City of Bloomington, Minnesota

COMPREHENSIVE PLAN 2000

This Plan includes all amendments through March 24, 2004

Bloomington's City Council adopted and placed the Comprehensive Plan 2000 into effect on **April 16, 2001** through Resolution 2001-30. The Metropolitan Council adopted its review record of the plan on April 11, 2001 (Item #2000-568).

Comprehensive plans are frequently updated and revised. The City maintains a current version of the Comprehensive Plan on its web site, www.ci.bloomington.mn.us. A hard copy of the current version can be obtained at:

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Bloomington Civic Plaza
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City Council

(April 2001)

Mayor
Gene Winstead

Councilmembers
Dave Abrams
Mike Fossum
Heather Harden
Alisa R. Ornat
Steve Peterson
Vern Wilcox

Planning Commission

(June 2000)

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Section 1: Introduction

Mission Statement

The City of Bloomington's organizational mission is to be a positive, professional, productive, learning organization that builds community and its renewal by providing quality services at affordable prices.

The City strives to preserve and enhance neighborhood vitality while promoting a diverse and balanced local economy.

Community Overview

Bloomington, Minnesota, is a diverse community of 38 square miles located along the Minnesota River in the southwestern portion of the Twin Cities metropolitan area. The city is fully developed but will continue to grow through redevelopment. At the turn of the century, the city encompasses 85,000 residents and well over 100,000 jobs. There are nearly two jobs for each Bloomington resident in the work force. Land use is well balanced between residential, natural, commercial, and industrial uses. Almost a third of the city has been preserved for conservation and recreation uses.

Looking forward, the city is well positioned to continue to thrive in the future. Bloomington's central location in a robust metropolitan area and its proximity to major transportation resources such as I-494 and the international airport are immense assets. Still, there are many challenges that will need to be addressed. These include:

- Increasing congestion on the area's transportation corridors;
- The construction of a new north-south airport runway which will create new noise impacts and development limitations;
- An older housing stock, with two thirds of all homes over 30 years old, a critical age at which major renovations are needed to maintain functional viability;

• A rapidly growing senior population with needs for new housing types that, due to a lack of vacant land, require the often controversial redevelopment of existing land uses; and,

• A fast changing economy that could influence land use patterns in a significant, although unpredictable, manner.

Development History

Native Americans traveled, settled, and traded along the Minnesota River in Bloomington for centuries. The river also brought occasional European explorers and traders. In the 1820s, Fort Snelling became the first European settlement at the nearby confluence of the Minnesota and Mississippi Rivers. With the fort nearby, some of the earliest settlers in Bloomington were missionaries who came to convert the resident Native Americans. In the 1850s, Bloomington began to be settled by Europeans and converted to agricultural uses. The city remained primarily agricultural for a century, raising produce for the growing nearby cities of Minneapolis and St. Paul.

In the 1950s, Bloomington became the classic American suburban "boom town", with the population soaring from 9,900 in 1950 to 50,500 in 1960. The city's central location in the metropolitan area, proximity to freeways, and proximity to a major international hub airport resulted in a strong and diverse economy with a mix of commerce and industry uncharacteristic of suburban communities. Today, Bloomington is an important economic engine for the entire state and a major tourist destination for the Upper Midwest.

Role of the Comprehensive Plan

First and foremost, the Comprehensive Plan is a statement of the City of Bloomington's goals and objectives. The plan expresses where the city is today and where it desires to be in the future, with recommendations on how to progress there. As such, the plan is a guide to decision making, a foundation for more detailed planning efforts. The plan is implemented through the City Code, Capital Improvements Program, annual budget, smaller scale plans, day-to-day operations, and through the efforts and resources of private citizens, businesses, and organizations.

In Minnesota the comprehensive plan is also a legal document that satisfies numerous statutory requirements. The plan must be approved by the Metropolitan Council and must be consistent with adopted regional plans. The plan also serves as a good general introduction to municipal issues for a new resident, staff member, commissioner, or councilmember.

The Comprehensive Plan is not a fixed document, but rather part of an ongoing planning and implementation process. Because conditions and circumstances are constantly changing, planning efforts must continuously be re-evaluated and adjusted.

Update Process

This Comprehensive Plan was rewritten over a four-year period from 1996-2000. Resident input was centered around the City of Bloomington's existing advisory commissions, including the Planning Commission, Traffic and Transportation Advisory Commission, and the Parks, Arts, and Recreation Commission. Over 60 public meetings were held, most of which were advertised and televised. Public awareness of the plan update was fostered through news updates on community television, stories in the local press, and a series of articles in the City newsletter. Updated drafts of the document have been available on the City's website and at both Bloomington libraries. Over 2,000 property owners were notified by direct mail of public hearings and community meetings to discuss proposed changes to the Land Use Element and Guide Plan.

Section 2:
Land Use Element

Credit: united properties

2.1 Summary

As a developed community with little remaining vacant land, Bloomington's land use focus over the next twenty years will be on managing redevelopment. In response to Bloomington's easy access to major employment centers such as the 494 Strip, Mall of America, and International Airport and metropolitan objectives to concentrate growth within and along the 494/694 ring, continued market pressure for both commercial and residential redevelopment is anticipated. Employment levels and, to a lesser extent, population is forecast to increase as redevelopment occurs.

Within the twenty year planning horizon of the comprehensive plan, several planned projects are expected to have a major impact on Bloomington, including:

- Significant development and redevelopment in the Airport South District;
- The construction of a new north-south runway at the airport which will project limiting state and federal runway safety zones into the Airport South District and redistribute airplane noise impacts within the city;
- The construction of a light rail transit line linking the Airport South District with the airport and downtown Minneapolis;
- The expansion and interchange reconfiguration of Interstate 494;

- **The expansion and interchange reconfiguration of Interstate 35W; and,**
- **The construction of a Bloomington "Ring Route" paralleling Interstate 494 along the 79th and 80th Street corridor.**

A primary purpose of the Land Use Element is to guide the redevelopment generated by these projects. The Element also describes existing land utilization; forecasts growth in households, population, and employment; establishes and describes land use categories used in the future land use map; and identifies strategies to guide redevelopment and land use decisions.

Intent

It is Bloomington's intention to:

- **Capitalize on regional infrastructure improvements while minimizing their negative impacts;**
- **Promote continued economic development for the City and the region.**
- **Maintain and enhance property values;**
- **Encourage the redevelopment of outdated or incompatible land uses;**
- **Mitigate existing land use conflicts and avoid future land use conflicts;**
- **Preserve sensitive environmental areas; and,**
- **Meet the needs of residents for services and recreation near their places of residence.**

2.2 Land Use Inventory

Historic Land Use Trends

Before World War II, Bloomington was predominantly rural and agricultural. Homes and businesses were concentrated along main transportation corridors. Fueled by an economic expansion in the post war years, Bloomington began its transformation into a large suburb and major employment center. As is common with suburban communities, the City grew at a very rapid rate. Population soared from 9,902 in 1950 to 50,498 in 1960.

Large scale residential development began in northeast Bloomington and generally spread to the south and west. Early residential development occurred almost exclusively as single family detached housing. In 1960, U.S. Census Bureau records show a total of 12,281 single unit dwellings versus only 77 multiple unit dwellings. After 1960, residential development diversified to include apartments, condominiums, and townhomes. Today, single family detached dwelling units comprise only 58% of total units. Vacant residential land has been virtually exhausted and construction of new dwelling units has slowed considerably. Future residential growth will be a function of infill on the few remaining vacant parcels or redevelopment of underutilized parcels.

Commercial development first occurred in Bloomington along major transportation corridors particularly at crossroads such as Lyndale Avenue and 98th Street. To take advantage of excellent access to the metropolitan area, both commercial and industrial land uses developed along the Highway 5 corridor, later expanded as Interstate 494. Commercial development generally occurs in strips along principle streets in eastern Bloomington but is concentrated in commercial nodes in western Bloomington.

While light industrial/warehouse land uses developed within the I-494 corridor, heavier industry concentrated in central Blooming-

ton where railway access was available. Industrial land uses were later promoted in the Western Industrial Area, which is largely developed today.

Almost one third of the City has been set aside for public and quasi-public land uses. The bulk of that land is preserved in its natural state as conservation areas, including the Minnesota River Valley, Hyland Park Reserve, and large wetlands along Nine Mile Creek. Churches and other quasi-public uses are scattered throughout the City. Schools are also dispersed throughout the City, with the exception of far western Bloomington. As this portion of Bloomington was developed, the school district was experiencing a rapid decline in enrollment which halted the construction of new schools and led to the closure of several existing schools.

Current Land Use

Today, less than two percent of Bloomington's 24,540 acres (38.3 square miles) are vacant and developable. A comparison of historic land utilization is shown in *Table 2.1*. Current distribution of land uses is summarized in *Table 2.2* and depicted on *Figure 2.1*.

Table 2.1 **Land Utilization**

	Acres			
Land Use Category	**1959**	**1969**	**1979**	**2000**
Residential	4,380	6,480	7,880	8,975
Commercial	200	680	930	1,606
Industrial	220	600	800	846
Public/Quasi-Public	1,300	4,150	5,590	8,044
Total	6,100	11,910	15,200	19,471

Source: Bloomington Planning Division

Table 2.2 **Land Use Distribution, 2000**

Land Use Category		Acres	Percent
Residential	Single Family Detached	7,493	30.5%
	Mobile Homes	14	0.1%
	Two Family	107	0.4%
	Townhouses	254	1.0%
	Condominiums	243	1.0%
	Apartments	554	2.3%
	Other	310	1.3%
	Subtotal	8,975	36.6%
Public/Quasi Public	Schools	416	1.7%
	Churches	237	1.0%
	Government Facilities	106	0.4%
	Parks	2,202	9.0%
	Golf Courses	293	1.2%
	Conservation Areas	4,410	18.0%
	Other	380	1.5%
	Subtotal	8,044	32.8%
Road Right-of-Way	Subtotal	4,587	18.7%
Commercial	Retail	428	1.7%
	Vehicle Oriented	148	0.6%
	Restaurants	93	0.4%
	Hotels	173	0.7%
	Service Oriented	301	1.2%
	Office	463	1.9%
	Subtotal	1,606	6.5%
Industrial	Manufacturing	372	1.5%
	Warehousing	356	1.5%
	Other	118	0.5%
	Subtotal	846	3.4%
Vacant/Agricultural	Vacant	384	1.6%
	Agricultural	98	0.4%
	Subtotal	482	2.0%
Grand Total		24,540	100.0%

Source: Bloomington Planning Division

Figure 2.1
11” by 17” map of current land use

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Table 2.3
Privately Owned Undeveloped Sites, 10 Acres or Greater, 2000

Address	Common Name	Acres
2701 and 2901 East Old Shakopee Road	Kelley Farm	58.1
7901 Old Cedar Avenue South, 2000 East 81st Street	Met Center Site	52.6
8201 24th Avenue South, 8200 28th Avenue South	Adjoining Lands Mall Overflow Parking	31.4
6820 Auto Club Road	Bethany Fellowship	21.8
1701, 2101, 2201 West 94th Street, 9545 Penn Avenue South	John Deere Expansion Area	15.3

Source: Bloomington Planning Division

Undeveloped Sites

Although rapidly diminishing in number, a few large, undeveloped sites remain in Bloomington, notably in the Airport South District (*see Table 2.3*). The majority of new development is currently occurring as redevelopment. For economic reasons, redevelopment tends to occur on sites that 1) are underutilized, outdated, and therefore relatively inexpensive and 2) meet the access needs of the replacement land use. The most favorable areas for redevelopment lie in eastern Bloomington along the I-494 corridor or within the Lyndale commercial and industrial corridor.

Previous Land Use Planning Efforts

The City of Bloomington has a long history of land use planning both citywide and at the area or district level. Bloomington's land use has been significantly influenced over the years by several guiding principles shared by these historic plans, including:

- Taking advantage of the freeways by locating high-value commercial and service uses along freeways and at interchanges.
- Locating housing farther away from the freeways than commercial land uses to minimize land use conflicts and commercial traffic through residential areas.
- Preserving natural drainage systems for their flood mitigating ability, their habitat, and environmental benefit.
- Preserving open space and conservation areas as an amenity and community hallmark.
- Achieving a 50/50 balance of residential and non-residential property tax base.

2.3 Influencing Factors

Households and Population

The number of households (occupied housing units) in Bloomington has increased consistently over the past several decades and will continue to increase in the future, but at a much slower rate due to the lack of vacant land. Future growth in households will be largely a function of increased density through redevelopment. Household forecasts, which assume an average vacancy rate of 3%, appear in *Figure 2.2*.

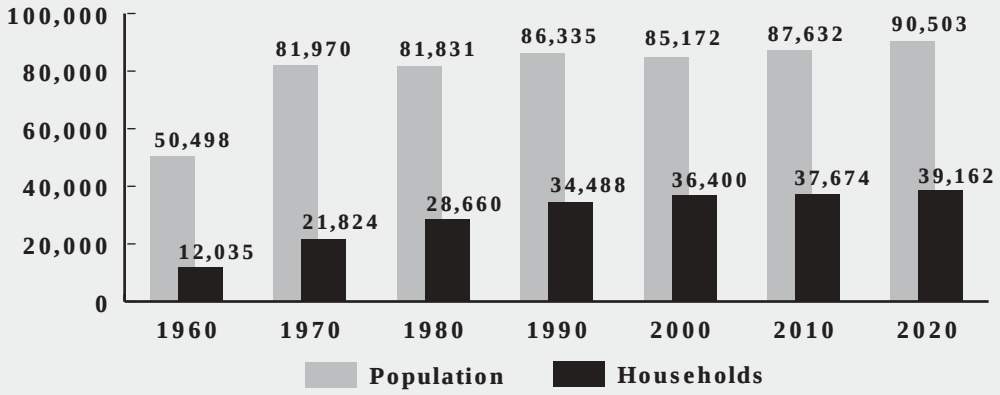
Population is a function of both the number of households and the number of residents per household. As of July 1998, there were an estimated 35,700 households and 88,200 residents in Bloomington. While the number of households has increased over time, the number of residents per household has decreased (from 4.2 in 1960 to 2.47 in 1990). Future household sizes will be affected by opposing

trends. On one hand, the growing senior population in Bloomington would tend to lower overall average household size. On the other hand, as seniors move from large single family detached housing to smaller, low maintenance units, younger families with small children may move in to take advantage of Bloomington's quality schools. This trend would tend to increase average household sizes. Population levels are expected to rise slowly over the next 20 years as the number of households slowly increases and the average number of residents per household remains relatively stable.

Employment

The number of people employed in Bloomington has risen consistently over time, even as vacant land has become increasingly scarce. Employment levels will continue to rise in the future as 1) Bloomington's excellent location along major freeway corridors and adjacent to the region's international airport continues to generate demand for commercial redevelopment, 2) spin-off development from the Mall of America continues, and 3) Phase II of Mall of America materializes. Current and forecasted employment levels are shown in *Table 2.4*.

Figure 2.2 **Population and Households: Historic Data and Forecasts**



Source: U.S. Census Bureau and Bloomington Planning Division, 2004

Table 2.4 **Current and Forecasted Employment**

	1997 (third quarter)	2000	2010	2020
Employment	**99,320**	**101,930**	**118,606**	**126,195**

Source: Bloomington Planning Division, 2004

Environmental Factors

Land use patterns are heavily influenced by environmental factors such as wetlands, flood zones, steep slopes, and adverse soil conditions. Land impacted by these environmental factors is generally unsuitable for development and should be set aside for use as nature preserves, open spaces, or storm water management areas. As a developed community, the vast majority of these areas have already been set aside. Around 27% of the city's land is currently preserved as conservation areas or parkland, including the Minnesota River Valley and large wetlands areas along Nine Mile Creek.

In 1982, Bloomington City staff prepared an Environmental Protection Element that includes a thorough analysis of environmental factors plus environmental goals and policies. The Environmental Protection Element also includes "an element for the protection and development of access to direct sunlight for solar energy systems" as required by Minnesota Statutes, Section 473.859, Subdivision 2. This Environmental Protection Element is included within the *Comprehensive Plan 2000* by reference. Staff hopes to update the Environmental Protection Element as staff resources become available after the completion of the 2000 Comprehensive Plan update.

Historic Resources

Cultural and historical resources shape development and give a community tradition and distinctiveness. As Bloomington developed from a prairie, marsh, and forest to a farming-oriented community and now to a city of 85,000 people, remnants of prehistoric and historical settlements and structures of architectural significance have become increasingly important and rare resources. The purpose of this section is to identify significant cultural and historical resources and recommend appropriate measures for their preservation.

The city of Bloomington has a rich historical inheritance as a result of the cultural backgrounds of the first settlers. Research and evaluation of Bloomington's prehistoric and historic periods establish a well documented record of influence of human activity on the development of the city.

The prehistoric period in Bloomington extends from the retreat of the Wisconsin glaciers from southern Minnesota approximately 10,000 years ago to the explorations of Groseillers and Radisson on the lower Minnesota River in 1660. Bloomington was a part of a transition zone from the Paleo-Indian, Eastern Archaic, Woodland, and Late Mississippian prehistoric cultures as a result of being almost too far north for the cultivation of corn, and almost too far south for a reliance on wild rice as a major food source.

The existence of numerous burial mounds and earthworks in the Minnesota River Valley and the adjoining bluff area of Bloomington are primary evidence of prehistoric peoples and cultures. The report, ***Bloomington: A Community Survey of Historic Sites***, identifies five existing mound groups and lists eleven destroyed or unlocated mound groups within Bloomington.[1]

There are numerous people, events, and activities that have influenced Bloomington history and provide for local and regional significance: Fort Snelling; Peter Quinn; the Pond family; Joseph Dean; the Bloomington Ferry; Colonel Savage; and the Dan Patch Line are but a few of the historical forces that shaped the growth and development of Bloomington. An extensive history of the city is provided in ***Bloomington on the Minnesota***, a project of the Bloomington Bicentennial Committee.[2]

Every building does not become architecturally or historically significant simply because it is timeworn or old. Every home or barn that dates back to the previous century should not be preserved simply because of nostalgia. An important aspect in historic preservation is a comprehensive evaluation of historic sites. Given Bloomington's growth and development, it is important that sites be evaluated not in isolation, but as part of an urban setting, giving full consideration to factors that influence the context of historic sites.

[1] **Miller-Dunwiddie Architects, Inc., Bloomington: A Community Survey of Historic Sites, Minneapolis, Minnesota, 1977.**

[2] **Judith A. Hendricks, Bloomington on the Minnesota, T.S. Denison and Company, Inc., May, 1976.**

Table 2.5 **Register of Prehistoric and Historic Sites**

Type	Site	Address
Existing Prehistoric	Findlay Mounds	Sec. 14, T.27, R.24
	Mounds	W 1/2 of SE 1/4. Sec. 5, T.115, R.21
	Cunningham Group	W 1/2 of SW 1/4 Sec 5, T.115, R.21
	Mound	SE 1/4 of NE 1/4, Sec. 6, T.115, R.21
	Bloomington Ferry Mounds	SW 1/4, Sec. 31, T.116, R.21
Class I	Gideon Pond House	401 East 104th Street
	William Chambers House	7648 Auto Club Road
	Brousseau/Reed House	1629 E. Old Shakopee Road
	Rene L. A. Ballif House	10624 Humboldt Avenue
	Joseph Lorence House	7335 Marth Road
	John Brown House	6630 Auto Club Road
	Bloomington Town Hall	10200 Penn Avenue
Class II	Robert "Doc" Oxborough House	1724 West 90th Street
	John Logan House	8940 W. Bush Lake Road
	Joseph Linke House	1516 East 86th Street
	J.H. Bradbury House	8701 3rd Avenue
	Sever G. St. Martin House	125 E. Old Shakopee Road
General Interest	Jeremiah Scott House	9347 Cedar Avenue
	John T. Palmer House	801 East 86th Street
	Mary Christian House	8428 Portland Avenue
	William Davis House	10225 Lyndale Avenue
	2nd Thomas Oxborough House	9440 Penn Avenue
	Elmer Scott Ford Agency	9133 Cedar Avenue
	Florentine Standish House	1311 West 98th Street
	James Palmer House	4304 W. Old Shakopee Road
	Robert Kelly House	6211 Auto Club Road

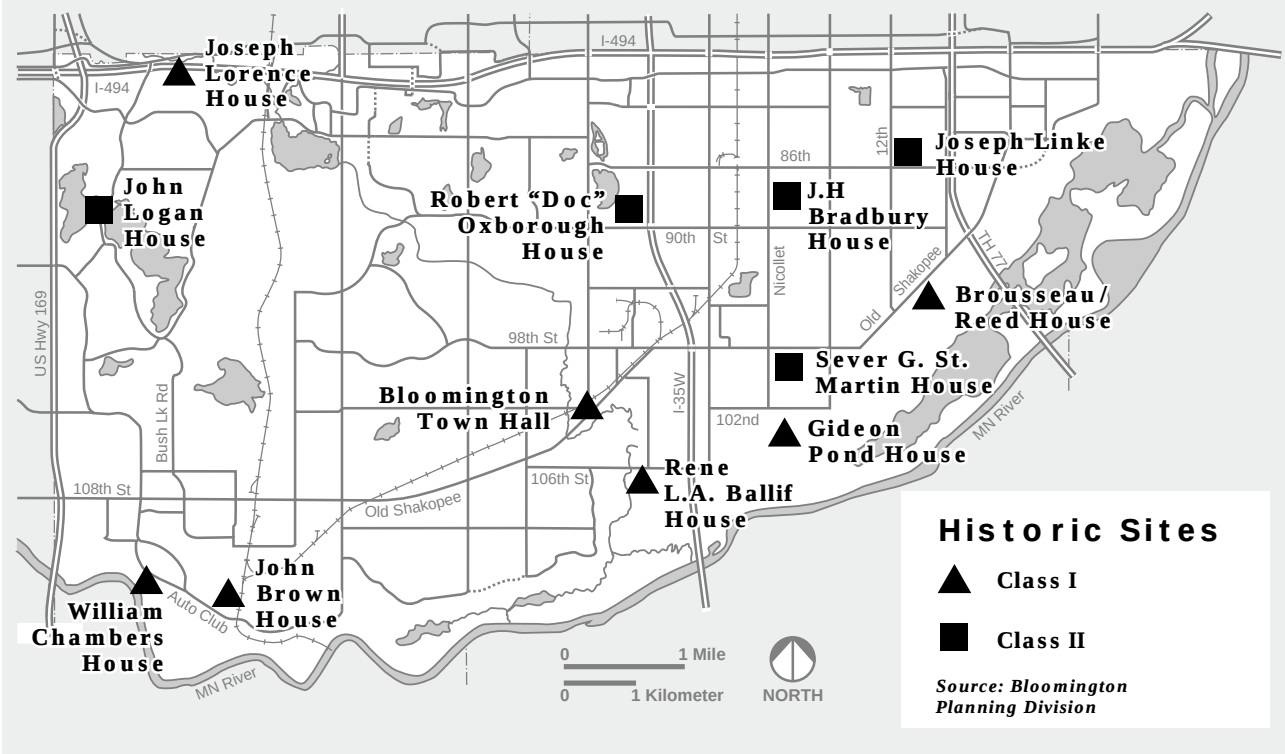
Source: Heritage Preservation Commission, City of Bloomington, Minnesota, 1997

The report ***Bloomington: A Community Survey of Historic Sites*** provides a preliminary survey and an initial compilation of architectural and historical information on a number of sites. The report classified sites into categories for preservation activities; however, a further examination of sites in relationship to Bloomington's historic preservation situation was warranted. An evaluation methodology was developed that allowed the City of Bloomington Heritage Preservation Commission to assess and measure the relative architectural, historical, and community development value or significance of existing sites. The methodology allowed for distinctions to be made between sites given the important distinction between "historic sites" per se and "sites of general interest."

The Heritage Preservation Commission and the staff utilized this evaluation methodology to individually assess each existing site listed in the community survey. The results of the evaluation were used to prepare a Bloomington Historical Register that was adopted by the City Council in 1979. The Register consisted of four categories of historic sites and the existing prehistoric sites. Class I sites were those properties that scored or rated the highest, followed by Class II, III, and IV.

In 1997, a revision of the Register combined the Class III and Class IV sites into a single category as "sites of general interest". The Bloomington Historical Register is used as the base for historic site

Figure 2.3 **Historic Sites**



regulations and control. A register of prehistoric and historic sites is shown in *Table 2.5* and the Class I and II site locations are shown in *Figure 2.3*.

Bloomington's existing architectural and historical resources, community development program, and the growth and development of Bloomington form the basis for historic preservation planning and programming. To date, the City has completed two preservation studies which formed the Historic Preservation Task Force and created the Bloomington Heritage Preservation Commission. The City adopted the Bloomington Historical Register and regulatory controls and acquired the Gideon Pond site where restoration is nearly completed.

The Heritage Preservation Commission prepared a workable historic preservation plan. It is not the aim of the plan to necessarily create museums or simply preserve old structures, but to integrate the preservation of prehistoric and historic into the daily lives of residents in a meaningful manner. The result of the plan provides techniques and standards for the evaluation, design, and implementation of a feasible and practical historical preservation program which emphasizes both public and private alternatives.

Airport Impacts

The proximity of Minneapolis-St. Paul International Airport creates a variety of impacts on Bloomington's land use through aircraft noise exposure, spin-off development, runway protection and safety zones, and runway related height limits. A complete discussion of airport impacts is included in Chapter 5, the Airport Impact Element.

Roadway Improvements

Through recently adopted plans, both the Metropolitan Council and the Minnesota Department of Transportation have challenged the region to concentrate anticipated growth within and along the I-494/694 Loop rather than on the urban fringe. While Bloomington applauds this coordinated approach for promoting efficient regional land use, realistically, it will require major state and regional investments in the public infrastructure, most notably in our transportation systems.

The Minnesota Department of Transportation and City of Bloomington have developed plans for roadway improvements along Interstates 494 and 35W and along the 79th/80th Street "Ring Route" corridor. Although not fully funded at this point, good land use planning demands that the effects of the improvements be taken into

consideration in the development of long range plans. These projects will impact land use through removal of existing homes and businesses, reconfiguration of property lines, and redevelopment generated from changing traffic flows and accessibility levels. Planned transportation improvements are discussed in detail in the Transportation Element.

Transit Service

Access to public transit plays a role in the desirable distribution of land uses. Certain land uses, notably assisted living facilities and group homes, often require locations with easy access to public transit due to their resident's lack of access to personal motorized vehicles. Commercial and industrial land uses benefit as well from proximity to transit lines as it increases their accessibility to both customers and employees. Further discussion of transit service appears in the Transportation Element.

Land Use Compatibility

As redevelopment occurs within Bloomington, the City will need to ensure that it is compatible with surrounding land uses. Land use incompatibility can arise if impacts generated by one land use negatively impact upon an adjacent land use. Examples of impacts capable of creating land use incompatibility include: high levels of traffic (noise, congestion, and air pollution), a high percentage of lot coverage by structures and paved surfaces (dust, glare, noise, excessive heat, high rates of storm water runoff, and loss of vegetation), and large building size (blocking of views, disruption of aesthetic scale and reduced access to light, air, and open space). These impacts do not stop at property lines, and where commercial or industrial uses border residential uses, they can contribute to residential deterioration. However, side-effects can be reduced or eliminated by using various buffering techniques.

Table 2.6 is illustrative of the extent to which land uses are considered compatible with one another. Actual land use compatibility naturally depends upon the particular uses and the extent to which the uses are buffered from one another. Generally, conflicts between uses considered generally compatible can be addressed through careful site planning. Conflicts between uses considered generally incompatible are more severe and should be avoided unless they can be successfully mitigated through not only careful site planning but appropriate buffering and separation.

***Table 2.6* Generalized Land Use Compatibility**

Generally Compatible / Generally Incompatible		Residential			Commercial/Industrial						Public/Quasi-Public		
		Low-Density	Medium-Density	High-Density	Office	Neighborhood Commercial	Community Commercial	Regional Commercial	High Intensity Mixed Use	Industrial	Public	Quasi-Public	Conservation
Residential	Low-Density				■	■	■	■	■	■			
	Medium-Density						■	■	■	■			
	High-Density							■	■	■			
Commercial/Industrial	Office	■											■
	Neighborhood Commercial	■											■
	Community Commercial	■	■										■
	Regional Commercial	■	■	■							■	■	■
	High Intensity Mixed Use	■	■	■							■	■	■
	Industrial	■	■	■							■	■	■
Public/Quasi-Public	Public							■	■	■			
	Quasi-Public							■	■	■			
	Conservation				■	■	■	■	■	■			

Source: Bloomington Planning Division

2.4 Future Land Use

Land Use Guide Plan Designations

To guide land use and development, a Land Use Guide Plan (attached as a fold out colored map) has been prepared that depicts designated future land uses for all parcels within the city. The future land use designations work hand in hand with the zoning designations to further the City's land use plans. While the zoning designations operate on the micro level with detailed development limitations and performance standards, the future land use designations operate on the macro level and deal solely with broad land use issues. Zoning designations may allow specific uses that are not allowed under the future land use designations, and vice versa. For a development proposal to be approved, however, the proposed land use must comply with both the applicable zoning and future land use designation.

The City strives to maintain consistency between zoning and future land use designations. For the purposes of this plan, zoning designations are interpreted to be consistent with future land use designations if there is at least one common land use allowed in both.

The following text explains what range of land uses are allowed in each future land use designation.

Low Density Residential

This category allows residential development between 0 and 5 dwelling units per acre. Typical development includes detached single family homes, although cluster housing and scattered two family units are also appropriate provided the density limit is observed. Access requirements in this category are low compared to other uses and this designation should generally not be applied in areas with high access to transportation facilities. In areas of steep slope or other natural features worthy of protection, clustered housing design or very large lots are appropriate to protect natural resources.

Medium Density Residential

This category allows residential development between 5 and 10 dwelling units per acre. Typical development includes townhomes, patio homes, two family dwellings, condominiums, and garden apartments. Access requirements in this category are moderate, therefore locations with access to nearby arterial and collector streets are most appropriate.

High Density Residential

This category allows residential development greater than 10 dwelling units per acre. Typical development includes multiple story apartments and condominiums. Given that access requirements for uses in this category are high, this category should be located only in areas adjacent to arterial and collector streets, and transit service should be available.

Public

This category designates areas set aside for public uses. Typical uses include parks, schools, fire stations, municipal buildings, libraries, and open spaces. Access requirements of public uses vary widely and must be evaluated according to the nature of the particular use.

Quasi-Public

This category when combined with the proper zoning provides areas throughout the community for privately owned uses that resemble public uses such as churches, private schools, private country clubs, nursing homes, funeral homes, day care, and private cemeteries. Certain open spaces used for utility transmission lines by Northern States Power Company are also included. Access requirements of quasi-public uses vary widely and must be evaluated according to the nature of the particular use.

Conservation

This category designates areas to be preserved in their natural condition for the protection of habitat, wildlife, and surface water drainage. Typical uses include natural areas, park reserves, wildlife conservation areas, and storm water storage. Access to conservation areas should be restricted and roadways which border or cross conservation areas require special design consideration.

Water

This category designates medium and large bodies of water. Typical water bodies receiving this designation include rivers and open water lakes as classified by the Minnesota Department of Natural Resources.

Right of Way

This category designates existing public rights of way and large areas that are clearly reserved for future right of way needs. The category is not meant to delineate every future right of way need and is not a substitute for a master right of way plan. As portions of parcels are dedicated or otherwise acquired for right of way purposes, their designation is automatically changed to the Right of Way category without formal amendment.

Office

This category allows professional and business offices and related accessory retail uses serving the needs of office building tenants. Access requirements for office uses are high, so land should only be designated for this category when adjacent to arterial and collector streets. Non-accessory commercial uses are not allowed within this designation based on the desire to establish areas free from the intrusion of more intensive commercial enterprises. Residential uses are allowed within this designation when fully integrated with an office land use and allowed in the underlying zoning district. Due to compatible land use characteristics, hotels are allowed on sites guided Office, provided the site is appropriately zoned for a hotel and within one mile of a freeway interchange.

General Business

This category allows a wide range of commercial uses that are suitable for the relatively small, shallow parcels of the City's neighborhood commercial nodes. Typical development includes retail and service uses such as neighborhood supermarkets (20,000 sq. ft. and below), small shopping centers (100,000 sq. ft. and below), drug stores, restaurants (10,000 sq. ft. and below), and gas stations. Office uses are allowed within this designation when integrated with a commercial use or as a stand alone use. Residential uses are allowed within this designation

only when fully integrated with a general business land use and allowed in the underlying zoning district. Access requirements for this category are moderate to high, so land should only be designated for this category when in close proximity to arterial or collector streets. This category excludes larger scale retail and service uses that require larger parcel sizes or freeway visibility, such as hotels and motels, "big box" retail, medium and large shopping centers, hospitals, automobile rental, and automobile sales.

Community Commercial

This category allows all "General Business" activities plus additional, larger scale service and retail uses that require larger parcel sizes such as supermarkets and restaurants of any size, medium sized shopping centers (up to 250,000 sq. ft.), and theaters. Hotels and motels are allowed within the Community Commercial designation only within one mile of a freeway interchange. Office uses are allowed within this designation when integrated with a commercial use or as a stand alone use. Residential uses are allowed within this designation only when fully integrated with a commercial land use and allowed in the underlying zoning district. Access requirements for this category are high, so land should only be designated for this category when adjacent to arterial or collector streets. This category excludes regionally oriented retail and service uses that demand easy access from the freeway system such as large shopping centers, "big box" retail, hospitals, or automobile sales.

Regional Commercial

This category allows all "General Business" and "Community Commercial" activities plus additional service and retail uses such as hotels and motels, "big box" retail, large shopping centers, hospitals, and automobile sales that demand easy access from the freeway system. Office uses are allowed within this designation when integrated with a commercial use or as a stand alone use. Residential uses are allowed within this designation only when fully integrated with a commercial land use and allowed in the underlying zoning district. Access requirements of regional commercial uses are very high, so land should only be designated for this category when it is in close proximity to freeways and adjacent to arterial or collector streets.

Industrial

This category allows industrial uses including manufacturing and warehousing. Industrial uses are heavy generators of employment and truck traffic and should have locations that are served by arterial and collector streets and close to freeways. Office uses play an important support role in industrial areas and are allowed within this designation when integrated with an industrial use or as a stand alone use. Unrelated commercial and residential uses should be discouraged in industrial areas so that they do not interfere with industrial activities.

High Intensity Mixed Use

This category works together with the HX-2 and CX-2 Mixed Use Zoning Districts to allow only master-planned, high intensity uses that are physically integrated with one another, that will attract visitors from within and beyond the region, and will achieve a magnitude of economic activity sufficient to generate significant additional development outside the category.

Airport South Mixed Use

This category is meant to foster a mixture of intense, employment oriented, tourist oriented, residential and support uses in Bloomington's Airport South District as a way to:

- Provide increased employment opportunities and services for residents;
- Maintain community and school vitality;
- Provide increased housing choices;
- Increase and diversify the City's tax base;
- Encourage the redevelopment of outdated uses and structures;
- Support existing businesses;
- Satisfy market demands; and
- Reduce the need to locate development in other areas of the region less suited for high intensity development, where such development may create greater impacts on the regional highway system, require consumption of farmland or open space, be incompatible with surrounding uses, and/or require costly extensions of public infrastructure.

Intensity Levels

Bloomington seeks high intensity development and prohibits new, permanent, low intensity development within this designation. Given the immediate proximity of high quality, frequent transit service and the relative lack of conflicts with adjacent low density residential uses, this portion of the Airport South District is particularly well suited for high intensity development. Bloomington will require high intensity development in the area through provisions within the Zoning Ordinance, which may include alternative requirements consistent with the objectives set forth in this Comprehensive Plan for special situations.

Use Mixture

Bloomington seeks the inclusion of high density residential uses within the area in order to:

- Create a live-work environment;
- Meet City objectives to site housing near employment and transit opportunities;
- Reduce the number of vehicle trips and vehicle miles traveled (relative to the same level of unmixed development) by encouraging linked trips, walking trips, carpool trips and transit trips;
- Reduce the overall costs and impacts of parking by making feasible shared parking where peak parking demand times vary among uses; and
- More efficiently use public and private infrastructure. Peak demand times for infrastructure (roads, transit, sewer, water, electricity, phone) generally vary among uses. A mixture of uses allows infrastructure to be used more efficiently. A mixture of residential and employment uses will also allow for the bi-directional use of roadway and transit infrastructure as the area becomes a source of trip origins in addition to trip destinations.

Bloomington will require the inclusion of high density residential uses within the area through provisions in the Zoning Ordinance, which may include alternative requirements consistent with the objectives set forth in this Comprehensive Plan for special situations.

Use Limitations

Bloomington seeks uses within the designation that meet the objectives discussed above, are compatible with future aircraft noise levels, and State runway safety zone limitations.

Requirements

- The following new, permanent uses are prohibited within this designation: industrial, warehouse, storage, automotive, motor-vehicle sales, remote airport parking, and similar low intensity, low employment uses.
- Support retail and service uses (including but not limited to restaurants, drug stores, bakeries, day care centers, dry cleaners, travel agencies, convenience stores, fuel sales and similar uses) are allowed when accessory to and integrated with an allowed residential, employment oriented, or tourist oriented use. Other types of destination oriented retail and service uses are better suited for the adjacent High Intensity Mixed Use Designation and are prohibited within the Airport South Mixed Use Designation.
- Residential uses are prohibited in incompatible aircraft noise areas. Areas are considered incompatible for residential uses if the 2007 noise map average mitigated aircraft noise levels are forecast by the Metropolitan Airports Commission to be at or above 70 DNL.

Pedestrian Support

Bloomington seeks to foster transit and non-vehicular travel modes within this designation.

Requirements

- New development shall include infrastructure to accommodate pedestrian movement between building entrances and existing pedestrian infrastructure and between uses on adjacent sites.
- New development shall include pedestrian infrastructure along public streets, private drives, and in other areas necessary to support districtwide pedestrian movement.
- Site design (including but not limited to the location of building entrances and ground floor fenestration) for new development shall promote pedestrian circulation.

Land Use Guide Plan Narrative

This section of the Land Use Element adds detail to the Land Use Guide Plan. While the Land Use Guide Plan map provides a delineation of the location of desired land use types within Bloomington, explanation of the special considerations used in preparing the plan is essential to appropriate interpretation and implementation.

In addition to this narrative, the Land Use Guide Plan is supplemented by the Bluff Report District Plan which is incorporated as a part of this comprehensive plan by reference. This district plan offers detail and attention beyond the scope of a citywide plan. In the event of a conflict between the citywide comprehensive plan and the Bluff Report District Plan, the comprehensive plan shall supercede.

Residential Areas

In addition to discussion here, Bloomington's residential areas and housing needs are further discussed within the Housing Element. The Housing Element focuses on two major issues: 1) the need to keep the existing housing stock vital through maintenance, rehabilitation, and code enforcement, and 2) the need to address the City's changing housing needs, notably the need for additional senior oriented housing, through appropriately sited redevelopment.

Redevelopment Opportunities

Residentially, Bloomington is close to entirely built out and residential land use patterns have been set. For the most part, the guide plan's residential land use designations reflect existing land uses and density levels, which is to say that the City anticipates no significant change in land use type or density in these areas. This fact does not imply that these areas will remain static. Properties will be improved and updated and spot redevelopment may well occur. Still, as discussed in the Housing Element, there are pressing needs for additional housing types within the City. The strongest current demand is for senior oriented housing. Many of the same residents who came to Bloomington with their young families in the boom of the 1950s and 1960s are today entering their senior years. Some of the seniors desire low maintenance housing alternatives or simply do not need the space or cannot afford the expense of a large single family home. Others may require a form of assisted care. Having lived in the community for many years they often wish to remain here, close to friends and neighbors, churches and familiar services. Unfortunately, Bloomington does not have enough senior oriented housing to meet the demands of its residents. Since very little vacant residential land remains, the only way in which the City can add additional senior housing is through redevelopment.

To provide areas for potential future residential redevelopment, the land use guide plan designates numerous areas throughout the City for development at greater than existing densities. This practice began with the 1980 comprehensive plan update and continues today. Selected areas are considered to be conducive to redevelopment and higher densities based on criteria such as proximity to commercial services, proximity to transit, relatively large parcel sizes, age and quality of existing structures, and surrounding land uses. Over time, housing and redevelopment needs will continue to evolve. As the comprehensive plan is updated in ten year increments in the future, housing priorities will need to be reassessed and areas guided for redevelopment will need to be reanalyzed in light of changing housing needs.

A priority must also be placed upon the incorporation of housing within commercial areas through mixed use development projects. This method brings residents close to commercial services and transit and reduces the need to travel. In addition to meeting housing needs, this method has the added benefit of revitalizing commercial areas, a benefit that can

increase overall neighborhood confidence. Adding housing in commercial areas typically generates much less neighborhood opposition than does redevelopment within single family residential areas. Each of the guide plan's commercial designation categories allow the inclusion of housing within a mixed use project. The City has also adopted redevelopment plans that call for the mixed use redevelopment of certain areas. These redevelopment plans are implemented by the Bloomington Housing and Redevelopment Authority.

While selected residential areas are guided to allow redevelopment at higher densities than currently exist or to other land uses altogether, the zoning in these areas generally conforms to the existing uses rather than to anticipated future uses. To rezone these properties to multiple family residential, commercial, or industrial zoning districts before redevelopment occurs would present a hardship upon the existing uses by making them nonconforming and by creating unreasonable zoning standards for routine home expansions. Given that redevelopment of these properties may actually be decades away or may never occur, the City wishes to avoid placing these properties in a zoning district that does not conform with the existing uses. Therefore, for the purposes of this Plan, single family residential zoning districts shall be considered consistent with commercial, industrial, or medium and high density residential land use guide plan designations in cases where a single family residential area is proposed for potential future redevelopment. However, no redevelopment shall occur in those areas which is inconsistent with the future designations of this Plan.

An appropriate land use guide plan designation is simply one of several required elements in the process of residential redevelopment. Residential redevelopment often requires rezoning and plan approval. As discussed in the goals and policy objectives section of this element, any request for rezoning will be reviewed to ensure that the proposed redevelopment package is of a viable size, does not leave behind orphan parcels, and sufficiently mitigates conflicts with existing land uses. A redevelopment rezoning proposal which the Issuing Authority finds does not satisfy these requirements is in conflict with this comprehensive plan.

Land Use Conflicts

There are areas within the City in which existing residential areas are negatively impacted by proximity to incompatible land uses. Examples of this phenomenon include portions of Pillsbury Avenue, with residential uses abutting and adjacent to industrial uses, and portions of Aldrich Avenue, with residential uses adjacent to commercial uses. In these areas, a more defined transition is needed to minimize impacts on the residential uses. Significant study has been performed on these areas to identify ways in which land use transitions can be improved, including an adopted Northeast Bloomington Study Report and a Pillsbury/Lyndale Neighborhood Plan which is currently in draft form.

Aircraft Noise

Bloomington's residential neighborhoods, particularly in eastern Bloomington, are impacted by aircraft noise from Minneapolis/St. Paul International Airport. The construction of a new north/south runway at the airport, while reducing the overall number of Bloomington dwellings exposed to high noise levels, will expose residential areas east of Highway 77 to increased aircraft noise. The environmental impact statement that includes the new runway recommends acquisition of 27 single family and 131 multiple family units within the Airport South District. Other affected units may be eligible for federal noise insulation funding. Further discussion on the impacts of aircraft noise on residential land uses is included within the Airport Impact Element.

Commercial Areas

Bloomington's commercial areas are close to entirely built out. Still, some key commercial sites remain undeveloped, including the 52 acre Met Center site, 58 acre Kelley Farm site, and 31 acre "Adjoining Lands" site each in the Airport South District. Market pressure for commercial redevelopment also remains strong. In recent years, high demand for hotel, office, and retail land uses have led to numerous redevelopments, primarily along the Interstate 494/Ring Route corridor. Future redevelopment levels will likely fluctuate with economic cycles but demand for commercial redevelopment in Bloomington is expected to remain strong as businesses take advantage of the city's excellent location within the region and several infrastructure improvement projects occur, including the introduction of LRT, the completion of the Ring Route, and improvement projects to I-494 and I-35W.

Range of Intensities

Bloomington's land use guide plan includes five commercial designations: Office/Hotel, General Business, Community Commercial, Regional Commercial, and High Intensity Mixed Use. The scope of each designation is discussed in the previous section. High Intensity Mixed Use is assigned only to the Mall of America and adjacent areas appropriate for high intensity, tourist-oriented uses. Generally, Regional Commercial is assigned only to select areas with excellent accessibility that are adjacent to a freeway. Community Commercial applies both to lower intensity freeway commercial areas and to the larger non-freeway commercial nodes. General Business is reserved for commercial areas scattered throughout the city that focus primarily on providing goods and services to the surrounding neighborhoods. The Office designation, which encompasses hotels as well, is applied both in high intensity office/hotel areas and as a transitional use between commercial and residential areas.

494/Ring Route Corridor

For many years, Bloomington's land use plans have encouraged the development of intense commercial uses along the Interstate 494 corridor. This commercial corridor has helped to create a strong and diverse tax and employment base for the City and its residents. The Comprehensive Plan 2000's land use guide plan carries on this vision. In many cases, the plan encourages nodes of land uses which benefit from proximity to one another, such as tourist-oriented land uses in the Airport South District, auto dealers near the I-494/I-35W intersection, and office uses

near France and I-494 or north of Normandale Lake. Location of these uses along the I-494 corridor also serves to buffer residential uses from the freeway and concentrates commercial traffic in non-residential areas. The linear nature of the corridor is also conducive to transit service, although major transit improvements are needed for the corridor to reach its transit potential. One effect of intensification of commercial uses within the corridor has been increased congestion. To maintain continued growth within the corridor, both public and private infrastructure improvements will be needed. Review and approval of development proposals within the corridor will need to closely examine infrastructure capacity.

Airport South District

City land use and capital improvement plans have long steered the commercial portions of the Airport South District (all Bloomington land east of TH 77) toward a role as a high intensity regional center. Given those past plans, the mix of existing land uses, an excellent location adjacent to both an international airport and major regional freeways, the untapped capacity of existing public infrastructure, a high level of planned transit service, and the availability of sites for additional development and redevelopment, Bloomington's Airport South District has the potential to become a third "downtown" for the region.

Airport South land use plans are intended to:

- Avoid under-utilization of land and low intensity uses;
- Require high intensity, employment and tourist oriented land uses;
- Require the creation of a new, high-density residential node in the northeastern corner of the Airport South District;
- Avoid freestanding, non-integrated retail and service uses;
- Promote alternative forms of transportation;
- Recognize the noise, height and safety constraints of a location adjacent to an international airport; and
- Preserve existing single-family residential areas south of 86th Street.

Lyndale Corridor

Bloomington's second commercial corridor runs along Lyndale Avenue from the Richfield boundary to 100th Street. This corridor is less intense than the I-494 corridor and has not seen the same level of recent market driven redevelopment demand. The corridor is a mix of retail, service, industrial, office, and residential uses. A major issue with the corridor is how land uses will evolve in the future. At the same time that some existing retail areas within the corridor struggle with high vacancy and turnover rates, new retail uses are proposed to replace non-retail land uses. For several years, some residential properties within the corridor have been guided for redevelopment to office uses while being zoned residential, with no actual redevelopment occurring. Other residential areas are guided industrial in anticipation of industrial expansion. Future land use plans within the corridor need to be reevaluated to produce a cohesive long term vision. The draft Pillsbury Lyndale Neighborhood Plan serves this purpose and should be brought to completion.

Commercial Nodes

In addition to these two commercial corridors, Bloomington also has numerous commercial nodes scattered throughout the city which focus on providing goods and services to the surrounding neighborhoods. These nodes include neighborhood commercial areas such as 90th and Penn, Old Shakopee and Old Cedar, Bloomington Ferry and Ensign, and community commercial areas such as France and Old Shakopee or 98th and Normandale. These scattered nodes are generally in good condition and vacancies are minimal, although several gas station sites have been vacated in recent years. Their small site sizes and the difficulty of converting them to other land uses have made redevelopment difficult. Several of these sites have become eyesores that negatively impact the image of the surrounding neighborhood. The City will need to create new land use tools to encourage the redevelopment of these uses.

Redevelopment

Wherever commercial redevelopment occurs, the City will need to closely consider infrastructure capacity, impact on surrounding land uses, and site suitability in its approval or denial decision. Proposed developments must not overtax the infrastructure and utilities. Redevelopment should reduce impacts on incompatible adjacent land uses through improved buffering and site design. Redevelopment must also not leave behind difficult to develop orphan parcels. The reuse of an existing structure for a new land use (for example, converting an industrial structure to a retail use), requires that the site be updated and reconfigured to meet all code requirements in the same manner as a new structure.

Industrial Areas

Bloomington industrial uses are concentrated within the Central and Western Industrial Areas although additional warehouse and high tech manufacturing uses are scattered throughout the city. Bloomington's Central Industrial Area has long been built out and is now entering a phase of redevelopment. Redevelopment in these areas is made more difficult by the abundance of inexpensive industrial land on the fringe of the metropolitan area. Most redevelopment within the Central Industrial Area has been generated through the expansion of existing industrial uses rather than through the entrance of new industry.

The Western Industrial Area, developed primarily in the 1980s and 90s, is approaching build out with many of the still vacant sites being held by their owners for planned expansions. In addition to the build out of the few remaining vacant sites, some expansion of existing uses is anticipated. Minimal redevelopment is anticipated in this area.

Public/Quasi-Public/Conservation Areas

With the Minnesota River Valley, Nine Mile Creek wetlands, and Hyland Park, Bloomington has a much higher percentage of its land set aside as natural areas than most communities. The guide plan endeavors to preserve these natural amenities. The city's parks, churches, schools, and public buildings are well established. Still, changes will occur and the City will need to ensure that improvements to public and quasi-public facilities work well with their surrounding neighborhoods.

2.5 Goals, Policy Objectives, Implementation Actions

Bloomington is many things to many people: a great place to raise a family, with quality schools, safe neighborhoods, low taxes, and rising property values; a good place to grow old, with excellent senior services and activities and diverse housing opportunities; a center of commerce; a great business address for small and large companies; a workplace for employees living throughout the region; a major tourist destination and shopping Mecca; and a nature preserve with vegetated river valleys and bluffs, numerous lakes and wetlands, and regional park reserves.

Bloomington's land use challenge over the next twenty years and beyond is to preserve all of the features that make Bloomington a great place to live and work while accommodating market demands for additional development and addressing the land use problems of today. The following goals and policies outline the City's land use values and strategies.

Land Use Goal 1

Encourage an efficient arrangement and distribution of land uses.

Policy Objective 1.1

Avoid future land use conflicts and mitigate existing land use conflicts.

Implementation Actions

- Encourage an arrangement of land uses that groups uses of compatible characteristics and requirements near one another (*see Table 2.6, Land Use Compatibility*). *Development proposals and requests to change zoning or guide plan classifications will be evaluated based on the surrounding land uses and the compatibility of the proposed land use. The location of incompatible land uses adjacent to one another will be strongly discouraged.*
- In instances where it is desirable, or unavoidable, to have incompatible land uses adjacent to one another, require the more intensive land use to provide an appropriate transition or buffer.
- Where land use conflicts currently exist, identify mitigation measures

such as the retrofit of screening or the redevelopment of one of the incompatible land uses.

Policy Objective 1.2

Craft the Zoning Ordinance to work hand in hand with the Comprehensive Plan to achieve the City's development vision.

Implementation Actions

- Evaluate the existing zoning districts and make changes as necessary. *The City currently has a complex system of 29 base zoning districts plus overlay districts which have been developed over the last forty years. A comprehensive review and revision of the City's zoning districts will ensure that they correspond to the City's current development goals and will simplify the development process by reducing the overall number of districts.*
- Perform a consistency study. *State law requires that zoning be consistent with the Comprehensive Plan. Once the City's geographic information system is available, a study should be performed to ensure that all zoning designations within the city are consistent with the Comprehensive Plan. To facilitate this study, the preparation of geographic overlays for property lines, land use, zoning, and guide plan designation should be made a priority.*

Policy Objective 1.3

Coordinate transportation and land use decisions to reduce peak period travel demand by reducing automobile use and trip.

Implementation Actions

- Promote high density and senior housing redevelopment in mixed use areas near employment opportunities, commercial services, and transit to reduce travel demand.
- Review the City's official controls to ensure that mixed use development is strongly encouraged in appropriate areas.

Policy Objective 1.4

Retain and use existing linear rights of way (e.g. railroad and utility rights of way) for public use.

Implementation Actions

- Support the acquisition of use of linear rights of way for recreational or other public use. *The existence of linear rights of way such as the Canadian Pacific Railroad Spur and the Northern States Power Corridor present unique opportunities for public uses that require a continuous corridor, including dedicated transit ways and recreational trails.*

Policy Objective 1.5

Promote aesthetically attractive development and good urban design.

Implementation Actions

- Require utility systems to be placed underground when feasible.
- Require parking lots to be screened through berms or vegetation.
- Evaluate the use of neighborhood identification features to foster neighborhood identity and pride.

Land Use Goal 2

Ensure that redevelopment improves local conditions.

Policy Objective 2.1

Avoid redevelopment that overtaxes existing infrastructure.

Policy Objective 2.2

Require that redevelopment mitigate negative impacts on adjacent property.

Policy Objective 2.3

Oppose the conversion of an existing structure to a use for which it was not intended (for example, conversion of an industrial building to a retail use) unless the site can be renovated and reconfigured to fully meet Code requirements and the needs of the new land use.

Policy Objective 2.4

Ensure that redevelopment sites are suitably sized for the proposed replacement land use.

Policy Objective 2.5

Avoid redevelopment that leaves behind difficult to develop "orphan parcels". *"Orphan parcels" are parcels that are unlikely to be redeveloped unless they are combined with an adjoining parcel. These parcels are not conducive to redevelopment by themselves due to their small size, lack of access, or inability to meet the performance standards of the underlying zoning district. Redevelopment proposals will be strongly encouraged not to create or leave behind orphan parcels.*

Policy Objective 2.6

Promote redevelopment of outdated or incompatible land uses and abandoned buildings. Examples of possible redevelopment implementation actions include the following:

Implementation Actions

- Develop a redevelopment fund and land banking policy. *To be in a position to quickly address priority redevelopment needs, special funds for that purpose should be set aside. To address long term redevelopment goals, critical parcels should be acquired as they come on the market, thereby reducing acquisition costs. Both the redevelopment fund and land banking policy should be directed towards only those sites which would not otherwise be redeveloped by the private market.*

- Evaluate available techniques for requiring the reuse, removal, or maintenance of vacated buildings. *Buildings, notably former service stations, have been vacated in some of the city's neighborhood commercial centers. To the extent that these buildings are not maintained to area standards (for example, broken or boarded windows) they have a significant detrimental affect on neighborhood confidence and impede further reinvestment by neighboring property owners. Staff will evaluate techniques such as anti-blight requirements and receivership to require either the reuse, removal, or maintenance of abandoned buildings.*

Land Use Goal 3

Promote continued economic development for the City and the region.

Policy Objective 3.1

Promote and facilitate the completion of planned expansions to Interstates 494 and 35W through Bloomington. *The Minnesota Department of Transportation has prepared plans to widen and improve I-494 and I-35W through Bloomington but the plans have not been fully funded due to a lack of state transportation resources. These projects would greatly improve access to Bloomington and would likely spur additional redevelopment.*

Implementation Actions

- As development proposals within the expansion area are received, the City will use available techniques to preserve as much of the needed highway expansion area as possible, thereby lowering the ultimate costs of the project and improving its chances for being funded.

Policy Objective 3.2

Promote the completion of planned light rail and transit improvements within Bloomington. *The Minnesota Department of Transportation and Metro Transit have plans to add light rail transit in the Airport South District and high speed bus service with a Bloomington transfer station along I-35W. Both of these projects will improve transit access to and from Bloomington and will facilitate transit oriented development.*

Policy Objective 3.3

Encourage the International Airport to remain at its present site. *Although the airport brings with it noise impacts and restrictive runway safety zones and height limits, having the airport adjacent to Bloomington is a net positive for the city due to its great economic impact. Bloomington's largest employers rely heavily on the close proximity of the airport. While recent legislative actions have determined that the airport will remain in its present location for the foreseeable future, there are continued calls from various groups to relocate the airport.*

Implementation Actions

- Lobby for retaining the airport at its present location if airport relocation is considered in the future.

Policy Objective 3.4

Preserve a diverse work force by providing a mix of housing at all price levels. *Since Bloomington's strong economy offers employment opportunities with wage levels at all points in the income spectrum, the city requires a corresponding diversity of housing types and price levels. While encouraging a mix of housing, the City must also ensure that new and existing housing meet high quality housing standards and conform to the goals and policies outlined in the Housing Element.*

Policy Objective 3.5

Promote and facilitate additional high quality redevelopment at appropriate locations throughout the city.

Policy Objective 3.6

Prepare an annual land use report.

Implementation Actions

- Utilize the City's geographic information system to prepare an annual report summarizing land use, vacant land, and development over the last year.

Land Use Goal 4

Preserve environmental and historic resources.

Policy Objective 4.1

Limit development in environmentally sensitive areas, such as floodplains, bluffs, steep slopes, and wetlands. *Additional environmental goals, policy objectives, and implementation actions appear in the Environmental Protection Element included in the Technical Appendix.*

Policy Objective 4.2

Promote the identification, preservation, and maintenance of sites with historic, architectural, archeological, and cultural value or significance, including those properties which may be technically ineligible for historic registration.

Implementation Actions

- Integrate historic, architectural, archeological, and cultural preservation in the routine activities of the City, such as zoning, code enforcement, public works, and economic development.
- Applications for permits in relation to a Class I or Class II historic or identified prehistoric site shall be reviewed by City staff. If a Certificate of Appropriateness is required, staff will prepare a recommendation to the City Council for final action.

Land Use Goal 5

Address the neighborhood specific needs of the city's commercial, industrial, and residential areas.

While a full discussion of neighborhood level land use conflicts, opportunities, and strategies is beyond the scope of a citywide Comprehensive Plan and should be reserved for a more detailed analysis within neighborhood or area plans, the most pressing neighborhood specific policy objectives and implementation actions are included below.

Policy Objective 5.1

Facilitate continued redevelopment in the Airport South District. *Including all lands in Bloomington east of Highway 77, the Airport South District plays a regional role as a major employment center, host to the nation's largest shopping mall, gateway to the Twin Cities and Minnesota for most air travelers, and anchor for the largest concentration of hotel rooms in the Upper Midwest. This diverse, mixed use district is also home to office towers, high-tech manufacturing, and residential areas of both high and low density. The district contains many of Bloomington's largest vacant parcels, including the Met Center site, Mall of America "Adjoining Lands" (currently used as overflow parking), Kelley Farm, and Ceridian Ballfields. The proximity of the region's international airport has had a major influence on land use within the district in the past and will continue to do so in the future.*

Implementation Actions

- Work with the Minnesota Valley National Wildlife Refuge to make the refuge more accessible to residents, visitors and employees. *As growth occurs in the Airport South District, especially residential growth, the wildlife refuge and river valley will be a much-treasured resource. Public access should be improved through the creation of new access points. To facilitate improved access to the Wildlife Refuge facilities, the City will work with Three Rivers Park District to promote a trail connection from the Refuge visitor's center and headquarters building to the proposed regional trail linking MSP Airport, Richfield and Edina to the South Hennepin Regional Trail.*
- Work with the Minnesota Valley National Wildlife Refuge in the provision of stormwater management utilizing a range of alternatives and techniques above and below the bluff.
- Improve pedestrian infrastructure to reduce the need for vehicle trips and to improve access to transit. *Pedestrian infrastructure should be provided between entrances and streetside sidewalks, between adjacent uses, along public streets, along private drives, and in other areas necessary to support districtwide pedestrian movement.*
- Collaborate with the Metropolitan Airports Commission to ensure that residential areas acquired for noise mitigation purposes are redeveloped in a manner that does not detract from surrounding land uses.
- Use official controls to require the creation of a high-density housing and mixed use node in the northeastern portion of the Airport South District.
- Work toward the creation of a fourth Bloomington light rail transit station at American Boulevard and 34th Avenue. *Adding an LRT station at American Boulevard and 34th Avenue is an integral component of the City's vision to create a high-density housing and mixed use node in the northeastern portion of the Airport South District. Bloomington's goal is to have plans in place by December 31, 2007. If plans are not in place by the end of 2007 to create this station, the City will reevaluate*

land use controls in the immediate vicinity as part of its required 2008 Comprehensive Plan Update.

- Amend official controls as necessary to support and implement the land use vision of this plan for the Airport South District.

Policy Objective 5.2

Mitigate the negative impacts of aircraft noise on the city's residential areas. *The addition of the new north-south runway will redistribute aircraft takeoffs and landings over Bloomington. Traffic on the existing 4-22 crosswind runway will decrease as the planes begin to use the new north-south runway, thereby decreasing noise exposure in most areas west of Highway 77. Areas east of Highway 77 that were previously exposed to little aircraft noise, however, will receive noise levels higher than anywhere else in the city (Figure 5.4 details anticipated aircraft noise levels).*

Implementation Actions

- The City's aircraft noise policies and noise level maps are included in Chapter 5, the Airport Impact Element.

Policy Objective 5.3

Encourage the continued redevelopment of land along the Ring Route and I-494 as a high density, mixed use corridor. *The so called "Bloomington Strip", which runs along I-494 and the 79th/80th Street Ring Route from Highway 77 to Eden Prairie, is one of the most densely developed and defined linear corridors in the Twin Cities region. The corridor can be viewed as two segments, divided at I-35W, each with its own character. The eastern portion of the corridor is and has been a jumbled mix of industrial, retail, service, office, and residential land uses. Much of the eastern portion has already been redeveloped with recent market pressures favoring retail establishments and hotels although sites have also been redeveloped to industrial, warehouse, and office uses. The western portion of the corridor is predominantly focused on office and retail uses including numerous high rise office buildings and the Southtown Shopping Center. Continued redevelopment pressures are anticipated throughout the corridor, especially as major roadway improvement projects for I-494 and the Ring Route are completed.*

Implementation Actions

- Integrate I-494/Ring Route Corridor land use plans with planned roadway improvements. *The City is currently in the process of upgrading 79th and 80th Street to create a continuous, high quality, four lane "Ring Route" paralleling I-494 on its south side. The improvements will include a bridge over I-35W, linking the eastern and western segments of the corridor. Traffic flows will increase along the Ring Route as short length, intra-city trips shift from a congested I-494. The Minnesota Department of Transportation has also drafted plans to make substantial improvements to Interstate 494. While only a small portion of the proposed improvements currently have funding, the entire project could materialize if transportation funding levels increase in the future. These roadway improvement projects will have a major impact on the corridor through increased highway capacity and improved access, the acquisi-*

tion or reconfiguration of numerous parcels, and the closing and reconfiguration of several interchanges.

- Develop a master plan for gateway entrance features and landscaping along Lyndale, Nicollet, Portland, 12th, 24th, and 34th Avenues between I-494 and 79th/80th Street Ring Route.
- Encourage the provision of regular transit service running the length of the Ring Route. *While portions of the corridor are currently served by bus routes, no route follows the corridor for its entire length. With the completion of a Ring Route bridge over I-35W, a continuous route serving the corridor will be possible and the City will encourage transit agencies to establish a continuous bus route linking the corridor from the international airport to the office towers west of Normandale Blvd.*

Policy Objective 5.4

Address neighborhood or area specific land use conflicts by implementing existing neighborhood and area plans and preparing new area and neighborhood plans as the need arises.

Implementation Actions

- Adopt and implement a neighborhood plan which addresses the many land use conflicts in north central Bloomington. At several locations in north central Bloomington, residential areas directly abut industrial or intense commercial development with little to no screening, notably along Lyndale and Pillsbury Avenues. This land use relationship has had a detrimental impact on the affected residential areas. Staff has been working on potential long term solutions to these land use conflicts within the Pillsbury/Lyndale Avenue Neighborhood Plan.
- Continue implementation of the Oxboro Redevelopment Plan.

Policy Objective 5.5

Inspire continued consumer confidence in the future of Bloomington's residential neighborhoods. ***When deciding on a neighborhood or community, a potential buyer looks at many factors in addition to the house itself. A buyer will look at the quality of schools; accessibility to employment and amenities such as shopping and recreation; the level of reinvestment within the area; how neighbors maintain their properties; the quality of services and infrastructure; and perceived levels of crime among other factors. To keep Bloomington's residential neighborhoods vital, the City will undertake the following actions which are further described in the Housing Element.***

Implementation Actions

- Continue the City's Community Enhancement Program of targeted neighborhood revitalization and intensive code enforcement.
- Increase housing rehabilitation.
- Remove substandard homes.
- Improve marketing efforts to promote community commitment to neighborhood vitality. Coordinate efforts with the Bloomington School District.
- Develop and link information sources for neighborhood analysis.
- Support anti-crime initiatives.

Section 3:
Housing Element

3.1 Summary

Bloomington's 36,900 plus dwelling units include a mix of single family detached homes, townhomes, duplexes, mobile homes, condominiums, apartments, group homes, and assisted living facilities. The vast majority of these units are currently in good condition. Nevertheless, housing challenges exist:

- **Two-thirds of the single family detached units are over 30 years old, the critical age at which major renovations are required to maintain functional viability. Without continued maintenance, the deterioration of a small number of individual homes can push entire neighborhoods into a cycle of decline.**
- **Residential land in Bloomington is close to entirely built out. Less than one percent of the land guided for residential use is currently vacant. The lack of vacant land will require increased reliance upon redevelopment to meet future housing needs.**
- **Changing household sizes, age distribution, and income levels will create demand for new housing types. For example, it is estimated that by the year 2005, nearly 20 percent of Bloomington's heads-of-household will be over the age of 65. Efforts will need to address these changing housing needs through redevelopment which compliments the character of existing neighborhoods.**

Maintenance, Rehabilitation, and Code Enforcement

The foremost housing priority is to keep the existing housing stock in good condition. Bloomington is a city of neighborhoods filled with houses of similar ages. Given this concentration of houses of a particular age, future neighborhood strength will be closely linked with the maintenance and rehabilitation of individual houses. The 14,000 single family homes over 30 years old will be particularly important. Unless already completed, these homes will require replacement of major systems, such as roofs, siding, furnaces, and driveways.

The City will continue to closely monitor housing quality and require property owners to maintain their homes to a high standard. In addition to routine enforcement, neighborhood enhancement inspections will be

conducted to review housing conditions and code compliance. Bloomington's Time-of-Sale Inspection Program will continue to address hazardous code deficiencies when an owner occupied home is sold. Housing and Redevelopment Authority (HRA) programs will assist with the maintenance needs of low income property owners. Houses beyond repair may be purchased by the HRA and removed to make way for structures.

As property owners maintain private property, the City will keep the existing public physical infrastructure well maintained and target physical improvements in the areas of highest benefit. While cracked sidewalks, broken curbs, and pothole filled streets can discourage property owners from making improvements on private property, a well maintained physical infrastructure and new public investment can spur neighborhood confidence and private investment.

In order to monitor neighborhood conditions and identify signs of decline in their earliest stages, the City will define areas where it will track changes in stability indicators over time. These stability indicators will include property values, crime levels, nuisance complaints, and rehabilitation levels. The information will help identify areas for public maintenance and rehabilitation efforts.

It is critical for property owners to have confidence in their neighborhood and community and to be comfortable investing their own resources to make significant property improvements. City sponsored programs nurture that confidence. But the full value of these public investments can only be realized if the public is well aware of the amount of public and private investment directed into their neighborhood.

Toward this end, the City will begin a communication initiative to let residents know that significant public and private investment is being made and will continue to be made in their neighborhood. The initiative will call attention to levels of public and private investment, provide information on available resources, and encourage residents to join their neighbors in maintenance and rehabilitation.

Redevelopment

Over half of Bloomington's single family housing stock was constructed in the 1950s and 60s. Since that time, Bloomington's demographics have changed dramatically. In 1960, 50 percent of the city's residents were under 20 years in age. By 1990, only 24 percent of residents were under 20. Median household size has fallen from 4.2 in 1960 to 2.47 in 1990. The city's demographics will continue to change. For example, it is anticipated that nearly 20 percent of Bloomington's heads-of-household will be over the age of 65 by the year 2005.

In the 1970s and 80s, falling household sizes, more single parent families, and increasing numbers of seniors created a demand for multi-family and single family attached housing units, a demand that could not be met by the housing stock in existence at the time. In response, the City encouraged increased densities and multi-family housing through its land use controls while developers responded to meet the demand. Bloomington's future housing needs will not be so easy to meet since the supply of vacant residential land is virtually exhausted. Future housing needs will have to be met primarily through redevelopment.

The City will encourage creative redevelopment in appropriate areas to meet changing housing needs in the future. However, it is important that redevelopment be sited carefully and be allowed only at a scale and location that will not adversely affect the surrounding neighborhood. The most intense redevelopment should occur only within areas or corridors with convenient access to transit and services and should be designed to minimize impacts on surrounding areas.

Intent

Meeting the housing needs of every Bloomington resident and work force member is a monumental task. Clearly, many of the root causes of housing need are beyond the power of a local government to solve. Nevertheless, there is a lot that local government can do to address housing needs. Using available resources, Bloomington will strive to build and renew community by:

- **Preserving and enhancing the vitality of the city's homes and neighborhoods;**
- **Providing a diversity of housing opportunities for a variety of household sizes, age groups, and income levels;**
- **Meeting changes in housing needs through creative redevelopment;**
- **Protecting and improving the physical and visual quality of residential areas through careful maintenance, rehabilitation, code enforcement, and public investment; and**
- **Maintaining consumer confidence in the future of neighborhoods and the community as a whole.**

3.2 Context

Bloomington's ability to meet the housing needs of its residents and work force is dependent upon several interrelated factors. A discussion of these factors appears below.

Housing Stock

Before World War II, Bloomington was a small community characterized by a rural, agricultural atmosphere. The city's rapid transformation into a large suburb and major employment center began in the postwar era of economic expansion. Population soared from 9,902 in 1950 to 50,498 in 1960 as federal policies encouraged single family, detached, owner occupied housing. In the early years of this expansion, Bloomington's housing stock was extremely homogeneous. In 1960, over 99 percent of the city's housing units were single family. Over time, however, the housing stock diversified considerably as illustrated by *Table 3.1*.

Today, Bloomington offers housing for residents at any stage of life or income level — from apartments to single family detached homes, from townhomes to assisted living facilities. Bloomington already meets benchmarks for life cycle housing as set by the Metropolitan Council in conjunction with the Livable Communities Program. *Table 3.2* depicts the current number of dwelling units by structural type while *Table 3.3* depicts the ownership status of Bloomington's dwelling units.

Table 3.1 **Housing Units, 1960-1990**

Type	1960	1970	1980	1990
Single Unit	12,281	17,290	22,290	24,400
Multi-Unit	77	4,964	7,430	11,415
Total	12,358	22,254	29,720	35,815

Source: U.S. Census Bureau

Table 3.2 **Housing Stock, 1999**

Housing Type	Units	Percent
Single Family Detached	21,337	57.8%
Townhouses	2,827	7.7%
Mobile Homes	186	0.5%
Two-Family Structures	544	1.5%
Multi-Family, including Condos, Co-ops, Assisted Living and Apartments	11,997	32.5%
Total	36,891	100.0%

Source: Bloomington Planning Division

Table 3.3 **Tenure by Housing Type, 1990**

Type	Owner Occupied	Renter Occupied
Single Family	22,297 (94%)	1,468 (6%)
Multi-Family	1,603 (16%)	8,676 (84%)
Entire City, including "Other" Units Not Specified Above	24,261 (70%)	10,227 (30%)

Source: U.S. Census Bureau

Table 3.4 Building Permits: New Residential Units

Year	Single Family Detached	Other	Total
1990	84	147	231
1991	60	92	152
1992	73	171	244
1993	92	91	183
1994	109	15	124
1995	47	126	173
1996	32	29	61
1997	28	131	159
1998	29	213	242
1999	23	43	66
Total	577	1,058	1,635

Source: Bloomington Building and Inspection Division

Table 3.5 Housing Units Forecast

Year	Total Units
2000	37,104
2005	37,972
2010	38,839
2020	40,373

Source: Bloomington Planning Division

Table 3.4 lists the number of building permits issued for new residential housing units from 1990 to 1999. The pace of new construction will slow as vacant residential land becomes increasingly scarce.

Only 129 vacant acres planned for residential use remain, less than one percent of Bloomington's land. Analysis of recommended land uses and development constraints shows that the remaining vacant residential land could support an additional 288 units (151 units — single family detached and 137 units — single family attached or multi-family). Some of these vacant parcels may not be immediately available for development because owners are unwilling to sell. Therefore, the addition of these 288 units will likely occur slowly.

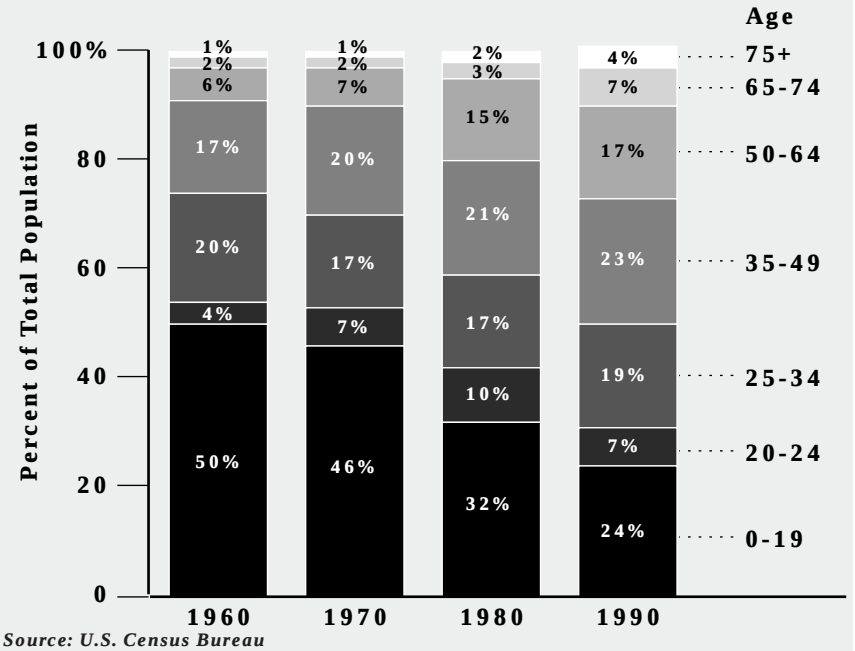
Additional changes in the number of housing units will be a result of either redevelopment or changes in zoning/future land use designations. Because redevelopment commonly occurs at greater than existing densities, the total number of housing units within the city after build-out should increase slightly over time as redevelopment occurs. The amount of redevelopment is difficult to forecast and will vary from year to year. Redevelopment will fluctuate with the strength of the economy, regional growth management policies, transportation costs, the availability of finance tools, regional land prices, and other factors. The forecasts in *Table 3.5* assume an increase of 3,269 housing units between 2000 and 2020, primarily in the Airport South District.

Household Makeup

In the 1950s and 1960s, Bloomington's population consisted primarily of nuclear families with parents in the child-rearing years of the life cycle. In more recent years, the city has also been attracting singles, single parents, childless couples, senior citizens, and other groups that characterize the heterogeneity of urban areas. Average household size has declined steadily, from 4.2 people per household in 1960 to 2.47 in 1990. The change in the age makeup of Bloomington's residents is illustrated by *Figure 3.1*.

Since 1960, Bloomington has experienced significant decreases in the percent of residents under 20 years of age; from 50 percent of the population in 1960 to 24 percent in 1990. In conjunction with state and national trends, the number of older Bloomington residents has increased dramatically over the same time period (1 percent of residents were over 75 in 1960, 3.7 percent in 1990). Still, the percentage of Bloomington's residents over 75 in 1990 was below the average for Hennepin

Figure 3.1 Age Distribution of Bloomington Population



Source: U.S. Census Bureau

Table 3.6
Age of Householder, 1990

Age Range	Number of Householders	Percent of Total
15-24	1,670	4.8%
25-34	7,778	22.6%
35-44	7,655	22.2%
45-54	6,471	18.8%
55-64	5,470	15.9%
65-74	3,630	10.5%
75+	1,814	5.3%
Total	34,488	100.0%

Source: U.S. Census Bureau

County (5.1 percent) and Minnesota (5.8 percent).

Assuming no out-migration, the growth in the senior population is expected to accelerate. Large numbers of residents are presently moving into the 65 to 74 age group, an even larger group will be in the next decade, and the aging baby boomers will be shortly after the year 2010 (**Demographic, Economic, and Social Trends Affecting People of Bloomington**, *South Hennepin Regional Planning Agency for Human Services*).

Perhaps more important for housing planning than overall age distribution is the age distribution of householders. A householder is the person, or one of the persons, in whose name a dwelling unit is owned, being purchased, or rented. *Table 3.6* outlines the age distribution of Bloomington's householders. In 1990, 15.8 percent of Bloomington's householders were over 65. By the year 2005, this number is expected to grow to nearly 20 percent of the population. Though not all these seniors will be low income, it is expected that there will be growing needs for new affordable senior housing and for services to assist seniors who stay in their single family detached homes.

Table 3.7 **Residential Density**

Land Use	1999		Density in Units/Acre	
	Acres	Units	1999	2020
Single Family Detached	7,526	21,337	2.8	2.9
Other	1,190	15,554	13.1	13.8
Total	8,716	36,891	4.2	4.4

Source: Bloomington Planning Division

Housing Costs

Bloomington's strong economy offers employment opportunities at all points of the income spectrum. Therefore, in order to meet the housing needs of the city's work force, Bloomington requires a corresponding mix of housing in all price ranges.

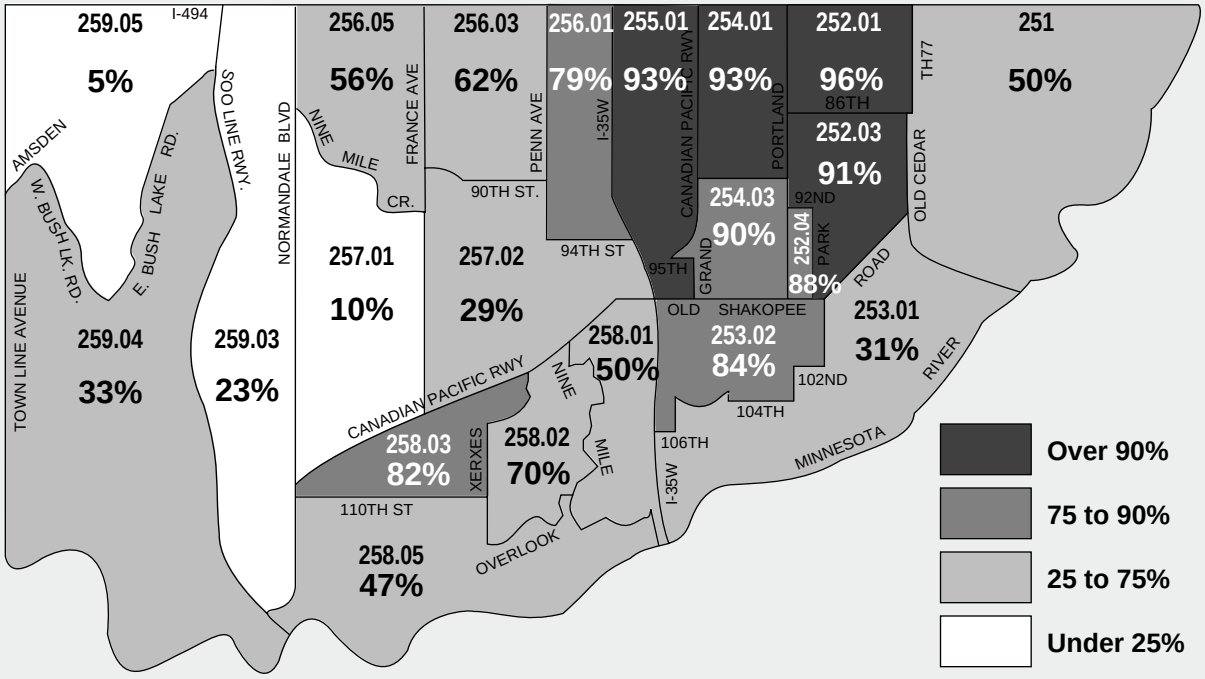
Bloomington has been successful in providing a high level of housing diversity while maintaining affordable housing options. Using Livable Communities Program measurements, 69 percent of the city's owner occupied housing qualifies as affordable (a value of $115,000 or less in 1994) and 33.4 percent of the city's rental housing qualifies as affordable (a monthly rental rate below $500 in 1990). Thus, the city meets benchmark levels of affordable owner occupied and rental housing as set by the Metropolitan Council (a complete list of Bloomington's assigned benchmarks appears in *Table 3.A1* in the **Technical Appendix**).

Bloomington's affordable housing is dispersed throughout the city although concentrations tend to be higher in the northern and eastern parts. These higher concentrations are indicative of the older housing in these areas. To preserve affordable housing and to ensure the continued vitality of affordable neighborhoods, it is important to concentrate rehabilitation and maintenance programs in these areas. *Figures 3.2 and 3.3* on page 3.6 show the 1990 distribution by census tract of both affordable owner occupied and affordable rental units.

One factor influencing housing cost is density. As density increases, the land and infrastructure costs per housing unit decrease. A community's residential density is an indicator tracked by the Metropolitan Council through the Livable Communities Program. Bloomington's density levels, as depicted in *Table 3.7*, are within the Metropolitan Council's benchmark ranges (a complete list of Bloomington's assigned benchmarks appears in *Table 3.A1* in the **Technical Appendix**). Given the limited vacant land in Bloomington, future housing densities will likely remain stable.

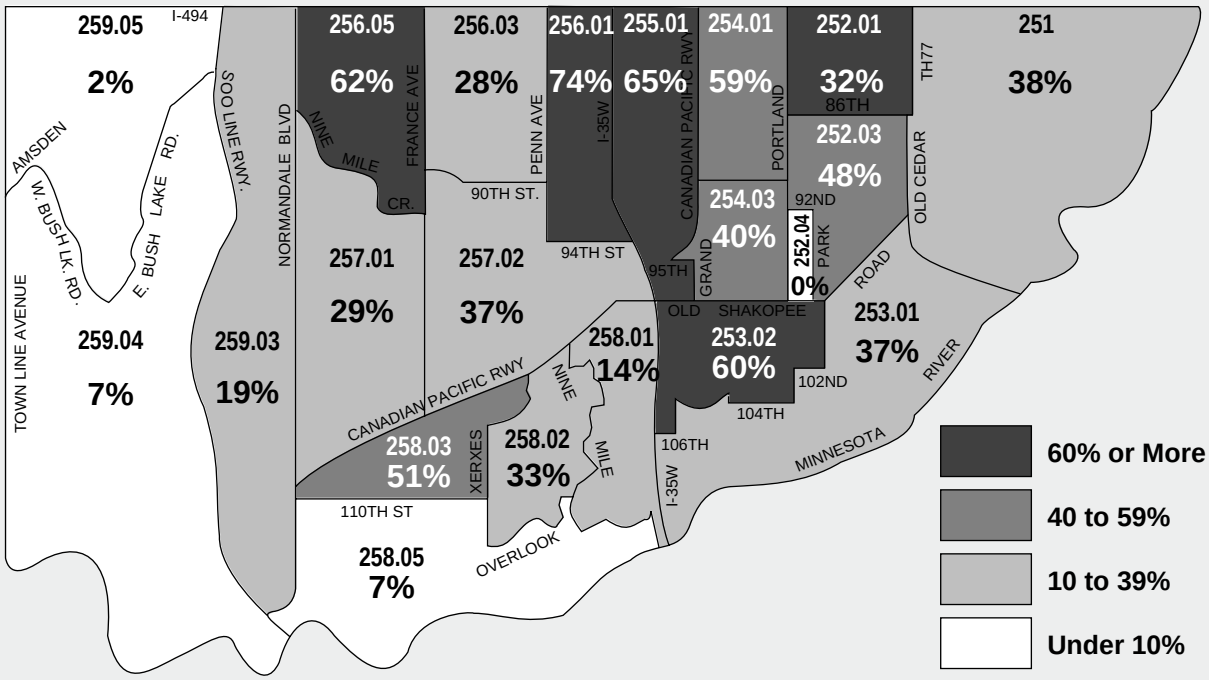
The average sale price of single family dwellings in Bloomington has increased over the ten-year period, 1990 - 1999, at a pace slightly slower than the metropolitan average. For the purposes of tracking average sales prices, the Minneapolis Area Association of Realtors (MAAR) divides Bloomington into an eastern and western market with I-35W as the dividing line. The 1999 MAAR average sales price was $129,267 for the eastern Bloomington market (an increase of 50 percent since 1990); $199,353 for the western Bloomington market (an increase of 52 percent since 1990);

Figure 3.2 **Percent of Owned Units with Values Below $100,000, 1990**



Source: U.S. Census Bureau

Figure 3.3 **Percent of Rental Units with Monthly Rent Below $500, 1990**



Source: U.S. Census Bureau

and $158,200 for the metropolitan area as a whole (an increase of 61 percent since 1990). The figures in *Table 3.8* reflect only units which were sold in a given year and are not adjusted for inflation. Eastern Bloomington figures predominantly reflect resales, while western figures include some sales of new construction.

The 1999 (payable 2000) average assessor's market value of single family detached housing units in Bloomington is $144,287. *Table 3.9* shows the distribution within value ranges.

The median monthly rent charged for rental units in 1999 was $801, a 47 percent increase over the U.S. Census Bureau's 1990 median monthly rent of $545. Monthly rental rates are summarized by number of bedrooms in *Table 3.10*.

Publicly Assisted Housing

To assist households and individuals unable to afford market rate housing, the City of Bloomington, through its Housing and Redevelopment Authority, subsidizes housing using a wide variety of federal, state, and local programs. *Table 3.11* details the number of units subsidized within the city by unit type.

Table 3.9 Assessor's Market Value: Single Family Detached Units, 1999

Value Range in Thousands	Number of Units	Percent of Total
$0-$50	10	0.0 %
$50-$100	2,741	12.9 %
$100-$150	12,293	57.7 %
$150-$200	3,831	18.0 %
$200-$300	1,703	8.0 %
$300+	714	3.4%

Source: Bloomington Assessing Division

Table 3.8 Average Sales Price: Single Family Units, 1990-1999

Year	Metro	Bloomington East Market	Bloomington West Market
1990	$98,016	$86,052	$131,377
1991	$99,402	$85,943	$136,269
1992	$103,264	$89,375	$144,396
1993	$107,569	$88,070	$157,418
1994	$111,806	$94,569	$156,131
1995	$117,053	$99,179	$161,256
1996	$124,022	$103,313	$162,771
1997	$133,800	$109,986	$173,048
1998	$143,500	$113,258	$181,635
1999	$158,200	$129,267	$199,353

Source: Minneapolis Area Association of Realtors

Table 3.10 Rental Units/Rental Range, 1999

	Efficiency	Number of Bedrooms: One	Two	Three	Total Rental
Rental Units	396	4,554	4,356	594	9,900
Percent of Total	4%	46%	44%	6%	100%
Rental Range per Month					
Low	$359	$248	$311	$605	$248
High	$774	$1,398	$1,406	$1,674	$1,674
Average	$592	$724	$897	$1,065	$814
Median	$634	$721	$911	$1,003	$801

Source: Bloomington Housing and Redevelopment Authority Sample Survey: 77 percent of all units were surveyed. Results were weighted to total number of rental units in the city. All figures reflect gross rent. Subsidized rental units are not included in this analysis.

Table 3.11 Subsidized Housing, 1999

Unit Type		Number
Large Family:	3 or More Bedrooms	204
Small Family:	2 Bedrooms	367
Seniors:	1 Bedroom	446
Special Needs:	Handicapped	231
Special Needs:	Battered Women, etc.	34
	Total Subsidized Units	1,282
Special Needs:	Chemically Dependent, Adolescent	57
Group Homes:	Mental Impairment	215
	Total Group Home Beds	272

Source: Bloomington Housing and Redevelopment Authority

Table 3.12 **Housing Condition**

Condition Rating	Number (Percent) of Units	
	1978	1996
Satisfactory, Good, and Excellent. *Observable defects, if any, are minor in nature; no maintenance items deferred to point where permanent damage exists.*	25,870 (98.7%)	26,037 (97.1%)
Major Maintenance Required. *Considerable deferred maintenance with permanent damage to structural items beginning to show.*	260 (1.0%)	737 (2.7%)
Critical Disrepair. *Damage to major structural items; housing still habitable, but possibly beyond occupant's ability to restore or maintain it.*	80 (0.3%)	39 (0.1%)

Source: Bloomington Planning and Assessing Divisions. Note that the 1978 survey included a slightly broader range of housing types than did the 1996 survey.

Housing Condition

The majority of the city's housing stock (97.1 percent) is satisfactorily maintained. However, because two-thirds of the single family housing stock is over thirty years old, increasing attention will need to be given to housing maintenance and rehabilitation in order to sustain satisfactory housing conditions. There are signs that the city-wide level of housing maintenance may be decreasing. The number of units in need of major maintenance has nearly tripled since the last comprehensive plan housing condition survey in 1978. Over the same time period, however, the number of homes in critical disrepair has been cut in half. Results of the housing condition surveys are outlined in *Table 3.12*.

Comparison with Surrounding Communities

The Metropolitan Council recommends that cities use Livable Communities data in their comprehensive plans for comparisons of their housing with other communities in the metropolitan area to help clarify housing needs. A comparison of Bloomington, neighboring communities, and other cities in the metropolitan area is provided in the **Technical Appendix**.

Regional Plans and Policies

The Metropolitan Council recommends that cities analyze the relationship between their housing plans and goals and the regional housing policies as stated in the **Regional Blueprint** (1996). This analysis is provided in the **Technical Appendix**.

3.3 GOALS AND POLICY OBJECTIVES

As Bloomington has changed from a fast growing suburb to a fully developed community, the City's housing focus has changed from growth to maintenance, rehabilitation, and redevelopment. Two-thirds of the city's single family homes are over 30 years old. Although the vast majority of these homes are in good condition, some neighborhoods are beginning to exhibit signs of deterioration. The city must avoid the destructive cycle of decline that can plague an aging suburb by preserving consumer confidence in our residential neighborhoods. The City of Bloomington's foremost housing priority is to keep the existing housing stock in good condition.

Over the years, Bloomington's demographic makeup and economy have also changed. Bloomington has diversified considerably from what was once a homogeneous community made up primarily of families with school age children. The number of seniors has increased greatly while the number of school age children has declined. Single parent households are becoming more prevalent and average household size has been dropping. Bloomington's strong economy continues to create both high and low wage jobs which will generate continued demand for housing in all price ranges.

These demographic trends, along with changing lifestyles, will create demand for new housing types. In recent years, the city has experienced increasing demand for townhomes and other housing types where exterior maintenance is handled by an owner's association. In the past, the City has been able to address changing housing needs by rezoning vacant residential land to accommodate the new demand. Today, however, Bloomington's vacant residential land has been virtually exhausted. In the future, demand for new housing types can only be accommodated through redevelopment.

It is the City's intention to encourage the redevelopment of existing residential land to meet the changing housing needs and desires of its residents while preserving a mix of housing at all price levels.

Housing Goal 1

Preserve and enhance the vitality and desirability of Bloomington's residential neighborhoods.

Policy Objectives

1.1 Continue the City's Community Enhancement Program.

1.2 Increase the amount of owner occupied housing rehabilitation.

1.3 Increase the amount of rental housing rehabilitation.

1.4 Remove substandard homes.

1.5 Reduce the number of substandard structures and code violations within residential areas through active code enforcement.

1.6 Review the existing housing codes and enforcement procedures. Make revisions as necessary.

1.7 Promote community commitment to neighborhood vitality and inspire continued consumer confidence in the future of Bloomington's residential neighborhoods.

1.8 Develop and link information sources for neighborhood analysis.

1.9 Support anti-crime initiatives.

1.10 Foster neighborhood ties and encourage neighborhood interaction.

Housing Goal 2

Provide life-cycle housing opportunities for all age groups, household sizes and income levels.

Policy Objectives

2.1 Increase the number of units oriented to the special needs of seniors.

2.2 Encourage redevelopment of low density housing to medium and high density housing in appropriate areas.

2.3 Create a redevelopment fund through annual City contributions.

2.4 Preserve existing affordable housing opportunities.

2.5 Provide and promote additional affordable rental housing.

2.6 Continue to actively pursue federal, state, and regional financial resources for affordable housing.

2.7 Support home ownership for low income residents.

2.8 Use Livable Communities Act benchmark indicators for communities of similar location and stage of development as affordable and life-cycle housing goals for the period 1996 to 2010.

3.4 HOUSING IMPLEMENTATION PROGRAM

The following implementation program describes the actions Bloomington will take to implement the goals and policy objectives of the **Housing Element**.

Housing Goal 1

Preserve and enhance the vitality and desirability of Bloomington's residential neighborhoods.

Policy Objective 1.1

Continue the City's Community Enhancement Program.

The City's existing Community Enhancement Program targets older neighborhoods for an 18 month period of intensive code enforcement in conjunction with neighborhood input meetings and educational newsletters. Additional rehabilitation resources are available for owner occupied and rental units within the targeted neighborhoods.

Implementation Actions

- Complete Community Enhancement inspections in all 19 designated neighborhoods by the year 2005.
- Provide funds to rehabilitate 50 owner occupied homes within each targeted neighborhood.
- Offer seminars on housing maintenance for property owners within the targeted neighborhoods.

Policy Objective 1.2

Increase the amount of owner occupied housing rehabilitation.

Implementation Actions

- Provide 100 loans for low income households to rehabilitate their homes each year. *Many homeowners have the desire to make major repairs to their property but simply do not have the resources. Bloomington will encourage rehabilitation by providing home improvement loans to low income residents who would otherwise not have access to credit. The loans can be used for basic repairs or energy improvements on items such as roofs, insulation, siding, windows, and doors.*
- Encourage private funds for rehabilitation efforts through coordinated marketing and education efforts with private lenders. *The City will*

work with private lenders and agencies to hold home improvement fairs and workshops where residents can learn of public and private resources and loans available for home improvement projects.

- Provide 50 purchase/rehabilitation loans by the year 2005. *The City will offer purchase or refinancing assistance to families who agree to rehabilitate an older home.*
- Provide information on materials and services for "do-it-yourself" property owners undertaking home improvement projects.

Policy Objective 1.3

Increase the amount of rental housing rehabilitation.

Implementation Actions

- Provide loan incentives for the maintenance and rehabilitation of 50 rental units per year. *Older rental complexes are particularly prone to falling into decline. As the major systems and amenities of rental properties age, monthly rent levels fall. Falling rental income in turn makes it even more difficult for a property owner to find the money to make improvements and reverse the trend. To help escape the cycle of decline or avoid it altogether, the City will provide loan incentives to property owners for maintenance and rehabilitation of older rental property.*
- Continue the City's quarterly rental housing collaboratives. *The meetings include educational speakers on rental housing topics, promotion of available City assistance, and opportunities for feedback on the City's policies.*
- Discourage crime in rental complexes through education on tenant screening and the Police Department's Crime Free Multi-Family Housing Program.

Policy Objective 1.4

Remove substandard homes.

Implementation Action

- Provide funds for the acquisition and demolition of six substandard homes per year. *Isolated structures which have deteriorated beyond repair should be identified, promptly removed, and replaced with uses compatible with the neighborhood.*

Policy Objective 1.5

Reduce the number of substandard structures and code violations within residential areas through active code enforcement.

When enforced, housing, nuisance, and zoning codes provide assurance to property owners and lending institutions that neighboring structures will not be allowed to impair their investment by deteriorating beyond standards established in the codes. This investment protection gives homeowners the confidence to make major improvements in their own homes.

Implementation Actions

- Continue code enforcement inspections within targeted neighborhoods as part of the Community Enhancement Program.
- Provide routine inspection on a systematic basis to increase the timeliness of code compliance.
- Perform citywide education and enforcement inspections on specific, high priority code violations. *As certain code violations become prevalent, enforcement personnel will identify violations citywide, educate the violating parties on the code requirements, encourage compliance, and*

follow up with enforcement action on properties that did not come into compliance.

- Maintain sufficient code enforcement staff.
- Continue the City's Time-of-Sale Inspection Program.
- Study the effectiveness of code enforcement procedures, notably neighborhood enhancement inspections and time-of-sale enforcement.
- Educate residents regarding code compliance complaint procedures.
- Sponsor periodic events where residents can drop off rubbish which they might otherwise store outside.
- Assist residents who do not have the financial or physical ability to correct code violations.
- Enforce non-residential codes. *Run down nearby commercial or industrial areas can negatively impact neighborhood confidence in the same manner that dilapidated homes can.*

Policy Objective 1.6

Review the existing housing codes and enforcement procedures. Make revisions as necessary.

A code enforcement program is only as strong as the Code it enforces. For example, it is possible for a house to meet the requirements of the Uniform Housing Code but still have a negative impact on its neighborhood. Such a home might be fine structurally but have peeling paint, falling shutters, and other cosmetic concerns.

A major difficulty with current code enforcement procedures is the lengthy time period often required to bring resolution to a code violation. Code violations proceed slowly through the courts and compete for City attorney time with other pressing legal matters.

Implementation Actions

- Complete a housing code review and present recommended changes to the City Council before the end of the year 2000.
- Create a civil process in which judgments and fine assessments for nuisance and housing code violations can be decided outside of the court system. *In the case of repeated violations, the authority to initiate corrective action and assess the costs of such action to the violating property would be available.*

Policy Objective 1.7

Promote community commitment to neighborhood vitality and inspire continued consumer confidence in the future of Bloomington's residential neighborhoods.

The City will establish a coordinated marketing initiative to make residents aware of the many resources available for housing maintenance and rehabilitation and to increase consumer confidence by publicizing the community's commitment to successful neighborhoods.

Implementation Actions

- Perform market research. *As the base for the initiative, periodic research will be conducted on what characteristics attract residents to Bloomington, what improvements residents desire in their neighborhoods, and why other residents choose to leave the city.*
- Package the City's many efforts to spur rehabilitation, improve the physical infrastructure, and fight crime under the umbrella of a single, easily recognizable title.

- Coordinate marketing efforts with the Bloomington School District. *A quality school system is a key community attribute sought by most residents. Bloomington is fortunate to have highly regarded schools and will work with the School District to emphasize this fact in its promotional efforts.*
- Continue the distribution of promotional and educational newsletters to residents of targeted neighborhoods. *Send promotional and educational newsletters to neighborhoods that are active in the Community Enhancement Program. The newsletters will feature recent public investments, document levels of private rehabilitation and maintenance, provide information on available public assistance programs, and encourage residents to join their neighbors in fixing up their homes.*
- Distribute regular information releases to the local and regional media and to existing homeowner's associations and neighborhood groups. *As positive information about neighborhood revitalization is received, the information will be shared with the media and neighborhood groups as another example of the initiative's success.*
- Conduct community outreach. *Educate residents on City requirements and available resources and promote the City's commitment to neighborhood vitality.*

Policy Objective 1.8

Develop and link information sources for neighborhood analysis.

Information on neighborhood indicators has always been tracked by the City. Unfortunately this data is difficult to use in a comprehensive fashion since it is collected by several departments in different formats for varying geographic areas. Development of a computerized geographic information system presents the opportunity to structure the data in a format that is accessible and more useful for policy and program analysis.

Implementation Actions

- Track neighborhood stability indicators in conjunction with the geographic information system. *Track data such as property value changes, crime levels, nuisance complaints, and building permits issued for maintenance and rehabilitation projects.*
- Create permanent neighborhood level geographic areas for data tracking purposes. *Bloomington is currently subdivided in a variety of ways such as census tracts, traffic analysis zones, neighborhood enhancement areas, and police sectors, many of which change boundaries over time. In order to compare data over time, permanent neighborhood level geographic areas are needed.*

Policy Objective 1.9

Support anti-crime initiatives.

Crime is a major factor affecting neighborhood confidence. Few residents will invest in home improvements if there is a major crime problem down the block. Bloomington has been successful in keeping crime levels low. Crime prevention is a vital tool for inspiring consumer confidence and Bloomington must continue to be tough on crime and respond immediately when crime levels rise in specific areas.

Implementation Actions

- Continue the Police Department's crime prevention and public relations efforts including the Neighborhood Watch Program; quarterly

newsletters to block captains; annual block captain workshops; home security checks; Crime Free Multi-Family Housing training; Operation Identification; National Night Out; weekly reports in the local newspaper; and a weekly show on the local cable access TV station.

Policy Objective 1.10

Foster neighborhood ties and encourage neighborhood interaction.

Residents will be more likely to make investments in their homes if they are tied in to the social fabric of their neighborhoods.

Implementation Actions

- Expand the Neighborhood Watch Program. *With over 300 active watch groups, nearly 50 percent of all households currently participate in the Neighborhood Watch Program. This program brings neighbors together to reduce crime in their communities.*
- Continue recreation programs at the neighborhood park level.
- Continue to provide funding for clean up days in targeted neighborhoods.
- Work with neighborhood groups to facilitate block parties through efforts such as Neighborhood Night Out.

Housing Goal 2

Provide life-cycle housing opportunities for all age groups, household sizes and income levels.

Policy Objective 2.1

Increase the number of units oriented to the special needs of seniors.

Bloomington's senior citizen population has grown rapidly in recent years and is expected to continue growing. Seniors frequently desire such special housing characteristics as one level living space, associations to handle maintenance and snow removal, services within walking distance, or easy access to transit. In order to live independently, seniors may need assistance with basic home maintenance tasks.

Implementation Actions

- Encourage the development or redevelopment of life cycle housing for seniors.
- Continue the City's assistance program to enable seniors to continue living in their homes by providing home maintenance and in-home health care services.
- Develop an "Adopt-A-House" program. *This program will match seniors who require basic home maintenance assistance with organizations and neighborhood groups willing to volunteer such services.*
- Complete a senior study. *The Bloomington Housing and Redevelopment Authority will undertake a comprehensive study of senior demographics, housing demand, and housing supply.*

Policy Objective 2.2

Encourage redevelopment of low density housing to medium and high density housing in appropriate areas.

Implementation Actions

- Retain existing opportunities for medium density, high density, and mixed use residential redevelopment in appropriate areas through land use controls. *For several years, the City has guided selected low density areas along transit corridors and near commercial service areas for medium density, high density, and mixed use redevelopment.*

Policy Objective 2.3

Create a redevelopment fund through annual City contributions.

To remain vital, cities must engage in a continual process of updating and renewal. In order to be in a position to quickly respond to redevelopment opportunities or needs as they present themselves, the City will establish a redevelopment fund.

Policy Objective 2.4

Preserve affordable housing opportunities.

Bloomington currently provides a reasonable level of affordable housing. The city falls within Metropolitan Council benchmark affordability levels for both owner occupied and rental housing. The best method for providing needed levels of affordable housing is to preserve viable existing affordable housing.

Implementation Actions

- Through neighborhood planning efforts and land use controls, ensure that viable existing areas of affordable housing are preserved.
- Encourage the use of available affordable housing resources to preserve housing with expiring federal rent assistance contracts. Changes in federal housing policy have the potential to reduce levels of affordable housing within Bloomington. The City will facilitate the preservation of these units by encouraging an extension of the program under current or alternative ownership.

Policy Objective 2.5

Provide or promote additional affordable rental housing.

The need for affordable housing is a function not only of housing cost but also of work skills and employment opportunities. While government's first priority should be to develop resident's skills to provide for themselves, the City recognizes that there are residents without the ability to work and afford market rate housing.

Implementation Actions

- Provide or promote 100 additional units of affordable small family (two to four persons) rental housing.
- Provide or promote 50 additional units of affordable large family (five or more persons) rental housing.
- Provide or promote 30 additional units of affordable special needs rental housing.

Policy Objective 2.6

Continue to actively pursue federal, state, and regional financial resources for affordable housing.

Through the Housing and Redevelopment Authority, the City will continue to pursue available funds for affordable housing and educate residents on available programs.

Policy Objective 2.7

Support home ownership for low income residents.

Implementation Action

- Offer downpayment and mortgage assistance for 20 first time home-buyers per year who would otherwise not be able to obtain conventional financing.

Policy Objective 2.8

Use Livable Communities Act benchmark indicators for communities of similar location and stage of development as affordable and life-cycle housing goals for the period 1996 to 2010.

Benchmark indicators for Bloomington established through the Livable Communities Act are included in the Technical Appendix.

Section 4:
Transportation Element

4.1 Introduction

Bloomington's transportation mission is to facilitate movement of people and goods quickly, safely, inexpensively, and comfortably to any desired destination while, at the same time, seeking to minimize associated negative impacts on community livability. Transportation is not an end in and of itself, but rather one of many means to achieve a desirable and livable community. Toward this end, the City advocates a range of transportation infrastructure, roadways, and fixed guideways, walkways and bikeways, to support a family of vehicles, each operating successfully side by side and in a manner that minimizes conflicts with surrounding land uses.

4.2 Roadway Network

Historical Origins

Until the mid-1800s, Minnesota's primary transportation corridors were not roads, but rivers. Native Americans traveled, settled, and traded along the Minnesota, Mississippi, and other area rivers for centuries. The first European explorers and settlers also relied primarily on the rivers. Early activity centers such as Fort Snelling, St. Paul, and Shakopee were sited based on their river accessibility. To augment river transportation between these early activity centers, overland trails were laid out. One of Bloomington's first roads originated as the trail connecting Fort Snelling with Shakopee, commonly referred to as the Shakopee Road. Today's Old Shakopee Road generally follows the alignment of this original trail.

In the 1850s the government sold most of the land that currently comprises Bloomington to settlers who started farms. It then became necessary to have a roadway system to support the movement of goods and people between farm and market. Dirt roads for horses and wagons were established primarily along the section lines. Today, the original section roads, such as Portland, Lyndale, Penn, France, and Normandale, each spaced one mile from the previous, have become primary streets in Bloomington. Primary east-west streets, such as 86th and 102nd, were also first constructed as section roads.

Without bridges over major rivers, travelers relied on ferries. The "Bloomington Ferry" was a major Minnesota River crossing for those travelling the Shakopee Road. As discussed in *Bloomington on the Minnesota* (1976, Judith A. Hendricks, Editor), the Bloomington Ferry was established in 1852 at a spot long used by Native Americans for fording horses. When Bloomington's first Minnesota River bridge, the "Bloomington Ferry Bridge", was completed at the same spot in 1890, the ferry went out of busi-

ness and the ferryman became the bridge watchman. A second Minnesota River bridge was completed at Cedar Avenue in 1892.

Over the years, Bloomington's original roads were upgraded from trails to dirt and gravel roads to paved roads. As farms were converted to development, especially in the 1950s and 60s, local streets were added and the section roads were expanded. Bloomington is now fully developed and the urban roadway system is essentially complete. Today's transportation planning focus is not on building new roads but on renewing, managing, and improving the existing roads.

Existing Roadways

Roads serve two major functions: to provide mobility and to provide land access. From a design standpoint, these functions are divergent. The mobility function is best served through a design that encourages continuous, high speeds while the land access function is best served by a design that encourages low speeds. To accommodate these equally necessary but incompatible functions, a hierarchy of roads has been developed which is commonly referred to as functional classification. Each road has its service to perform and needs to be designed accordingly, from the local residential street that accommodates frequent driveways to the multi-lane freeway with well-spaced, grade separated interchanges. *Figure 4.1* depicts the functional classification of roads in Bloomington.

The typical characteristics of each class of road are described in *Table 4.1*. These characteristics can and do vary, however. While the table provides a general feel for the relative purpose and role of each street class, individual streets can depart from these typical characteristics in some circumstances. *Figure 4.2* depicts the number of lanes for each Bloomington roadway.

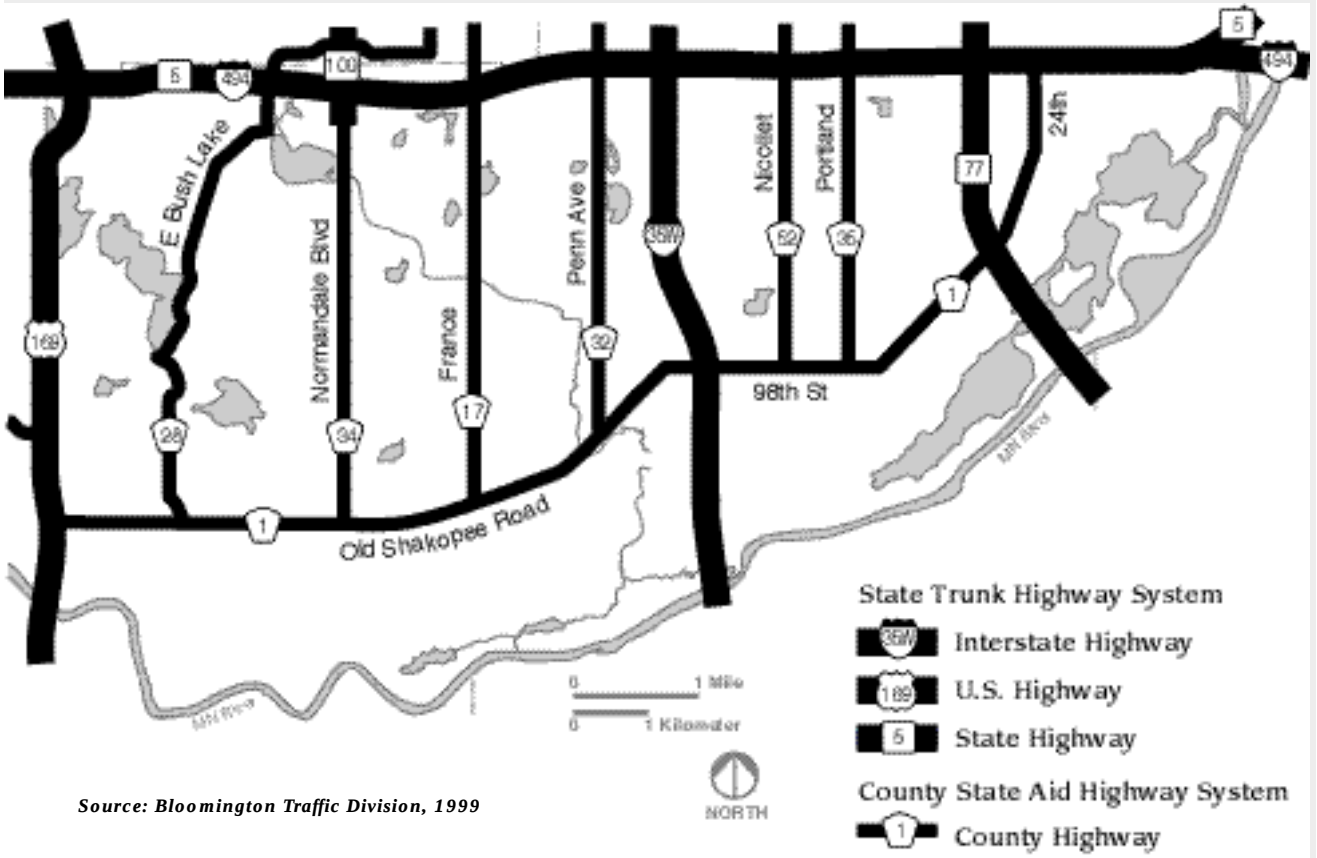
Jurisdiction over roadways in Bloomington is designated to or

Table 4.1 **Typical Roadway Characteristics by Functional Classification**

Characteristic	Principal Arterial	Minor Arterial	Collector	Local
Place Connections	Interconnect metro centers and regional business concentrations	Interconnect major traffic generators, supplement primary arterials	Interconnect neighborhoods and minor business concentrations	Interconnect blocks within residential neighborhoods and land parcels within non-residential developments
System Connections	To other principal arterials and selected minor arterials	To principal arterials, other minor arterials, collectors, and some local streets	To minor arterials, other collectors, and local streets	To collectors and other local roads, to some minor arterials
Trips	Greater than 8 miles, 5 of which on the principal arterial	2-6 miles at moderate speeds	1-4 miles at low to moderate speeds	Under 2 miles at low speeds
Mobility vs. Land Access	Emphasis on mobility, no land access allowed	Emphasis on mobility, land access should be minimized	Equal emphasis on mobility and land access	Emphasis on land access, not on mobility
Intersections	Grade separated desirable, required for freeways	Traffic signals and cross street stops	Four way stops and some traffic signals	As required
Management Tools	Ramp metering, preferential treatment for transit, interchange/ intersection spacing	Traffic signal progression and spacing, land access management/ control, preferential treatment for transit	Number of lanes, traffic signal timing, land access management	As necessary
Vehicles/Day	25,000-200,000	5,000-30,000	1,000-15,000	Less than 1,000
Speed Limits	55-65 mph	35-45 mph	30-40 mph	Maximum 30 mph
Right of Way	As required	100-120 feet	80 feet	60 feet

Source: Based on Metropolitan Council Functional Classification System Criteria, Transportation Policy Plan Appendix, 1996

***Figure 4.3* Roadway Jurisdiction**



Source: Bloomington Traffic Division, 1999

shared by the City, County, and State. Generally, the Minnesota Department of Transportation maintains the interstate and trunk highway system on behalf of the State, Hennepin County maintains the County State Aid Highways system, and the City maintains the remaining roadways. *Figure 4.3* depicts roadways within Bloomington under State and County jurisdiction.

The City's Traffic and Transportation Division has prepared average daily traffic forecasts for the year 2020 for Bloomington's arterial and collector streets. These 2020 forecasts along with year 2000 volumes are depicted in *Figure 4.4*. Year 2000 volumes were used as a base from which to forecast the 2020 volumes. The forecast methodology used multiple data inputs and considered anticipated land development and other trip generation factors. Some of the 2020 forecasted volumes were calculated by using a 2% annual trip growth rate. Some forecasts were adjusted from that calculation on the basis of land development maturity or anticipated change of trip generation rate in the travel shed. In addition, some of the calculated forecast volumes were adjusted because of modifications to the infrastructure such as the planned construction of the 79th Street/80th Street Bridge over I-35W and the Nord Avenue Bridge over I-494.

Some collector level streets are forecast to experience little change in the next 20 years. Generally the infrastructure of street section and rights of way should not be diminished in those instances as future decades could revitalize a new generation of redevelopment and transportation needs, including new and alternate travel modes in addition to accommodation of greater volumes.

The Bloomington 2020 travel forecasts do not differentiate or assign modal splits. The availability of alternate mode trip accommodation in Bloomington is anticipated to a limited degree. Although alternate modes are a very important and foresighted component of the transportation system within the region and within Bloomington, the percentage of trips carried is anticipated in the single digit range and will not diminish the necessity for excellent and extensive street and highway capacity.

[Insert Figure 4.1: Functional Roadway Classification – 11 x 17 fold out, color map]

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[Insert Figure 4.2: Through Lanes in Each Direction – 11 x 17 fold out, black and white map]

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[Insert Figure 4.4: Daily Traffic Volumes – 11 x 17 fold out, black and white map]

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[Insert Figure 4.5: Traffic Analysis Zones – 11 x 17 fold out, black and white map]

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Traffic forecasts on the regional roadway system are prepared by the Metropolitan Council. To assist the Metropolitan Council in preparing regional traffic forecasts, *Table 4.2* depicts the City's household, population, and employment forecasts out to the year 2020 broken down by traffic analysis zones for easy insertion into the regional model. Traffic Analysis Zone boundaries are depicted in *Figure 4.5*.

Roadway Network Challenges

Congestion

The most significant challenge facing Bloomington's roadway network in the next 20 years is increasing congestion, particularly on the regional highway system. Congestion is costly to society in environmental terms and represents a significant drain on the economy. Severe congestion can have a large impact on the ability to attract residents and employers and thereby affect the growth of a community. Bloomington must continue to take aggressive steps to combat congestion.

Many experts argue that congestion is unavoidable in a large metropolitan region such as the Twin Cities, that congestion is a natural stage in the evolution of a city, and that a region cannot simply build its way out of congestion. Congestion can be seen as one function of growth and prosperity. Every large American metropolitan area sees congestion. Successful cities throughout history have been congested. Still, there continues general agreement that steps can and should be taken to minimize congestion by assisting the transportation infrastructure toward increased capacity and efficiency.

Roadway congestion is a complex phenomenon that is influenced by numerous issues, many of which are beyond the jurisdiction of individual municipalities. A detailed analysis of congestion would have to include discussion of issues as varied as federal tax policy, federal and state highway funding, regional growth management strategies, fuel prices, and consumer housing preferences to name only a few relevant issues. Perhaps the largest factor influencing congestion that cities can directly impact is local land use.

Cities could, in theory, enact land use controls to keep density of development low enough to avoid overtaxing transportation infrastructure. Such an approach would, however, result in many undesirable consequences. Businesses and the residential and institutional uses that follow employment opportunities would be forced ever outward, leading to inefficient land use patterns, continuing infrastructure expansions, and longer trip distances which would itself increase congestion. The lack of density would make it very difficult to provide transit service. Resulting sprawl would consume valuable farmland and open spaces. Such an approach would also be in conflict with the market dynamics that drive businesses in their locational decisions. For these reasons, the Metropolitan Council has wisely pursued a policy of focusing growth within and along the I-494/694 corridor.

There are meaningful steps that cities can take individually and in groups to combat congestion. Bloomington will continue to work individually and with multi-jurisdictional groups, such as the I-494 Corridor Commission and the I-35W Solutions Alliance, to combat congestion. Bloomington's strategy for combating congestion includes the following elements:

- Pursue roadway improvements
- Use technology to make the existing transportation system more efficient
- Take steps to reduce travel demand, especially during peak periods
- Coordinate land use and transportation decisions

Roadway Improvements

Bloomington will work toward numerous roadway improvements to increase roadway capacity, remove existing bottlenecks, and enhance efficiency and safety through improved operational integrity of the travelways and supportive networks. These improvements are discussed in the section on Planned Roadway Improvements.

Increased Efficiency through New Technology

Bloomington will continue to identify, promote, and implement technologies that can increase the efficiency of existing transportation infrastructure. Some of this technology, such as ramp metering and traffic dependent signal timing, has been around for many years, but continues to improve. Other technology is new.

Intelligent Transportation System (ITS) technology has proven to be applicable in numerous transportation systems. Recently, an ITS has been implemented along I-494 and its parallel arterials on the north and south sides. This system allows a controller to view traffic conditions through video cameras and street detectors and use variable and changeable message signs to guide travelers off the freeway and onto the parallel routes for a segment to avoid a traffic accident.

Table 4.2 **TAZ Household, Population and Employment Forecasts**

	Households			Population			Employment		
TAZ	2000	2010	2020	2000	2010	2020	2000	2010	2020
471	295	130	583	599	330	1,111	6,790	9,113	14,202
472	-	1,191	1,736	0	2,056	2,999	9,156	11,795	11,795
473	686	676	676	1,372	1,442	1,442	11,805	15,801	15,801
474	910	905	918	2,651	2,639	2,670	3,104	3,304	3,504
475	1,111	1,105	1,121	2,492	2,477	2,514	560	560	560
476	1,117	1,112	1,126	2,318	2,307	2,340	375	375	375
477	2,265	2,350	2,378	5,204	5,404	5,470	1,594	1,619	1,644
478	1,150	1,144	1,159	2,892	2,879	2,914	100	100	100
479	803	799	810	1,797	1,788	1,814	222	222	222
480	740	736	745	1,869	1,861	1,882	97	97	97
481	856	851	863	2,013	2,002	2,030	2,096	2,296	2,496
482	270	268	272	785	781	790	1,050	1,250	1,450
483	82	69	70	191	160	163	2,538	2,738	2,938
484	183	181	184	459	455	462	1,476	1,676	1,876
485	808	806	817	1,831	1,826	1,851	373	398	423
486	645	720	729	1,389	1,564	1,586	4,046	4,196	4,346
487	979	974	988	2,010	1,998	2,031	2,364	2,464	2,564
488	209	208	211	470	468	475	2,365	2,465	2,565
489	1,295	1,294	1,313	2,707	2,704	2,749	655	655	655
490	1,126	1,127	1,142	2,970	2,973	3,008	221	221	221
491	2,359	2,354	2,383	6,077	6,065	6,133	571	571	571
492	2,102	2,206	2,237	4,703	4,946	5,019	1,561	1,561	1,561
493	1,749	1,769	1,794	3,996	4,043	4,102	779	779	779
494	976	972	985	2,348	2,339	2,369	288	288	288
495	590	587	595	1,497	1,490	1,509	489	489	489
496	35	34	35	145	144	146	3,796	3,896	3,996
497	219	218	221	522	520	527	2,669	2,669	2,669
498	615	613	621	1,549	1,544	1,563	330	330	330
499	204	203	206	233	230	237	3,207	3,407	3,607
500	-	-	-	0	0	0	6,246	6,396	6,546
501	1,568	1,565	1,586	3,783	3,776	3,825	1,863	1,863	1,863
502	639	635	644	1,264	1,255	1,276	3,331	4,191	4,391
503	1,015	1,013	1,026	2,359	2,354	2,384	251	251	251
504	312	311	313	575	573	578	6,621	8,501	8,526
505	1,580	1,598	1,624	3,740	3,782	3,843	190	190	190
506	628	630	644	1,486	1,491	1,524	224	224	224
507	1,726	1,745	1,769	4,211	4,256	4,312	72	72	72
508	682	679	689	1,519	1,512	1,535	1,131	1,181	1,231
509	1,196	1,190	1,205	2,911	2,898	2,933	342	342	342
510	1,262	1,297	1,318	2,726	2,808	2,857	5,625	6,011	6,211
511	1,372	1,367	1,383	3,398	3,387	3,425	379	379	379
512*	-	-	-	0	0	0	857	857	857
517*	2	2	2	8	8	8	3,371	5,987	6,087
534*	-	-	-	0	0	0	3,177	3,202	3,227
535*	2	2	2	6	6	6	2,460	2,485	2,510
537*	-	-	-	0	0	0	586	611	636
541*	37	34	35	97	89	91	0	0	0
542*	-	-	-	0	0	0	528	528	528
Citywide	36,400	37,674	39,162	85,172	87,632	90,503	101,931	118,606	126,195

Source: Bloomington Planning Division, October 2003

The City has recently applied for a TEA-21 grant to install variable message signs in the Airport South District.

Another promising new technology is the wealth of traffic information available on the web. Travelers can view real time photos and maps of traffic conditions. The information can be used to select an alternative, less congested route or to delay a trip until travel conditions improve. Travelers can even receive daily e-mail summarizing traffic conditions along their route and projecting travel time.

As technology advances, there will continue to be new applications for increasing transportation efficiency.

Reducing Travel Demand

Bloomington will work with local employers and neighboring cities to combat congestion through Transportation Demand Management (TDM). TDM is a general name given to a variety of techniques designed to reduce congestion by altering individual travel behavior and the overall demand for travel, especially in peak periods.

One clear inefficiency in our present transportation system is the peaking phenomenon, often referred to as "rush hour". Since most people's work hours start and end at roughly the same times, a large burden is placed on the road and transit systems during these periods. To minimize congestion, transportation systems are designed with the peak period in mind. Highways that are frequently congested during peak periods may be well under capacity at other times. Large buses that are full during rush hours may run close to empty at non-peak times. The peaking phenomenon is very expensive for the taxpayer since transportation systems need to be sized to meet heavy demands that are present for only a portion of the day.

Congestion could be substantially reduced if employers and employees were willing to stagger work hours. Staggered work hours would more evenly disperse trips over the course of the day and reduce the number of trips taken during peak periods, thereby reducing congestion. The City of Bloomington has a role to play in encouraging staggered work hours by promoting the benefits to local employers and by setting a positive example through its own work hours.

Another way TDM strives to improve the efficiency of existing transportation systems is by encouraging the public to choose modes of travel such as carpools and transit that have a lower impact on congested roadways. Increasing the occupants per vehicle reduces the vehicles on the road, which in turn reduces congestion. While reducing congestion is an important objective in and of itself, multiple occupant vehicles have the added benefit of improving air quality, reducing resource consumption, and lowering the need for parking spaces. However, convincing large numbers of people to carpool or use transit is not an easy task. The single occupant vehicle is widely regarded as the most flexible and desirable mode choice. Most commuters will resist a change in modes unless they can realize substantial time and/or cost savings.

Methods of encouraging commuters to consider carpooling include high occupancy vehicle (HOV) lanes, HOV ramp meter bypasses, preferential parking for carpools, and ride-matching services. HOV lanes currently exist in Bloomington on I-35W south of 86th Street and are proposed for implementation on I-35W north of 86th Street by 2003. The flexibility to provide for HOV lanes is included in preliminary MNDOT plans for I-494 improvements throughout Bloomington. Section A4.1 of the appendix provides detailed information on the location of existing freeway ramp meters and HOV ramp meter bypasses.

Methods to make transit more viable and attractive include service improvements, transit vehicle signal preemption, bus shoulder authorization, convenient park and rides, bus shelters, and timed transfer stations. Recommendations regarding needed transit improvements in Bloomington are offered later in this element.

One of the best ways to encourage commuters to consider alternatives to the single occupant vehicle is through promotion at the workplace. A few examples of incentives and resources that employers can provide include:

- Ride matching services
- Lobby kiosks with transit, carpooling, and commuting information
- Commuting newsletters
- Commuter fairs
- Bus shelters
- Sidewalks to bus stops
- Subsidized or free bus passes to interested employees for a short period to encourage employees to give transit a try and see if it works for them
- Preferential carpool/vanpool parking
- Vanpool subsidies
- Showers and lockers to encourage biking to work

Area cities are starting to require new development within congested areas to commit

resources and prepare plans that document how developers, employers, and property managers will encourage employees to place less of a burden on the transportation system. These plans are referred to as Transportation Management Plans (TMPs). Bloomington has required TMPs in the past by condition of approval but they are not yet required by the City Code. As recommended by the I-494 Corridor Commission, Bloomington will consider Code amendments to require TMPs for new development meeting appropriate thresholds. The City will also work with business organizations such as the Chamber of Commerce to promote implementation of TDM methods within existing businesses.

Land Use and Transportation Coordination

Bloomington will work to reduce the need to travel by promoting a variety of land uses well distributed throughout the City. Trip lengths can be reduced if residents have access to goods and services in close proximity to their homes. Cutting the length of trips in half reduces congestion as much as cutting the number of trips in half. The City will also reduce the need for motorized travel by promoting mixed land uses and non-motorized vehicle access ways. Residents may prefer to leave their cars at home and walk or bike to pick up a gallon of milk or go out to eat, but only if their destination is in close proximity and can be safely and pleasantly reached by non-motorized means.

Safety

Safety has historically been and will continue to be a principal City focus in managing its transportation infrastructure. To promote roadway safety, the City will pursue the following actions:

- Use fundamentals of visibility, spatial relationships, adequate geometrics, and appropriate gradients in roadway design.
- Consistently apply warranted traffic control devices.
- Acquire adequate right of way to provide for safety enhancing features such as medians and boulevard type sidewalks.
- Include accessible ramps at sidewalk intersections with streets.
- Provide raised median channelization when feasible.
- Separate turn lanes when feasible.
- Require setbacks sufficient to maintain visibility and safety.
- Permit driveway designs and locations only in conformance with the City's access management practices.
- Coordinate reviewing and permitting of access to county and state roadways with appropriate agencies.
- Take access and safety factors into consideration in the review of development proposals. Access management has the added benefit of improving street capacity.
- Enforce traffic laws and implement promising, emerging enforcement techniques.
- As new development or redevelopment occurs, encourage land uses that are compatible with adjacent streets.
- Minimize obstacles and safety hazards at the sides of roadways.
- Provide appropriate street lighting levels.
- Perform snow and ice removal as necessary.

Figure 4.6 depicts traffic accidents for the two year period 1997-1998 while *Table 4.3* depicts traffic accident levels between 1995 and 1998. It should be noted that nearly all of the more extensive accidents with high property damage and personal injury occur on streets with regulatory traffic control devices (signals and stop signs) present. Only a small percentage of reported traffic accidents, less than 3% in Bloomington, occur on the local street network where statutory laws dictate the rights of way and traffic operating obligations. This fact is repeatedly demonstrated on an annual basis in Bloomington.

[Insert Figure 4.6: Traffic Accidents 1997-1998 – black and white, 11 x 17]

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Compatibility with Residential Areas

A frequently voiced resident concern relates to the issue of traffic in residential neighborhoods, particularly in regards to volume and traffic law violations or driving manner. Like most American cities, Bloomington's streets are set up in a hierarchical fashion, ranging from a typical low volume local street, to a collector street such as Xerxes Avenue or 12th Avenue, to a minor arterial such as Old Shakopee Road, to a principal arterial such as I-35W. Each street has its role, which is reflected by traffic volumes and speed and by the design and width of the street itself (*see Table 4.2*). Problems begin to occur when congestion or some other bottleneck becomes severe enough to cause drivers to leave higher volume streets for alternative routes or "short cuts" along streets that were not expected to carry that level of traffic. Frustrated with the delay, drivers may ignore posted or statutory speed limits, stop signs, or signal lights, thereby creating safety hazards.

A desirable, livable community needs an efficient roadway transportation system. But such a community also needs safe and quiet neighborhoods. Achieving a balance requires efficient arterial and collector streets with minimal bottlenecks coupled with local streets that do not encourage speeding or cut-through traffic and residents who are willing to conscientiously monitor their driving behavior. The following text discusses residential area violation and volume issues and recommends specific approaches for addressing each.

Table 4.3 **Reported Traffic Accidents, 1995 - 1998**

Roadway System Type of Crash	Total Mileage	Crashes Reported				Yearly Average
		1995	1996	1997	1998	
All Routes - Total	**420.5**	**2496**	**2577**	**2462**	**2469**	**2501**
Fatal		5	0	5	6	4
Personal Injury		793	780	765	772	778
Property Damage		1,698	1,797	1,692	1,691	1,720
Interstates - Total	**14.8**	**865**	**917**	**873**	**966**	**905**
Fatal Crashes		2	0	2	2	1.5
Personal Injury		209	201	214	256	220
Property Damage		654	716	657	708	684
USTH System - Total	**5.2**	**53**	**62**	**98**	**115**	**82**
Fatal		0	0	0	1	0.25
Personal Injury		9	14	25	30	20
Property Damage		44	48	73	84	62
MNTH System - Total	**3.1**	**86**	**114**	**91**	**109**	**100**
Fatal		0	0	0	0	0
Personal Injury		20	29	24	33	27
Property Damage		66	85	67	76	74
CSAH System - Total	**29.4**	**834**	**772**	**727**	**620**	**738**
Fatal		1	0	3	0	1
Personal Injury		305	290	276	247	280
Property Damage		528	482	448	373	458
MSAS System - Total	**73.7**	**498**	**560**	**498**	**527**	**521**
Fatal		2	0	0	1	0.75
Personal Injury		194	199	164	179	184
Property Damage		302	361	334	347	336
Municipal System - Total	**294.3**	**160**	**152**	**175**	**132**	**155**
Fatal		0	0	0	2	0.5
Personal Injury		56	47	62	27	48
Property Damage		104	105	113	103	106

Source: Minnesota Transportation Information System Yearly Accident Reports

Traffic Law Violations

While traffic law violations and less conscientious driving habits occur on all levels of streets, they are of particular concern on local residential streets. Because of lower volumes and lower speeds, residents may take fewer precautions on local residential streets, parents are more likely to let children cross randomly, and children are more likely to play in the street. The shortage of sidewalks along most local Bloomington streets often forces children and adults to use the street when

walking or biking. In this environment, running a stop sign, speeding, not yielding the right of way, and not driving in a careful, conscientious manner is particularly objectionable and may be dangerous.

There are at least two classes of traffic law violators on local residential streets, those who live in the neighborhood and those who do not and may live a great distance away. The first class is most common. For the driver who lives in the neighborhood and violates traffic laws and careful practices, the problem can only be addressed through changing the driver's behavior whether through voluntary means, enforcement, or mandatory or influencing restraints. The violating driver from outside the neighborhood is usually not there by choice but by virtue of congestion or bottlenecks on a more direct, higher volume roadway. Their violations may be a function of frustration, of being unable to meet a deadline due to congestion or bottlenecks. Such a driver identifies less with the neighborhood and may be less likely to change behavior voluntarily. They may also be out of the reach of City traffic law compliance marketing efforts. Unlike the violator who resides in the neighborhood, it may be possible to eliminate the non-neighborhood violator if the congestion, bottleneck, or route inadequacy that forces them onto the local residential street in the first place can be addressed.

Coordinated Effort to Improve Driver Behavior

While there are important steps that government can take to encourage traffic law compliance, in the end, change is up to the individual driver. Bloomington's approach for addressing the compliance issue will therefore start with a coordinated effort to improve driver behavior. Since the vast majority of all trips on local residential streets are made by residents of the neighborhood themselves, this effort must include significant neighborhood participation. As a springboard for neighborhood participation, Bloomington will use the existing Neighborhood Watch Group and National Night Out structure to raise this issue, foster discussion, and build awareness. Neighborhood groups could then take actions such as distributing brochures or encouraging neighbors to sign traffic law compliance pledges. The effort must utilize other communication devices, as well, such as the City newsletter, City website, community television, and occasional signs at key locations.

Improved Traffic Law Enforcement

Bloomington will also step up traffic law enforcement on local residential streets. This effort will require additional personnel focused specifically on neighborhood traffic. To promote self-enforcement, more speed trailers may be required. New enforcement technologies should also be explored and tested. One such promising technology can take a photo of the license plate of drivers who run a red light or exceed a certain speed. With appropriate state legislation, a warning letter or even citation could then be sent to the registered owner of the vehicle. Clearly, privacy issues will need to be addressed with any such technology.

Roadway Improvements

In addition to an effort to change driver behavior and increased enforcement, planned roadway improvements are another central element to the City's approach on this issue. The numerous roadway improvements discussed in the next section are proposed to address specific congestion points and bottlenecks. Improving traffic flow on more direct, higher volume streets will reduce the number of non-neighborhood traffic law violators on local residential streets.

Design Considerations/Traffic Calming Study

If traffic law violations remain persistent at specific locations, the City will consider the feasibility of design features or intelligent transportation systems to physically discourage violations. Drivers tend to choose a speed that is comfortable to maintain given the design and operational characteristics of their roadway. Communities across the country have been experimenting with design features that reduce a driver's comfort level in order to slow down traffic and reduce the street's appeal as a cut through. Such design features are commonly referred to as traffic calming measures and can include features such as stop signs, speed humps, narrowing, chicanes, turn restraints, and continuity diminishment among many others. More dramatic traffic calming measures such as diagonal diverters or cul-de-sac closures involve route influencing physical barriers within streets to redirect traffic flow. A Bloomington example of this feature can be seen on James Avenue at 92nd Street. Formerly a through street, a diagonal diverter was added to James Avenue to separate industrial and residential traffic. Bloomington has historically employed cul-de-sacs, street loops, severances, turn restraints, and other operational management techniques.

The City will undertake a study of traffic calming measures to assess their impact and to consider their feasibility for added implementation in Bloomington. Any implementation of traffic calming measures must take into consideration impacts on pedestrians, bicyclists, emergency vehicles, as well as costs and benefits. Climate, maintenance needs, and safety must also be considered. Since most Bloomington local residential streets do not have sidewalks, residents use the roadway for walking or biking. Any design feature that narrows the roadway to calm traffic may create negative impacts to walkers and bikers who also need to use the roadway. Implementation of traffic calming may therefore require installation of a sidewalk along the affected roadway before other restraining devices and added.

Traffic Volumes in Residential Neighborhoods/Cut Through Traffic

The level of automobile traffic on adjacent streets is a significant concern for some Bloomington residents. In some cases, the volumes may simply be a reflection of a street's functional classification and may be unavoidable. Bloomington does have many high volume arterial and collector streets with adjacent residential land uses where the traffic volumes are not a reflection of cut through traffic but of traffic generated within the immediate area travelling the expected route. In these cases, traffic volume impacts must be addressed through encouraging compatible land uses and appropriate physical design (setbacks, building orientation, structural type, acoustic insulation, window placement, etc.) along the route, which is possible to do with new development or redevelopment but is not helpful to existing incompatible residential uses. In other cases, excess volumes are primarily a reflection of cut through traffic due to congestion or bottlenecks on principal streets. In these cases, volume can be addressed through roadway improvements or design features as discussed below.

The route drivers select is usually based on time. If an alternative route can save time, drivers will tend to use it. When congestion or bottlenecks affect more direct, higher volume streets, drivers seeking short cuts may result in excess volumes on particular stretches of neighborhood streets. The best option and the City's first strategy for addressing these situations is to correct the bottleneck that is creating or influencing the cut through traffic. To this end, the next section discusses numerous proposed short and long range improvements to the Bloomington roadway system.

In some cases, however, bottlenecks will not be easy to correct. Cost or physical circumstances will preclude or significantly delay their correction. In these cases, the City will consider the feasibility and appropriateness of design features that discourage use of local residential streets as cut throughs. These features will be further discussed in a study of traffic calming measures to be prepared by the Traffic Division. Such measures will need to be implemented in a manner that does not simply transfer the cut through traffic to the next local residential street.

To promote an orderly and consistent approach toward complaints regarding traffic law compliance and traffic volume, the Traffic Division will establish comment procedures. These procedures will be summarized in an easy to read brochure that will assist neighborhoods in understanding the process for complaint review. The procedures will also discuss when the City will undertake special studies to further assess identified problems and the review those studies will receive at the Traffic and Transportation Advisory Commission and the City Council.

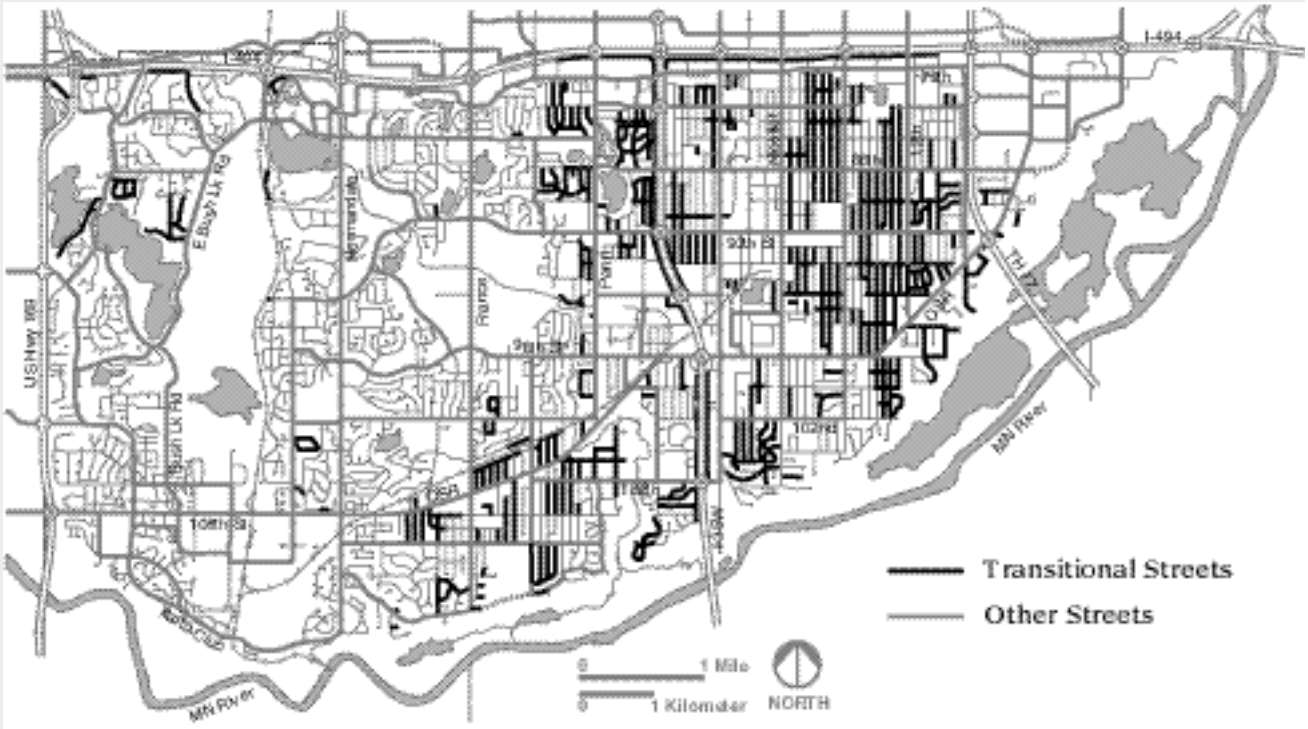
Planned Roadway Improvements

To combat congestion, improve safety, promote residential compatibility, and meet the needs of forecast future development, the City proposes numerous improvements to the existing roadway system. These improvements are depicted in *Figure 4.7* and summarized in the Transportation Element Appendix. Some of the depicted improvements are already scheduled for construction; others are included simply to be held in abeyance for future evaluation. Those held in abeyance may or may not ever materialize depending on future development and traffic conditions.

Roadway improvements require sufficient physical space for construction. To ensure that new development does not negatively impact upon future right of way needs, the Zoning Ordinance requires all building setbacks to be measured from planned, widened right of way lines. Right of way needs are documented on an official map maintained in the Public Works Department. For illustration purposes, a non-official map depicting minimum right of way requirements is included within this plan as *Figure 4.8.*

There are streets in Bloomington that lack structural integrity, lack curb and gutter, or have faulty drainage circumstances. The City Pavement Management Program generally defines these streets with temporary base or surface character as “transitional streets”. The City of Bloomington intends all streets to become permanent in structure type as they can be phased into the construction program. By policy established with the Pavement Management Program by the City Council in1992, transitional streets are eligible for overlay as a pavement rehabilitation strategy. Sealcoats can be applied provided existing pavement conditions conform to standards established in the Pavement Management Program. *Figure 4.9* depicts the location of transitional streets in Bloomington.

Figure 4.9 **Transitional Streets**



Source: Bloomington Traffic Division, February 2000

[Insert Figure 4.7: Roadway Improvements – color, 11 x 17 map]

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[Insert Figure 4.8: Minimum Right of Way Requirements – 11 x 17, black and white map]

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4.3 Transit

Bloomington supports the provision of a high quality transit system as a way to:

- provide transportation to residents who do not have access to an automobile or who choose transit as their preferred mode;
- manage congestion on area roadways;
- increase the number of potential employees with easy access to employment in Bloomington;
- promote additional economic development;
- conserve natural resources; and,
- diversify transportation options available to Bloomington residents.

Transit service in Bloomington is in a state of transition. Future federal and state transit funding levels are uncertain. The region's primary transit provider, the Metropolitan Council through its Metro Transit Division, is in the process of redesigning its service. Meanwhile, major transit improvements are planned in Bloomington, including light rail transit (LRT) service, new bus service, and, in the long term, potentially commuter rail.

Given increasing traffic levels on the region's principal arterials, limited roadway expansion funding, tightening environmental requirements, planned transit infrastructure investments, increasing employment density, and the temporary loss of roadway capacity that will be created by planned construction projects, transit's role in Bloomington will expand in the future. Bloomington will work with transit providers in this time of transition to facilitate high quality transit service and address the deficiencies of the current system.

Existing Transit System

Bloomington's existing transit system consists primarily of several bus routes, as depicted in *Figure 4.10*. The frequency of service varies among the routes. Several of the routes operate only during peak morning and evening commuting times. Route 5 (connecting the Mall of America with downtown Minneapolis via

Chicago Avenue) has the longest operating period, from 5 a.m. until midnight. Service is operated by a variety of providers, including:

Metro Transit - A division of the Metropolitan Council, Metro Transit operates most scheduled bus service in Bloomington. Metro Transit routes focus on taking riders to downtown Minneapolis or to subregional transit hubs such as the Mall of America, Southdale, or Southtown.

BE Line - BE (Bloomington-Edina) Line service currently consists of two bus routes (88 and 89) that circulate through Bloomington and Edina between Southdale and the Mall of America. BE Line Service is provided by a private bus company under a contract administered by the Metropolitan Council.

Minnesota Valley Transit - Minnesota Valley Transit operates bus service in several communities south of the Minnesota River. Two of Minnesota Valley's bus routes (77 and 42) stop at the Mall of America and another route (31) connects the Burnsville Transit Station with portions of western Bloomington.

Southwest Metro Transit - Southwest Metro Transit operates bus service in Eden Prairie, Chanhassen, and Chaska. Southwest Metro links the Mall of America with Southwest Station in Eden Prairie via local (590) and express bus routes (53M).

University of Minnesota - The University of Minnesota operates bus service to bring riders to the University. One of these routes (52A) originates at the Mall of America.

City of Bloomington - The City of Bloomington, through its Human Services Division, offers group route, door to door bus service within Bloomington using two buses. Those eligible to use this service include older adults, children, families, and people with disabilities.

Metro Mobility - Metro Mobility, a division of the Metropolitan Council, offers door to door bus service for individuals with disabilities.

Volunteers Enlisted to Assist People (VEAP) - VEAP has a network of volunteer drivers offering rides to medical appointments to individuals with no other transportation resources.

Private Services - Transit in Bloomington is also provided by numerous private taxicab companies and private disability transportation services.

[Insert Figure 4.10: Bus Routes and Park and Rides – 11 x 17 fold out, black and white map]

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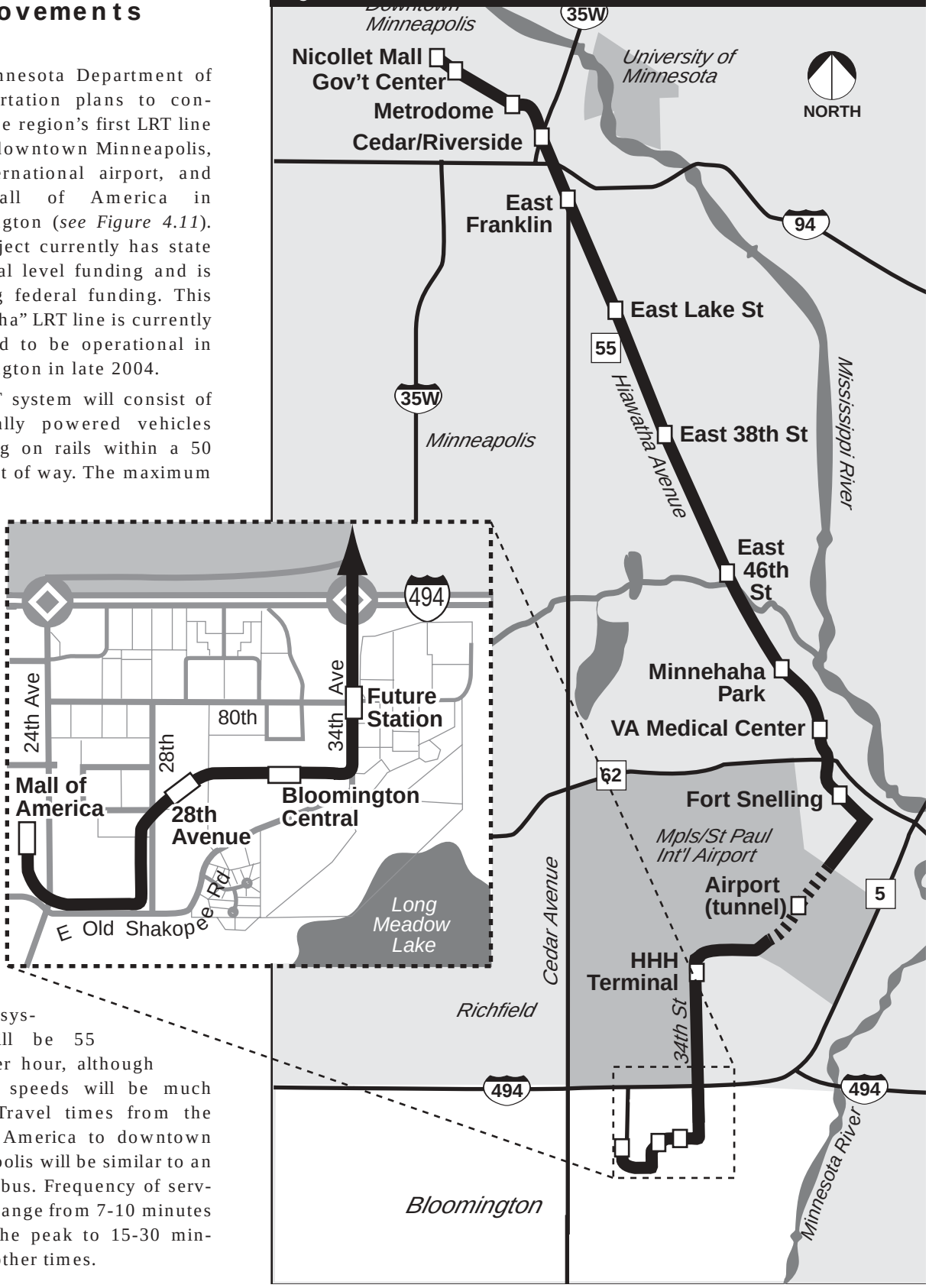
Planned Transit Improvements

LRT

The Minnesota Department of Transportation plans to construct the region's first LRT line to link downtown Minneapolis, the international airport, and the Mall of America in Bloomington (*see Figure 4.11*). The project currently has state and local level funding and is awaiting federal funding. This "Hiawatha" LRT line is currently projected to be operational in Bloomington in late 2004.

The LRT system will consist of electrically powered vehicles operating on rails within a 50 foot right of way. The maximum speed of the system will be 55 miles per hour, although average speeds will be much lower. Travel times from the Mall of America to downtown Minneapolis will be similar to an express bus. Frequency of service will range from 7-10 minutes during the peak to 15-30 minutes in other times.

Figure 4.11 **LRT Route, 2003**



The City of Bloomington views the development of LRT within the city as one way to diversify available transportation options, conserve natural resources, facilitate economic development and redevelopment, and increase the number of people with easy access to employment in Bloomington. The City plans to assist in the preparation of LRT station area plans to review area land use and pedestrian infrastructure in light of LRT.

Through a $500,000 state grant, Dakota County is currently preparing a Cedar Avenue Transit Study to evaluate opportunities for connecting communities south of the Minnesota River with the Hiawatha LRT line through frequent bus service or an LRT extension. Such planning should be done in a manner that minimizes negative impacts on Bloomington.

Bus Route Enhancements

Metro Transit plans to initiate frequent, limited stop bus service along I-35W by 2002. Service will run between northern Bloom-ington and downtown Minneapolis with five stops along the route. The southern most station is proposed in Bloomington near 82nd Street. Service would be similar in nature to LRT with buses running 18 hours per day at 15 minute intervals. Travel times to downtown Minneapolis would rival automobiles, especially during times of congestion when buses would have shoulder lane authorization.

As the first step toward improving east-west bus connections along the employment rich I-494 corridor, a new bus route (#590) began service in December of 1999. Route 590, a joint venture between Metro Transit and Southwest Metro Transit, runs between the Mall of America and Southwest Station in Eden Prairie. Metro Transit is also considering redesigning some local bus routes to provide timed transfer with both the proposed LRT line and the I-35W limited stop service. Instead of numerous individual routes focused on taking riders to downtown Minneapolis, local bus service in the future may include more circulator/feeder routes (such as the BE Line Routes 88 and 89). These circulators would focus on transporting residents from their homes to local destinations and to transit stations where they can transfer to limited stop transit bound for regional destinations.

Other Fixed Guideway Transit Opportunities

LRT has been proposed in the past along I-35W. As reflected in the *January 1995 Final Environmental Impact Statement,* the Minnesota Department of Transportation's I-35W expansion and improvement plans included an LRT line linking Bloomington with downtown Minneapolis. The route was proposed to start at 95th Street in Bloomington and run northward to downtown Minneapolis within the freeway right of way. Stations and park and ride facilities for Bloomington were proposed at 95th Street and 80th Street. This proposal has not received funding and, due to its high cost, does not appear likely to receive funding in the foreseeable future. Still, by virtue of the large number of vehicles currently using the I-35W corridor throughout Bloomington and beyond, this corridor presents an opportunity for a fixed guideway transit route when the system is expanded in the future. The I-35W corridor is also depicted as a future route on the Hennepin County Regional Railroad Authority's *LRT System Plan*.

The Canadian Pacific Railroad right of way through central Bloom-ington may also be conducive to fixed guideway transit. This railroad line currently supports low levels of freight train service that may be discontinued in the future. Its continuous, linear nature coupled with significant adjacent residential and industrial redevelopment opportunities, make this corridor well suited for fixed guideway transit. The fact that this corridor parallels I-35W makes it an alternative route to any proposed fixed guideway transit along I-35W. Advantages of this railroad right of way over I-35W include proximity to employment and increased redevelopment opportunities. Costs may be significantly lower due to reduced right of way acquisition costs. Alignment along the railroad corridor would also allow transit vehicles to operate independently of I-35W congestion and would eliminate negative operational impacts the transit vehicles may have on I-35W automobile traffic.

As one of the most recognizable, densely developed, and defined linear corridors in the region, Bloomington's I-494 corridor has strong potential for transit. With its high concentration of employment and retail destinations, this corridor would be an essential component of any metropolitan-wide fixed guideway transit system.

The routes described above are those that would easily lend themselves to a metropolitan-wide system, as might be anticipated with commuter rail or light rail. If a technology such as personal rapid transit (PRT) is used, a denser network of routes may be feasible. It is envisioned that PRT routes would connect major traffic generators and activity centers much as the bus system does today.

Assessment of Existing Transit Weaknesses

The primary transit weaknesses in need of improvement from the City's perspective are:

1. Lack of Suburb-to-Suburb Transit Connections – Existing transit service in Bloomington is designed primarily around transporting commuters to downtown Minneapolis and back. Clearly, this transit task remains essential. However, in recent years, a large number of jobs have been generated outside the downtown core. For example, current total employment in five cities along I-494 (Bloomington, Edina, Eden Prairie, Minnetonka, and Plymouth) exceeds that of Minneapolis. Living in Bloom-ington, it is very difficult and time consuming to use transit to access employment in these other suburbs. It is also difficult for residents of those cities to use transit to access the significant employment opportunities available in Bloomington. As roadway congestion increases and large-scale construction projects will significantly reduce roadway capacity on a temporary basis, it will be vital to improve suburb to suburb connections.

2. Lack of Service to Bloomington's Primary Employment Concentrations – The I-494 corridor is a high density, linear employment corridor with over 68,000 employees in Bloom-ington's portion alone. Although it is one of the region's largest employment corridors and its linear nature is conducive to transit, this corridor is not currently well served by transit. Segments of the corridor are served by various routes; other segments have no bus service. With significant employment growth forecast along the corridor and with planned infrastructure improvements creating renewed parallel arterials on both sides of I-494, the time has arrived to create continuous east-west bus routes on both sides of I-494. These routes will facilitate vital transit connections between this linear employment corridor and both the proposed I-35W limited stop bus service and the proposed Hiawatha LRT line.

Recommendations for Needed Transit Improvements

Bloomington recommends the following specific transit improvements:

1. Establish Limited Stop, Trunk Bus Service along I-494 – To facilitate suburb to suburb trips via transit, the City joins the I-494 Corridor Commission in advocating a new, limited stop, trunk bus service along I-494. This service would be similar in nature to the limited stop bus service proposed along I-35W. It would be designed to transport riders from central stations or transfer points such as the Mall of America LRT Station, the I-35W transfer station at 82nd Street, and Southwest Station. The line could continue to follow I-494 northward as additional stations are created. Riders would be able to transfer at the stations to local or circulator routes to their ultimate destination. While not ideal due to the need for transfers, this type of service may be the only way to facilitate suburb to suburb transit connections where both housing and employment are at relatively low densities. To make this type of service possible, it is vital that the stations be designed and located to allow quick bus access.

2. Establish Regular Bus Service along Both Sides of I-494 – To serve this linear employment corridor, Bloomington advocates creation of two continuous bus routes running along the parallel arterials on the north and south sides of I-494. These routes would greatly improve transit access to the bulk of Bloomington employment and would serve as valuable feeder routes for LRT, I-35W limited stop bus service, and possibly commuter rail. Route 590, which began service in December of 1999, is a step in the right direction. However, Route 590 follows a circuitous route. By crossing I-494 four times and attempting to serve both the north and south sides of I-494, Route 590 adds significant time onto transit trips and fails to serve critical segments of the corridor. An appropriate time to modify Route 590 to two separate routes would be at the time of transit redesign in anticipation of LRT and I-35W limited stop bus service. Several planned infrastructure improvements will also facilitate two separate routes, most notably the planned bridge over I-35W at 79th/80th Street.

3. Create a Viable, Permanent Transit Station near I-35W and 80th Street – In conjunction with Metro Transit's planned I-35W limited stop bus service, a temporary bus transfer station is proposed adjacent to the freeway off ramp at the northwest corner of 82nd Street and I-35W. This station will be an important future transfer point between I-35W trunk bus service, east-west bus service along the ring route, and other neighborhood circulator buses. While this temporary site has the advantage of being the low cost alternative, it has significant disadvantages that require its quick replacement with a permanent, viable transit station. The

temporary site is very inconvenient for both limited stop and local buses, adding significant time onto any trip utilizing the temporary station. There is also no parking proposed in conjunction with the station, reducing the viability of limited stop bus service on I-35W. Bloomington strongly recommends that a permanent transit station be constructed in a timely fashion near I-35W and the planned 80th Street bridge. This station should allow I-35W buses to stop and start on-line, allow for easy transfers to ring route buses, include an appropriately sized park and ride facility, and be convenient to the surrounding area in which significant redevelopment is anticipated.

4. Extend the Proposed I-35W Limited Stop, Trunk Bus Service to the South with a New Station and Park and Ride at 98th Street – The City of Bloomington joins the I-35W Solutions Alliance in advocating an extension of I-35W limited stop, trunk bus service to the south, perhaps ultimately to the Burnsville Transit Station or Burnsville Center. Such an extension would improve transit access to employment in Bloomington for Dakota County residents. The southward extension should include a station and park and ride at 98th Street where the City already owns land for this purpose. A 98th Street station would serve the Oxboro redevelopment area, would provide a central location for a community park and ride, and would be a good connection point for buses operating in the 98th Street/Old Shakopee Road Transit Corridor.

5. Consider Additional Circulator Bus Service within Bloomington – At the time when local bus routes are redesigned to work with LRT and I-35W limited stop, trunk bus service, Metro Transit should consider creation of several circulator routes similar to the two existing BE Line routes. These circulator routes, with smaller buses, may be the best option for providing service to low density residential areas and connecting smaller, scattered employment nodes.

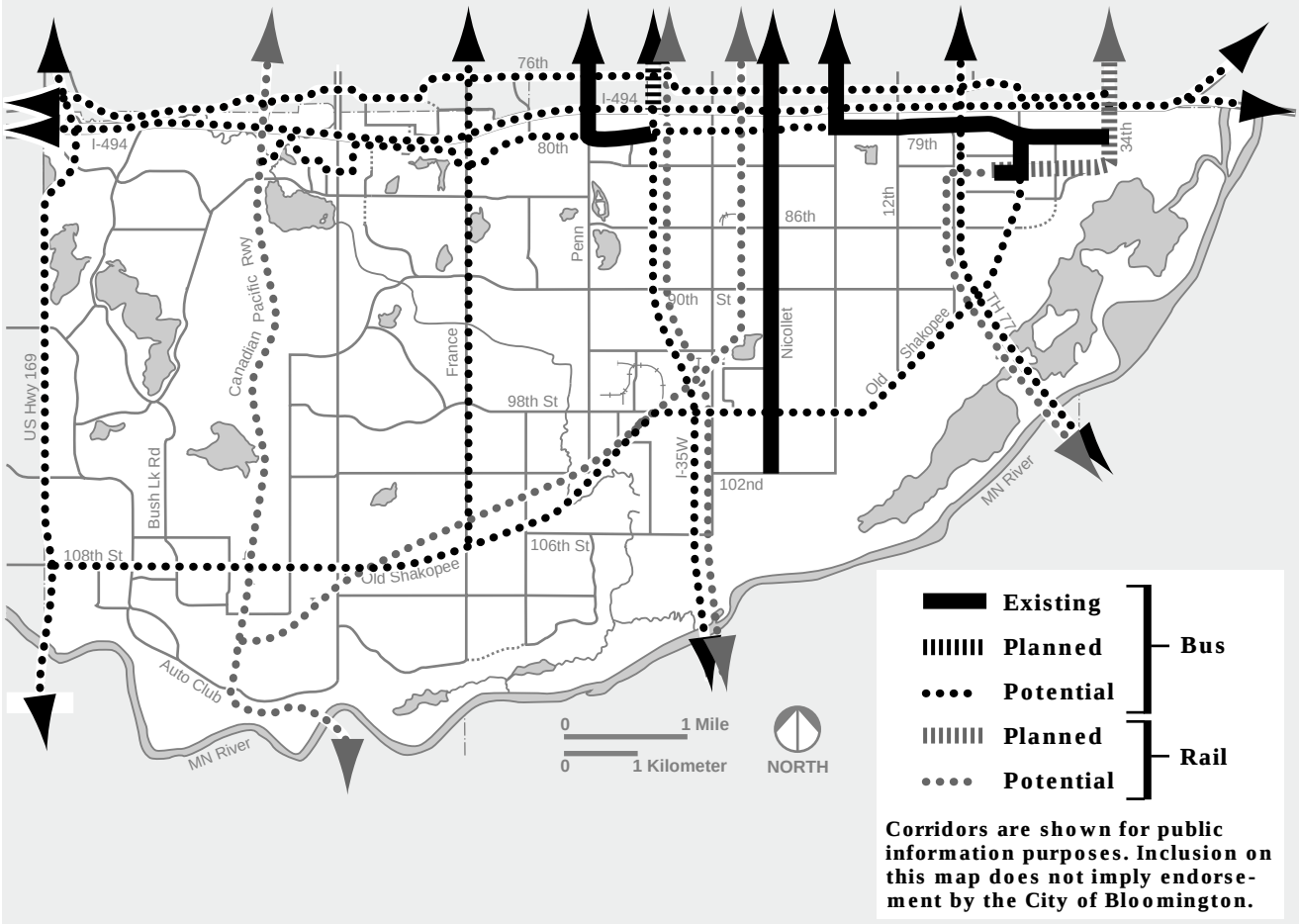
Two of the recommendations above involve high speed, trunk bus service on freeways. For bus service using freeways to succeed, it is critical that buses have advantages over single occupant vehicles, including HOV lanes, HOV ramp meter bypasses, and shoulder authorization. Equally important for freeway bus service success is that stations or stops be located and designed to minimize stop time. When feasible, freeway trunk bus service stations or stops should be located on-line to enable the bus to stop and reenter traffic without entering the surface street system and waiting at stoplights. Such design requires sufficient physical space within the right of way. One example of an area where sufficient right of way space may be available for an on-line transit station or stop is along I-494 immediately east of France Ave. In areas where an on-line station or stop is not feasible, the off-line station or stop must be sited to minimize time the bus must spend off the freeway. Inconvenient stations or stops would defeat the purpose of high speed, trunk bus service.

Park and Rides

The location of existing Bloomington park and rides is depicted in *Figure 4.10*. Bloom-ington has historically used the approach of having numerous, small park and rides scattered throughout the city. These park and rides generally utilize existing parking lots through agreements at minimal cost. The City has found church sites to be particularly well adapted to shared use as park and rides due to their general lack of use during the working day. The one exception to this approach is the 200 space park and ride located near the City's only transit station at the Mall of America.

With the advent of LRT and limited stop, trunk bus service on I-35W, additional park and rides will be needed. The Minnesota Department of Transportation proposes an additional 200 space park and ride in conjunction with the Mall of America LRT station. The City has concerns that 200 additional spaces may not be sufficient and recommends further study on this issue and having plans and funding in place for future expansion should the facility prove to be undersized. A new park and ride is appropriate in conjunction with a bus transfer station at I-35W near 80th Street. The City has also acquired land for a future transit station and park and ride in the vicinity of 98th Street and I-35W. A medium sized park and ride at this location would be desirable after the extension of limited stop, trunk bus service along I-35W south to 98th Street. In the long term, if Bloomington commuter rail stations are created, consideration should be given to creating associated small park and rides.

Figure 4.13 **Frequent Transit Service Corridors**



Transit Supportive Land Use

The success of a transit route is heavily dependent upon the land use and density along the route. While transit providers control route locations and service characteristics, cities control land use and density. On a small scale, cities can facilitate transit by requiring pedestrian access ways linking new development with transit stops and by requiring waiting shelters or bus pull out lanes in high passenger volume locations. On a larger scale, cities control land use and density, elements vital to transit's viability. Land use and density decisions clearly go well beyond the issue of transit compatibility and are based on many factors including market demands, resident input, and infrastructure constraints. Still, as depicted in *Figure 4.13*, there are existing and potential future corridors of frequent transit service that deserve special consideration for transit oriented land uses and design. New development and redevelopment along these corridors should be designed to facilitate transit use. If and when frequent transit service is implemented along these corridors, land use plans for areas in proximity to stations should be reevaluated.

4.4 Bikeways, Walkways, and Other Forms of Transportation

Bloomington supports the provision of a high quality, non-motorized transportation system for bikes and pedestrians as a way to:

- Provide a viable transportation alternative to residents who may not have access to an automobile, such as the young, the elderly, the poor, and the disabled;
- Provide an attractive alternative to the automobile, thereby reducing auto trips, traffic congestion, air and noise pollution, resource consumption, wear and tear on roadways, and the need for roadway expansions and automobile parking;
- Provide recreational opportunities, thereby improving residents' health and well being;
- Provide safer, more convenient access to transit; and,
- Interconnect businesses, thereby allowing a motorist to access several destinations from one parking spot.

Existing Bikeway and Pedestrian Transportation System

Bloomington's existing bikeway and pedestrian transportation systems are depicted in *Figure 4.14*. Except in parks, these facilities generally run parallel to the street system. While the majority of the City's minor arterial and collector streets are accompanied by sidewalks and/or bikeways, most of the City's local streets are not.

Assessment of Existing Bikeway and Pedestrian Transportation System

There are pockets of excellent bikeway and pedestrian path resources within the city. Prime examples include the recreational pathways within Hyland Lake Park Reserve, the trails around Normandale Lake, and the paths along lower Nine Mile Creek. Bloomington's residential neighborhoods, however, are generally not well connected with these amenities or other common pedestrian/bike destinations such as schools and

parks. The primary bikeway and pedestrian transportation system weaknesses in need of improvement from the City's perspective are:

1. Lack of Sidewalks Along Local Streets, Especially in the Vicinity of Schools

Except in some newer residential areas in western Bloomington, the City's local streets generally have no sidewalks. Children who walk or bike to school, to the park, or to a friend's house are forced to share space with motorized vehicles on the street. This situation is even more undesirable in the winter when the streets may be icy and narrowed by snow.

2. Sidewalks Directly Adjacent to the Street

In some areas, sidewalks are constructed directly adjacent to collector and minor arterial streets. One major example of this phenomenon is along Nicollet Avenue north of 98th Street, an area of frequent pedestrian traffic heading to and from Kennedy High School. Such situations are highly undesirable for safety reasons and the fact that roadway snow storage and water/salt spray makes the sidewalk inhospitable and difficult to use. Even in the best weather, this situation discourages use of the sidewalk by making it uncomfortable to use due to its proximity to fast moving traffic.

3. Pedestrian/Bike Unfriendly Environment

In making Bloomington auto friendly, pedestrian and bike accommodations have at times been overlooked. Many street intersections are difficult to cross by foot or bike. Pedestrian connections between adjacent businesses are sometimes lacking, forcing customers to use vehicles for very short trips. A lack of bike racks at many businesses makes them inconvenient to visit by bike.

4. Freeways and Railroads Reduce Pedestrian and Bicycle Access

Freeways and railroads that bisect Bloomington sometimes block pedestrian and bicycle access to what would otherwise be accessible amenities and facilities. A good example of this situation is the Lyndale Avenue bridge over I-494 with its very narrow sidewalks directly adjacent to the road that inevitably becomes the exclusive domain of snow storage in the Winter. Pedestrians or bicyclists at this location who wish to access amenities on the opposite side are forced to go a great distance out of their way (Nicollet Avenue) to find a safer crossing point. This situation can be avoided through providing better pedestrian and bicycle infrastructure at the time of freeway and bridge construction or reconstruction.

Safety

When assessing the bicycle and pedestrian transportation system, it is important to evaluate accident data. *Figure 4.15* depicts the location of reported bike and pedestrian accidents in the five years between 1995 and 1999. Within this period, there was an average of 17 reported bicycle accidents per year. The frequency of reported bicycle accidents has dropped in number since the City's Bikeway Plan was prepared. Between 1971 and 1974 there were an average of 34 reported bicycle accidents per year. It is difficult to analyze the drop in reported bicycle accidents because there is no comparative data on the relative number of bicycle trips for the two time periods. Factors that may account for the decrease include:

- A significant reduction in the number of school aged residents (from 22,000 in 1972 to 11,500 in 1999);
- Improved bicycle safety features, such as hand brakes;
- Improvements to the bicycle/sidewalk infrastructure;
- Changing attitudes about public safety and the advisability of children travelling alone; and
- Increased bike usage during the early 1970s energy crisis.

In the five years between 1995 and 1999 there were a total of 92 reported accidents between pedestrians and motor vehicles, or an average of 18 per year. Pedestrian accident data has not been discussed in previous City plans which makes it difficult to know if accident levels are rising or falling. 54 percent of the reported pedestrian accidents occurred on public streets and sidewalks, with the remainder occurring on private property, most often in parking lots. The month with the highest frequency of accidents is February with an average of 3.75 accidents.

Drawing conclusions from the location of bike and pedestrian accidents is difficult because of the lack of data on bike and pedestrian traffic levels. One could reasonably assume that an area with significantly more bike/pedestrian traffic would correspondingly have higher bike/pedestrian accident levels. Still, analysis of bike/pedestrian accident locations does show striking correlations and can assist in identifying areas of highest priority for bike/pedestrian infrastructure improvements.

[Insert Figure 4.14 Existing and Proposed Walkways and Bikeways – fold out, color, 11 x 17 map]

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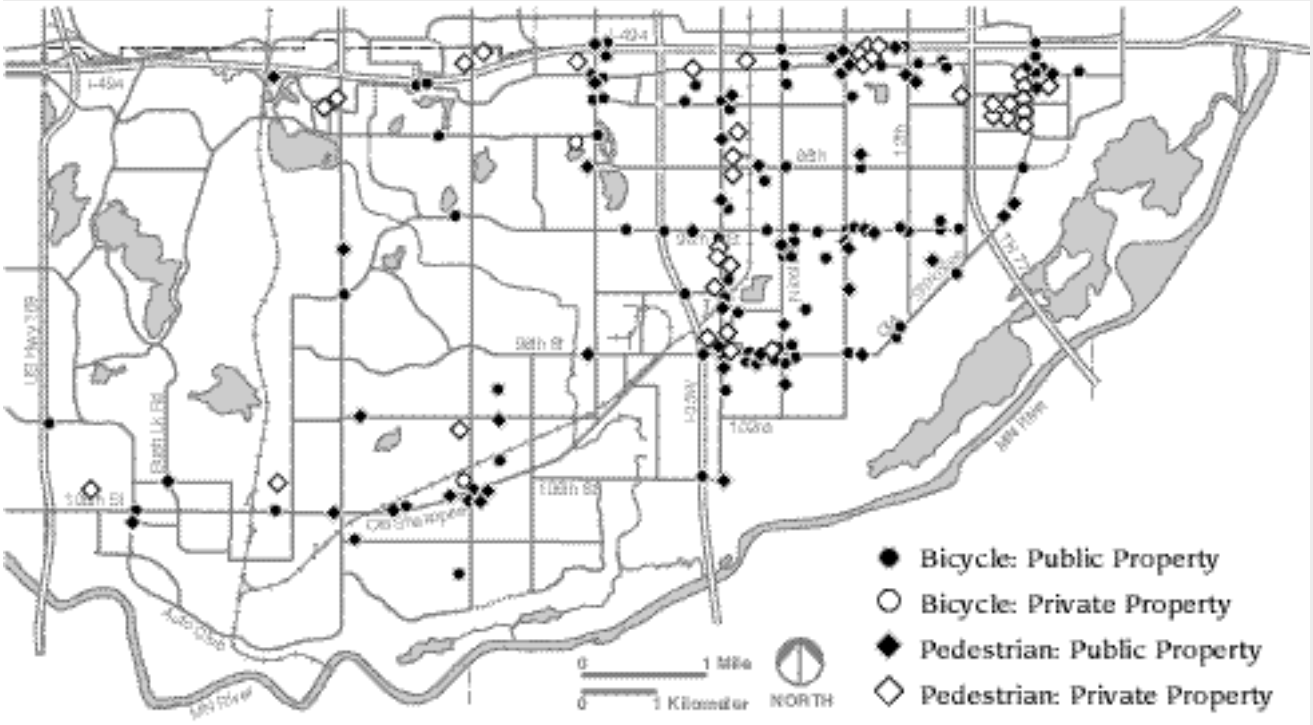
Figure 4.15 **Reported Auto-Related Bicycle and Pedestrian Accidents, 1995 - 1999**



Source: Bloomington Police Department, 1999

There is a strong correlation between reported bike/pedestrian accident locations and areas with commercial services, indicating that one of the most probable locations for bike and pedestrian accidents is at an access point to a commercial business or within a commercial parking lot. Outside of commercial areas, the highest concentration of reported bike/pedestrian accidents appears along East 90th Street, a phenomenon likely explained by the location of Valley View playfields and swimming pool in this area, a major bike/pedestrian destination point for the surrounding neighborhood.

Recommended Improvements

To improve Bloomington's bicycle and pedestrian transportation system, specific recommended physical improvements are shown in *Figure 4.14*. While sidewalks are desired along all local streets, the focus of those depicted is on improving connectivity within the existing system. The proposed Citywide Bicycle and Pedestrian Plan will prioritize and depict recommended sidewalk improvements on local streets, with a focus on school-neighborhood connections. The following are general recommendations:

1. Prepare a Citywide Bicycle and Pedestrian Plan

The City's Bikeway Plan was last updated in 1975 and there is no comprehensive pedestrian pathway plan. There is a strong need to prepare a new citywide Bicycle and Pedestrian Plan. This new plan should focus both on major connecting routes (river valley, NSP Park Ave. transmission line corridor, East Bush Lake Road, Ring Route) and smaller scale but equally important neighborhood improvements. Previous plans have provided grand visions with little discussion of implementation or funding. The focus of the new plan should be on providing pedestrian and bikeway infrastructure to link neighborhoods with destination points such as schools and with the remainder of the citywide system. To be successful, the updated plan must include a funding/implementation component along with clear priorities on the timing of proposed improvements.

2. Provide Separation between Sidewalks and Roadways

As discussed above, sidewalks immediately adjacent to roadways are highly undesirable for a variety of reasons. All newly constructed sidewalks/bikeways should be appropriately separated from the adjacent roadway, in most cases at least eight feet of

separation. As those roadways that have immediately adjacent sidewalks are reconstructed, the sidewalks should be separated. In situations where no roadway reconstruction is anticipated in the foreseeable future, the City should pursue available resources to accomplish separation.

3. Provide Pedestrian and Bicycle Connections across Physical Impediments

Freeways and major roadways represent significant impediments to bicycle and pedestrian movement. To minimize the effects of these impediments and provide better pedestrian and bicycle connections, freeway and interchange redevelopment must include appropriate pedestrian and bicycle accommodations. The City should also pursue grade separated pedestrian and bicycle crossings over minor arterial streets at locations of high pedestrian and/or bicycle traffic.

4. Improve Pedestrian and Bicycle Access to Transit

With major transit improvements such as LRT, high speed bus service, and potentially commuter rail being planned in Bloomington, pedestrian and bikeway infrastructure surrounding the stations will need to be closely evaluated and in places augmented to ensure station accessibility.

5. Improve Private Pedestrian and Bicycle Accommodations at Commercial Properties

At the time of site plan review and approval, the City will require appropriate pedestrian and bicycle connections with public sidewalks and between adjacent commercial uses as well as appropriate bicycle storage and locking opportunities.

Influencing Factors

The City also recognizes that numerous factors beyond actual pedestrian and bikeway pathway infrastructure can have a significant influence on the viability and desirability of pedestrian and bicycle trips. These factors and the City's role in positively shaping them include the following:

Land Use - Land use patterns significantly affect the viability of pedestrian and bicycle trips. Well dispersed, pedestrian oriented commercial nodes make non-motorized trips more feasible. Since Bloomington is fully developed and land use patterns are set, the City's role in positively shaping land use patterns is focused on redevelopment. As redevelopment occurs, mixed uses in close proximity to commercial services will be encouraged.

Weather - Minnesota's weather is inhospitable to pedestrian and bicycle trips for several months out of the year. The City has an important role to play in providing snow removal for vital pedestrian ways and in designing pedestrian and bicycle pathways to minimize negative impacts from adjacent roadway snow storage.

Lighting - Depending on the purpose and role of the pathway, lighting is another critical factor in making pedestrian and bicycle trips viable and improving safety.

Building Orientation - Buildings that are set back from the road with large parking lots in front are uninviting and difficult for pedestrians to access. Buildings close to, and oriented toward sidewalks, with parking in the rear or on the side, are more likely to encourage pedestrian use and are more transit-friendly.

Traffic Noise and Perception of Danger - Roadways with sidewalks directly adjacent to noisy, high-speed travel lanes are often perceived as being undesirable for walking. Greater separation, especially with planting strips/trees and slower traffic speeds, increases the level of comfort for pedestrians.

Access Management - Every driveway creates conflicts for pedestrians and bicyclists. Reducing the number of driveways and limiting access from one or more directions improves pedestrian and bicyclist safety and comfort while increasing vehicle safety as well.

Street Crossings - Wide multi-lane roadways are difficult to cross on foot. Crossing opportunities can be provided with techniques such as raised medians, refuge islands, curb extensions, and pedestrian signals, where appropriate.

Intersections - Intersections built for the movement of motor vehicles can be very difficult for pedestrians and bicyclists to cross. A network of streets with sidewalks and bike lanes does not fully accommodate pedestrians and bicyclists if intersections present obstacles. Free-turning movements for vehicles offer particular safety challenges. Improvements for pedestrians include refuge islands, shorter crossing distances, reduced curb radii, crossings at right angles, and slower traffic speeds. At busy interchanges, grade-separation for bicyclists and pedestrians may be needed.

Public Education - The City plans to improve public understanding of available pedestrian and bicycle resources and of general bicycle/pedestrian safety through summary brochures, newsletter articles, and cable access TV programming.

Truck and Rail Transportation

Truck and rail service are important to the City's economic development objectives and transportation needs, but often are disruptive to traffic flow and adjacent residential neighborhoods. The City's truck and rail transportation goal is to facilitate access for commercial traffic and at the same time be considerate of associated adverse land use and safety impacts.

Truck traffic constitutes about three percent of vehicle trips in Bloomington. These trips are concentrated on, but not restricted to, serving commercial and industrial land uses. Bloomington does not have a city-wide truck route policy because the arterial road network is organized to discourage trucks from using local roadways. Most truck traffic on local streets occurs because it is serving properties in the immediate vicinity.

To maintain satisfactory truck circulation, the City intends to:

- continue to review arterial road access to industrial and commercial land uses, ensuring that these routes are the fastest, most convenient routes for truck access;
- separate collector road systems for industrial and commercial land uses from residential collector roads as feasible; and,
- improve land and landscape buffers between residential areas and arterial roads with high traffic volumes when there is feasible opportunity.

The Canadian Pacific Railway operates two routes in Bloomington, a main line (5.8 miles) running north to south across Bloomington about 3/4 mile west of Normandale Boulevard and a spur line (6.9 miles) serving numerous industries in central Bloomington. In 1999, the Canadian Pacific Railway main line typically carried four to six train trips per day. Operating speed is less than 20 miles per hour. The spur line carries an average of two train trips per day at speeds of 10 miles per hour. In Bloomington, there are three grade crossings of the Canadian Pacific Railway main line and 19 grade crossings of Canadian Pacific Railway spur lines and sidings. All three main line crossings and several of the spur line crossings are protected by automatic flashing light signals. There are two bridged crossings of the main line.

Future automobile and train traffic volumes and emergency vehicle access considerations warrant a grade-separated crossing of the Canadian Pacific Railway main line at Old Shakopee Road. Access control and roadway gradient considerations are arranged for that bridge implementation. Grade separation at East Bush Lake Road may also be a prudent future action as decades continue.

River Transportation

The Minnesota River upstream from the T.H. 77 Bridge is one of three principal port areas in the metropolitan region. Barge traffic on the Minnesota River supplies petroleum products, fertilizers and metal products to Port Richards and Port Cargill and serves grain terminals in Savage and Shakopee. A large percentage of the grain raised for export is shipped by barge to New Orleans and many of those shipments originate on the Minnesota River. Intermodal transfer for grain traffic is predominantly truck to terminal to barge. Most of this traffic is grain shipments that originate south and west of the metropolitan area and do not seriously impact roads in Bloomington. The only commercial transportation related uses in Bloomington are barge fleeting areas or mooring areas on the north side of the river channel.

The U.S. Army Corps of Engineers is responsible for maintaining a nine-foot barge navigation channel to river mile 14.7. An additional seven miles of nine foot channel from Savage to Shakopee is maintained by the Peavey Company. The Corps of Engineers maintains a four foot channel to mile 25.6 of the Minnesota River for recreational craft.

The City of Bloomington controls land use on the north bank of the Minnesota River. However, the City does not have permitting responsibilities with respect to the waterway system itself. The Bloomington land use guide plan classifies all Minnesota River bottomlands for conservation use. The City opposes river uses or land uses on the south side of the river that would conflict with the use of the north side of the river for conservation uses.

4.5 Goals, Policy Objectives, Implementation Actions

Transportation Goal 1

Minimize levels of congestion within the city and on the surrounding regional system.

Policy Objective 1.1

Add capacity to the regional roadway system.

The City's priority order for roadway capacity projects is:

1) I-494, including the interchange with I-35W;

2) I-35W;

3) TH 169 upgraded to freeway design; and

4) Upgrade interchange areas including intersecting roads and bridged crossings.

Implementation Actions

- Support adequate funding levels to implement needed transportation improvements.
- The City's priority order for additional transportation funding is 1) use all state motor vehicle excise tax (MVET) and motor vehicle license revenues for transportation purposes, 2) increase the gas tax.
- Support metro-wide transportation pricing and other methods which raise revenue dedicated for transportation improvement directly from highway, transit, and bicycle path users. The City opposes collection of tolls on portions of the regional system.
- Join with the Metropolitan Council to focus transportation investments within and along the I-494/I-694 corridor.
- Encourage MNDOT to update its official map for regional highways and related transportation facilities and to acquire rights of way for future expansion of I-494 and I-35W when parcels become available for purchase.

- Encourage innovative partnerships with MNDOT, the Metropolitan Council, and Hennepin County to allow development while preserving necessary highway expansion rights of way.
- Encourage the addition of preferential ramps for HOVs where possible.

Policy Objective 1.2

Add capacity and remove bottlenecks in the local roadway system.

Implementation Actions

- Endeavor to complete the 79th/80th Street Ring Route improvements as funds become available.
- Endeavor to complete other roadway improvements discussed in Section 4.2 of this plan.
- Use state aid funds to assist upgrading collector streets.
- Continue to obtain rights of way, by dedication where possible, as shown on the City's master plan.
- Manage City roadway rights of way to encourage private utilities to be installed in a manner that does not hinder improvements to the adjacent roadway.

Policy Objective 1.3

Use technology to increase the efficiency of the existing transportation system.

Implementation Actions

- Continue to identify, research, and implement promising new roadway efficiency technologies.
- Provide commuting information on the City's website, including easy links to sites that display information on freeway traffic speeds, accidents, and construction areas.
- Coordinate the timing of signalized intersections controlled by separate jurisdictions.

Policy Objective 1.4

Utilize transportation demand management (TDM) strategies as cost effective methods to reduce congestion.

Implementation Actions

- Support multi-jurisdictional and regional TDM efforts. *While municipalities have an important role to play in implementing TDM strategies, no city acting on its own can control congestion on the regional highway system. Many TDM strategies are best implemented at the regional or multi-jurisdictional level. It is also important to have uniformity among the TDM requirements of neighboring communities so that cities that implement TDM are not penalized for their efforts by placing themselves at a disadvantage compared to cities that do not implement TDM.*
- Continue to be actively involved in the I-494 Corridor Commission and the I-35W Solutions Alliance, multi-jurisdictional groups devoted to reducing freeway congestion.
- Support the efforts of Metro Commuter Services, the regional commuter transportation agency.
- Require large employers to submit transportation management plans at the time new development or expansion is proposed.
- Amend the City Code to formalize transportation management plan requirements and thresholds.

- Work with business organizations such as the Chamber of Commerce to promote implementation of TDM techniques by existing employers.
- Increase the average number of occupants per vehicle by promoting the use of transit and carpools. *The City will encourage the development of bus only shoulder lanes, additional park and ride facilities, meter bypass lanes for high occupancy vehicles, and transit oriented design requirements. The City will work to reduce congestion by cooperating with metropolitan initiatives to encourage the use of car and vanpools.*
- Encourage telecommuting by continuing to allow non-intrusive home occupations as permitted uses, by requiring two way high speed communication service in conjunction with the City's cable television franchise agreement, and by encouraging and facilitating the continued development of a high quality wired and wireless communications infrastructure while minimizing any adverse impacts upon the community.
- Set a positive community example by implementing TDM techniques for City employees. *As a major employer with over 500 employees, the City of Bloomington has a responsibility to practice what it promotes with respect to TDM. The City will implement a telecommuting policy for City employees, study the idea of staggered or flexible hours for City employees, and retain preferential parking for carpools at City facilities.*
- Reduce the need for motorized vehicle travel through improved pedestrian and bicycle connections.

Policy Objective 1.5

Encourage land use that reduces the need to travel.

Implementation Actions

- Promote a variety of land uses well distributed throughout the City to reduce trip lengths.
- Require pedestrian connections between complementary land uses.
- Encourage the development of complementary uses within walking distance of one another.

Transportation Goal 2

Provide transportation facilities that are safe for users.

Policy Objective 2.1

Encourage roadway improvements that increase safety.

Implementation Action

- Place special emphasis on those roadway improvements outlined in the Transportation Element which increase safety, most notably the upgrading of U.S. Highway 169 to freeway standards with grade separated intersections.
- Use fundamentals of visibility, spatial relationships, adequate geometrics, and appropriate gradients in roadway design.
- Consistently apply warranted traffic control devices.
- Acquire adequate right of way to provide safety enhancing features such as medians and boulevard type sidewalks.
- Include accessible ramps at sidewalk intersections with streets.
- Provide raised median channelization when feasible.
- Separate turn lanes when feasible.

Policy Objective 2.2

Manage the public rights of way to minimize safety danger from obstacles along roadways and pathways.

Implementation Actions

- Require local service electric distribution lines to be placed underground whenever the adjacent arterial or collector street is reconstructed.
- Study and implement new technology advances in breakaway signs and poles.
- Minimize negative safety impacts from private structures placed in the right of way.
- Minimize the number of unshielded obstacles within 20 feet of a roadway.
- As new development and redevelopment occurs, encourage land uses that are compatible with adjacent streets.
- Require structure setbacks as necessary to maintain safety and visibility.

Policy Objective 2.3

Minimize the number of access points and intersections along arterial roadways to improve safety.

Implementation Actions

- Where possible, remove and restrict direct land access to minor arterial streets.
- Permit driveway designs and locations only in conformance with the City's access management practices.
- Coordinate review and permitting of access to county and state roadways with appropriate agencies.

Policy Objective 2.4

Manage and maintain public roadways and pathways to minimize safety concerns.

Implementation Actions

- Perform snow removal as called for in the City's snow removal policy and maintain safe driving conditions.
- Restrict on street parking through signs in areas where on street parking creates a safety hazard.
- Place signs and signals based on the *Manual on Uniform Traffic Control.*
- Improve rail crossing safety by installing signals or constructing grade separated roadways where warranted by vehicle and rail traffic volumes.
- Provide appropriate street lighting levels.

Policy Objective 2.5

Promote safety through enforcement of traffic laws.

Implementation Actions

- Implement emerging technology to support traffic law compliance in appropriate locations.

Transportation Goal 3

Encourage driving practices that are compatible with residential neighborhoods.

Policy Objective 3.1

Prepare a neighborhood oriented program to encourage traffic law compliance.

Implementation Actions

- Utilize the Neighborhood Watch Group and National Night Out Structure to encourage neighborhood participation in improving traffic law compliance.
- Utilize City communication devices such as the website, newsletter, and community television to promote traffic law compliance.

Policy Objective 3.2

Increase enforcement of traffic laws on local residential streets.

Implementation Actions

- Consider additional police enforcement personnel focused specifically on neighborhood traffic.
- Consider purchase of additional speed monitoring trailers to encourage self-enforcement.
- Research and implement new enforcement technologies as they become available.

Policy Objective 3.3

Discourage heavy, fast, or through traffic from using local residential streets.

Implementation Actions

- Prepare a study of traffic calming measures to assess their impact in other communities and consider their feasibility for implementation in Bloomington.
- Consider retrofitting design features into high violation roadway *segments to physically discourage violations. The effect of such modifications should be to give the dominant position on local residential streets to residential qualities and pedestrians rather than to vehicles.*

Policy Objective 3.4

Assist neighborhoods in understanding the process for complaint review.

Implementation Actions

- Establish uniform complaint procedures.
- Summarize complaint procedures in an easy to read brochure

Transportation Goal 4

Protect the public investment in transportation infrastructure through regular maintenance and renewal.

Policy Objective 4.1

Adequately fund the Pavement Management Program to maintain 90% of City streets in a condition above the "problem" category.

Implementation Action

- Convert transitional streets to permanent streets as they can be phased into the construction program.
- Continue to implement the Pavement Management Program.
- Continue to study and implement promising new techniques in pavement management.
- Pursue roadway infrastructure maintenance and replacement grants.
- Recover appropriate costs from utilities using the right of way and cutting pavement sections to compensate for their impact on public streets.

Transportation Goal 5

Work with transit providers to create a viable, high quality transit system.

Policy Objective 5.1

Address weaknesses in the existing transit system.

The two primary weaknesses in the existing transit system identified by the City of Bloomington are the lack of suburb to suburb transit connections and the lack of service to Bloomington's primary employment concentrations.

Implementation Actions

- Encourage transit providers to establish limited stop, trunk bus service along I-494.
- Encourage transit providers to establish regular bus service along both sides of I-494.
- Encourage transit providers to construct a viable, permanent bus transfer station with park and ride facilities along I-35W near 80th Street.
- Encourage Metro Transit to extend the proposed I-35W limited stop, trunk bus service to the south with a new station and park and ride at 98th Street.
- Encourage transit providers to establish additional circulator bus service as routes are redesigned to work with LRT, I-35W limited stop, trunk bus service, and potentially commuter rail.

Policy Objective 5.2

Facilitate transit oriented land uses and design in proximity to LRT stations and along the City's frequent transit service corridors.

Implementation Actions

- Prepare LRT station area plans with specific recommendations.
- Use land use controls to encourage development of viable transit corridors.
- Prepare a station area plan with specific recommendations for the area in proximity to bus transfer station at I-35W near 80th Street.

Policy Objective 5.3

Remove barriers to transit use.

Implementation Actions

- Require new development and redevelopment to incorporate transit friendly design features. *Where appropriate, sidewalks, transit shelters, and bus pull out lanes to facilitate access to transit will be required in conjunction with new development.*
- Support transportation network improvements that facilitate transit. *Improvements that can be made to the transportation network to facilitate transit include bus only shoulder lanes, additional park and ride facilities, bus preemption of traffic signals, meter bypass lanes for high occupancy vehicles, improved signage, and transit shelters.*
- Encourage the provision of transit vehicles and facilities that are accessible to persons with disabilities.

Policy Objective 5.4

Strive to meet the transit needs of residents and employees.

Bloomington will work with transit providers to identify and meet the transportation needs of residents and employees.

Implementation Actions

- Continue to offer group route, door to door bus transportation for transit dependent residents through the Bloomington Human Services Division. *These buses qualify as approved Specialized Transportation Services (STS) through the Minnesota Department of Transportation and meet Americans with Disabilities Act Accessibility Guidelines (ADAAG) specifications.*
- Assist transit providers in tailoring their services to meet the needs of Bloomington's transit dependent residents.

Policy Objective 5.5

Promote improved transit service in Bloomington.

Implementation Actions

- Participate in efforts to increase coordination among the providers offering transit service in Bloomington and surrounding communities.
- Work with the Metropolitan Council and Metro Transit to implement their *Transit Redesign Plan* in Bloomington in a manner that maximizes transit improvements while minimizing negative impacts.
- Through representation on the I-35W Solutions Alliance, participate and provide input on feasibility studies being prepared for the Dan Patch commuter rail line.

Transportation Goal 6

Provide a comprehensive, convenient, and safe pedestrian and bicycle transportation system to connect neighborhoods with recreation, commercial, and educational facilities.

Policy Objective 6.1

Improve the existing pedestrian and bicycle infrastructure.

Implementation Actions

- Pursue infrastructure improvements outlined in *Figure 4.14*.
- Integrate bicycle and pedestrian facility needs into roadway planning, design, construction, and maintenance activities.
- Adopt design standards that create safe facilities and encourage bicycling and walking.
- Provide separation between sidewalks and roadways.

- Provide pedestrian and bicycle connections across physical impediments.
- Evaluate and improve traffic operation measures and traffic control devices to support and accommodate bike and pedestrian use.
- Provide uniform signs for bikeways and walkways.
- Maintain bikeways and walkways in a smooth, clean, and safe condition.
- Design walkway improvements to meet the needs of the disabled and the requirements of the American's with Disabilities Act.

Policy Objective 6.2

Improve and coordinate bikeway and walkway planning.

Implementation Actions

- Prepare a citywide bicycle and pedestrian plan to update the 1975 Bikeway Plan with a focus on linking neighborhoods to educational, recreational, and commercial amenities as well as to major cross-city connecting routes.
- Annually monitor and analyze bicycle and pedestrian accident data and use the analysis in pathway planning.
- Work with other agencies such as Hennepin County Parks, the state Department of Natural Resources, and the U.S. Fish and Wildlife Service to coordinate pathway connections, promotions, and information materials.

Policy Objective 6.3

Improve bicycle and pedestrian facilities on private property.

Implementation Actions

- Require appropriate pedestrian and bicycle connections between adjacent commercial properties and with public sidewalks at the time of site plan review and approval.
- Require appropriate bicycle storage and locking opportunities on commercial properties at the time of site plan review and approval.

Policy Objective 6.4

Improve public understanding of available pedestrian and bicycle resources and of general bicycle/pedestrian safety.

Implementation Actions

- Prepare a brochure showing notable bicycle and pedestrian amenities available within Bloomington.
- Develop bicycling and walking safety education to improve skills and observance of traffic laws, and promote overall safety for bicyclists and pedestrians.
- Develop safety education aimed at motor vehicle drivers to improve awareness of the needs and rights of bicyclists and pedestrians.
- Utilize the City newsletter and cable access TV programming to publicize available bicycle and pedestrian amenities as well as general safety issues.

Policy Objective 6.5

If abandoned in the future, use railroad rights of way for the public benefit.

While the purpose of a railroad is to carry train traffic, changing freight delivery methods have raised at least the possibility of abandonment of rail lines in Bloomington. If abandoned, railroad corridors should be used for the public benefit. As demonstrated elsewhere in the metropolitan area, one beneficial interim use for abandoned railroad corridors is as a non-motorized pathway. If developed within an abandoned railroad corridor, pathways should be designed to be sensitive to surrounding land uses and not preclude other public uses.

Section 5:
Airport Impact Element

CREDIT: METROPOLITAN AIRPORTS COMMISSION

5.1 Introduction

Minneapolis-St. Paul International Airport

The close proximity of Minneapolis-St. Paul International Airport (MSP) creates a mix of positive and negative impacts on Bloomington. Airport-related service facilities such as hotels are a major portion of Bloomington's economy. Proximity to the airport is also a major incentive for other businesses to locate in Bloomington and an important component in the success of existing land uses such as the Mall of America. With over 25,000 employees, the airport itself is one of the region's largest employers. Many of these employees call Bloomington home.

Unfortunately, the proximity of the airport brings with it significant noise that creates nuisance impacts on existing land uses and limits future land use. The airport also limits development in parts of Bloomington through runway-related safety zones and height limits. Runway safety zones for the planned north/south runway (35/17) will require removal of several existing buildings and will limit development on some of the city's most prime real estate near the Mall of America.

Reliever Airports

While MSP has been designed primarily for regularly scheduled commercial flights, there are ten other airports in the metropolitan airport system designed to serve personal and business general aviation needs and to "relieve" MSP of general aviation traffic. The closest reliever airport is Flying Cloud in Eden Prairie. Along with Airlake Airport in Lakeville, Flying Cloud serves the travel needs of Bloomington businesses and residents that cannot be met by scheduled airline service. Although air traffic departing and arriving at Flying Cloud frequently passes over Bloomington, the associated noise impacts on Bloomington are minimal.

All things considered, having these airports as neighbors is a net positive for the City of Bloomington. The City supports retaining MSP as the region's one major passenger and cargo airport and supports continued improvements for general aviation needs at the Flying Cloud Airport. At the same time, the City will work actively to reduce and contain the adverse impacts of these airports on Bloomington.

Changes at MSP

Within the next twenty years, several changes are anticipated at MSP which will have an impact on Bloomington, including:

- A potential revised runway use system (RUS) which would increase the number of takeoffs and landings (and aircraft noise) over Bloomington on the crosswind runway (4/22) until the planned north/south runway is operable.
- The opening of a new north/south runway which would limit development in the Airport South District through runway safety zones and structure height restrictions and increase aircraft noise levels east of Highway 77 while lowering noise levels west of Highway 77. The north/south runway will reduce the number of flights using runway 4/22.
- A possible fixed path transit connection between downtown Minneapolis, the airport, Airport South District, and Dakota County.
- After 2010, the potential relocation of the main terminal to the northwest corner of the airport could increase travel time between the terminal and the Airport South District.
- The continued growth of air traffic levels at MSP and corresponding noise level increases. The Metropolitan Airports Commission forecasts 640,000 takeoffs and landings by 2020, up from 485,000 in 1997.
- The evolution of commercial aircraft fleets to quieter, Stage III aircraft by the year 2000.

5.2 Development Impacts

CREDIT: METROPOLITAN AIRPORTS COMMISSION

The proximity of the airport creates significant impacts on development within Bloomington, most notably in the Airport South District, through spin-off development, runway safety zones, and structure height limits.

Spin-Off Development

Airport-related service facilities, including hotels, private parking lots, car rental agencies, and others, are a major portion of Bloomington's economy. The majority of these service facilities are located in Bloomington due to the close proximity of the airport. Bloomington also has a competitive advantage in attracting and retaining land uses that benefit from being close to a major hub airport, such as Fortune 500 companies whose executives are constantly traveling or a tourist-oriented destination such as the Mall of America.

The primary benefit of having a major airport as a neighbor is the economic development opportunities that it generates. Relocation of the airport would have a major detrimental impact on the economic well being of Bloomington.

Safety

Public safety and flight operation safety are overriding considerations in achieving compatibility between the airport and its surroundings. To protect the safety of the flying public and those on the ground, the federal and state government have instituted a variety of safety controls which include limits on development intensity and height near the end of runways.

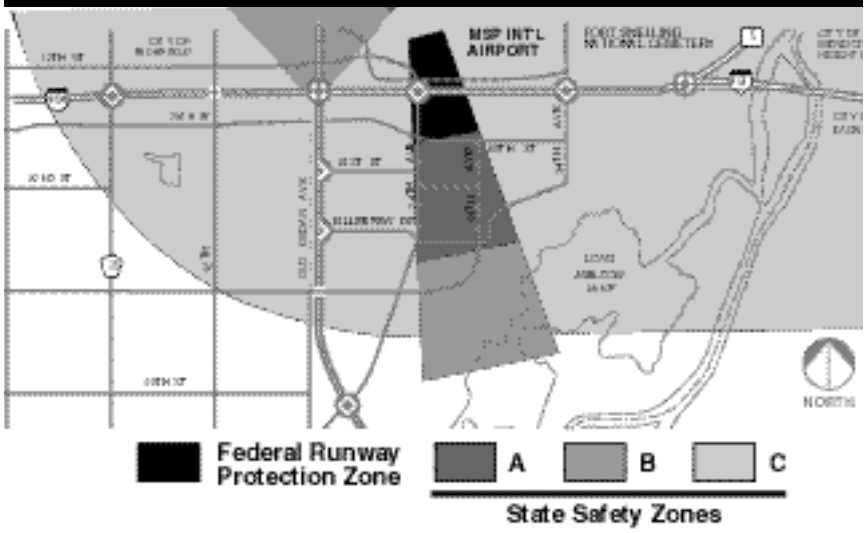
Federal Runway Protection Zones

The Federal Aviation Administration requires the area immediately surrounding the end of a runway to be kept clear of buildings and possible obstructions. As depicted in *Figure 5.1*, the planned north/south runway's protection zone will extend into Bloomington's Airport South District and require the removal of several existing buildings and an electric substation. Acquisition of the required properties will be completed by the Metropolitan Airports Commission with federal funds.

State Runway Safety Zones

The Minnesota Department of Transportation has established runway Safety Zones A, B, and C which extend beyond the limits of the federal runway protection zones. Land uses, development density, occupancy density, and site coverage are regulated within Safety Zones A and B. In Safety Zone C, activities which would interfere with airport communications or with a pilot's view of the airport are regulated. The City and MAC are in the process of defining how new development in Safety Zones A and B should be regulated.

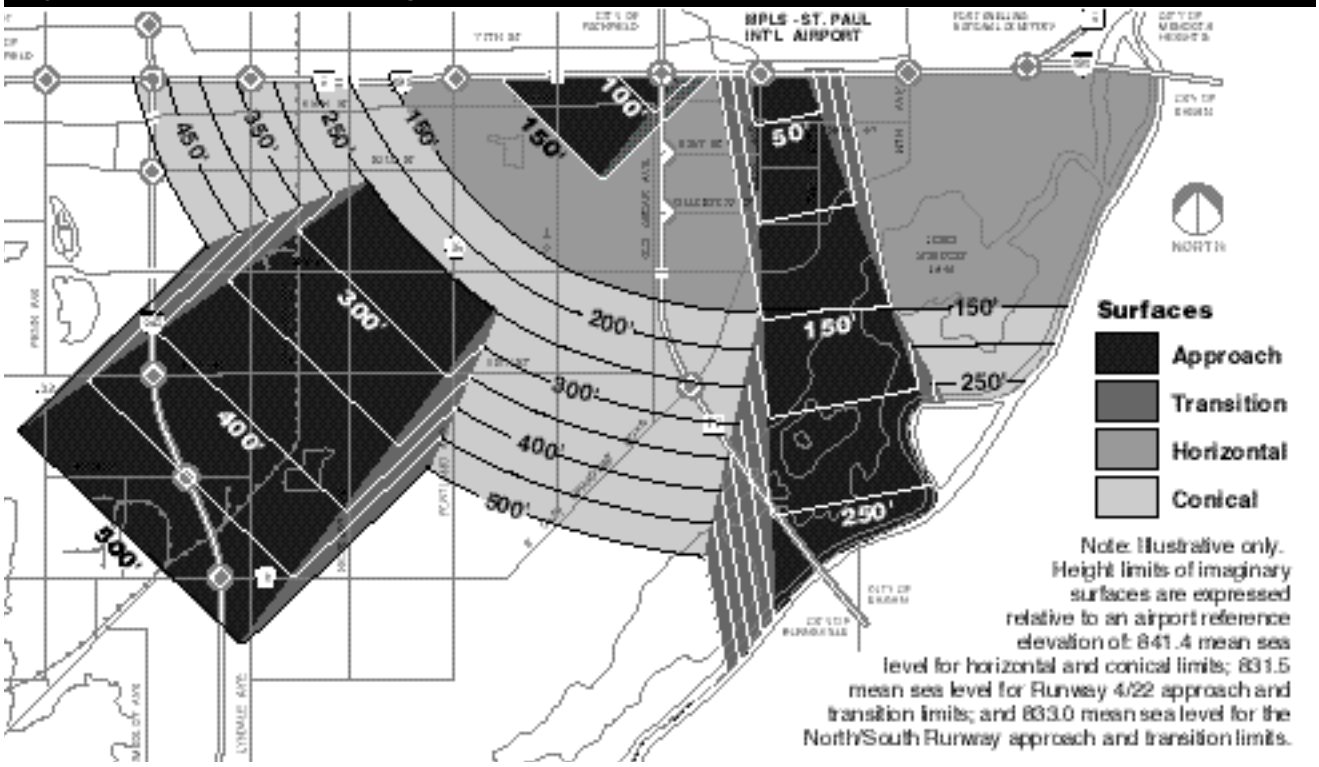
Figure 5.1 **Federal and State Airport Runway Safety Zones**



Height Limits

The Federal Aviation Administration has also adopted height restrictions for structures, trees, and other objects in the vicinity of the runways. As depicted in *Figure 5.2*, the regulations establish a number of imaginary surfaces constructed from the ends of runways. Any object piercing these imaginary surfaces is considered an obstruction to navigable airspace. In certain cases, the Federal Aviation Administration grants exceptions for structures to be constructed above the horizontal or conical surfaces, provided the structure has appropriate marking lights and that the Federal Aviation Administration finds that safe operation of the airport will not be impeded.

Figure 5.2 **FAA Structure Height Restrictions**



5.3 Noise Impacts

CREDIT: METROPOLITAN AIRPORTS COMMISSION

Noise is the most widespread environmental impact associated with the airport and perhaps the most difficult airport-related problem to mitigate. While all of Bloomington is exposed to noise from overhead aircraft, noise levels are most intense in portions of eastern Bloomington that lie near the airport and under the designated flightpaths. In these areas, aircraft noise exceeds that of a mere annoyance and can represent a significant nuisance.

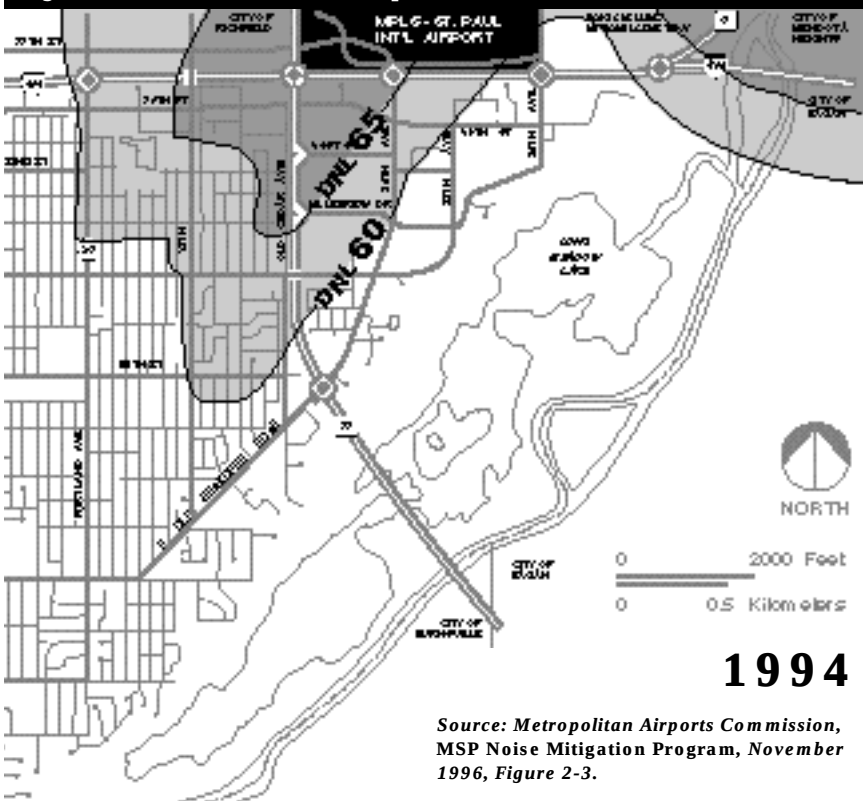
The primary noise generator in an aircraft is its engine, whether jet or propeller. In Bloomington, the noise created by overflying jet aircraft causes the bulk of noise impacts. Jet engine noise is generated by both the mixing of hot exhaust gases with the cooler ambient air and the fan noise produced by rotating blades in the engine. New technology allows for a reduction in the fan noise component, but it will take time for older aircraft to be phased out of service and replaced by newer, quieter aircraft.

The federal government classifies aircraft based upon the noise they generate. For example, aircraft classified as "Stage II" generate more noise than aircraft classified as "Stage III". In 1994, a federal law was enacted that requires subsonic turbojet aircraft over 75,000 pounds to meet Stage III noise requirements by the end of 1999.

Noise is typically measured according to its loudness using the logarithmic decibel (dB) scale. To more closely measure sound within frequency ranges to which humans are most sensitive, an A-weighted decibel (dBA) scale is often used in aircraft and environmental noise analysis. Federal agencies use "Day-Night Levels" (DNL or Ldn) as an expression of average noise levels over one year's time. DNL is a logarithmic average of sound levels in dBA that assigns a penalty to nighttime (10 p.m. to 7 a.m.) noise to reflect increased human sensitivity to noise during those hours.

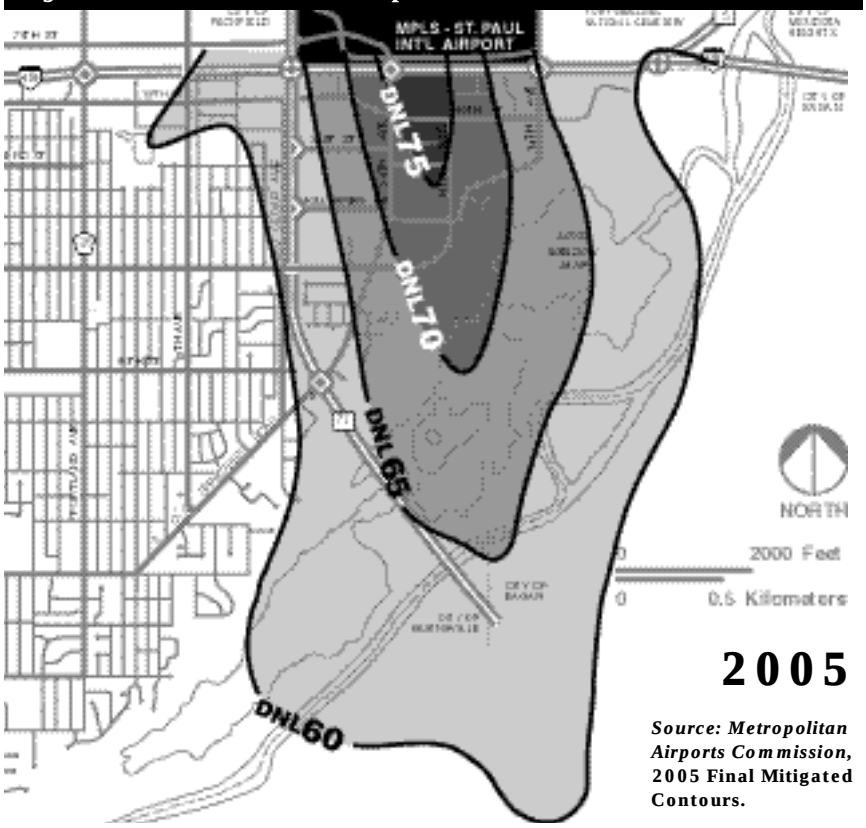
Aircraft noise impacts are based on variables such as the number and proximity of overflights and the type of aircraft being used. Using a computer to analyze forecasted changes in the variables, future noise levels on the ground

Figure 5.3 **Aircraft Noise Exposure 1994**



Source: Metropolitan Airports Commission,* MSP Noise Mitigation Program, *November 1996, Figure 2-3.

Figure 5.4 **Aircraft Noise Exposure 2005**



***Source: Metropolitan Airports Commission,* 2005 Final Mitigated Contours.**

can be modeled. *Figures 5.3 and 5.4* depict 1994 and projected 2005 noise levels in Bloomington in DNL units. The changes in Bloomington's noise exposure levels between 1994 and 2005 primarily reflect the redistribution of air traffic after the completion of the north/south runway in 2003; although, to a lesser extent, the changes are also attributable to increased overall air traffic levels, quieter aircraft, and revised flight paths.

As is demonstrated with the 1994 and 2005 noise contour maps, the addition of a new north/south runway will dramatically impact aircraft noise exposure levels in Bloomington. As air traffic using runway 4/22 decreases and air traffic begins using the new north/south runway, noise levels east of Highway 77 will increase and noise levels west of Highway 77 will generally fall. *Figures 5.5 and 5.6* depict the use of MSP runways in both 1994 and 2005 by showing the percentage of all incoming and outgoing flights using each of the runways. In 1994, 3 percent of outgoing flights and 2 percent of incoming flights flew over Bloomington through use of the 4/22 runway. Between 1994 and 2005, use of the 4/22 runway is anticipated to drop dramatically but the new north/south runway will begin handling 37 percent of all outgoing flights and 17 percent of all incoming flights, according to Metropolitan Airports Commission data in the *MSP Noise Mitigation Program* (November 1996).

In the short term, aircraft noise levels in Bloomington may also be impacted by a proposed revision to the runway use system (RUS) that would route additional air traffic onto runway 4/22 and over Bloomington. If implemented, the

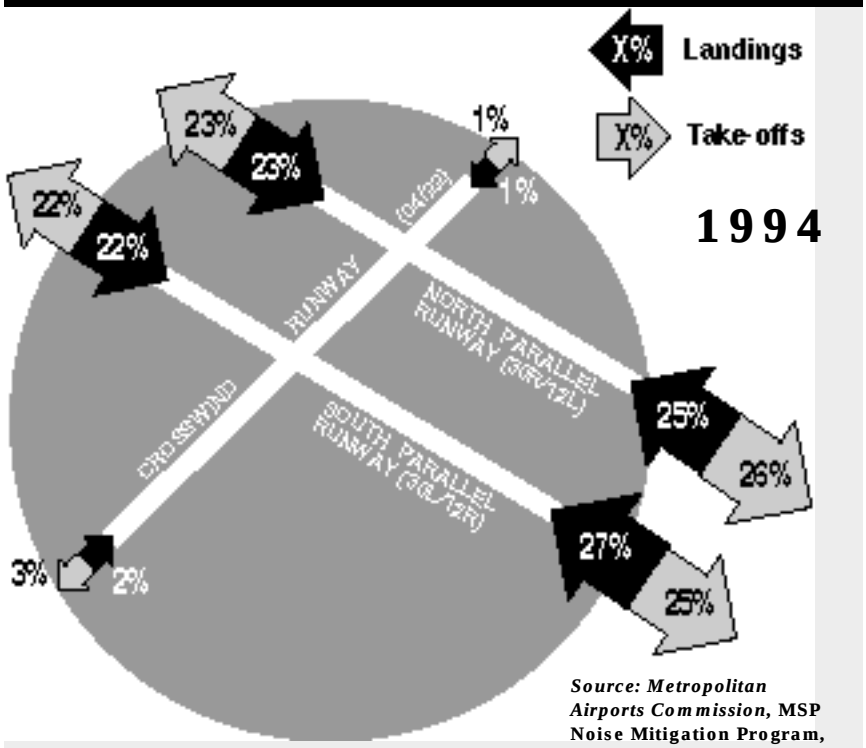
proposed redistribution of takeoffs and landings would increase aircraft noise levels in Bloomington while decreasing levels under the parallel runway flightpaths. The mitigation required if MAC were to implement the 4/22 RUS is described in the 1995 Record of Decision and includes acquisition of 75 single family homes in Bloomington and noise insulation of 1,047 single and 2,175 multi-family homes in Richfield and Bloomington. The 4/22 RUS may not be implemented however due to the very high cost of mitigating the associated impacts and the fact that the shifting of operations to the north/south runway will accomplish even greater noise relief by 2003 for areas under the parallel runway flightpaths.

Noise Compatibility of Impacted Land Uses

Certain land uses are more tolerant of aircraft noise than others. Residential uses and hotels are considered the least tolerant of aircraft noise, followed by schools and churches. Industrial and agricultural uses are considered the most tolerant. *Table 5.1* compares the number of existing Bloomington dwelling units exposed to various aircraft noise thresholds both before and after the construction of the north/south runway. Although the number of flights passing over Bloomington will greatly increase, the overall number of dwelling units exposed to 60 DNL and above will actually decrease due to the fact that the flights will be passing over a less populated area.

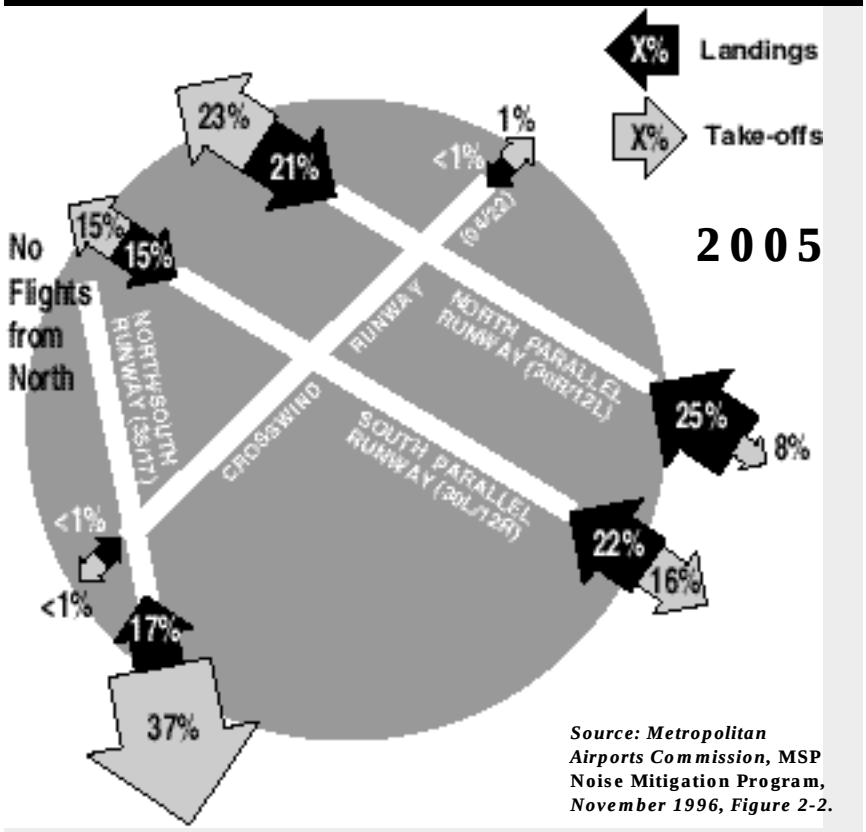
Noise impacts at DNL 75 and above are considered severe. Residential, most public and

***Figure 5.5* MSP Runway Use 1994**



Source: Metropolitan Airports Commission,* MSP Noise Mitigation Program, *November 1996, Figure 2-2.

***Figure 5.6* MSP Runway Use 2005**



Source: Metropolitan Airports Commission,* MSP Noise Mitigation Program, *November 1996, Figure 2-2.

Table 5.1 **Comparison of Bloomington Dwelling Units Exposed to High Levels of Aircraft Noise Before and After Construction of the North/South Runway**

	Units within Exposure Level	
Exposure Level	**1994**	**2005**
75 DNL and above	**0**	**0**
70-75 DNL	**0**	**4***
65-70 DNL	**411**	**383***
60-65 DNL	**2,269**	**1,251**
Total Units Affected	**2,680**	**1,638**

*** Numbers reflect the anticipated MAC removal of 112 units in the 70-75 DNL zone and 49 units in the 65-70 DNL zone.**

***Source: Metropolitan Airports Commission,* MSP Noise Mitigation Program, *November 1996, Figure 2-3 and* 2005 Final Mitigation Contours.**
Unit counts by Bloomington Planning Division.

quasi-public, and hotel uses are incompatible with these noise levels. Other non-industrial land uses are appropriate only when adequately insulated. In Bloomington, most of the existing land uses that will be exposed to noise levels at or above 75 DNL, including three hotels, also fall within the Federal Runway Protection Zone and will be removed in conjunction with the north/south runway.

Noise impacts at DNL 70-75 are sustained and can routinely interfere with speech and sleep. Residential land uses and most public and quasi-public uses are incompatible with these noise levels. Other uses may require insulation depending on the nature of the use. In Bloomington, much of the central Airport South District including the bulk of the vacant Kelley property, a portion of the Met Center site, 24 single and 92 multi-family dwellings are exposed to this level of noise. It is anticipated that 20 single and 92 multi-family dwellings will be purchased and removed by MAC in conjunction with the completion of the north/south runway.

Noise impacts at DNL 65 to DNL 70 are significant. Residential land uses and most public and quasi-public uses are incompatible with these noise levels and other uses may require insulation depending on the nature of the use. In Bloomington, this area includes hotels, a portion of the Mall of America, office and commercial uses, and 432 single and multi-family dwelling units. It is anticipated that 9 single and 40 multi-family dwellings will be removed and the remainder of the dwellings insulated in conjunction with the north/south runway.

Noise impacts at DNL 60 to DNL 65 are considered moderate. There are 1,251 Bloomington dwellings that will be exposed to this level of aircraft noise in 2005. It is anticipated that MAC will insulate all of these dwellings as a mitigation measure for the north/south runway.

Noise Mitigation Techniques

Strategies for minimizing aircraft noise impacts generally involve, 1) reducing noise at the source, 2) reducing interior noise levels through acoustic insulation, or 3) restricting incompatible land uses from high noise areas. Reducing noise at its source is of primary importance because it can reduce or reconfigure the geographic area subject to adverse noise and because it is usually less expensive than insulation or land use measures. Available techniques include requirements for quieter aircraft, setting time limits on flights, distributing takeoffs and landings among the runways to minimize noise impacts, limiting nighttime runups, and routing flights over noise tolerant land uses or sparsely populated areas when possible.

While reducing noise at the source is the most desirable noise mitigation technique, it cannot solve the entire noise problem. Acoustic insulation and land use programs will continue to be necessary to mitigate noise impacts around the airport. Where extreme incompatibilities exist, there may be a need for appropriate agencies to assist in the redevelopment of the incompatible land use or even to purchase the use outright for removal. In the case of less extreme incompatibilities, retrofitted acoustic insulation can greatly reduce interior noise levels. Future incompatibilities can be mitigated through development restrictions that prohibit new noise sensitive land uses in the highest noise areas and building regulations that require appropriate acoustic insulation in areas exposed to airport noise.

CREDIT: METROPOLITAN AIRPORTS COMMISSION

5.4 Transportation Impacts

Generating over 71,000 vehicle trips per day in 1996, MSP is one of the metropolitan area's largest traffic generators. As air traffic increases in the future, vehicle trips will also increase, placing increased burdens on area transportation corridors such as I-494 which are already congested.

MAC also has plans to double the size of parking ramps at the airport which will reduce the need for private airport parking facilities in Bloomington and encourage redevelopment on these sites in the future.

To avoid further congestion and maintain easy airport access for the region, airport area roadway improvements will be necessary as will alternative forms of transportation. Routes are currently being refined and federal funding sought for a fixed path transitway that would link downtown Minneapolis with the airport, Bloomington's Airport South District, and possible points beyond. A heavily used bus line currently links the airport with Bloomington's Airport South District.

5.5 Intergovernmental Relations

Several agencies are involved in airport-related issues. The *Metropolitan Airports Commission* operates the airport and prepares short and long range airport improvement plans. The *Metropolitan Council* reviews airport improvement plans, prepares aviation policy plans, and reviews the aviation elements of local comprehensive plans. The *Minnesota Department of Transportation* also reviews airport improvement plans in addition to licensing airports and promulgating airport-related regulations. The *Minnesota Pollution Control Agency* monitors noise and air quality levels and enforces state noise and air quality standards. The *Federal Aviation Administration* controls all air traffic and reviews airport improvement plans and federally funded airport projects. The *Metropolitan Aircraft Sound Abatement Council* advises the Metropolitan Airports Commission on noise compatibility issues. *Municipalities* surrounding the airport, including Bloomington, control land use and building regulations for airport-related facilities and noise impacted areas. The City of Bloomington feels it is important to use the principle that MAC should pay for any mitigation and local land use action which may result in a property damage claim if the action is taken by the City in order to protect current or future operation of an airport.

Given the airport's large impact on Bloomington, it is essential that the City closely follow the activities of each of these agencies and participate in airport-related activities through advisory boards and committees.

5.6 Goals, Policy Objectives, and Implementation Actions

Airport Impact Goal 1

Support continued airport improvements to preserve MSP as a first class hub airport while capitalizing on its proximity to Bloomington.

Policy Objective 1.1

Support continued use of MSP as the region's one major passenger and cargo airport.

Policy Objective 1.2

Support improvements to keep MSP operating safely and efficiently.

Policy Objective 1.3

Encourage continued improvements at Flying Cloud Airport for general aviation needs and as a method for "relieving" general aviation traffic from MSP.

Policy Objective 1.4

Encourage prompt implementation of the north/south (35/17) runway both as a means for increasing airport capacity and as a reasonable measure for mitigating noise in cities surrounding the airport.

Policy Objective 1.5

Support the use of the extended crosswind (4/22) runway for heavy aircraft or emergency situations where a long runway is needed and to allow two runway operation and adequate runway length while the south parallel (30L/12R) is being reconstructed.

Policy Objective 1.6

Oppose changing the runway use system to simultaneously use the crosswind (4/22) and north parallel (30R/12L) runways to redistribute aircraft flights and noise.

Policy Objective 1.7

Encourage improved and diverse transportation connections between the airport and Bloomington, including roadway improvements, bus service, and fixed path transit systems.

Airport Impact Goal 2

Reduce and contain the airport's adverse impacts on Bloomington.

Policy Objective 2.1

Support aggressive mitigation of aircraft noise impacts to reduce the airport's nuisance effect on residents around the airport.

Implementation Actions

- Support the use of building codes and other local controls to increase the compatibility of new development with MSP.
- The MAC and FAA should accept responsibility for all costs of implementing runway safety zones, enforcing height restrictions, and mitigating noise impacts. Pursue MAC indemnification for damages caused by City actions to preserve safety zones and avoid navigation obstructions.
- Support strategies to reduce aircraft noise at its source as an efficient method of minimizing aircraft noise impacts.

- Encourage the expansion of residential noise insulation programs to the DNL 60 line.
- Advocate the implementation of runway 4/22 noise mitigation by MAC. If the revised runway use system is implemented, mitigation should include acquisition of all residential parcels identified for acquisition in the City's proposal "Acquisition of 75 Residential Properties in Bloomington's Northeast Noisepoint Neighborhood" submitted to the MAC in January of 1994. If the revised runway use system is not implemented, mitigation should include acoustic insulation of those same identified residential parcels.
- Advocate the implementation of north/south runway noise mitigation by MAC at the same time the north/south runway is constructed.
- Encourage appropriate noise mitigation to proceed in conjunction with all future airport-related changes impacting noise levels.
- The City will evaluate redevelopment strategies for residential areas east of Old Cedar Avenue if there is owner interest expressed through a written petition of over half the property owners on any given block. The petition will be reviewed by the Planning Commission, which will make a redevelopment recommendation to the City Council.
- In conjunction with the residential Time-of-Sale Inspection Program, provide information to a buyer on a property's anticipated aircraft noise exposure level in the same manner that information on zoning and flood zone status is currently provided.

Policy Objective 2.2

Implement land use strategies to comply with federal and state runway related development limitations as expressed in the *Minneapolis-St. Paul International Airport Zoning Ordinance*.

Implementation Actions

- Amend the *Zoning Ordinance* to create a new overlay zoning district that reflects the use and development limitations of the *Minneapolis-St. Paul International Airport Zoning Ordinance*.
- Rezone land within Bloomington that falls within Safety Zone A or Safety Zone B in the *Minneapolis-St. Paul International Airport Zoning Ordinance* to achieve consistency with the *Minneapolis-St. Paul International Airport Zoning Ordinance* and to apply the new overlay zoning district.

Policy Objective 2.3

Support road capacity and transit improvements to lower congestion levels on transportation corridors serving the airport.

Policy Objective 2.4

Continue to participate actively in airport-related advisory boards and committees.

Section 6:
Utilities Element

6.1 Introduction

Utility systems are a necessity for public health, safety, and welfare and play a direct role in physical development and environmental quality. Modern water treatment and distribution, sanitary sewage collection and treatment, surface water management, and gas, electric, and communication services have become so dependable and available as to often be overlooked. Bloomington is currently well served by public and private utilities. For Bloomington to continue to grow and prosper, however, the City must take steps to keep the existing utility infrastructure up-to-date and to ensure the future availability of additional utility capacity.

It is the City of Bloomington's intent to work with public agencies and private utilities to provide high quality, highly dependable utility services while minimizing utility costs and the visual impacts of utility infrastructure through efficient design and operation and coordinated planning.

6.2 Water System

This section summarizes in-depth water system plans, which are included within the Comprehensive Plan by reference. These plans include:

- *Water System Master Plan*, prepared by Black and Veatch, 1998.
- *Public Water Supply Emergency and Conservation Plan*, prepared by the City of Bloomington, 1995.

History

Before 1960, there was no public water system in Bloomington. Users extracted water from private wells. The shallow water table in the eastern portion of Bloomington contributed to a building boom that saw the City's population jump from around 10,000 in 1950 to over 50,000 in 1960. The new, mass-produced homes relied on a well for potable water and a septic tank/cesspool system for waste disposal. In most cases, the well consisted of a length of pipe with a well point attached, driven into the shallow aquifer about twelve to fifteen feet below the surface, not far from the waste disposal systems. Within a few years, wastewater began to seep into the shallow aquifer, causing its water to be unfit for drinking.

After careful study, a referendum was held in 1959 and voters approved the installation of public water and sanitary sewer systems. In the spring of 1960, a rapid construction program was initiated. Approximately 100 miles of water and sanitary sewer piping were installed in the first year. Originally, water for the system was purchased from the City of Minneapolis and pumped during off-peak hours to reservoirs at 82nd Street and Penn Avenue. To diversify its supply, the City constructed four deep wells and a water treatment plant, which went into operation in 1974.

Water Supply

Bloomington's current public water supply consists of two sources: groundwater and surface water.

Groundwater is provided by four deep wells located near Normandale Boulevard and Poplar Bridge Road which draw water from the Prairie du Chien-Jordan aquifer. Water from the wells is pumped directly to a nearby water treatment plant. The well water, high in quality but relatively hard, requires softening. The current firm capacity of the wells is 8.6 million gallons per day (mgd) slightly higher than the current 7 mgd capacity of the water treatment plant.

The surface water portion of the supply, purchased wholesale from the City of Minneapolis, consists of treated, lime-softened water drawn from the Mississippi River. Bloomington's agreement with Minneapolis allows the City to draw up to 30 mgd until the year 2017, at which time the contract is anticipated to be renegotiated.

Water in the distribution system is a blend of these two finished, potable waters. The annual average over the past ten years shows the Bloomington well supply contributing 65 percent of the total demand and the Minneapolis supply contributing the remaining 35 percent. Both supplies are stored and pumped from separate, isolated reservoirs into a common distribution system based upon demand.

In order to meet essential demands, increase reliability, increase flexibility (providing a true dual source of supply), reduce reliance on purchased water from Minneapolis, and gain greater control in meeting water quality goals, the City's *Water System Master Plan* recommends adding wells and treatment capacity to increase the supply of treated groundwater to 14 mgd. This recommended improvement is consistent with the projected needs of the community based on growth in population and employment and would allow the City to meet essential demands (defined as average daily usage on an annual basis) should Bloomington lose the ability to draw water from Minneapolis.

The vast majority of Bloomington's water needs are met from the public supply, although some private wells do exist. Private groundwater use is regulated by the Minnesota Department of Natural Resources. The largest private use of groundwater in Bloomington comes from those industrial users who avoid treated water due to cost or chemical reasons. Private groundwater use raises several issues, such as aquifer recharge, proper metering and billing when discharged into the sanitary sewer system, and impact on surface water bodies when discharged into the storm sewer system.

Water Treatment

Bloomington's water treatment plant, constructed in 1974, softens, clarifies, recarbonates, and filters groundwater prior to distribution. The plant reliably supplies 7 mgd of high-quality, softened water that continues to meet the requirements of the Safe Drinking Water Act. The City's *Water System Master Plan* recommends expanding the water treatment plant at its current location to a capacity of 14 mgd. In addition to a 24-hour a day, fully trained staff of operators, the plant includes a laboratory staffed by two chemists who monitor raw and finished water quality, analyze storm water runoff, and monitor municipal lake and stream water quality. Microbiological and radiological testing is currently performed by a contract laboratory. Expansion of the City laboratory is recommended in conjunction with the water treatment plant expansion.

Lime softening residuals are a major by-product of the City's water treatment process. Lime is used as the principal softening agent to precipitate out calcium and magnesium ions. Disposal of lime softening residuals is an important consideration in the efficient operation of the plant. Although lime softening residuals are inert, their disposal is costly in economic and environmental terms. The by-product is currently transported by truck to the City's seven storage lagoons in the western industrial area, which have two years' storage capacity. At appropriate intervals, the lagoons are excavated and the lime softening residuals are transported to farm fields. There the residuals are incorporated into the earth as a United States Department of Agriculture approved liming material.

Water Distribution System

The water distribution system is currently supplied from two sources: the City's wells and water treatment system and two connections to the Minneapolis distribution system. The water from Bloomington's treatment plant is stored in a 4 million gallon treated water reservoir and pumped to the distribution system. The water from Minneapolis is delivered to two-10 million gallon storage reservoirs located at 82nd Street and Penn Avenue, then pumped to the distribution system on demand.

To achieve the pressure necessary to supply water throughout the city, the distribution system is divided into two pressure zones labeled as the "Normal Zone" and the "High Zone". The High Zone is supplied by pumping from the Normal Zone. In addition to water mains of various sizes, distribution infrastructure in the Normal Zone includes the 1.5 million gallon Valley View Water Tower at 401 E. 90th Street and the 3 million gallon Western Reservoir at 9921 Rich Road. The High Zone includes the 1.5 million gallon Northwest Water Tower at 7201 W. 83rd Street. *Figure 6.1* depicts Bloomington's water distribution system.

As a developed community, Bloomington's water distribution system is essentially complete. Bloomington's *Water System Master Plan* recommends several areas in which the distribution system should be upgraded to address fire flow and pressure deficiencies.

Figure 6.1
11” by 17” map of distribution system and infrastructure

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Water Demand

A water utility must be able to supply water at highly fluctuating levels of demand. Demand levels most important to the design and operation of a water system are average day, maximum day, and maximum hour. **Average day demand** is the annual volume of water supplied divided by the number of days in the year. This number is used for projecting peak demands and for developing probable supply, treatment, and pumping costs and revenue. **Maximum day demand** is the maximum quantity of water used on any day of the year. This number is used to size water supply, treatment, and distribution facilities. The greatest demands on a water system are generally experienced for short periods of time during the maximum demand day. These peak demands are referred to as **maximum hour demands** because they seldom extend over a period of more than a few hours. Pumping and storage requirements are usually determined on the basis of maximum hour demands.

Table 6.1 depicts recent historical water use rates as well as projected future demand. Bloomington's *Water System Master Plan* recommends construction of additional wells and expanded treatment capacity to meet future essential demands and to increase system reliability, flexibility, and overall water quality while optimizing the service life of the water treatment plant.

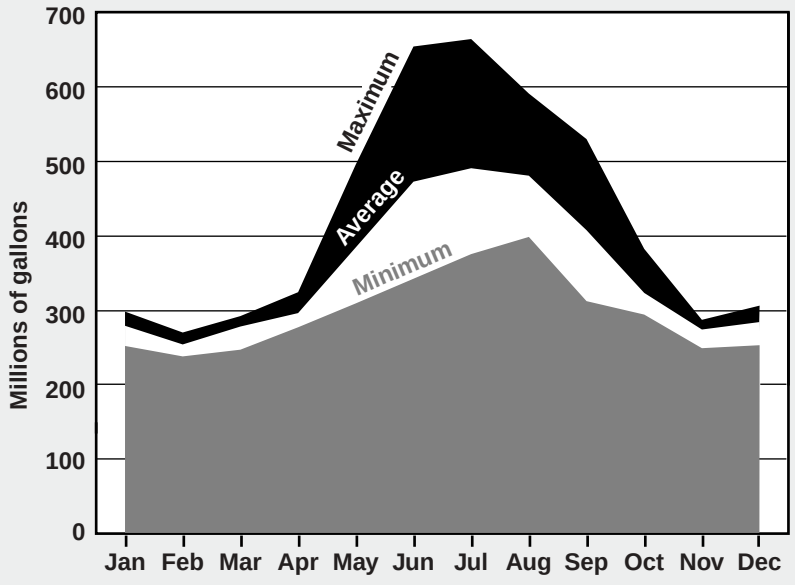
Water systems are typically designed to meet peak period demands. In Minnesota, water usage varies dramatically throughout the year. Peak periods invariably occur during the hotter and drier months of the summer. *Figure 6.2* shows the impact of the seasons on minimum, maximum, and average Bloomington water usage. One way the City attempts to defer or eliminate the need for capital improvements to the water system is to increase local water conservation efforts. Bloomington's *Public Water Supply Emergency and Conservation Plan* identifies several water conservation measures, including: metering; water audit, leak detection, and repair programs; rate structures; regulations for plumbing fixtures; retrofitting programs; local ordinances; educational programs; and pressure reduction. Current measures include public education, metering upgrades, leak detection, and rate structures.

***Table 6.1* Historical and Projected Water Demand**

Year	Average Day (mgd)	Maximum Day (mgd)	Maximum Hour (mgd)
1993	10.24	20.09	38.11
1994	11.21	22.68	43.63
1995	11.68	28.08	44.38
1996	12.48	28.18	44.38
1997	11.95	29.65	48.00
1998	12.18	25.90	N/A
2000	12.57	34.72	59.23
2010	13.55	36.83	62.84
2020	14.00	37.87	64.61

Source: Bloomington Utilities Division (historical data) and Black and Veatch (projections).

***Figure 6.2* Monthly Average Water Consumption, 1989 to 1998**



Source: Bloomington Utilities Division

6.3 Sanitary Sewer System

This section summarizes the City's S*anitary Sewer Policy Plan* (1998, Short Elliott Hendrickson), which is included within the Comprehensive Plan by reference.

History

Before 1960, there was no public sanitary sewer system in Bloomington. Sewage treatment occurred on-site in septic tank cesspool systems. As the population and number of septic systems soared in the 1950s, wastewater began to seep into the shallow aquifer, causing its water to be unfit for drinking. After careful study, a referendum was held in 1959 and voters approved the installation of public water and sanitary sewer systems. In the spring of 1960, a rapid construction program was initiated. In the first year, approximately 100 miles of water and sanitary sewer piping were installed.

Originally, Bloomington's sewage was pumped north through Richfield and Minneapolis and then treated on a contract basis by the Minneapolis-St. Paul Sanitary District. Sewage treatment in the metropolitan area was later taken over by the Metropolitan Waste Control Commission, now referred to as the Metropolitan Council Environmental Services (MCES). MCES owns and operates regional interceptor sewer lines and sewage treatment facilities while the City of Bloomington owns and maintains local sewer lines. The City maintains certain components of the regional interceptors as defined in a maintenance contract with MCES. Bloomington's sewage now flows southeast, under the Minnesota River near T.H. 77 to the Seneca Wastewater Treatment Plant in Eagan. The Seneca Plant, which also serves Burnsville, Eagan, Savage, and small portions of Apple Valley and Lakeville, was built in 1972, then expanded and upgraded in 1992 to a capacity of 34 million gallons per day (mgd). The original interceptor and

sewage lift station are still operational and act as a redundant system to the regional interceptor that flows south to the Seneca Plant.

Collection Network

Almost 100 percent of Bloomington's current population is connected to the sanitary sewer collection system. Once entering the system, sewage flows by virtue of gravity and with the help of 28 lift stations that pump sewage to a higher elevation to keep it flowing. Bloomington's sewer lines range in diameter from six to 48 inches. *Figure 6.3* depicts the location of the sanitary sewer service districts, while *Figure 6.4* depicts sanitary sewer infrastructure.

As a fully developed city, Bloomington's sanitary sewer system is essentially complete. The system is relatively new and is characterized by the latest engineering and construction techniques. Looking forward, major issues concerning the system include making improvements as necessary to accommodate future redevelopment; working with MCES to meet long-term treatment capacity needs; continuing efforts to identify the presence of inflow and infiltration; and performing preventative system maintenance.

Of serious concern for any sanitary sewer system are infiltration, inflow, and blockage. Infiltration is the seepage of groundwater into sewer pipes through cracks or joints. Inflow is the entrance of clear water into the system from a single point such as a sump pump, foundation drain, or sewer access covers. Blockage occurs when pipes are clogged or obstructed by solids or tree roots. Infiltration and inflow increase the volume of sewage, thereby increasing treatment costs and potentially requiring premature infrastructure improvements. Blockage must clearly be avoided for the system to work effectively.

In their management of the sanitary sewer collection network, the City's Public Works Department has initiated many preventative maintenance efforts to proactively avoid infiltration, inflow, and blockage. Efforts that occur on an on-going basis include: pipe cleaning; chemical and mechanical treatment to control tree root intrusion; sewer television inspection; main line repairs, service line repairs, lift station maintenance, and monitoring; changing castings and covers on manholes; and eliminating sump pump connections.

Sewer lines that serve a regional purpose are owned and operated by Metropolitan Council Environmental Services (MCES). As discussed in its *Water*

Figure 6.3 **Sanitary Sewer Districts**

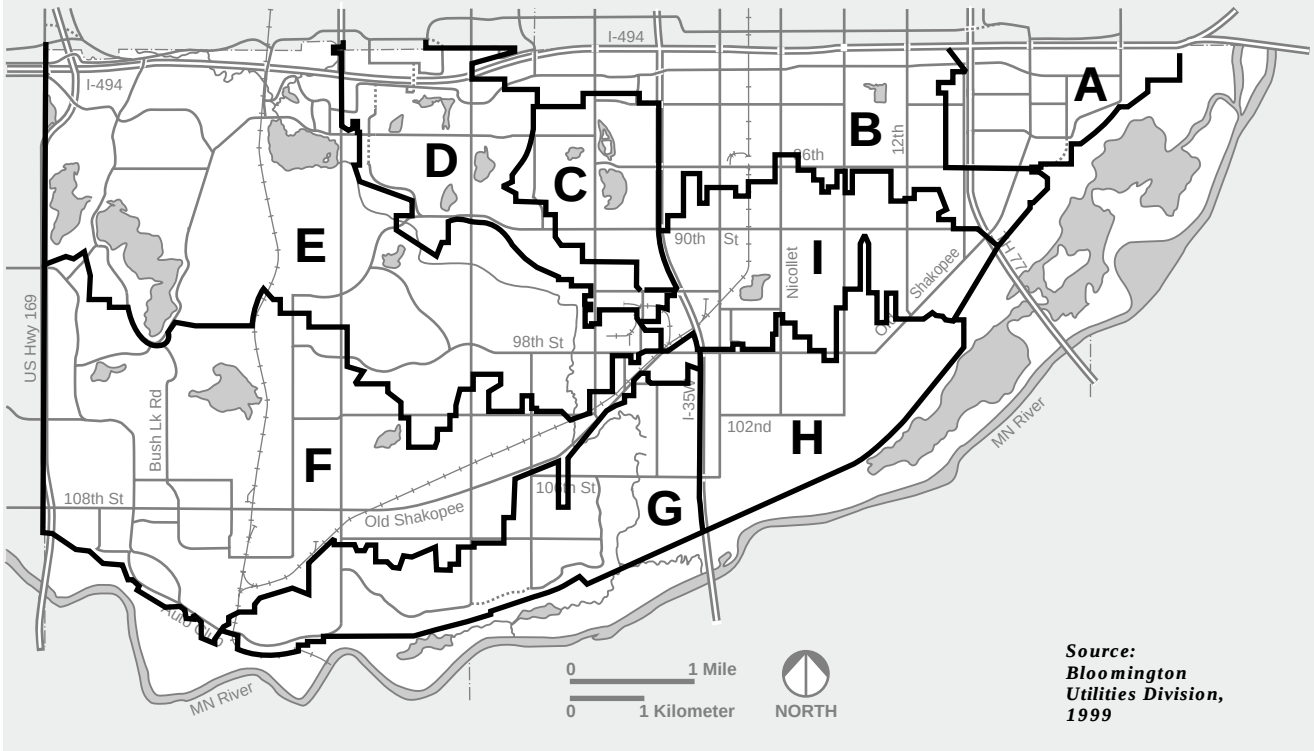


Table 6.2
Current and Projected Average Daily Sanitary Sewer Flow

Year	Residential (mgd)	Commercial/Industrial (mgd)	Average Daily (mgd)
1997	6.55	3.70	10.25
1998	6.61	3.78	10.39
1999	6.64	4.16	10.80
2000	6.65	4.27	10.92
2001	6.66	4.32	10.98
2005	6.70	4.56	11.26
2010	7.09	4.73	11.82
2015	7.15	4.76	11.91
2020	7.19	4.80	11.99

Source: Bloomington Utilities Division.

Resources Management Policy Plan, the Metropolitan Council proposes requiring cities to purchase MCES interceptor lines which it feels no longer have a regional role. This proposal includes one MCES line in Bloomington identified as 3-BN-499. This line serves portions of both Edina and Bloomington and runs across the city from its entrance point near the I-494/Highway 100 intersection to the intersection of 90th Street and 18th Avenue. This interceptor currently meets the criteria for serving a regional role and projected sewage flow increases in Edina will strengthen that role. The City of Bloomington expects the 3-BN-499 line to remain under MCES operation due to its regional role in serving portions of two communities and the fact that it does not meet the criteria for removal from the regional system as outlined in the *Water Resources Management Policy Plan*, (December 1996, p. 45).

Demand

Bloomington currently generates sewage at an average level of over 10.0 million gallons per day (mgd). Commercial/industrial users generate approximately 36% of that flow while residential users generate 64%.

Table 6.2 depicts current and projected future sanitary sewer flows as stated in the City's *Sanitary Sewer Policy Plan*. The projections reflect generation rates of near 75 gallons per day per resident and near 40 gallons per day per employee. Total flow is projected to increase 9.8% between 2000 and 2020. The projections and their methodology is described in greater detail within the *Sanitary Sewer Policy Plan*.

The *Sanitary Sewer Policy Plan* also includes detailed analysis of sewer infrastructure at the subdistrict level to identify improvements needed to accommodate anticipated growth and redevelopment. Based on that analysis, the plan makes several recommendations to maintain the capacity and integrity of the existing system to the year 2020.

Figure 6.4
11” by 17” map of sanitary sewer infrastructure

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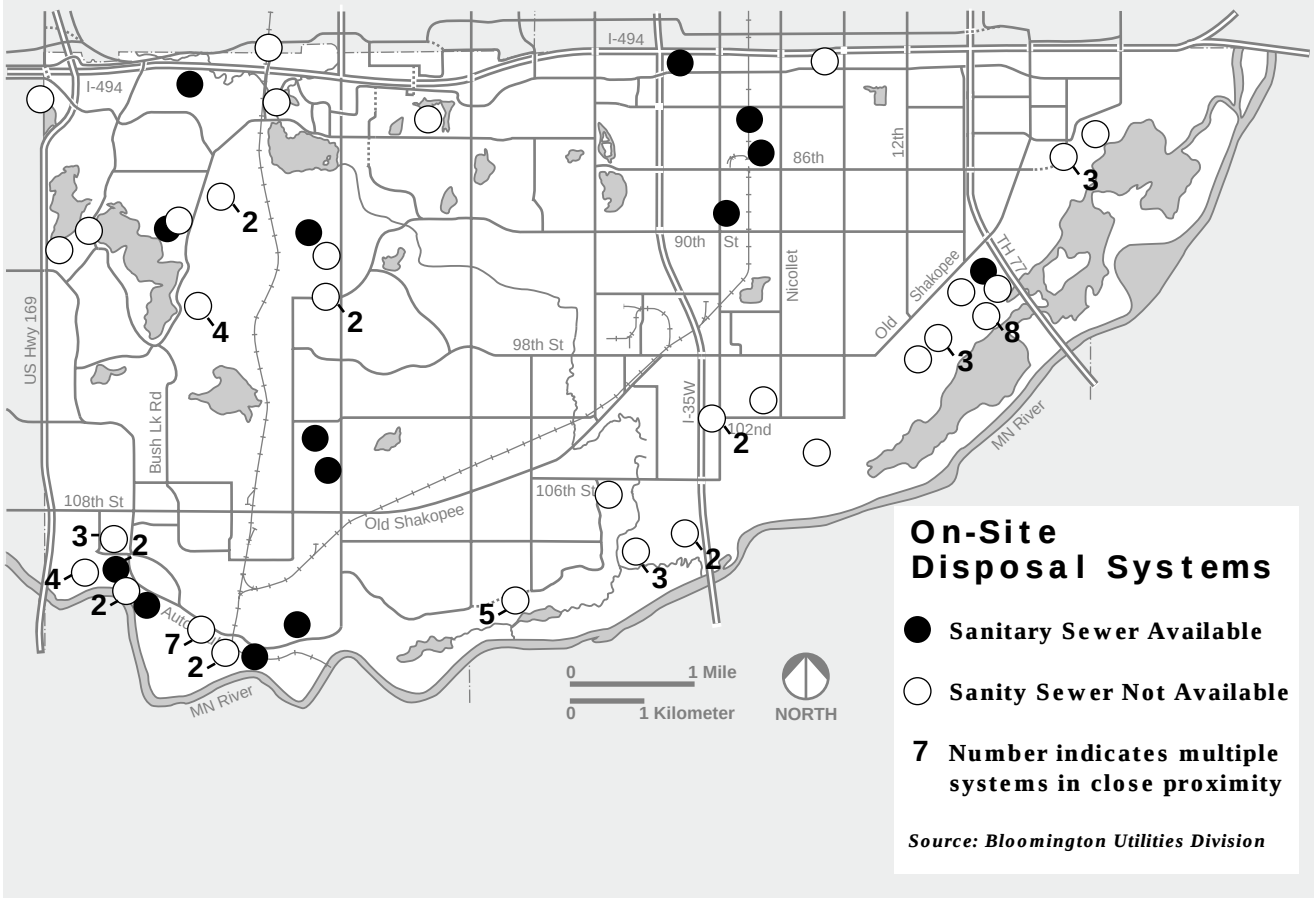
On-Site Disposal Systems

As of 2000, it is estimated that 83 Bloomington properties continue to utilize individual on-site disposal systems. *Figure 6.5* depicts the location of active on-site disposal systems according to whether sanitary sewer access is available. Properties producing domestic or industrial wastes are required by City Code Section 11.26 (c) to connect to the public sewer system within two years of sewer availability. The City regulates the operation of on-site disposal systems in accordance with Minnesota Pollution Control Agency regulations. The Bloomington Environmental Services Division is responsible for coordination and enforcement of on-site disposal system ordinances.

In accordance with Minnesota Rules Chapter 7080, the City will continue to implement a comprehensive management program for on-site disposal systems. The management program requires on-site disposal system owners to have their systems inspected and serviced at least every three years. The program includes a computerized notification and tracking system along with enforcement policies and procedures.

***Figure 6.5* Location of Active On-site Disposal Systems**



6.4 Surface Water Drainage System

This section summarizes the City's *Comprehensive Surface Water Management Plan* (1999, WSB, Inc.) and *Wetland Protection and Management Plan* (1997, City of Bloomington), which are included as part of the Comprehensive Plan by reference.

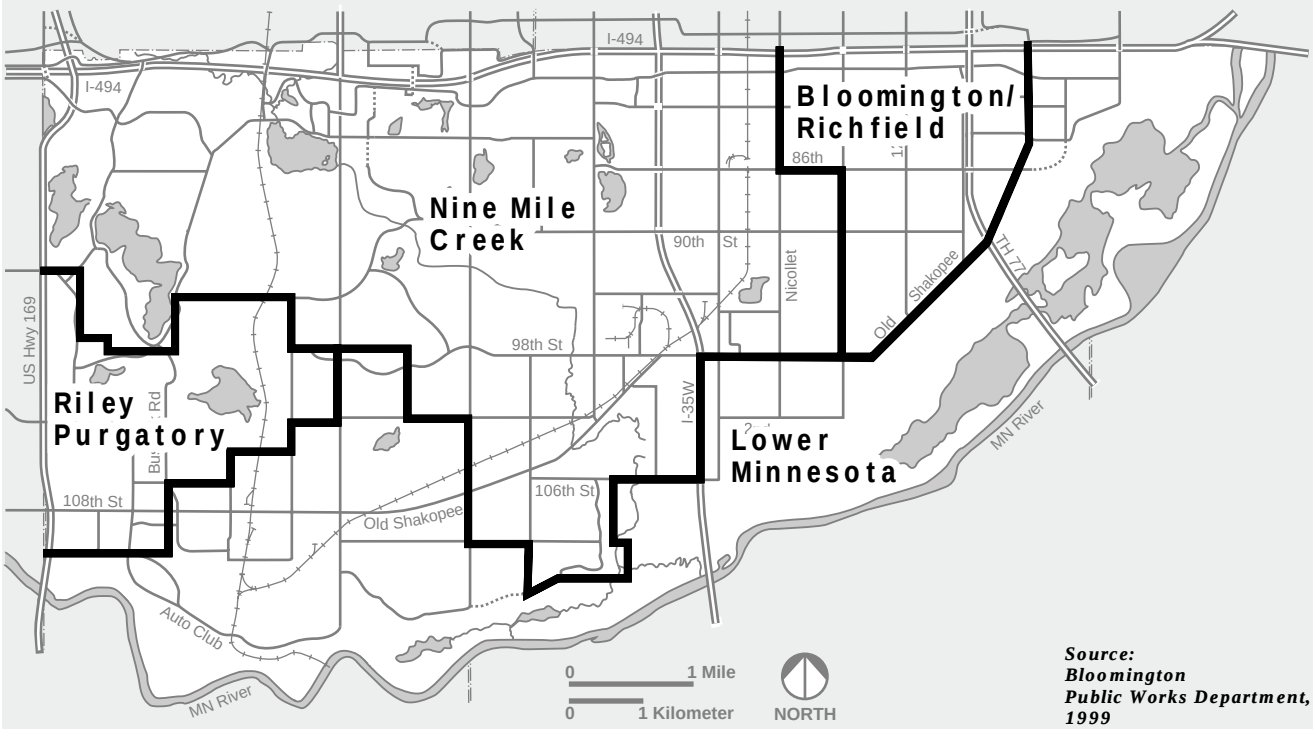
The Need for Management

Urbanization alters the natural drainage patterns of rainfall and melting snow. Increased impervious surface area restricts water from entering the soil, which causes more water to exit a site faster than when it was vegetated. If not properly managed, the cumulative effect of this phenomenon leads to increased flooding potential. Urbanization also adds pollutants to draining water that can have negative effects on our water bodies and the life forms that depend on them.

To reduce flooding potential and improve water quality, the City of Bloomington has constructed a comprehensive surface water management system as development has occurred. This system relies on open drainage ways; drainage pipe; lift station pumps; private and publicly constructed retention and detention ponds; and natural wetlands and water bodies. When possible, the City has used natural drainage ways and wetlands within this system. Using these natural systems benefits the City by lowering costs, improving water quality in lakes and streams, saving valuable wildlife habitat, and retaining the beauty of the natural environment.

Regulatory agencies, as well as the Metropolitan Council, share Bloomington's view on the importance of surface water management. The City follows the Metropolitan Council's *Interim Strategy to Reduce Non-Point Source Pollution* and has adopted the Minnesota Pollution Control Agency's *Protecting Water Quality in Urban Areas* policies commonly known as "*Best Management Practices*" (City Code Section 19.57). The City's *Comprehensive Surface Water Management Plan* and *Wetland Protection and Management Plan* discuss local methods to further joint goals and policies regarding surface water management while assessing problems and proposing corrective actions.

***Figure 6.6* Watershed Districts**



Source: Bloomington Public Works Department, 1999

Watershed Districts

In 1956, state law created and empowered Watershed Districts to work with cities and property owners to improve flood storage capacity and to protect water quality and wetlands. As depicted in *Figure 6.6*, the City of Bloomington shares land area with three Watershed Districts and a Watershed Management Organization. These entities each have their own watershed management plans. Bloomington's surface water plan is in accordance with the requirements of the individual watershed plans for the Bloomington area.

6.5 Private Utility Systems

In addition to water, sanitary sewer, and storm sewer service, development relies upon the availability of private utilities, notably electricity, natural gas, and communications. While local governments do not control the provision of these services, they do have limited regulatory authority over the location and design of the conveyance infrastructure. The City will facilitate the continued development of these private utilities while minimizing associated adverse impacts.

Electricity

Electric service in Bloomington is provided by Northern States Power (NSP) through a complex network of facilities, the most visible of which include major transmission lines along the I-494 corridor and Park Avenue, four substations, and the coal-fired Black Dog power plant directly across the Minnesota River in Burnsville. (*See Figure 6.7.*) Within the next twenty years, several issues related to the existing electric infrastructure are expected to impact Bloomington.

Due to a federal runway protection zone for the planned north/south airport runway at the Minneapolis/St. Paul International Airport, the recently constructed substation at 7900 28th Avenue South will need to be relocated and the major overhead power lines will need to be placed underground. NSP also plans to significantly increase the size of this substation to accommodate anticipated growth in the Airport South District. If the expanded substation is relocated to a visible, on-street site, it will need extensively screened through the use of attractive walls and landscaping. The underground portion of the line should also be extended to encompass the entire Airport South District from 34th Avenue to T.H. 77.

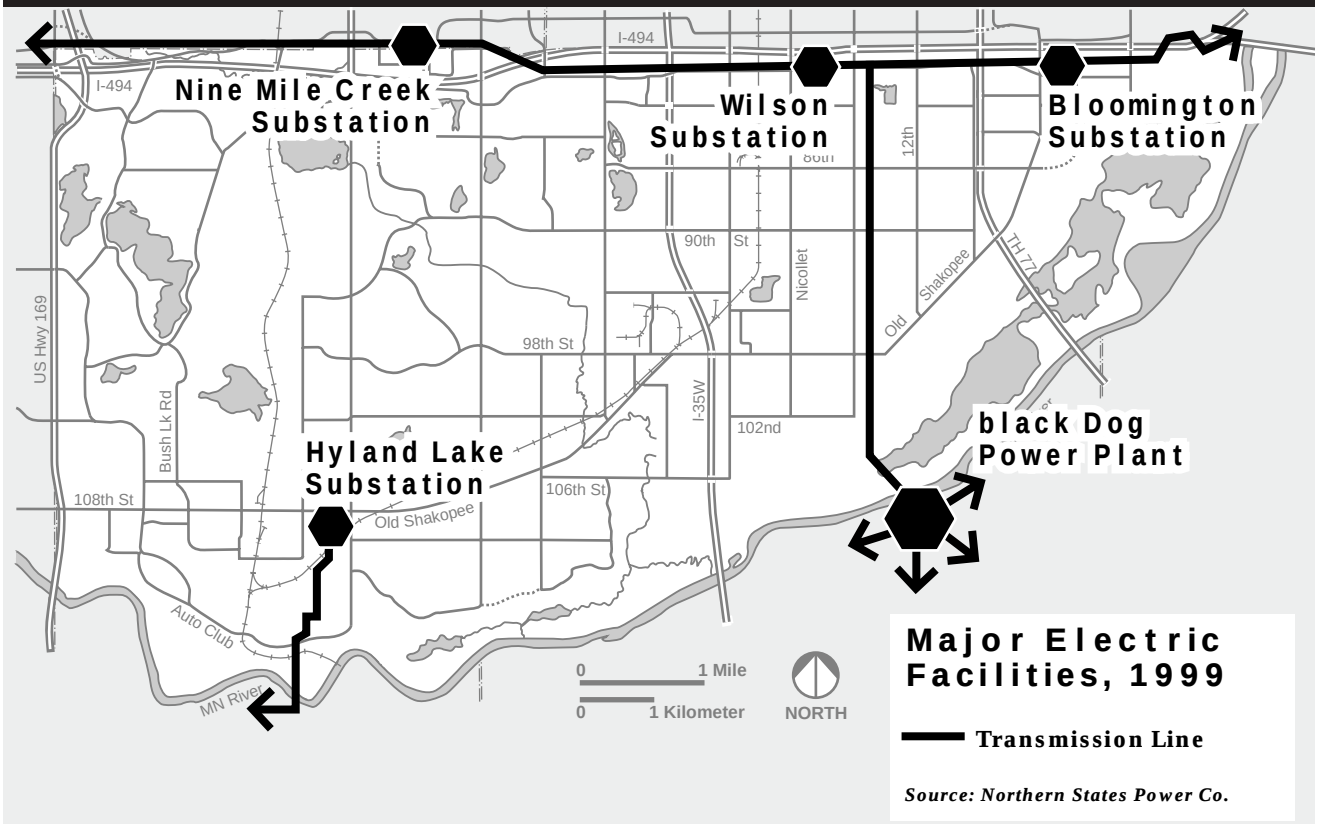
Systemwide, NSP projects demand to increase around 1.5% per year. Due to anticipated commercial redevelopment, forecasts for Bloomington are higher (2% to 2.5% growth in demand per year). To accommodate increased demand in Bloomington and the southeast metropolitan area, NSP plans to rebuild the 79th Street corridor transmission lines east of the Wilson substation at Nicollet Avenue and I-494 as a double circuit which will require the replacement of existing power line support structures along the line with larger, taller structures. NSP also plans to expand and improve the Wilson substation at Nicollet Avenue and 79th Street. Both the transmission line and the Wilson substation are high visibility locations. These projects will need to be completed in a manner that minimizes negative impacts on surrounding property.

The electric industry may potentially be deregulated in the next five to 10 years, allowing several providers to sell electricity through the existing NSP infrastructure. While deregulation will have a major impact on electric providers and offer additional choices to the consumer, it should have little affect on the conveyance infrastructure in Bloomington. Deregulation may affect the future of the coal-fired Black Dog power plant in Burnsville, given its relatively high per unit production costs and the fact that is currently used primarily during peak demand periods.

Natural Gas

Reliant Energy/Minnegasco provides natural gas in Bloomington with 670 miles of distribution lines serving 29,000 metered homes and businesses. Bloomington is also home to high pressure transmission lines that convey natural gas from the south to customers throughout the western metropolitan area.

Figure 6.7



Reliant Energy/Minnegasco currently has no need for new transmission lines within Bloomington and no plans for major changes to the existing lines. Natural gas supply and demand is forecast to remain relatively stable over the next twenty years. While additional users will come on line as the region grows, overall demand should remain static through continued efficiency improvements and insulation methods. The natural gas industry will likely be deregulated in the next five to 10 years, allowing several providers to sell natural gas through the existing Reliant Energy/Minnegasco infrastructure. While deregulation will have a major impact on natural gas providers and offer additional choices to the consumer, it should have little effect on the overall conveyance infrastructure.

Communications

The 1980s and 90s have been a time of great transition for the communications industry. In 1980, the industry was limited primarily to the land line telephone system and over the air television and radio. Since that time, many new technologies have come into fruition, including: cable and satellite television; two-way radio; paging; cellular and PCS phone service; fiber optic cable; and, even, satellite phone service. The rise of the Internet and high speed data transmission technologies has greatly increased the demand for additional communications services. Each of these new technologies requires its own infrastructure, such as communication towers, satellite dishes, or a grid of buried or above-ground cable. In order to increase competition, ensure the provision of desired technologies, or maximize revenues, the Federal government, before auctioning blocks of available frequencies to the highest bidder, has overridden or limited the ability of local jurisdictions to regulate the infrastructure associated with many new communications technologies.

While the provision of advanced communications technology is important to the city's residents and businesses, and vital to the continued economic development of the city, the associated infrastructure can be aesthetically unattractive and present negative impacts to existing services. The City strives to encourage and facilitate the continued development of high quality communications infrastructure while minimizing any associated adverse impacts upon the community or upon the reliability of existing services that are often delivered via the public rights-of-way.

6.6 Goals, Policy Objectives, and Implementation Actions

Utilities Goal 1

Dependably and affordably provide a high quality public water supply.

Policy Objective 1.1

Expand Bloomington's groundwater supply to 14 million gallons per day. An expansion of Bloomington's ground water supply is necessary to ensure that essential demands are met in the event that the Minneapolis supply is lost, to increase system reliability, to increase flexibility by providing a true dual source of supply, to reduce reliance on the Minneapolis supply, and to gain greater control in meeting water quality goals.

Implementation Actions

- Construct new wells to increase the City's supply of groundwater.
- Expand the existing water treatment plant to a capacity of 14 million gallons per day.

Policy Objective 1.2

Protect the quality and quantity of the groundwater supply.

Implementation Actions

- Encourage continued development of a metropolitan groundwater model, as a tool to define aquifers and aquifer recharge areas and as a basis for aquifer protection and management.
- Construct new public water supply wells to meet Minnesota Department of Health wellhead protection requirements.
- Continue active enforcement of the State Well Code through the City's Environmental Services Division.
- Continue to require that unused wells be sealed at the time of property transfer.
- Continue to track data on underground storage tanks and hazardous material spills within the city.

Policy Objective 1.3

Maintain a secondary water supply to meet peak period demands and improve system reliability and flexibility.

Implementation Action

- Continue to implement the existing water purchase contract with the City of Minneapolis.

Policy Objective 1.4

Reduce the need for disposal and storage of water treatment by-products.

Implementation Actions

- Change the water treatment process, when feasible, to reduce the production of lime softening residuals.
- Develop lime softening residuals disposal alternatives including, but not limited to, the possible recycling of lime softening residuals for agricultural and/or industrial uses.

Policy Objective 1.5

Construct improvements to the water distribution system as necessary to meet area demands and to address any fire flow or pressure deficiencies.

Implementation Action

- Improve the water distribution system as recommended in the *Water System Master Plan*.

Policy Objective 1.6

Reduce per capita water demand.

Implementation Action

- Explore water conservation measures outlined in the City's *Public Water Supply and Emergency Conservation Plan* to the extent deemed feasible and beneficial. Conservation measures include: metering; water audit, leak detection, and repair programs; rate structures; regulations for plumbing fixtures; retrofitting programs; local ordinances; educational programs; and pressure reduction.

Utilities Goal 2

Dependably and affordably convey sanitary sewage into the regional treatment system.

Policy Objective 2.1

Construct improvements to the sanitary sewer collection system as necessary to meet the increased demand resulting from continued growth and redevelopment.

Implementation Action

- As warranted and in a cost effective manner, implement improvements to the sanitary sewer collection system that are recommended in the Sanitary Sewer Policy Plan.

Policy Objective 2.2

Maintain an efficient and effective sanitary sewer collection system.

Implementation Actions

- Continue a phased sewer infrastructure replacement program.
- Continue the sanitary sewer preventative maintenance program.

Policy Objective 2.3

Reduce per capita/per employee sanitary sewage generation rates.

Implementation Actions

- Continue proactive efforts to reduce and eliminate infiltration and inflow.
- Implement water conservation measures outlined in the City's *Public Water Supply and Emergency Conservation Plan* to the extent deemed feasible and beneficial.

Policy Objective 2.4

Reduce the number of on-site sewage disposal systems while ensuring that existing on-site systems are properly maintained.

Implementation Actions

- Enforce City ordinances requiring connection to the public sanitary sewer system within two years of availability.
- Limit the establishment of new on-site disposal systems.
- Continue implementation of the City's comprehensive management program for on-site disposal systems.

Policy Objective 2.5

Work with Metropolitan Council Environmental Services (MCES) to ensure coordinated local and regional sanitary sewage conveyance and treatment.

Implementation Actions

- Periodically review and evaluate sewer collection network capacity and treatment capacity in conjunction with MCES to ensure long-term viability of the system.
- Encourage proactive regional capital improvements planning to schedule long-term expansions to treatment facilities as necessary.
- Due to its regional role as defined by the Metropolitan Council's *Water Resources Management Policy Plan* (December 1996, p. 45), request the MCES to remove the regional interceptor sewer line 3-BN-499 from the list of sewer lines to be reconveyed to local government.

Utilities Goal 3

Ensure that the public and private surface water management system is constructed to economically meet community needs as development occurs.

Policy Objective 3.1

Limit the potential for flooding.

Implementation Actions

- Hold new development runoff to pre-development runoff rates.
- Utilize existing natural ponding areas for the impoundment and treatment of surface water runoff, unless such use is not recommended by the *Wetland Protection and Management Plan*.
- Work with property owners to identify and implement economical solutions to minimize damage risks to existing structures in flood prone areas.
- For new structures, require a minimum of two feet of freeboard between the lowest structure opening and the water elevation of the 1% chance event.

Policy Objective 3.2

Maintain or improve the quality of water in area lakes, streams, and rivers.

Implementation Action

- Using the provisions outlined in the *Comprehensive Surface Water Management Plan*, require the pretreatment of storm water runoff to Nationwide Urban Runnoff Program (NURP) recommendations in the design and construction of new, or modifications to existing, storm water conveyance systems.
- Require applicants to receive permits from the appropriate watershed district.
- Conform to the Metropolitan Council's *Interim Strategy to Reduce Nonpoint Source Pollution to all Metropolitan Water Bodies.*
- Continue to enforce the City's *Shore Area Protection Ordinance.*
- Continue implementing a comprehensive street sweeping program.
- Require the inclusion and maintenance of skimmers in new pond outlets while retrofitting skimmers in existing pond outlets where feasible and practical.
- Continue public education efforts on water quality issues. *Some important educational issues include lawn fertilizing, lawn waste management, pet waste disposal, and private parking lot sweeping.*
- Implement the *Wetland Protection and Management Plan*'s Capital Improvement Plan as the Storm Water Utility budget allows.
- Implement a policy regarding the establishment of vegetated buffer zones around wetlands.
- Implement a fertilizer and pesticide management ordinance to restrict the use of chemical lawn treatments with high phosphorous content.
- Implement an invasive and exotic species vegetation control program for city maintained water bodies.

Utilities Goal 4

Work with NSP to accommodate Bloomington's electricity needs while mitigating adverse impacts.

Policy Objective 4.1

Minimize the impact of electric infrastructure on surrounding land uses.

Implementation Actions

- Require new or expanded substations to be extensively screened and landscaped.
- Work towards the replacement of the existing overhead transmission line underground within the Airport South District from 34th Avenue to T.H. 77.
- Require existing local service electric distribution lines be placed underground whenever an adjacent arterial or collector street is reconstructed.
- Require new electric lines to be placed underground, if feasible.

Utilities Goal 5

Work with Reliant Energy/ Minnegasco to accommodate the city's natural gas needs while mitigating adverse impacts.

Policy Objective 5.1

Monitor and review changes in high pressure natural gas transmission lines.

Policy Objective 5.2

Support efforts to conserve natural gas.

Policy Objective 5.3

Require natural gas control valves to be placed underground when technically feasible.

Utilities Goal 6

Encourage and facilitate the continued development of a high quality communications infrastructure while minimizing any associated adverse impacts upon the community or upon the reliability of existing services delivered via the public rights-of-way.

Policy Objective 6.1

Minimize the number of communication towers citywide.

Implementation Actions

- Require antennas to be upon existing towers or structures such as buildings, water towers, or power line support structures when it is technically feasible to do so.
- Require new towers to be designed to accommodate multiple users.

Policy Objective 6.2

Encourage communication towers be designed and located to minimize adverse impacts on the surrounding area.

Implementation Actions

- Use zoning tools to encourage towers to locate first in industrial areas, then in commercial areas, and finally at public and quasi-public uses in residential areas.
- Regulate tower height based on the tower's proximity to residential property.
- Encourage the use of stealth and camouflage techniques to reduce the visual impact of communication towers.

Policy Objective 6.3

Transfer the costs associated with placing private communication infrastructure in the public rights-of-way away from the general taxpayer and onto the provider and user of the service.

Implementation Actions

- Charge appropriate fees to providers placing communication infrastructure in public rights-of-way.
- Encourage coordination and communication between public and private utilities when placing utilities underground to identify collocation opportunities.

Policy Objective 6.4

Recognize federally imposed limits on the regulation of communications infrastructure while working to keep those limits fair and equitable.

Implementation Action

- Lobby the FCC and Congress to retain local zoning control over communications infrastructure.

Policy Objective 6.5

Encourage new communications infrastructure be placed underground when it is technically feasible.

Section 7:
Community Facilities Element

7.1 Introduction

The delivery of public services requires appropriate physical facilities. This element provides future planning direction for Bloomington community facilities used to provide education, recreation, fire protection, and other government services. When well delivered, these services together with housing, transportation, employment, and shopping opportunities improve the quality of life and provide a competitive edge in attracting and retaining residents and businesses. It is Bloomington's intent to provide and promote high quality community facilities to fully meet public service needs.

7.2 Parks, Recreation, and Arts

This section provides an overview and assessment of the City's parks, recreation, and arts resources and makes recommendations to preserve, improve, and enhance these resources in the future. It is Bloomington's intent to provide passive and active recreation and arts opportunities through well balanced parks and facilities.

History

As Bloomington transitioned from a rural to urban community, local government began to create the present public park and open space system through dedication and purchase. Bloomington's first parks, Beaverbrook and Lower Bryant, were dedicated to Bloomington Township in 1946. The Village of Bloomington made its first park purchase in 1954: 28 acres of Moir Park for $60,000. A Park Board was established in 1946, followed by a Park and Recreation Advisory Commission in 1955. The City Subdivision Regulations were amended to require park dedication in 1958.

The 1960s brought successful parks bond referendums and federal grants. In the 1970s, the federal Land and Water Conservation Program (LAWCON) created additional opportunities for park and open space acquisition. LAWCON purchases resulted in acquisition of major park and open space areas including North Corridor Park, Marsh Park, Tierney's Woods and Pond-Dakota Mission Park. Bloomington's park system has been significantly enhanced through metropolitan funding of the Hyland-Bush-Anderson Lakes Regional Park Reserve and federal funding of the Minnesota Valley National Wildlife Refuge.

The character of Bloomington's parks and open spaces reflects surrounding natural features as well as the timing and pattern of surrounding development. With few limiting natural features and a relatively flat landscape, development in the eastern portion of the City occurred very rapidly and in a grid pattern. Correspondingly, there are few passive open space resources (with the exception of the Minnesota River Valley). Park facilities in this area generally focus on active recreation and fit within the grid pattern.

Park and open space areas in central Bloomington primarily follow a similar pattern except that the valley and marshlands of Nine Mile Creek have been largely set aside as park and open spaces. Central Bloomington also provides an accessible location for community wide facilities such as the Bloomington Ice Garden, the National Guard Armory, and Creekside Community Center.

In addition to being more topographically varied, the western portion of Bloomington developed at a slower pace and at a later date, when the City was better equipped to undertake proactive park planning. Park and open space planning was an important part of the *Western Area Plan* in the 1970s and in the *1980 Bloomington Comprehensive Plan*. In addition to playfields and neighborhood parks, the City planned for and then required dedication of many open space corridors to link larger open space areas and facilitate wildlife movement.

Inventory

The Bloomington park and open space system encompasses close to one third of the land area of the City. Park and open space property is an extensive land resource particularly when compared to other cities within the metropolitan area. *Figure 7.1* depicts the location of parks in the City. Each park is assigned a classification based on its role. Classifications are described in *Table 7.1*. *Table 7.2* summarizes the amount of parkland in each classification. A complete park inventory with information on each park is included in the appendix.

Bloomington's parks provide diverse recreational amenities,

Table 7.1 **Park Classifications (continued next page)**

	Playlot
Use:	**Intended for children up to ten years of age. Usually includes play apparatus and turf areas.**
Service Area:	**1/2 Mile radius**
Size:	**1 to 2 Acres**
Location:	**Frequently within neighborhood playgrounds or community parks.**
	Neighborhood Playground
Use:	**Intended to meet primary play needs of 5 to 17 year olds. Usually includes play apparatus and areas for field games, court games and skating.**
Service Area:	**1 Mile radius**
Size:	**5 to 20 Acres**
Location:	**Co-locate with elementary schools and spaced throughout community to serve neighborhoods.**
	Community Park
Use:	**Intended for use by all ages. Usually includes areas of natural or ornamental quality for walking, bicycling, viewing, sitting or picnicking. Often includes playlot.**
Service Area:	**4 to 16 Square miles**
Size:	**20 to 50 Acres**
Location:	**Determined by existing natural features.**
	Playfield
Use:	**Emphasis on facilities for organized and individual sports. Usually includes lighted athletic fields, areas for court games and skating.**
Service Area:	**9 to 16 Square miles**
Size:	**20 to 50 Acres**
Location:	**Determined by existing natural features and good transportation access.**
	Large Urban Park
Use:	**Attractive natural features contrast to urban environment. Caters to nature-oriented outdoor recreation such as picnicking, boating, walking and skiing.**
Service Area:	**Southwest metropolitan area**
Size:	**100+ Acres**
Location:	**Determined by existing natural features.**
	Regional Park
Use:	**Continuous or groupings of open spaces offering facilities/activities determined by natural assets. Recreation development limited to no more than 30 percent of the total acreage; much of park retained in a natural state.**
Service Area:	**Metropolitan area**
Size:	**250+ Acres**
Location:	**Determined by existing natural features.**

Table 7.1 **Park Classifications (continued)**

	Conservation Area
Use:	**Protects natural environment rather than satisfying demand for recreation opportunities or scenic quality. Ensures proper functioning of natural systems, especially hydrologic. While secondary, passive or active recreation uses coexist with primary conservation function.**
Service Area:	**Metropolitan area**
Size:	**250+ Acres and water quality ponding areas**
Location:	**Determined by existing natural features and proximity to water resources.**
	Corridor Park
Use:	**Developed for recreational travel including hiking, bicycling, cross-country skiing or horseback riding. Serves as corridors for wildlife movement.**
Service Area:	**Metropolitan area**
Size:	**Sufficient width to provide maximum use and protection of resource. Sufficient length to serve recreational travel purposes.**
Location:	**Where linear resources such as watercourses or bluff lines occur. Link recreation system components.**
	Special Areas (Historic Parks, Arts Facilities, Indoor Ice Arenas)
Use:	**Preserve and maintain buildings, sites, or objects of historical or archeological significance. Provide for fine arts activities. Indoor ice facilities.**
Service Area:	**Varied**
Size:	**Varied**
Location:	**Where resource occurs.**
	Golf Course
Use:	**Daily fee golf course and associated facilities such as driving ranges, putting greens, and clubhouses.**
Service Area:	**40,000 Population**
Size:	**120 to 180 Acres for 18-hole course**
Location:	**Determined by existing natural features.**

Source: Bloomington Parks and Recreation Division, March 2000

including hiking trails; biking trails; picnic areas and shelters; horseshoe pits; basketball courts; soccer fields; tennis courts; a disc golf course; playground equipment at 53 locations; benches; nature areas; restored prairie planting areas; in-line skating facilities; volleyball courts; a swimming beach; a swimming pool; a wading pool; a bocce ball court; softball and baseball diamonds; wetlands; hockey rinks; and pleasure skating rinks.

[Insert Figure 7.1 – Recreation/Arts Facilities, 11 x 17 fold out map, black and white]

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Special Facilities

The parks and open spaces described in the inventory are enhanced by the following special recreational and cultural facilities, which are maintained and operated by the City of Bloomington.

Golf Courses

The City of Bloomington maintains and operates two public golf courses: Dwan and Hyland Greens. Dwan Golf Course is an executive length, par 68 golf course. Hyland Greens Golf Course consists of a long par 3 course, a "pitch and putt" par 3 course, and a 12-station practice range.

Bloomington Ice Garden

The Bloomington Ice Garden currently meets the community's needs for indoor skating venues except during the most sought-after prime hours. The existing facilities are in need of some extensive capital replacement, specifically the roofs on Rinks 1 and 2 and the rink and freezing system in Rink 1. Additional indoor skating facilities should be considered only when the debt on the existing facilities is nearly retired.

Bloomington Arts Center

The Bloomington Arts Center, at Penn Avenue and West Old Shakopee Road, is occupied by the Bloomington Fine Arts Council. The Bloomington Fine Arts Council receives operating support from the City. The Arts Center provides a limited physical space for basic arts activities including some art classes, small meetings and display.

Bloomington History Center

The Bloomington History Center is sited adjacent to the Bloomington Arts Center at the intersection of Penn Avenue and West Old Shakopee Road. The actual building, which was moved to its present location in 1924, was the original Bloomington Town Hall. The building serves as a depository for historic artifacts, photos and documents and provides limited meeting space.

Table 7.2 Park Classification Summary

Classification	Quantity	Acres
Playlot	17	25.4
Neighborhood Playground	28	255.5
Community Park	7	228.1
Playfield	3	110.4
Large Urban Park	2	269.7
Regional Park	3	6,870.8
Corridor Park	1	15.6
Conservation Area	30	969.4
Special Area	4	29.3
Golf Course	2	152.8
Total	97	8,927.0

Source: Bloomington Parks and Recreation Division, March 2000

Pond-Dakota Mission Park

Pond-Dakota Mission Park was acquired with federal LAWCON funds in the late 1970s. The park includes the Gideon Pond house and farm, which is notable for its historic and architectural attributes. The Gideon Pond house, initially constructed in 1854, is on the National Register of Historic Places.

Major Regional Public Park and Open Space Facilities

The Bloomington park and open space system is fortunate to have two major regional facilities with unique physical and natural characteristics. These facilities are the Minnesota Valley National Wildlife Refuge and the Hyland-Bush-Anderson Regional Park Reserve. As large park and open space areas, the Minnesota Valley National Wildlife Refuge and the Hyland-Bush-Anderson Regional Park Reserve provide a wide variety of recreational opportunities within a diverse natural environment.

Minnesota Valley National Wildlife Refuge

The Minnesota Valley National Wildlife Refuge was established by Congressional act in 1976 to preserve the Minnesota River valley's natural resources, develop recreational opportunities, and to provide a wildlife interpretation and education center. The Refuge boundaries extend from the northeast boundary of Bloomington south and west along the Minnesota River valley to Louisville Swamp near the city of Carver.

The Refuge within the City extends the entire length of the Minnesota River valley between the river and the 722 foot elevation. The U.S. Fish and Wildlife Service owns and maintains a significant portion of this refuge, specifically the Long Meadow Lake refuge unit and the Bloomington Ferry refuge unit. The Long Meadow Lake unit

includes the river bottoms area from the northeast City boundary to I-35W and the Bloomington Ferry unit includes the river bottoms area from the Canadian Pacific Railroad right of way (south of Auto Club Road) west to the City boundary. The refuge area between the Long Meadow unit and the Bloomington Ferry unit is the Bloomington Open Space unit, owned and maintained by the City of Bloomington.

The wildlife refuge in Bloomington constitutes a regional and large corridor park. It is designated for conservation uses on the City's land use guide plan and serves as major habitat for resident and migratory wildlife. Included within the refuge is the proposed Minnesota Valley State Trail alignment that will connect refuge units. The visitor center and refuge headquarters is located at 3815 East 80th Street in Bloomington.

Hyland-Bush-Anderson Lakes Regional Park Reserve

The 2,611 acre Hyland-Bush-Anderson Regional Park Reserve is a part of the metropolitan parks and open space system. This regional park reserve consists of seven individual park units: Hyland Lake, Bush Lake, Anderson Lakes, Tierney's Woods, North Corridor, South Corridor, and Normandale Lake. Six of the park units are located entirely within the city of Bloomington and the seventh (Anderson Lakes) is split between Bloomington and Eden Prairie. The City of Bloomington and the Suburban Hennepin Regional Park District are joint implementing agencies for the Regional Park Reserve as they each own and operate several of the individual park units.

Bush Lake, Tierney's Woods, North Corridor, South Corridor and Normandale Lake park units are owned by the City of Bloomington. Hyland Lake and Anderson Lakes park units are owned and operated by the Suburban Hennepin Regional Park District. The Hyland Lake park unit is the largest of the park units that comprise the Hyland-Bush-Anderson Regional Park Reserve with 1,060 acres or 41% of the total area.

Hyland-Bush-Anderson Regional Park Reserve provides a broad spectrum of recreational opportunities and outstanding facilities that were developed by both the City of Bloomington and the Suburban Hennepin Regional Park District. Most notable are the picnicking and beach facilities at Bush Lake Park, the Hyland Hills Ski Area, 70 meter ski jump, and the Richardson Nature Center.

Recreation and Arts Programming

The City of Bloomington provides over 50 different recreation and arts programs on an annual or seasonal basis. These programs are summarized in *Table 7.3*.

Recreation and arts programming in Bloomington is supported by community arts and recreation organizations that provide a broad array of programs to meet community needs and interests in arts, cultural activities, and sports for various age groups and populations within the city. The City of Bloomington has been successful in working cooperatively and in partnership with community arts and recreation organizations.

Support of arts programming dates back to 1963 when the Parks and Recreation Division promoted the establishment of the Bloomington Symphony Orchestra through financial support from the City Council. Fine arts programming has expanded significantly with the growth of community arts organizations. Cultural, arts, and leisure activities are supported by community groups such as the Bloomington Fine Arts Council members (Angelica Cantanti, Bloomington Art Center, Bloomington Symphony Orchestra, Bloomington Medalist Concert Band, Continental Ballet Company, Bloomington Civic Theater, Normandale Choral Society, and NOTE-able Singers); the Bloomington Garden Club; the Bloomington Swirlers; the Bloomington Historical Society; and the Gideon Pond Heritage Society.

Recreation and sports programming supported by community recreation organizations offer numerous programs for adults and youth in Bloomington. The Bloomington Athletic Association (BAA) offers youth baseball, basketball, floor hockey, football, golf, ice hockey, soccer, softball, volleyball, and wrestling. Other organized athletic groups include the Bloomington Amateur Hockey Association (BAHA), Barracuda Aquatics Club, Bloomington Adult Sports Association (BASA), Bloomington Traveling Baseball Association, Broomball, Classic League, Fall Ball, Bloomington Figure Skating Club, Girls' Fast Pitch, Horseshoe Club, Legion Baseball, Legion Gun Safety, North Star Diving, Bloomington Junior Soccer Club (BJSC), Town Team Baseball, Southdale YMCA, and Born Again Jocks (BAJ).

Table 7.3 **City Recreation and Arts Programs**

Program	Season			
	SP	S	F	W
Adaptive Recreation and Learning Exchange (AR&LE)				
Adult Drop-in Center	■	■	■	■
Adult Softball		■		
Bowling			■	■
Happenings I	■	■	■	■
Integrated Softball		■		
Teen Explorers	■	■	■	■
Travel Club	■		■	■
Youth Softball		■		
Adopt-A-Park	■	■	■	
Arts in the Parks		■		
Basketball League				
Men			■	■
Women			■	■
Bloomington Historical Museum	Mar	■		Dec
Bloomington Loves Its Kids				■
Bloomington Jazz Festival		■		
Canoe Rack Rentals	May 1	■		Oct 31
Day Camp				
Environmental		■		
History		■		
KOTA		■		
Discovery		■		
Football, Fall			■	
Galaxy Youth Center	■	■	■	■
Garden Plots	May 1	■	Oct 15	
Gideon Pond Open House and Special Events	■	■	■	
Halloween Party			■	
Lifeguard Training		■		
Parks Garden Club	■	■	■	

Program	Season			
	SP	S	F	W
Public Swimming				
Bush Lake		■		
Valley View Pool		■		
River Rendezvous			■	
Sand Castles		■		
Shape Up Challenge	■			
Skating Rinks				■
Snorkeling Lessons		■		
Softball				
Co-Rec.	■	■	■	
Men	■	■	■	
Women	■	■		
Summer Fete		Jul 3		
Summer Spectrum		■		
Supervised Summer Playgrounds		■		
Swim Lessons				
Bush Lake		■		
Valley View Pool		■		
Talent Show		■		
Tennis				
Ladder, Men's Doubles		■		
Ladder, Men's Singles		■		
Ladder, Women's Doubles		■		
Ladder, Women's Singles		■		
Lessons, Adult	■	■	■	
Senior		■		
Volleyball				
Co-Rec.			■	■
Daytime	■		■	■
League, Women			■	■
Sand		■	■	■

Source: Bloomington Parks and Recreation Division, March 2000

Future Directions in Parks, Recreation, and Arts

The City will continue to provide quality parks, recreation, and arts opportunities by building upon the solid foundation of existing facilities and programs and by being responsive to the changing needs of the community. Future park planning efforts will strive to:

- develop new facilities based on a comprehensive parks, recreation, and arts planning process;
- provide facilities that are accessible on a city, neighborhood, and individual level;
- maintain and enhance parks, recreation, and arts facilities as an aspect of community reinvestment;
- facilitate public awareness of parks and open space facilities as safe places for recreation and enjoyment;
- maintain a range of recreation and arts programs responsive to changing community needs; and,
- ensure continued cooperation between the City, other governmental agencies, and community recreation and arts organizations.

Parks and Recreation Division staff will complete an extensive and inclusive revision of the *1973 City Park Plan* during the years 2000 and 2001. Revising and updating the *City Park Plan* through careful research and evaluation will enable the Parks and Recreation Division to effectively plan for the future of parks, recreation, and arts in Bloomington. This section of the comprehensive plan provides an overall framework and guiding policies for the more detailed and site-specific discussion and recommendations to be included in the updated park plan.

7.3 Schools

Quality educational facilities are an essential component of a prosperous, desirable community. Bloomington is home to many learning facilities including Independent School District #271, Normandale Community College, Northwestern Health Sciences University, and several private schools and training centers. The City will work cooperatively with education providers to ensure that Bloomington's schools successfully meet future resident and business needs.

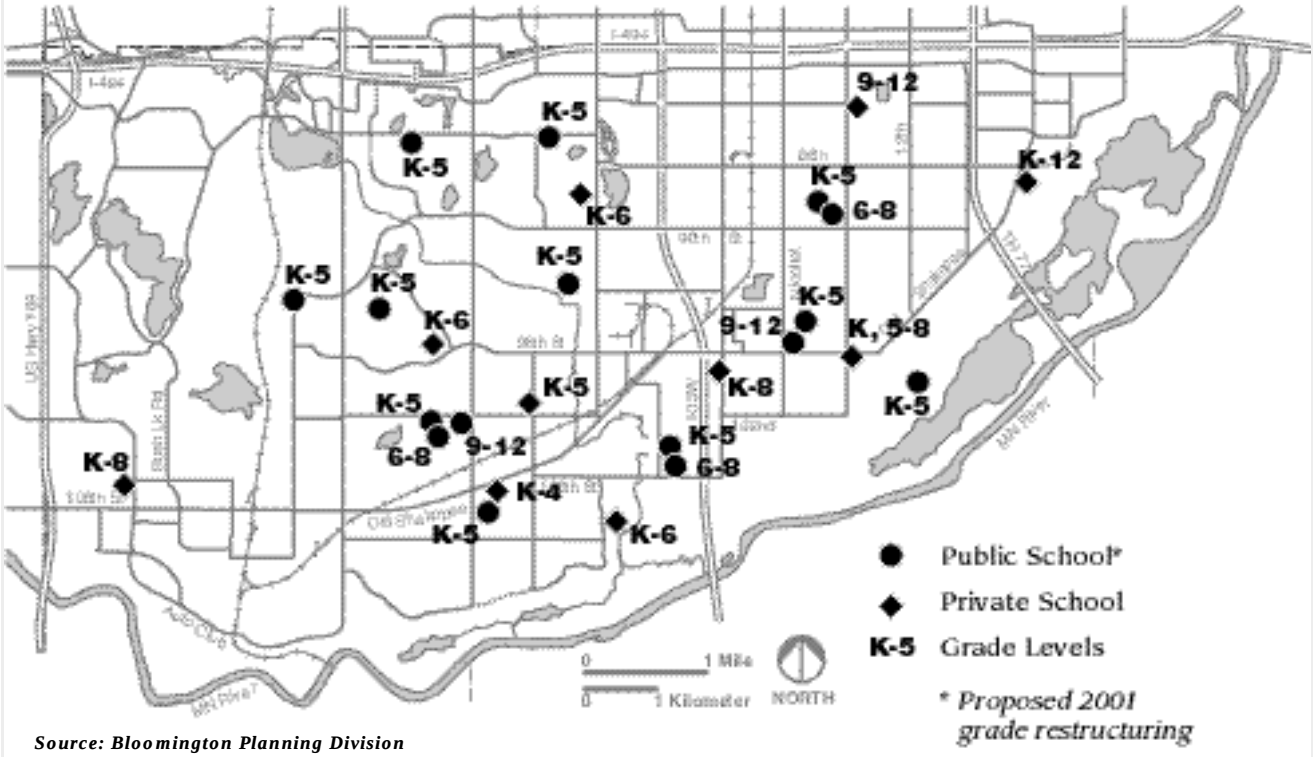
History

The majority of Bloomington lies within Bloomington Independent School District 271, commonly referred to as the Bloomington School District. Small portions of northwest Bloomington lie within Eden Prairie School District 272 and Edina School District 273. District 271, a unit of government separate from the City of Bloomington, operates all public Bloomington kindergarten through grade 12 schools and the community education program.

Public school enrollment skyrocketed in the 1960s reaching a peak of 25,000 students, 28 schools, and 2,000 staff members in 1969. Since that time, family sizes have decreased and many of the homes purchased by child-rich families in the 1960s are now owned by empty nesters. Enrollment fell sharply until it stabilized in the late 1980s. In 2000, the School District has around 11,000 students, 17 schools, and 1,500 staff.

The rapid decline in enrollment resulted in the closure and sale of several schools. These schools have been successfully redeveloped or converted to other uses, including private schools, a community center, office building, and church. The fact that enrollment began dropping as western Bloomington was being developed led to an inefficient distribution of schools. There are no public schools west of the Hyland Park Reserve and only one public school west of Normandale Boulevard, a fact that leads to longer distance busing of children. The location of public and private K-12 schools in Bloomington is depicted in *Figure 7.2*.

Figure 7.2 **Public and Private Schools, K - 12**



Source: Bloomington Planning Division

Table 7.4 **Bloomington Public School K -12 Enrollment History and Projections**

School Year	Enrollment
1995-96	11,415
1996-97	11,298
1997-98	11,143
1998-99	11,094
1999-00	10,921
2000-01	10,706
2001-02	10,376
2002-03	10,108
2003-04	9,788
2004-05	9,423

Source: Bloomington School District, Enrollment Report, October 1999

Challenges

The School District forecasts a 12% decrease in K-12 enrollment over the next five years, from 10,706 in the 2000-2001 school year to 9,423 in the 2004-2005 school year. A similar percentage decrease is anticipated statewide for the same period. No additional Bloomington school closures are anticipated. Rather, the declining enrollment will allow some restructuring of classroom use and of average classroom sizes. Community education enrollment has been increasing, with courses serving around 40,000 students in 1999. Historic and forecast K-12 enrollment levels are depicted in *Table 7.4*.

Schools across the country are experiencing changing facilities needs. The need for computers, media centers, new special education, community education, and athletic programs among other factors requires space and infrastructure not needed in 1960s era schools. In response to these changing needs, Bloomington voters approved a $107 million bond referendum in May of 1999 to fund facility improvements. Changes and updates are proposed for all 17 Bloomington schools. The School District is also redesigning its instructional programs and reorganizing its grade level structure. By 2001, the District will offer grades K-5 in 11 elementary schools, grades 6-8 in 3 middle schools, and grades 9-12 in 2 high schools.

To reduce present costs and better control future costs, the School District purchased and began operating its own fleet of buses in 1999. A supporting bus maintenance and storage facility was acquired at 8801 Lyndale Ave. S.

7.4 Public Buildings

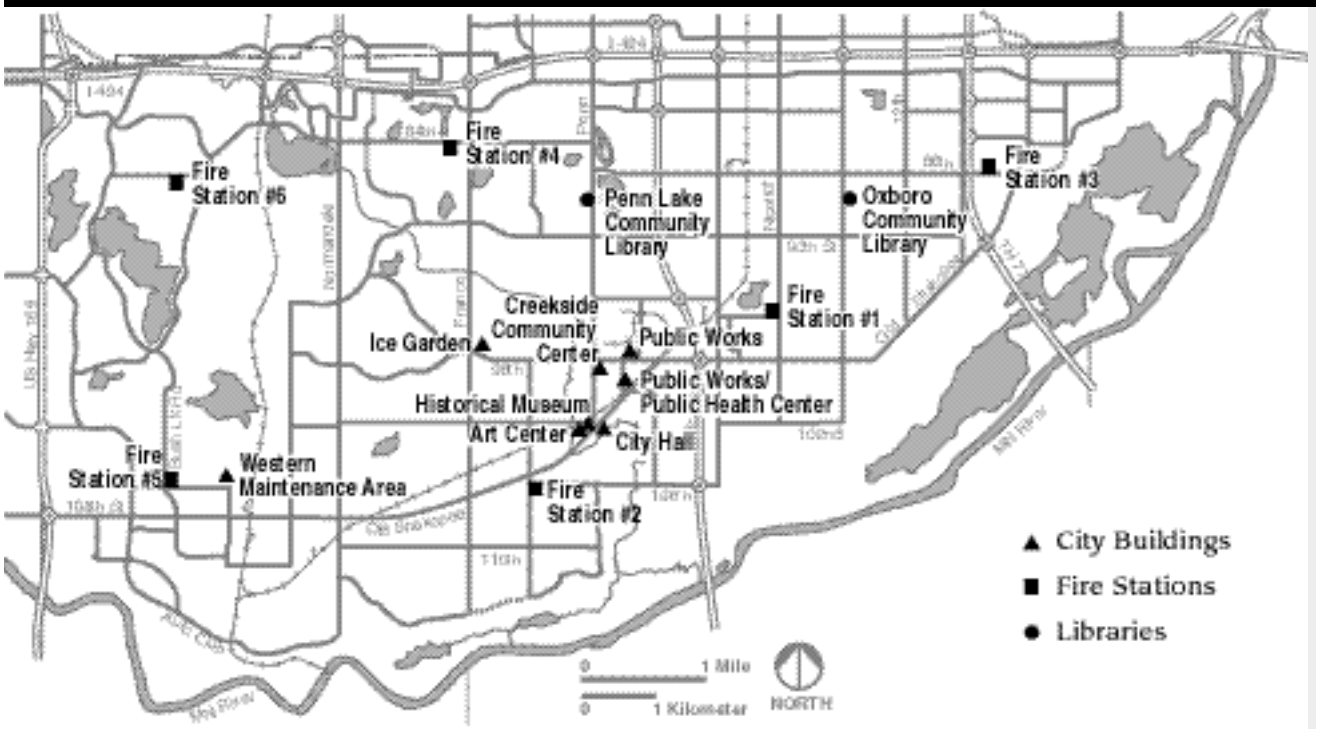
In addition to human resources, the provision of public services requires physical resources such as libraries, fire stations, offices, and community centers. It is Bloomington's intent to provide high quality; long-lasting public buildings that support the efficient and economical provision of desired services.

At the center of public service provision is City Hall. The present City Hall at 2215 West Old Shakopee Road was built in 1964, expanded in 1972, and dedicated with the motto "built from savings, dedicated to progress." Thirty-six years later, City Hall is undersized and ill equipped to meet the service needs of a much larger city. In 1999, the City Council appointed a 14-member citizen task force to study City police, office, and vehicle storage needs. The task force recommended constructing a new City Hall, police facility, and vehicle storage facility with a new dedication motto, "built from savings, dedicated to service".

Bloomington's senior citizen services are centered in the heavily used Creekside Community Center, 9801 Penn Avenue S. Creekside is a former elementary school constructed in 1960 that the City acquired from the School District for $500,000 in 1975. In addition to meeting room rentals and senior citizen programs, the center is also utilized for Human Services programs, noon and evening meal services, nutrition programs, and serves as offices for eight human service agencies. With a rapidly growing senior population and increasing demand for all-purpose facilities, the City will find it difficult to meet future service needs within the existing Creekside facility. Constructing a larger, more comprehensive community center has been discussed for years. The discussion has been fueled in part by the City's lack of indoor recreational facilities, facilities which have become common in newer suburban communities. Clearly, there is a strong need for such a facility and its funding, role, and location will be the subject of future study.

Fire protection service is delivered from the City's six fire stations. These stations are located throughout the community to pro-

Figure 7.3 **Public Buildings**



Source: Bloomington Planning Division

tect life, safety, and property. Bloomington's fire protection service is provided by a 150-member volunteer department of highly trained firefighters. The City holds an ISO Class III insurance rating, a reflection of excellent service that keeps insurance rates low.

Keeping the City's fire fighters at the highest performance levels requires extensive training at specialized facilities. The City currently maintains a fire training facility at 600 West 95th Street in an area proposed for redevelopment. To construct a more comprehensive fire and police training facility, several area public safety agencies, including the City of Bloomington, have teamed up to propose a new, joint facility. Construction of this facility is on hold pending state funding decisions.

Given high levels of anticipated commercial redevelopment, most notably in the Airport South District, fire station facilities and equipment should be periodically re-evaluated to ensure excellent fire protection service.

Bloomington is home to two libraries, Penn Lake Community Library at 8800 Penn Avenue S. and Oxboro Community Library at 8801 Portland Avenue S. Hennepin County owns and operates both facilities. More extensive library services are provided nearby in Edina at the Southdale Regional Library, 7001 York Avenue S.

Figure 7.3 depicts the location of public buildings in Bloomington.

7.5 Goals, Policy Objectives, Implementation Actions

Community Facilities Goal 1

Provide accessible park, recreation, and arts facilities and programs to serve the needs of Bloomington residents.

Policy Objective 1.1

Meet resident needs and desires for leisure time activities through appropriate facilities and programs.

Implementation Actions

- Explore the development of additional parks, arts, and recreation facilities as an aspect of the comprehensive parks, recreation, and arts planning process.
- Develop innovative parks, arts, and recreation facilities and programs.
- Enhance programming and facilities at Dakota-Pond Mission Park. Increase interpretive programming and fund capital improvements (e.g. interpretive center/barn).
- Develop level of service (LOS) indices to identify specific facility needs on the neighborhood or area level.
- Develop a community recreational profile to track demographic changes in order to modify programs and facilities to meet population needs.
- Maintain adequate funding levels for a range of parks, recreation, and arts programming opportunities.
- Establish a parks, recreation, and arts capital improvement evaluation process to determine project priorities.
- Establish alternative funding mechanisms to supplement traditional funding sources for park improvements, acquisition, recreation programs, and maintenance.

Policy Objective 1.2

Develop a comprehensive parks, recreation, and arts planning process that allows the City to be proactive in the development of facilities and programs to meet changing community needs.

Implementation Actions

- Revise the City *Parks, Arts, and Recreation Master Plan* by 2002 and then revise/update it at least every fifteen years.
- Create a computerized database to better manage the park system.
- Map the parks using GIS to identify and locate the various amenities and features in the parks.
- Develop computerized park historical files identifying the various park improvements made and to address future capital improvement projects.

Policy Objective 1.3

Involve and inform the public on parks, recreation, and arts issues.

Implementation Actions

- Expand use of the Internet to share information, respond to resident comments, register for programs, and reserve facilities.
- Expand cable television programming for parks, recreation, and arts items.
- List the benefits of Parks and Recreation services and the positive impact they have on Bloomington.
- Include the residents in the planning of parks, recreation, and arts facilities and programs through solicitation of public input (e.g. public meetings, surveys, evaluations, feedback, task forces, etc.).
- Address resident concerns in a timely manner.
- Improve utilization of volunteers and develop a comprehensive volunteer recognition program.

Policy Objective 1.4

Continue to support cooperative relationships with other governmental agencies and community recreation and arts organizations to enhance and improve the Bloomington parks, recreation and arts facilities and programs.

Implementation Actions

- Work closely with the Suburban Hennepin Regional Park District, the State Department of Natural Resources, the Metropolitan Council, the Legislative Commission on Minnesota Resources, the U.S. Fish and Wildlife Service, and other agencies in the improvement of regional recreation facilities.
- Negotiate agreements with the Bloomington School District to maintain continued public use of recreation facilities after schools are closed.
- Explore partnerships with other service providers for parks, recreation, and arts services and facilities (e.g. YMCA, School District, youth athletic associations, Lion's Club, community service organizations, neighborhood groups, etc.) Partnerships can be for programming, fund-raising for park facilities, etc.

Policy Objective 1.5

Provide park facilities and amenities that meet or exceed standards set through the Americans with Disabilities Act (ADA).

Implementation Actions

- Make reasonable accommodations for individuals with special needs except where an undue burden exists (i.e. some facilities may not be accessible due to extreme topography and the excessive cost to make the facilities ADA compliant).
- Identify barriers to participation or use of facilities and take steps to reduce or eliminate these barriers.
- Provide specialized recreation facilities and programs for the elderly, handicapped, and other people with special needs.
- Implement the *Accessibility Evaluation Transition Plan*.

Policy Objective 1.6

Develop comprehensive facilities to meet the visual and performing arts programming needs of the community.

Implementation Actions

- Take advantage of facilities already existing in the community for arts programming (schools, city, etc.).
- Consider construction of a visual and performing center for the arts.
- Construct the Normandale Lake Bandshell and Park Shelter as a venue for Bloomington arts in the regional park system.

Community Facilities Goal 2

Work cooperatively with education providers to ensure high quality, safe learning environments responsive to the needs of local residents and businesses.

Policy Objective 2.1

Coordinate City and school planning efforts to cooperate on joint objectives.

Implementation Actions

- Establish regular joint meetings between the City Council and School Board.
- Coordinate planning on multi-use community center facilities and adult educational programming to ensure City and School facilities and programs complement one another and to avoid unnecessary duplication of services.
- Coordinate planning on community/school bicycle and pedestrian linkages.
- Include School District in citywide traffic demand management discussions.
- Cooperate with the School District to continue to provide drug abstinence education and youth activity programming.
- Coordinate Bloomington promotional strategies and marketing efforts with the School District.
- Continue to provide Police Department liaison services to public middle and high schools.
- Continue joint school/police emergency response training and simulations.
- Encourage a continued closed campus environment for all schools.

Community Facilities Goal 3

Support the efficient and economical provision of public services with high quality, long-lasting public buildings.

Policy Objective 3.1

Develop new facilities to meet community needs.

Implementation Actions

- Construct a new City Hall, police station, and vehicle storage facilities as recommended by the Facilities Task Force in 1999.
- Continue to study the funding, role, and location of a new community center.
- In conjunction with other area public safety agencies, pursue development of a joint, comprehensive fire and police training facility.
- Periodically review fire station facilities and equipment for adequacy as redevelopment occurs.

Section 8:
Environmental Protection

The City of Bloomington is strongly committed to environmental protection. Large areas of the city have been set aside as conservation and natural areas, including the entire length of Bloomington's Minnesota River Valley and significant wetland and woodland areas along Nine Mile Creek. As residential development occurred, the City also took steps to preserve numerous natural corridors to link larger natural areas and facilitate wildlife movement.

To serve as a guide to the wise use of land, water, and natural resources; to establish criteria for the protection and enhancement of environmental quality; and to foster understanding and enjoyment of the natural environment, Bloomington has included an Environmental Protection Element in its Comprehensive Plan. The City plans a future update of the Environmental Protection Element, which was last updated in a comprehensive fashion in 1980. Until that update occurs, the City will carry forward the existing 1980 Environmental Protection Element as a part of this plan by reference.

Section 9:
Implementation

Comprehensive planning begins with creating a community vision and establishing guiding goals and policy objectives. That step has been taken through the update of this plan and through other City visioning efforts. The next step involves bringing the vision into reality, actually implementing the plan. Implementation of this plan will be accomplished through a variety of means, including:

- Following the recommended implementation actions included in each element of this plan;
- Using the Capital Improvements Program to prioritize capital expenditures;
- Allocating resources through the regular budget process;
- Working with community residents, businesses, and organizations. Most of the resources and initiative needed to bring the community vision into reality will be supplied by the private sector.
- Enforcing existing local official controls;
- Amending the existing local official controls as needed;
- Following the plan within day-to-day operations;

• Regularly evaluating implementation progress; and,

• Adjusting plans and programs to take into consideration changing circumstances.

State statutes (Sec. 473.859) require including an implementation program within the comprehensive plan. Because of the length of the implementing documents listed below, they are included within the comprehensive plan by reference:

• The *Bloomington City Code*, which includes the zoning ordinance, subdivision regulations, and other local official controls;

• The *Bloomington Capital Improvements Program*;

• The *Bloomington Housing and Redevelopment Authority Action Plan*; and,

• The *Bloomington Comprehensive Surface Water Management Plan.*