3 *Comprehensive Plan 2030*
TRANSPORTATION PLAN

INTRODUCTION AND OVERVIEW

Brooklyn Center is a fully developed suburb with a well-established roadway network. No major new roads will be required as part of the Transportation Plan. The plan will examine ways to upgrade or maintain the existing transportation system, including transit, bicycling and walking, in order to accommodate changes in the City's land use.

The Transportation Plan will function as a guide to:

- Identify the City's existing and proposed transportation network;
- Identify major investments to meet transportation needs; and
- Support the City's land use goals and objectives.

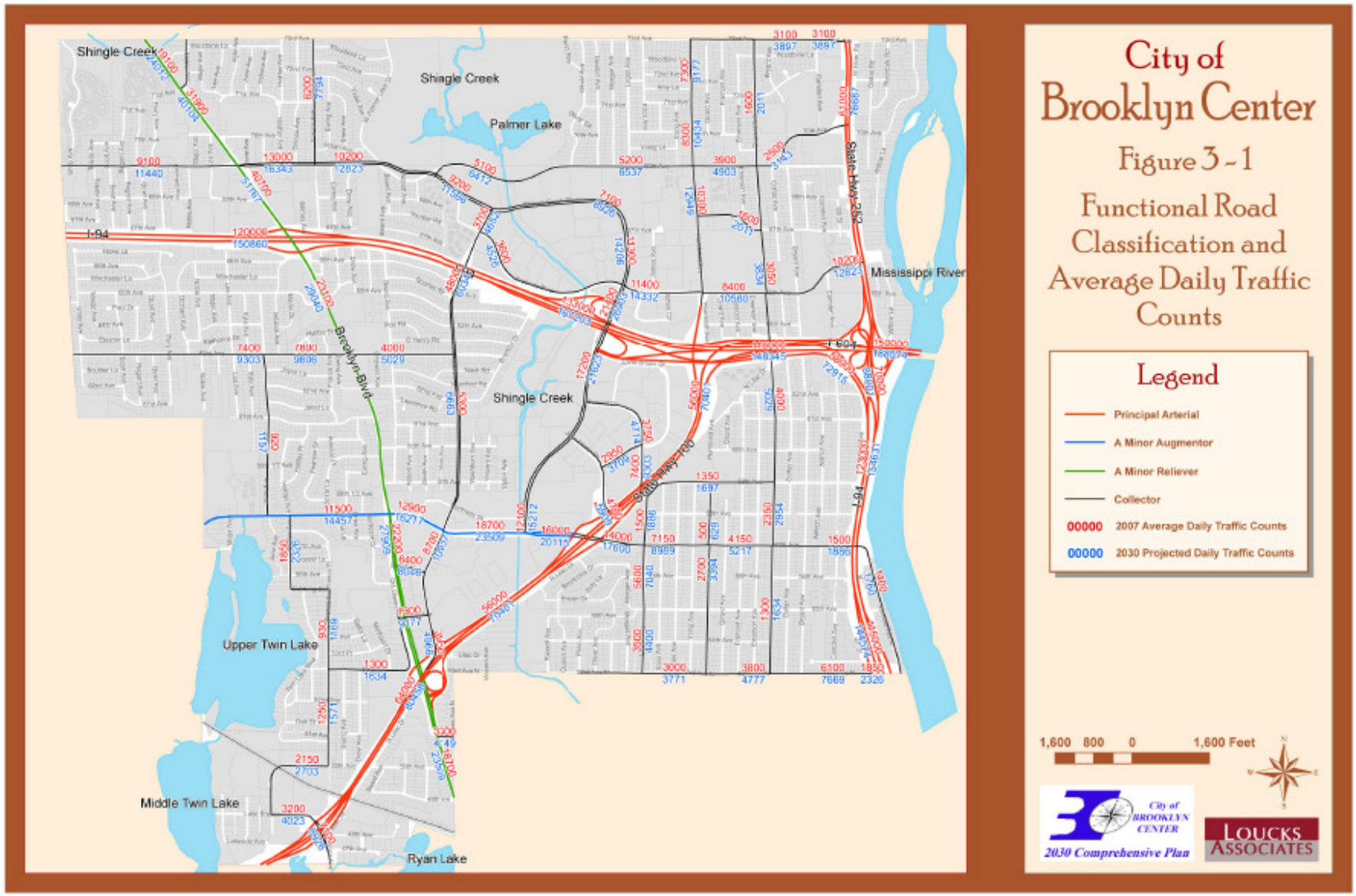
This chapter of the *Comprehensive Plan* includes the following elements:

- Street and road system
- Street and road system plan
- Transit
- Bicycle and pedestrian movement
- Travel demand management
- Goods movement
- Aviation
- The relationship between land use and transportation

STREET AND ROAD SYSTEM

FUNCTIONAL CLASSIFICATION SYSTEM

Functional classification is a tool used in transportation planning and traffic engineering to categorize streets by the type of transportation service provided and the roadway's relationship to surrounding land uses. The purpose of a functional classification system is to create a hierarchy of roads that collects and distributes traffic from neighborhoods to the metropolitan highway system in as efficient a manner as possible, given the topography and other physical constraints of the area. Functional classification also involves determining what function each roadway should perform before determining street widths, speed limits, intersection control or other design features. Functional classification ensures that non-transportation factors such as land use and development are taken into account in the planning and design of streets and highways.


City of
Brooklyn Center
Figure 3 - 1
Functional Road Classification and Average Daily Traffic Counts
Legend
Principal Arterial
A Minor Augmentor
A Minor Reliever
Collector
00000 2007 Average Daily Traffic Counts
00000 2030 Projected Daily Traffic Counts
1,600 800 0 1,600 Feet
City of BROOKLYN CENTER
2030 Comprehensive Plan
LOUCKS ASSOCIATES
Shingle Creek
Palmer Lake
Mississippi River
I-94
Brooklyn Blvd
Upper Twin Lake
Middle Twin Lake
Ryan Lake
State Hwy 252
I-694

The Metropolitan Council, in its *Transportation Policy Plan,* presents a functional classification system for the metropolitan area. The major classifications are:

- Principal arterial
- "A-minor" arterial
- "B-minor" or "other minor" arterial
- Collector
- Local Streets

The local street system is not included in the Metropolitan Council's Transportation System. The function of each of these roadways is slightly different depending on whether the roadway is in an urban or rural area. Only the urban characteristics are applicable to Brooklyn Center.

The elements of the functional classification system are described below, along with a listing of which roads are in each classification. These road classifications are described in more detail in the *Transportation Policy Plan.* Figure 3-1 shows the 2007 pattern of road functional classification, and Table 3-2 lists roads by functional class, number of lanes, jurisdictional class and sub-class.

Principal arterials are the highest roadway classification and are considered part of the metropolitan highway system. These roads are intended to connect metropolitan centers with one another and connect major business concentrations, important transportation terminals and large institutional facilities. Brooklyn Center is crossed by several of the region's principal arterials:

- I-94
- I-694
- Trunk Highway 100
- Trunk Highway 252

Principal arterials are further classified as "Freeways" and "Other Principal Arterials." The latter category may be designed with high capacity, controlled, at-grade intersections rather than interchanges, although grade separation is desirable. In Brooklyn Center, T.H. 252 between 73rd Avenue North and I-94 falls into the "Other Principal Arterial" category because of the at-grade intersections. All arterials are under Mn/DOT's jurisdiction.

Minor arterials are intended to connect important locations within the city with access points on the metropolitan highway system and with important locations outside the city. These arterials are also intended to carry short to medium trips that would otherwise use the regional system.

The Metropolitan Council working cooperatively with Mn/DOT, Counties and Cities, defined a network of A Minor arterials that are intended to either relieve traffic on the principal arterials or serve as substitutes for principal arterials. The A Minor arterials were subdivided into relievers, expanders, connectors and augmenters.

In Brooklyn Center, there are two roads classified as A Minor arterials:

- Brooklyn Boulevard (County Road 152)
- Bass Lake Road (County Road 10) west of T.H. 100

The Metropolitan Council classifies Brooklyn Boulevard as a reliever and Bass Lake Road as an augmenter. Relievers provide direct relief and support for congested principal arterials. They provide relief for long

trips and accommodate medium length trips. Augmenters, literally, augment the capacity of principal arterials by serving higher density areas and long-range trips. Both of the minor arterials are under the jurisdiction of Hennepin County.

Collector roadways are designed to serve shorter trips that occur entirely within the city, and to collect and distribute traffic from neighborhoods and commercial/industrial areas to the arterial system. Brooklyn Center has identified an extensive network of collector roads, all of which link neighborhoods with each other, with neighboring cities, with the City Center, or with the regional highway system.

Currently two of the collector roadways are under Hennepin County's jurisdiction:

- 69th Avenue North west of Brooklyn Boulevard,
- Humboldt Avenue/57th Avenue North located just east of T.H. 100.

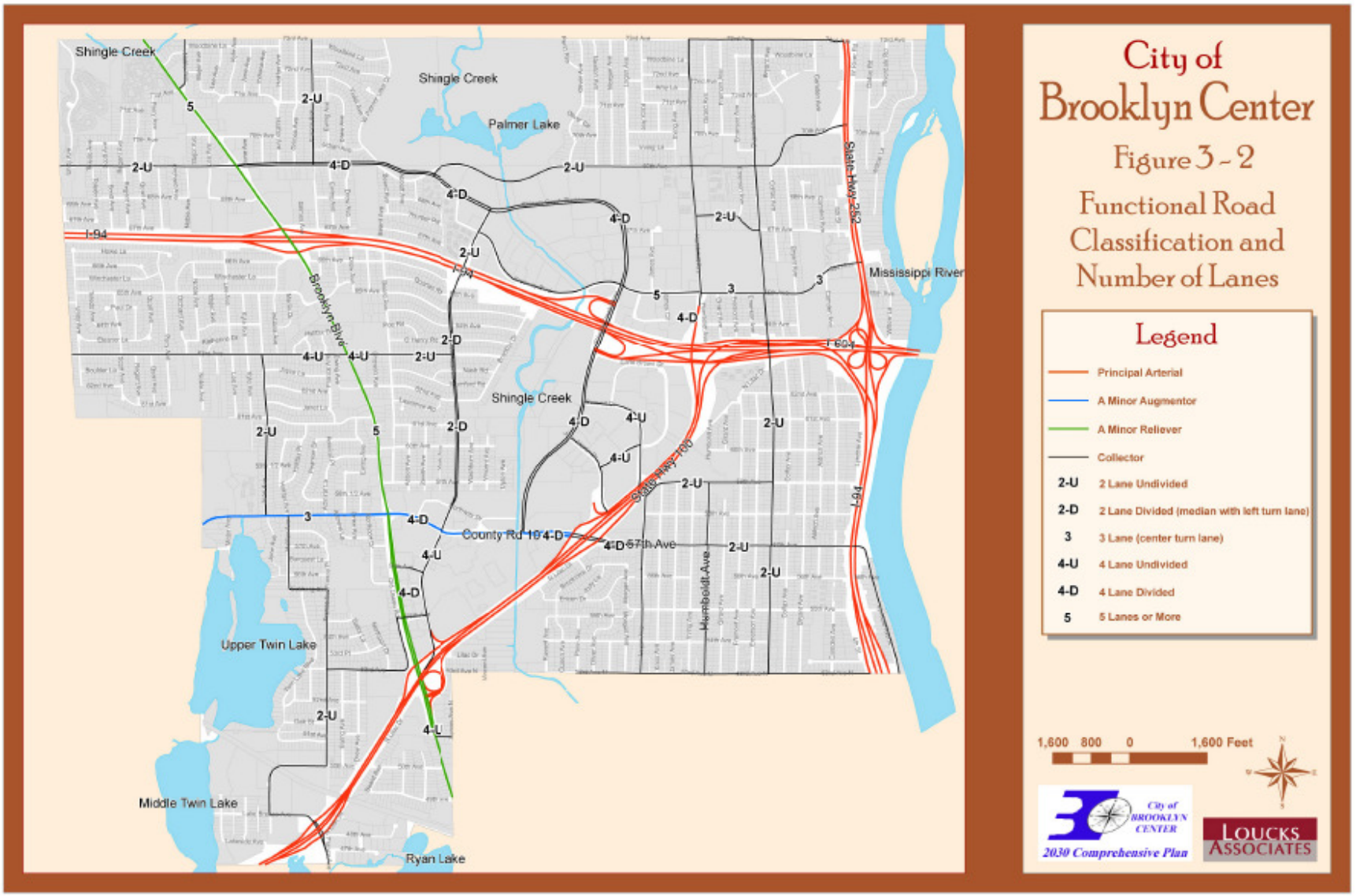
The remaining collector roadways are under the City's jurisdiction. The County classifies Humboldt as a collector since it links to other collectors in north Minneapolis. Figure 3-1 shows it as part of the collector system.

Local streets connect blocks and land parcels; their function is primarily to provide access to adjacent properties. Local streets can also serve as important components of bicycle and pedestrian circulation systems. In most cases, local streets will connect to other local streets and collectors, although in some cases they may connect to minor arterials. All other streets within the City are classified as local streets.

Table 3-1: Street Classifications in Brooklyn Center

Functional Classification	Jurisdictional Classification	Sub-class	Lanes
Principal Arterials			
I-94	State	Freeway	6+
I-94/I-694	State	Freeway	6+
TH 252	State	Other	6
T.H. 100	State	Freeway	4
A Minor Arterials			
Brooklyn Boulevard (CSAH 152)	County	Reliever	4/5
58th Avenue/CR 10	County	Augmenter	3/4
Collectors			
69th Ave N (CR 130) (west of Brooklyn Blvd.)	County		2
69th Avenue N (east of B. Blvd.)	City		4/2

Humboldt Ave N/57th Ave N (CR 57)	County	4/2
Humboldt Ave N (north of I-94/694)	City	4/2
57th Ave N (east of Humboldt Ave N)	City	4
Noble Ave N	City	2
France Ave N (2 segments)	City	2
June Ave N (58th Ave to 63rd Ave N)	City	2
Halifax Ave/Eckberg Dr/France Ave/50thAve/AzeliaAve/Lakebreeze Ave	City	2
55th Ave N/56th Ave N (Xerxes Ave to CSAH 152)	City	4
53rd Ave N/Brooklyn Blvd frontage (France Ave to 55th Ave N)	City	2
John Martin Drive	City	4
Earle Brown Drive (John Martin Drive to Summit Drive)	City	4
Summit Drive	City	4
59th Ave N/Logan Ave N (Dupont Ave N to 53rd)	City	2
Lyndale Ave N	City	2
67th Ave N (Humboldt to Dupont Ave N)	City	2
63rd Ave N (west of Xerxes)	City	4/2
Shingle Creek Parkway	City	4
Xerxes Ave N	City	4/2
Freeway Boulevard (65th-66th Ave N)	City	2-5
Dupont Ave N	City	2
73rd Ave N (east of Humboldt)	City	2
53rd Ave N (east of Penn)	City	2
51st Ave N (east of Brooklyn Blvd.)	City	2


City of
Brooklyn Center
Figure 3 - 2
Functional Road
Classification and
Number of Lanes
Legend
Principal Arterial
A Minor Augmentor
A Minor Reliever
Collector
2-U 2 Lane Undivided
2-D 2 Lane Divided (median with left turn lane)
3 3 Lane (center turn lane)
4-U 4 Lane Undivided
4-D 4 Lane Divided
5 5 Lanes or More
1,600 800 0 1,600 Feet
Shingle Creek
Palmer Lake
I-94
Brooklyn Blvd
State Hwy 252
Mississippi River
I-694
State Hwy 100
Humboldt Ave
County Rd 10
57th Ave
Upper Twin Lake
Middle Twin Lake
Ryan Lake
City of BROOKLYN CENTER
2030 Comprehensive Plan
LOUCKS ASSOCIATES

JURISDICTIONAL CLASSIFICATION

Jurisdiction over the City's roadway system is shared among three levels of government: the State of Minnesota, Hennepin County, and the City. The Minnesota Department of Transportation (Mn/DOT) maintains the interstate and State Trunk Highway System. Hennepin County maintains the County State Aid Highway (CSAH) and County Road Systems. The City maintains the remaining streets.

Road jurisdiction is logically linked to the geographic area the roadway serves and the level of government capable of administering and operating the road. Generally, jurisdiction can be linked to functional classification as follows, although there is some overlap between classes:

- Principal Arterials — Federal and State
- Minor Arterials — County
- Collectors — City
- Local Streets — City

EXISTING AND FORECAST TRAFFIC

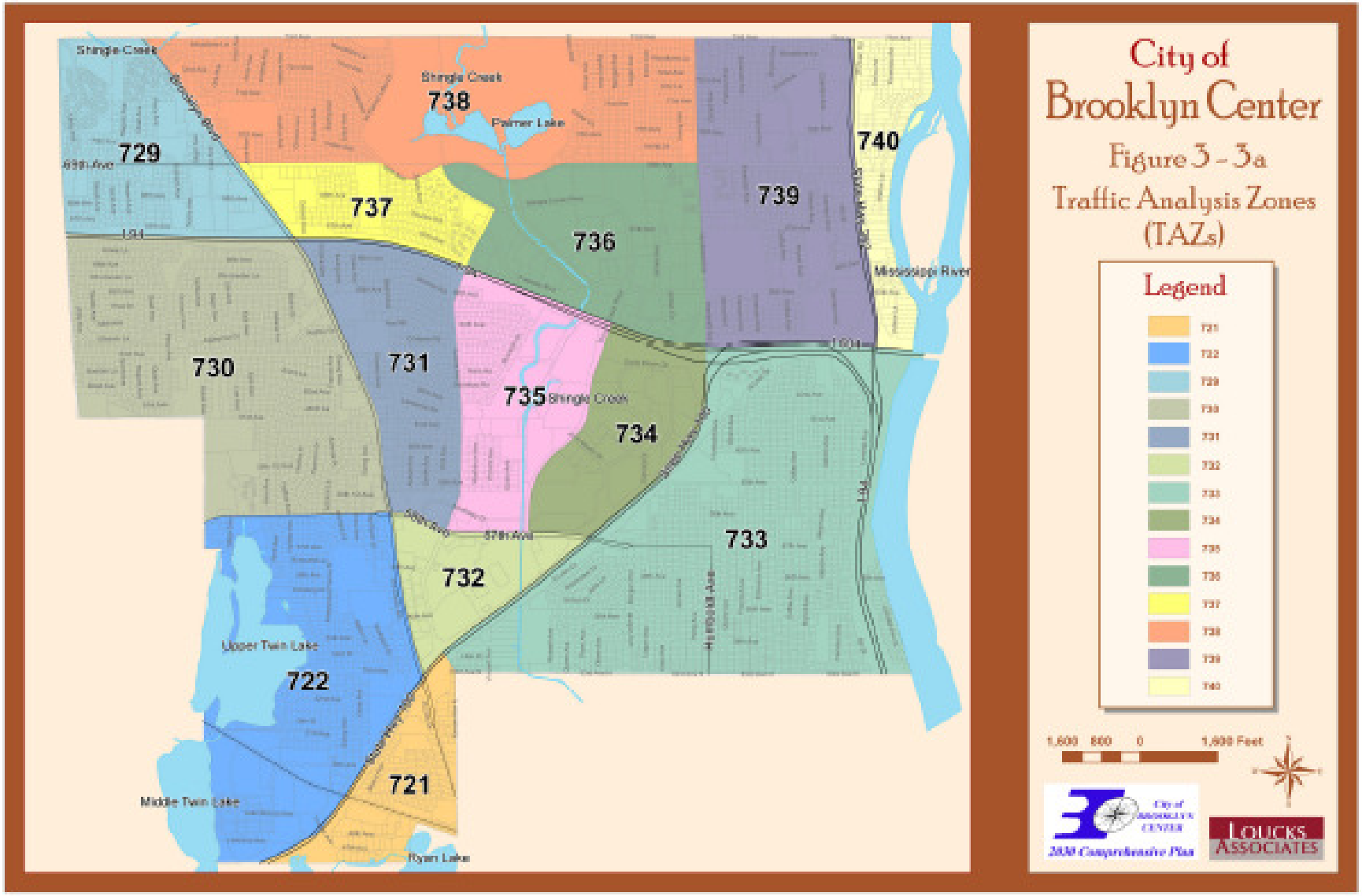
The most recent (2007) traffic counts and the forecast 2030 projected traffic counts are shown in Figure 3-1. The 2007 average daily traffic volumes (ADT) and the 2030 projected daily traffic volumes (PDT) are provided by the Minnesota Department of Transportation. Given Brooklyn Center's recent increase in vacancies and underutilization of certain commercial properties and employment centers, traffic volumes are expected to increase with the redevelopment of higher and better uses on these properties.

The existing and forecast traffic volumes are compared to the size and capacity of each roadway in order to determine where capacity problems exist or are expected to occur in the future. Figure 3-2 shows the number of lanes and general configuration of the City's major roadways in order to help identify potential capacity problems.

Roadway capacity problems arise when the roadway cannot efficiently handle the traffic using it, particularly at intersections. Efficient traffic movement is described in terms of "level of service" (LOS), categorized using the letters "A" through "F." Table 3-2 illustrates LOS characteristics. Typical roadway capacities for a fully developed area like Brooklyn Center are as shown in Table 3-3.

TRAFFIC ANALYSIS ZONES

For purposes of regional transportation planning, the Metropolitan Council divides the region into Traffic Analysis Zones (TAZs). Figure 3-3A shows the Metropolitan Council's TAZ boundaries and Hennepin County's further subdivision of these zones. Regional population, households and employment forecasts are allocated to the TAZs as a means of forecasting traffic volumes. These forecasts are shown on Figure 3-3B. Because Brooklyn Center is a fully developed community, the trips generated within the TAZs are not expected to change significantly during the period of this plan. Slight changes could occur if and when certain properties are redeveloped.


City of
Brooklyn Center
Figure 3 - 3a
Traffic Analysis Zones
(TAZs)
Legend
721
722
729
730
731
732
733
734
735
736
737
738
739
740
Shingle Creek
Palmer Lake
Mississippi River
Upper Twin Lake
Middle Twin Lake
Ryan Lake
1,600 800 0 1,600 Feet
2030 Comprehensive Plan
LOUCKS
ASSOCIATES

TRAFFIC ANALYSIS ZONE	POPULATION				HOUSEHOLDS			
	March-07				March-07			
TAZ	2000	2010	2020	2030	2000	2010	2020	2030
721	521	527	545	527	216	223	227	229
722	2,475	2,503	2,588	2,503	1,118	1,154	1,174	1,184
729	2,407	2,434	2,517	2,434	948	979	996	1,004
730	4,960	5,016	5,186	5,016	1,878	1,939	1,972	1,988
731	1,957	1,979	2,046	1,979	702	725	737	743
732	0	0	0	0	0	0	0	0
733	5,812	5,877	6,076	5,877	2,249	2,322	2,561	2,381
734	271	274	283	274	187	193	196	198
735	1,476	1,493	1,544	1,493	626	646	657	662
736	744	752	777	752	292	301	306	308
737	994	1,005	1,039	1,005	379	391	398	402
738	2,848	2,880	2,978	2,880	1,047	1,081	1,099	1,108
739	3,967	4,012	4,148	4,012	1,491	1,539	1,565	1,578
740	740	748	773	748	297	307	312	315
	29,172	**29,500**	**30,500**	**29,500**	**11,430**	**11,800**	**12,200**	**12,100**

TRAFFIC ANALYSIS ZONE	TOTAL EMPLOYMENT				RETAIL EMPLOYMENT				NON-RETAIL EMPLOYMENT			
	March-07											
TAZ	2000	2010	2020	2030	2000	2010	2020	2030	2000	2010	2020	2030
721	458	880	880	900	26	50	50	50	432	830	830	850
722	773	773	773	790	29	30	30	30	744	743	743	760
729	872	972	972	995	367	410	410	410	505	562	562	585
730	690	690	690	710	211	210	210	215	479	480	480	495
731	665	665	665	680	607	607	607	610	58	58	58	70
732	2,506	2800	2900	2970	2,110	2355	2392	2400	396	445	508	570
733	256	200	200	205	36	40	40	40	220	160	160	165
734	3,407	3800	4100	4200	922	1027	1050	1055	2,485	2,773	3,050	3,145
735	961	961	961	985	183	183	183	185	778	778	778	800
736	4,246	4341	4341	4395	719	725	725	740	3,527	3,616	3,616	3,655
737	606	806	806	825	189	250	250	255	417	556	556	570
738	240	240	240	245	33	33	33	35	207	207	207	210
739	916	970	970	995	20	20	20	25	896	950	950	970
740	102	102	102	105	59	60	60	60	43	42	42	45
	16,698	**18,200**	**18,600**	**19,000**	**5,511**	**6,000**	**6,060**	**6,110**	**11,187**	**12,200**	**12,540**	**12,890**

City of Brooklyn Center

Figure 3-3b

Forcast by TAZ

City of BROOKLYN CENTER
2030 Comprehensive Plan

Table 3-2: Traffic Level of Service Characteristics

Level of Service	Characteristics
A	• Most Vehicles Do Not Stop At All • Most Vehicles Arrive During Green Phase • Progression Is Extremely Favorable
B	• More Vehicles Stop Than LOS A • Good Progression
C	• Number of Vehicles Stopping Is Significant • Fair Progression • Individual Cycle Failures
D	• Many Vehicles Stop • Unfavorable Progression • Individual Cycle Failures Are Noticeable
E	• Limit of Acceptable Delay • Poor Progression • Frequent Cycle Failures
F	• Unacceptable Delays • Poor Progression • Oversaturation

Table 3-3: Daily Roadway Capacities

Area Type — All are developed

	Daily Capacity by Level of Service (LOS)				
Cross-Section	A	B	C	D	E
2-lane	6,600	7,900	9,000	10,100	11,200
3-lane	12,000	14,000	16,000	18,000	20,000
4-lane undivided	17,000	18,700	21,200	24,500	27,300
4-lane divided	18,700	21,700	25,000	28,200	31,300
4-lane expressway	22,800	26,500	30,000	34,000	38,000

Notes:
For developed area assume minimum acceptable LOS of "C".
For developing areas assume minimum acceptable LOS of "C".
For rural areas assume minimum acceptable LOS of "B".
-UNACCEPTABLE OPERATIONS

COMPARISON OF TRAVEL DEMAND AND REGIONAL HIGHWAY SYSTEM CAPACITY

The City of Brooklyn Center believes that its land use plan is in conformance with the Metropolitan Council's *Transportation Guide/Policy Plan.* Brooklyn Center is a nearly fully developed community in which increased traffic generation may occur in two ways: increased per-capita trip-making and intensified land use. As described in the Land Use and Redevelopment Plan, redevelopment and infill will be pursued along Brooklyn Boulevard, Humboldt/65th Avenue/I-694 and the City Center Opportunity Site, plus few other isolated locations such as the Gateway area near 66th Avenue and T.H. 252.

However, Brooklyn Center feels that it will be difficult to achieve the 2020 projections for households and employment that the Metropolitan Council has established for Brooklyn Center and which are the basis for the regional travel model. Opportunities for redevelopment are relatively limited given the young age and sound condition of most structures. Increased traffic on the regional system may be offset somewhat by possibilities for improved transit service resulting from higher densities and more mixed land uses. Consequently, the City expects that its land use plan will not result in auto trips on the regional highway system beyond those forecast by the Metropolitan Council; the City also feels that its land use plan will further Council objectives of increased transit ridership and travel demand management.

While the City of Brooklyn Center believes they will not significantly contribute to traffic demand on the regional highway system, they are concerned about the growth of traffic on this system and its impact on Brooklyn Center. Traffic projections on I-94, I-694, T.H. 100, T.H. 252 and Brooklyn Boulevard indicate increasing traffic demand from outside the city, which will have an impact on the city's access to the regional highway system. The City believes improvements to the regional highway system are important for economic development in the Brooklyn Center.

STREET AND ROAD SYSTEM ISSUES AND PROBLEMS

The transportation issues in Brooklyn Center have been grouped into the following categories for discussion:

- Capacity Deficiencies
- Safety
- Jurisdiction
- Functional Classification

CAPACITY DEFICIENCIES

Most of the capacity deficiencies and congestion that affect Brooklyn Center today occur on the principal and minor arterial system. Congestion occurs in the peak hours on T.H. 252 north of I-694, and on I-694 west of I-94. There is also significant off-ramp congestion on Brooklyn Boulevard north of I-694 which can cause backups on the eastbound and westbound I-94. The traffic forecasts indicate that the traffic demand on these regional facilities will continue to increase and the congestion could grow worse.

Further studies need to be done to analyze impacts of the limited freeway movements of northbound Highway 100 to westbound I-94 and eastbound I-94 to southbound Highway 100 and the effect on the local transportation system. Changing this interchange to a full interchange could relieve regional through-traffic on Brooklyn Boulevard.

The 2030 forecasts anticipate low to moderate growth in traffic on the local and collector roadway system. Most of this increase in demand will result from increasing congestion on the regional highway system. This growth in traffic on collector roadways is expected to begin to cause some congestion on some of these roadways, including:

- 63rd East of Brooklyn Boulevard
- 69th Avenue East of Brooklyn Boulevard
- Humboldt Avenue North of 65th Avenue
- Shingle Creek Parkway north of I-694
- Noble Avenue north of Brooklyn Boulevard
- 66th Avenue North west of T.H. 252

SAFETY

The major areas of concern relative to traffic safety in Brooklyn Center is on Brooklyn Boulevard and on the collector roadways that are nearing capacity, such as 69th Avenue, 66th Avenue, 63rd Avenue and Humboldt Avenue. The high traffic volumes on a roadway that is intended to have a relatively high level of access can become a problem because of the number of vehicle conflicts that will occur.

JURISDICTION

Currently two of the collector roadways serving the City of Brooklyn Center are under the jurisdiction of Hennepin County-- 69th Avenue west of Brooklyn Boulevard (CSAH 130) and Humboldt Avenue between 53rd and 57th Avenue/57th Avenue between Logan and Humboldt (CSAH 57). Hennepin County would like to turn these roadways back to the City. There are capacity, maintenance and funding issues that must be resolved before this would be considered.

FUNCTIONAL CLASSIFICATION

A number of streets have been upgraded as collectors to the Functional Classification System map since the last comprehensive plan was completed. Most notable among these are the following:

- John Martin Drive, Summit Drive and Earle Brown Drive (between John Martin and Summit); and stretches of 55th and 56th Avenues West between Brookdale and Brooklyn Boulevard in City Center;
- Humboldt and Logan Avenues North between 53rd and 59th Avenues, 59th Avenue between Logan and Dupont, and Lyndale between 53rd and 57th Avenues in the southeast neighborhood; and
- Halifax, Eckberg Drive, France, 50th, Azelia and Lakebreeze and 53rd between France and the T.H.100 frontage road, in the southwest neighborhood; and
- 67th Avenue between Humboldt and Dupont in the northwest neighborhood.

Hennepin County is interested in turning these roads back to the City. However there are capacity, maintenance and funding **issues** which need to be resolved before this can occur.

STREET AND ROAD SYSTEM PLAN

Brooklyn Center is a fully developed city and its road system is in place. No new roads are expected to be constructed. However, these existing roads can be improved to address capacity problems:

- T.H. 252
- T.H.100
- I-694
- Brooklyn Boulevard north of I-694
- 69th Avenue west of Brooklyn Boulevard

Specific Roadway Improvements

Trunk Highway 100

The only non-freeway portion of TH 100 between Glenwood Avenue in Golden Valley and 50th Avenue N. in Brooklyn Center was upgraded to freeway design standards since the 2000 comp plan was completed. Further studies need to be done to analyze impacts of the limited freeway movements of northbound Highway 100 to westbound I-94 and eastbound I-94 to southbound Highway 100 and the effect on the local transportation system. Changing this interchange to a full interchange could relieve regional through-traffic on Brooklyn Boulevard.

I-694

An additional lane was added between I-94 and I494 to accommodate increased traffic on I-694 and the traffic demand being placed on 63rd and 69th, the City's parallel collector roadways.

TH 252

Mn/DOT's Transportation System Plan shows TH 252 north of I-694 as an expansion corridor. The extension of TH 610 and expansion of the TH 610 bridge are expected to cause an increase in traffic on this segment of TH 252. Capacity improvements on this segment of TH 252 would help to reduce traffic demand on the City's parallel collector roadways and maintain the City's ability to access the regional highway system. Mn/DOT and the cities of Brooklyn Center and Brooklyn Park are studying elimination of several signalized intersections north of I-94/I-694 to improve traffic flow. The difficulty is that several properties including businesses get access from the 66th Avenue, 70th Avenue and 73rd Avenue at-grade intersections with TH 252. If these are eliminated, care must be given in the design to provide adequate access to these properties within the context of the limited area of right-of-way.

The City of Brooklyn Center anticipates additional infill and redevelopment in the Gateway area along TH 252 north of I-694. The intersection on TH 252 at 66th Avenue represents a potential capacity constraint to development in this area. Some additional improvements will be needed at this intersection (potentially an interchange) in order to accommodate the additional traffic from additional development in the Gateway area. The City of Brooklyn Center will work with Mn/DOT to identify the improvements needed that are consistent with other improvements Mn/DOT plans to make in the TH 252 corridor.

BROOKLYN BOULEVARD

Brooklyn Boulevard north of I-694 has been widened and improved from 65th to Noble/71st since the last comprehensive plan was completed. As discussed below and elsewhere in this plan numerous improvements to the section of Brooklyn Boulevard south of I-694 need to be made to increase the aesthetic appeal and provide for long term growth.

69TH AVENUE

The improvements on Brooklyn Boulevard also included some improvements on 69th Avenue at the intersection with Brooklyn Boulevard. The forecast volumes indicate that some capacity improvements will also be needed to the west to the Brooklyn Center city limits. The City will need to work with Hennepin County on the capacity improvements that will be necessary prior to turnback of this roadway to the City.

ACCESS MANAGEMENT

The access to Mn/DOT highways in the City of Brooklyn Center is largely fixed in place. I-94 and I-694 are interstates with access only occurring at interchanges. These interchange locations are set and the City does not expect these locations to change. Access to TH 100 has been resolved with the TH 100 improvements. These improvements, however, have left eastbound I-94 to southbound TH 100, and northbound 100 to west bound I-94 difficult. Local streets are used to make these movements including Brooklyn Boulevard, Shingle Creek Parkway and 65th Avenue. Access to TH 252 was set when the roadway was built. The City is not looking for more access but does believe that additional capacity will be needed at the intersection of 66th Avenue and TH 252.

Access to the minor arterial system (Brooklyn Boulevard and Bass Lake Road) will require management in order to maintain the mobility function and safety of these roadways. The Brooklyn Boulevard *Streetscape Amenities Study* and the proposed Brooklyn Boulevard improvements identified a number of access improvements that should be made on Brooklyn Boulevard in order to improve the capacity and safety of this roadway. Access to Bass Lake Road, especially east of Brooklyn Boulevard, should be consolidated to improve safety. Hennepin County has guidelines for desirable access spacing on minor arterials. Although it may not be possible to achieve the desired spacing with the current land use and development patterns on Bass Lake Road, the City will strive to consolidate access wherever possible.

LOCAL SYSTEM MAINTENANCE

In Brooklyn Center, as in many post-war first ring suburbs, most of the infrastructure was constructed in the late 1950s and 1960s. These systems, including local streets, water and sanitary sewer, and storm drainage systems, are now reaching the end of their useful lives and need replacement. In 1992 the City undertook a Pavement Management Study to document pavement conditions and determine the extent of street reconstruction needs. The study showed that about 80 percent of the street mileage should be overlaid or reconstructed.

In response, the City embarked on a program to address these needs in a systematic manner. The Neighborhood Street and Utility Improvement Program is an infrastructure rehabilitation program designed to serve as a catalyst for neighborhood revitalization.

In 2009, Brooklyn Center is in its sixteenth year of constructing neighborhood improvements. Since 1985, approximately 49.8 miles of residential streets and 18.4 miles of State Aid streets have been reconstructed. With over 100 miles of streets and utilities, it will take approximately twelve more years to complete a cycle of infrastructure rehabilitation.

LOCAL TRAFFIC CONTROL

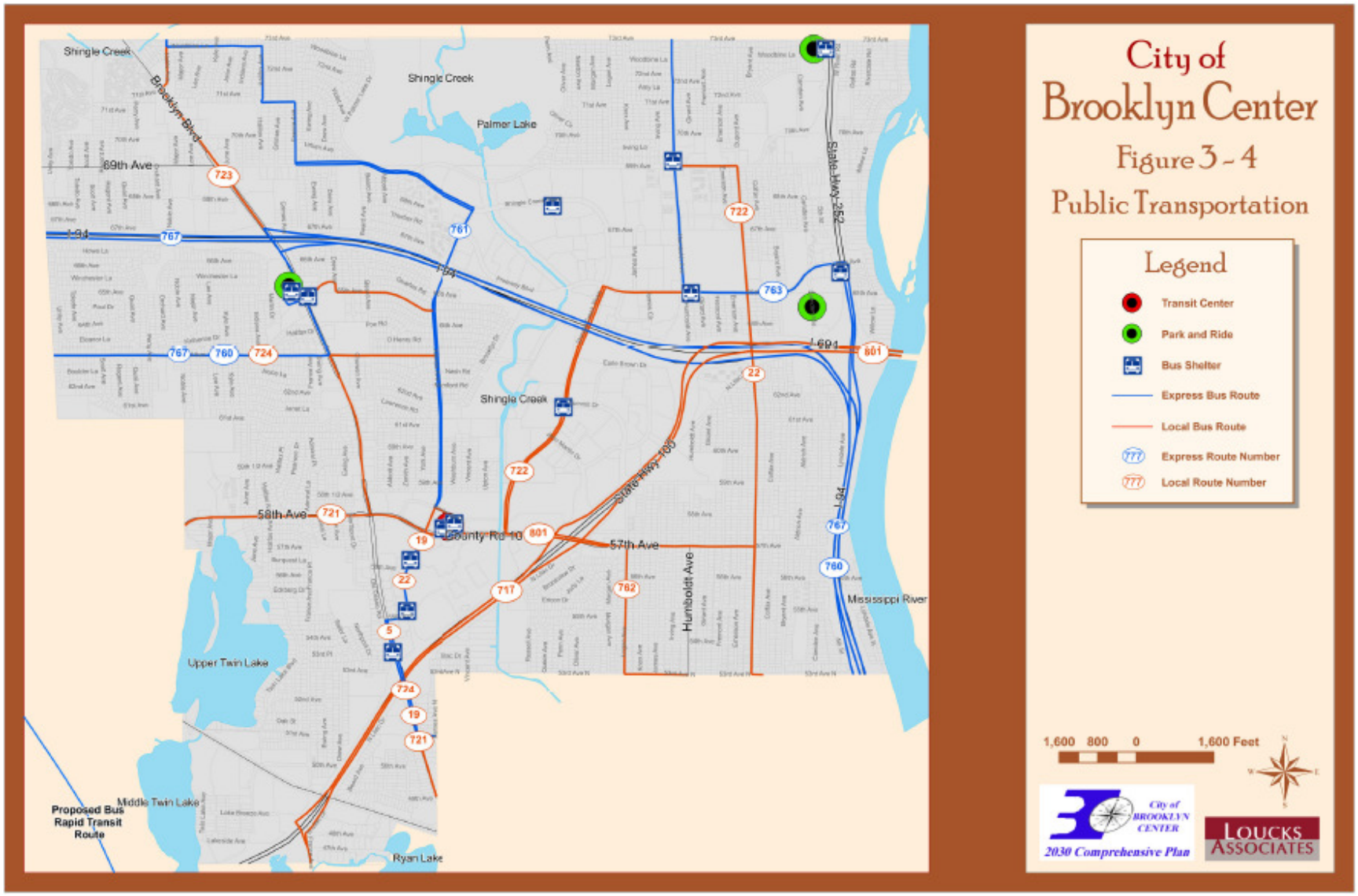
The increasing level of traffic and congestion on the principal, minor, and collector roadways causes increasing amounts of traffic that attempts to cut through residential neighborhoods in order to avoid congested locations and save some travel time. The best solution is to make sure the principal and minor arterials have capacity to serve the traffic demand so delays are minimized. However, on collector roadways it may not be desirable to add capacity since it could encourage more traffic and higher speeds through residential areas. On the other hand it also may not be appropriate to try to calm traffic because this may cause the traffic to divert to local streets. Problems on collector roadways need to be addressed on a case-by-case basis to identify the most appropriate solution.

TRANSIT

As shown in Figure 3-4, the City of Brooklyn Center is well served by local transit routes that operate on most of the City's minor arterial and collector roadways. The City is also well served by express routes providing quick access to downtown on I-94. The City has park and ride lots located on Brooklyn Boulevard just south of I-694, one on the west side of TH 252 at 73rd Avenue and one at 65th Avenue. A transit hub where a number of routes intersect to provide connections to other locations within the City is located north across County Road 10 from Brookdale Center at Northway Drive. Metro Transit has determined that 40 percent of the transit trips in Brooklyn Center go to Brookdale Center, making the site across County Road 10 from Brookdale Center an ideal location for a successful transit hub. Some timed-transfer feeder service was instituted in the 1990s when the transit hub/park and ride facility was located at Brookdale Center and this continued with the relocation of the facility. Further expansion of timed transfer operations and other transit improvements are dependent on the construction of a full-scale transit hub which can accommodate significantly more customers and buses.

The Metropolitan Council's *Transportation Policy Plan* identifies five transit markets in the metropolitan area and the service characteristics and performance guidelines that are appropriate for the different markets. The transit plan also defines four transit service zones where the service is developed to be responsive to the markets they serve. Brooklyn Center is located primarily within the Inner Urban/Suburban Transit Zone. This zone has the second-highest service level in the Metropolitan area. Service in this area should be available 12 to 18 hours a day, seven days a week. A small portion of the northeast corner of the City falls into the Outer Suburban Zone. Given the type of land uses and density of development in this area, the City believes it should be part of the inner urban/suburban transit zone.

The City is within the Metropolitan Transit Taxing District and in Market Area II. Service options for Market Area II include regular-route locals, all-day expresses, small vehicle circulators, special needs paratransit (ADA, seniors), and ridesharing. Metro Mobility serves the paratransit needs of the City and Prism operates its dial-a-ride service


City of
Brooklyn Center
Figure 3 - 4
Public Transportation
Legend
Transit Center
Park and Ride
Bus Shelter
Express Bus Route
Local Bus Route
777 Express Route Number
777 Local Route Number
Shingle Creek
Brooklyn Blvd
Palmer Lake
69th Ave
I-94
Shingle Creek
Shingle Creek
State Hwy 252
I-694
58th Ave
County Rd 10
57th Ave
State Hwy 169
Humboldt Ave
I-94
Mississippi River
Upper Twin Lake
Middle Twin Lake
Ryan Lake
Proposed Bus Rapid Transit Route
1,600 800 0 1,600 Feet
City of BROOKLYN CENTER
2030 Comprehensive Plan
LOUCKS ASSOCIATES

The *Transportation Policy Plan* identifies the primary factors that can influence the creation of transit- and pedestrian-friendly communities. These are:

- Concentrated, compact development patterns
- Mixing of land uses within 40 to 160-acre neighborhoods
- Pedestrian- and transit-oriented design, as expressed in building and parking locations, transit shelters, sidewalks and paths, etc.

As described in the Land Use, Redevelopment and Community Image Plan, Brooklyn Center's goals include the revitalization and intensification of certain areas, notably the City Center Opportunity Site and the Brooklyn Boulevard corridor, with a more diversified mixture of uses that will reduce reliance on the private automobile and encourage walking and transit use. The City is ready to work with Metro Transit on strategies that will enhance transit service to such mixed-use areas.

TRAVEL DEMAND MANAGEMENT

Travel Demand Management (TDM) is a set of techniques to reduce peak period vehicle trips by 1) shifting travelers from driving alone into shared ride arrangements, such as ridesharing or transit, or 2) by encouraging alternative work arrangements, such as flextime and telecommuting that remove trips from the peak travel times.

In this metropolitan area and throughout the nation our ability to build our way out of growing congestion and environmental problems is severely limited by the cost of roads and the environmental and social impacts of new and expanded roads. Brooklyn Center's road system allows for very little expansion if any, due to constrained rights-of-way and established land uses. Therefore, the City supports travel demand management as a way to alleviate increasing traffic congestion.

TDM techniques are best implemented through a partnership of cities, regional and state agencies, and employers to encourage travelers to change their behavior through incentives, enhanced services and high occupancy facilities. For example, employers can provide subsidized transit passes, allow staggered work hours to allow travel outside of peak hours, and encourage telecommuting. The state and region provide transit service and facilities such as high occupancy vehicle (HOV) lanes, metered ramps and meter bypasses to allow faster travel times for ride-sharers and transit users. These type of improvements are important for supporting drivers who choose alternatives to driving alone.

Most of the City of Brooklyn Center has been developed so that the City is somewhat limited in what it can do to encourage transit-friendly design or to encourage employers to provide incentives to employees that rideshare. In infill and redevelopment areas the City will review plans to ensure transit is accommodated and to encourage the development of TDM programs.

BICYCLIST AND PEDESTRIAN MOVEMENT

Although much of Brooklyn Center was originally developed without sidewalks, the City has developed a system of sidewalks and trails that effectively link its parks, schools, commercial areas and civic buildings. As shown on Figure 3-6, sidewalks have been developed along most minor arterial and collector streets and along an interconnected system of local streets.

Trails are connected with sidewalks and cross most City parks. The extensive Shingle Creek trail system rings Palmers Lake and connects with the Three Rivers Park regional trail system that follows the course of Shingle Creek north to south through the City but is disconnected at the Brookdale site between 57th Avenue and T.H. 100. At the City's southern boundary, the trail continues along the creek through north Minneapolis, eventually linking to Webber Parkway, the Grand Rounds Scenic Byway of the Minneapolis Parkway system and Three Rivers regional trail system.

Pedestrian bridges provide key links in the trail and sidewalk system, crossing I-94/694 at Central Park, and crossing TH 100 from Summit Drive to Knox Avenue, and from Brookdale Center to Lions Park. Providing a new pedestrian access bridge across Highway 252 would link the Mississippi trail to Evergreen Park and provide a unique opportunity for community branding.

SIDEWALK AND TRAIL IMPROVEMENTS

The on-sidewalk segment of the Shingle Creek trail system across the Brookdale Shopping Center is unimproved, not adequately separated from traffic, and is somewhat confusing because of a lack of directional signs. Improved signage and landscaping along the trail would improve this segment.

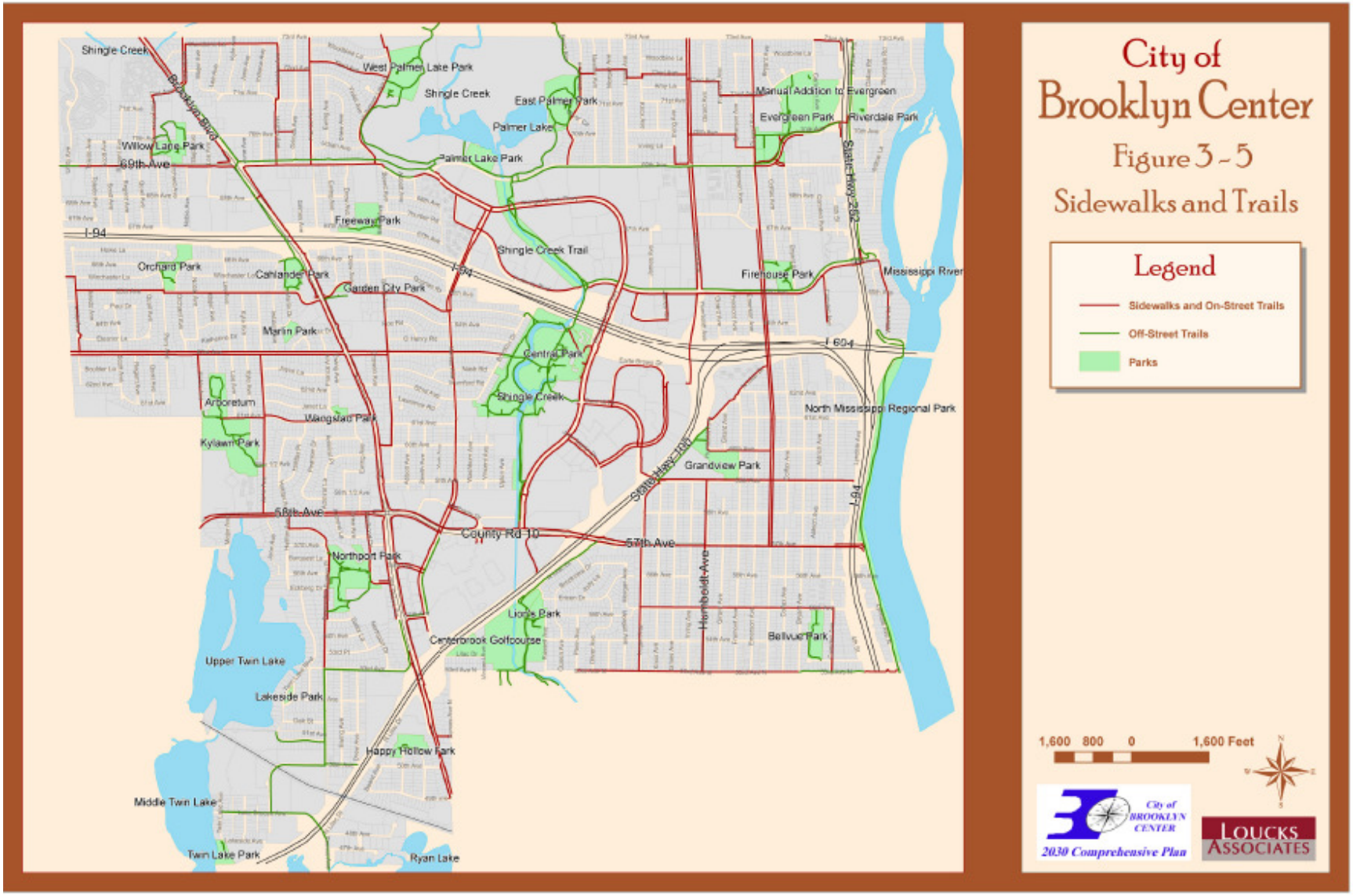
A trail and sidewalk crossing has been constructed under I-694 on both sides of Brooklyn Boulevard to improve access and safety. However, pedestrian movement is particularly unsafe along the sidewalk of the west side of Brooklyn Boulevard between 63rd Avenue and 58th Avenue. A trail has also been constructed by Three Rivers Park District from 53rd under I-694 to connect with Brooklyn Center's trail system north of I-694 and the Minneapolis trail system to the south.

Gaps in the sidewalk system still hinder pedestrian and bicycle movement in some locations, and should be filled when other street improvements are made. These routes are intended to link neighborhoods, parks, schools and the City Center. In particular sidewalks are currently missing on the south side of the section of 57th Avenue/Bass Lake Road from Shingle Creek Parkway to Xerxes.

Bicycling is accommodated on the City's off-street trail system. However, bicycling on City streets can be difficult, especially on arterial and collector streets with high traffic volumes and insufficient width for bike lanes or paths. The recently-constructed multi-use path along 66th Avenue is one example of a facility that accommodates both bicycles and pedestrians. However, rights-of-way in many locations are too narrow to allow on-street bike lanes or off-street paths to be developed.

The most feasible solution would be a system of signed bicycle routes on the three main "loop" routes identified on Figure 2-4. Most of these streets -- Dupont and Humboldt, for example -- have two undivided travel lanes and two parking lanes. A separate bicycle lane cannot be accommodated without removing parking. However, where traffic volumes are moderate, experienced bicyclists can share the road with occasional parked cars. Bicycle routes, or bicycle lanes where space is available, should be located on the following streets:

- Humboldt Avenue
- Dupont Avenue
- Xerxes Avenue north of County Road 10
- 69th Avenue west of Brooklyn Boulevard
- 57th Avenue/County Road 10 east of Brooklyn Boulevard
  Shingle Creek Parkway


City of
Brooklyn Center
Figure 3-5
Sidewalks and Trails
Legend
Sidewalks and On-Street Trails
Off-Street Trails
Parks
1,600 800 0 1,600 Feet
Shingle Creek
West Palmer Lake Park
Shingle Creek
East Palmer Park
Palmer Lake
Palmer Lake Park
Manual Addition to Evergreen
Evergreen Park
Riverdale Park
Willow Lane Park
69th Ave
Freeway Park
I-94
Shingle Creek Trail
Orchard Park
Cahlander Park
Garden City Park
Firehouse Park
Mississippi River
Marion Park
I-694
I-694
Central Park
Shingle Creek
Arboretum
Wangstad Park
Kylawn Park
North Mississippi Regional Park
Grandview Park
State Hwy 100
I-94
58th Ave
County Rd 10
57th Ave
Northport Park
Humboldt Ave
Lions Park
Centerbrook Golfcourse
Bellvue Park
Upper Twin Lake
Lakeside Park
Happy Hollow Park
Middle Twin Lake
Twin Lake Park
Ryan Lake
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A regional trail is under review with Three Rivers Park District for the section of 57th/County Road 10 east of Brooklyn Boulevard. In its current configuration, much of Brooklyn Boulevard is unsuitable for bicyclists, due to high traffic volumes and narrow sidewalks. However, in lieu of other alternatives, bicyclists can use the existing sidewalk for short distances, although this creates visibility hazards at intersections. As redevelopment occurs along the portion of Brooklyn Boulevard south of I-694, increased consideration should be given to providing wider off-street paths for shared bicycle and pedestrian use, as has been done north of I-694.Other regional trails being discussed to be taken over by Three Rivers Park District include Twin Lakes trail and Shingle Creek trail. Given the location of Brooklyn Center to the ever growing Metropolitan area, and the increased interest in alternate forms of transportation and conservation of energy, the City should work with Three Rivers Park District to promote more regional trails to address the needs of not only the City, but the larger metropolitan area.

GOODS MOVEMENT

Most freight movement in the City of Brooklyn Center is primarily by truck on the existing roadway system. Maintaining good access and mobility on this system will be the best method of providing for goods movement in the City. There are no major freight terminals in the city and most freight movement is related to delivery service to commercial businesses in the city.

The Canadian Pacific Railway runs through the southern tip of the City providing service to a small industrial area located in this area.

RELATIONSHIP OF LAND USE AND TRANSPORTATION

Brooklyn Center has a relatively dense pattern of residential development with small lot singles and a high proportion of attached units. It also has a large and centrally located retail-office-civic core that is supportive of transit and pedestrian-bike access.

Brooklyn Boulevard, a Minor Arterial and the major non-regional roadway in the community, is struggling with the dual demands of traffic movement and land access. There is a strong and growing demand for traffic from the north to use Brooklyn Boulevard to access I-94/694 and TH 100. At the same time, the City wishes to make this corridor a more important location of office, retail and multi-family residential development. This includes replacing the existing single-family detached housing that has direct access to Brooklyn Boulevard with more intensive development with limited access points conducive to traffic flow. The *Brooklyn Boulevard Streetscape Amenities Study (1994)* calls for consolidating and sharing access points, closing certain median openings, and increasing the use of intersecting streets for land access.

Another area where transportation plans and land use patterns are of concern is the TH 252 corridor. This area is planned to be expanded in Minnesota Department of Transportation's plan in 2024. There is a primary issue with access to existing businesses in this area. Great care will need to be done to provide access in any proposed plans to limit the negative impacts that project would have in this northeastern area of the community.

County Road 10 is also an area where streetscaping and the connection of the regional trail gap in this area could go along way in the improvement of the image in this area of the community as well as attracting appropriate land uses for redevelopment around the Brookdale Mall and Opportunity Site.

This would provide an important link to the major business centers and provide a connection to other amenities along Shingle Creek Parkway.

PLANNED CHANGES IN LAND USE THAT MAY AFFECT TRAFFIC AND TRANSIT

- Possible long-term City Center area intensification through redevelopment; greater mixture of uses; more pedestrian emphasis.
- Brooklyn Boulevard redevelopment and intensification; closing current and restricting future access points to Brooklyn Boulevard south of I-694; additional transit shelters as part of streetscape improvements.
- Possible reduction in housing density in the Northeast Neighborhood.
- Infill commercial and industrial development north of I-94/694 near Shingle Creek Parkway and south of I-94/694 within the Opportunity Site.
- Infill and intensification of the Brookdale Mall Site.

AVIATION

Brooklyn Center is within the influence area of the Crystal Airport, which is a designated reliever airport for the Minneapolis-St. Paul (MSP) Airport. Airspace over Brooklyn Center is also used by aircraft operating from Metropolitan Area airports and other airports.

A small portion of the Crystal Airport is located within Brooklyn Center. Most of this area is located in the Shingle Creek floodway and as such is controlled by the City's floodplain zoning and not suitable for development.

Brooklyn Center is a member (with Crystal and Brooklyn Park) of the joint Airport Zoning Board, which regulates land use around the airport. This commission functions under a joint power agreement. In the early 1980s, the Zoning Board adopted airport zoning regulations which apply to each of the member cities. The airport zones are shown on the Brooklyn Center zoning map but the text of the regulations has not been incorporated into the City's zoning ordinance.

Airspace zones are imaginary surfaces around the airport into which no structure or tree is permitted to penetrate. The imaginary surfaces include approach surfaces, primary surfaces, horizontal surfaces and conical surfaces.

Land use safety zones are established to control land uses near public airports for the safety of airport users and persons in the vicinity of airports. There are three safety zones: A, B and C.

Safety zone A extends outward from the end of the runway for a distance equal to two-thirds of the length of the existing or planned runway. No buildings, transmission lines, or uses that would cause an assembly of persons are permitted. In Brooklyn Center, this area is partially airport-owned open space and partially in single-family residential use.

Safety zone B extends outward from safety zone A, a distance equal to one-third the existing or planned runway length. It covers an additional single-family residential area.

Safety zone C contains all land within an arc drawn with a 6,000 foot radius from the ends of all runways, excluding the areas in zones A and B. Uses are only subject to general restrictions regarding interference with electronic communications, airport lighting and the impairment of visibility in the vicinity of the airport. In Brooklyn Center, this zone extends as far as Brooklyn Boulevard, encompassing a wide range of land uses.

Structures which are 150 feet or higher above ground level and within approximately two miles of the airport may be considered hazards to air navigation. Brooklyn Center has no existing structures of this height; does not permit such structures under its zoning ordinance, and has no plans to permit such structures in the future. Any applicant who proposes to construct such a structure shall notify the city, the Minnesota Department of Transportation and the Federal Aviation Administration at least 30 days in advance as required by law (MCAR 8800.1200 Subpart 3 and FAA form 7460-8). The FAA recommends that proposed structures be reviewed if they are located within two miles of the airfield and within five miles of a runway approach corridor. The Metropolitan Airports Commission recommends that any proposed structure within these parameters which may exceed 50-feet should be reviewed by the FAA, Mn/DOT Aeronautics and the Metropolitan Airports Commission.

The City's policy in the 1979 *Comprehensive* Plan was to encourage the eventual phase-out of the Crystal Airport and its replacement with a new minor classification airport. Both Brooklyn Center and the City of Crystal have maintained that relocation would eliminate hazardous situations caused by the proximity of the airport to surrounding residential development. Brooklyn Center still supports this policy. The Metropolitan Airports Commission has recently developed A Long-Term Comprehensive Plan Draft (2008) which discusses various options from no-expansion to certain runway closures, to full closure of the facility. They have no plans to expand the airport.
The summary of the 2008 Draft concluded the following Preferred Alternative for the 20-year planning period:

- Reconstruction of Runway 14L-32R;
- Reconstruction of the Runway 14R-32L pavement into a taxiway ;
- Removal of runway signs for the turf crosswind runway;
- Consider the option to redevelop areas on the airport into non-aeronautical uses.

The preferred alternative does include additional hangar space, unless redevelopment of existing area is pursued. No other airport expansion or provision of new facilities was recommended.

None of the land use changes proposed in this *Comprehensive Plan* will affect the functioning of the Crystal Airport. By the same token, airport operations have relatively few impacts on the adjacent neighborhood in Brooklyn Center. Noise impacts are considered in the Long-Term Comprehensive Plan for the airport. The Metropolitan Council suggests that the 60 DNL (day-night average sound level[1]) contour should be used for planning purposes for areas inside the MUSA. The 60 DNL noise contours in 1993 had minimal impact on Brooklyn Center, since most departures are to the northeast, into the prevailing wind direction. The projected 60 DNL noise contours for 2013 in the *Long Term Comprehensive* Plan extends just beyond the airport boundary into Brooklyn Center, but should affect few, if any, residential properties. According to FAA standards, the 60 DNL contour is compatible with residential development.

(DNL is the average sound level, in decibels, obtained from the accumulation of all sound events; it weights night-time sound events to account for the increased disturbance resulting from night-time

noise. It is the FAA's single system for determining exposure of individuals to airport noise.)

There are no heliports in Brooklyn Center, and heliports are not a permitted use in any zoning district. The City should examine the issue of where heliports might best be permitted, to ensure that any future proposals for heliports occur in appropriate locations.