk Time	In Vehicle Time (minutes)	Route(s)	Walk Distance (miles)	Walk Time
Employment																
UW Research Park	38	12	0.08	1.6	51	22, 28	0.11	2.2	12	18	0.24	4.8	6	2 or 28	0.06	1.2
Middleton Business Park	53	12, 71	0.21	4.2	66	29, 71	0.23	4.6	66	18, 73/74	0.03	0.5	14	71	0.18	3.6
Stewart Street	26	16, 48	0.32	6.4	52	29, 47	0.49	9.8	20	18, 48	0.25	5	36	57, 47	0.41	8.2
WPS/South Towne	Walk				67	22, 17, 16	0.11	2.2	35	18, 16	0.18	3.6	34	71, 11	0.16	3.2
American Center	53	12, 25	0.06	1.2	65	29, 25	0.23	4.6	71	18, 5, 25	0.18	3.6	49	57, 25	0.15	3.0
Oscar Mayer	35	12, 57	0.21	4.2	19	22, 27	0.24	4.8	46	56	0.41	8.2	32	56	0.3	6.0
Downtown (GEF Bldgs.)	17	12	0.11	2.2	30	29	0.22	4.4	35	18, 5	0.09	1.8	15	72/71	0.21	4.2
Retail																
West Towne	60	12, 67	0.04	0.8	68	22, 28, 73	0.25	5.0	26	18, 73	0.18	3.6	27	14, 67	0.02	0.4
East Towne	41	16, 30	0.11	2.2	53	22, 20	0.09	1.8	75	18, 5, 30	0.004	0.08	58	57, 6	0.15	3.0
Education																
UW-Madison	23	12	0.21	4.2	35	22, 28	0.25	5.0	35	18, 4	0.14	2.8	15	56, 80	0.21	4.2
MATC - Truax Campus	50	12, 6	0.17	3.4	39	22, 20	0.2	4.0	69	18, 6	0.13	2.6	47	57, 6	0.26	5.2
Hospital/Medical																
St. Mary's Hospital	16	12, 13	0.21	4.2	44	29, 47	0.37	7.4	26	18, 4	0.04	0.8	21	56, 4	0.16	3.2
Parks/Recreational																
Goodman Pool/Park	12	12, 13	0.05	1.0	55	29, 13	0.23	4.6	28	18, 13	0.03	0.6	25	56, 13	0.15	3.0
Elver Park	65	16, 18, 50	0.09	1.8	84	29, 2, 50	0.28	5.6	31	18, 50	0.02	0.4	19	28, 50	0.02	0.4
McKee Farms Park	Not available				Not available				Not available				Not available			

\* Service effective August 2006

**TABLE 33**  
**2000 (BASE YEAR) WEEKDAY A.M. PEAK PERIOD AUTO TRAVEL TIMES (IN MINUTES) FROM EJ AREAS**  
**TO MAJOR EMPLOYMENT, OTHER CENTERS**

Centers	Environmental Justice Areas						
	Broadway/Lakepoint	Northport (Vera Ct.)	Allied Drive	Sheboygan Avenue	Greenway Cross	Braxton Pl.	Wexford
Employment							
UW Research Park	16.0	24.0	11.0	8.3	13.0	16.2	7.9
Middleton Business Park	23.1	21.6	18.1	14.1	20.1	22.7	12.7
Stewart Street	12.0	23.6	10.7	13.7	7.4	12.2	13.9
WPS/South Towne	6.5	20.5	12.6	15.6	10.3	11.8	15.9
American Center	19.1	16.1	25.2	27.1	22.9	20.0	28.4
Oscar Mayer	16.4	9.2	22.9	21.3	20.6	14.4	25.3
Downtown (GEF Bldgs.)	14.8	16.8	17.4	16.2	14.9	8.7	20.5
Retail							
West Towne	16.9	24.0	11.9	10.4	14.0	17.6	7.1
East Towne	16.5	13.5	23.1	24.5	20.8	17.4	26.3
Education							
UW-Madison	17.0	19.9	17.5	14.5	14.7	9.6	19.2
MATC - Truax Campus	14.6	10.6	21.2	22.6	18.9	15.6	24.5
Hospital/Medical							
St. Mary's Hospital	13.4	20.3	13.7	14.8	10.9	8.9	16.9
Parks/Recreational							
Goodman Pool/Park	9.4	18.9	11.8	14.8	9.5	8.9	15.0
Elver Park	17.9	25.8	12.2	12.2	14.9	18.5	9.0
McKee Farms Park	14.1	25.6	10.1	15.1	8.2	14.3	16.0

involved. The initial wait time at the bus stop is not included. This would typically add another 5-10 minutes to the total travel time. Five of the seven EJ areas are located on the fringe of the Metro service area outside the bus transfer points. Most of the centers analyzed are also located close to the outer edge of the Madison urban area and Metro service area. As a result, travel times for many of the O-D pairs are quite long, particularly for trips from one side of the urban area to the other (i.e., south-to-north, west-to-east). In contrast, travel time to downtown and the UW-Madison campus exceeds 45 minutes for only one of the EJ areas (Wexford, which has a 48-minute total travel time to downtown).

The Vera Court area on Madison's North side has the longest travel times, while the centrally located Braxton Place area has the shortest travel times. Most travel times from the Sheboygan Avenue area are also under 45 minutes. That area has a high level of transit service and ridership. Travel times for cross-town trips on the same side of the urban area (e.g., southwest to south, southeast to east) are generally 45 minutes or less. These trips usually require only one transfer and the distances are short enough to keep travel times reasonable. It is the trips from one side of the urban area to the other (e.g., southwest to north) that the transit system is unable to serve effectively. The combination of the longer distances, lack of express service, and the requirement of two transfers results in travel times of one hour or longer.

Table 33, on page 184, shows the 2000 base year peak period auto travel times from the EJ areas to all of the centers. Travel times are 25 minutes or less with three exceptions. The majority of travel times are 20 minutes or less. Most of the EJ areas are located with good access to the arterial roadway system, which contributes to the shorter travel times even for trips from one side of the urban area to the other.

Table 34, on the next page, shows the a.m. peak period in-vehicle transit travel times for the future year 2030 scenario with the recommended transit system improvements (see Figure 40 on page 131) compared to the "existing plus committed" transit system. There is a small (2-3 minutes or less) reduction in travel time to most centers from all of the EJ areas except the Wexford area. The fact that the modeling doesn't show a reduction in travel time for the Wexford area is puzzling, since it is located north of Mineral Point Road which is served by a new rail system in the recommended plan scenario. Further analysis is needed of this area. Overall, the reductions in travel time for the recommended plan scenario are greatest for trips to West Towne, the existing UW Research Park, and UW-Madison, which are all served by the proposed rail line. The consultants for the Transport 2020 Study are currently in the process of making some major improvements to the mode choice and transit portions of the MPO's regional travel model. The transit accessibility analysis will be revisited as part of that study following implementation of these improvements.

Table 35, on the next page, shows the auto travel times for the future year 2030 scenario with the recommended roadway system improvements compared to the "existing plus committed" (E+C) roadway system. Travel times from the EJ areas to the majority of centers are shorter under the recommended plan scenario, but the difference is less than one minute in almost all cases. Travel times are slightly longer from most EJ areas to WPS/South Towne, Oscar Mayer, East Towne, and MATC-Truax campus. The slightly longer travel times to these centers is probably due to minor regional traffic distribution changes as a result of the roadway capacity expansions in the plan scenario, particularly the Reiner/Sprecher Road corridor and CTH M (North) projects. The travel time impacts for non-EJ areas (other than the far east and west side areas where the projects are located) would be similar. The small differences in travel times between the recommended plan and E+C scenarios is not surprising since the roadway capacity improvements are almost all on the fast developing east and west periphery of the urban area where existing two-lane rural roadways need to be improved to urban standards. The auto travel times for the 2030 scenarios are considerably longer (3 to 7 minutes or more in some cases) than the 2000 base year, reflecting the increased future traffic congestion.

The EJ analysis conducted for this regional transportation plan update is just a small part of ongoing efforts by the MPO, WisDOT, and local units of government to comply with Title VI and address environmental justice. More in-depth EJ analyses are being or will be conducted as part of ongoing corridor studies (e.g., USH 51 North and South Corridors, Beltline Corridor, Transport 2020 (East-West Transit Corridor) Study). The MPO conducts an EJ analysis of the five-year Transportation Improvement Program (TIP) each year as part of the annual update. Also, implementing agencies conduct EJ analyses as individual projects move forward through the environmental analysis and design stages.

**TABLE 34  
COMPARISON OF A.M. PEAK PERIOD IN-VEHICLE TRANSIT TRAVEL TIMES (IN MINUTES) FROM EJ AREAS TO MAJOR EMPLOYMENT,  
OTHER CENTERS FOR THE 2030 “EXISTING PLUS COMMITTED (E & C) PROJECTS” AND RECOMMENDED PLAN SCENARIOS**

Centers	Broadway/Lakepoint		Northport (Vera Ct.)		Allied Drive		Sheboygan Ave.		Greenway Cross		Braxton Place		Wexford	
	E+C	Rec. Plan	E+C	Rec. Plan	E+C	Rec. Plan	E+C	Rec. Plan	E+C	Rec. Plan	E+C	Rec. Plan	E+C	Rec. Plan
<b>Employment</b>														
UW Research Park	48.1	46.3	57.3	57.3	10.9	10.9	9.3	9.0	51.8	39.7	27.2	29.0	4.2	4.2
Middleton Business Park	58.9	60.4	60.0	62.8	60.2	25.9	24.9	26.6	58.8	49.3	37.7	36.3	21.8	21.9
Stewart Street	46.7	42.9	n.a.	n.a.	34.3	34.7	40.8	34.6	17.9	17.9	28.3	35.9	n.a.	n.a.
WPS/South Towne	2.2	1.8	34.8	34.7	18.7	18.4	23.1	19.5	16.5	28.0	11.2	14.8	41.5	40.5
American Center	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Oscar Mayer	32.1	31.7	17.8	17.8	42.8	42.8	36.3	35.3	39.4	44.0	13.4	13.6	46.0	46.5
Downtown (GEF Bldgs.)	24.1	24.4	43.3	43.2	31.6	31.6	12.0	14.8	30.3	33.7	6.6	6.4	35.5	38.4
<b>Retail</b>														
West Towne	62.9	33.1	72.8	43.4	13.9	13.9	31.2	9.4	63.3	30.6	41.8	40.5	8.3	8.5
East Towne	46.2	47.5	35.3	34.5	57.7	57.7	31.8	32.6	59.1	49.4	29.7	28.8	60.2	62.3
<b>Education</b>														
UW-Madison	16.1	15.8	25.1	26.6	28.6	28.6	14.3	26.8	25.7	13.3	17.3	17.3	31.9	32.7
MATC – Truax Campus	39.9	41.6	28.9	28.6	51.8	51.8	25.5	26.7	52.8	43.5	23.8	22.5	53.9	56.4
<b>Hospital/Medical</b>														
St. Mary's Hospital	13.7	13.5	25.1	26.6	28.6	28.6	14.3	9.6	15.9	13.3	4.7	7.3	31.9	32.7
<b>Parks/Recreational</b>														
Goodman Pool/Park	8.0	7.8	34.0	33.5	35.5	35.5	23.3	16.6	19.4	17.2	8.9	8.9	40.8	39.6
Elver Park	52.8	51.9	53.0	57.7	20.0	20.0	18.7	20.7	52.2	45.0	33.6	30.1	20.14	22.2
McKee Farms Park	n.a.	24.8	n.a.	40.7	19.7	19.7	n.a.	28.2	n.a.	2.4	15.6	n.a.	n.a.	47.0

**TABLE 35  
COMPARISON OF AUTO TRAVEL TIMES (IN MINUTES) FROM EJ AREAS TO MAJOR EMPLOYMENT, OTHER CENTERS  
FOR THE 2030 “EXISTING PLUS COMMITTED (E & C) PROJECTS” AND RECOMMENDED PLAN SCENARIOS**

Centers	Broadway/Lakepoint		Northport (Vera Ct.)		Allied Drive		Sheboygan Ave.		Greenway Cross		Braxton Place		Wexford	
	E+C	Rec. Plan	E+C	Rec. Plan	E+C	Rec. Plan	E+C	Rec. Plan	E+C	Rec. Plan	E+C	Rec. Plan	E+C	Rec. Plan
<b>Employment</b>														
UW Research Park	23.8	23.4	33.0	32.7	13.2	12.9	8.9	8.9	17.8	17.4	19.5	19.5	8.7	8.6
Middleton Business Park	32.4	31.9	30.5	28.6	21.9	21.5	17.1	17.0	26.4	26.0	28.8	28.8	13.8	13.8
Stewart Street	16.9	16.8	29.9	29.7	14.3	14.0	18.7	18.2	9.1	8.8	16.1	16.1	20.9	20.1
WPS/South Towne	6.7	6.7	24.4	24.1	18.1	18.6	22.5	22.8	14.6	15.3	16.6	16.6	24.7	24.7
American Center	23.0	23.0	20.6	20.2	36.1	36.1	34.8	34.8	32.9	32.8	25.5	25.5	40.1	41.2
Oscar Mayer	19.2	19.6	10.0	10.1	29.3	29.4	26.6	26.1	25.4	25.8	17.1	17.1	31.9	32.5
Downtown (GEF Bldgs.)	17.5	17.1	18.8	18.2	21.7	21.9	19.3	19.1	17.8	18.1	9.3	9.3	24.3	25.0
<b>Retail</b>														
West Towne	25.5	25.0	34.3	32.3	14.9	14.6	11.9	11.7	19.5	19.0	22.3	22.3	7.3	7.4
East Towne	19.5	19.5	17.0	17.4	32.8	32.7	31.3	31.3	29.3	29.3	22.0	22.0	36.6	37.7
<b>Education</b>														
UW-Madison	19.3	19.0	21.8	22.6	20.1	19.6	16.0	15.8	16.4	16.6	9.5	9.5	21.7	22.2
MATC – Truax Campus	16.8	16.8	12.9	13.2	30.1	29.9	28.3	28.4	26.6	26.5	18.5	19.1	33.6	34.8
<b>Hospital/Medical</b>														
St. Mary's Hospital	16.4	16.2	23.4	23.4	16.9	17.0	16.3	16.4	13.0	13.2	9.7	9.7	21.3	21.8
<b>Parks/Recreational</b>														
Goodman Pool/Park	11.3	11.1	21.7	21.7	15.9	15.7	19.5	19.4	12.5	12.4	10.2	10.2	22.5	21.8
Elver Park	26.0	25.5	36.6	24.4	13.3	13.0	14.6	14.0	18.7	18.5	24.5	24.5	10.4	10.1
McKee Farms Park	19.7	19.9	32.7	32.9	11.4	11.3	18.0	17.8	9.5	9.5	19.3	19.3	21.5	20.8