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MEMORANDUM REPORT NUMBER 63

A LAND USE-TRANSPORTATION STUDY OF THE N. 76TH STREET CORRIDOR

Prepared by the

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A LAND USE-TRANSPORTATION STUDY OF THE N. 76TH STREET CORRIDOR

CITY OF MILWAUKEE, WISCONSIN

INTRODUCTION

In response to a request received in August 1990 from the City of Milwaukee Commissioner of Public Works, Mr. John R. Bolden, the Southeastern Wisconsin Regional Planning Commission conducted, in cooperation with the City of Milwaukee Department of City Development and Bureau of Traffic Engineering and Electrical Services, a study of land use and transportation within the N. 76th Street corridor in the City of Milwaukee. The N. 76th Street corridor, as defined for the purpose of the study, is shown in Map 1, and extends from W. Silver Spring Drive on the south to W. County Line Road on the north, and from N. 60th Street on the east to N. 91st Street on the west.

Within this corridor, N. 76th Street and several of its major cross streets-including particularly W. Good Hope Road and W. Brown Deer Road--have been subject to increasing traffic demand and congestion in recent years. The N. 76th Street corridor study area has experienced substantial land development in recent years, particularly commercial retail and office development. Some of this commercial development has not been consistent with the adopted City northwest side land use plan published in 1988 and entitled, <u>A Plan for</u> <u>Milwaukee's Northwest Side</u>. This commercial land development has exacerbated traffic problems in the corridor as, on the average, the commercial land uses generate more traffic than the planned industrial and residential land uses which they replaced. Additional commercial development which is not consistent with the City's adopted land use plan has been proposed by developers and landowners, and it is anticipated that the future long-term potential for substantial additional commercial development--with attendant trip generation-throughout the corridor exists.



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Source: SEWRPC.

Over the past several years developers have indicated to the City that there is little market for the planned industrial and residential uses within the City's northwest side; and that a strong market exists for commercial uses. Approvals have been sought for individual commercial projects inconsistent with the City's adopted land use plan. The increased traffic generation which may be expected from this additional commercial development has been cited as insignificant by developers. In part, this is because the developers identify only the incremental traffic generated by their own particular development, and then express such incremental traffic as a small percentage increase with respect to total traffic on selected major streets within the corridor. Such an analysis of traffic impacts ignores the cumulative effects attendant to approvals of commercial developments throughout the corridor on many parcels now proposed for industrial land use. For example, while the incremental traffic from each individual commercial development permitted may represent only a 1 percent increase in traffic at the N. 76th Street and W. Good Hope Road intersection, the cumulative impact of 20 such developments may represent a very substantial 20 percent increase. Moreover, the existing traffic has already created congestion problems within the corridor, and there is a need to accommodate the future increase in traffic which will be generated by the planned development of current open lands as recommended in the City's adopted land use plan.

The objective of this study is to identify the cumulative long-term impacts of potential additional unplanned commercial development throughout the N. 76th Street corridor. Under the study the traffic volumes and levels of congestion which may be anticipated in the N. 76th Street corridor if that corridor is permitted to continue to develop with additional unplanned commercial land uses are identified. The potential future traffic volumes and levels of congestion are contrasted with the traffic volume and congestion which may be expected in the N. 76th Street corridor, if future corridor development is consistent with the City's land use plan which proposes generally less traffic-intensive industrial and residential land uses. Following the comparison of the traffic volume and congestion attendant to the City's adopted land use plan and an alternative land use pattern with more commercial development, potential changes to the current City land use plan and the adopted regional transportation system plan are considered and recommendations made for amending the City's adopted land use plan and the adopted regional transportation system plan.

The study has four elements which are described in the remaining sections of this memorandum. The first element, and first section of this report, identifies existing traffic conditions and attendant problems within the N. 76th Street corridor. The second element of the study, and second section of this report, identifies existing and planned land use within the corridor. With respect to future land use in the corridor, the study presents two scenarios. One scenario envisions implementation of the City's adopted northwest side land use plan. The other scenario envisions a continued trend of development of commercial land uses within the corridor, accommodating existing and potential future developer proposals. The third element of the study, and the third section of the report, presents and compares the anticipated forecast future traffic volumes and attendant levels of congestion under the City's adopted land use plan within the corridor, and under the alternative land use scenario which envisions continued additional commercial development. The traffic. volume and congestion problems under both the adopted land use plan and alternative land use scenario are evaluated under two transportation system plan alternatives. One alternative assumes implementation of the adopted regional transportation system plan, which proposes a balanced approach of significant improvement and expansion of public transit service, implementation of transportation system management measures, and some improvement in arterial streets and highways. The other alternative is a "do-nothing" alternative which assumes no additional transportation facilities and services improvement, and provides for only future maintenance of the public transit and arterial street and highway system of the Region. Under the fourth element of the study, and fourth section of the report, recommendations with respect to the City's land use plan and the adopted regional transportation system plan within the corridor are presented.

EXISTING STUDY AREA TRAFFIC VOLUMES AND CONGESTION PROBLEMS

Existing year 1990 average weekday traffic volumes and attendant levels of congestion on the arterial street system of the N. 76th Street corridor study area are shown on Map 2. The average weekday traffic volumes are based upon traffic counts conducted by the City of Milwaukee. Those arterial facilities carrying existing average weekday traffic volumes which exceed their design capacity are considered as currently experiencing traffic congestion. Also shown on Map 2 are those arterial facilities within the study area which are currently carrying average weekday traffic volumes which are approaching their design capacity, that is, are operating within 10 percent of design capacity. The high traffic volumes relative to design capacity carried on these arterial streets indicate that, with continued land development and traffic growth within the corridor, increases in traffic congestion may be expected.

Urban arterials carrying average weekday traffic volumes exceeding design capacity may be expected to experience significant delays at controlled intersections, reduced speeds between intersections, and increased accident rates. The reduced speeds and intersection delays on urban arterials carrying average weekday traffic volumes equaling or exceeding their design capacity will generally occur only during the morning and evening peak traffic hours and periods, although, in some cases, also during the midday. During evening and early morning hours, there will generally be little, if any, traffic congestion and delay. Also, on most urban arterial streets, weekend traffic peaks will generally be less than weekday traffic peaks.

Typically, vehicles using arterials carrying traffic volumes substantially exceeding design capacity will experience delays at signaled intersections of about 35 seconds during peak traffic periods, with delays to some vehicles of up to 120 seconds. Vehicles may have to wait through more than one traffic signal red phase to clear the intersection, particularly left-turning vehicles. Also, between controlled intersections, arterials carrying traffic volumes greater than design capacity may be expected to experience restrictions on operating speed and on the ability of vehicles to maneuver. Travel times on

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Map 2

EXISTING YEAR 1990 AVERAGE WEEKDAY TRAFFIC VOLUMES AND CONGESTION IN THE N. 76TH STREET CORRIDOR STUDY AREA



"Curb lanes on selected arterials have been determined to operate as traffic lanes, even though parking has not been explicitly prohibited, through signing, for the entire length of the arterial. These lanes generally do not experience curb parking, due to adjacent land uses, and were observed to operate as traffic lanes. They include W. Good Hope Road between N. 91st Street and N. 60th Street; W. Brown Deer Road between N. 76th Street and N. 60th Street; and N. 76th Street between W. Bradley Road and the Northridge Shopping Center driveway. Desirably, parking should be explicitly prohibited, at least during the peak traffic periods, on these arterials, even though they now operate in this manner without signing. SOURCE: SEWRPC. such arterials may typically increase by one-third over the average travel times on uncongested facilities.

Vehicles using arterials carrying traffic volumes equal to or approaching design capacity typically experience vehicle delays at signalized intersections during peak traffic periods of from 20 to 30 seconds, with delays to some vehicles approaching 90 seconds. The average travel times on such arterials may typically increase by up to one-third over the average travel times on uncongested facilities.

Vehicles using arterials operating at or under design capacity will experience little vehicle backup at signalized intersections, and no vehicles will have to wait through more than one red traffic signal phase. The average delay to vehicles at signalized intersections will typically range from 5 to 15 seconds.

The number of traffic lanes on an arterial facility largely, although not entirely, determines its traffic-carrying capacity. A two-traffic-lane urban arterial generally has a design capacity of about 13,000 vehicles per average weekday; a four-traffic-lane undivided urban arterial has a design capacity of about 17,000 vehicles per average weekday; a four-traffic-lane divided urban arterial has a design capacity of about 25,000 vehicles per average weekday; and a six-lane divided urban arterial has a design capacity of about 35,000 vehicles per average weekday.

An estimated 8.0 miles, or 28 percent, of the arterial streets within the N. 76th Street corridor study area were determined to be carrying in 1990 traffic volumes which exceeded their design capacity and were experiencing traffic congestion. An additional 5.5 miles, or 19 percent, of the arterial streets within the study area were determined to be carrying traffic volumes which are approaching their design capacity.

The location and extent of traffic congestion on N. 76th Street as identified by analyses of average weekday traffic volumes and design capacities were compared to such location and extent as identified through analyses of average weekday morning and afternoon peak hour traffic volumes and design capacities and estimated intersection delays. This alternative analytical approach, as documented in Table 1, confirmed the identification of the location and extent of congestion based upon the average weekday analysis, as it indicated that nearly all signalized intersections along N. 76th Street within the study area have approaches which are currently operating at or over design capacity.

The accident frequency and rate for the 32 major intersections within the City of Milwaukee portion of the corridor in 1990 are summarized in Table 2. Of the 11 intersections with the highest accident frequency and the 11 intersections with the highest accident rate, 11 and 9, or 100 and 82 percent, respectively, had at least one connecting facility segment exhibiting average weekday traffic volumes exceeding or approaching design capacity. The midblock accident frequency and rate for the arterial segments within the City of Milwaukee portion of the corridor for the year 1990 are summarized in Table 3. Of the 14 arterial segments with the highest midblock accident frequency and the 16 segments with the highest midblock accident rate, 12 and 11, or 86 and 69 percent, respectively, were located on arterial facility segments with average weekday traffic volumes exceeding or approaching design capacity. Thus, it may be concluded that the identification of traffic congestion problems through analysis of average weekday traffic volumes and design capacities does accurately identify the traffic problems within the study area with respect to morning and afternoon peak hour traffic congestion, intersection accident frequency and rate, and midblock accident frequency and rate.

EXISTING AND PLANNED YEAR 2010 LAND USE

The existing land use pattern within the N. 76th Street corridor study area is shown on Map 3 and summarized in Table 4. The recommended future land use pattern for the study area, as proposed in the City of Milwaukee's adopted northwest side land use plan, is shown on Map 4 and also summarized in Table 4. It may be noted that the incremental land uses proposed to be developed by the year 2010 under the planned land use pattern are predominantly industrial and residential, although the City's adopted land use plan does, as well, accommodate additional office and retail uses within the study area.

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Table 1

EXISTING 1990 N. 76TH STREET SIGNALIZED INTERSECTION MORNING AND AFTERNOON PEAK HOUR TRAFFIC CONGESTION

Signalized Intersections	Morning Peak Hour	Afternoon Peak Hour
W. Silver Spring Drive South Ramps	1 approach at design capacity	1 approach at design capacity
W. Silver Spring Drive North Ramps	1 approach at design capacity	1 approach at design capacity
W.Florist Avenue	2 approaches at design capacity	2 approaches at design capacity
W. Mill Road	Entire intersection at design capacity (1 approach over design capacity)	Entire intersection at design capacity (1 approach over design capacity)
W. Acacia Street	All approaches under design capacity	2 approaches at design capacity
W. Greentree Road	2 approaches at design capacity	1 approach over design capacity and 1 approach at design capacity
W. Good Hope Road	Entire intersection over design capacity	Entire intersection over design capacity
W. Calumet Road	2 approaches over design capacity	1 approach over design capacity and 1 approach at design capacity
W. Bradley Road	2 approaches at design capacity	2 approaches at design capacity
W. Tower Avenue	1 approach over design capacity and 1 approach at design capacity	2 approaches over design capacity
W. Dean Road	2 approaches at design capacity	1 approach over design capacity and 1 approach at design capacity
W. Brown Deer Road West Ramps	1 approach over design capacity	1 approach over design capacity
W. Brown Deer Road East Ramps	2 approaches at design capacity	2 approaches at design capacity
Northridge Driveway	All approaches under design capacity	All approaches under design capacity
W. Northridge Lakes Boulevard	All approaches under design capacity	2 approaches at design capacity

Source: City of Milwaukee.

Table 2

EXISTING 1990 MAJOR INTERSECTION ACCIDENT FREQUENCY AND RATE FOR N. 76TH STREET CORRIDOR STUDY AREA ARTERIAL STREETS

Intersection	1990 Accident Frequency	1990 Accident Rate (accidents per million vehicles entering intersection)	Average Weekday Traffic Congestion on Arterial Segments at Intersection
N. 60th Street at W. Bradley Road	2	0.2	At design capacity
N. 60th Street at W. Florist Avenue	9	1.4	Under design capacity
N. 60th Street at W. Good Hope Road	45	2.9	At design capacity
N. 60th Street at W. Mill Road	11	1.1	At design capacity
N. 60th Street at W. Silver Spring Drive	20	1.2	Over design capacity
N. 76th Street at Acacia Street	8	0.6	Over design capacity
N. 76th Street at W. Bradley Road	21	1.2	Over design capacity
N. 76th Street at W. Brown Deer Road	29	1.4	Over design capacity
N. 76th Street at W. Calumet Road	10	0.7	Over design capacity
N. 76th Street at W. County Line Road	7	0.5	Under design capacity
N. 76th Street at W. Dean Road	7	0.6	Under design capacity
N. 76th Street at W. Florist Avenue	16	1.2	Over design capacity
N. 76th Street at W. Good Hope Road	43	1.8	Over design capacity
N. 76th Street at W. Greentree Road	5	0.4	Over design capacity
N. 76th Street at W. Mill Road	25	1.4	Over design capacity
N. 76th Street at Northridge Entrance	0	0	Under design capacity
N. 76th Street at W. Northridge Lakes Boulevard	6	0.6	Under design capacity
N. 76th Street at W. Silver Spring Drive	19	1.0	Over design capacity
N. 76th Street at W. Tower Avenue	2	0.2	Under design capacity
N. 91st Street at W. Bradley Road	10	1.1	Over design capacity
N. 91st Street at W. Brown Deer Road	18	1.1	Over design capacity
N. 91st Street at W. Calumet Road	4	0.5	Over design capacity
N. 91st Street at W. County Line Road	0	0	Under design capacity
N. 91st Street at W. Flagg Street	3	0.3	At design capacity
N. 91st Street at W. Fond du Lac Avenue	5	0.6	At design capacity
N. 91st Street at W. Good Hope Road	22	1.3	Over design capacity
N. 91st Street at W. Mill Road	8	0.8	Under design capacity
N. 91st Street at W. Silver Spring Drive	29	1.6	Over design capacity

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Table 2 (continued)

Intersection	1990 Accident Frequency	1990 Accident Rate (accidents per million vehicles entering intersection)	Average Weekday Traffic Congestion on Arterial Segments at Intersection
W. Fond du Lac Avenue at N. Flagg Street	5	1.5	Under design capacity
N. Fond du Lac Avenue at W. Silver Spring Drive	12	1.1	Over design capacity
W. Mill Road at N. 64th Street	6	0.8	Under design capacity
W. Silver Spring Drive at N. 68th Street	5	0.4	Over design capacity

Source: City of Milwaukee and SEWRPC.

Table 3

EXISTING 1990 MIDBLOCK ACCIDENT FREQUENCY AND RATE FOR ARTERIAL STREETS WITHIN CITY OF MILWAUKEE PORTION OF N. 76TH STREET CORRIDOR STUDY AREA

		i			
		Aco	cidents	Traffic Congestion	
			Accident Rate	Arterial Segment	
			(accidents	At or Over	
Arteri	al Street Segment	Accident	per million	Design Capacity on	
Street	Limits	Frequency	vehicle miles)	Average Weekday	
			· · · · · · · · · · · · · · · · · · ·		
N. 60th Street	W.Silver Spring Drive and				
	W. Florist Avenue	15	5.3	Under design capacity	
N. 60th Street	W. Florist Avenue and				
	W. Mill Road	12	4.2	Under design capacity	
N. 60th Street	W. Mill Road and				
	W. Greentree Boad	7	27	At design canacity	
N. 60th Street	W. Greentree Road and		2	no coorgin capacity	
	W. Good Hope Road	11	4.3	At design canacity	
N. 60th Street	W. Good Hope Road and			int attraction capacity	
	W. Calumet Boad	10	37	At design canacity	
N 60th Street	W Calumet Road and	10	5.7	At design capacity	
	W Bradley Road	6	3 3	Under design consoity	
N 76th Street	W Silven Spring Drive and		5.5	onder design capacity	
N. Joth Street	W Elorist Avenue	4.3	8.0	Owen design senseitu	
N 76th Streat	W. Florigt Averue and	43	8.0	over design capacity	
N. Joth Street	W Mill Road	14		Owner destant second but	
N 76th Streat	W. Mill Road and	14	2.2	Over design capacity	
N. Joth Street	W. MIII Road and	15	4 7		
N 76th Streat		10	4.7	Over design capacity	
N. 70th Street	W. Acacia Road and	-	2.2		
N 76th Street		/	2.2	Over design capacity	
N. Join Street	W. Greentree Road and	20			
N 76th Street		39	0.1	Over design capacity	
N. 76th Street	W. Good Hope Road and				
N 76th Street	W. Calumet Road and	64	9.4	Over design capacity	
A. Join Street	W. Calumet Road and		2.0		
N 76th Channel	W. Dradley Road	24	3.8	Over design capacity	
N. Joth Street	W. Bradley Road and		10.6		
N 76th Street	W. Tower Road	19	10.6	Over design capacity	
N. Joth Street	W. Tower Road and		2.0		
N 7(+) Charles	W. Dean Road	8	3.0	Under design capacity	
N. 76th Street	W. Dean Road and				
N 76 hb Church	W. Brown Deer Road	8	1.8	Under design capacity	
N. Join Street	W. Brown Deer Koad and				
N 76 th Church	Northridge entrance	21	8.3	Under design capacity	
N. /oth Street	Northridge entrance and				
N 76 M Gton t	Northridge Lakes Boulevard	2	1.2	Under design capacity	
N. 76th Street	Northridge Lakes Boulevard				
N 01 + 04	and W. County Line Road	14	4.6	Under design capacity	
N. 91st Street	W. Silver Spring Drive and				
N 04	W. Flagg Street	16	4.9	At design capacity	
N. 91st Street	W. Flagg Street and				
	W. Fond du Lac Avenue	6	2.4	At design capacity	
N. 91st Street	W. Fond du Lac Avenue and				
	W. Mill Road	16	7.8	Under design capacity	
N. 91st Street	W. Mill Road and				
	W. Denver Road	7	2.1	Under design capacity	
N. 91st Street	W. Denver Road and				
	W. Good Hope Road	4	1.2	Under design capacity	
N. 91st Street	W. Good Hope Road and			•	
	W. Calumet Road	14	3.8	Over design capacity	
N. 91st Street	W. Calumet Road and			•	
	W. Bradley Road	2	0.6	Over design capacity	
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Table 3 (continued)

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		Ac	cidents	Traffic Congestion	
			Accident Rate	Arterial Segment	
			(accidents	At or Over	
Arteri	al Street Segment	Accident	per million	Design Capacity on	
Street	Limits	Frequency	vehicle miles)	Average Weekday	
N. 91st Street	W. Bradley Road and				
N. 91st Street	W. Dean Road W. Dean Road and	2	0.7	At design capacity	
N. 91st Street	W. Brown Deer Road W. Brown Deer Road and	9	3.2	At design capacity	
N. 91st Street	W. Fairy Chasm Road W. Fairy Chasm Road and	3	2.7	Under design capacity	
W. Silver Spring Drive	W. County Line Road N. 91st Street and	0	0	Under design capacity	
W. Silver Spring Drive	N. Fond du Lac Avenue N. Fond du Lac Avenue and	33	5.0	Over design capacity	
W. Silver Spring Drive	N. 76th Street and	29	13.0	Over design capacity	
W. Silver Spring Drive	N. 68th Street	24	4.8	Over design capacity	
W. Mill Road	N. 60th Street N. 91st Street and	31	5.8	Over design capacity	
W. Mill Road	N. 84th Street	11	6.7	Under design capacity	
W. Mill Road	N. 76th Street and	4	1.5	Under design capacity	
W. Mill Road	N. 67th Street and	16	4.5	Under design capacity	
W. Mill Road	N. 64th Street	10	8.4	Under design capacity	
W. Good Hope Road	N. 60th Street	5	4.2	Under design capacity	
W. Good Hope Boad	N. 86th Street	13	3.4	Under design capacity	
W. Good Hope Road	N. 76th Street	36	5.5	At design capacity	
W. Good Hope Road	N. 68th Street	16	2.9	At design capacity	
W. Bradley Road	N. 60th Street	8	1.5	At design capacity	
W. Bradley Road	N. 86th Street	7	8.0	Under design capacity	
W. Bradley Road	N. 76th Street and N. 76th Street	2	0.9	Under design capacity	
W. Bradley Road	N. 67th Street	6	2.0	At design capacity	
W. Brown Deer Boad	N. 60th Street and N. 60th Street	1	0.6	At design capacity	
W. Brown Deer Road	N. 85th Street	52	10.4	Over design capacity	
W. Brown Deer Road	N. 76th Street and N. 76th Street	32	3.9	Over design capacity	
W. Fond du Lac Avenue	N. 68th Street and N. 68th Street	17	3.0	Over design capacity	
W Fond du Las Avenue	N. Flagg Street	. 1	2.4	Under design capacity	
W County Line Deed	W. Flagg Street and W. Silver Spring Drive	3	2.5	Under design capacity	
W. County Line Road	N. 91st Street and N. 84th Street	0	0	Under design capacity	
W. County Line Road	N. 84th Street and N. 76th Street	o	0	Under design capacity	
w. County Line Road	N. 76th Street and N. 68th Street	2	2.6	Under design capacity	
				• ·······	

Source: City of Milwaukee and SEWRPC.

Map 3

EXISTING LAND USE WITHIN THE N. 76TH STREET CORRIDOR STUDY AREA: 1990



Source: City of Milwaukee and SEWRPC.

Table 4

LAND USE WITHIN THE N. 76TH STREET CORRIDOR STUDY AREA: EXISTING 1990, YEAR 2010 ADOPTED CITY LAND USE PLAN, AND YEAR 2010 ALTERNATIVE LAND USE SCENARIO PROPOSING ADDITIONAL COMMERCIAL DEVELOPMENT

		Adopted	Alternative
	Existing	City Land	Land Use
	Land Use	Use Plan	Scenario
	1990	2010	2010
Land Use	(Acres)	(Acres)	(Acres)
Residential	2,040	2,600	2,620
Commercial	610	740	850
Industrial	640	1,500	1,380
Street/Highway	900	900	900
Utility	100	120	120
Recreation	250	490	480
Water	50	50	50
Wetland	20	20	20
Woodland	140	30	30
Open Space	1,740	40	40
Total	6,490	6,490	6,490

Source: SEWRPC.

Map 4

ADOPTED CITY OF MILWAUKEE LAND USE PLAN WITHIN THE N. 76TH STREET CORRIDOR STUDY AREA





As already noted, an alternative future land use scenario was also prepared for the corridor. This alternative scenario envisions accommodating current land developer and landowner proposals for additional commercial development, even though such proposals are not recommended in the City's adopted land use plan and, as well, accommodates a projection of additional such commercial land development to the year 2010. This scenario is shown on Map 5 and is also summarized in Table 4. This alternative future land use scenario specifically differs from the adopted City land use plan with respect to 15 land parcels within the N. 76th Street corridor study area, as shown on Table 5 and Map 6. It may be noted that the alternative future land use scenario is based upon a projection of developer proposals within the corridor, and generally assumes conversion of planned industrial and residential land uses to future retail and service land uses.

FORECAST FUTURE YEAR 2010 TRAFFIC VOLUME AND CONGESTION

Based upon the two alternative land use plans for the N. 76th Street corridor study area and outside the study area, the adopted year 2010 regional population and employment forecasts, adopted regional land use plan, and draft year 2010 regional land use plan for the seven-county Southeastern Wisconsin Region, year 2010 average weekday traffic forecasts for the arterial streets within the study area were prepared. Two traffic forecasts were prepared for each of the two alternative future land use scenarios. As already noted, one traffic forecast for each land use plan was prepared under a do-nothing transportation system plan which assumed that no transportation system improvement and expansion would be implemented within the corridor study area, and within the remainder of the Southeastern Wisconsin Region. This plan only provides for continuing maintenance of the existing arterial street system and the existing level of public transit service. It also assumes that no new travel demand management measures would be implemented in an attempt to increase public transit and use of carpools; and that no additional traffic management measures such as parking restrictions would be implemented in an attempt to move traffic more efficiently on the existing arterial street system.

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ALTERNATIVE LAND USE SCENARIO PROPOSING ADDITIONAL COMMERCIAL DEVELOPMENT FOR THE N. 76TH STREET CORRIDOR STUDY AREA



4000 FEET

Source: City of Milwaukee and SEWRPC.

Table 5

SPECIFIC LAND PARCELS WITH CURRENT AND PROJECTED PROPOSED COMMERCIAL DEVELOPMENT INCONSISTENT WITH CITY ADOPTED LAND USE PLAN

	City Adopted Land Use Plan						Alternative Scenario Accommodating Commercial Development			
			Estimated	Fetimetod	Estimated Average			Detimeted		Estimated Average
Parcel			Floorspace	Iobe/	Person			Estimated	Estimated	Rencon
Number	Land Use	Acres	(1.000 feet)	Households	Trips	Land Use	Acres	(1 000 feet)	Households	Trips
					<u></u>	Bana obe	Acres	(1,000 1000)	nousenoius	
1	Industrial	25.5	444.31	444	1.330	Retail	25.5	333.23	333	10.000
2	Industrial	48.0	836.35	836	2,510	Residential	48.0		240	2,400
3	Industrial	35.0	609.84	610	1,830	Retail	35.0	457.38	457	13,720
4	Theater	5.0			2,000	Retail	5.0	65.34	65	1,960
5	Residential	20.0		180	1,800	Service	20.0	261.36	1,307	3,920
6	Residential	49.0		441	4,410	Residential	49.0		588	5,880
7	Residential	1.0		9	90	Retail	1.0			1,375
8	Open	9.2				Industrial	9.2	160.30	160	480
9	Open	1.6				Office	1.6	20.91	105	310
10	Industrial	5.8	101.06	101	300	Service	5.8	75.79	379	1,140
11	Industrial	13.8	240.45	240	720	Service	13.8	180.34	902	2,710
12	Office	9.0	117.61	588	1,760	Retail	9.0	117.61	118	3,540
13	Office	4.6	60.11	301	900	Service	4.6	60.11	301	900
14	Office	3.2	41.82	209	630	Retail	3.2	41.82	42	1,260
15	Residential	8.2		39	390	Retail	8.2	107.16	107	3,210

Source: City of Milwaukee and SEWRPC.

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SPECIFIC LAND PARCELS WITH CURRENT AND PROJECTED PROPOSED COMMERCIAL DEVELOPMENT INCONSISTENT WITH CITY ADOPTED LAND USE PLAN

Note: See Table 5 for parcel identification number.

Source: City of Milwaukee and SEWRPC.

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The second traffic forecast prepared for each of the two land use plans assumed implementation of the adopted regional transportation system plan. The adopted regional transportation system plan is a balanced plan with public transit, transportation system management, and arterial street and highway components. The plan recommends significant improvement in, and expansion of, public transit service; the institution of transportation system management measures to reduce vehicular travel and encourage use of public transit and carpooling; the provision of traffic engineering measures on the existing arterial street system to provide for more efficient travel at minimal cost and disruption; and a modest program of arterial street and highway system capacity improvement and expansion, principally directed toward standard arterial streets and highways. The plan emphasizes public transit improvements and transportation demand management measures to reduce the growth of automobile traffic and the attendant need for improved highway facilities.

The adopted regional transportation system plan seeks to improve the balance between highway and transit service in the Region by approximately doubling the current level of transit service. Under the plan transit service would be extended to all parts of the Milwaukee urbanized area, including the northwestern portion of Milwaukee County which includes the N. 76th Street corridor study area. Also, the frequency of transit service would be improved, particularly in the outlying portions of Milwaukee County, including the corridor. In addition, the development of a rapid transit system element is recommended. The rapid transit system would extend into all major corridors of Milwaukee County, including the study area. It would operate with limited stops and be provided with preferential treatment such as reserved street lanes or its own right-of-way. As a result of the provision of a competitive and attractive transit alternative to the automobile through the planned rapid transit service, and the planned substantial expansion of transit service and improvements in service frequency, transit ridership is forecast to approximately double.

Also under the adopted regional transportation system plan, travel demand management measures are recommended, including the development of an areawide freeway traffic management system under which freeway ramp metering would be

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extended throughout the Milwaukee area, and buses and carpools would be provided preferential access to the freeway system through exclusive bypass lanes and ramps. Other demand management measures proposed include the operation of an aggressive program to promote carpooling in the Milwaukee area, and the restriction of parking supply and the increase of commuting parking cost in the Milwaukee central business district. Together, these transportation demand management actions have the potential to significantly increase automobile occupancy and transit use over the next 20 years. Public transit use within Southeastern Wisconsin is planned to increase from about 3 percent of all trips on an average weekday to 6 percent, and automobile occupancy is planned to increase from about 1.2 to 1.4 on an average weekday. For those severe traffic and congestion problems which are not expected to be abated by expanded public transit and travel demand management, the adopted regional transportation system plan recommends traffic management measures such as onstreet parking prohibition, which would convert existing arterial parking lanes to traffic lanes during peak traffic periods. Where such traffic management measures are not feasible or are already in force, the plan recommends the limited widening of existing arterial streets and construction of new arterial streets. Under the adopted regional transportation system plan, approximately 580 miles of the 3,600-mile arterial street and highway system of southeastern Wisconsin were proposed for widening and expansion, or about 15 percent of the total arterial street and highway system.

Within the N. 76th Street corridor the adopted regional transportation system plan envisions the substantial expansion of current local bus service, as shown on Map 7. The local bus service would operate on all, rather than selected, arterial streets within the study area in the northwestern portion of Milwaukee County; and a new rapid transit system would be extended within the corridor. Also, rapid transit freeway flyer bus service would be substantially improved through expanded hours of operation, improved speed of operation over an operationally controlled freeway system to which it is provided preferential access, and operation in both directions with limited stops to connect to a system of rapid transit and express bus service within the Milwaukee area.

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LEGEND

Local Bus Existing Recommended

Rapid/Express Transit (none) Existing

Freeway	Flyer Bus
A CONTRACTOR OF THE	Existing
(none)	Recommended



Source: SEWRPC.

Map 7

With respect to traffic management actions, parking prohibitions recommended in the study area which remain to be implemented are shown on Map 8. They include the prohibition of parking on W. Good Hope Road between N. 91st Street and N. 60th Street; N. 76th Street between W. Silver Spring Drive and W. Brown Deer Road; and on W. Brown Deer Road between N. 76th Street and N. 60th Street. Also shown on Map 8 are the recommended improvement and expansion measures contained in the adopted regional transportation system plan for the N. 76th Street corridor study area. Only one major arterial street improvement and expansion project is proposed and is a new north-south arterial street between N. 60th and N. 76th Streets between W. Brown Deer Road and W. Mill Road. The facility, as shown on Map 8, would follow a generally direct alignment, but would deviate from such alignment as necessary to minimize impacts and costs. It would use existing Industrial Road between W. Mill Road and W. Acacia Street; and newly constructed N. Granville Woods Road between W. Bradley Road and W. Marcia Road.

The principal implication of the adopted regional transportation system plan for traffic volume and congestion conditions within the N. 76th Street corridor is that implementation of the plan would significantly reduce traffic volumes and traffic congestion compared to the do-nothing alternative. This is because implementation of the adopted regional transportation system plan would increase transit ridership and automobile occupancy within the Milwaukee area, including in the N. 76th Street corridor. Together, this increase in transit ridership and increase in automobile occupancy would result in approximately 10 to 15 percent less traffic volume than under a do-nothing alternative. In addition, traffic congestion would be reduced under the adopted plan as the parking prohibitions recommended on N. 76th Street would provide additional traffic lanes to accommodate existing traffic. Also, the proposed construction of a new north-south arterial facility between N. 60th and N. 76th Streets would serve to modestly reduce traffic on N. 76th Street and N. 60th Street by providing an alternative to N. 60th and N. 76th Streets principally for the arterial traffic generated by existing and planned future land uses located adjacent to this proposed new arterial facility. It should be noted that the adopted transportation system plan represents an attempt to reverse trends in transportation development over the last 10 years in southeastern



ARTERIAL HIGHWAY SYSTEM ELEMENT OF ADOPTED REGIONAL TRANSPORTATION SYSTEM PLAN WITHIN THE N. 76TH STREET CORRIDOR STUDY AREA



Source: SEWRPC.

Wisconsin. Over the last 10 years, public transit service and ridership have declined, travel demand management measures have not been implemented, and arterial street improvement is behind the pace proposed in the plan.

The year 2010 average weekday traffic forecasts for the N. 76th Street corridor study are are shown on Map 9, which also compares these forecasts against existing average weekday traffic volumes. It may be noted that under the City's adopted land use plan for the N. 76th Street corridor study area, and assuming a do-nothing transportation alternative over the next 20 years, average weekday traffic volumes within the N. 76th Street corridor study area may be expected to increase by approximately 20 percent. As a result, traffic congestion may, as well, be expected to increase, as indicated in Table 6. However, under the City's adopted land use plan, and assuming implementation of the adopted regional transportation system plan, traffic volumes in the year 2010 may be expected to be only about 8 percent greater than existing traffic volumes; and traffic congestion may be expected to be slightly reduced.

Under the alternative land use scenario which envisions accommodating existing and projected proposals for unplanned commercial development within the N. 76th Street corridor study area, and assuming a do-nothing transportation alternative, average weekday traffic volumes on the arterial street system in the corridor may be expected to increase by approximately 35 percent; and average weekday traffic congestion may be expected to increase substantially, as shown in Table 6. Also, under this alternative land use scenario, even assuming implementation of the adopted regional transportation system plan, average weekday traffic volumes may still be expected to increase by about 20 percent over existing traffic volumes. The increases in traffic under this alternative land use scenario may be expected to be particularly substantial on segments of N. 76th Street, W. Good Hope Road, and W. Mill Road. Average weekday traffic congestion may be expected to substantially increase as well under this future.

In reviewing the set of four traffic volume and traffic congestion forecasts, it is important to note that achievement of those forecasts which assume implementation of the adopted regional transportation system plan will--as

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EXISTING AND FORECAST AVERAGE WEEKDAY TRAFFIC VOLUMES ON ARTERIAL STREETS IN THE N. 76TH STREET CORRIDOR STUDY AREA: 1990 AND 2010

		W. COUNTY LINE RD.	1	1	
6,70 10,80 9,60 10,80 9,60	00 00 00 00	3,400 6,500 5,800 6,500 5,800 37,200 41,000 35,600 41,500 36,100 W. BROWN DEER RD.	18,100 25,900 22,500 30,600 26,500	3,500 4,900 4,400 4,900 4,400 38,300 46,000 40,500 40,500 47,400 41,700 STH 100	4,400 5,000 4,500 5,500 4,900
16,50 22,80 20,50 22,80 20,50	00	11,100 14,800 13,200 17,700 15,800 W. BRADLEY RD.	26,800 31,200 24,300 39,300 30,300	7,200 8,400 15,400 13,400 17,300 15,100	11,000 12,000 9,000 13,000 9,700
Average Weekday Traffic Volume Current 1990 Forecast 2010 Adopted City Land Use Plan Do-Nothing Transportation Plan Adopted Regional Transportation Plan	N. 91ST ST.	20,000 29,000 25,800 25,800 25,800 25,800 25,800 31,100 27,700 36,300 32,300 W. GOOD HOPE RD.	37,800 46,300 37,900 59,200 48,200 *LS H192 'N	32,600 41,100 36,600 47,700 42,500 42,500 42,500 42,500 42,500 42,500 42,500 42,500 42,500 42,500 42,500 42,500 42,500 42,500 42,500 41,100 42,500 42,500 41,100 42,500 42,500 42,500 41,100 42,500 40,500 40,500 40,500 40,500 40,5000 40,5000 40,5000 40,5000 40,50	16,000 20,800 16,300 22,300 17,400
Alternative Land Use Scenario Do-Nothing Transportation Plan Adopted Regional Transportation Plan		22,000 23,000 20,500 20,500 9,800 11,200 11,200 14,200 W. MILL RD.	38,400 42,500 34,900 52,700 42,700	8,700 11,600 17,700 21,900 26,500 23,600	15,200 20,600 15,800 23,400 18,100
24,40 26,10 23,20 26,10 23,20		1-10-00-00-00-00-00-00-00-00-00-00-00-00	37,700 41,600 36,200 50,100 43,500	W. SILVER SPRING DR.	16,900 18,100 16,100 20,900 18,600
	1	28,600 30,500 27,100 30,500 27,100	FOND OULAC AVE.	29,700 32,600 29,000 32,600 29,000	

LEGEND

3,400

6,500 5,800

6,500 5,800

TABLE 6 Comparison of Traffic Volume and Traffic Congestion on Arterial Streets in the N. 76TH street Corridor Study Area:1990 and 2010

Year		Vehicle Miles	Extent of Traffic Congestion ^o					
		of Travel (Average Weekday)	NONE (Traffic Volumes at 0 to 90 % of Design Capacity) (miles)	APPROACHING (Traffic Volumes at 91 to 100 % of Design Capacity) (miles)	MODERATE (Traffic Volumes at 101 to 115 % of Design Capacity) (miles)	SUBSTANTIAL (Traffic Volumes at 115 to 130 % of Design Capacity) (miles)	SEVERE (Traffic Volumes at 131 % or more of Design Capacity) (miles)	Total Arterial Street Mileage
1990	Existing	589,000	15.80	5.00	3.00	2.00	3.00	28.80
2010	Adopted City Land Use Plan Do Nothing Transportation Plan	707,000	11.10	2.00	2.70	7.00	6.00	28.80
2010	Adopted City Land Use Plan Adopted Regional Transporta- tion Plan	636,000	16.35	4.70	7.00	3.00	1.00	32.05
2010	Alternative Land Use Scenario Do Nothing Transportation Plan	787,000	8.10	1.00	5.00	3.70	11.00	28.80
2010	Alternative Land Use Scenario Adopted Regional Transporta- tion Plan	709,000	14.35	3.00	5.70	7.00	2.00	32.05

^G Congestion and capacity analyses for the Do Nothing transportation plan are based on the existing arterial design capacites shown on Map 2; and for the Adopted regional transportation plan include the following increases in design capacities: "Planned New Arterial" located between N.60th Street and N.76th Street--two traffic lane undivided arterial; and N.76th Street between W.Silver Spring Drive and W.Bradley Road--improved from 4 lanes to 6 lanes through parking prohibition.

Source: SEWRPC.

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already noted--represent a substantial departure from the trends of the last 10 years. Over the last 10 years, the amount of public transit service provided within the greater Milwaukee area and public transit ridership in that area have declined by about 15 percent. The plan calls for a doubling of transit service over the next 20 years, including the development of express and rapid transit service to provide a competitive and attractive alternative to the automobile, and to thereby achieve a doubling of transit ridership. The implementation of express bus transit service within the N. 76th Street corridor study area scheduled for late 1991 may be considered a step toward implementation of the regional plan. The plan, however, calls for express transit service well beyond that currently proposed for implementation, including greater frequency of service, greater coverage of service, and the provision of preferential treatment for such service, as well as the operation of the service as not a single line, but as part of an integrated system of lines serving all major travel corridors in the Milwaukee area.

Also, the long recommended travel demand management measures have not been implemented, including the freeway traffic management system and an aggressive carpool program, and revision of parking supply and pricing policies. The freeway traffic management system, however, is scheduled to move toward implementation through the conduct of a preliminary engineering study by the Wisconsin Department of Transportation. Proposals for a more aggressive carpooling program were included in the discussions of the 1991-1993 State budget; and the City of Milwaukee is studying the central business district parking supply and pricing.

With respect to arterial street improvements proposed in the adopted regional transportation system plan, some progress has been made toward implementation of the approximately 580 miles proposed in the adopted regional transportation system plan. Recommended improvements on approximately 130 miles have been implemented to date, including three miles within the corridor study area, specifically, N. 91st street between W. Mill Road and W. Brown Deer Road. The construction of the proposed new north-south arterial between N. 60th Street and N. 76th Street, and extending from W. Mill Road to W. Brown Deer Road, however, remains to be implemented. A preliminary engineering study to

determine its alignment and to preserve its right-of-way has not been conducted. The City of Milwaukee Department of City Development, however, has requested that the City of Milwaukee Bureau of Engineers act to officially map the proposed new north-south arterial.

With respect to parking prohibitions, the prohibition of parking on some segments of N. 76th Street, W. Good Hope Road, and W. Brown Deer Road have been implemented in an attempt to accommodate increasing traffic. However, parking prohibitions remain to be implemented on other segments of N. 76th Street, W. Good Hope Road, and W. Brown Deer Road, all of which currently carry traffic volumes which exceed the design capacity of the number of traffic lanes now provided.

It is important to note that, even if the City proceeds with only approving development consistent with its adopted land use plan within the N. 76th Street corridor and the adopted regional transportation system plan is aggressively implemented, average weekday traffic volumes in the year 2010 within the N. 76th Street corridor study area may be expected to increase somewhat over the existing 1990 levels. Traffic congestion would also increase. Not implementing the transportation system plan would result in substantially increased congestion. Not implementing the land use plan, but implementing the transportation system plan, would also result in substantially increased congestion. Not implementing either the City's adopted land use plan or the adopted regional transportation system plan will result in significant increases in traffic volumes and very substantial increases in traffic congestion. The levels of traffic on N. 76th Street and W. Good Hope Road, may, under those conditions, be expected to exceed existing traffic volumes on those streets by nearly 15,000 to 20,000 vehicles per average weekday. Such traffic levels may be expected to result in a need to consider future widening of those streets. However, even with such widening, congestion levels would remain at about existing levels as the forecast future average weekday traffic volumes would exceed the design capacity of eight-lane roadways on stretches of N. 76th Street and W. Good Hope Road.

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RECOMMENDATIONS

Based upon a comparative evaluation of the traffic forecasts prepared for each of the two alternative land use scenarios considered--the adopted City land use plan and and alternative scenario which envisions accommodating the current trends in commercial development--and under two transportation system alternatives--one assuming implementation of the adopted regional transportation system plan and one assuming a do-nothing alternative, it is recommended that:

- o The City of Milwaukee reaffirm its adopted land use plan for the Milwaukee northwest side. Any changes proposed to this plan should be required prior to adoption to demonstrate that the traffic generated by the changes would be less on an average weekday, as well as during morning and afternoon peak traffic hours, than under the planned development conditions. Moreover, the City of Milwaukee should, as part of their site plan review and approval process, require land developments to be designed to accommodate and encourage transit use and carpooling.
- Implementation of the adopted regional transportation plan be aggressively pursued, including:
 - o Substantial improvement and expansion of the public transit services in the corridor and in the entire Milwaukee area, including the development of express and rapid transit facilities to provide an attractive alternative to the automobile; the expansion and improvement of local bus service through expanded areal coverage; and improved frequency of service.
 - o The implementation of travel demand management measures which seek to discourage single occupant automobile use and increase public transit and carpooling use, including the long planned freeway traffic management system, an aggressive carpooling program in the Milwaukee area, and consideration of Milwaukee central business district parking supply and price.

- Implementation of traffic management measures, including the long planned freeway traffic management system and the remaining parking prohibitions long recommended for N. 76th Street, W. Good Hope Road, and W. Brown Deer Road.
- o Implementation of the proposed north-south arterial between N. 60th Street and N. 76th Street extending from W. Mill Road to W. Brown Deer Road. The City of Milwaukee should conduct a preliminary engineering study which would identify the alternative alignments for such a facility and attempt to establish an alignment and right-ofway for the facility which could be preserved.

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The City of Milwaukee should continue to work closely and cooperatively with the Regional Planing Commission and other levels and units of government within southeastern Wisconsin in the reevaluation of the regional land use and transportation system plans now underway. This N. 76th Street corridor study has indicated that implementing the City's adopted land use plan--which is consistent with the currently adopted regional land use plan--and implementing the adopted regional transportation system plan will in essence ensure only a minimal increase in traffic volume and traffic congestion over the next 20 years in this corridor. The City will need to work closely with the Regional Planning Commission to ensure that, if long-term reduction of traffic congestion in the N. 76th Street corridor is considered desirable by the City, additional transportation management measures including public transit and travel demand management, and additional arterial street and highway improvement and expansion to provide the desired level of service are proposed, evaluated, and ultimately recommended. Such additional improvements and expansion would be over and above those in the current adopted regional transportation system plan, and will likely need to be pursued cooperatively with the Regional Planning Commission and the other units and levels of government within southeastern Wisconsin.

SUMMARY

In response to a request received in August 1990 from the City of Milwaukee Commissioner of Public Works, Mr. John R. Bolden, the Southeastern Wisconsin Regional Planning Commission conducted, in cooperation with the City of Milwaukee Department of City Development and Bureau of Traffic Engineering and Electrical Services, a study of land use and transportation conditions within the N. 76th Street corridor in the City of Milwaukee. The N. 76th Street corridor, as defined for the purpose of the study, extends from W. Silver Spring Drive on the south to W. County Line Road on the north, and from N. 60th Street on the east to N. 91st Street on the west. The purpose of the study was to identify the cumulative long-term traffic volume and congestion impacts of potential additional unplanned commercial development throughout the N. 76th Street corridor.

Substantial traffic congestion currently occurs within the N. 76th Street corridor on an average weekday. An estimated 8.0 miles, or 28 percent, of the arterial streets within the N. 76th Street corridor study area were determined to be carrying in 1990 traffic volumes which exceeded their design capacity and were experiencing traffic congestion. An additional 5.5 miles, or 19 percent of the arterial streets within the study area were determined to be carrying traffic volumes which are approaching their design capacity.

Year 2010 forecasts of average weekday traffic volume and congestion for the arterial streets within the study area were prepared. Traffic forecasts were prepared for two alternative future land use scenarios. One land use scenario is the City's adopted northwest side land use plan. The other land use scenario accommodates current land developer and land owner proposals for commercial development and includes a projection of additional similar proposals to the year 2010 on a total of 15 parcels within the corridor. The proposals concerned are generally inconsistent with the City's adopted land use plan.

Two traffic forecasts were prepared for each of the two alternative future land use scenarios. One traffic forecast for each land use scenario was prepared based upon a "no-build" transportation system plan under which no transportation system improvement and expansion projects would be carried out within the corridor, nor within the remainder of the Southeastern Wisconsin The second traffic forecast prepared for each of the two land use Region. plans assumed implementation of the adopted regional transportation system The adopted regional transportation system plan recommends significant plan. improvement in, and expansion of, public transit service; the institution of transportation system management measures to reduce vehicular travel and encourage use of public transit and carpooling; the provision of traffic engineering measures on the existing arterial street system to provide for more efficient travel at minimal cost and disruption; and a modest program of arterial street and highway system capacity improvement and expansion, principally directed toward standard arterial streets and highways. Within the N. 76th Street corridor, the adopted regional transportation system plan envisions the substantial expansion of current local bus service and development of a rapid transit system; extension of additional parking prohibitions on stretches of W. Good Hope Road, N. 76th Street, and W. Brown Deer Road; and the construction of a new north-south arterial street between N. 60th and N. 76th Streets between W. Brown Deer Road and W. Mill Road.

The year 2010 average weekday traffic forecasts indicated that, under the City's adopted land use plan for the N. 76th Street corridor study area, and assuming a "no-build" transportation system alternative over the next 20 years, average weekday traffic volumes within the N. 76th Street corridor study area may be expected to increase by approximately 20 percent. As a result, traffic congestion may, as well, be expected to increase with an anticipated 16 miles of arterials carrying traffic volumes exceeding design capacity, including six miles with traffic volumes exceeding design capacity by over 30 percent. However, under the City's adopted land use plan, and assuming implementation of the adopted regional transportation system plan, traffic volumes within the N. 76th Street corridor in the year 2010 may be expected to be only about 8 percent greater than existing traffic volumes; and traffic congestion may be expected to be only marginally increased with an anticipated 11 miles of arterials carrying traffic volumes exceeding design capacity, including only one mile of arterial with traffic volumes exceeding design capacity by over 30 percent.

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Under the alternative land use scenario which envisions accommodating existing and projected proposals for unplanned commercial development within the N. 76th Street corridor study area, and assuming a "no-build" transportation alternative, average weekday traffic volumes on the arterial street system in the corridor may be expected to increase by approximately 35 percent; and average weekday traffic congestion may be expected to increase substantially with 20 miles of arterials carrying traffic volumes exceeding design capacity, including 11 miles with traffic volumes exceeding design capacity by over 30 percent. Also, under this alternative land use scenario, even assuming implementation of the adopted regional transportation system plan, average weekday traffic volumes may still be expected to increase by about 20 percent over existing traffic volumes. The increases in traffic under this alternative land use scenario may be expected to be substantial on segments of N. 76th Street, W. Good Hope Road, and W. Mill Road. Average weekday traffic congestion may be expected to increase with 15 miles of arterial carrying traffic volumes exceeding design capacity, including two miles with volumes exceeding design capacity by over 30 percent.

It is important to note that, even if the City approves only development proposals that are consistent with its adopted land use plan within the N. 76th Street corridor and the adopted regional transportation system plan is aggressively implemented, average weekday traffic volumes in the year 2010 within the N. 76th Street corridor study area may be expected to increase somewhat over the existing 1990 levels. Traffic congestion would also be expected to increase slightly. Not implementing the transportation system plan may be expected to result in substantially increased levels of congestion. Not implementing the land use plan, but implementing the transportation system plan, may also be expected to result in substantially increased levels of con-Not implementing either the City's adopted land use plan or the gestion. adopted regional transportation system plan may be expected to result in significant increases in traffic volumes and very substantial increases in traffic congestion. The levels of traffic on N. 76th Street and W. Good Hope Road may, under those conditions, be expected to exceed existing traffic volumes on those streets by nearly 15,000 to 20,000 vehicles per average weekday. Such traffic levels may be expected to result in a need to consider future

substantial widening of those streets. However, even with such widening, congestion levels would remain at about existing levels, as the forecast future average weekday traffic volumes would exceed the design capacity of eight-lane roadways on stretches of N. 76th Street and W. Good Hope Road.

Based upon a comparative evaluation of the traffic forecasts prepared for each of the two alternative land use scenarios considered, it is recommended that:

- o The City of Milwaukee reaffirm its adopted land use plan for the Milwaukee northwest side. Any changes proposed to this plan should prior to approval be required to demonstrate that the traffic generated by the changes would be less on an average weekday, as well as during morning and afternoon peak traffic hours, than under the planned development conditions. The City of Milwaukee should, as part of their site plan review and approval process, require land developments to be designed to accommodate and encourage transit use and carpooling.
- o Implementation of the adopted regional transportation plan be aggressively pursued, including substantial improvement and expansion of the public transit services in the corridor; implementation of travel demand management measures which seek to discourage single occupant automobile use; implementation of traffic management measures; and implementation of the proposed north-south arterial between N. 60th Street and N. 76th Street extending from W. Mill Road to W. Brown Deer Road.
- o The City of Milwaukee should continue to work closely and cooperatively with the Regional Planning Commission and other levels and units of government within Southeastern Wisconsin in the reevaluation of the regional land use and transportation system plans now underway. This N. 76th Street corridor study has indicated that implementing the City's adopted land use plan--which is consistent with the currently adopted regional land use plan--and implementing the adopted regional transportation system plan should ensure that only minimal increases in traffic volume and traffic congestion occur within the corridor over the next 20 years. If long-term reduction of traffic congestion in the N. 76th

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Street corridor is considered desirable by the City, additional transportation management measures, including public transit and travel demand management, and additional arterial street and highway improvement and expansion to provide the desired level of service, will need to be proposed, evaluated, adopted, and, ultimately implemented.