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Special acknowledgement is due Mr. Kenneth H. Voigt, Principal Engineer, for his contribution to the preparation of this report.

COMMUNITY ASSISTANCE PLANNING REPORT NUMBER 67

A TRAFFIC CIRCULATION PLAN FOR THE VILLAGE OF LAC LA BELLE

Waukesha County, Wisconsin

Prepared by the

Southeastern Wisconsin Regional Planning Commission P. O. Box 769 Old Courthouse 916 North East Avenue Waukesha, Wisconsin 53187-1607

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REGIONAL PLANNING COMMISSION

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March 17, 1982

The Honorable Joseph L. Lakota Village President and Members of the Plan Commission of the Village of Lac La Belle P. O. Box 284 Oconomowoc, Wisconsin 53066

Gentlemen:

On June 17, 1981, the Village of Lac La Belle requested the Southeastern Wisconsin Regional Planning Commission to undertake a special study of traffic patterns within the Village and environs in order to determine the safest and most efficient means of accommodating those patterns. The requested study--including a special origin-destination survey of all vehicular traffic entering and leaving the Village on July 10 and 11, 1981--was completed in December 1981. The findings and recommendations are set forth in the attached report.

More specifically, this report identifies the existing travel patterns within and through the Village of Lac La Belle and analyzes the probable impact on those travel patterns of the planned construction of the STH 16 freeway bypass. The report further describes the relative advantages and disadvantages of each of eight alternative street system plans, comparing those alternative street systems to each other and to the existing street system. Each alternative street system is analyzed and compared on the basis of traffic impacts -- including the distribution of through traffic; vehicular accident potential; emergency service response time; potential theft and vandalism problems; travel inconvenience; and school bus service--as well as on the basis of capital costs. The expected impact of each alternative street system on the water quality of Lac La Belle and on the conservancy-zoned wetlands within the Village is identified, as is the conformance of each alternative with the village master plan.

The results of the study indicate that Alternative Plan 7 has the best potential to improve the safety and efficiency of vehicular travel within and through the Village. Alternative Plan 7 consists of: the abandonment of the existing eastern segment of Lac La Belle Drive from the easterly village limits to Pennsylvania Street and the construction of a new land access road on the inland side of the properties abutting Lac La Belle to replace this segment of Lac La Belle Drive; the construction of a new east-west road extending between Saeger Avenue and Pennsylvania Street along the northerly village limits; the abandonment of the existing western segment of Lac La Belle Drive from the Saeger Creek bridge to Saeger Avenue; and the construction of a new land access road on the inland side of the properties abutting Lac La Belle to replace this segment of Lac La Belle Drive. The capital cost of this alternative is estimated at \$640,500. Adoption and implementation of this plan would serve to increase the safety and efficiency of vehicular travel within the Village and environs; would support the orderly development of planned residential land use in the Village; and would help to meet the development goals set forth in the village master plan.

The attached report is respectfully submitted for your consideration and action. The Commission stands ready to meet on request with the Village Plan Commission and the Village Board to discuss the findings of the study, and to assist the Village in its consideration, adoption, and implementation of the recommended plan.

Sincerely,

Kurt W. Bauer Executive Director

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A TRAFFIC CIRCULATION PLAN FOR THE VILLAGE OF LAC LA BELLE

INTRODUCTION

Over the past few years local elected officials and residents of the Village of Lac La Belle have been attempting to determine the safest and most efficient manner of accommodating the movement of vehicular traffic within and through the Village. A principal concern of officials and residents of the Village has been the identification of existing traffic patterns and volumes and of the incidence of motor vehicle accidents, and of changes in these factors which may be expected to result from the implementation of alternative street systems designed to increase the safety and efficiency of the existing street system. Accordingly, village officials requested the Southeastern Wisconsin Regional Planning Commission to undertake a study to identify existing travel characteristics and to analyze the changes in those travel characteristics which could be expected to result from the implementation of alternative street systems designed to increase the safety and efficiency of vehicular travel within the Village. This report presents the findings and recommendations of that study.

STUDY AREA

As shown on Map 1, the Village of Lac La Belle, Wisconsin, is located in western Waukesha County approximately 18 miles from the western limits of the Milwaukee urbanized area. In 1980, the Village had a resident population of 289. As shown on Map 2, the geographic area covered by this study includes the 0.48-square-mile area of the Village, plus an adjacent 0.70-square-mile area bounded on the west by the Jefferson County line, on the north by Lang Road, and on the east by STH 67 (Lake Road). The limits of the study area were drawn to include sufficient area adjacent to the corporate limits of the Village so as to encompass the entire street system serving existing local and through traffic patterns within the Village.

The principal street within the study area is Lac La Belle Drive. Lac La Belle Drive, designated as a local land access street according to the Wisconsin Department of Transportation functional highway classification system, in fact functions as a collector facility within the Village of Lac La Belle. It traverses the study area for a distance of 2.84 miles from its intersection with STH 67 east of the village westerly limits along and adjacent to the northern and western shore of Lac La Belle to its intersection with STH 16, as shown on Map 2. In 1975 the Village divided Lac La Belle Drive into two separate segments by barricading the street at a point immediately west of its intersection with Pennsylvania Street. The Village erected the barricades to discourage use of the street by through traffic and to avoid the high cost of reconstructing the roadway in this area which was deteriorating because of the character of the subsoils and roadway subbase and through the effects of traffic.

Two local streets that traverse the study area in a north-south direction are Saeger Avenue, which extends from its intersection with Lang Road on the northern boundary of the study area to its intersection with Lac La Belle Drive, a distance of 0.50 mile, and Pennsylvania Street, which extends through the study area from Lang Road to Lac La Belle Drive, a distance of 0.45 mile. As previously noted, Lang Road serves as the northern boundary of the study area, extending in an east-west direction a distance of 2.06 miles through the study area, and STH 67, the only arterial highway in the study area, extends in a north-south direction and serves as the eastern boundary of the study area for a distance of 1.00 mile.



Source: SEWRPC.

VILLAGE OF LAC LA BELLE TRAFFIC CIRCULATION PLAN STUDY AREA



Source: SEWRPC.

EXISTING TRAFFIC CONDITIONS

Among the more important measures of the existing demand on a community's street system are vehicular traffic counts on the various street segments comprising that system. Analysis of vehicular traffic count data taken on an hourly, daily, and seasonal basis can provide important insights into the characteristics of the demand for travel within a community and is essential to any determination of the effectiveness of the existing street system in serving the travel needs of the community.

In order to quantify the existing demand on the street system in the study area, average weekday traffic volume counts taken by the Wisconsin Department of Transportation (WisDOT) were analyzed by the Commission staff. Traffic volume counts, as shown on Map 3, were routinely taken by the WisDOT in 1968 and 1974 in the Lac La Belle study area. In addition, a special set of daily traffic counts, also shown on Map 3, was taken by the WisDOT in August 1981 as part of the requested study when temporary roadway barricades were erected on Lac La Belle Drive and Saeger Avenue. To supplement these daily WisDOT traffic counts, a set of hourly traffic counts, as shown on Map 3, was taken in the study area by the Commission staff prior to the placement of the barricades on Lac La Belle Drive and Saeger Avenue. These counts were taken in conjunction with an origin-destination license plate survey taken on July 10 and 11, 1981. The 1981 traffic counts taken by the Commission staff reflect current traffic conditions within the study area as impacted by the barricading of Lac La Belle Drive immediately west of Pennsylvania Street, while the special 1981 traffic counts taken by the WisDOT reflect travel conditions impacted by the barricading of Lac La Belle Drive west of Pennsylvania Street and the temporary barricading, which has since been removed, on Lac La Belle Drive at Clemens Resort and on Saeger Avenue at the north village limits.

24-Hour Traffic Volumes

The 1981 traffic counts taken by the Commission were used in the analysis of travel within and through the Village of Lac La Belle. As shown in Figure 1, the hourly traffic counts taken by the Commission on Friday, July 10, 1981, on Lac La Belle Drive west of STH 67 over the period from 7:00 a.m. to 8:00 p.m. exhibit a general increase in traffic volumes--from a low of 28 vehicles per hour from 7:00 a.m. to 8:00 p.m. to 7:00 p.m. As also shown in Figure 1, it is estimated that traffic volume over the period from 8:00 p.m. to 7:00 a.m. to 5:00 a.m.

The WisDOT hourly traffic counts which were obtained by automatic traffic-counting machine on Friday, August 8, 1981, although impacted by the temporary barricades erected on Lac La Belle Drive and Saeger Avenue, exhibit a pattern of hourly traffic volumes during the 4:00 a.m. to 8:00 p.m. time period similar to that exhibited by the Commission traffic counts. The 1981 WisDOT traffic counts indicated a total 24-hour traffic volume on Lac La Belle Drive just west of STH 67 on Friday, August 8, of 660 vehicles. Because of the very similar traffic pattern exhibited by the two traffic counts taken from 7:00 a.m. to 8:00 p.m., a 24-hour traffic volume of 1,040 vehicles can be estimated, as shown in Figure 1, for Friday, July 10, 1981, at this location. Based on use of this same procedure, the estimated 24-hour traffic volume at the western village limits; 340 vehicles on Saeger Avenue south of its intersection with Lang Road; and 590 vehicles on Pennsylvania Street south of its intersection with Lang Road.



24-HOUR WEEKDAY TRAFFIC VOLUMES ON SELECTED STREETS IN THE VILLAGE OF LAC LA BELLE TRAFFIC CIRCULATION PLAN STUDY AREA: 1968-1981

Map 3

Source: SEWRPC.

(340)

July 1981

HOURLY TRAFFIC VOLUMES ON LAC LA BELLE DRIVE WEST OF STH 67



Source: SEWRPC.

Figure 2 indicates the estimated 24-hour traffic volumes on the village street system on Fridays in the summer in 1981, including turning movements at selected intersections, based upon the traffic volume and turning movement count data obtained by the Commission staff. From the traffic count data presented in Figure 2, it can be seen that 320 vehicles, or about 94 percent of the vehicular traffic on Saeger Avenue, turned to or from the east traveling on the segment of Lang Road between Saeger Avenue and Pennsylvania Street. Of the 590 vehicles on Pennsylvania Street south of Lang Road, only 60 vehicles, or about 10 percent, came from or were destined for the north on Pennsylvania Street; 230 vehicles, or about 39 percent, turned to or from the west traveling on the segment of Lang Road between Saeger Avenue and Pennsylvania Street; and 300 vehicles, or 51 percent, turned to or from the segment of Lang Road east of Pennsylvania Street. Finally, of the 1,040 vehicles on Lac La Belle Drive west of STH 67, only 10, or about 1 percent, came from or were heading east on Vista Drive east of STH 67; 130 vehicles, or about 12 percent, turned to or from the segment of STH 67 north of Lac La Belle Drive; and 900, or about 87 percent, turned to or from the segment of STH 67 south of Lac La Belle Drive. These traffic volumes were used in the analysis of existing travel patterns in and through the study area.

TYPICAL 24-HOUR FRIDAY TRAFFIC VOLUMES AND TURNING MOVEMENTS FOR VEHICLES ENTERING AND EXITING THE VILLAGE OF LAC LA BELLE TRAFFIC CIRCULATION PLAN STUDY AREA: SUMMER 1981



Daily Traffic Volume Variation

Daily traffic volumes normally follow a consistent pattern of change over a week, exhibiting a gradual increase from Monday through Friday and, depending upon the type of travel route, either increasing on the weekend--as is typical of a route carrying recreational traffic-or decreasing-as is typical of a route carrying commuter traffic. The daily variation in traffic volume exhibited on the village streets reflects the impact of summer recreational travel, as shown in Figure 3. The daily travel pattern, as determined from 1981 traffic count data taken by the WisDOT in the Village and the Oconomowoc area, indicates that daily traffic volumes in the study area exhibit a general increase during the week--starting at a low on Monday of 93 percent of the average weekday volume to a high on Saturday of 10 percent greater than the average weekday volume, with Sunday traffic volumes being approximately equal to the weekday average. The daily variation in vehicular travel may be attributed to the increased tripmaking for social-recreational, personal business, and shopping purposes which occurs on Friday and to the increased tripmaking for social-recreational travel purposes which occurs on Saturday and Sunday. The principal social-recreational trip generators in the study area besides Lac La Belle itself are the Lac La Belle Country Club and Clemens Resort, both of which directly influence traffic volumes on Lac La Belle Drive.

VARIATION IN AVERAGE DAILY TRAFFIC VOLUME ON THE STREETS IN THE VILLAGE OF LAC LA BELLE TRAFFIC CIRCULATION PLAN STUDY AREA: 1981



Source: SEWRPC.

Seasonal Traffic Volume Variation

In addition to exhibiting consistent hourly and daily patterns, vehicular travel exhibits a consistent pattern of seasonal variation. It is estimated that vehicular traffic volumes on Lac La Belle Drive exhibit a seasonal pattern of monthly average weekday traffic volumes, as shown in Figure 4. The variation in average weekday traffic volumes by month, as shown in Figure 4, confirms the pattern of increased vehicular traffic which has been perceived to occur on Lac La Belle Drive by residents of the Village of Lac La Belle. As shown in Figure 4, traffic volumes in areas directly influenced by recreational travel exhibit a pattern of higher than normal traffic volume during the summer, with June through September traffic volumes being approximately 7 to 13 percent higher, respectively, than average annual weekday traffic volumes. The peak summertime traffic pattern is even more pronounced when compared to the lower than average winter traffic volumes; during the months of December through March, traffic volumes are approximately 8 to 18 percent below average, resulting in a net seasonal variation in average weekday traffic volumes of almost 30 percent.

Special Traffic Generators

In addition to the traffic counts taken by Commission staff on Lac La Belle Drive, Pennsylvania Street, and Saeger Avenue, hourly occupancy counts were taken at the parking lots of the Lac La Belle Country Club and Clemens Resort. As previously





MONTH OF YEAR

Source: SEWRPC.

noted, these two developments are important recreational traffic generators directly influencing traffic volumes and travel patterns on the existing street system of the study area.

Lac La Belle Country Club: The occupancy counts taken on Friday, July 10, 1981, indicated that a total of 144 vehicles used the Lac La Belle Country Club parking lot. As shown in Figure 5, there were 10 vehicles in the lot at 7:00 a.m., with a peak occupancy of 64 vehicles occurring from 7:00 p.m. to 8:00 p.m. The total traffic attracted to the Country Club on July 10 was probably somewhat higher than normal for a typical Friday in July, as the club served on that day as the site for a ladies' traveling golf tournament. This increase in generated activity is reflected in the early to mid-morning parking lot occupancy of about 32 vehicles per hour. Considering that each vehicle observed in the Country Club parking lot involved a trip entering the lot and a second trip exiting the lot, the Lac La Belle Country Club generated a total of approximately 288 vehicle trips on Lac La Belle Drive and Pennsylvania Street on Friday, June 10, 1981. As also shown in Figure 5, a total of 129 vehicles used the Lac La Belle Country Club parking lot during the rainabbreviated 8:00 a.m. to 4:00 p.m. Commission traffic count taken on Saturday, July 11, 1981. Even though the total Saturday parking lot vehicle count was less than that taken on Friday, July 10, comparison of the two parking lot occupancy patterns shown in Figure 5 supports the variation in daily traffic patterns shown in Figure 3, and the perceived increase in weekend vehicular recreational travel attracted to the Lac La Belle study area.



LAC LA BELLE COUNTRY CLUB PARKING LOT OCCUPANCY

Source: SEWRPC.

Clemens Resort: The occupancy counts taken on Friday, July 10, 1981, indicated that a total of 120 vehicles used the Clemens Resort parking lot. As shown in Figure 6, there was one vehicle in the lot at 7:00 a.m. and there were 46 vehicles in the lot at 8:00 p.m., with a peak parking lot occupancy of 56 vehicles occurring from 6:00 p.m. to 7:00 p.m. Again, considering that each vehicle observed in the resort parking lot involved a vehicle trip entering the lot and a subsequent trip exiting the lot, Clemens Resort generated a total of approximately 240 vehicle trips on Lac La Belle Drive on Friday, July 10, 1981. As also shown in Figure 6, there were a total of 56 vehicles in the Clemens Resort parking lot during the rain-abbreviated 8:00 a.m. to 4:00 p.m. Commission traffic count taken on Saturday, July 11, 1981. This count is considered to be lower than normal for a Saturday in July because of the overcast weather conditions during the afternoon of July 11, 1981. The impact of the weather conditions are reflected in the decreasing parking lot occupancy pattern shown in Figure 6 after 2:00 p.m. The portion of the parking lot occupancy pattern between 8:00 a.m. to 2:00 p.m. of July 11 is appreciably higher than that of July 10 and reinforces the previously noted daily travel pattern information presented in Figure 3.

CLEMENS RESORT PARKING LOT OCCUPANCY 120 PARKING LOT ACCUMULATION 110 100 90 80 (Vehicles per Hour) 70 Friday, July 10, 1981 60 50 Saturday, July 11, 1981 40 30 20 10 0 10 2 6 12 3 - AM -PM TIME OF DAY

Source: SEWRPC.

MOTOR VEHICLE ACCIDENT HISTORY

The incidence of traffic accidents provides a good indicator of the efficiency and operating characteristics of a community's street system. Two commonly used measures for quantifying traffic accidents are: 1) the total number of accidents per year; and 2) the severity of the accidents as determined by the number of fatality, personal injury, and property damage accidents.

The motor vehicle accident history for the street system of the study area was reviewed to determine the number of on-street traffic accidents which occurred from January through September of 1981 and in 1980 and 1979. The location of each of the accidents was plotted, as shown on Map 4, to identify any concentrations of accidents. There were a total of five on-street accidents from January through September 1981 in the study area, of which one accident occurred within the village limits. There were a total of six on-street accidents in 1980, of which three accidents occurred within the village limits. There were a total of four on-street accidents in 1979, of which one accident occurred within the village limits. In total, five, or 33 percent, of the 15 accidents reported in the study area over the 33-month period were located within the Village. Table 1 provides information on the severity of the motor vehicle accidents in the study area, with the majority of the accidents-73 percent-resulting in property damage only. Analyses of the time of day and month

Figure 6



1979

Source: SEWRPC.

ON-STREET MOTOR VEHICLE ACCIDENT LOCATIONS IN THE VILLAGE OF LAC LA BELLE TRAFFIC CIRCULATION PLAN STUDY AREA: 1979 THROUGH 1981

Map 4

Table 1

ON-STREET MOTOR VEHICLE ACCIDENT SEVERITY IN THE VILLAGE OF LAC LA BELLE TRAFFIC CIRCULATION PLAN STUDY AREA: 1979 THROUGH 1981

Year	Fatal	Personal Injury	Property Damage Only	Total
1981 <i>ª</i> 1980 1979		3 1 	2 5 4	5 6 4
Total		4	11	15

^a January through September only. Source: SEWRPC.

of the year in which these accidents occurred indicate that of the 15 on-street accidents, nine, or 60 percent, occurred at night; three, or 20 percent, occurred during the summer recreational travel months of June, July, and August; and nine, or 60 percent, occurred during the winter months of December through March.

The average of five motor vehicle accidents with an average of less than two personal injuries per year indicates that there is not a severe motor vehicle accident problem within the study area. As shown on Map 4, the 15 motor vehicle accidents which were reported since 1978 are fairly evenly distributed over the street system of the study area, with no specific location identified as a major focal point of motor vehicle accidents which could be ameliorated through the application of corrective traffic engineering measures. Interestingly, the history of motor vehicle accidents in the study area exhibits a decrease in the number of accidents which occur during the summer recreational travel period, when daily vehicular traffic within the study area increases by approximately 10 percent over the annual average daily traffic volume.

It may therefore be concluded that a severe motor vehicle accident problem does not exist within the study area. This is not to suggest that the potential for motor vehicle accidents is not present, especially with respect to the conflict between pedestrian and local traffic and recreational traffic attracted to the Lac La Belle area, but rather that motor vehicle accidents have not become a severe problem within the study area. Any reduction in unnecessary vehicular traffic within or through the study area should serve to reduce the conflict between pedestrian and local traffic and recreational traffic and thereby reduce the potential and number of motor vehicle accidents which may occur in the future.

TRAFFIC PATTERNS

An understanding of the existing travel patterns imposed upon a community's transportation system is important to any analysis of the performance of alternative street systems designed to serve these patterns. This is particularly true in the Village of Lac La Belle, which is a small residential community with a minimum of alternative street routes to accommodate vehicular traffic, and thus the potential for congestion by through and local traffic. In order to help determine the existing travel patterns in the Lac La Belle study area, a special survey of the license plate numbers of all vehicles entering, exiting, and parking in the Lac La Belle Country Club and Clemens Resort parking lots was taken on July 10, 1981. The license plate numbers were used to obtain the geographic garaging locations of the vehicles entering the study area and to trace existing travel patterns into, out of, and through the study area.

License Plate Registration Addresses

In order to identify the geographic garaging location of the vehicles entering the study area, the license plate numbers obtained in the traffic survey were computerprocessed by the Wisconsin Department of Motor Vehicles. As shown in Table 2, of the 1,226 vehicles surveyed on July 10, 1981, 157 vehicles, or about 13 percent, were registered as leased or company-owned vehicles. An additional 114 vehicles, or about 9 percent, either were incorrectly identified in the survey or were otherwise untraceable with respect to garaging location. Thus, the garaging location of 955 vehicles, or about 78 percent of the total, could be determined. These garaging locations are plotted on Maps 5 through 10.

As indicated on Map 5, 83, or 27 percent, of the 307 traceable vehicle license plates entering Lac La Belle Drive west of STH 67 had registration addresses located along the segments of Lac La Belle Drive and Pennsylvania Street between STH 67 and Lang Road or on Foster Circle, a cul-de-sac with access from Pennsylvania Street; and another six vehicles, or 2 percent, had registration addresses located along the remaining segments of Lac La Belle Drive between Pennsylvania Street and the west village limits. Thus, a total of about 29 percent of the vehicles entering Lac La Belle Drive west of STH 67 were identified as having garaging addresses within the study area. Of the remaining 218 vehicles which entered Lac La Belle Drive west of STH 67, 101 vehicles, or 33 percent of the total traceable plates, had registration addresses located in the City of Oconomowoc and other adjacent areas east and south of the study area. In total, approximately 62 percent of the traffic entering Lac La Belle Drive west of STH 67 was from the Village or adjacent Oconomowoc area. Of the 117 vehicles which were from outside the Village and adjacent areas, 17 vehicles, or 14 percent, had registration addresses located west of the study area; 22 vehicles, or 19 percent, had registration addresses located north of the study area; and 78 vehicles, or 67 percent, had registration addresses located east or south of the Oconomowoc area.

As indicated on Map 6, 10, or 6 percent, of the 160 traceable vehicle license plates entering Pennsylvania Street south of Lang Road had registration addresses located on the segment of Lac La Belle Drive and Pennsylvania Street between STH 67 and Lang Road or on Foster Circle, and another six vehicles, or 4 percent, had registration addresses located along the remaining segment of Lac La Belle Drive between Pennsylvania Street and the west village limits. Thus, a total of approximately 10 percent of the vehicles entering Pennsylvania Street south of Lang Road were identified as having garaging addresses within the study area. Of the remaining 144 vehicles which entered Pennsylvania Street south of Lang Road, 64 vehicles, or 40 percent, had registration addresses located in the City of Oconomowoc and other adjacent areas east and south of the study area. In total, approximately 50 percent of the vehicles entering Pennsylvania Street south of Lang Road were from the Village or adjacent Oconomowoc area. Of the 80 vehicles which were from outside the Village and Oconomowoc area, 15 vehicles, or 19 percent, had registration addresses located west of the study area; 13 vehicles, or 16 percent, had registration addresses located north of the study area; and 52 vehicles, or 65 percent, had registration addresses located east or south of the Oconomowoc area.

As indicated on Map 7, five, or 6 percent, of the 89 traceable vehicle license plates entering Saeger Avenue south of Lang Road had registration addresses located along the segment of Lac La Belle Drive and Pennsylvania Street between STH 67 and Lang

Table 2

SUMMARY OF LICENSE PLATE SURVEY REGISTRATION DATA: 7:00 A.M. to 8:00 P.M., JULY 10, 1981

	Total	Leas Com Regist	ed or pany ration	lnv Licens Num	alid e Plate bers	Plotted Registration Address		
Location	Surveyed	Number	Percent	Number	Percent	Number	Percent	
Lac La Belle Drive- West of STH 67 Pennsylvania Street-	388	39	10	42	11	307	79	
South of Lang Road Saeger Avenue-	192	31	16	1	1	160	83	
South of Lang Road Lac La Belle Drive-	122	18	15	15	12	89	73	
at West Village Limits., Lac La Belle Country	260	35	14	30	11	195	75	
Club Parking Lot Clemens Resort	144	27	19	10	7	107	74	
Parking Lot	120	7	6	16	13	97	81	
Total	1,226	157	13	114	9	955	78	



Map 5





Map 7



Map 9

LOCATION OF REGISTRATION ADDRESSES OF VEHICLES OCCUPYING THE LAC LA BELLE COUNTRY CLUB PARKING LOT: FRIDAY, JULY 10, 1981



LOCATION OF REGISTRATION ADDRESSES OF VEHICLES OCCUPYING CLEMENS RESORT PARKING LOT: FRIDAY, JULY 10, 1981



Road or on Foster Circle, and another 22 vehicles, or 24 percent, had registration addresses located along the remaining segment of Lac La Belle Drive between Pennsylvania Street and the west village limits. Thus, a total of approximately 30 percent of the vehicles entering Seager Avenue south of Lang Road were identified as having garaging addresses within the study area. Of the remaining 62 vehicles which entered Saeger Avenue south of Lang Road, 30 vehicles, or 33 percent of the total, had registration addresses located in the City of Oconomowoc and other adjacent areas east and south of the study area. In total, approximately 63 percent of the traffic entering Saeger Avenue south of Lang Road was from the Village or adjacent Oconomowoc area. Of the 32 vehicles which were from outside the Village and Oconomowoc area, four vehicles, or 13 percent, had registration addresses located morth of the study area; 13 vehicles, or 40 percent, had registration addresses located anoth of the study area; and 15 vehicles, or 47 percent, had registration addresses located east or south of the Oconomowoc area.

Finally, as indicated on Map 8, nine, or 5 percent, of the 195 traceable vehicle license plates entering Lac La Belle Drive at the west village limits had registration addresses located on the segments of Lac La Belle Drive and Pennsylvania Street between STH 67 and Lang Road or on Foster Circle, and another 49 vehicles, or 25 percent, had registration addresses located along the remaining segments of Lac La Belle Drive between Pennsylvania Street and the west village limits. Thus, a total of approximately 30 percent of the vehicles entering Lac La Belle Drive at the west village limits were identified as having garaging addresses within the study area. Of the remaining 137 vehicles which entered Lac La Belle Drive at the west village limits, 59 vehicles, or 30 percent, had registration addresses located in the City of Oconomowoc and other adjacent areas east and south of the study area. In total, approximately 60 percent of the traffic entering Lac La Belle Drive at the west village limits was from the Village or adjacent Oconomowoc area. Of the 78 vehicles which were from outside the Village and Oconomowoc area, 13 vehicles, or 17 percent, had registration addresses located west of the study area; another 11 vehicles, or 14 percent, had registration addresses located north of the study area; and 54 vehicles, or 69 percent, had registration addresses located east or south of the Oconomowoc area.

In total, of the 751 traceable vehicle license plates surveyed on Friday, July 10, 1981, as entering the study area, 190 vehicles, or about 25 percent, were garaged at addresses within the study area, and 254 vehicles, or about 34 percent, were garaged at addresses located in the City of Oconomowoc and other adjacent areas east and south of the study area. Thus, a total of approximately 59 percent of the vehicles entering the study area were garaged at addresses located within the village limits and the adjacent Oconomowoc area. Of the vehicles which were from outside the Village and Oconomowoc area, 49 vehicles, or about 16 percent, had registration addresses located west of the study area; 59 vehicles, or about 19 percent, had registration addresses located north of the study area; and 199 vehicles, or about 65 percent, had registration addresses located east or south of the Oconomowoc area. The analysis thus indicated that about 75 percent of the traffic entering the study area on July 10, 1981, was generated by vehicles not garaged in the Village. An analysis of the vehicle trips generated by those vehicles not garaged in the study area follows below and in the subsequent section of this report on license plate traces within and through the study area.

An analysis of the data shown on Map 9 indicates that of the 107 traceable vehicle license plates surveyed as using the Lac La Belle Country Club parking lot, four vehicles, or 4 percent, had registration addresses located in the study area, and 48 vehicles, or 45 percent, had registration addresses located in the City of Oconomowoc and other adjacent areas east and south of the study area. Thus, a total of approximately 49 percent of the vehicles using the Country Club parking lot were identified as having garaging addresses located within the village limits and the adjacent Oconomowoc area. Of the remaining 55 vehicles which were from outside the Village and Oconomowoc area, three vehicles, or 5 percent, had registration addresses located west of the study area; five vehicles, or about 4 percent, had registration addresses located north of the study area; and 50 vehicles, or about 91 percent, had registration addresses located east or south of the Oconomowoc area.

An analysis of the data shown on Map 10 indicates that of the 97 traceable vehicle license plates surveyed as using the Clemens Resort parking lot, five vehicles, or about 5 percent, had registration addresses located in the study area, and 37 vehicles, or about 38 percent, had registration addresses located in the City of Oconomowoc and other adjacent areas east and south of the study area. Thus, a total of approximately 43 percent of the vehicles using the Clemens Resort parking lot were identified as having garaging addresses located within the village limits and the adjacent Oconomowoc area. Of the remaining 55 vehicles which were from outside the Village and Oconomowoc area, 13 vehicles, or about 24 percent, had registration addresses located west of the study area; five vehicles, or 9 percent, had registration addresses located north of the study area; and 37 vehicles, or about 67 percent, had registration addresses located east or south of the Oconomowoc area.

In total, of the 204 traceable license plates surveyed on Friday, July 10, 1981, as using the Lac La Belle Country Club and Clemens Resort parking lots, only nine vehicles, or about 4 percent, were registered to addresses located within the study area, and 85 vehicles, or about 42 percent, were registered to addresses located in the City of Oconomowoc and other adjacent areas east and south of the study area. Thus, a total of approximately 46 percent of the vehicles using the Country Club and Clemens Resort parking lots were garaged at addresses located within the village limits and adjacent Oconomowoc area. Of the 110 vehicles which were from outside the Village and Oconomowoc area, 16 vehicles, or about 14 percent, had registration addresses located west of the study area; seven vehicles, or about 6 percent, had registration addresses located north of the study area; and 87 vehicles, or about 80 percent, had registration addresses located east or south of the Oconomowoc area.

This identification of vehicle trip patterns in the Village of Lac La Belle study area indicates that 96 percent of the vehicular traffic destined for the Lac La Belle Country Club or Clemens Resort is nonlocal traffic. However, since the Lac La Belle Country Club and Clemens Resort are recreational business developments depending upon areawide trip attractions, their traffic impact on the local street system within the study area should properly be considered to be local traffic with a trip destination located within the study area. Consideration of such traffic as local traffic increases the local traffic on Lac La Belle Drive to almost 50 percent of the total traffic.

License Plate Traces Within and Through Study Area

As already noted, approximately half of the vehicles entering the study area on July 10, 1981, constituted local traffic. This vehicle registration information alone does not indicate if the nonlocal traffic identified in the Commission survey had a destination within the study area or was simply passing through. A comparison of the license plate numbers of vehicles entering and exiting the study area, as well as using the parking lots of the Lac La Belle Country Club and Clemens Resort, however, provided this additional information by street segment on the existing trip patterns within and through the study area. Vehicle trips on short segments of roadway such as exist in the study area may be classified as local trips--those trips with either the origin or destination, but not both, along a roadway segment--and as through trips-those trips which travel on a roadway segment and which do not originate at or are not destined for land uses located along that roadway segment.

Table 3 summarizes the license plate comparison of those vehicles that entered and exited Lac La Belle Drive west of STH 67 with those vehicles that entered and exited Pennsylvania Street south of Lang Road, and identifies the trip pattern of vehicles traveling on those segments of Lac La Belle Drive and Pennsylvania Street. As shown in Table 3, of the 1,040 vehicles which entered or exited Lac La Belle Drive at STH 67, 136 vehicles, or about 13 percent, were through trips, without a stop, to or from Pennsylvania Street south of Lang Road; 182 vehicles, or about 18 percent, were destined for or had originated from Clemens Resort; and 72 vehicles, or about 7 percent, were destined for or had originated from the Lac La Belle Country Club. Thus, a total of 650 vehicles, or about 62 percent, were destined for or had originated from the residential development located along the segments of Lac La Belle Drive, Pennsylvania Street, and Foster Circle between STH 67 and Lang Road. As shown in Table 4, an analysis of the vehicles which entered or exited Pennsylvania Street at Lang Road indicates that the previously noted 136 through trips comprise about 23 percent of the 590 vehicles which entered or exited Pennsylvania Street south of Lang Road. Forty-eight vehicles, or about 8 percent, were destined for or had originated from Clemens Resort; and 206 vehicles, or about 35 percent, were destined for or had originated from the Lac La Belle Country Club. Thus, a total of 200 vehicles, or about 34 percent, were destined for or had originated from the residential development located along the segments of Lac La Belle Drive, Pennsylvania Street, and Foster Circle between Lang Road and STH 67. This analysis indicates that for the total traffic traversing the segments of Lac La Belle Drive and Pennsylvania Street extending between STH 67 and Lang Road, approximately 136 vehicles per day, or about 17 percent of the 815 vehicles entering those segments, were through trips which did not stop or have a destination between STH 67 and Lang Road, with the remaining 679 vehicles, or 83 percent, being local trips having a destination between STH 67 and Lang Road.

Table 5 summarizes the license plate comparison of those vehicles which entered or exited Saeger Avenue south of Lang Road with those vehicles that entered or exited Pennsylvania Street south of Lang Road and that exited or entered Lac La Belle Drive at the west village limits, and identifies the trip pattern of vehicles traveling on those segments of Lang Road, Saeger Avenue, and Lac La Belle Drive. As shown in Table 5, of the 340 vehicles which entered or exited Saeger Avenue south of Lang Road, 160 vehicles, or about 47 percent, came from or continued on to Pennsylvania Street south of Lang Road as through trips. Of the 160 vehicles which were identified as through trips on the segment of Lang Road between Saeger Avenue and Pennsylvania Street, 26 vehicles, or 16 percent, originated at or were destined for Clemens Resort; 20 vehicles, or 12 percent, originated at or were destined for the Lac La Belle Country Club; and 46 vehicles, or 29 percent, were identified as through trips on the segments of Pennsylvania Street and Lac La Belle Drive between Lang Road and STH 67. Thus, a total of 68 vehicle trips, or 43 percent, were local trips destined for or originating from the residential development located along the segments of Pennsylvania Street and Lac La Belle Drive extending between Lang Road and STH 67. Table 5 also shows that, of the 340 vehicles which entered or exited Saeger Avenue south of Lang Road, 219 vehicles, or about 64 percent, were classified as through trips--trips without a stop--to or from Lac La Belle Drive at the west village limits, and 121 vehicles, or 36 percent, were classified as local trips--trips destined for or that had originated from the residential development located along those segments of Lac La Belle Drive and Saeger Avenue.

Table 6 summarizes the license plate comparison of those vehicles which entered or exited Lac La Belle Drive at the west village limits with 1) those vehicles that entered or exited Saeger Avenue, 2) those vehicles that exited or entered Pennsylvania Street south of Lang Road, 3) those vehicles that entered or exited Lac La Belle Drive west of STH 67, and 4) those vehicles destined for or that had originated from the Lac La Belle Country Club or Clemens Resort. As shown in Table 6, of the 630

Table 3

DESTINATION OF VEHICLE TRIPS ON LAC LA BELLE DRIVE WEST OF STH 67: 1981

Clemens		Resort	Lac La Belle Country Club		Through To/From Lang Road		لەدە		Total	
Traffic Movement	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Friday, June 10, 1981Westbound Left Turn Ahead Right Turn	78 13	18 20	33 3	7 	54 4 9	12 80 14	285 1 40	63 20 61	450 5 65	100 100 100
Subtotal	91	18	36	7	67	13	326	62	520	100
Friday, June 10, 1981Eastbound Left Turn Ahead Right Turn	13 78	20 18	3 33	5 7	9 4 56	14 80 12	40 1 283	61 20 63	65 5 450	100 100 100
Subtotal	91	18	36	7	69	13	324	62	520	100
Total	182	18	72	7	136	13	650	62	1,040	100

Source: SEWRPC.

Table 4

DESTINATION OF VEHICLE TRIPS ON PENNSYLVANIA STREET SOUTH OF LANG ROAD: 1981

							1				
	Clemens Resort		Lac La Belle Country Club		Through To/From Lang Road		Local		Total		
Traffic Movement	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	
Friday, June 10, 1981Westbound Left Turn Ahead Right Turn	24 	16 	16 4 83	11 13 72	41 8 18	27 27 16	69 18 14	46 60 12	150 30 115	100 100 100	
Subtotal	24	8	103	35	67	23	101	34	295	100	
Friday, June 10, 1981Eastbound Left Turn Ahead Right Turn	 24	 16	83 4 16	72 13 11	9 20 40	8 67 26	23 6 70	20 20 47	115 30 150	100 100 100	
Subtotal	24	8	103	35	69	23	99	34	295	100	
Total	48	8	206	35	136	23	200	34	590	100	

Source: SEWRPC.

Table 5

DESTINATION OF VEHICLE TRIPS ON SAEGER AVENUE SOUTH OF LANG ROAD: 1981

							1997 - A. M. Marine, 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -			· · · · ·		1	
	وافعصا		From/To Lac La Belle at West Village Limits		From/To Pennsylvania Street South of Lang Road		Clemens Resort		Lac La Belle Country Club		Lac La Belle Drive West of STH 67		
Traffic Movement	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Total
Friday, June 10, 1981Southbound Left Turn Right Turn	64 5	40 50	96 5	60 50	80	50 	13 ^b 	8 	10 ^b 	6 	21 ^b	13 	160 10
Subtotal	69	40	101	60	80	47	130	8	100	6	21 ^b	12	170
Friday, June 10, 1981––Northbound Left Turn Right Turn	7 45	70 28	3 115	30 72		 50	 13 ^b		10 ^b	6	25 ^b	 16	10 160
Subtotal	52	30	118	70	80	47	13 ^b	8	10 ^b	6	25 ^b	15	170
Total	121	36	219	64	160	47	26 ^b	8	20 ^b	6	46 ^b	14	340

^aThose vehicles with a destination on the segments of Lac La Belle Drive and Saeger Avenue between the west village limits and Lang Road.

^bTraffic volume included in value for Pennsylvania Street--south of Lang Road. Source: SEWRPC.

Table 6

DESTINATION OF VEHICLE TRIPS ON LAC LA BELLE DRIVE EAST OF JEFFERSON COUNTY LINE: 1981

<u> </u>		and the second second second						1. S.					
	Local		Saeger Avenue South of Lang Road		Pennsylvania Street South of Lang Road		Clemens Resort		Lac La Belle Country Club		Lac La Belle Drive West of STH 67		
Traffic Movement	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Total
Friday, June 10, 1981Eastbound Ahead	197	62	118 ^a	38	50 ^a	16	10	3	9	3	25	8	315
Friday, June 10, 1981Westbound Ahead	214	68	101 ^a	32	64 ^a	20	10	3	9	3	21	7	315
Total	411	65	219 ^a	35	1148	18	20	3	18	3	46	7	630

^a Includes Lac La Belle Colf Club, Clemens Resort, and STH 67 through trip vehicles. Source: SEWRPC.
vehicles per day traveling on Lac La Belle Drive at the west village limits, 219 vehicles, or about 35 percent, were identified as through trips on the segment of Lac La Belle Drive between the west village limits and Lang Road, and the remaining 411 vehicles, or 65 percent, were identified as local trips destined for or that had originated from the residential development located along the segments of Lac La Belle Drive between the west village limits and Pennsylvania Street and Saeger Avenue. Of the 219 vehicles classified as through trips on these segments of Lac La Belle Drive and Saeger Avenue, 114 vehicles, or 52 percent, continued onto or came from the segment of Pennsylvania Street south of Lang Road. Twenty of these 114 vehicles, or 18 percent, were destined for or had originated from Clemens Resort; 18 vehicles, or 16 percent, were destined for or had originated from the Lac La Belle Country Club; and 46 vehicles, or 40 percent, were identified as through trips on the segments of Pennsylvania Street and Lac La Belle Drive between Lang Road and STH 67. This analysis indicates that for the total traffic traversing the segments of Lac La Belle Drive and Saeger Avenue between the west village limits and Lang Road, approximately 219 vehicles per day, or about 45 percent of the 485 vehicles entering those segments, were through trips which did not stop or have a destination between the west village limits and Lang Road. The remaining 266 vehicles, or 55 percent, were classified as local trips having a destination between the west village limits and Lang Road.

In summary, the license plate survey data described in detail above provide an accurate identification of the pattern of local and through traffic on the individual street segments of the study area. The survey data indicate that about 17 percent of the traffic on the segments of Lac La Belle Drive and Pennsylvania Street between STH 67 and Lang Road was through traffic, and that 45 percent of the traffic on the segments of Lac La Belle Drive and Saeger Avenue between the west village limits and Lang Road was through traffic. However, vehicular traffic identified as through traffic on a specific roadway segment within the study area may have a trip origin or destination along another roadway segment within the study area. Therefore, total through trips across the study area are classified as only those trips having neither an origin nor a destination inside the study area. Trips having an origin or destination, but not both, inside the study area are classified as internal/external trips. The total, then, for all the vehicular traffic entering the individual segments of Lac La Belle Drive, Saeger Avenue, and Pennsylvania Street on Friday, July 10, 1981, was 1,300 vehicle trips. Of these 1,300 vehicle trips, 1,050 trips, or about 81 percent, were identified as internal/external trips having a destination at Clemens Resort, the Lac La Belle Country Club, or the residential development located within the study area. Thus, 19 percent of the vehicular traffic entering the study area was through traffic. Although this volume of through traffic constitutes only about 250 vehicle trips per day, it is noted that the percentage of total through traffic entering the study area approaches the higher range of through traffic percentage identified in other communities in southeastern Wisconsin.

The proportion of study area through traffic found in the license plate survey conducted on July 10, 1981, is very similar to that identified in a sample survey of vehicular traffic conducted by village residents on Thursday, June 25 and Saturday, June 27, 1981, in which vehicles traveling on Lac La Belle Drive between the Saeger Creek bridge and Saeger Avenue were stopped and the driver asked: 1) Do you live in the Village?; 2) Are you visiting someone in the Village or are you on business here?; and 3) Are you using Lac La Belle Drive as a thoroughfare? As shown in Table 7, the results of the survey indicate that approximately 22 percent of the Thursday traffic and 20 percent of the Saturday traffic was through traffic.

It is necessary in any analysis of the potential impact of alternative street systems on traffic patterns within and through the study area to identify the segments of Lac La Belle Drive used by vehicles which were parked at the Lac La Belle Country Club

Table 7

	Driver Response									
	June 2	.5, 1981	June 2	7, 1981	Total					
Survey Question	Number	Percent	Number	Percent	Number	Percent				
Do You Live in the Village?	86	35.0	116	39.7	202	37.6				
Are You Visiting Someone in the Village or are You on Business Here?	105	42.7	118	40.4	223	41.4				
Are You Using Lac La Belle Drive as a Thoroughfare?	55	22.3	58	19.9	113	21.0				
Total	245		292		538					

TRAVEL SURVEY CONDUCTED BY VILLAGE RESIDENTS ON LAC LA BELLE DRIVE BETWEEN SAEGER CREEK BRIDGE AND SAEGER AVENUE: 1981

and Clemens Resort, the major recreational traffic generators in the study area. As shown in Table 8, of the total 288 vehicle trips which entered or exited the Lac La Belle Country Club parking lot, 72 vehicle trips, or 25 percent, used Lac La Belle Drive west of STH 67, 10 vehicle trips, or 3 percent, had an origin or destination located along the segments of Lac La Belle Drive and Pennsylvania Street between STH 67 and Lang Road; and 206 vehicle trips, or 72 percent, used Pennsylvania Street south of Lang Road--with 20 of these 206 vehicle trips, or 10 percent, continuing as through trips on the segments of Lang Road between Pennsylvania Street and Saeger Avenue. Of the latter, two vehicle trips had an origin or destination along the segments of Saeger Avenue and Lac La Belle Drive between Lang Road and the west village limits, and 18 vehicle trips continued on Lac La Belle Drive as through trips to the west village limits.

Of the total 240 vehicle trips which entered or exited the Clemens Resort parking lot, 182 vehicle trips, or 76 percent, used Lac La Belle Drive west of STH 67; 10 vehicle trips, or about 4 percent, had an origin or destination along the segments of Lac La Belle Drive and Pennsylvania Street between STH 67 and Lang Road; and 48 vehicle trips, or 20 percent, used Pennsylvania Street south of Lang Road, with 26 of these 48 vehicle trips, or 54 percent, continuing as through trips on the segments of Lang Road between Pennsylvania Street and Saeger Avenue. Of the latter, two vehicle trips had an origin or destination along the segments of Saeger Avenue and Lac La Belle Drive between Lang Road and the west village limits, and 20 vehicle trips continued on Lac La Belle Drive as through trips to the west village limits.

In summary, about 254, or 48 percent, of the 528 vehicle trips generated by the Lac La Belle Country Club and Clemens Resort entered or exited the study area on Lac La Belle Drive at STH 67; 20, or 4 percent, were destined for or had originated at the residential development located along the segments of Lac La Belle Drive and Pennsylvania Street between STH 67 and Lang Road; and the remaining 254, or 48 percent, entered or exited the study area on Pennsylvania Street at Lang Road. In total, only 24, or 4 percent, of the 528 vehicle trips generated by the Lac La Belle Country Club and Clemens Resort were made by residents of the study area.

Table 8

LICENSE PLATE SURVEY TRIP PATTERN IDENTIFICATION OF THE VEHICLES USING THE LAC LA BELLE COUNTRY CLUB AND CLEMENS RESORT PARKING LOTS: FRIDAY, JULY 10, 1981

	Lac La Countr	Belle y Club	Clemens	Resort	Total		
Location	Number	Percent	Number	Percent	Number	Percent	
Lac La Belle Drive West of STH 67	72	25	182	76	254	48	
Lac La Belle Drive and Pennsylvania Street Between STH 67 and Lang Road	10		10	4	20	4	
Pennsylvania Street South of Lang Road	206	72	48	20	254	48	
Total	288	100	240	100	528	100	
Saeger Avenue South of Lang Roada	20	7	26	11	46	9	
Lac La Belle Drive and Saeger Avenue Between the West Village Limits and Lang Road ^a	2	1	6	2	8	2	
Lac La Belle Drive at the West Village Limits	18	6	20	8	38	7	

^aVehicle total included in value shown for Pennsylvania Street south of Lang Road.

TRAFFIC IMPACT OF PROPOSED STH 16 FREEWAY BYPASS

The only arterial street and highway improvement recommended in the adopted year 2000 regional transportation system plan which may be expected to significantly and directly impact vehicular traffic conditions in the Village of Lac La Belle study area is the planned construction of the STH 16 freeway bypass. The bypass as shown on Map 11--which depicts the Commission's long-range transportation system plan for the study area-is planned as a four-lane restricted-access arterial facility to be located approximately 300 feet south of and extending in an east-west direction parallel to Lang Road across the northern portion of the study area. Access to the bypass would be provided by grade-separated interchanges at the intersections of the study area in Jefferson County. It is also planned that the bypass would have grade-separated crossings over both Saeger Avenue and Pennsylvania Street in the study area.

The construction of the proposed STH 16 freeway bypass is not expected to significantly impact the total volume of vehicular traffic which enters or exits the study area. However, since the bypass provides a direct arterial route around the City of Oconomowoc, existing traffic patterns within the study area may be expected to change as vehicular traffic destined for or originating from areas west or south of the Oconomowoc area are attracted to the proposed bypass. More specifically, based on the data shown on Map 6, the proposed construction of the STH 16 bypass should serve to redistribute existing turning volumes at the intersection of Lac La Belle Drive and STH 67, increasing the southbound right-turn volume and complementing eastbound leftturn volume by approximately 50 vehicles-from 65 to 115 vehicles per day, or by about 75 percent--and decreasing the northbound left-turn volume and complementary eastbound right-turn volume from 450 to 400 vehicles per day, or by about 11 percent. Based on the data shown on Maps 7 and 10, traffic volumes and turning movements at the intersection of Pennsylvania Street and Lang Road should not be significantly impacted by the planned construction of the STH 16 bypass, as more than 70 percent of the existing traffic generated by the Lac La Belle Country Club currently enters the study area at that intersection. Based on the data shown on Maps 8 and 9, the proposed construction of the STH 16 bypass should serve to redistribute traffic volumes on the western segment of Lac La Belle Drive and Saeger Avenue, increasing the existing northbound right-turn volume and complementary westbound left-turn volume at the intersection of Saeger Avenue and Lang Road by approximately 100 vehicles--from 160 to 260 vehicles per day, or by about 62 percent--and similarly decreasing traffic volume on Lac La Belle Drive at the west village limits from 630 to 430 vehicles per day, or by about 32 percent.

ANALYSIS OF ALTERNATIVE STREET SYSTEMS

Eight alternative street systems were designed to more safely and efficiently accommodate the travel demands that were identified in the study area. The remaining portion of this report describes and analyzes these alternative systems, and compares the advantages and disadvantages of the alternative systems to each other and to the existing street system.

The following alternative street systems were designed in cooperation with officials of the Village of Lac La Belle for analysis under the study:

1. The existing street system, which includes Lac La Belle Drive, with the existing barricades west of Pennsylvania Street; Pennsylvania Street; Saeger Avenue; the segments of STH 67 and Lang Road which form the east and west

SEWRPC TRANSPORTATION SYSTEM PLAN IN THE VICINITY OF THE VILLAGE OF LAC LA BELLE TRAFFIC CIRCULATION PLAN STUDY AREA: 2000







Source: SEWRPC.

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limits of the study area; and the assumed placement of barricades on Lac La Belle Drive immediately west of Clemens Resort, as were in place from July 25 to August 11, 1981 (see Map 12);

- 2. The existing street system, as described under Alternative 1, but with the abandonment of the existing segment of Lac La Belle Drive between the east village limits and Pennsylvania Street and the replacement of that segment of Lac La Belle Drive with a new roadway constructed on the inland side of the properties abutting Lac La Belle (see Map 13);
- 3. The existing street system, which includes Lac La Belle Drive, with the existing barricades west of Pennsylvania Street; Pennsylvania Street; Saeger Avenue; the segments of STH 67 and Lang Road which form the east and west limits of the study area; and the assumed placement of barricades on Lac La Belle Drive in the vicinity of Saeger Creek (see Map 14);
- 4. The existing street system as described under Alternative 3, but with the assumed placement of barricades on Saeger Avenue in the vicinity of the north village limits instead of on Lac La Belle Drive in the vicinity of Saeger Creek (see Map 15);
- 5. The existing street system as described under Alternative 1, but with the abandonment of the existing segment of Lac La Belle Drive between Saeger Creek and Saeger Avenue and the replacement of that segment of Lac La Belle Drive with two new cul-de-sacs accessible from the existing Lac La Belle Drive on the south and Saeger Avenue on the east, with those roadways located on the inland sides of the properties abutting Lac La Belle Drive (see Map 16);
- 6. The street system as described under Alternative 5, but with the connection of the two proposed new roadways as a continuous street on the inland side of the properties abutting Lac La Belle (see Map 17);
- 7. The street system as described under Alternatives 2 and 6, plus the construction of a new east-west roadway extending between Saeger Avenue and Pennsylvania Street along the north village limits (see Map 18); and
- 8. The street system as described under Alternatives 2 and 6, but with the abandonment of the existing segment of Lac La Belle Drive between Saeger Avenue and Pennsylvania Street and the replacement of that segment of Lac La Belle Drive with a new east-west roadway constructed on the inland side of the properties abutting Lac La Belle (see Map 19).

Existing Conditions

To facilitate the comparative evaluation of the alternative street system plans, Lac La Belle Drive has been divided into three segments: an eastern segment extending from STH 67 to Pennsylvania Street; a central segment extending from the existing barricades immediately west of Pennsylvania Street to Saeger Avenue; and a western segment extending from Saeger Avenue to the west village limits.

The following description of the existing street system in the Village of Lac La Belle, as shown on Map 2, is provided to facilitate a comparison of the existing system to the eight alternative street systems described above. Typical traffic volumes on Fridays during the summer travel period on the existing street system in 1981 ranged from a high of 1,040 vehicles per day on the eastern segment of Lac La Belle Drive to a low of 110 vehicles per day on the central segment of Lac La Belle Drive, with the western segment of Lac La Belle Drive experiencing a traffic volume of 630 vehicles per day.

ALTERNATIVE STREET SYSTEM PLAN 1 FOR THE VILLAGE OF LAC LA BELLE TRAFFIC CIRCULATION PLAN STUDY AREA: 1981



ALTERNATIVE STREET SYSTEM PLAN 2 FOR THE VILLAGE OF LAC LA BELLE TRAFFIC CIRCULATION PLAN STUDY AREA: 1981



ALTERNATIVE STREET SYSTEM PLAN 3 FOR THE VILLAGE OF LAC LA BELLE TRAFFIC CIRCULATION PLAN STUDY AREA: 1981



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ALTERNATIVE STREET SYSTEM PLAN 4 FOR THE VILLAGE OF LAC LA BELLE TRAFFIC CIRCULATION PLAN STUDY AREA: 1981





Map 16

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ALTERNATIVE STREET SYSTEM PLAN 7 FOR THE VILLAGE OF LAC LA BELLE TRAFFIC CIRCULATION PLAN STUDY AREA: 1981

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ALTERNATIVE STREET SYSTEM PLAN 8 FOR THE VILLAGE OF LAC LA BELLE TRAFFIC CIRCULATION PLAN STUDY AREA: 1981

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Traffic on segments of the local street system within the study area may be categorized by trip type; that is, as through trips--those trips which travel on a roadway segment and have neither an origin nor a destination along that segment--and as local trips--those trips which are generated by the land uses along the roadway segment and, therefore, that have either an origin or destination along that segment. As shown in Table 3, approximately 136 vehicles per day, or about 13 percent of the 1,040 vehicles traveling on the eastern segment of Lac La Belle Drive, were identified as traversing that segment of Lac La Belle Drive and the connecting segment of Pennsylvania Street as through traffic between STH 67 and Lang Road. A total of 240 vehicle trips were generated by Clemens Resort located along the eastern segment of Lac La Belle Drive, with 182 of these vehicle trips, or about 76 percent, traversing the segment of Lac La Belle Drive between the Resort and its intersection with STH 67; 48 vehicle trips, or 20 percent, traversing the segment of Lac La Belle Drive west of the Resort and the connecting segment of Pennsylvania Street to its intersection with Lang Road; and 10 vehicle trips, or 4 percent, originating at or being destined for the residential development located along the eastern segment of Lac La Belle Drive and Pennsylvania Street between their respective intersections with STH 67 and Lang Road. The other recreational trip generator in the study area, the Lac La Belle Country Club, which is located along Pennsylvania Street south of Lang Road, generated a total of 288 vehicle trips, with 72 of these vehicle trips, or about 25 percent, traversing the segment of Lac La Belle Drive between the Club and its intersection with STH 67; 208 vehicle trips, or about 72 percent, traversing the segment of Pennsylvania Street to its intersection with Lang Road; and eight vehicle trips, or 3 percent, originating at or being destined for the residential development located along the eastern segment of Lac La Belle Drive and Pennsylvania Street between their respective intersections with STH 67 and Lang Road.

There were no through vehicle trips made on the central segment of Lac La Belle Drive owing to its discontinuity with the eastern segment of Lac La Belle Drive as a result of the barricades, placed by the Village, on the roadway west of Pennsylvania Avenue.

Of the 630 vehicle trips made on the western segment of Lac La Belle Drive at the west village limits, 219 vehicles, or about 35 percent, were identified as traversing that segment of Lac La Belle Drive and the connecting segment of Saeger Avenue as through traffic between the west village limits and Lang Road. Of these 219 through vehicle trips, 114 trips, or about 52 percent, were identified as also traversing Pennsylvania Street south of Lang Road with--as previously noted--46 of these vehicles continuing on Lac La Belle Drive as through traffic entering or exiting the study area at STH 67. This indicates that of the 219 vehicle trips identified as through trips on the western segment of Lac La Belle Drive and the connecting segment of Saeger Avenue, 68 vehicle trips, or 31 percent, either originated at or were destined for the recreational and residential development located along the segment of Pennsylvania Street south of Lang Road and the eastern segment of Lac La Belle Drive.

From the parking lot surveys conducted at the Lac La Belle Country Club and Clemens Resort, it was determined that 18 vehicle trips, or 8 percent of the 219 through trips on the western segment of Lac La Belle Drive, were generated by the Country Club; 20 vehicle trips, or 9 percent of the 219 through trips, were generated by Clemens Resort; and the remaining 30 vehicle trips either originated at or were destined for the residential development located along the segment of Pennsylvania Street south of Lang Road and the eastern segment of Lac La Belle Drive. Of the 845 vehicle trips generated by the residential development located along Pennsylvania Street and the eastern segment of Lac La Belle Drive, 645 vehicle trips, or 76 percent, entered or exited the study area on Lac La Belle Drive at its intersection with STH 67, with the remaining 200 vehicle trips, or 24 percent, entering or exiting Pennsylvania Street at its intersection with Lang Road. Of the 532 vehicle trips generated by the residential development adjacent to the central and western segments of Lac La Belle Drive and Saeger Avenue, 411 vehicle trips, or 77 percent, entered or exited the study area on Lac La Belle Drive at its intersection with the west village limits, with the remaining 121 vehicle trips, or 23 percent, entering or exiting the study area on Saeger Avenue at its intersection with Lang Road.

Finally, it is necessary to identify the present emergency services and school bus service provided in the study area in order to provide a basis for comparing the present street system with the alternative street systems. Emergency services such as ambulance and fire protection and school busing services are provided to the residents of the Village of Lac La Belle study area by the City of Oconomowoc and the Oconomowoc Area Public School System, respectively. The routing of emergency services to the eastern segment of Lac La Belle Drive is provided from STH 67 on the eastern boundary of the study area; to Pennsylvania Street from STH 67 to Lang Road along the eastern and northern boundary of the study area except during hazardous winter driving conditions, when Lang Road is avoided and emergency services are routed through the Village over the eastern segment of Lac La Belle Drive from STH 67 to Pennsylvania Street; and to the central and western segments of Lac La Belle Drive and Saeger Avenue from USH 16 northward to the western village limits. The Oconomowoc Area Public School System provides school bus service to the Village of Lac La Belle study area from STH 67 and Lang Road, with all of the children who are enrolled in the public school system currently attending schools in the Greenland School District.

Alternative Plan 1

The first alternative street system plan designed to more safely and efficiently accommodate vehicular traffic in the study area consists of the placement of barricades on the eastern segment of Lac La Belle Drive immediately west of Clemens Resort, as shown on Map 12. This alternative system was temporarily implemented by village officials from July 25 to August 11, 1981, to reduce through traffic volumes within the Village. Implementation of this alternative system, as shown in Table 9, should prohibit use of the eastern segment of Lac La Belle Drive and the connecting segment of Pennsylvania Street by through traffic, resulting in a traffic volume on the eastern segment of Lac La Belle Drive of about 660 vehicles per day--a reduction of 380 vehicles, or about 36 percent, from the existing daily volume of 1,040 vehicles. These 660 vehicle trips would be comprised of the 240 trips generated by Clemens Resort and 420 trips generated by the 30 residences located along the segment of Lac La Belle Drive extending from Clemens Resort to STH 67. Daily traffic volumes on the segment of Pennsylvania Street south of Lang Road may be expected to increase by about 90 vehicles, or 17 percent, from the existing traffic volume of 590 to 680 vehicles per day. These 680 vehicle trips would be comprised of the 288 trips generated by the Lac La Belle Country Club and the 392 trips generated by the 22 residences located along the segment of Lac La Belle Drive west of Clemens Resort, the segment of Pennsylvania Street south of Lang Road, and Foster Circle, and by the Redemptorist Fathers Seminary located at the intersection of Pennsylvania Street and Lac La Belle Drive. Implementation of this alternative street system may also be expected to reduce traffic volumes on Saeger Avenue and on the western segment of Lac La Belle Drive by about 50 vehicles per day. This reduction of 50 vehicle trips would be attributable to the discouragement and subsequent redistribution of the existing through trips which used both the western and eastern segments of Lac La Belle Drive, and of the vehicle trips generated by Clemens Resort and the residences located along the eastern segment of Lac La Belle Drive which had an origin or destination in the western portion of the study area or the geographic area immediately west or south of the study area. Because of the barricades at Clemens Resort, these trips would be diverted around the study area either on Lang Road to the north or on USH 16 and STH 67 to the south of Lac La Belle.

As shown in Table 9, the only roadway segment in the study area which is expected to experience a change in emergency vehicle response time under this alternative is the section of the eastern segment of Lac La Belle Drive immediately west of the proposed barricades. It will take fire and ambulance services an additional three minutes to travel on STH 67 to Lang Road to Pennsylvania Street to access the Redemptorist Fathers Seminary and the residences in the area immediately west of Clemens Resort which were formerly accessed from STH 67 to Lac La Belle Drive. During severe winter driving conditions, the barricades at Clemens Resort may also increase emergency vehicle access time to the residences located along Pennsylvania Street south of Lang Road, since Lac La Belle Drive provides a safer and more passable route for emergency vehicles. This alternative is expected to reduce the motor vehicle accident potential and the potential for theft and vandalism along the eastern segment of Lac La Belle Drive and the connecting segment of Pennsylvania Street by prohibiting through trips by nonvillage residents on these two roadway segments and by also reducing total traffic from 1,040 to 660 vehicles per day on the eastern segment of Lac La Belle Drive. There should be little or no change in motor vehicle accident potential or in the potential for theft and vandalism along the other roadway segments in the study area.

Travel inconveniences should be experienced only by those residents located adjacent to the section of the eastern segment of Lac La Belle Drive west of the barricades at Clemens Resort and the connecting segment of Pennsylvania Street. Those resident trips must be directed around the study area on Lang Road and STH 67. Approximately 76 percent of the resident trips generated by the development along these two segments currently use the eastern segment of Lac La Belle Drive to access STH 67.

Implementation of this alternative street system should not significantly impact the existing school bus service provided to the residents within the study area except to result in an increased walking distance for children currently residing along the eastern segment of Lac La Belle Drive east of the proposed barricades at Clemens Resort. This increased walking distance is required as there would be insufficient turnaround space for the buses on Lac La Belle Drive. Therefore, unless a special roadway widening is provided along the eastern segment of Lac La Belle Drive as a bus turnaround, the children residing along that segment would be expected to board their school buses at the intersection of Lac La Belle Drive and STH 67. Implementation of this alternative does not serve to implement the recommendations contained in the Village of Lac La Belle Master Plan adopted by the Village Board of Trustees on June 11, 1979, which includes the relocation of Lac La Belle Drive. Since this alternative does not serve to increase traffic volumes on Lac La Belle Drive, it should not adversely impact the water quality of Lac La Belle or of the conservancy-zoned wetlands that lie within the village limits.

Alternative Plan 2

The second alternative street system plan designed to more safely and efficiently accommodate vehicular traffic in the study area consists of the construction of a new roadway on the inland side of the residential development along the eastern segment of Lac La Belle Drive, along with the subsequent abandonment of the existing Lac La Belle Drive in that area, as shown on Map 13. Implementation of this alternative system, as shown in Table 9, should result in the redistribution of vehicular traffic generated by the Lac La Belle Country Club. Since about 85 percent of the vehicle trips generated by the Lac La Belle Country Club either originate at or are destined for the area east and south of the study area, it is expected that about 130, or 63 percent, of the 206 vehicles which currently use Pennsylvania Street and Lang Road will be attracted to the Country Club on the new eastern segment of Lac La Belle Drive. It is also expected that through traffic on the reconstructed eastern segment of Lac La Belle Drive and the connecting segment of Pennsylvania Street may be expected to increase from 136 to about 230 vehicle trips per day. In total, traffic

Table 9

LOCAL TRAFFIC IMPACT AND RELATIVE ADVANTAGES AND DISADVANTAGES OF ALTERNATIVE STREET SYSTEMS IN THE VILLAGE OF LAC LA BELLE TRAFFIC CIRCULATION PLAN STUDY AREA: 1981

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	na di sua la Record de la Constanta da la Const Esta de la Constanta da la Const	Alternative Street System								
Local Traffic Impact	Roadway Segment ^a	System	1	2	3	4	5	6	7	8
24-Hour Traffic Volume (vehicles per day)	Western ^b Central Eastern ^c Saeger Avenue ^d Pennsylvania Street	630 110 1,040 340 590	580 110 75/660 290 680	630 110 1,260 340 550	110/230 110 1,090 430 640	510 110 960 30/80 490	110/230 110 1,090 430 640	630 110 1,040 340 590	510 110 1,460 100/570 430	510 510 1,460 100 430
24-Hour Through Traffic Volume (vehicles per day)	Western ^b Central _c Eastern ^c Saeger Avenue Pennsylvania Street	219 	170 170 	219 230 219 230	 190 190	90 90	 190 190	219 136 219 136	250 420 50/250 230	250 250 420 50 230
Relative Transportation Advantages/Disadvantages										
Change in Emergency Service Response Time (minutes)	Western ^b Central Eastern Saeger Avenue ^d Pennsylvania Street		 +3.0 	 -0.5 -2.0	+2.4 +2.3 	 +1.3 	+2.4 +2.3 +1.7	+0.4 	+0.4 -2.0	 -2.0 -0.5 -2.0
Vehicular Accident Potential	Western ^b Central Eastern ^c Saeger Avenue ^d Pennsylvania Street		Negligible No change Reduction Negligible Reduction	Negligible No change Reduction Negligible Negligible	Reduction No change No change Negligible No change	Reduction No change No change Reduction No change	Reduction No change No change Negligible No change	Reduction No change No change Negligible No change	Reduction No change Negligible Reduction Reduction	Reduction Negligible Negligible Reduction Reduction
The ft and Van dalism	Western ^b Central Eastern Saeger Avenue ^d Pennsylvania Street		No change No change Reduction No change Reduction	No change No change Reduction No change No change	Reduction No change No change Reduction No change	Reduction No change No change Reduction No change	Reduction No change No change Reduction No change	Reduction No change No change No change No change	Reduction No change Reduction No change No change	Reduction Reduction Reduction No change No change
Travel Inconvenience to Residents	Western ^b Central Eastern ^c Saeger Avenue ^d Pennsylvania Street		Negligible Negligible Yes/ Negligible Negligible Yes	None None None None	Yes Yes None Yes None	Yes Yes None Yes None	Yes Yes None Yes None	None Negligible None None None	Reduction Reduction None Reduction None	Reduction Reduction None Reduction None

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		Alternative Street System									
Local Traffic Impact Roadway Segment ^a	System	1	2	3	4	5	6	7	8		
School Bus Service	Western ^b		No change	No change	School district change/ increased walk	School district change	School district change	No change	No change	No change	
	Central		No change	No change	No change	School district change	No change	No change	No change	No change	
	Eastern		No change/ increased walk	No change	No change	No change	No change	No change	No change	No change	
	Saeger Avenue		No change	No change	No change	No change/ school district change	No change	No change	No change	No change	
	Pennsylvania Street		No change	No change	No change	No change	No change	No change	No change	No change	

Table 9 (continued)

^aRoadway segments as set forth in the text of the report.

^bWhere the western segment of Lac La Belle Drive is subdivided by an alternative street system plan xx/yyy, xxx denotes impacts on that portion of segment with access from/to the western village limits, and yyy denotes impacts on segment with access from/to Saeger Avenue.

^CWhere the eastern segment of Lac La Belle Drive is subdivided by an alternative street system plan xxx/yyy, xxx denotes impacts on that portion of segment with access from/to Pennsylvania Street, and yyy denotes impacts on that portion of segment with access from/to STH 67.

d. Where Saeger Avenue is subdivided by an alternative street system plan xxx/yyy, xxx denotes impacts on that segment of Lac La Belle Drive with access from/to Lang Road, and yyy denotes impacts on that segment with access from/to Lac La Belle Drive.

Source: SEWRPC.

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volumes on the reconstructed eastern segment of Lac La Belle Drive may be expected to increase by 220 vehicles per day, or 21 percent, because of the redistribution of 130 Country Club trips and the addition of 90 through trips, with an attendant decrease in traffic volumes on the connecting segment of Pennsylvania Street of about 40 vehicles per day, or 7 percent.

As shown in Table 9, emergency vehicle response time in the study area may be expected to be reduced by about a half minute to the residences located along the eastern segment of Lac La Belle Drive and by about 2.0 minutes to the residences located along the connecting segment of Pennsylvania Street. These reductions would result solely from the safer and more efficient emergency vehicle travel speeds attainable on the newly constructed eastern segment of Lac La Belle Drive. This safer roadway should serve to decrease the motor vehicle accident potential on the eastern segment of Lac La Belle Drive and to decrease the potential for theft and vandalism along that segment of roadway, since through and local vehicular traffic would be removed from the existing direct access to boating facilities and other residential property abutting the shore of Lac La Belle. This alternative street system should not significantly impact any other roadway segments in the study area, nor should it create any travel inconvenience to any of the residents of the study area or result in any school bus service changes. Implementation of this alternative is in conformance with the recommendations contained in the Village of Lac La Belle Master Plan, which includes the relocation of Lac La Belle Drive. Based upon a Commission and Wisconsin Department of Natural Resources (DNR) analysis, as shown in Appendix A, implementation of this alternative should not adversely impact the water quality of Lac La Belle or of the conservancy zoned wetlands that lie within the village limits.

Alternative Plan 3

The third alternative street system plan designed to more safely and efficiently accommodate vehicular traffic in the study area consists of the placement of barricades on the western segment of Lac La Belle Drive in the vicinity of the Saeger Creek bridge, as shown on Map 14. Implementation of this alternative system, as shown in Table 9, should prohibit use of the western segment of Lac La Belle Drive and Saeger Avenue by through traffic, resulting in a traffic volume on the western segment of Lac La Belle Drive south of the Saeger Creek bridge barricades of about 110 vehicles per day, a reduction of 520 vehicles, or 82 percent, from the existing daily volume of 630 vehicles. This alternative should also result in a traffic volume of 230 vehicles per day on the segment of Lac La Belle Drive between the Saeger Creek bridge and Saeger Avenue, a reduction of about 400 vehicles, or 63 percent, from the existing daily volume of 630 vehicles. Even with the prohibition of the 219 through trips identified as occurring between Saeger Avenue and the western segment of Lac La Belle Drive, daily traffic volumes on Saeger Avenue may be expected to increase by about 90 vehicles, or 26 percent, over the existing daily traffic volume of 340 to 430 vehicles. This increase in traffic on Saeger Avenue would be the direct result of diverting all of the trips generated by the residences located along the western segment of Lac La Belle Drive north of the Saeger Creek bridge, the central segment of Lac La Belle Drive, and Saeger Avenue northward over Saeger Avenue to enter or exit the study area from Lang Road. Because of the forced diversion of vehicular traffic onto Saeger Avenue and Lang Road, an additional 50 vehicular through trips per day are expected to occur on the eastern segment of Lac La Belle Drive and the connecting segment of Pennsylvania Street, increasing the existing daily traffic volumes to 640 and 1,090 vehicles, or by about 8 and 5 percent, on Pennsylvania Street and the eastern segment of Lac La Belle Drive, respectively.

As shown in Table 9, emergency vehicle response time to the residential land development in the study area may be expected to increase by about 2.4 minutes to the western segment of Lac La Belle Drive north of the Saeger Creek bridge; by about 2.3 minutes to the central segment of Lac La Belle Drive; and by about 1.7 minutes to Saeger Avenue since emergency vehicles would be required to access these areas from STH 67 and Lang Road instead of from USH 16 northerly on Lac La Belle Drive to the west village limits as is currently done. This alternative is expected to reduce the motor vehicle accident potential and the potential for theft and vandalism along the western segment of Lac La Belle Drive by prohibiting through trips by nonvillage residents on this roadway segment and by reducing traffic from 630 to 110 and 230 vehicles per day on the sections of Lac La Belle Drive south and north of the Saeger Creek bridge, respectively. There should be little or no change in motor vehicle accident potential and in the potential for theft or vandalism along the other roadway segments in the study area. Under this alternative, travel inconvenience may be expected to be experienced by those residents in the study area located along the western segment of Lac La Belle Drive north of the Saeger Creek bridge, the central segment of Lac La Belle Drive, and Saeger Avenue because of the previously noted diversion of vehicular trips northward to Saeger Avenue and Lang Road. Implementation of this alternative street system may be expected to impact the existing school bus service provided to the residents located along the western segment of Lac La Belle Drive north of the Saeger Creek bridge by increasing the walking distance for school bus boarding--that is, unless a special roadway widening is provided along that section of Lac La Belle Drive to serve as a bus turnaround. The children residing along the western segment of Lac La Belle Drive south of the Saeger Creek bridge would be required to transfer to the Parklawn School District, as the bus travel time and mileage required to access that section of Lac La Belle Drive could be minimized with reassignment to that district. Implementation of this alternative does not serve to implement the recommendations contained in the Village of Lac La Belle Master Plan, which includes the relocation of Lac La Belle Drive. Since this alternative does not serve to increase traffic volumes on Lac La Belle Drive, it should not adversely impact the water quality of Lac La Belle or of the conservancy-zoned wetlands that lie within the village limits.

Alternative Plan 4

The fourth alternative street system plan designed to more safely and efficiently accommodate vehicular traffic in the study area consists of the placement of barricades on Saeger Avenue in the vicinity of the north village limits, as shown on Map 15. Implementation of this alternative system, as shown in Table 9, would prohibit use of the western segment of Lac La Belle Drive and Saeger Avenue by through traffic, resulting in a traffic volume on the western segment of Lac La Belle Drive of about 510 vehicles per day, a reduction of 120 vehicle trips, or 19 percent, from the existing daily volume of 630 vehicles per day. Daily traffic volumes on the segment of Saeger Avenue between the north village limits and Lang Road may be expected to decrease by about 310 vehicles, or 91 percent, from the existing daily traffic volume of 340 to 30 vehicles per day, with the remaining segment of Saeger Avenue south of the village limits expected to experience a traffic volume reduction of 260 vehicles, or 76 percent, from the existing volume of 340 to 80 vehicles. As a result of the prohibition of through vehicle trips on the western segment of Lac La Belle Drive and Saeger Avenue, traffic volumes on the eastern segment of Lac La Belle Drive and the connecting segment of Pennsylvania Street should also experience a decrease in through trips, with traffic volumes on each roadway segment being reduced by about 46 vehicles, or by 4 and 8 percent, to a volume of 960 and 490 vehicles per day, respectively.

As shown in Table 9, emergency response time to the residential land development in the study area may be expected to increase by about 1.7 minutes to the segment of Saeger Avenue between the north village limits and Lang Road, as emergency vehicles would be required to access this segment of Saeger Avenue from STH 67 and Lang Road rather than from USH 16 northerly on Lac La Belle Drive to the west village limits, as is currently done. This alternative is expected to reduce the motor vehicle accident potential and the potential for theft and vandalism along the western

segment of Lac La Belle Drive and Saeger Avenue by prohibiting through trips by nonvillage residents on these roadway segments, and by reducing traffic conflicts from 340 to 30 and 80 vehicles per day on the segments of Saeger Avenue north and south of the village limits, respectively. Minor travel inconvenience within the study area may be experienced by those village residents located along the western and central segments of Lac La Belle Drive and Saeger Avenue due to the barricading of Saeger Avenue and the subsequent prohibition of direct access to Lang Road. Finally, implementation of this alternative street system should impact the existing school bus service to the residents south of the barricade on Saeger Avenue and along the western and central segments of Lac La Belle Drive by requiring the children residing along these roadway segments to transfer to the Parklawn School District, as the bus travel time and mileage required to access this portion of the study area could be minimized with reassignment to that district. Implementation of this alternative does not serve to implement the recommendations contained in the Village of Lac La Belle Master Plan, which includes the relocation of Lac La Belle Drive. Since this alternative does not serve to increase traffic volumes on Lac La Belle Drive, it should not adversely impact the water quality of Lac La Belle or of the conservancyzoned wetlands that lie within the village limits.

Alternative Plan 5

The fifth alternative street system plan designed to more safely and efficiently accommodate vehicular traffic in the study area consists of the construction of two new cul-de-sacs accessible from the existing Lac La Belle Drive on the south and Saeger Avenue on the north to be constructed on the inland side of the properties abutting Lac La Belle, with the subsequent abandonment of the existing western segment of Lac La Belle Drive between Saeger Creek and Saeger Avenue, as shown on Map 16. This alternative street system, as shown in Table 9, may be expected to have traffic impacts and relative advantages and disadvantages similar to those set forth for Alternative Plan 3, except that the walking distance to the school bus for those children residing along the segment of the proposed cul-de-sac accessible from Saeger Avenue would not change since the roadway would be designed to provide for an adequate bus turnaround area. However, the children who reside along the proposed cul-de-sac accessible from Lac La Belle Drive on the south would be required to transfer to the Parklawn School District as under Alternative Plan 3. This alternative is in partial conformance with the recommendations contained in the Village of Lac La Belle Master Plan, which includes the relocation of Lac La Belle Drive. Since this alternative does not serve to increase traffic volumes on Lac La Belle Drive, it should not adversely impact the water quality of Lac La Belle or of the conservancyzoned wetlands that lie within the village limits.

Alternative Plan 6

The sixth alternative street system plan designed to more safely and efficiently accommodate vehicular traffic in the study area consists of the alternative street system as described under Alternative Plan 5, but with the connection of the two proposed cul-de-sacs as a continuous street on the inland side of the properties abutting Lac La Belle, as shown on Map 17. Implementation of this alternative system, as shown in Table 9, should not result in an increase in through traffic on the reconstructed segment of Lac La Belle Drive. Traffic volumes on the streets within the study area are not expected to change as a result of the implementation of this alternative.

As shown in Table 9, emergency vehicle response time to the residences located along the central segment of Lac La Belle Drive may be expected to increase by about 0.4 minute because of the increased travel distance required of emergency vehicles responding from USH 16 to access the central segment of Lac La Belle Drive. This safer and more efficient roadway should serve to reduce the potential for theft and vandalism along the western segment of Lac La Belle Drive, as through and local vehicular traffic would be removed from the existing direct access to boating facilities and other residential property abutting the shore of Lac La Belle. This alternative street system plan should not significantly impact any other roadway segments in the study area, nor should it create any travel inconvenience to residents of the study area or result in any school bus service changes. Implementation of this alternative is in conformance with the recommendations contained in the Village of Lac La Belle Master Plan, which includes the relocation of Lac La Belle Drive. Based upon the Commission and DNR analysis referenced in Appendix A, implementation of this alternative should not adversely impact the water quality of Lac La Belle or of the conservancy-zoned wetlands that lie within the village limits.

Alternative Plan 7

The seventh alternative street system plan designed to more safely and efficiently accommodate vehicular traffic in the study area consists of the combination of the street system changes set forth under Alternatives 2 and 6, plus the construction of a new east-west roadway extending between Saeger Avenue and Pennsylvania Street along the northern village limits, as shown on Map 18. Implementation of this alternative street system, as shown in Table 9 and outlined under Alternatives 2 and 6, may be expected to increase vehicular traffic volumes on the eastern segment of Lac La Belle Drive by 220 vehicles, or about 31 percent--from 1,040 to 1,260 vehicles per day. In addition, local traffic generated by the residences located along Saeger Avenue and the central and western segments of Lac La Belle Drive may be expected to be redistributed, with an equal proportion of the 532 total vehicle trips generated by these residences entering or exiting the study area on Lac La Belle Drive at the west village limits and on Lac La Belle Drive at its intersection with STH 67. Therefore, total traffic on the eastern segment of Lac La Belle Drive may be further expected to increase by approximately 200 vehicles per day-or by about half of the 532 local vehicle trips generated from the residences in the western portion of the study area minus the existing 68 vehicle trips from that area which currently have an origin or destination at the Lac La Belle Country Club, Clemens Resort, or the residential development along the eastern segment of Lac La Belle Drive and the connecting segment of Pennsylvania Street--for a total daily traffic volume of 1,460 vehicles. This represents a net increase of 420 vehicles, or about 40 percent, over the existing daily volume of 1,040 vehicles on Lac La Belle Drive west of its intersection with STH 67. As a result of this expected redistribution of local vehicle trips, traffic volumes on Lac La Belle Drive at the west village limits may be expected to decrease by about 120 vehicles, or 19 percent, from the existing volume of 630 vehicles per day--for a daily traffic volume of 510 vehicles. This redistribution of local residential traffic and increase in through trips on the new roadway constructed on the eastern segment of Lac La Belle Drive may be expected to result in a daily traffic volume of approximately 400 vehicles on the proposed east-west roadway segment extending between Saeger Avenue and Pennsylvania Street. Construction of this segment of roadway may be expected to attract about 240 vehicles per day, or 70 percent of the 340 vehicles currently on the segment of Saeger Avenue between the proposed east-west roadway and Lang Road, resulting in a daily volume of 100 vehicles per day on Saeger Avenue. Similarly, construction of this segment may be expected to attract about 160 vehicles, or 27 percent, of the 590 vehicles currently on the segment of Pennsylvania Street between the proposed east-west roadway and Lang Road, resulting in a daily volume of 430 vehicles on Pennsylvania Street south of Lang Road.

As shown in Table 9, emergency vehicle response time may be expected to increase by 0.4 minute to the residents located along the central segment of Lac La Belle Drive; may be expected to decrease by about 2.0 minutes to the residents located along the connecting segment of Pennsylvania Street; and may be expected to decrease by about 0.5 minute to the residents located along the eastern segment of Lac La Belle Drive. The increase in response time to the central segment of Lac La Belle Drive would be

attributable to the additional distance required to travel on Saeger Avenue from the relocated western segment of Lac La Belle Drive to the central segment of Lac La Belle Drive, which remains located on the inshore side of the residences abutting Lac La Belle. The decrease in response time to residents located along the connecting segment of Pennsylvania Street and the eastern segment of Lac La Belle Drive would be attributable to the safer and more efficient emergency travel speeds attainable on the new eastern segment of Lac La Belle Drive. This safer roadway design should also serve to decrease the motor vehicle accident potential on the western segment of Lac La Belle Drive, with the expected reductions in daily traffic volumes on the segments of Saeger Avenue and Pennsylvania Street serving to decrease the motor vehicle accident potential on those segments. The expected increase in traffic volume at the intersection of Lac La Belle Drive with STH 67 may result in an increase in the motor vehicle accident potential at that intersection, but the increased impact of traffic volume on motor vehicle accident potential on the segment of Lac La Belle Drive west of that intersection may be expected to be offset by the safer design of the new roadway constructed along that segment. As mentioned under Alternatives 2 and 6, the potential for theft and vandalism should be reduced along the eastern and western segments of Lac La Belle Drive owing to the removal of through and local traffic from direct access to boating facilities and other residential property abutting the shore of Lac La Belle. Travel inconveniences currently experienced by residents along the central and western segments of Lac La Belle Drive and Saeger Avenue should be reduced through the provision of improved access to STH 67 over the proposed east-west roadway extending between Saeger Avenue and Pennsylvania Street. Implementation of this alternative street system plan should not have any impact on existing school bus service to the residents of the study area. Implementation of this alternative is in conformance with the recommendations contained in the Village of Lac La Belle Master Plan, which includes the relocation of Lac La Belle Drive. Based upon the Commission and DNR analysis referenced in Appendix A, implementation of this alternative should not adversely impact the water quality of Lac La Belle or of the conservancy-zoned wetlands that lie within the village limits.

Alternative Plan 8

The final alternative street system plan designed to more safely and efficiently accommodate vehicular traffic in the study area consists of the alternative street system as described under Alternative Plans 2 and 6, but with the construction of the new east-west roadway extending between Saeger Avenue and Pennsylvania Street located on the inland side of the properties abutting Lac La Belle and the subsequent abandonment of the existing central segment of Lac La Belle Drive, as shown on Map 19. Implementation of this alternative system, as shown in Table 9, may be expected to have traffic impacts similar to those set forth for Alternative Plan 7, except that vehicular traffic on the central segment of relocated Lac La Belle Drive may be expected to increase by about 400 vehicles -- from the existing 110 to 510 vehicles per day--as vehicular traffic identified as traveling on the proposed east-west roadway under Alternative 7 would travel on the relocated central segment of Lac La Belle Drive under this alternative plan. Vehicular through traffic, which is currently prohibited on the existing central segment of Lac La Belle Drive by the roadway barricades west of Pennsylvania Street, may be expected to constitute about 250 vehicle trips per day on the relocated central segment of Lac La Belle Drive, as through traffic that originally traveled on the western segment of Lac La Belle Drive, Saeger Avenue, and Lang Road would increase from 219 to about 300 vehicle trips per day, or by about 37 percent, with all but 50 trips attracted to the relocated central segment of Lac La Belle Drive.

As shown in Table 9, emergency vehicle response time may be expected to decrease by about 0.5 minute to the residents located along the eastern segment of Lac La Belle Drive and by about 2.0 minutes to the residents located along the central segment of Lac La Belle Drive and the connecting segment of Pennsylvania Street. The decrease in

response time to residents located along the eastern segment of Lac La Belle Drive and connecting segment of Pennsylvania Street would be attributable to the safer and more efficient emergency travel speeds attainable on the new eastern segment of Lac La Belle Drive; and to residents located along the central segment of Lac La Belle Drive would be attributable to the improved access provided between the central and eastern segments of Lac La Belle Drive. As under Alternative 7, this safer roadway design should also serve to decrease the motor vehicle accident potential on the western segment of Lac La Belle Drive and to increase the motor vehicle accident potential at the intersection of Lac La Belle Drive and STH 67. The potential for theft and vandalism should be reduced along the eastern, central, and western segments of Lac La Belle Drive owing to the removal of through and local traffic from direct access to boating facilities and other residential property abutting the shore of Lac La Belle. Travel inconveniences currently experienced by residents within the study area should be reduced through the provision of improved access to all portions of the Village over the proposed relocated central segment of Lac La Belle Drive. Implementation of this alternative street system plan should not have any impact on existing school bus service to the residents of the study area. Implementation of this alternative is in conformance with the recommendations contained in the Village of Lac La Belle Master Plan, which includes the relocation of Lac La Belle Drive. Based upon the Commission and DNR analysis referenced in Appendix A, implementation of this alternative should not adversely impact the water quality of Lac La Belle or of the conservancy-zoned wetlands that lie within the village limits.

IMPLEMENTATION COSTS OF ALTERNATIVE STREET SYSTEM PLANS

An important element to be considered in the selection of a recommended street system plan for the Village of Lac La Belle is the total cost of each alternative system plan considered. An itemized cost estimate, which includes engineering, right-of-way acquisition, utility relocation, private property damages, and appraisal and acquisition negotiation costs, as well as construction costs, all expressed in 1982 dollars, is set forth in Table 10. The cost estimates for Alternative Plans 1, 3, 4, and 7 were prepared by the Commission staff, with the assistance of the Wisconsin Department of Transportation, District 2, real estate staff. The cost estimates for Alternative Plans 2, 5, 6, and 8, which involve considerable individual parcel-by-parcel project impact analysis, were prepared by a team of consultants retained by the Village of Lac La Belle. The consultant retained by the Village to identify preliminary roadway construction, engineering, and utility relocation costs was Jahnke & Jahnke Associates, Inc.; to identify right-of-way acquisition, property damage, and appraisal costs was McCartan-Egan Real Estate & Appraisal Company, Ltd.; and for project negotiations was the Draheim Company (see Appendix B). Incidental property damage costs for driveway relocation and garage door modifications not included directly in the consultant project cost analysis were provided to the Commission by village officials. The estimates of private property damages caused by the construction of new driveways and such structural alterations required as new garage door locations are based upon the assumption that the Village, and not the property owners, would have to pay these costs for work carried out by a private contractor or contractors.

Alternative Plan 1

The cost of implementing Alternative Plan 1 is estimated at \$5,500. This cost consists of \$3,300 for the placement of permanent roadway barricades and the construction of bus turnaround areas adjacent to the barricades on the eastern segment of Lac La Belle Drive at a location immediately west of Clemens Resort, and \$2,200 for right-of-way acquisition required for the bus turnarounds. As previously noted, how-

Table 10

PROJECT ELEMENT COST ESTIMATES FOR IMPLEMENTING ALTERNATIVE STREET SYSTEMS ANALYZED IN THE VILLAGE OF LAC LA BELLE TRAFFIC CIRCULATION PLAN: 1982

									1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	
	Alternative Street System									
									8	
Project Element	1. 	2	3	4	5	6	Central Segment ^a	Total	Central Segment b	Total
Construction Engineering	\$3,000 300	\$179,500 18,500	\$3,000 300	\$2,000 200	\$118,000 11,000	\$118,000 11,000	\$113,000 11,000	\$410,500 40,500	\$128,000 11,000	\$425,500 40,500
Subtotal	\$3,300	\$198,000	\$3,300	\$2,200	\$129,000	\$129,000	\$124,000	\$451,000	\$139,000	\$466,000
Right-of-Way Acquisition Utility Relocation	\$2,000	\$ 52,000 2,000	\$2,000 	\$1,000	\$ 40,000 1,000	\$ 40,000 1,000	\$ 50,000 	\$142,000 3,000	\$ 5,000 1.000	\$ 97,000 4.000
Property Damages Appraisals/		8,000			14,000	14,000		22,000	28,000	50,000
	\$2 200	\$ 73 500	\$2,200	100 \$1 100	9,000 \$ 64.000	9,000 \$ 64,000	2,000	22,500	1,500	22,000
	\$2,200	\$ 73,500	\$2,200	\$1,100	\$ 64,000	\$ 64,000	\$ 52,000	\$189,500	\$ 35,500	\$173,000
lotal	\$5,500	\$271,500	\$5,500	\$3,300	\$193,000	\$193,000	\$176,000	\$640,500	\$174,500	\$639,000

^aNew east-west roadway between Saeger Avenue and Pennsylvania Street located along northern village limits.

^bNew east-west roadway between Saeger Avenue and Pennsylvania Street located on inland side of properties along the central segment of Lac La Belle Drive,

Source: Village of Lac La Belle and SEWRPC.

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ever, without the construction of adequate bus turnarounds this action would require school children residing along the eastern segment of Lac La Belle Drive to board school buses at the intersection of Lac La Belle Drive and STH 67.

Alternative Plan 2

The cost of implementing Alternative Plan 2 is estimated at \$271,500. This cost consists of \$198,000 for the construction of a new roadway on the inland side of the residential development along the eastern segment of Lac La Belle Drive and the costs associated with the subsequent abandonment and removal of the existing Lac La Belle Drive and restoration of the property along that segment, \$65,500 for right-of-way acquisition, utility relocation, and appraisal/negotiation, and \$8,000 for property damage repairs, including replacement driveway construction and structural alterations for garage door relocations.

Alternative Plan 3

The cost of implementing Alternative Plan 3 is estimated at \$5,500. This cost consists of \$3,300 for the placement of permanent roadway barricades and the construction of bus turnaround areas adjacent to the barricades on the western segment of Lac La Belle Drive in the vicinity of the Saeger Creek bridge, and \$2,200 for right-ofway acquisition of that property required for the bus turnarounds. As previously noted, without the construction of adequate bus turnarounds this action would require school children residing along the western segment of Lac La Belle Drive to board school buses at the intersection of Lac La Belle Drive and Saeger Avenue or on Lac La Belle Drive near the west village limits.

Alternative Plan 4

The cost of implementing Alternative Plan 4 is estimated at \$3,300. This cost consists of \$2,200 for the placement of permanent roadway barricades and the construction of a bus turnaround area west of the barricades on the western segment of Lac La Belle Drive at its intersection with Saeger Avenue, and \$1,100 for right-of-way acquisition of that property required for the bus turnaround. As in Alternatives 1 and 3, elimination of the bus turnaround would increase the walking distance for school bus boarding.

Alternative Plan 5

The cost of implementing Alternative Plan 5 is estimated at \$193,000. This cost consists of \$129,000 for the construction of two cul-de-sac roadways on the inland side of the residential development along the western segment of Lac La Belle Drive and the costs associated with the subsequent abandonment and removal of the existing Lac La Belle Drive and restoration of the property along that segment, \$55,000 for rightof-way acquisition, utility relocation, and appraisal/negotiation, and \$9,000 for property damage repairs, including replacement driveway construction and structural alterations for garage door relocations.

Alternative Plan 6

The cost of implementing Alternative Plan 6 is the same as the cost of implementing Alternative 5--an estimated \$193,000. This cost consists of \$129,000 for the construction of a new roadway on the inland side of the residential development along the western segment of Lac La Belle Drive and the costs associated with the subsequent abandonment and removal of the existing Lac La Belle Drive and the restoration of the property along that segment, \$55,000 for right-of-way acquisition, utility relocation, and appraisal/negotiation, and \$9,000 for property damage repairs, including replacement driveway construction and structural alterations for garage door relocations.

Alternative Plan 7

The cost of implementing Alternative Plan 7 is estimated at \$640,500. This cost includes the cost of implementing Alternative Plans 2 and 6 plus the cost of construction of a new east-west roadway extending between Saeger Avenue and Pennsylvania Street along the northern village limits. As shown in Table 10, the implementation cost of constructing the new roadway between Saeger Avenue and Pennsylvania Street includes a right-of-way acquisition cost of \$52,000 and a construction cost of \$124,000.

Alternative Plan 8

As also shown in Table 10, the cost of a variation of Alternative 7, identified as Alternative Plan 8, which would construct a new roadway on the inland side of the properties along the central segment of Lac La Belle Drive instead of constructing a new east-west roadway between Saeger Avenue and Pennsylvania Street along the northern village limits, was also analyzed. The cost of implementing Alternative Plan 8 is estimated at \$639,000. This cost includes the cost of implementing Alternative Plans 2 and 6, plus the cost of construction of the new roadway extending between Saeger Avenue and Pennsylvania Street and the subsequent abandonment and removal of the existing segment of Lac La Belle Drive between Saeger Avenue and Pennsylvania Street and the restoration of any property damages along that segment. As shown in Table 10, the implementation cost of constructing the new roadway between Saeger Avenue and Pennsylvania Street includes a right-of-way acquisition and appraisal/negotiation cost of \$6,500, a property damage restoration cost of \$28,000, a utility relocation cost of \$1,000, and a construction cost of \$139,000, for a total of \$174,500.

CONCLUSION AND RECOMMENDATIONS

Of Alternative Plans 1 through 8, Alternatives 7 and 8 would have the most beneficial impact on the safety and efficiency of vehicular travel within the study area. Alternatives 7 and 8 may be expected to most efficiently manage the existing through traffic that occurs across the study area; to reduce the travel inconvenience experienced by residents of the study area, particularly those residing in the western portion of the study area; and to reduce potential theft and vandalism problems along Lac La Belle Drive by removing through and local vehicular traffic away from recreational boating facilities and other property of the residents located along the shore of Lac La Belle. In addition, Alternatives 7 and 8 would not significantly impact emergency vehicle response time in the study area, nor impact existing school bus service. Alternatives 7 and 8 are in conformance with the recommendations contained in the Village of Lac La Belle Master Plan, which includes the relocation of Lac La Belle Drive. Implementation of Alternatives 7 or 8 should not adversely impact the water quality of Lac La Belle or of the conservancy-zoned wetlands that lie within the village limits.

Alternatives 1, 3, 4, and 5, which the analyses showed also to be effective in prohibiting through traffic on specific segments of Lac La Belle Drive, would not provide as good a solution to the transportation problems of the study area as Alternatives 7 and 8. In addition to prohibiting through traffic on certain streets in the study area, these alternative street systems would serve to redistribute existing traffic volumes--in some cases reducing traffic volumes on street segments directly impacted by each alternative, but in some cases also increasing traffic volumes on other street segments as vehicular traffic prohibited from one street was diverted to other streets in the study area. Other transportation service advantages and disadvantages that would result from the implementation of these alternative street systems include: increased travel inconvenience experienced by residents of the study area; increased walking distance for children boarding school buses and, in some cases, the transfer of children to a different school district; and increased emergency vehicle response time to residents denied direct access by emergency vehicles from the existing street system. Implementation of Alternatives 1, 3, and 4 would not serve to carry out the recommendations of the Village's Master Plan, which includes the relocation of Lac La Belle Drive. The water quality of Lac La Belle and of the conservancy-zoned wetlands that lie within the village limits should not be adversely impacted by the implementation of any of the alternatives analyzed in this traffic circulation study. Implementation of Alternative 8 may not be expected to promote the orderly development or serve the planned residential land use in the central area of the Village.

In conclusion, it is recommended that Alternative 7 be implemented by the Village of Lac La Belle to reduce the existing conflict between residential land use activities and vehicular traffic--both local and through--and to improve the safety and efficiency of the existing street system in the study area. The cost of implementing Alternative Plan 7 is estimated at \$640,500. Implementation of this alternative street system can be accomplished in three phases: Phase 1--the construction of a new road on the inland side of the properties abutting the shore of Lac La Belle between the east village limits and Pennsylvania Street, with the subsequent abandonment of the existing Lac La Belle Drive in that area; Phase 2--the construction of a new road on the inland side of the properties abutting the shore of Lac La Belle between Saeger Creek and Saeger Avenue, and the subsequent abandonment of the existing Lac La Belle Drive in that area; and Phase 3--the construction of a new east-west roadway extending between Saeger Avenue and Pennsylvania Street adjacent to the north village limits. Implementation of this alternative street system plan should serve to promote and assist in the orderly development of the open land areas within the village limits located adjacent to these proposed roadways.

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SUMMARY

Introduction

A concern over existing traffic patterns and a desire to improve the safety and efficiency of vehicular travel within the Village of Lac La Belle prompted local elected officials and residents of the Village to request the Southeastern Wisconsin Regional Planning Commission to undertake a traffic study of the Village. The study was to identify existing travel patterns and develop alternative street system plans to accommodate those patterns safely and efficiently. The Commission initiated work on the requested traffic study in July 1981.

Recognizing that traffic patterns transcend the corporate boundaries of the Village of Lac La Belle, the geographic area for the study was drawn to include, in addition to the village proper, sufficient area adjacent to the Village so as to encompass the entire street system serving existing local and through traffic patterns within the Village. The study area was accordingly defined by the Jefferson County line on the west, Lang Road on the north, STH 67 on the east, and Lac La Belle Drive on the south.

The traffic study: 1) analyzed existing traffic count data; 2) reviewed motor vehicle accident data; 3) surveyed and identified existing traffic patterns; 4) analyzed the probable impact of the proposed STH 16 freeway bypass on existing traffic patterns; 5) evaluated and compared to the existing street system a set of eight alternative street system plans designed to increase the safety and efficiency of vehicular travel within the study area; 6) estimated the cost of implementing each alternative street system; and 7) recommended the adoption and implementation of a street system plan which was shown to most effectively serve existing and probable future travel patterns in the study area.

Existing Traffic Conditions

The analysis of existing traffic count data indicated that the three segments of Lac La Belle Drive--the eastern segment from STH 67 to Pennsylvania Street; the central segment from Saeger Avenue to the barricades west of its intersection with Pennsylvania Street; and the western segment from Saeger Avenue to the west village limits--currently experience peak 24-hour traffic volumes on Fridays during the summer recreational travel period of 1,040, 110, and 630 vehicles, respectively. This analysis indicated that annual average daily traffic volumes in the study area exhibit a gradual increase from Monday through Friday--starting at a low of 93 percent of the annual average weekday volume on Monday to a high of 10 percent greater than the annual average weekday volume on Saturday, with Friday traffic volumes about 7 percent greater than the average, and Sunday traffic volumes being about equal to the average weekday volume. This analysis also indicated that the seasonal variations in vehicular traffic in the study area exhibit a higher than normal traffic volume during the summer, with June through September traffic volumes being about 7 to 13 percent higher, respectively, than annual average weekday volumes, and December through March traffic volumes being about 92 to 82 percent, respectively, below the average.

Vehicular turning movement traffic counts taken by Commission staff at selected intersections in the study area on Friday, July 10, 1981, indicated that 94 percent of the traffic volume on Saeger Avenue turned to or from the east traveling on the segment of Lang Road east of Saeger Avenue; that 10 percent of the traffic on Pennsylvania Street south of Lang Road came from or was destined for the north on Pennsylvania Street, and that 39 percent turned to or from the east traveling on the segment of Lang Road east of Pennsylvania Street; and that 11 percent of the traffic on the eastern segment of Lac La Belle Drive came from or was destined for the east on Vista Drive, that 12 percent turned to or from the segment of STH 67 north of Lac La Belle Drive, and that 87 percent turned to or from the segment of STH 67 south of Lac La Belle Drive.

In addition to the selected intersection turning movement traffic counts, parking lot occupancy counts were taken by Commission staff at the Lac La Belle Country Club and Clemens Resort. A total of 144 vehicles used the Lac La Belle Country Club parking lot and 128 vehicles used the Clemens Resort parking lot on Friday, July 10, 1981. Considering that each vehicle observed in these parking lots involved a trip entering and a second trip exiting the lot, the Lac La Belle Country Club generated a total of 288 vehicle trips and Clemens Resort generated a total of 244 vehicle trips on Lac La Belle Drive and/or Pennsylvania Street.

Motor Vehicle Accident History

A review of accident records for the period from January 1979 through September 1981 indicated that a total of 15 on-street motor vehicle accidents occurred in the study area over this 33-month period, of which five were located within the limits of the Village of Lac La Belle. No fatal accidents have occurred within the study area since 1979. Eleven accidents, or 73 percent of the total, resulted in property damage only. The accidents occurred randomly throughout the study area, with no concentration of accidents occurring at any specific location. Of the 15 on-street motor vehicle accidents reported in the study area since 1979, only three accidents, or 20 percent, occurred during the peak recreational travel months of June, July, or August, when traffic volumes in the study area are about 7 to 13 percent greater than the average for the year.

Traffic Patterns

A license plate survey was conducted by the Commission on July 10, 1981, of all vehicles entering and exiting the study area and occupying the Lac La Belle Country Club and Clemens Resort parking lots. Based upon an analysis of the resulting data, it was concluded that of the vehicles entering the study area, about 25 percent were garaged at addresses within the study area; about 34 percent were garaged at addresses located in the City of Oconomowoc and other adjacent areas to the east and south of the study area; about 6 percent were garaged at addresses located west of the study area; about 8 percent were garaged at addresses located north of the study area; and about 26 percent were garaged at addresses located east or south of the study area. This analysis indicated that approximately 75 percent of the traffic entering the study area on July 10, 1981, was generated by nonlocal vehicles not garaged in the Village. This analysis also indicated that about 96 percent of the vehicles entering the Lac La Belle Country Club and Clemens Resort parking lots were vehicles garaged outside the study area. However, since the Lac La Belle Country Club and Clemens Resort are recreational business developments depending upon areawide trip attraction, their impact on the street system within the study area should properly be considered to be local traffic, which results in a decrease in the proportion of nonlocal traffic on Lac La Belle Drive from 75 to 50 percent of the total traffic.

A comparison of the license plate numbers of the vehicles entering and exiting the study area provided additional information on the pattern of local and through traffic on the individual street segments of the study area. The survey data indicated that about 13 percent of the traffic on Lac La Belle Drive west of STH 67 and 23 percent of the traffic on Pennsylvania Street south of Lang Road was through traffic on those roadway segments. In total, then, about 17 percent of the traffic that entered or exited Lac La Belle Drive west of STH 67 or Pennsylvania Street south of Lang Road was through traffic across that portion of the study area. Similarly, about 64 percent of the traffic on Saeger Avenue south of Lang Road and 35 percent of the traffic on Lac La Belle Drive at the west village limits was through traffic on those roadway segments. Thus, a total of about 45 percent of the traffic that entered or exited Saeger Avenue south of Lang Road or Lac La Belle Drive at the west village limits was traveling across that portion of the study area as through traffic.

A portion of the vehicular traffic identified as through traffic on a specific roadway segment within the study area may be classified as internal/external trips, trips with a trip origin or destination along another roadway segment in the study area--for example, through trips across the eastern portion of the study area on Lac La Belle Drive and Pennsylvania Street may have a trip origin or destination along Lac La Belle Drive or Saeger Avenue in the western portion of the study area. Therefore, the total for all the vehicular traffic entering the individual segments of Lac La Belle Drive, Pennsylvania Street, and Saeger Avenue was 1,300 vehicle trips, of which 1,050, or about 81 percent, were identified as internal/external trips having a destination at Clemens Resort, the Lac La Belle Country Club, or the residential development located within the study area. Thus, 19 percent of the total vehicular traffic entering the study area was through traffic without a trip origin or destination inside the study area. Even though this volume of through traffic constitutes only about 250 vehicle trips per day, the percentage of through traffic approaches the higher range of through traffic percentages identified in other communities in southeastern Wisconsin.

Traffic Impact of Proposed STH 16 Freeway Bypass

An analysis of proposed highway improvements within the study area indicated that the only facility which may be expected to impact vehicular travel conditions within the study area is the planned STH 16 freeway bypass. The construction of this bypass, which may be expected to occur during the 1990 to year 2000 time period, is proposed to extend in a north-south direction across the northern portion of the study area approximately 300 feet south of and parallel to Lang Road. The bypass should not significantly impact the total volume of vehicular traffic which enters or exits the study area. The bypass is, however, expected to redistribute existing travel patterns within the study area as vehicles desiring to travel on the bypass facility change their travel routes to enter or exit the proposed interchange between the bypass and STH 67 on the eastern boundary of the study area. This redistribution of travel patterns may be expected to more closely balance turning movements at the intersection of Lac La Belle Drive and STH 67, and to increase traffic volumes on Saeger Avenue by about 200 vehicles per day, or about 59 percent, and to decrease traffic volumes on the western segment of Lac La Belle Drive by about 200 vehicles per day, or about 32 percent, as vehicles originally traveling on the western segment of Lac La Belle Drive and STH 16 change their travel route to Saeger Avenue and Lang Road to access the proposed bypass interchange at STH 67.

Analysis of Alternative Street System Plans

A comparative evaluation of the existing street system and of eight alternative street system plans designed to more safely and efficiently accommodate the vehicular traffic in the study area indicated that Alternative Plan 1, which consists of barricading Lac La Belle Drive in the vicinity of Clemens Resort, may be expected to reduce total traffic volumes, reduce through traffic volumes, and increase travel inconvenience for residents located along the eastern segment of Lac La Belle Drive and the connecting segment of Pennsylvania Street. Implementation of this alternative may also be expected to increase emergency vehicle--fire and ambulance--response time to the residences located along the eastern segment of Lac La Belle Drive west of the barricades at Clemens Resort and on the connecting segment of Pennsylvania Street. Motor vehicle accident potential and potential theft and vandalism problems may be expected to decrease along the eastern segment of Lac La Belle Drive and the connecting segment of Pennsylvania Street. Unless additional right-of-way is purchased for the provision of a turnaround area adjacent to the proposed barricades, school bus service along the portion of Lac La Belle Drive east of Clemens Resort would be impacted by this alternative, with children being required to walk to STH 67 for school bus boarding.

Alternative Plan 2, which consists of the abandonment of the existing eastern segment of Lac La Belle Drive from the east village limits to Pennsylvania Street and the construction of a new road on the inland side of the properties abutting Lac La Belle, may be expected to increase traffic volumes and through traffic on the eastern segment of Lac La Belle Drive and the connecting segment of Pennsylvania Street. Implementation of this alternative may be expected to reduce emergency vehicle response times along the eastern segment of Lac La Belle Drive by 0.5 minute and along Pennsylvania Street by 2.0 minutes. Motor vehicle accident potential and potential theft and accident problems should be reduced by the new roadway. Travel convenience and school bus service should remain unchanged within the study area.

Alternative Plan 3, which calls for the barricading of Lac La Belle Drive in the vicinity of the Saeger Creek bridge, may be expected to decrease traffic volumes and prohibit through traffic on the western segment of Lac La Belle Drive while increasing traffic volumes and prohibiting through traffic on Saeger Avenue. Implementation of this alternative may be expected to increase emergency vehicle response times to the residences located on Lac La Belle Drive north of the Saeger Creek bridge by about 2.4 minutes and to the residences on Saeger Avenue by about 1.7 minutes. Motor vehicle accident potential and potential theft and vandalism problems should be reduced along the western segment of Lac La Belle Drive and Saeger Avenue. The travel of residents located along the western and central segments of Lac La Belle Drive and Saeger Avenue would be inconvenienced by this alternative. The children residing along Lac La Belle Drive south of the Saeger Creek bridge would be required to walk to Saeger Avenue or a bus turnaround area north of Saeger Creek for school bus boarding or to transfer to the Parklawn School District, while those children residing north of the Saeger Creek bridge would be required to walk to Saeger Avenue for school bus boarding unless additional right-of-way was purchased to provide for a turnaround area adjacent to the proposed barricades.

Alternative Plan 4, which calls for the barricading of Saeger Avenue at the north village limits, may be expected to reduce traffic volumes and prohibit through traffic on the western segment of Lac La Belle Drive and Saeger Avenue while increasing travel inconvenience to the residents located along the western and central segments of Lac La Belle Drive and Saeger Avenue. Implementation of this alternative may be expected to increase emergency vehicle response time to the residences located along Saeger Avenue north of the village limits by about 1.3 minutes. Motor vehicle accident potential and potential theft and vandalism problems should be reduced along the western segment of Lac La Belle Drive and Saeger Avenue. The children residing along the western and central segments of Lac La Belle Drive and the portion of Saeger Avenue within the village limits would be required to transfer to the Parklawn School District under this alternative.

Alternative Plan 5, which consists of the abandonment of the western segment of Lac La Belle Drive between Saeger Creek and Saeger Avenue and the construction of two new cul-de-sacs on the inland side of the properties abutting Lac La Belle accessible from Lac La Belle Drive on the south and Saeger Avenue on the north, may be expected to have the same traffic volume impacts and exhibit the same relative transportation advantages and disadvantages as Alternative 3 except that the children residing along the western segment of Lac La Belle Drive would not be required to walk to Saeger Avenue for school bus boarding, as each cul-de-sac road would be designed with a bus turnaround area.

Alternative Plan 6, which consists of the connection of the two cul-de-sac roads described in Alternative 5 for the western segment of Lac La Belle Drive to form a continuous street on the inland side of the properties abutting Lac La Belle, should not significantly change traffic volumes, through traffic, travel convenience, or school bus service in the study area. However, implementation of this alternative may be expected to slightly increase emergency vehicle response time to the residences located along the central segment of Lac La Belle Drive and to reduce motor vehicle accident potential and potential theft and vandalism problems along the western segment of Lac La Belle Drive.

Alternative Plan 7, which consists of a combination of Alternatives 2 and 6 plus the construction of a new east-west road extending between Saeger Avenue and Pennsylvania Street along the north village limits, may be expected to increase traffic volumes on the eastern segment of Lac La Belle Drive while slightly decreasing traffic volumes on the other streets in the study area. Emergency vehicle response time to the residences located along Pennsylvania Street in the study area and the eastern segment of Lac La Belle Drive may be expected to decrease by about 2.0 minutes and 0.5 minute, respectively, while response time to the residences located along the central segment of Lac La Belle Drive may be expected to increase by about 0.4 minute. Motor vehicle accident potential may be expected to be reduced within the study area except on the central segment of Lac La Belle Drive, where the accident potential would remain unchanged, and at the intersection of Lac La Belle Drive and STH 67, where the accident potential may be expected to increase. Potential theft and vandalism problems along the eastern and western segments of Lac La Belle Drive should be reduced, as should travel inconvenience to the residents located along the central and western segments of Lac La Belle Drive and Saeger Avenue. There should be no change in school bus service to the residents in the study area as a result of the implementation of this alternative. Implementation of Alternative Plan 7 should promote the orderly development of, and serve the planned residential land use in, the central area of the Village.

Alternative Plan 8, which consists of a combination of Alternatives 2 and 6 plus the construction of a new east-west road extending between Saeger Avenue and Pennsylvania Street along the inland side of the properties abutting the central segment of Lac La Belle Drive, may be expected to have the same traffic volume impacts as Alternative 7, except that the vehicular traffic which would have traveled on the new eastwest roadway located along the northern village limits would instead travel on the relocated central segment of Lac La Belle Drive under this alternative. Emergency vehicle response time to the residences located along the eastern segment of Lac La Belle Drive, the central segment of Lac La Belle Drive, and Pennsylvania Street may be expected to decrease by 0.5 minute and 2.0 minutes, respectively. As under Alternative 7, motor vehicle accident potential may be expected to be reduced within the study area except at the intersection of Lac La Belle Drive and STH 67, where the accident potential may be expected to increase. Potential theft and vandalism problems and travel inconvenience to the residents of the study area would be reduced. There should be no change in school bus service to the residents in the study area as a result of the implementation of this alternative. Implementation of Alternative 8 may not be expected to promote the orderly development of, or serve the planned residential land use in, the central area of the Village.

The implementation of Alternative Plans 1, 3, and 4 would not serve to carry out the recommendations contained in the Village of Lac La Belle Master Plan as adopted by the Village Board of Trustees on June 11, 1979, which includes the relocation of Lac La Belle Drive. Furthermore, implementation of any of these eight alternative street system plans should not adversely impact the water quality of Lac La Belle or of the conservancy-zoned wetlands that lie within the village limits.

Implementation Costs of Alternative Street System Plans

In considering any alternative plan, it is important to consider the associated costs as well as the traffic operation and safety benefits. Table 11 indicates the estimated 1982 cost of implementing Alternative Street System Plans 1 through 8. The implementation costs shown in Table 11 include construction, engineering, right-ofway acquisition, appraisal and negotiations, utility relocation, and property damage costs. The cost estimates are based on the assumptions that all right-of-way is -

Table 11

IMPLEMENTATION COST ESTIMATES OF ALTERNATIVE STREET SYSTEMS ANALYZED IN THE VILLAGE OF LAC LA BELLE TRAFFIC CIRCULATION PLAN: 1982

Alternative	Implementation	Cost
	\$ 5,500	
2	271,500	
3	5,500	
4	3,300	
5	193.000	
6	193,000	
7	640.500	
8	639,000	

Source: Village of Lac La Belle and SEWRPC.

purchased at fair market value, that all utility relocation costs are charged to the Village, and that all private property damage costs caused by the removal of the existing roadway, the abandonment of existing driveways, and the subsequent construction of new driveways, and structural alterations such as garage door relocations, are paid for by the Village.

As shown in Table 11, the estimated cost of implementing Alternative Plans 1 and 3 is estimated at \$5,500, which could be reduced to about \$3,300 through the elimination of turnaround areas adjacent to the roadway barricades. Similarly, the estimated estimated cost of implementing Alternative 4 is \$3,300, which could also be reduced to about \$2,200 through the elimination of a turnaround area. The cost of implementing Alternative 2 is estimated at \$271,500, and the cost of implementing Alternatives 5 or 6 is estimated at \$193,000. The cost of implementing Alternatives 7 and 8 is estimated at \$640,500 and \$639,000, respectively, depending on which variation of a new east-west roadway between Saeger Avenue and Pennsylvania Street is implemented--a new roadway along the northern village limits or on the inland side of the properties along the central segment of Lac La Belle, respectively.

Conclusion and Recommendations

It is concluded that of Alternative Street System Plans 1 through 8, Alternative Plan 7 should have the most beneficial impact on the safety and efficiency of vehicular travel within and through the study area. It is therefore recommended that Alternative Plan 7, as shown on Map 20, be implemented by the Village of Lac La Belle at an estimated cost of \$640,500 to reduce the existing conflict between residential land use activities and vehicular traffic. Implementation of Alternative 7 may be expected also to: reduce travel inconvenience experienced by residents of the study area; reduce potential theft and vandalism problems along Lac La Belle Drive; reduce motor vehicle accident potential in the study area; and serve to carry out the village Master Plan recommendations, which include the relocation of Lac La Belle Drive and the promotion of the orderly development of the open land spaces within the village limits located adjacent to the proposed roadways.
Map 20

RECOMMENDED RELOCATION OF LAC LA BELLE DRIVE IN THE VILLAGE OF LAC LA BELLE TRAFFIC CIRCULATION PLAN STUDY AREA: 1981



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APPENDICES

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Appendix A

WATER QUALITY IMPACTS OF ROADWAY IMPROVEMENTS IN THE VILLAGE OF LAC LA BELLE

COPY

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

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March 2, 1981

Mr. Joseph L. Lakota President Village of Lac La Belle 572 Lac La Belle Drive Oconomowoc, Wisconsin 53066

RE: SEWRPC No. CA-714-24

Dear Mr. Lakota:

This letter is intended to confirm comments made by Mr. Donald M. Reed of the Commission staff at a Village of Lac La Belle Plan Commission meeting held on December 17, 1980, for the purpose of discussing the Lac La Belle feasibility report prepared by the firm of Donahue & Associates, Inc. In your letter of December 10, 1980, you ask that the Commission staff review and comment on this matter. As indicated by Mr. Reed at the aforementioned meeting, the Commission staff has reviewed the feasibility report and has the following comments to offer for your consideration:

- Lac La Belle Drive through the Village of Lac La Belle is not con-1. sidered by the Commission to be an arterial street or highway. Accordingly, the potential relocation of portions of Lac La Belle Drive is not of regional concern and will not have a significant impact on areawide traffic patterns. Any proposed relocation of Lac La Belle Drive would not conflict with the adopted regional transportation plan.
- Relocation of Lac La Belle Drive as set forth in Alternative 1, Area 2. B, and Alternatives 1, 2, and 3, Areas D and E, would likely help to reduce the loading of such traffic related contaminents of road deicing chemicals, grease and oil transmission fluids to Lac La Belle because Lac La Belle Drive would be located away from the Lac La Belle shoreline.
- 3. Alternative 1, Area B, would involve a minor encroachment along the shrub carr (Type VI wetland) located within the Village's designated conservancy area.
- 4. Alternatives 2 and 3, Area E, may significantly impact the small, shallow marsh (Type III wetland) located immediately east of the Village limits and north of the existing Lac La Belle Drive, particularly during construction. Therefore, the Commission staff would recommend the selection of route options 1 or 2 in Area E in order to avoid the marsh.

Jo I. Lakota Page 2 March 2, 1981

- 5. It is recommended that any open or closed channels associated with the project be constructed in such a manner as not to drain the wetlands in the conservancy area. In addition, sediment basins should be installed and maintained in order to reduce any potential sediment loading into Lac La Belle.
- 6. It is recommended that, should the project proceed, a grading plan be prepared and be reviewed by the County Soil and Water Conservation District staff.

We trust that the foregoing comments and suggestions will be helpful to you. Should you have any questions concerning this matter, please do not hesitate to call.

Sincerely,

Furt W. Bauer Executive Director

KWB/ea



State of Wisconsin

DEPARTMENT OF NATURAL RESOURCES

P.O. Box 13248 Milwaukee, WI 53213

Carroll D. Besadny Secretary

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P.O. Box 13248 Milwaukee, WI 53213 IN REPLY REFER TO: 3520

December 17, 1980

Mr. Joseph Lakota, President Village of Lac La Belle 522 Lac La Belle Drive Oconomowoc, WI 53066

Dear Mr. Lakota:

In April I was directed to investigate a complaint from a village resident concerning the relocation of Lac La Belle Drive into the conservancy zoned wetland area.

Since April I have discussed the matter with you and other village officials, discussed the matter with Southeast Wisconsin Regional Planning Commission staff, reviewed the 1978 Village Master Plan, reviewed the recently completed Lac La Belle Feasibility Study and have field investigated the wetland area.

Based on this information I have determined that the proposed relocation of Lac La Belle Drive is above the ordinary high water mark of both Lac La Belle and the unnamed tributary. As such, no authority is required pursuant to Chapters 30 and 31, Wisconsin Statutes, to relocate Lac La Belle Drive as proposed.

I have asked the U.S. Army Corps of Engineers to determine if they have authority in the wetland area (Section 404 of the 1977 Amendments to the Clean Water Act gave the Corps discretionary authority in wetlands adjacent to navigable waterways). In the past, the Corps has not taken authority in similar situations, however this remains their decision and I am awaiting their reply.

If you decide to proceed with the relocation of Lac La Belle, I would recommend that to minimize adverse impacts on the wetland and Lac La Belle that you:

- Disturb only the areas needed for construction. At the present time, natural vegetation covers this area and there is little erosion. The streambed and streambanks are stable. The vegetation on the flood plain and adjacent slopes will contribute to the esthetic and environmental quality of the development.
- 2. Remove only those trees, shurbs, and grasses that must be removed for construction; protect the rest to preserve their esthetic and erosion-control values.

- 3. Stockpile topsoil and protect it with anchored straw mulch.
- 4. Install sediment basins and diversion dikes before disturbing the land that drains into them.

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- 5. Install erosion- and sediment-control practices according to soil conservation district standards and specifications. The practices are to be maintained in effective working condition during construction and until the drainage area has been permanently stabilized.
- 6. Temporarily stabilize each segment of graded or otherwise disturbed land, including the sediment-control devices not otherwise stabilized, by seeding and mulching or by mulching alone. As construction is completed, permanently stabilize each segment with perennial vegetation and structural measures. Both temporary and permanent stabilization practices are to be installed according to soil conservation district standards and specifications.
- 7. Level diversion dikes, sediment basins, and silt traps after areas that drain into them are stabilized. Establish permanent vegetation on these areas. Sediment basins that are to be retained for storm-water detention may be seeded to permanent vegetation soon after they are built.
- 8. Discharge water from outlet structures at nonerosive velocities.
- 9. Attempt to eliminate the need for a drainage way on the west side of the new roadway in the wetland area to prevent drainage of the wetland.
- 10. Limit the use of road deicing chemicals (you may wish to consider this for the present road also).

Based on my investigation, I believe that the relocation of Lac La Belle Drive along the east margin of the conservancy zoned wetland will not adversely impact the wetland provided the above recommendations are followed.

If you have any questions, please feel free to contact me.

Sincerely,

Paul Scott Hausmann

Water Management Coordinator

PSH:jlm

Appendix B

VILLAGE OF LAC LA BELLE DETAILED ALTERNATIVE COST ESTIMATES

JAHNKE & JAHNKE ASSOCIATES INC.

CONSULTANTS IN

ENGINEERING, PLANNING, SUBDIVISIONS AND SURVEYING Telephone 711 W. Moreland Blvd 542-5797

Waukesha, Wisconsin 53186

February 23, 1982

PRELIMINARY COST ESTIMATE LAC LA BELLE DRIVE - ROAD RELOCATION

Estimates based on relocation as shown on Plan File No. Oconomowow 26 includes topsoil stripping where specified, removal and disposal of trees and brush, removal of certain buildings, placement of culverts to maintain drainage patterns, cut and fill as specified, place fabric mat where specified, place 10" of gravel, 3" of asphalt, obliterate sections of old road as designated, replace topsoil, seed and mulch. Some utility relocation may be required by electric and telephone companies.

Estimates do not include right-of-way acquisition, appraisal fees, legal fees, driveway culverts or driveway relocation.

AREA "B":

Grading - 2800 l.f. @ \$10.00/ft.	\$ 28,000.00
Gravel (10") - 5000 tons @ \$5.00/ton	25,000.00
Fabric - 10,000 s.y. @ \$1.00/s.y.	10,000.00
Asphalt (3") - 1000 tons @ \$25.00/ton	25,000.00
Landscaping - 12,500 s.y. @ \$1.60/s.y.	20,000.00
Tree clearing and grubbing	4,000.00
Building demolition	1,000.00
Culverts	3,000.00
Utility relocation	1,000.00
Road obliteration	2,000.00
Engineering and surveying	11,000.00
TOTAL	\$130,000.00
\$46.40/ft. including engineering	

AREA "C":

Grading - 3000 l.f. @ \$10.00/ft.	\$ 30,000.00
Gravel (10") - 5200 tons @ \$5.00/ton	26,000.00
Fabric - 10,000 s.y. @ \$1.00/s.y.	10,000.00
Asphalt (3") - 1100 tons @ \$25.00/ton	27,500.00
Landscaping - 13,500 s.y. @ \$1.60/s.y.	21,600.00
Tree clearing and grubbing	10,000.00
Culverts	3,000.00
Utility relocation	900.00
Engineering and surveying	11,000.00
TOTAL	\$140,000.00
\$45.67/ft. including any ineering	

AREAS "D" AND "E":

Grading - 4100 l.f. @ \$15.00/ft.	\$ 61,500.00
Gravel (10") - 6000 tons @ \$5.00/ton	30,000.00
Fabric - 12,500 s.y. @ \$1.00/s.y.	12,500.00
Asphalt - 1500 tons @ \$25.00/ton	37,500.00
Landscaping - 17,500 s.y. @ \$1.60/s.y.	28,000.00
Tree clearing and grubbing	3,000.00
Building demolition	1,000.00
Culverts	4,000.00
Utility relocation	2,000.00
Road obliteration	2,000.00
Engineering and surveying	18,500.00
TOTAL	\$200,000.00
\$48.78/ft. including engineering	

PREPARED BY:

JEROME G. WEGNER, P.E. JAHNKE & JAHNKE ASSOCIATES INC. 711 W. Moreland Blvd. Waukesha, Wisconsin 53186

McCartan-Egan Real Estate & Appraisal Co., Itd.

1305 NORTH BARKER ROAD BROOKFIELD, WISCONSIN 53005

TELEPHONE (414) 782 8200

TOM H. MCCARTAN M.A.L.S.R.P.A.-SR WA WILLIAM T. EGAN, R.M.

JAMES A, MARTH ROBERT A, JAKUBOWSKI SCOTT L, WILLMAN

February 19, 1982

Mr. Joseph L. Lakota Village President - Lac La Belle c/o Planned Futures Incorporated P. O. Box 284 Oconomowoc, Wisconsin 53066

Dear Mr. Lakota:

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Per your request we have made a preliminary compensation survey on the proposed relocation of Lac La Belle Drive per a plat by Jahnke & Jahnke dated February 4, 1982. The compensation estimate gives consideration to area acquired, buildings acquired, special benefits, necessary building modifications and driveway relocation, on those parcels which are directly affected by an acquisition. Incidental claims by other parties affected by the project, costs of removal of existing roadway or driveways, and relocation assistance are excluded from our survey. This survey is very preliminary in nature based on visual inspection of the properties from the existing right of way due to inclement weather conditions. On this basis, our premininary compensation estimates for the various segments is as follows:

Segment	(Compensation	Estimate
В		\$40,000	
C		5,000	
D		35,000	
E		17,000	_
	Total	\$97,000	

In addition, if Alternate 1 is used on Segment B, the compenstaion estimate would increase by approximately \$4,000.

We propose to perform appraisals made in compliance with Wisconsin Chapter 32 on the basis of a per parcel fee of \$300 assuming we are awarded the entire project, currently consisting of 44 parcels. Total appraisal costs are \$12,100. Quotes on individual segments would vary depending on the total number of parcels being appraised. We trust this estimate is sufficient for your purposes at this time and look forward to being of service in the future.

Sincerely, 5 Jaw

Tom R. McCartan, President



cc: Dale Arenz

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812 S. Fisk Street / Green Bay, WI 54304 / (414) 499-3727

February 19, 1982

Mr. Joseph Lakota, President Village of Lac La Belle 522 Lac La Belle Drive Oconomowoc, Wisconsin 53066

Dear Mr. Lakota:

I have reviewed the revised taking for the new road through Lac La Belle. Based on our discussion at Dale Arenz office on January 29th, I would estimate that it would take an average of 10 hours per parcel for negotiations. This is considering that the village would have a local resident who could do some of the leg work on the project. This would still include a public relations meeting with the owners prior to the appraisals being made as well as meeting to present the offer, keeping the village board informed as to the status of negotiations, meeting with the engineer when necessary, and working with the village attorney in unusual cases, or when condemnation may be necessary.

My fee for this work is \$30.00 per hour plus expenses which normally run 10% of the hourly rate. Based on the current estimate of 31 parcels the total acquisition cost is estimate to be \$10,000.

If you have any questions on this estimate, please give me a call.

Sincerely,

Regueil 11D rober

Reginald H. Draheim

RHD/jb

cc: Mr. Dale Arenz