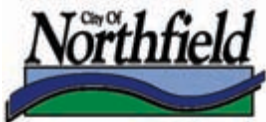


COMPREHENSIVE PLAN *for Northfield*



Prepared by
ACP Visioning + Planning, Ltd.
Development Economics

Prepared For
The City of Northfield, Minnesota

Acknowledgments

Planning Commission

Greg Colby
Steve Rhol
Tracy Davis
Suzie Nakasian
Jim Herreid
Alice Thomas

City Boards & Commissions and Interested Others, especially:

Arts and Culture Commission
Economic Development Authority
Environmental Quality Commission
Housing and Redevelopment Authority
Northfield Area Chamber of Commerce
Ross Currier, Former Planning Commission Member
Ron Griffith, Former Planning Commission Member
Joe Hargis, Former Planning Commission Member

City Staff

Joel Walinki, Interim City Administrator
Brian O'Connell, Community Development Director
Dan Olson, City Planner
Katy Gehler-Hess, City Engineer
Michelle Merxbauer, Housing Manager
Jody Gunderson, Economic Development
Director
Sandra Bremer, Administrative Assistant, Community
Development

Mayor / City Council

Dixon Bond
Scott Davis
Jon Denison
Lee Lansing
Arnie Nelson
Jim Pokorney
Kris Vohs

Community Outreach Task Force

Alex Beeby
Betsey Buckheit
Michael Budd
Adam Gurno
Joe Hargis
Margit Johnson
Clarita Kell
Alan Marks
Suzie Nakasian

Consultants

ACP-Visioning & Planning, Ltd.
www.acp-planning.com

Randall Gross / Development Economics

Table of Contents

1. Introduction
 - A. Overview
 - B. What is a Comprehensive Plan?
 - C. History of Comprehensive Planning in Northfield
 - D. Process Highlights
 - E. Organization of the Plan
 - F. Key Directions for the Community
 - G. Policy Foundation for the Plan
2. Demographic Composition
 - A. Introduction
 - B. Population of Northfield
 - C. Age of Population
 - D. Race and Ethnicity
 - E. Income
 - F. Education
 - G. Households
 - H. Employment Characteristics
 - I. Commuting
 - J. Population and Household Projections
3. Community Identity
 - A. Overview
 - B. Goal
 - C. Key Findings
 - D. Objectives and Strategies
4. Land Use
 - A. Overview
 - B. Goal
 - C. Key Findings
 - D. Existing Land Use
 - E. Land Use Principles
 - F. Regulatory Implications
 - G. Objectives and Strategies
5. Environmental Resources
 - A. Overview
 - B. Goal
 - C. Key Findings
 - D. Objectives and Strategies
6. Sewer and Water Resources
 - A. Overview
 - B. Goal
 - C. Key Findings
 - D. Objectives and Strategies
7. Transportation
 - A. Overview
 - B. Goal
 - C. Key Findings
 - D. Objectives and Strategies
8. Parks and Recreation
 - A. Overview
 - B. Goal
 - C. Key Findings
 - D. Objectives and Strategies
9. Community Facilities
 - A. Overview
 - B. Goal
 - C. Key Findings
 - D. Objectives and Strategies
10. Economic Development
 - A. Overview
 - B. Goal
 - C. Key Findings
 - D. Priority Strategies
 - E. Objectives and Strategies
11. Housing
 - A. Overview
 - B. Goal
 - C. Existing Housing Conditions
 - D. Key Findings
 - E. Objectives and Strategies
12. Implementation
 - A. Overview
 - B. How to Use the Plan
 - C. Actions
 - D. Implementation Matrix

Table of Appendices

- A. Built Environment Existing Conditions Report
- B. Traffic Counts

I. Introduction

Organization

- A. Overview
- B. What is a Comprehensive Plan?
- C. History of Comprehensive Planning in Northfield
- D. Process Highlights
- E. Organization and Intent of the Plan
- F. Key Directions for the Community
- G. Policy Foundation for the Plan
 - 1) Vision Statement
 - 2) Goals, Objectives and Strategies
 - 3) Land Use Principles

A. Overview

Almost seven years have passed since the adoption of the City of Northfield's 2001 Comprehensive Plan. This recent effort to update the Comprehensive Plan was led by the Northfield Planning Commission, who worked closely with the national consulting firm ACP–Visioning and Planning, Ltd. to facilitate the 22-month process. The process was unique because it incorporated an assessment of the City's development regulations to assure consistency with Plan principles. This approach afforded a stronger and more consistent relationship between the Plan and the City's codes. This assessment will result in the creation of a hybrid form-based code as a means of accomplishing some or all of the land use objectives of this Plan.

This Plan was based on significant public input throughout the process. This input was integrated with research of the existing conditions and anticipated trends for the future. It was the charge of the Planning Commission to understand the findings—from both sources—and deliberate on appropriate recommendations for the future. This Plan represents their best effort to do so, while balancing competing interests and complex and intertwined issues.

B. What Is a Comprehensive Plan?

A Comprehensive Plan is a community's "blueprint" for the future. As such, it is the broadest policy document a community can have to guide decision-making on long-term physical development. Comprised of policies consisting of goals, objectives and strategies, the Comprehensive Plan guides the physical, social, and economic development of the municipality and its environs, including airspace and subsurface areas. This includes both private and public development. Local governments have been given the authority to adopt a Plan according to Minnesota State Statute 462.353, Subd. 1. This Comprehensive Plan represents Northfield's recommendations for the future growth and development of the city.

C. History of Comprehensive Planning in Northfield

The City has had a Comprehensive Plan in effect since at least 1966. The following summarizes the direction provided by past comprehensive planning efforts.

1966 Comprehensive Plan

Due to the growth of St. Olaf and Carleton Colleges, the 1966 Plan viewed Northfield as an emerging educational community. A growing role as a retirement center was also envisioned. Although agriculture was still a significant part of the economy, its role was diminishing even then.

In 1959, Hwy 3 was rerouted west of the Cannon River. This reroute eased congestion in the downtown area, but created an adverse effect on traffic movements west of the river, as noted in the 1966 Plan.

In the 1966 Plan, auto-oriented strip commercial development along Hwy 3 was noted as undesirable.

According to the 1966 Plan, adding 950 new housing units between 1966 and 1985 would be sufficient to meet a projected population of 8,250 (without college students).

The other key focus of the 1966 Comprehensive Plan was the “Central Area Plan,” which essentially includes downtown Northfield. Key problems identified were associated with traffic and parking.

1977 Comprehensive Plan

This Plan projected a population of 19,050 by 2000, and the addition of 2,090 new households between 1977 and 2000. According to this Plan, Northfield would absorb 381 acres to accommodate new housing.

In the 1977 Plan, industrial growth was designated in three places: within the existing industrial area along Armstrong Boulevard; on the north end of Hwy 3 adjacent to the railroad; and along the south end of Hwy 3 between the Cannon River and the Highway.

In the land use plan adopted in 1977, Northfield was to grow in a staged and orderly fashion, with residential development in the northern and southern portions of the community.

1988 Comprehensive Plan

The 1988 Plan, with assistance from the Rice County Planning Agency, identified an Urban Expansion Boundary. This boundary was established in order for the County to direct urban growth towards those municipalities able to adequately provide urban services.

The land use plan preserved environmental areas and concentrated retail and service commercial in the Central Business District; highway-oriented businesses along Hwy 3; industrial expansion to the west; residential expansions to the south, southeast, and northwest.

2001 Comprehensive Plan

In the 2001 Plan, the downtown was seen as the center and focus of social, commercial and community life to help maintain a historic small town character and atmosphere. This was a result of pressures to develop residentially and commercially on the edges of Northfield.

Key transportation goals of the Plan were to construct another river crossing between Dundas and the 5th Street Bridge, extend Jefferson Parkway through the southeast area of the city, and extend Thye Parkway between Cedar Avenue and Hwy 3 North.

Environmental initiatives in the Plan included emphasizing the Cannon River as an important element of the community’s environment, and preserving natural resources, such as Rice Creek (also known as Spring Brook), to maintain a sense of place and clear community identity.

2008 Comprehensive Plan

The most recent planning initiative emphasizes refining and clarifying the goals and objectives of the 2001 Plan, including protecting Northfield’s community identity and unique sense of place.

The following plans were consulted, and some are referenced, in the 2008 Comprehensive Plan:

- Greater Northfield Area Greenway System Action Plan (2007)
- Surface Water Management Plan (2007)
- Downtown Northfield Streetscape Framework Plan (2006)
- Comprehensive Economic Development Plan (2006)
- Comprehensive Sanitary Sewer Plan (2006)
- Comprehensive Water Plan (2006)
- Northfield Housing Study (2006)
- ArtsPlan06 (2006)
- Natural Resources Inventory (2005)
- Draft Northfield Parks, Open Space, and Trail System Master Plan (2008)

These technical plans are usually updated every seven to ten years. In the event there is a conflict between the 2008 Comprehensive Plan and the technical plans, the more specific document will guide.

D. Process Highlights

The planning process was designed to achieve broadly based, informed, and thoughtful consideration of the crucial issues confronting Northfield. It built upon

past planning efforts, provided new technical information, and created multiple opportunities for public input. A timeline of major activities can be found in Table 1.1, below.

TABLE 1.1

Activity (*Public involvement)	Timeframe
Kick-Off	Winter 2007
Community Choices*	Spring 2007
Land Use Principles*	Spring 2007
City Council - Principles	Summer 2007
Develop Draft Master Plan	Summer/Fall 2007
Open House*	Fall 2007
Joint Planning Commission/City Council	Summer 2008
Open House*	Fall 2008
Public Hearing – Planning Commission	Fall 2008
City Council Adoption	Fall 2008

Source: ACP—Visioning & Planning, Ltd.

As designed, the Comprehensive Plan document:

- 1) records the future desired by a majority of the participating community residents;
- 2) spells out priorities and actions backed by local agreement; and,
- 3) identifies public decision-making procedures through which future disagreements over priorities and actions can be resolved in a timely and responsible fashion.

Community Participation in the Planning Process

The planning process engaged residents in a productive dialogue on issues and values. A Community Outreach Task Force was formed to involve residents and businesses to strive for geographic diversity as well as ethnic, gender, age, and social diversity among the participants. The intuitive input gathered by the public was then integrated with technical research in order to determine community values and goals and to identify patterns of development that are consistent with these goals. This section describes the major public involvement activities:

- Community Choices
- Land Use Principles
- Open House Events
- Board and Commission Input

Community Choices

Community Choices was an open, public, community-wide event held in April of 2007, at the Armory in downtown Northfield. There was excellent participation, with approximately 250 citizens attending. Additional stakeholder meetings were held prior to the Community Choices event.

Participants were asked to identify which places they treasure, where and how Northfield should grow, and strong places/weak places in the community. From the input gathered, a set of 12-land use principles were developed. These principles are a foundation for the Comprehensive Plan chapters.

Land Use Principles

A second public meeting was held on May 15, 2007, at the Armory with approximately 80 people attending to receive input on the 12 land use principles identified during the Community Choices event. The Planning Commission reviewed the public comments and refined the principles.

Open House Events

An Open House was held on September 18, 2007, at the Armory with approximately 80 people attending to present goals, objectives, and strategies for each chapter of the updated Comprehensive Plan and receive comments. The public's comments were reviewed by the Planning Commission and incorporated into the draft Comprehensive Plan document. Another Open House was held on September 23, 2008, at the Amory, prior to the Planning Commission public hearing, to present the final draft of the Plan.

Board and Commission Input

Relevant boards and commissions were asked for input on the Comprehensive Plan, and they provided extensive comments throughout the planning process.

E. Organization and Intent of the Plan

The 2008 Plan is organized into the following structure:

Chapter 2: Demographic Composition – describes general population characteristics including age, race, ethnicity, income, education, households, and employment characteristics and projects future population.

Chapter 3: Community Identity – addresses the community’s identity, including the physical environment and activities, events, and institutions that produce Northfield’s identity. It provides guidance for the preservation and enhancement of this identity.

Chapter 4: Land Use – identifies issues related to growth and land use, analyzes the current land use pattern and recommends a set of development principles and a conceptual land use plan illustrating the form, pattern, and character of future development and redevelopment.

Chapter 5: Environmental Resources – identifies the community’s unique environmental resources including bedrock, soils, groundwater, and watersheds, and describes current protection efforts. It also establishes objectives and strategies for the preservation, protection and enhancement of the natural environment.

Chapter 6: Sewer and Water Resources – establishes key policies and programs for the timely, fiscally responsible, and environmentally conscious extension and management of the City’s potable water, sanitary sewer, and surface water infrastructure systems.

Chapter 7: Transportation – evaluates current and future transportation needs based on the 2008 Comprehensive Transportation Plan Update that was adopted by the City Council following completion of this Plan.

Chapter 8: Parks and Recreation – summarizes the draft Northfield Parks, Open Space, and Trail System Plan, which describes the existing park and trail system in the city, and goals for extending that system in the future.

Chapter 9: Community Facilities – looks at the location and capacity of City offices, public safety facilities, schools, health care and other public facilities and recommends planning for facility upgrade or replacement and their sensitive location within neighborhoods.

Chapter 10: Economic Development – summarizes the results of the Comprehensive Economic Development Plan, adopted by the Economic Development Authority (EDA) in 2006 and recommends

a set of three priority strategies plus several additional objectives and strategies for the City and EDA to implement.

Chapter 11: Housing – provides a brief summary of existing housing conditions and an analysis of supply and demand, as well as an assessment of demographics, rental housing inventory, and single-family housing stock. Specific attention is paid to the need for housing that is affordable to existing residents and workers.

Chapter 12: Implementation – provides guidance for maintaining accountability, monitoring activities, creating appropriate development regulations and procedures, and involving the community in implementation of the 2008 Plan.

Appendices – The following supporting documents were prepared as part of the comprehensive planning process and are included in the Appendices:

Appendix A – Built Environment. This appendix is a report presented to the Planning Commission on April 2, 2007. It details existing land use conditions in Northfield as of that date, and lays the foundation for Chapter 4, Land Use.

Appendix B - Transportation. This appendix is the traffic counts from the 2008 Comprehensive Transportation Plan Update.

This Comprehensive Plan is intended to serve as a general guide for Northfield for the next 20 years. The document should be read and interpreted as a whole to fully understand the direction city leaders should take. The Plan is not intended to be taken piecemeal, nor are words or phrases to be taken out of context. The goals, objectives and strategies described in this Plan should also be applied with regard to the specific circumstances of a situation, taking into account other City documents (such as the technical plans referenced earlier).

E. Key Directions for the Community

The following points summarize the key directions that the community should take in order to realize the vision inherent in this Plan. These points are drawn from public sentiment expressed throughout the planning process, an analysis of the Plan’s objectives and strategies, as well as deliberations with the Planning

Commission. Although the Comprehensive Plan consists of distinctive elements, these key directions represent an integrated approach to achieving the community's vision for its future.

Preserving the area's natural, historic, and cultural resources.

The most significant theme that surfaced throughout the planning process is the need to protect the city's significant natural resources, including wildlife habitats, farmland, recreational lands, scenic vistas, and environmentally significant areas. Conservation of land will require trade-offs in other areas. For example, in order to deal with rising land prices that can result from reducing the supply of buildable land, higher density development should be allowed and strategies need to be developed to direct more growth to the appropriate areas, particularly within the existing community. Historic buildings should be adaptively reused to accommodate new functions and activities without sacrificing the historic integrity of individual structures. Historic Resources, including sites and other areas of significance, will be preserved by the City. This Plan effectively captures these trade-offs, striking a balance between land preservation and the need for intensified development in the community.

Assuring a strong economy.

From an economic standpoint, Northfield would be well-served by the diversification and expansion of its economic base. This will generate fiscal benefits for the community, create more private sector job opportunities for residents and somewhat reduce reliance on the Colleges as the economic drivers of the community. Finally, the diversification of community services and facilities, including recreation facilities, social services and transportation opportunities, will help to ensure that all residents have access to a high quality of life.

Encouraging vibrancy in the downtown core and its fringe areas.

Downtown must be allowed to grow and change to allow existing uses to expand and new uses to be established. This will maintain its economic and cultural standing while retaining its historic character and walkable scale. Vibrancy in this area can be pursued through a variety of initiatives, including additional housing development, economic investment, expansion of arts and cultural facilities, promotion of a mix of uses,

and improvements to the public realm (such as parks, public art, streetscapes, and public squares). These initiatives will lead to a more walkable community and allow for more day-to-day interactions among residents. Such vibrancy will also attract more visitors to the community, and enhance the tourism industry.

Maintaining the community's character.

The preservation of Northfield's community character encompasses a variety of different approaches, including protecting historic resources (historic neighborhoods, downtown, and other sites) and promoting adaptive reuse of historic buildings, to creating neighborhood design standards that will ensure new development is in accord with existing character, to protecting farmland and promoting the local agricultural economy. Residents have a strong interest in maintaining the charm of their community for years to come, and appropriate regulatory tools (such as form-based codes and conservation easements) will help to ensure that this goal is achieved.

Enhancing "Town/Gown" relations.

A symbiotic relationship exists between the City and its educational institutions. The Colleges generate a great deal of employment and provide economic support to local businesses; they also enhance the cultural opportunities available to residents. On the other hand, the City provides a variety of public facilities and services to help support the large student population, while having relatively limited opportunities for fiscally supporting such services through local taxation. A central theme throughout this Plan is the need to enhance relations between the City and the Colleges in order to maximize the benefits available to the entire community in a manner that is fair and financially viable for each entity.

Promoting an ethic of sustainability in all city activities.

The community has a high degree of awareness regarding environmental issues. Initiatives recommended throughout this Plan detail ways to protect natural resources, conserve energy, reduce reliance on the private automobile, promote healthier lifestyles and encourage green building techniques. Public education will be a key component in supporting this ethic of sustainability. Efforts to promote greater sustainability in City policies and practices can set the tone for the

community and serve as an example for private sector businesses, including the development community.

These key directions resound throughout each of the Plan's elements. Taken together, they represent a simplified, yet cohesive approach for enhancing the city in a manner that is aligned with Northfield's community values.

Plan for strategic growth in the community.

In public meetings held in 2007, community members expressed a strong interest in infill and redevelopment within city limits before annexing new land into the city. Also, there is a strong desire to have a balance of residential, commercial, and industrial development. This will lead to adequate and affordable housing, jobs that provide a living wage and a sufficient tax base to meet the community's needs. Therefore, City leaders should strategically plan for how growth will occur, and not simply react to proposed development projects.

G. Policy Foundation for the Plan

The policy foundation of the Plan was shaped by an extensive community involvement and planning process. The Vision Statement for the community, noted below, was developed by the Planning Commission based on this public involvement. Also, the Comprehensive Plan has three key layers of policies: goals, objectives and strategies. Goals are the broadest policy statements that state a desired outcome in general terms. Objectives indicate a more specific policy direction and help organize strategies. Strategies are detailed actions necessary to initiate or complete an objective – such as a project, program or policy. There are multiple objectives for each goal and multiple strategies for each objective.

Vision Statement

Northfield values its unique heritage as a mill and college town, and will reflect its community identity by preserving its historic and environmental character, and enhancing its quality of place through a progressive and sustainable development pattern.

Goals, Objectives and Strategies

This Plan includes ten goals, 53 objectives, and 279 strategies, which are described in detail in the following chapters and summarized in Chapter 12: Implementation. The goals are listed below.

Community Identity: Decisions influencing Northfield's future land development will reflect the city's history and natural and built environments, and enhance social capital.

Land Use: An efficient use of land resources that emphasizes strategic development and redevelopment, preserved natural areas and agricultural resources, a strong and vibrant downtown, and promotes sustainable planning practice.

Environmental Resources: The natural environment will be protected, enhanced and better integrated into the community.

Sewer and Water Resources: Provide potable water, wastewater collection and treatment, and surface water control to the community in an environmentally sensitive, financially-equitable and fiscally-responsible manner.

Transportation: Facilitate the movement of people, goods, and services within and through the city on a safe, convenient, coordinated, and fiscally responsible network of routes using a variety of transportation modes.

Parks and Recreation: Promote a high quality of life in Northfield by providing a balanced and sustainable system of parks, natural open spaces, athletic facilities and trails consistent with the historic sense of place in the community.

Community Facilities: Plan for and prioritize the construction of community facilities so as to provide the greatest benefit to the residents in the most cost-effective manner possible, with the most positive effect on the immediate surroundings.

Economic Development: Promote economic development by supporting existing businesses, by talent attraction and retention, by aggressive business recruitment, and by increasing the availability of commercial and industrial land. A further goal is to reposition Northfield to become more competitive in its economic development initiatives in relation to the Twin Cities, the Rochester corridor, and its neighboring communities.

Housing: Provide affordable housing opportunities for all the people who live and work in Northfield. A variety of housing options, including rental housing, should be available as first-time homebuyers have families, become empty-nesters, become elderly and eventually need assisted living services. The historic neighborhoods that contribute to Northfield's sense of place and character will be protected. Green technology, environmental considerations, and strong neighborhood qualities should be combined to provide a safe, secure and pleasing living environment.

Principles

Land use principles are statements of intent that describe the direction of future development and redevelopment in the community. These principles will help guide the City on how to use its limited land resources efficiently and effectively to continue to foster a high quality physical environment. (See Chapter 4 for a more detailed description of the principles.)

The principles reflect a variety of land use topics and themes. They focus on the quality, pattern, character and organization of development. They specifically address mobility and connectivity as it relates to neighborhoods, districts and corridors. It should be understood that the City could take action that induces or inhibits, maintains or changes, future development patterns.

The City's land use principles are:

1. The small town character will be enhanced.
2. The natural environment will be protected, enhanced and better integrated into the community.
3. The preference for accommodating future growth is in infill locations, then redevelopment/land intensification opportunities, and then on the edge of existing developed areas.
4. New and redeveloped residential communities (areas) will have strong neighborhood qualities.
5. Environmentally-sensitive and sustainable practices will be integrated into new developments and redeveloped areas.
6. Places with a mix of uses that are distinctive and contribute to increasing the city's overall vitality are preferred.
7. Neighborhood-serving commercial will be small scale and integrated with the residential context.
8. A wider range of housing choices will be encouraged – in the community as well as in neighborhoods.
9. Rural character of certain areas of the community will be protected.
10. Streets will create an attractive public realm and be exceptional places for people.
11. Places will be better connected, in part to improve the function of the street network and also to better serve neighborhoods.
12. Opportunities will be created to walk and bike throughout the community.

2. Demographic Composition

Organization

- A. Introduction
- B. Population of Northfield
- C. Age of Population
- D. Race and Ethnicity
- E. Income
- F. Education
- G. Households
- H. Employment Characteristics
- I. Commuting
- J. Population and Household Projections

Purpose

The purpose of the Demographic Composition Chapter is to understand the current and projected population and socio-economic makeup so as to better plan for Northfield's future.

A. Introduction

Northfield has been a thriving community for more than 150 years. Situated on the Cannon River in an agricultural area, the city is home to two liberal arts colleges, historic downtown and residential neighborhoods, and various manufacturing and regional businesses. Today, Northfield is within a 45 minute drive from the Twin Cities and the proximity to the Twin Cities is emerging as a factor in future population growth. Located on the border of Rice and Dakota Counties, a small portion of Northfield is in Dakota County, which has been a part of the Minneapolis-St. Paul Metropolitan Area since the 1950 Federal Census.

B. Population of Northfield

Over the past 50 years, Northfield has experienced a relatively consistent rate of growth; averaging 18% per decade since 1950, with the largest numerical increase occurring during the 1990s when population increased by 2,463 persons (See Table 2.1).

With two colleges within its corporate limits, the increase in college enrollments played a large role in Northfield's growth from 1950 to 1980. For example, in the 1960s the increase in college students accounted for 61% of the city's growth, while in the 1970s students accounted for 52% of the population increase. However, since 1980, growth in the non-student population accounted for all of Northfield's population growth. The decennial censuses are one source for the number of college students. Enrollment data from the colleges is another source of this information. Based on data from the colleges, it is clear that college enrollment has been flat since 1980. In 2005, while total enrollment was 4,994, only 4,719 students were residing in Northfield (this number represents total enrollment less students who are not on campus).

In 2000, college students made up 28% of Northfield's population. With such a large percentage of the population, the student population has a major affect on Northfield's housing, retail and transportation environments. As of today, neither college is forecasting enrollment growth in the future, and both colleges have announced their goal of providing housing to all students on campus. Yet, this population will remain an important part of Northfield's character and will continue to affect the housing, retail and transportation environments.

TABLE 2.1 GENERAL POPULATION OF NORTHFIELD BY YEAR

Year	Total Population	Population Increase	% Growth From Last Census	Population Excluding College Students	Population Increase Excluding College Students	% Growth Based on Non-Student Population
1960	8,707	1,220	16%	5,834	N/A	N/A
1970	10,235	1,528	18%	6,435	601	10%
1980	12,562	2,327	23%	7,560	1,125	17%
1990	14,684	2,122	17%	9,746	2,186	29%
2000	17,147	2,463	17%	12,339	2,593	27%

Source: 2000 U.S. Census Bureau

C. Age of Population

Age is one of the most important characteristics of a population because needs and consumption patterns vary with age, thereby making age data valuable in projecting community needs. The proportion of a community's population at various ages has implications for current and future needs. Housing, transportation and recreation are three major areas where age affects needs and usage.

Each life stage is associated with a unique profile of the consumption of goods and services. Minnesotans can drive at 16 and must attend school until 18. Most Minnesotans establish their own households in their early to mid-20s; the median age for giving birth is about 30. Those over 65 can retire with full social security benefits (this age will rise for younger Americans) and most have empty-nests at 50.

In Table 2.3, the median is used as a measure of age. Students at St. Olaf and Carleton Colleges account for about 28% of Northfield's population (See Table 2.2). These students are between 18 and 24 years of age. With such a large portion of the city's population in this age group, median age in Northfield is 23 years, which is low when compared to Rice and Dakota Counties and Minnesota (See Table 2.3). However, Northfield looks much more like its neighbors when the percentage of 25 to 44 year-olds is examined. Approximately 34% of Northfield's population consists of 25-44 year-olds. The percentage in this age group ranges from 31% to 37% for Cannon Falls, Dundas, Faribault, Farmington, Hastings and Red Wing.

TABLE 2.2 COLLEGE STUDENT POPULATIONS BY YEAR

Year	Students	Percentage of Student Population
1980	5,002	40%
1990	4,938	34%
2000	4,805	28%
2005	4,994	

Source: 2000 U.S. Census Bureau; 2005 student data from St. Olaf and Carleton Colleges

TABLE 2.3 MEDIAN AGE BY AREA

Geographical Area	Median Age (in years)
Northfield	23.0
Rice County	32.9
Dakota County	33.7
Minnesota	35.4

Source: 2000 U.S. Census Bureau

D. Race and Ethnicity

With an increase in the number of immigrants coming to the United States since the mid 1980s, race/ethnicity began to change quickly. Although the population of foreign-born individuals is a small percentage of Northfield's population (6.2%), Northfield has a higher percentage of foreign-born than Minnesota (5.3%), Dakota County (5.1%) or Rice County (4.8%). (Foreign-born individuals are 11.1% of the U.S. population.) See Table 2.4 for detailed information.

TABLE 2.4 RACE AND ETHNICITY BY AREA

Race	Northfield		Rice County	Dakota County	Minnesota
	#	%	%	%	%
White non-Hispanic	15,324	89.4	90.5	90.0	88.2
Black	154	0.9	1.3	2.3	3.5
American Indian	58	0.3	0.4	0.4	1.1
Asian	405	2.4	1.5	2.9	2.9
Hispanic	982	5.7	5.5	2.9	2.9

Source: 2000 U.S. Census Bureau (All racial/ethnic groups based on one race except for Hispanics who can be of any race.)

In the 2000 census, for the first time Americans could declare themselves to be of more than one race. Only 2% of Northfield's population reported they were of more than one race. In the United States, 2.4% listed themselves as being of two or more races, while only 1.7% of Minnesotans said they were of two or more races.

With the rapid growth of the Hispanic population, which is now the largest minority population in the United States, it is now customary to first categorize the population into ethnicity by declaring oneself as White non-Hispanic or Hispanic. Northfield is similar to Rice County, Dakota County and Minnesota in that its population is overwhelmingly White non-Hispanic (89.4%). In the United States, people who are White non-Hispanic made up 69.1% of the population in 2000. Hispanic people may be of any race, while the population for the other racial/ethnic groups in the table above represents those who reported themselves to be of one race. Northfield, like Rice County, has a higher percentage of Hispanic people than Dakota County or Minnesota. (The U.S. percentage for Hispanic people is 12.5%)

Northfield is more similar to Dakota County and Minnesota than to Rice County in the percentage of Asian people. The percentage of Blacks and American Indians was very small in Northfield in 2000.

E. Income

Three different measures of income are reported by the U.S. Census Bureau. For communities, income data are available only in the decennial censuses. Thus, the

most recent data for Northfield were collected in 2000 and represent 1999 income (See Table 2.5).

Household income represents the income of all households, whether they have but one person or contain many people. Family income represents the income of families, which must have at least two persons who are related by marriage, blood or adoption according to Census definitions. Median family income is always higher than median household income. Per capita income is calculated by dividing all income by the total population.

Per capita income in Northfield is affected by the large student population. As the data show, Northfield has lower per capita income than Rice County and Minnesota. Median household income for Northfield, Rice County and Minnesota is similar. Family income is the measure that is least affected by the college population. Median family income clearly shows that Northfield is an affluent community, especially in the Rice County and Minnesota context. However, when compared to Dakota County, the difference between a metropolitan county and a non-metropolitan place becomes apparent.

TABLE 2.5 MEDIAN INCOME (1999) BY AREA

Geographical Area	Household Income	Family Income	Per Capita Income
Northfield	\$49,972	\$61,055	\$18,619
Rice County	\$48,651	\$56,407	\$19,695
Dakota County	\$61,863	\$71,062	\$27,008
Minnesota	\$47,111	\$56,874	\$23,198

Source: 2000 U.S. Census Bureau

F. Education

Educational attainment for the population age 25 and over is another measure of a population's socio-economic status. The percent of persons with a bachelor's degree or more in Northfield helps give Northfield its intellectual atmosphere. With 43% of its population age 25 and older holding a bachelor's degree, Northfield has a high level of educational attainment even when compared to Dakota County (See Table 2.6).

TABLE 2.6 EDUCATIONS BY AREA

Geographical Area	Bachelor's Degree or Higher
Northfield	43.0%
Rice County	22.4%
Dakota County	34.9%
Minnesota	27.4%

Source: 2000 U.S. Census Bureau

G. Households

People reside in households or in group quarters. Group quarters include dormitories, nursing homes, group homes, correctional facilities and the like. Because Northfield has a large college population, it has a large percentage of its population in group quarters. In 2000, 27.5% of the population or 4,713 persons lived in group quarters. Twenty-five percent lived in dormitories or other student housing while 2.5% lived in institutions.

Over the past 50 years, the number of households also increased rapidly in Northfield. Like the state and nation, household growth was especially rapid during the 1970s as the large Baby Boom generation entered the household formation years. Also, like the state and nation, the number of persons per household has declined in Northfield. The decline in persons per household is the result of fewer children per family and the increase in one-person households. In 2000, 27.5% of Northfield's households had only one person. This percentage is slightly higher than Minnesota's percentage of one-person households. See Table 2.7 for detailed information.

TABLE 2.7 NORTHFIELD HOUSEHOLDS BY YEAR

Year	Households	Persons Per Household
1960	2,031	2.92
1970	2,285	2.89
1980	3,170	2.60
1990	4,056	2.49
2000	4,909	2.53

Source: 2000 U.S. Census Bureau

In 2000, the average of persons per household in Northfield was similar to the Minnesota number but it was lower than that of Rice County and Dakota County (See Table 2.8).

TABLE 2.8 PERSONS BY HOUSEHOLDS BY AREA

Geographical Area	Persons Per Household
Northfield	2.53
Rice County	2.65
Dakota County	2.70
Minnesota	2.52

Source: 2000 U.S. Census Bureau

H. Employment Characteristics

Employment or the number of jobs is closely related to household growth for most communities. Jobs must be in a community or within reasonable driving time/distance in order for a community to grow. Retirement communities are the only exception to this rule.

The census provides data on the industry of employment for Northfield residents (See Table 2.9). However, this is different from the number of jobs located in Northfield. The Minnesota Department of Trade and Economic Development reports the number of jobs located in Minnesota communities.

As the following table shows, nearly half (45.7%) of all Northfield residents were employed in education, health or social services at the time of the 2000 census. Manufacturing (10.9%) was the second largest sector of employment in 2000. In Minnesota 20.9% were employed in education, health or social services and 16.3% were employed in manufacturing.

Arts, entertainment, recreation, accommodation, and food services were the third largest sector of employment (8.8%) among Northfield residents and retail trade was the fourth largest sector of employment (7.0%). In Minnesota 7.2% were employed in arts, entertainment, recreation, accommodation, and food services and 11.9% were employed in the retail sector. Table 2.10 shows the 15 largest employers in Northfield, and some interesting trends and points to some future challenges. For example, with St. Olaf and Carleton Colleges anticipating no enrollment growth, Northfield's first and third largest employers are not likely to have employment growth in the future. Any rapid future growth in Northfield would mean either that job growth in the community had accelerated or more residents are commuting to the Twin Cities Metro Area.

TABLE 2.9 EMPLOYMENTS OF RESIDENTS BY INDUSTRY

Employed Civilian Population (16 years+)	Number Employed	Percent of Total Employed
Agriculture, Forestry, Fisheries	107	1.2%
Construction	358	4.0%
Manufacturing	980	10.9%
Wholesale Trade	258	2.9%
Retail Trade	631	7.0%
Transportation, Warehousing; Utilities	331	3.7%
Information	234	2.6%
Finance, Insurance, Real Estate	255	2.8%
Professional, Scientific, Management, Administrative, Waste Management	505	5.6%
Educational, Health, Social Services	4,101	45.7%
Arts, Entertainment, Recreation, Accommodation; Food Services	793	8.8%
Other services	242	2.7%
Public administration	184	2.1%
Total	8,979	100.0%

Source: 2000 U.S. Census Bureau

TABLE 2.10 FIFTEEN LARGEST EMPLOYERS

Employer	Products/Services	2007 Employee Count
St. Olaf College	Colleges & Universities	861
Malt-O-Meal	Cereal Breakfast Foods	830
Carleton College	Colleges & Universities	690
Northfield Public Schools ISD #659	Elementary and Secondary Schools	500
Multek Flexible Circuitry	Printed Circuit Boards	430
McLane Minnesota	Grocery Wholesale	450
Northfield Hospital	General Medical & Surgical Hospitals	340
City of Northfield	Government Offices	132
Allina Medical Clinic	Medical	150
Three Links Care Center	Skilled Nursing Care Facilities	180
Cub Foods	Supermarket	175
Cardinal Insulated Glass	Flat Glass	140
Laura Baker School	Schools & Educational Services	142
Target	Discount Department Store	120
Northfield Retirement Center	Skilled Nursing Care Facilities	141

Source: City of Northfield

I. Commuting

In 2000, Northfield was still primarily a “free standing” community. Of the 8,820 workers 16 years and over, 8,519 lived in Rice County, a non metro county, and 301 lived in Dakota County, a metro county. Seventy percent of Northfield’s workers who lived in Rice County worked in their place of residence, that is, Northfield (See Table 2.11). This is a high percentage. Of the 301 workers residing in Dakota County, 50% worked in the metro area.

From 1990-2000, the number of Northfield workers residing in Rice County increased by 1,317. Of these, 498 worked in a metro area. This means that 38% of the growth in workers was due to commuters. It is not known how many of these workers moved from the Metro area to Northfield and how many were Northfield residents who found a job in a metro area.

The percentage of workers commuting to a metro area increased from 18% to 21% during the 1990s. However, the importance of local job development is illustrated by the 62% of additional Northfield, Rice County workers who found employment in the Northfield area as compared to a metro area.

TABLE 2.11 PLACE OF WORK - NORTHFIELD RESIDENTS*

	Workers	Work in Place of Residence		Work in a Metro Area	
1990	7,202	5,238	72.7%	1,311	18.2%
2000	8,519	5,988	70.3%	1,809	21.2%

Source: 1990 & 2000 U.S. Census Bureau

*Rice County portion only

Northfield is located within driving distance of the Minneapolis-St. Paul (Twin Cities) Metropolitan Area and Rochester Metropolitan Area. Based on the highway system, it is safe to assume that most Northfield commuters were working in the Twin Cities Metro Area.

Table 2.12 presents data for some of Northfield’s neighboring communities in southeastern Minnesota. Cannon Falls, a much smaller community, has a high percentage of its workers working in a metro area. Because Cannon Falls has easy highway access to both the Twin Cities and Rochester, workers are flowing to both metro areas. The small commuter population in Owatonna may also be split between the Twin Cities and Rochester.

TABLE 2.12 PLACE OF WORK - OTHER COMMUNITIES

	Workers	Work in place of Residence		Work in a Metro Area	
Cannon Falls	1,995	931	46.7%	758	38.0%
Faribault	9,584	6,107	63.7%	1,483	15.5%
Northfield*	8,519	5,988	70.3%	1,809	21.2%
Owatonna	11,848	9,553	80.6%	626	5.3%
Red Wing	8,055	6,290	78.1%	1,157	14.4%

Source: 1990 & 2000 U.S. Census Bureau

*Rice County portion only

Data in this table also show that the Twin Cities commuter shed extends to Faribault. While Faribault’s percentage of workers working in a metro area is smaller than in Northfield, the percentage is large enough to suggest that in the future, commuters settling in Rice County may be as likely to select the Faribault area as the Northfield area. This becomes a consideration when thinking about future population growth.

TABLE 2.13 PLACE OF WORK - SELECTED PARTS OF NORTHERN RICE COUNTY

	Workers	Work in a Metro Area	
		#	%
Lonsdale City	811	440	54.3%
Northfield City*	8,519	1,809	21.2%
Northfield Township	433	102	23.6%
Bridgewater Township	1,058	289	27.3%
Dundas City	331	86	26.0%

Source: 2000 U.S. Census Bureau

*Rice County portion only

Commuting can also be examined in northern Rice County (See Table 2.13). Lonsdale was a community of commuters in 2000 when it had a population of 1,494. Its population is estimated to have increased to 2,684 in 2006. The household growth associated with this population increase is likely to be almost totally from workers commuting to the Twin Cities Metro Area.

Northfield residents are slightly less likely to be commuters than workers in the adjacent townships and Dundas, but even in these adjacent areas, commuting is still modest. Looking at Rice County, commuters have three options: Lonsdale, Northfield-Dundas and Faribault.

J. Population and Household Projections

Population grows when births exceed deaths and more people move into a community than move out. Population growth is almost always accompanied by an increase in the number of housing units, which is influenced by land use, particularly the availability of land to develop for residential purposes or the redevelopment of underutilized sites. Projections in this chapter are based on the potential demands and availability of land.

Population

There are three common methods for projecting population. These are: the cohort-component or cohort survival method, the linear regression/extrapolation method and the housing unit method. The cohort-component method is based on the age-sex composition of the population in the base year. This method is sensitive to the differences in age-sex specific mortality and migration rates and age-specific fertility rates. While this method is complex, it is the preferred method and yields important age data, which is very important for planning.

The housing unit method is very simple and works reasonably well when the number of housing units is fixed. However, it does not provide any age data.

Linear regression/extrapolation uses past growth rates to project future growth. This method works well if the population has no anomalies and the factors that have driven growth in the past remain the factors in the future. However, this method does not yield age projections.

The population projections presented in this chapter were prepared using the cohort-component method, sometimes called the cohort-survival method. The methodology is explained in greater detail at the end of this chapter. Local mortality rates are likely to follow the state pattern while fertility rates are subject to more local variation. It is migration rates, however, that are most subject to local variation, such as job growth, cost and availability of housing, perception of a community and whether the area is close to a larger population area that is suburbanizing.

Nonetheless, some state and national mobility trends will affect local migration rates. For example, the probability of moving is related to age. Every year, 20-24 year-olds are more likely to move than any other age group. Nationwide, 30% of 20-24 year-olds move each year. The next most mobile age group is 25-29 year-

olds. In this age group, 28% move each year. The high mobility among these two groups means that 21% of 1-4 year-olds will move each year. However, after age 29, mobility drops. Nearly 20% of 30-34 year-olds move each year, for example, but that percentage drops to 9% by age 45-49 years and to less than 5% by age 65-69 years. As the population ages over the next twenty years, we can expect that migration will also decrease. In fact, annual mobility is lower today than at any time since 1950.

The population projections in this chapter show a total population for Northfield as well as projected age groups (See Table 2.14). For planning purposes, the total population numbers can be rounded to the nearest hundred. In other words, 2010 can be rounded to 20,300 and 2020 can be rounded to 23,600.

As the age projections show, all age groups are larger in 2020 than they were in 2000. However, a couple of age groups are larger in 2010 than they are in 2020. This occurs because the size of the population (cohort) moving through those specific age groups is different in the different time periods. Some changes in age are worth noting. Because no growth is projected in St. Olaf and Carleton Colleges' enrollments, the percentage of population in the college-age groups (15-19 years and 20-24 years) will decrease from 2000 to 2010. However, the college population in Northfield will keep Northfield's population younger than Minnesota's population throughout the projection period.

TABLE 2.14 POPULATION PROJECTIONS BY AGE GROUP

Age	2000	2010	2020
0-14	2,880	3,160	3,624
15-19	2,636	2,985	3,068
20-24	3,463	3,949	3,938
25-34	1,569	1,945	3,049
35-44	2,039	1,934	2,290
45-54	1,783	2,267	2,056
55-64	970	1,807	2,207
65-74	776	989	1,770
75-84	665	657	796
85+	366	591	818
Total	17,147	20,284	23,616

Source: Hazel Reinhardt Consulting Services

The percent of population 65 years and over will increase from 10.5% in 2000 to 11.0% in 2010 and to

Demographic Composition

14.3% in 2020. This increase in the senior population reflects the movement of the Baby Boom generation into the ranks of the elderly starting in 2011. During this same time, Minnesota's senior population will increase from 12.1% to 16.1% in 2020. The age projections also show a major generational shift from 2010 to 2020. At the very time that the Baby Boomers are moving into the ranks of the elderly, their offspring, the Echo Boom or Gen Y, will be adults. Gen Y will be 25-44 years of age in 2020 and will be a large percentage of Minnesota's and Northfield's populations.

These generational shifts mean that three age groups will double in size from 2000-2020 (note: college students have been removed from these projections). These three age groups are: 25-34 year-olds, 55-64 year-olds and 65-74 year-olds. The change in the age profile of Minnesota and Northfield is likely to change the demand for housing of certain types. For example, the next 15 years will see an increasing demand for housing options for empty-nesters. Nationwide, more retirees are choosing university and college towns as places to retire. This trend may grow in Northfield as well.

To put the Northfield projections into context, it is helpful to look at Northfield's projected rate of change compared to Rice County, Dakota County and the Twin Cities Metro Area (See Table 2.15). While it is normal for smaller populations to show a faster rate of growth, these percentages, especially the ones for 2010-2020, show rapid growth for Northfield.

TABLE 2.15 RATE OF POPULATION CHANGE BY AREA

Geographic Area	1990-2000	2000-2010	2010-2020
TC Metro (MN part)	16.8%	13.5%	9.3%
Dakota County	29.3%	18.9%	11.2%
Rice County	15.2%	13.9%	12.2%
Northfield City	16.8%	18.3%	16.4%

Source: Hazel Reinhardt Consultant Services

The population projections completed by Hazel Reinhardt in 2005 can also be compared to those made by the Minnesota State Demographer in the 2001 Comprehensive Plan (See Table 2.16).

TABLE 2.16 COMPARISON OF PROJECTIONS BY AREA

Geographic Area	2000	2006 Est.*	2010		2020	
			State* /MC	Current**	State* /MC	Current**
Northfield	17,147	19,413	19,601	20,284	21,944	23,616
Rice	16,590		18,861		21,004	
Dakota	557		740		940	

* Source: Minnesota State Demographer (The Metropolitan Council made the population projection for the Dakota County part of Northfield)

**Source: Hazel Reinhardt Consultant Services

Households

The projected number of households in this chapter is the result of the projected population and the proportion of people in each age and sex group who are projected to be householders (heads of household).

As shown in Table 2.17, the projections of persons per household will increase in numbers of members from 2000-2010 and then decline in numbers of members from 2010-2020 as the Baby Boom population ages.

TABLE 2.17 HOUSEHOLD PROJECTIONS BY AGE OF HEAD*

Age of Head	2000	2010	2020
15-24	427	485	490
25-34	777	963	1,509
35-44	1,162	1,102	1,305
45-54	1,013	1,288	1,168
55-64	560	1,043	1,273
65-74	460	586	1,050
75-84	385	380	461
85+	125	202	280
Total	4,909	6,049	7,536
Persons per Household	2.53	2.57	2.51

*As part of this project, population and household projections were made for Dundas also.

Methodology—Population Projections

The 2000 Census population by age and sex was the starting point. Assumptions were made about the rates of mortality, fertility and migration during each ten-year period. The population at the end of each time period reflects the expected number of survivors, births during the period and additions or subtractions attributable to migration. The projected population for 2010 becomes the basis for the next cycle of projection calculations for 2020.

Mortality Assumptions: Survival rates were based on rates developed by the Minnesota State Demographer. These rates show a slight increase in survival between 2000 and 2020. Most of the improvement in survival rates occurs at the older ages.

households rather than residing in group quarters (nursing homes).

Fertility Assumptions: Rice County age-specific fertility rates were calculated for 2000-2004. These age-specific rates were applied throughout the projection period.

Migration: Migration rates vary by age and sex. The rates used in the projections are net rates. If more people move in than move out, there is net in migration. If more people move out than move in, there is net out migration.

The age-specific net migration rates between 1990 and 2000 were calculated. These rates were applied during each projection cycle. For example, Northfield had net in migration in all age-sex groups except for females 20-24 years, 25-29 years and 75-79 years. The largest net in migration rates occurred among 30-34 years olds. Males increased 72% over the expected population (survivors) and females increased 60% over the expected population.

College Students: A constant college enrollment was assumed throughout the projection period based on information from the two colleges. Students enrolled at St. Olaf and Carleton Colleges were removed from the 15-19 and 20-24 year-old age groups in 2000 and 2010 before mortality rates, migration rates and fertility rates were applied. A population equal to the 2005 enrollment was added back to the appropriate age-sex groups in the 2010 and 2020 projections. This means that college students are shown in the appropriate age groups in the projections but the college population did not affect deaths, births or migration into or out of its respective age groups in Northfield. The number of student residents in Northfield was 4,719 in the fall of 2005.

Methodology—Household Projections

The household projections assume that the total householder rate in each age-sex group will remain at its 2000 rate. For example, in 2000, 57% of all 35-44 year-olds were householders. The assumption of a constant rate of householders may underestimate the number of householders age 85+ in the future as a national trend would indicate that more of this age group will remain in

3. Community Identity

Organization

- A. Overview
- B. Goal
- C. Key Findings
- D. Objectives and Strategies

Purpose

The purpose of the Community Identity Chapter is to address how the community can enhance and strengthen its historic small town atmosphere, which is its defining characteristic.

A. Overview

Northfield is defined by its location on the Cannon River (one of only six rivers in Minnesota with a “Wild and Scenic River” designation), its authentic and vital downtown, historic buildings, a vital arts and cultural presence, rural elements, historic events such as the foiling of the bank robbery by the James and Younger gang, two top-ranked private colleges, a quality public school system, strong community organizations, and a tradition of public involvement, all of which comprise Northfield’s identity and create its strong sense of place.

These features, which have defined Northfield’s character for its first 150 years, can also provide direction for the preservation and enhancement of the community moving into the twenty-first century.

Northfield residents have expressed a strong desire to maintain the community’s historic town character in its rural agricultural setting. This desire implies that future development should be considerate of the elements that have historically defined Northfield’s small-town character, including its agricultural heritage, local architectural and design elements, and the traditional form and pattern of the community.

Much of the development in Northfield in the last thirty years has not complemented this small-town character. New development has led to the creation of commercial corridors and numerous residential subdivisions without a true sense of place. If the community is to continue to develop in such a pattern, a point will be reached when the community character is compromised.

The land use principles, outlined in Chapter 4 of this Plan, provide a baseline for the return to development practices that will once again foster and strengthen the small-town character of Northfield. The principles have been used to develop the Objectives and Strategies found in this Comprehensive Plan. The remaining sections of this chapter include:

- B. Goal
- C. Key Findings
- D. Objectives and Strategies

The goal, objectives and strategies reflect key findings and public input that were gathered as part of the Northfield Comprehensive Plan update planning process. **It is important to note the community’s vision for the future has not changed significantly since the**

completion of the 2001 Comprehensive Plan. The zoning and subdivision regulations will be revised to reflect the 2008 Comprehensive Plan. The guiding principles and goals in the 2001 Plan related to community identity are reflected in the recommendations of this chapter.

B. Goal

A goal is a policy statement that states a desired outcome in general terms. The goal was developed by considering key principles, and integrating public input generated as part of the Plan update. The goal for community identity is provided below.

Decisions influencing Northfield's future land development will reflect the city's history and natural and built environments, and enhance social capital.

C. Key Findings

Existing conditions research was conducted as part of the Comprehensive Plan update. Information was compiled from a variety of sources such as field surveys, existing plans and codes, and input from several public meetings. Outlined below is a summary of key findings related to Northfield's community identity.

Importance of the Cannon River: The Cannon River was an essential component of Northfield's identity, as settlers located to utilize its power to help establish a trade center and build the community. The river also provides the basic topographical shape to the community and to a degree dictates travel patterns and infrastructure development. Recent community efforts, including the Cannon Riverwalk, have worked to better integrate the river into the community; its scenic beauty and recreational possibilities afford the possibility for further integration of the river into the community. The Greater Northfield Area Greenway System Action Plan is an important resource in helping with this integration.

Rural and Agricultural Heritage: Northfield is located within an area of small farms connected by rural roads. Agriculture has played a significant role in the historical development of the community and continues to contribute to the city's economy, character, and identity. Distinct edges or borders where the city meets the rural landscape have eroded in some areas of the community. Adherence to the land use principles in

Chapter 4 and associated ordinances will offer protection of the rural edges.

Rail Connection: The railroad was a key force that shaped the development of the community. Remnants of the railroad include the historic depot and grain elevators. Malt-O-Meal and other local industry continue to use the rail line today. Both the history and the potential future of rail are key identity elements.

Well-defined Historic Downtown: Division Street ("Main Street") is the foundation of the downtown core. The streetscape provides a pedestrian-friendly environment with wide sidewalks, well-defined public spaces, active storefronts, benches, and multi-use buildings that frame the street. The physical environment and downtown buildings are well-preserved, adding to the community's small town character and identity. However, the downtown is not without its challenges, the most significant being better integration of the Cannon River and improvements to make the area more pedestrian-friendly.

Unique Character of the Built Environment: Northfield has a reputation as a community with historic structures containing unique architectural elements of the community in the downtown and older neighborhoods. A 1999 book called "Northfield: The History and Architecture of a Community" has an inventory of homes, churches and college-related buildings in these neighborhoods. These structures are sited with minimal setbacks which creates a vibrant streetscape. Modern commercial and residential structures constructed within the last 30 years are characterized by franchise architecture, which fails to strengthen the community's small town character. Unlike the downtown, these commercial structures are defined by large parking areas usually located between the building front and the street.

Divergent Development Pattern: The development pattern over the last 30 years has put the small town character of the community at risk (See Figure 3.1). Typical recent development no longer follows the traditional street and lot and block pattern of the original grid network. New development has occurred that is built around wide streets, deep setbacks and a curvilinear road network. This changing development pattern has created pockets that do not reflect the traditional

Their proximity to downtown and the sizable student population give Northfield a “College Town” feel. A strong relationship between the City, schools, and colleges will continue to be an essential element of Northfield’s identity.

D. Objectives and Strategies

Outlined below are seven objectives and 33 strategies. The objectives indicate a specific policy direction and help organize strategies, while the strategies are detailed actions necessary to initiate or complete an objective such as a program, policy or a project.

Objective 1: Continue to preserve Northfield’s rural heritage.

CI 1.1 Preserve the scenic quality of the rural landscape by defining the edge of the community and maintain the rural character of roadways on the edges of the community.

CI 1.2 Preserve, protect, and enhance rural heritage preservation sites in collaboration with surrounding jurisdictions.

CI 1.3 Support small-scale, farm-to-table programs (such as a farmers’ market) to promote the health of the local agricultural economy.

CI 1.4 Ensure that all development, redevelopment and expansion be compatible with the desirable features of the natural and man-made environment.

Objective 2: Strengthen downtown as an historical and cultural center of the community.

CI 2.1 Maintain and enhance existing public spaces and create new public gathering places for social interaction.

CI 2.2 Identify strategic locations to more effectively integrate the Cannon River into the fabric of the downtown, while also protecting its environmental quality and enhancing its visual appearance.

CI 2.3 Create new educational, artistic, cultural and recreational activities along the Cannon River in and around the downtown.

CI 2.4 Identify and designate an arts and cultural district in the downtown.

CI 2.5 Support existing and new local businesses that provide dining, retail, arts and entertainment.

Objective 3: Preserve historic sites and structures.

CI 3.1 Work with the Northfield Heritage Preservation Commission to create a priority list for designating buildings (those that aren’t already listed), structures and districts on local, state and or national historic registers.

CI 3.2 Provide economic incentives and design flexibility to aid in the restoration and long term economic vitality of historically significant buildings in the Downtown.

CI 3.3 Consider becoming an officially designated Mainstreet program by the National Trust for Historic Preservation, or incorporating Mainstreet’s principles into existing economic development, historic preservation, or community planning programs.

CI 3.4 Cooperate with appropriate community groups, such as the Northfield Historical Society, in protecting and enhancing structures in the historic neighborhoods, and improving the general appearance of these areas.

Objective 4: Encourage a traditional development pattern.

CI 4.1 Guide new development to be compatible with, and/or expand on the existing grid network (see Figure 3.3).



Figure 3.3. Left: A conventional subdivision pattern in Northfield showing a disjointed road network. Right: The traditional neighborhood pattern found in the Neighborhood General Zone.

CI 4.2 Provide for a mix of uses to create new neighborhood centers as new development occurs (see Figure 4.6 in Chapter 4).

CI 4.3 Ensure new development provides for areas that contribute to the public realm, such as plazas and other public gathering places.

CI 4.4 Require new neighborhoods to create neighborhood scaled streets, with street trees and sidewalks (see Figure 4.4 in Chapter 4).

CI 4.5 Regulate the placement of buildings onsite by regulating short front yard setbacks to orient buildings to the street/public realm (see Figure 4.4 in Chapter 4).

CI 4.6 Encourage architectural styles and scales that contain a relationship to the overall community identity.

Objective 5: Improve the entry points (gateways) into the community.

CI 5.1 Create gateways at the north and south Hwy 3 entryways near the city limits.

CI 5.2 When appropriate, include attractive landscaping and public art at identified gateways.

CI 5.3 Modify the overlying zoning districts at targeted gateways to create a defined streetscape with building fronts oriented to the street and parking to the rear of the structure.

CI 5.4 Work with the State transportation department to implement traffic calming techniques and pedestrian-friendly crossings on Hwy 3 and Hwy 19.

Objective 6: Continue to host and sponsor local arts and cultural activities and festivals.

CI 6.1 Develop initiatives in collaboration with the Arts and Culture Commission to promote the arts and cultural qualities of Northfield.

CI 6.2 Solicit input from members of the local design community when building or renovating public facilities to enhance the quality of these facilities and grounds.

CI 6.3 Create opportunities, in collaboration with local students and Northfield arts organizations, for the public to contribute to sense of place (e.g., public art, landscaping, and outdoor activity areas).

CI 6.4 Create a community seal to be used in a wide range of public improvements.

CI 6.5 Explore regulations to implement a “percent-for-arts” requirement in community funded projects.

CI 6.6 Develop an “artist in residence” program in the public works department.

CI 6.7 Incorporate public art into the design of existing public places including community buildings and infrastructure.

Objective 7: Continue to support local schools and colleges.

CI 7.1 Coordinate with the school district on population growth and residential development trends in order to reserve sites for future school facilities as population growth may require.

CI 7.2 Cooperate with the local colleges to minimize negative impacts of parking and traffic on Northfield neighborhoods.

CI 7.3 Collaborate with the local colleges to provide the overall community with quality public programs, and quality open spaces.

4. Land Use

Organization

- A. Overview
- B. Goal
- C. Key Findings
- D. Existing Land Use
- E. Land Use Principles
- F. Regulatory Implications
- G. Objectives and Strategies

Purpose

The purpose of the Land Use Chapter is to address how the future land use pattern will be shaped to be more efficient in terms of fiscal impacts of new development, mobility and connectivity, and guiding land use decisions that help the Community protect cherished cultural and environmental resources.

HOW TO USE THE LAND USE RECOMMENDATIONS

The Land Use chapter will be consulted for any **development proposal** based on the following steps. If a proposal is not consistent with recommendations of any one of these steps, the proponent should re-evaluate and make adjustments (or provide justification for deviation) prior to submission. Once there is a formal submission, the staff report will identify whether or not the proposal is aligned with the following three aspects:

1. **Intent:** Development proposals will reflect the spirit and values expressed in the 12 **principles** (statements of intent) (pages 4.9 to 4.13).
2. **Location:** Development proposals will be consistent with the **Conservation and Development Map** (page 4.18) and location descriptions (pages 4.14 to 4.15).
3. **Character:** Development proposals will be consistent with the **Framework Map** (page 4.19) and recommendations and context descriptions (pages 4.15 to 4.17).

A. Overview

The community has been growing in population and land area over the past few decades, and given its attractiveness in the Twin Cities region is projected to continue to grow over the next 20 years.

How new growth and development occurs will dictate everything from fiscal health, to community appearance, and ultimately Northfield's continued attractiveness as a place to live, work, play and learn. Residents have made it clear that protecting and enhancing its small town character is important. This was the predominant theme emerging from the public involvement process as part of this Plan and the 2001 Comprehensive Plan.

The community is at a critical juncture today to make informed and balanced decisions. Land use decisions must consider fiscal impacts on the tax base, economic viability, and influence on the built and natural environments. In order to make balanced decisions and implement the vision (land use goals and principles described in this Chapter) the City needs to follow through on the objectives and strategies contained in this Plan, and prepare and enforce a new set of development regulations. The City also needs to consider how future pressure for annexations from local developers and the adjacent townships will impact the city's character and fiscal health.

Continued outward growth, extending utilities and the road network to areas of "vacant land" is not always fiscally responsible, nor will it work to preserve the small town character. Building inward, looking first at underutilized and undeveloped land already served with infrastructure, is a more sustainable development pattern the community has indicated as a preference. This involves creating incentives to rebuild, redevelop and intensify underutilized areas in the city, while at the same time selectively and strategically pursuing development opportunities on the edges.

Building inward and making more efficient use of land also allows Northfield to retain its highly-valued natural features. Large areas of open space that are forested or under cultivation can be preserved, protecting the much sought after rural character. Stream channels and riparian corridors can be retained and enhanced as greenways linking neighborhoods and districts, and will create new opportunities for recreation and pedestrian mobility.

This chapter outlines the recommendations for addressing land use and the built environment. The remaining sections of this chapter include:

- B. Land Use Goal
- C. Key Findings
- D. Existing Land Use
- E. Land Use Principles
- F. Regulatory Implications
- G. Objectives and Strategies

The goal, principles, objectives and strategies reflect input and key findings that were identified as part of this planning process. **It is important to note the community's vision for the future has not changed significantly since the completion of the 2001 Comprehensive Plan, and guiding principles and goals from the 2001 Plan are reflected in the recommendations of this chapter.**

B. Goal

A goal is a policy statement that states a desired outcome in general terms. The goal for land use is provided below. The goal was developed by considering key findings related to existing land use conditions, and integrating public input generated as part of the Plan update.

An efficient use of land resources that emphasizes strategic development, redevelopment, and land intensification, preserves environmentally significant areas and agricultural resources, preserves a strong and vibrant downtown, preserves of a sense of place, and promotes sustainable planning practices.

C. Key Findings

Existing conditions research was conducted as part of the Comprehensive Plan update. Information was compiled from a variety of sources including the U.S. Census Bureau, existing City GIS data, and existing plans and codes including the 2001 Comprehensive Plan. Some fieldwork was also conducted as part of this analysis, as well as interviews with key stakeholders in the community to gain input on critical components of the built environment.

Two maps with corresponding tables summarize the existing land use conditions in Northfield, the Priority Growth Area and the Urban Expansion Area. Map 4.1 and Table 4.1 show the existing land use by category. The land totals on Map 4.1 and Table 4.1 for areas within the city limits, within the Priority Growth Area, and within the urban Expansion Area do not include land for

rights-of-way and water bodies. Each parcel is assigned to one category regardless of whether the entire parcel is developed. Vacant land that has been approved for preliminary plat by the City, but has not yet been final platted, is identified as “pipeline.”

Map 4.2 and Table 4.2 show the land within these areas that is undeveloped and should be considered developable. Developable lands are those areas that are either vacant or in agricultural use and are not protected or constrained by environmental factors. The developable land figures do not include entire parcels, since some parcels contain areas with development constraints. These figures are intended to provide an overall assessment of available land in Northfield to accommodate future growth.

Outlined below is a summary of key findings related to the existing land use conditions in the community.

Northfield has nearly doubled in land area from 1966 to 2007: Northfield contains 4,908 acres (7.67 square miles), which includes streets and water bodies. Northfield has nearly doubled in land area from 1966 to 2007, growing from 2,443 acres to 4,908 acres. For the purposes of land use analysis, rights-of-way and water bodies were not included in these acreage calculations leaving a total of 4,110 acres within the city (Table 4.1). Northfield's growth has not come without costs related to transportation and utilities, and impacts on the rural landscape. These issues will be addressed in the objectives and strategies.

Agriculture is a shrinking land use type while single family residential is now the largest land use type in the city: The predominant land use within Northfield has changed from agriculture (39.6%) in 1966 to primarily residential (36.3%) in 2007. Single-family residential is the predominant land use within Northfield making up 28.2% of the total land area. College uses comprise 16.7% of the total land area. Agriculture remains the predominant use outside the city boundaries.

Some of the land in the city is not appropriate for development: An evaluation of environmentally constrained land was conducted as part of the Comprehensive Plan update. For the purpose of this analysis, environmentally constrained land was put into two categories: preserve lands and environmentally significant areas. Preserve lands are permanently

protected by federal, state and local regulations. Environmentally significant areas are defined as lands that are not part of the preserve, but due to environmental constraints and limitations, their development potential should be considered for future preservation. Environmentally constrained land is identified on Map 4.2.

agricultural and vacant/pipeline land within the city (323 acres) and then subtracting the preserve and environmentally significant lands that overlap, which has been estimated to be 66 acres.

The city is projected to grow in population and

TABLE 4.1 - EXISTING LAND USE (DATA AS OF JUNE 16, 2008)

Land Use Type	City of Northfield, Minnesota Existing Land Use 2008					
	City		City plus Priority Growth Area		City plus Priority Growth Area plus Urban Expansion Area	
	Acres	Percentage	Acres	Percentage	Acres	Percentage
Public/Semi-Public	358	8.7%	365	5.7%	379	4.4%
Park/Open Space	674	16.5%	674	10.5%	722	8.4%
College	684	16.7%	704	11.0%	704	8.2%
Manufactured Home	37	0.9%	37	0.6%	37	0.4%
Multi-Family Residential	294	7.2%	294	4.6%	294	3.4%
Single Family Residential	1,168	28.2%	1,335	21.0%	1,727	20.0%
Office/Commercial	206	5.0%	222	3.5%	234	2.7%
Industrial	366	8.9%	366	5.7%	366	4.3%
Agricultural	50	1.2%	2,217	33%	3,805	44.9%
Vacant	19	0.5%	24	0.4%	29	0.3%
Pipeline (Vacant)	254	6.2%	254	4.0%	254	3.0%
Total	4,110	100.0%	6,492	100.0%	8,551	100.0%

Source: ACP—Visioning & Planning, Ltd.

TABLE 4.2 - DEVELOPABLE LAND

Land Use Type	City of Northfield, Minnesota Developable Land 2008					
	City		City plus Priority Growth Area		City plus Priority Growth Area plus Urban Expansion Area	
	Acres	Percent of total land	Acres	Percent of total land	Acres	Percent of total land
Agricultural, Vacant, Pipeline Land	323	7.9%	2495	38%	4,088	48%
Environmentally Constrained Land*	66	-	937	-	1545	-
Developable Land	257	6.3%	1,558	24%	2,543	30%

Source: ACP—Visioning & Planning, Ltd.

*The amount of environmentally constrained land within the agricultural, vacant and pipeline areas.

There is a limited amount of land left within the city limits that is available for future growth:

There is approximately 257 acres (or 6.3% of the total land use area) within city limits that are developable (Map 4.2, Table 4.2). Of these 257 acres, approximately 129 acres are planned for residential development, 37 acres are planned for commercial/industrial development, and 91 acres are planned for mixed-use development. This acreage figure is calculated by adding the total amount of

land area: If the projected demand is accommodated, the city would need 1,411 acres of developable land by the year 2027, the year selected for growth planning (see how this acreage was calculated under “How much land could we need?” in this chapter). This is an estimate, and the amount of land needed to accommodate growth depends on the pattern of future growth, the desired balance between housing and commercial/industrial, and the total amount of growth targeted. A more compact

form of growth that promotes multi-modal transportation options will require less land than is projected here, as this projection is based on historic land consumption rates. The priority growth area and urban expansion area have a total of 1,558 and 2,543 acres of potentially developable land respectively (Table 4.2), which accommodates the city's need for an additional 1,411 acres by the year 2027. In 2008, the City reviewed the boundaries of both the Priority Growth Area and Urban Expansion Area from the 2001 Comprehensive Plan and made some adjustments to these boundaries in the 2008 Plan based on technical studies, such as the recently completed water and sanitary sewer plans, as well as a discussion of where growth seemed logical.

D. Existing Land Use

General Land Use Pattern

Land use in Northfield is most heavily influenced by the patterns of development that occurred in the late 1800s. Northfield was founded in 1855, along the banks of the Cannon River. This was an ideal place to create a new town with access to hydrologic power to run the flour and lumber mills that fueled the agricultural economy. These industries, along with the establishment of Carleton College in 1866 and St. Olaf College in 1874, provided a strong economic foundation, and the town quickly grew to a population of 2,300.

During the late 1800s, the downtown began to take shape and by 1900 buildings lined both sides of Division Street which, along with the Cannon River, still forms the centerpiece of the community. Residential development occurred in almost every direction from downtown, but three key forces limited this outward growth: 1) the Cannon River and eventual development of the railroad limited growth in a southwesterly direction; 2) Carleton College land holdings prevented growth from extending to the northeast; and 3) St. Olaf College land holdings further to the northwest enabled growth to fill in between St. Olaf College and downtown. Thus, the predominant pattern of growth occurred in a northerly and southeasterly direction from downtown, a pattern that largely continues today (2001 Comprehensive Plan).

While Northfield was at one time an agricultural center, it has never been immune to economic and cultural change. The community evolved gradually from its center/downtown along the riverfront and has been showing signs of suburbanization since the 1970s as it

experienced expansion pressure from the Minneapolis/St. Paul metropolitan region. The completion of Interstate 35 in 1977 was a major milestone contributing to Northfield's outward growth.

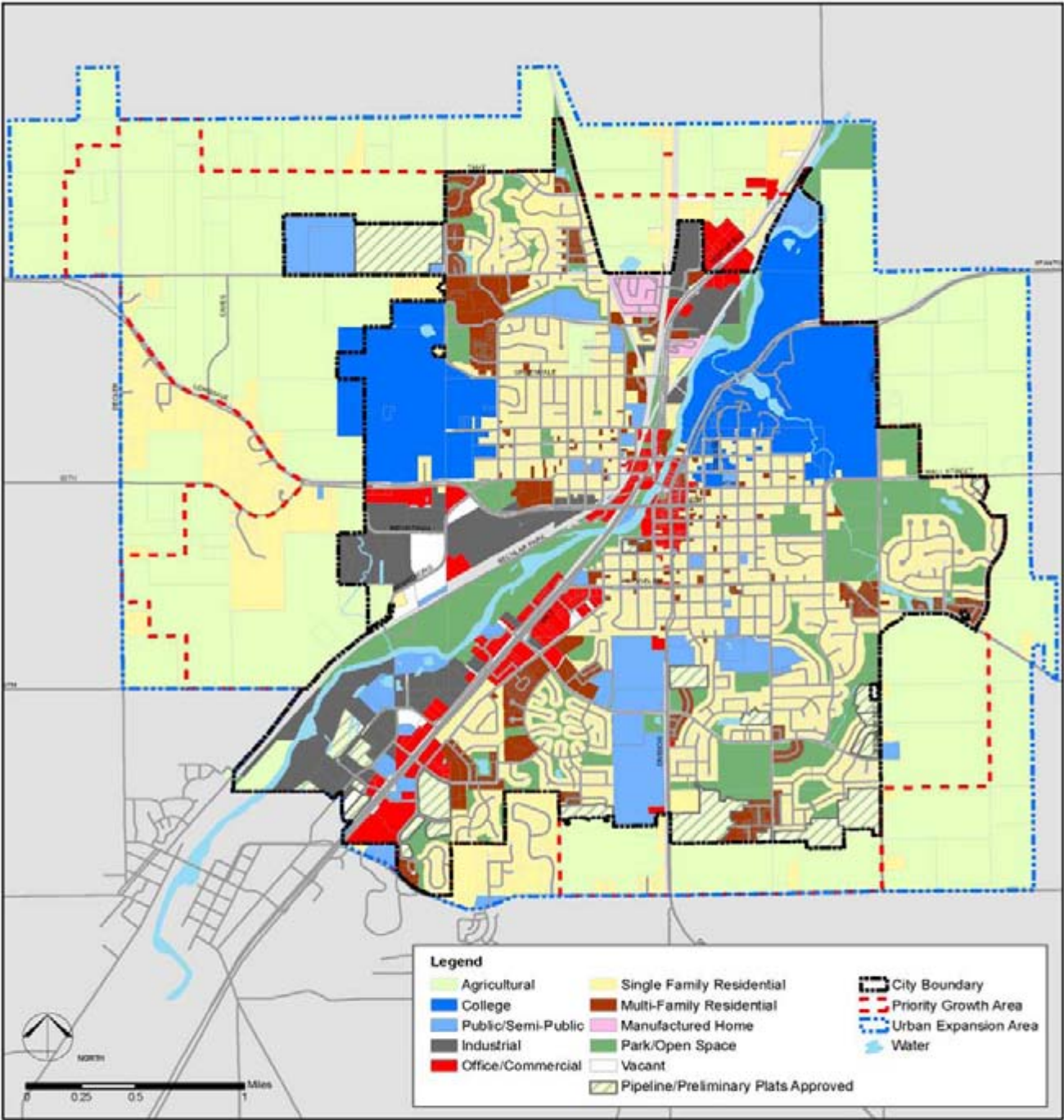
Northfield has experienced an erosion of what remained of its agricultural makeup since then. Residential growth has been rapid since the mid-1980s due to direct highway connections, and the community has been facing the challenge of becoming a suburban bedroom community on the southern fringe of the metropolitan area.

Many of the buildings in downtown Northfield are well-preserved examples of late 19th/early 20th century architecture. The presence of the local colleges has created opportunities for local business owners in the downtown to adapt to growth pressures and changing economic conditions. Older downtown businesses have been replaced by specialty shops, pubs and coffee houses. Today the downtown is more extensive and preserved (the buildings and public realm) than that of otherwise similar mainstreet communities in the Midwest.

The evolution of the local economy today is demonstrated by the growth in businesses serving the growing senior citizen market. The Village on the Cannon, Millstream Commons, and new construction at the Northfield Retirement Center campus are all positive economic indicators. Development of new residential and commercial projects along the river on the north edge of downtown, and the addition of commercial development along the southern Hwy 3 corridor, are signs of economic growth. However, many residents have noted that the character of large format retail that fronts major transportation corridors is not preferred, and does not match the existing character of the community.

How much land could we need? Between 2006 and 2027, the city is projected to grow by 6,500 people for a total population of approximately 25,600 residents, based on an extrapolation from 2020 projections in Chapter 2. The amount of land needed to accommodate the projected population growth was calculated using land consumption rates (acres/person). Two different land consumption rates were generated for the purpose of this analysis: a historical (conservative) consumption rate that takes into account the dense urban core, and a current land consumption rate that is based on recent growth from 1970 to date.

MAP 4.1 – EXISTING LAND USE

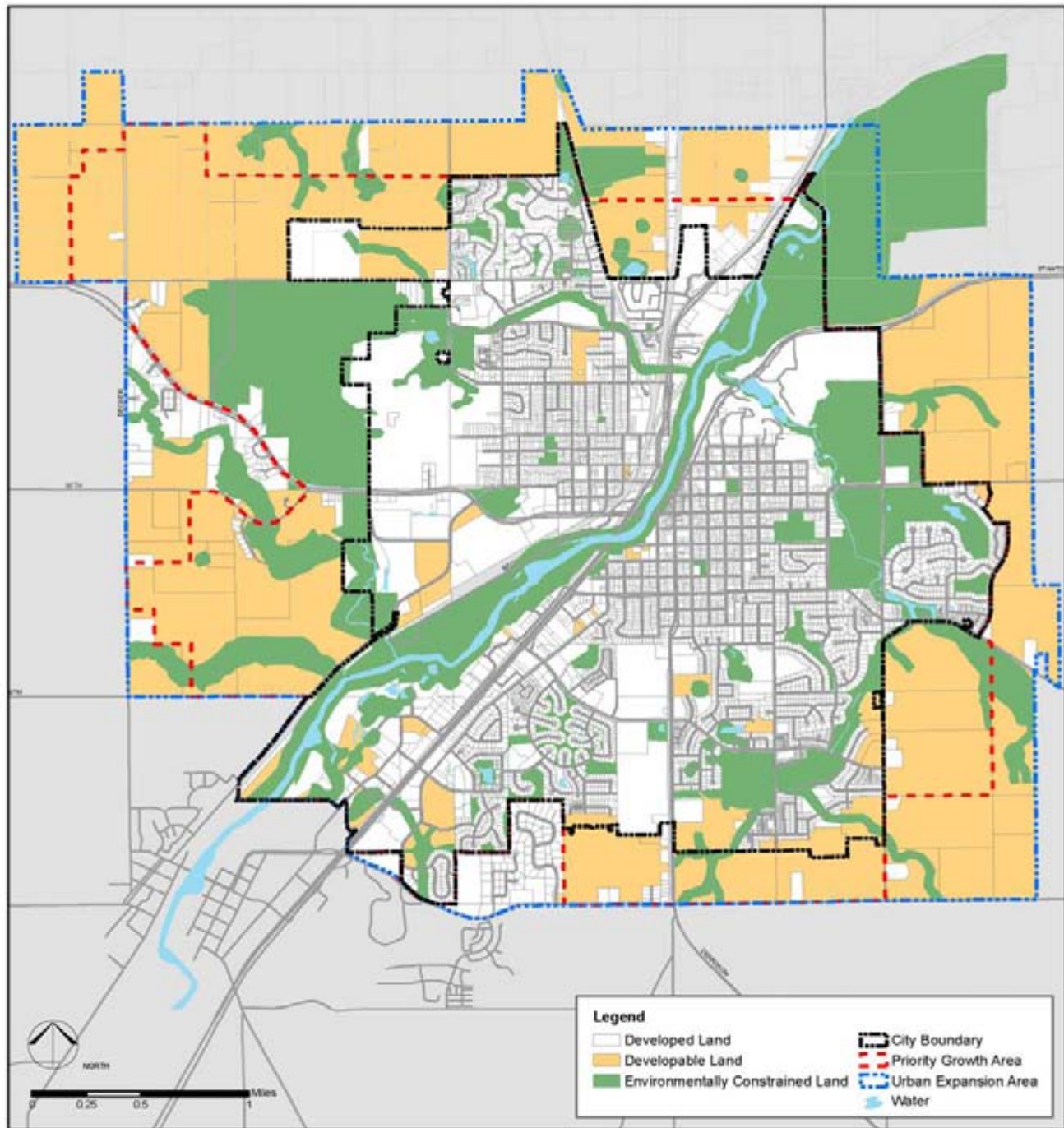


EXISTING LAND USE

NORTHFIELD COMPREHENSIVE PLAN
NORTHFIELD, MN
Revised November 12, 2008
ACP-VISIONING & PLANNING, LTD.

Source: ACP—Visioning & Planning Ltd.

MAP 4.2 - NORTHFIELD DEVELOPABLE LAND



DEVELOPABLE LAND

NORTHFIELD, MN
 NORTHFIELD COMPREHENSIVE PLAN
 Revised November 12, 2008
 ACP-VISIONING & PLANNING, LTD.

The historical (conservative) land consumption rate accounts for all development that has taken place since the community was formed. The total amount of developed land, 3,798 acres was divided by the 2006 population estimate of Northfield (19,413), which equates to a historical land consumption rate of 0.196 acres/person.

The current land consumption rate was calculated by taking an average of the land consumption rates for the time periods 1970-1980, 1980-1990, 1990-2000, and 2000-2006. These time periods were selected due to the availability of corresponding population and land use data. The change in population and change in developed land area was calculated for each of these periods (see Table 4.3). The change in developed land area was divided by the change in population to determine the land consumption

projected population based on both land consumption rates is shown in Table 4.4 for the years 2020 and 2027.

If the projected population demands were accommodated, the city would need 1,411 acres of land by the year 2027. This calculation is an average of the acres of land needed historically (1,213 acres), and the acres of land needed according to current trends (1,609 acres). These 1,411 acres will be provided to the city in the form of infill, redevelopment, land intensification, and greenfield development. An average of these two figures was used due to the general policy direction of the Plan, which directs the City to promote a more traditional neighborhood development pattern. As a result of this general policy direction it is assumed that the future development pattern will be more dense than that which

TABLE 4.3 - NORTHFIELD DEVELOPED LAND CONSUMPTION RATES 1970-2006

Year	Population	Dev. Land Area	Time Period	Change Pop.	Change Land	Acres Per Person
2006	19,413	3,798	00-06	2,266	519	0.23
2000	17,147	3,279	90-00	2,463	832	0.34
1990	14,684	2,447	80-90	2,122	545	0.26
1980	12,562	1,902	70-80	2,327	479	0.21
1970	10,235	1,423	60-70	1,528	-	-

Source: ACP—Visioning & Planning, Ltd.

TABLE 4.4 - NORTHFIELD DEVELOPED LAND PROJECTION

Time Period	Population Change	Acres Per Person (Current Rate)	Acres Needed (Current Trends)	Acres Per Person (Historic Rate)	Acres Needed (Historical)
2006-2020	4,187	0.260	1,089	0.196	821
2020-2027	2,000	0.260	520	0.196	392
Total	6,187	-	1,609	-	1,213

Source: ACP—Visioning & Planning, Ltd.

rate for each time period. The four consumption rates were averaged together in order to show a more current trend of land consumption of 0.26 acres/person. This estimate is more aggressive than the previous consumption rate because it only accounts for development that has occurred since 1970, and is not skewed by the density of the downtown and surrounding neighborhoods.

Northfield has an estimated 2006 population of 19,413 (according to the State Demographer's office) and could have approximately 23,600 residents by 2020 and 25,600 residents by the year 2027 (Source: Development Economics, Chapter 2 of the 2008 Northfield Comprehensive Plan, Northfield Comprehensive Sanitary Sewer Plan). The amount of acreage needed to serve the

has occurred over the past 35 years.

These projections depend on a number of variables. Regulatory policy that accommodates and provides for incentives for infill, redevelopment and land intensification can significantly change the amount of land consumed. Also, there is currently an over supply of housing which needs to be absorbed prior to significant residential expansion/growth (see Chapter 11, Housing).

These projections should be viewed with the consideration that future growth and development in the community might not follow historic or current patterns of development. These calculations will, however, help the City plan for where and how the growth should occur.

Figure 4.1 Types of Developable Land**Infill**

- Undeveloped
- Mostly bordered by developed land
- Most likely served with utilities with sufficient capacity to accommodate development
- Most likely served by roads with sufficient capacity to accommodate development

Redevelopment/Intensification

- Already developed
- Bordered by developed land
- Most likely served with utilities with sufficient capacity to accommodate development
- Most likely served by roads with sufficient capacity to accommodate development

Greenfield

- Undeveloped
- May not be contiguous to any developed land
- Probably not served with utilities with sufficient capacity to accommodate development
- Probably not served by roads with sufficient capacity to accommodate development

When will we run out of land within the city limits?

As previously stated, there is an estimated 257 acres of land within the city limits that is available for development. Most of this land is guided for residential development. To answer the question, “when will we run out of land within city limits?”, it is important to consider various factors that affect residential and commercial/industrial development.

By 2008, the residential housing market had slowed notably since the housing “boom” in the first years of the 21st century. It is difficult to predict when the housing market will recover, and the city will again need to accommodate greater numbers of parcels for residential development. A housing market analysis completed in 2007, and discussed in Chapter 11, states that the city has enough land within the city limits to accommodate 3-5 years of housing growth. This situation could change depending on the future of the housing market. By contrast, it was noted in the City’s 2006 Economic Development Plan that there is little vacant land for commercial and industrial development. Most of the vacant land shown on Map 4.1 is not suited for this type of land use, especially for those industries in need of large tracts of land. Therefore, it could be argued that the city already has run out of vacant land within the city limits for commercial and industrial development. However,

opportunities exist for infill, redevelopment, and land intensification.

How and Where Do We Grow? As part of the Plan update a series of public meetings were held to gather input from the public. At these meetings the public provided their insight as to how and where they thought the city should grow to accommodate the projected population growth.

At the first public meeting a question was posed, “Where would you like to direct future development?” Three options were provided: infill, redevelopment (land intensification) and greenfield areas. These terms are defined in Figure 4.1. On Map 4.3, infill sites are designated as “Infill Sites”, and redevelopment (intensification) sites are designated as “Redevelopment/Intensification Sites.” Participants listed what percentage of future growth they wanted to see in each of these categories. It was acknowledged that this is a complex question, and one that requires much information and analysis, but the intent was to gauge the participants’ attitudes about the distribution of future growth. Averages of all the responses were tabulated. Table 4.5 summarizes the results of this exercise.

The results indicate participants preferred to grow in infill, redeveloped and intensification areas (approximately 75% of new growth) as opposed to developing in greenfield locations. More importantly, the results indicate a desire to use land resources more efficiently. Participants at the meeting were also presented with the question “How Do We Grow?” Participants expressed a strong desire for traditional neighborhoods that are compact and walkable and supported by mixed-use commercial centers. Conserving open space and rural areas is also a priority, as well as protecting and enhancing the downtown core. The results of the “Where Do We Grow” and “How Do We Grow” exercises helped to shape a set of land use principles and land use maps described in Section E of this chapter.

TABLE 4.5 – WHERE DO WE GROW RESULTS

Growth Area	Percentage
Redevelopment /Intensification	36%
Infill	37%
Greenfield	26%
Total	100%

Source: Public Meeting April of 2007

There is a strong desire among community leaders and residents to have balanced growth when approving residential, commercial and industrial developments. With the housing “boom” in the first years of the 21st century, there was a large area annexed and developed for residential development. Now, there is a belief that there is an imbalance between the amount of residential development and commercial and industrial development. The city recognizes that since Northfield is a freestanding community, commercial and industrial development is an important source of property taxes and jobs that support Northfield’s ability to remain freestanding, rather than become a “bedroom” community of the Twin Cities metropolitan region.

The desire for more balanced growth should cause City leaders to carefully consider when and where development should occur. As has been previously stated, among residents there is a desire first for infill, redevelopment, and land intensification within the existing city limits, and then annexation in greenfield areas of the townships. This leads to more compact development within the city limits, which is a better use of Northfield’s land resources. Also, since the city has fewer opportunities for commercial and industrial development, infill, redevelopment, and land intensification should focus on those types of land uses.

To facilitate this type of development activity, the City should develop ordinances and policies in line with this goal. When annexation in greenfield areas is proposed, a detailed analysis should be completed to clarify how the city as a whole will benefit. As of the writing of this Comprehensive Plan, greenfield development, as defined in Figure 4.1, will require significant investments in public infrastructure; and, therefore, it seems most appropriate for commercial and industrial land uses due to higher tax revenues and the desire for additional property taxes and job opportunities.

E. Land Use Principles

This section outlines a set of land use principles, which are statements of intent that describe the direction of future development, redevelopment, and land intensification in the community. These principles will help guide the City on how to use its limited land resources efficiently and effectively to continue to foster a high quality community with a strong economy and distinct sense of place.

The land use principles should be used as a guide to help the City in evaluating future growth. Policy decisions, capital improvements, and development applications should consider the land use principles, and support their intent. If a project, program or policy does not support the principles it should be re-evaluated and made consistent with the intent of the principles.

The principles reflect a variety of land use topics and themes. They focus on the quality, pattern, character and organization of development. It should be understood that the local government can take action that induces or dampens, maintains or changes future development patterns. Outlined below are the principle statements:

1. The small town character will be enhanced.

Northfield’s built environment is defined by a distinct land use pattern and architectural character that includes a mix of traditional residential neighborhoods, a compact commercial shopping district and well-defined commercial and industrial areas. This character, referred to as “Old Northfield”, is cherished by local residents and distinguishes the community in a regional context, setting it apart from Twin City suburbs and bedroom communities (See Figure 4.2).

- a. “Old Northfield”, including the downtown core and older historic neighborhoods, will define Northfield’s character.
- b. Future areas for growth and development will reflect the essential elements of “Old Northfield” with respect to the form and pattern of development.
- c. New development, redevelopment, and land intensification will be sensitive to pedestrians in terms of scale and walkability.
- d. Mixed-use will be the preferred development approach when accommodating retail and office uses.

2. The natural environment will be protected, enhanced and better integrated in the community.

Northfield’s natural environment has a variety of ecological systems and open spaces. Residents have a strong environmental ethic and support the protection of critical environmental areas and desire open spaces for recreation and peace of mind.



Figure 4.2. These images, taken from the 2001 Comprehensive Plan, represent Northfield's small town character.

- a. The Cannon River is a defining natural feature of Northfield, and the City will commit to protecting and enhancing the river corridor when development, redevelopment or land intensification occurs. The corridor will be integrated in development, redevelopment or land intensification design plans to create high quality public spaces that connect people to the river (See Figure 4.3).



Figure 4.3. The Cannon River is a critical environmental feature that needs to be protected and celebrated by better integrating it into the existing fabric of the community.

- b. Convenient and accessible recreational opportunities will be provided on parkland and green spaces for all ages. These areas will be enhanced and new areas will be set aside that connect people to the natural environment, to promote recreational opportunities that support active and healthy lifestyles.
- c. The green spaces will be protected and enhanced as cherished community assets.

3. The preference for accommodating future growth is in infill locations, then redevelopment/land intensification opportunities, and then on the edge of existing developed areas.

The existing pattern of development has been to grow outward at the edge of the city or fringe areas especially for residential development. This continued outward pattern of development is compromising the rural character of the community, creating a disconnected development pattern that is auto-oriented, while increasing the demand for infrastructure and community services.

- a. Priority areas for future development will be identified for all three areas (infill, redevelopment/intensification and greenfield). It should not be implied that infill and redevelopment/intensification capacity must be consumed prior to support for any greenfield development.
- b. When infill, redevelopment, or land intensification occurs it will be done with great care so as not to compromise the quality of life for existing residents as a result of inappropriate building placement or size, unreasonable traffic impact or other identifiable negative consequences.
- c. When new development occurs at the edge of the community through annexations, it will be done with great care. This can be done by creating well-defined residential neighborhoods, a green edge and well designed places for commerce, so as not to compromise the rural landscape or the small town character.
- d. When new growth occurs on the edge of the community through annexations, it will be done with a planned growth pattern which minimizes infrastructure and community services.

4. New and redeveloped residential communities (areas) will have strong neighborhood qualities.

The trend of residential growth has been to create subdivisions with a single use and building type. Typically these subdivisions are not human-scaled or walkable and are often defined by wide streets in a pattern that does not connect residential areas to each other, or the greater community (See Figure 4.4).

- Neighborhoods will have pedestrian friendly streets containing sidewalks, accommodate automobiles at lower speeds and volumes and provide for bicycle mobility on the street giving priority to the pedestrian experience.
- Community gathering areas will be integrated into new residential areas to promote opportunities for social interaction and public events.
- Basic retail service may be located nearby (accessible via walking and/or biking) or integrated with residential areas in the form of neighborhood centers.



Figure 4.4. These images represent the types of neighborhoods that have strong neighborhood qualities (street trees, sidewalks, open space).

5. Environmentally-sensitive and sustainable practices will be integrated into new developments and redeveloped areas.

The community has a high level of environmental awareness, which is reflected in local energy choices. Residents want to continue to employ creative and

innovative choices to reflect the community's commitment to sustainability and healthy living (See Figure 4.5).

- New construction will employ context sensitive design to reduce impacts on the natural environment.
- Compact/cluster subdivision design will be the preferred pattern of residential development outside the City's Urban Expansion Area.
- Environmental sensitivity and sustainability will be reinforced by an effort to attract environmental technology businesses, which represent one of six business and industry niches that are ideally suited to be recruited to Northfield.



Figure 4.5. Newly developed areas outside the Urban Expansion Area should take on a conservation subdivision pattern, creating open space and protecting critical environmental features.

6. Places with a mix of uses that are distinctive and contribute to increasing the city's overall vitality are preferred.

The local identity defined as "Old Northfield", which includes a variety of uses mixed together on the same block, or same building, reflects positively on the community. Over the last fifty years land uses have been segregated from one another, which detracts from this identity.

- Mixed-use centers, places that mix small-scale retail, residences, offices and civic uses will become part of

the new development pattern of the city, where applicable (See Figure 4.6).

- b. New opportunities will be created for residents to live and work in and around the downtown.
- c. Mixed-use centers will be compatible in scale and character to surrounding uses and develop in a form that reflects “Old Northfield”, including such elements as building mass, placement and orientation to the street.
- d. Districts will be designated for commercial and industrial uses that are not appropriate in a mixed-use setting. Commercial and industrial development is vital to distinguish Northfield in the larger regional context. The creation of jobs and the expansion of the tax base will continue to set Northfield apart from the suburban residential communities of the Twin Cities metropolitan area. This will also support the City’s economic development agenda as outlined in the 2006 Economic Development Plan.



Figure 4.6. Mixed-use developments should have neighborhood sensitive qualities.

7. Neighborhood-serving commercial will be small scale and integrated with the residential context.

- a. Neighborhood-serving commercial will occur in Northfield in a pattern that contributes contextually to the surrounding neighborhood district and street.
- b. Neighborhood-serving commercial will not be designed to be single-use and auto-oriented with parking in front and buildings disconnected from the streetscape. Neighborhood-serving commercial buildings will reflect the form and character of the neighborhood vernacular or historic context of the community.
- c. Neighborhood-serving commercial development, when located in a residential context, will reflect the qualities of the residential context with respect to

form, scale and character. Neighborhood-serving commercial will be sited in a manner that is pedestrian-friendly.

8. A wider range of housing choices will be encouraged – in the community as well as in neighborhoods.

In the recent past, housing developments have been developed with homogenous unit type and pricing. This has created a monotonous character to residential developments and has segregated residents socially and economically. Housing developments have also catered to larger families with above average household incomes (which does not reflect demographic trends) thereby limiting more affordable housing opportunities.

- a. New residential development will offer a variety of housing types and prices, including affordable and workforce housing.
- b. Housing diversity will be integrated into the fabric of the neighborhood.

9. Rural character of certain areas of the community will be protected.

The rural character is a defining element in creating Northfield’s identity and provides the setting for the “small town” character. The primary elements that make up this character are the rural roads, expansive agrarian views and rural architectural vernacular.

- a. The open space and land currently in agricultural use in the community will be strengthened and protected where appropriate.
- b. Public investments, e.g., roads, will be improved in a manner that strengthens the rural character.
- c. Initiatives will be pursued (such as Preservation Land Trusts, Development Easements, and Conservation Design Development) to protect the rural character.

10. Streets will create an attractive public realm and be exceptional places for people.

Many of the local streets are wide and are designed primarily to facilitate the movement of automobiles (e.g., ignore the needs of pedestrians and cyclists). The wide nature of the streets encourages a higher rate of travel for motorists, and increases the distance between building fronts, which detracts from the pedestrian experience and quaint small-town character (See Figure 4.8).

- a. Roadways and streets are important elements of the built environment and will strengthen the character of

the setting. Roadways and streets will be given greater consideration as part of future development to ensure they contribute to the neighborhood character and people-oriented functions.

- b. The City will take great care in protecting the rural roadway character on the edge of the community.
- c. Buildings will be situated on their site to define a high-quality streetscape.

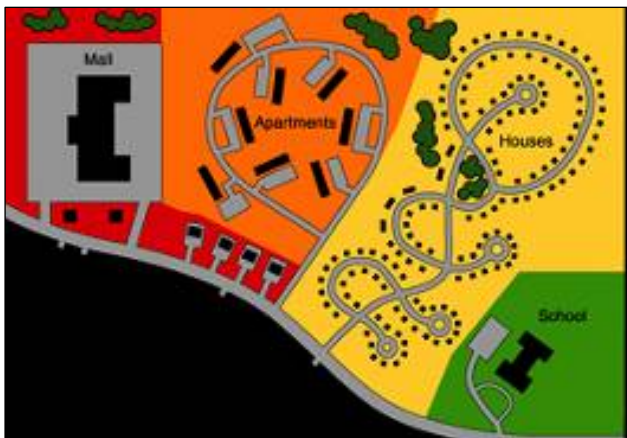


Figure 4.8. These two images illustrate how connections in the transportation framework can improve mobility for automobiles and pedestrians (Source: DPZ).

11. Places will be better connected, in part to improve the function of the street network and also to better serve neighborhoods.

Streets that are disconnected limit the flow of traffic in the community by forcing traffic onto major and minor arterials, which can create traffic congestion. Encouraging an interconnected street pattern will create more travel options for residents to arrive at destinations, thereby decreasing travel time/distance, reducing congestion and improving wayfinding.

- a. The street pattern will be improved to keep local traffic off major arterials, and high-speed through traffic off local streets.
- b. A better connected grid or modified grid street system is the preferred network for future development and redevelopment.
- c. The development, redevelopment, or land intensification along commercial corridors will incorporate traditional patterns reflected in “Old Northfield”, which emphasizes pedestrian mobility and the relationships of buildings to one another and the public realm.
- d. The connections between Northfield and the regional transportation systems, including State Hwys 19 and 3, and County Roads 47 and 1, among others, that support future development will be enhanced.

12. Opportunities will be created to walk and bike throughout the community.

A large percentage of residents prefer to make trips via walking or biking for recreation or other uses, and desire to recreate on multi-use paths. Currently, there are limited opportunities for walking and cycling, which encourage more trips made via the automobile. This contributes to local congestion and potential for decreased air quality, while limiting healthy lifestyle choices for residents (See Figure 4.9).

- a. The design of local streets will encourage pedestrian and bicycle movement through features such as sidewalks, bikeways, narrower street widths, and high quality planter and buffer strips to protect the pedestrian.
- b. Sidewalks, walking trails and bikeways will be connected to public parks and other destinations, including shopping and entertainment areas.
- c. Biking and other alternate forms of transportation will be provided as a viable means of transportation.

Land Use Plan

The conceptual land use framework for Northfield focuses on three areas for future growth and development: infill, redevelopment, and greenfield. The development trend over the last 30 years has been to favor greenfield sites over infill or redevelopment sites. Greenfield sites are often zoned for low density residential and are usually easier to develop than their counterparts.



Figure 4.9. A variety of paths can accommodate pedestrians, and expand mobility options.

Infill sites are frequently the “next to develop” and typically already have access to infrastructure. Even though these sites are undeveloped, the fact that they are already zoned gives those specific entitlements or the right to develop certain land uses at certain densities. Redevelopment and intensification sites present the biggest challenge to develop as they have existing structures, and the community has an expectation or desire for a similar use that currently exists.

The amount of greenfield development that has occurred over the past few decades has posed some challenges. The traditional neighborhood and transportation framework has become disconnected as a result of new growth, which has reflected a conventional suburban subdivision pattern. In addition, new growth in outlying areas has been single use developments, primarily accessible by automobiles and in some cases lacks pedestrian amenities. This development pattern has been noted by the community as undesirable.

In considering the public’s vision for future growth a series of land use maps were created. The land use maps reflect the community’s desire to return to a more traditional development pattern that is connected, and promotes inward rather than outward growth. The land use maps are intended to act as a framework for future

development. These maps should be considered when evaluating future development, and generally illustrate the preferred development pattern.

The land use maps are not based on zoning or existing land use. The maps are based on the understanding that a community is not made up of zones and artificial geographical or political boundaries, but rather the true framework of the community, or “context zones.”


Land Use Maps

This section of the Plan describes the two land use maps. These maps should be used as a guide when considering future growth and development. They are intended to be general guidelines, which may change over time as growth occurs.

The Conservation and Development Map and the Framework Map are described below. Illustrations 4.2 and 4.3 show graphic examples of street types appropriate in each concept area, while Table 4.6 indicates the street types that are appropriate for the development concept areas. (The City’s Land Development Code will provide more specific direction on street character.)

Conservation and Development Map. The community has choices as to how and where it will grow and these are expressed in the Land Use Principles (Section E of this chapter). The Conservation and Development Map illustrates, in graphic form, *where* the Principles could be implemented, and also illustrates areas to be conserved as open space and areas to be developed, redeveloped, intensified or infilled. The Priority Growth Area and Urban Expansion Area have been identified as the Managed Growth and Conservation Development areas respectively (See Map 4.3). The Priority Growth Area and Managed Growth area should be considered first in annexing property due to their proximity to existing development and public infrastructure within the city limits. By contrast, the Urban Expansion Area and Conservation Development area are less of a priority due to their distance from existing development and difficulties and expense in extending public infrastructure. Elected and appointed City officials should give careful consideration to these principles when reviewing annexation requests.

The following describes each component of the Conservation and Development map (Map 4.3):

 **Environmentally Significant Areas:** Lands that are not part of the preserved lands but due

to environmental constraints and other limitations should be considered for future preservation. These lands include floodplain areas, areas with hydric soils with steep slopes (over 12%) and wetlands, all of which could be developed but not without significant additional effort or cost.



Core Enhancement: Focused on the downtown area for continued infill as a mixed-use center with improved river access.



Neighborhood Conservation: Areas designated for neighborhood preservation and continued maintenance of buildings, streets and infrastructure.



Corridor Redevelopment: Areas best suited for redevelopment and land intensification along the corridor with a mix of uses, with increased intensity at major nodes, or intersections, and with a redesign of existing roadways to calm traffic flow.



Managed Growth: Areas that are supportive of mixed-use development because of their proximity to planned or existing roadways and utilities. They include both a traditional neighborhood pattern (walkable with a distinct center and edge) and an open space development pattern. Districts (industrial, university, etc.) because of their size, function and configuration are not expected to conform to the neighborhood or open space/clustered pattern of development. Care should be taken to ensure that new development is compatible with existing development patterns in the area. (See “Context Zone” descriptions in the next section.)



Conservation Development: Areas that have value as open space but are subject to development because County zoning entitlements are already in place. They include a predominantly open space/clustered development pattern.

Framework Map. The Framework Map shows two complimentary components of the land use plan. First, it includes the anticipated street network (a logical extension of the existing network) within the urban

expansion area and the bike paths that are planned for the community’s natural and man-made (e.g., railway and roadway) corridors. The spacing of intersections in the network is generally based on the neighborhood dimension (pedestrian shed) of a one-quarter mile radius from center to edge (See Map 4.4 and Illustration 4.1).

The second component of the Framework map is the form and character of existing and future development represented through the nine context zones outlined below. As the community develops, it is the intent of this map to guide the pattern of development.


Context zones are areas of the city with a combination of elements that create a specific character (See Figure 4.10). The characteristics used in defining the context zones include: lot size and coverage, land use, density, street pattern and connectivity, and building design. The identification of context zones illustrates how the city has developed over time, and how the development pattern has changed. For the purposes of this plan, the context zones describe the existing character *and* indications of how the character can evolve over time. The Land Development Code will provide greater specificity about the character of new development, redevelopment and land intensification.

It is important to note that there is a wide variety within each context zone. The intent is to capture the general character attributes of particular areas within the community.


Figure 4.10 Northfield's Nine Context Zones

- Core
- Center
- Corridor
- District
- Educational District
- Neighborhood Central
- Neighborhood General 1
- Edge
- Rural


Nine different context zones in Northfield are identified and characterized. These areas are illustrated in Map 4.4 (a detailed description of the context zones, as they existed in April 2007, can be found in Appendix A). Civic Uses on Maps 4.3 and 4.4 include public schools and the Northfield Hospital. The following generally describes the existing character of each context zone and the City’s intent for the evolution of each zone in the future:

 **Core:** The Core is the zone of densest development and is located in the center of the original plat of Northfield. The area offers a mix of uses including residential units and employment and commercial areas. The area is highly walkable due to the compactness of development.


Future Character: The essential character of the Core (mixed use, compact and highly walkable) should be re-inforced with future development.

 **Center:** The Center is the transitional zone of development between the Core and the neighborhood areas. This area also offers a mix of uses including employment, commercial and residential areas, but development within this zone is not as compact as the Core zone. The Center zone contains large structure commercial development with major parking areas. This area sees a decrease in walkability due to pedestrian conflict zones created by the large parking lots located here.

Future Character: Future development in the Center zone should contribute to connecting the Core to the adjacent neighborhoods. Greater intensity of development should be encouraged.


 **Corridor:** The Corridor zones can be found along arterials or major collectors. These zones include all the parcels that front the roadway. Corridors are generally made up of non-residential uses (e.g.: commercial or office). These zones are often not pedestrian friendly. They may include sidewalks; however, the auto-oriented nature of the corridor zones and the amount of traffic from commercial structures creates conflict zones for pedestrians.

Future Character: The Corridor zone is likely to continue to be auto-oriented, but future development, redevelopment and land intensification should take on greater intensity, mix of uses and pedestrian accommodations.


 **District:** Districts are generally special use areas found within the city. The districts within Northfield are typically of a single use; in this case composed of large business or industrial

structures. Districts are located along collectors and arterial roadways.


Future Character: No change in character is anticipated in these areas with respect to future development.

 **Educational District:** The other district type found within Northfield is an Educational District. Educational districts within the city are created by the campus areas of St. Olaf and Carleton Colleges and comprise a significant portion of the city. The campus areas are walkable and offer many recreational opportunities for students and residents. The Carleton College campus has an arboretum, and St. Olaf College has preserved natural wetlands and prairie lands, which contributes to a large amount of open space for the community.

Future Character: The essential campus character of the Educational Districts are unlikely to change significantly in the future.


 **Neighborhood Central:** The Neighborhood Central zone is typified by traditional urban development consisting of detached single-family homes on smaller lots (10,000 to 14,000 square feet), which may also include some multiple-family and mixed-use type developments. These areas are often walkable and include a range of housing types. These neighborhoods include consistent block size and a range of housing styles. However, the edges of these areas begin to transition from the urban type square grid to the suburban style curvilinear development, and begin to lose consistency with square blocks as well as longer rectangular blocks.

Future Character: The essential, existing character of the Neighborhood Central zone should be re-inforced with future development.


 **Neighborhood General I:** The Neighborhood General I zones are found outside the historic plat of Northfield and are typified by single family homes with lots that are generally larger than those found in Neighborhood Central. There is a

significant change in the street framework within this district, moving from a linear grid to curvilinear. The change in framework reduces the connectivity and accessibility of the road network. The diminishing quality of connectivity and accessibility due to block length and a single use zoning pattern creates an area that is less walkable than the Neighborhood Central zone.

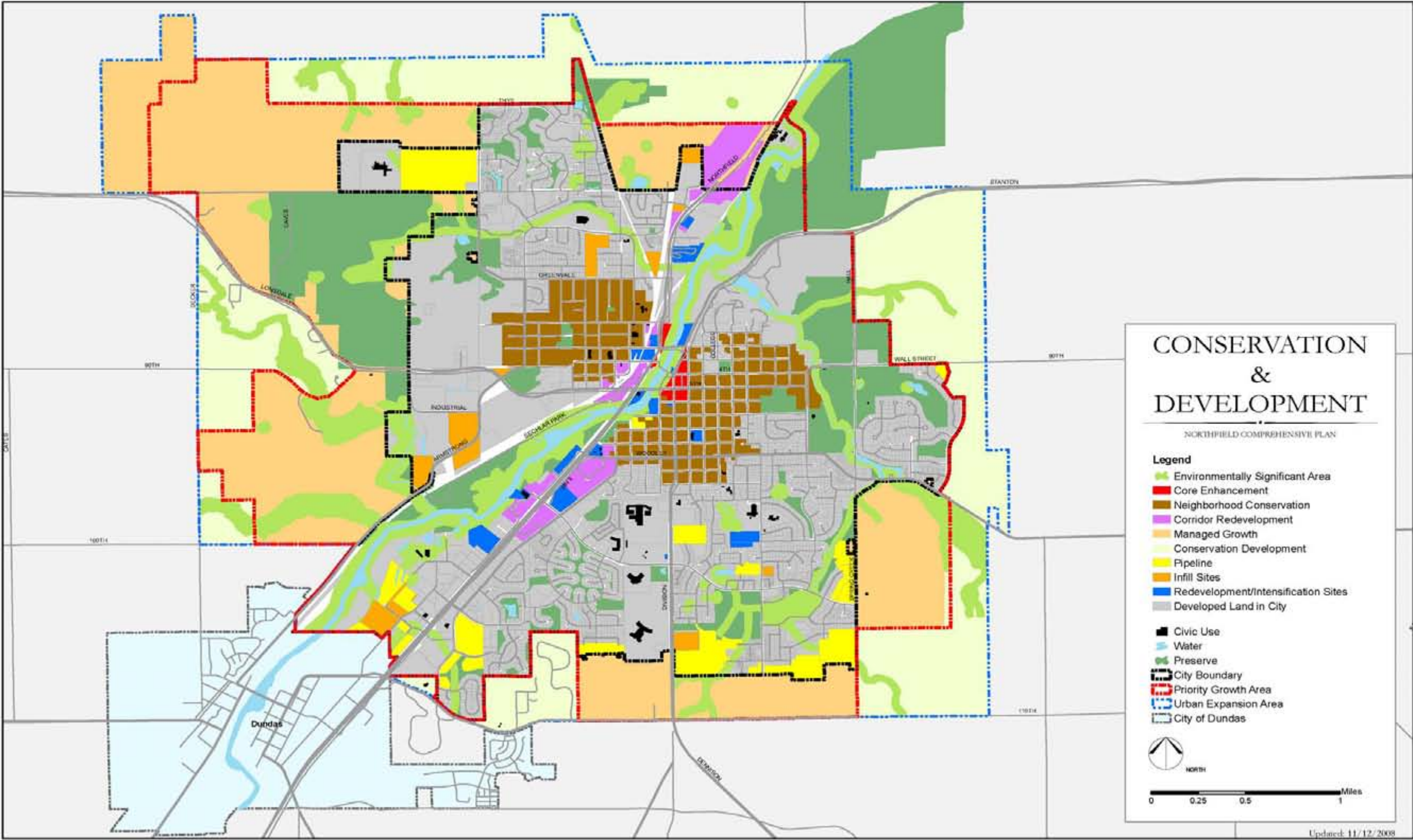
Future Character: While considering the adjacent pattern typified of this zone, future development in the Neighborhood General I zone should be more pedestrian friendly and reflect traditional neighborhood qualities, such as a gridlike street pattern, the built form's relationship to the street, and street connectivity. These qualities are further explained in the Land Use Principles found earlier in this chapter.

 **Edge:** Edge zones are typically found in outlying areas of the community near Northfield's municipal boundaries. The framework of development in these zones is similar to Neighborhood General I with curvilinear streets and culs-de-sac. The street network in this zone lacks sufficient connectivity relative to Neighborhood General I, deterring pedestrian mobility and making it more difficult for police, fire, and other emergency management services to provide adequate coverage and response times to residents in these areas.

Future Character: While considering the adjacent pattern of the existing Neighborhood General I and the Rural context zones, future development in the Edge zone could be more pedestrian-friendly and reflect traditional neighborhood qualities utilizing open space development concepts.

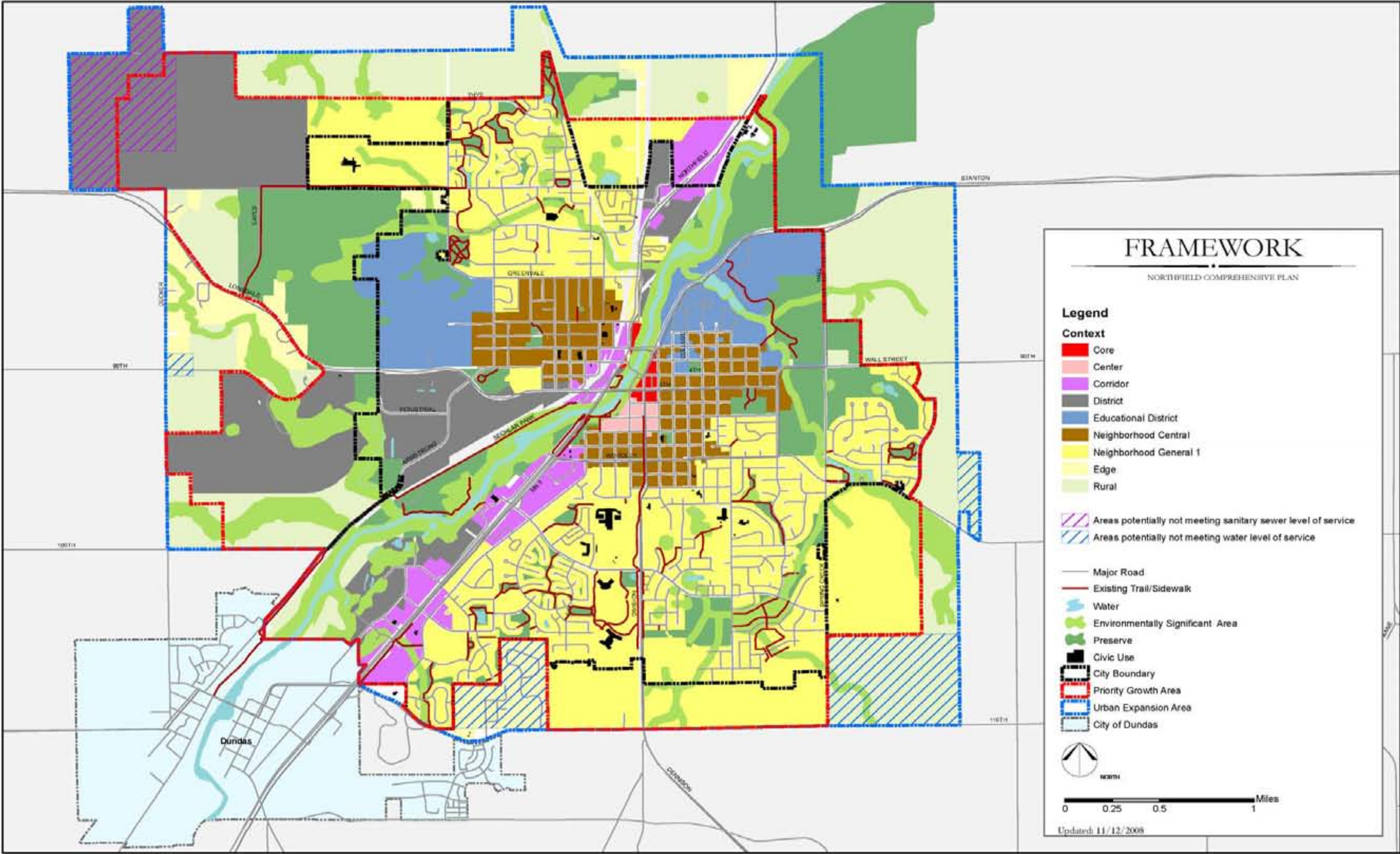
 **Rural:** Rural zones are composed of primarily agricultural uses and are located outside of the city. Residential uses are found in rural zones, but they are limited to those residences associated with agricultural production in the zone. Preserve and environmentally sensitive areas are also located within this zone. Rural zones define the majority of the area outside the city in the priority growth and urban expansion areas.

MAP 4.3 – CONSERVATION AND DEVELOPMENT MAP



Source: ACP—Visioning & Planning Ltd.

MAP 4.4 – FRAMEWORK MAP



Source: ACP—Visioning & Planning Ltd.

ILLUSTRATION 4.1 NEIGHBORHOOD PATTERN CONCEPTS

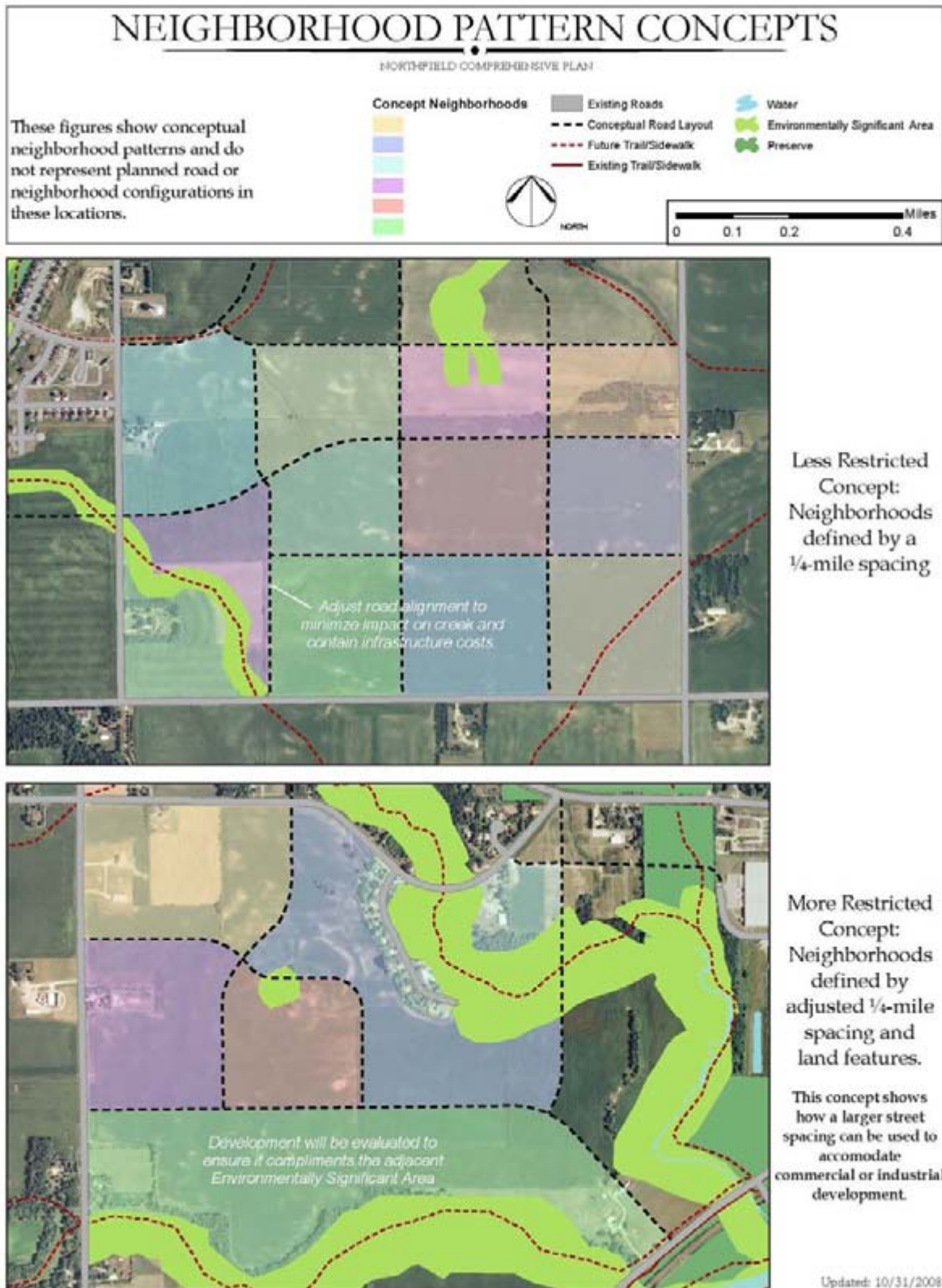


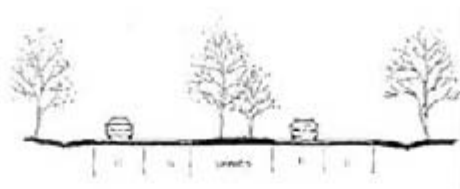
ILLUSTRATION 4.2 CITY STREET TYPES

Note: Specific widths for the street sections shown in Illustrations 4.2 - 4.3 will be determined and identified through the Transportation Plan. Whenever possible and practical, these street types should incorporate low impact development strategies to reduce the negative impacts of stormwater runoff. Soil conditions may dictate the strategies of stormwater management techniques used as part of a particular street type, and whether or not the various street types will have curb and gutter.

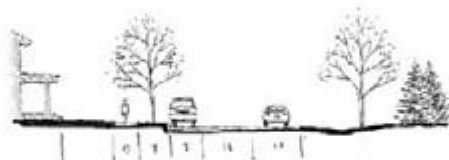
STREET TYPES

Parkway

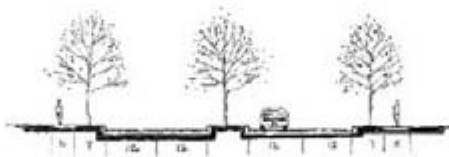
- Long distance thoroughfare
- Designed with naturalistic landscaping including a median

**Drive**

- Thoroughfare along the boundary between an urbanized and natural condition
- One side has the urban character of a street or boulevard with sidewalks and buildings
- One side has the qualities of a road or parkway, with naturalistic plantings and rural characteristics

**Avenue**

- Free-movement thoroughfare connecting civic locations in an urbanized area of a finite length

**Road**

- Local slow-movement thoroughfare suitable for rural areas
- A road tends to have rural characteristics
- Design may include adjacent bioretention such as swales or rain gardens to collect stormwater runoff

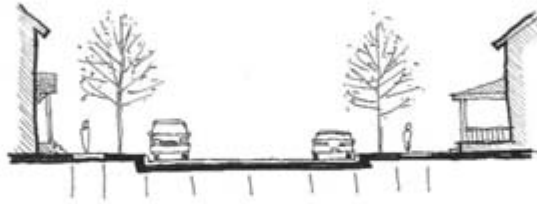


ILLUSTRATION 4.3 CITY STREET TYPES

STREET TYPES

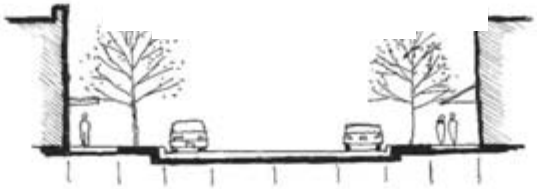
Street

- Slow-movement thoroughfare for urbanized areas
- Higher density, possibly residential uses, slightly setback from the street



Main Street

- Local slow-movement thoroughfare suitable for urbanized areas
- Adjacent buildings are designed to house a mix of uses and positioned to create a street wall



Alley (Service Lane)

- Narrow service access to the rear of more urban buildings providing service areas, parking access, and utility easements
- Paved from building face to building face, with drainage accommodated by an inverted crown at the center



Path

- Pedestrian way traversing a park or countryside
- Should connect directly with the sidewalk network at the urban edge



Source: ACP—Visioning & Planning Ltd.

Note: The street typologies that are recommended for each development concept area are listed in the following table.

TABLE 4.6 – STREET TYPES

Street Type	Conservation and Development Areas						
	Preserve/ Open Space Area	Environmentally Significant Area	Core Enhancement Area	Neighborhood Conservation Area	Corridor Redevelopment Area	Managed Growth Area	Conservation Development Area
Parkway		X				X	
Drive						X	X
Avenue			X	X		X	
Road						X	X
Street				X	X	X	
Main Street			X		X	X	
Alley			X		X	X	
Path	X	X	X	X	X	X	X

Source: ACP—Visioning & Planning, Ltd.

F. Regulatory Implications

Development regulations are the key tool in implementing the land use principles, maps, objectives and strategies. The existing development regulations for Northfield will be reevaluated with respect to how well they reflect the recommendations in the Plan.

In general, Northfield’s current development regulations are proscriptive, stating what the City does not want. A new approach to regulating development is necessary; one that is based on form and is prescriptive in nature, stating what is desired by the City.

Form-based codes go beyond the conventional zoning controls of segregating and regulating land use types and defining building envelopes by setback requirements and height limits. Instead, form based codes address the detailed relationship between buildings and the public realm of the street, the form and mass of buildings in relation to one another, and the scale and type of the streets and blocks. Form-based codes are based on specific outcomes desired by the community that may be identified through an inclusive, design-focused public participation process, similar to the public outreach conducted as part of this Plan. The regulations in form-based codes are applied to property through “regulating plans” that map the community with geographic designations that are based on the scale, character, intensity and form of development rather than differences in land uses.

The objectives and strategies listed in the next section include a number of recommendations to create specific form based standards to help implement the plan.

G. Objectives and Strategies

Outlined below are 11 objectives and 59 strategies. The objectives indicate a specific policy direction and help organize strategies. Strategies are detailed actions necessary to initiate or complete an objective such as a program, policy or a project.

Objective 1: Protect and enhance the small town character.

LU 1.1 Create regulations that yield commercial and office structures that reflect local vernacular (and minimize franchise/corporate structures).

LU 1.2 Create regulations that require coordination and blending of public realm/streetscape with new developments.

LU 1.3 Encourage the development of identifiable neighborhood districts within the community.

LU 1.4 Create regulations that allow for and encourage appropriately-scaled places for structured and casual interaction.

LU 1.5 Maintain the rural character of selected roads (see “Road” graphic in Figure 4.3). A road is typically a local slow movement thoroughfare for rural areas with rural characteristics including no curb and gutter.

LU 1.6 Annually monitor the land use of residential as compared to commercial and industrial land uses as shown in Table 4.1 and Map 4.1, as a means to accomplish the overall planning objectives of the city.

LU 1.7 The City Council should determine, through a process involving the Planning Commission, Economic Development Authority, and citizens, what would constitute an acceptable balance between residential and commercial/industrial uses. This balance could be measured by analyzing tax revenues, jobs in Northfield versus commuters, and other factors. Once the definition of acceptable balance is determined, the City Council should prepare policies and ordinances to bring about the desired balance.

Objective 2: The downtown core is an important aspect of community life.

LU 2.1 Promote general merchandise retailers, financial institutions, office developments and entertainment uses within the downtown core. Create new opportunities for businesses by reinvesting in the infrastructure and public spaces in and around the downtown.

LU 2.2 Provide and support new opportunities for residents to live in or near the downtown.

LU 2.3 Adopt a shared parking ordinance to facilitate new development in the downtown.

LU 2.4 Encourage pedestrian paths and trail connections from commercial uses to adjoining residential developments and places of employment.

LU 2.5 Encourage more compact housing as a component of infill, redevelopment or land intensification projects.

LU 2.6 Integrate the Cannon River, where feasible, into downtown development.

Objective 3: Encourage a compact development pattern, and support infill, redevelopment and land intensification.

LU 3.1 Create incentives to encourage infill, redevelopment and land intensification.

LU 3.2 Work collaboratively to identify structures and sites for redevelopment, intensification or reuse.

LU 3.3 The Economic Development Authority (EDA), with the assistance of City staff, will prepare a marketing program for targeted structures and/or sites for infill, redevelopment and land intensification.

LU 3.4 Establish priorities for capital improvements that are directed toward infill sites and mature neighborhoods.

LU 3.5 Facilitate redevelopment of uses that do not fit the development pattern of downtown (i.e. single story uses surrounded by parking), but which with better design could increase density and provide more commercial, office, or housing opportunities.

Objective 4: Facilitate the creation of residential areas with strong neighborhood qualities.

LU 4.1 Require major subdivisions to complete a master plan, which incorporates the principles of traditional neighborhood design and addresses the environment, transportation system, park and open space system, and provision of municipal utilities.

Major subdivisions need to be defined by the City. Many municipalities consider any development of ten or more units as a major subdivision.

LU 4.2 Permit small-scale neighborhood commercial services as part of master plan developments.

LU 4.3 Create standards for developments with neighborhood qualities.

LU 4.4 Create regulations that require high-quality pedestrian streets with sidewalks, street trees, and adequate lighting, where appropriate.

LU 4.5 Create regulations that allow for or require a mix of housing types within new and existing neighborhoods that are also compatible with development patterns in these neighborhoods.

LU 4.6 Permit accessory structures as residential housing units (granny flats or mother-in-law apartments) within existing neighborhoods, especially near downtown.

LU 4.7 Encourage connections among neighborhoods via roads, sidewalks and multi-use paths.

Objective 5: Guide new commercial/retail and office developments in a mixed use pattern.

LU 5.1 Encourage small-scale retail and service commercial uses to locate in the downtown area.

LU 5.2 Create regulations that allow for mixed-use commercial developments.

LU 5.3 Create regulations that require future commercial developments to provide public space.

LU 5.4 Create design standards that orient commercial buildings in a way that helps to define the streetscape.

LU 5.5 Regulate additional “big box” and other large-format retail establishments to minimize their fiscal, transportation and infrastructure impacts. “Big box” establishments should also be compatible with the form and context of the area in which it is located.

Objective 6: Be a good steward of the natural environment.

LU 6.1 When appropriate, establish development patterns that respect the natural environment by mandating conservation subdivisions.

LU 6.2 Prepare educational material on alternative development choices for protecting natural areas—for the public and development community.

LU 6.3 Modify existing regulations and create new policies that mandate environmentally-sensitive and sustainable planning and building practices, as identified and defined in the City’s Natural Resources Inventory Final Report adopted in 2005.

LU 6.4 Identify and prioritize land for open space preservation.

LU 6.5 Create a program to acquire open space and environmentally significant lands.

LU 6.6 Require dedication of existing significant tree stands and critical riparian habitat as part of the subdivision process for major subdivisions as identified in the Natural Resources Inventory.

LU 6.7 Conduct coordination meetings with neighboring jurisdictions on protecting and linking open space, especially as pertains to Rice Creek with Dundas and Bridgewater Township.

LU 6.8 Improve buffers along the Cannon River to enhance the natural qualities of the river. For the areas in and around downtown, care should be taken to improve the natural qualities of the river, while still respecting the existing built environment (See Figure 4.11).

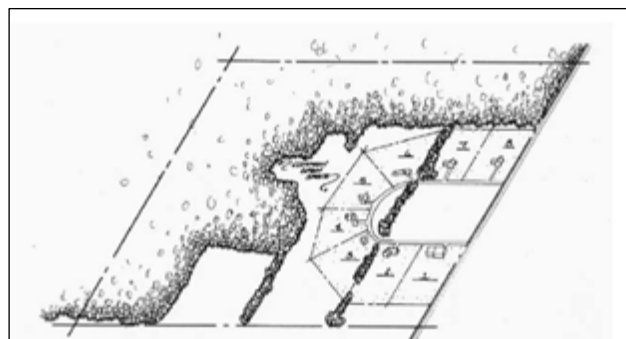


Figure 4.11. “Conservation subdivision: a housing development in a rural setting that is characterized by compact lots and common open space, and where the natural features of land are maintained to the greatest extent possible.”

Source: Randall Arendt. *Rural By Design*

Objective 7: Support local agriculture.

LU 7.1 Support and create opportunities for cooperative agricultural production to provide local residents with quality local foods by creating areas for farmers’ markets and community foods festivals.

LU 7.2 Encourage and/or support the dedication of underutilized or vacant sites that are not developable for community gardens.

LU 7.3 As part of the subdivision approval process, require new developments on the fringe to educate future residents of that neighborhood about the impacts of nearby agricultural operations to avoid future conflicts among uses. Examples of impacts from agricultural operations that may affect residents include: noxious

odors from livestock, noise from the use of heavy machinery, and stormwater issues.

LU 7.4 Encourage the use of conservation easements as a means to preserve productive agricultural land, greenways, and environmentally significant areas.

LU 7.5 Work with other units of government, including Rice and Dakota Counties, to preserve agricultural land uses.

Objective 8: Provide locations that facilitate economic development opportunities.

LU 8.1 Identify sites for commercial and industrial development.

LU 8.2 Identify sites for new office development.

LU 8.3 Facilitate the development of new business parks.

LU 8.4 Ensure land served by public infrastructure is available to accommodate future economic growth.

LU 8.5 Create architectural and site controls for development on Hwy 19 and Hwy 3, in order to present a high quality image for the character of the city.

Objective 9: Improve transportation choices and efficiency.

LU 9.1 Incorporate “park once” site design requirements in areas that call for mixed use development.

LU 9.2 Expand the multi-use path system to connect neighborhoods, districts and corridors.

LU 9.3 Require site design principles that encourage the use of public transit (i.e., on street sidewalks and trails, parking lots at side or rear of buildings, sidewalk connections from the street to the building entrances). Sources of public transit include bus or vanpools from colleges, nearby towns, a possible future commuter rail station, taxi service, or the Northfield Transit service.

LU 9.4 Improve walking and biking travel patterns through improving connections to the Northfield trail system, improved street crossings and foot-bridges.

Objective 10: Improve the development review process.

LU 10.1 Improve the clarity and efficiency of the development review process.

LU 10.2 Seek acknowledgement and support of the Plan and its implementation strategies from the counties and townships.

LU 10.3 Support multi-jurisdictional review of policy decisions affecting land-use, especially with Dundas.

LU 10.4 Streamline the development review process for projects that incorporate high-quality environmental and neighborhood standards.

Objective 11: Monitor the effectiveness of the development regulations.

LU 11.1 Update the development regulations to be consistent with the recommendations in the Plan.

LU 11.2 Create new development regulations that are based on form and are prescriptive in nature, stating what is desired by the city.

LU 11.3 Periodically interview members of the development community to identify short falls in the regulations.

5. Environmental Resources

Organization

- A. Overview
- B. Goal
- C. Key Findings
- D. Objectives and Strategies

Purpose

The purpose of the Environmental Resources Chapter is to define environmentally significant areas and establish objectives and strategies for their preservation, protection, enhancement and utilization.

A. Overview

An important part of Northfield's future vision is the preservation and enhancement of the community's environmental resources. Three of the land use principles in Chapter 4, developed during the Comprehensive Plan public meetings, reinforce the City's commitment to environmental stewardship:

- The natural environment will be protected, enhanced and better integrated in the community.
- Environmentally-sensitive and sustainable practices will be integrated into new developments and redeveloped areas.
- Rural character of certain areas of the community will be protected.

B. Goal

A goal is a policy statement that states a desired outcome in general terms. The goal for environmental resources is provided below. The goal was developed by considering key findings related to environmental resources and integrating public input generated as part of the Plan update.

The natural environment will be protected, enhanced and better integrated into the community.

C. Key Findings

Northfield's character reflects a number of unique environmental qualities. This chapter of the Comprehensive Plan will identify many of those features and establish objectives and strategies for the preservation, protection and enhancement of Northfield's natural environment. Recently, the City has completed key documents that provide direction on the identification, enhancement and protection of the area's natural resources. These documents are the Natural Resources Inventory (NRI) completed in 2005, the Greater Northfield Greenway Corridor System Action Plan completed in 2007, and the Surface Water Management Plan, also completed in 2007. These documents will be referenced throughout this chapter.

Environmentally Significant Areas

The general topography, along with the soils, bedrock, water features and other natural community resources, are a defining element of the overall community (Map 5.1). These areas are described below. Each environmentally significant area should be evaluated

to determine whether the area should be protected, restored, or allowed to be altered.

General Topography

The Cannon River Valley is the dominant topographical element in Northfield. The river forms the low point of the community, but various high points are spread alongside the length of the river and certain hillsides and tributaries of the Cannon River feature steep slopes. Numerous wetlands of various types are located within many of the stream valleys, the Cannon River Valley and elsewhere.

Bedrock

According to the Bedrock Geologic Map and Bedrock Topographic Map of Dakota County (Minnesota Geological Survey, 1990) and the Rice County Water Resource Management Plan, the geomorphology of the uppermost geologic formation is a thin layer of quaternary deposits and, in many places, exposed bedrock. The current landscape results largely from glacial activity. The bedrock formations consist mainly of St. Peter Sandstone, Prairie Du Chien Group and Jordan Sandstone.

Depth to bedrock varies from 130 feet deep to exposure at the surface. Areas where the bedrock is shallow or exposed provide an increased potential for pollutants to reach the groundwater supply. As the City looks at infiltration practices in stormwater management, care should be taken to locate storm water improvement features away from shallow bedrock areas that could increase the risk of groundwater contamination.

Soils

The US Department of Agriculture and Rice County prepared the Rice County Soil Survey in 1975. Utilizing this survey, Carleton College developed a report called Northfield Land Use Suitability, which was used during the preparation of the 1977 Northfield Comprehensive Plan. The report generally analyzed the suitability of land for urban development, rural development (which relies on septic tanks), and agricultural use within Northfield and an area that includes today's urban expansion area.

Northfield is surrounded by agricultural land. Agricultural soils maintain a generally moderate to high level of productivity except for the western and northwestern extremes where agricultural lands are found to have very high productivity levels based on corn

suitability ratings. Conservation farming practices should be encouraged in the city's growth areas as a means of reducing soil loss from agricultural fields. Also, the rate of growth should be controlled with land use principles in Chapter 4 to reduce the amount of land taken out of agricultural production.

The agricultural lands surrounding Northfield may eventually develop. Soil types found in valleys and low areas following streams and the Cannon River, as well as areas with steeper slopes (as shown on Map 5.1) have a limited building suitability. Detailed topographic surveys will be completed as part of any development plan to determine the actual location of these areas. Development will mean soils will be highly susceptible to erosion and sedimentation during construction periods. Best Management Practices (BMPs) should be used and erosion and sediment regulations enforced to control soil loss.

Water Resources

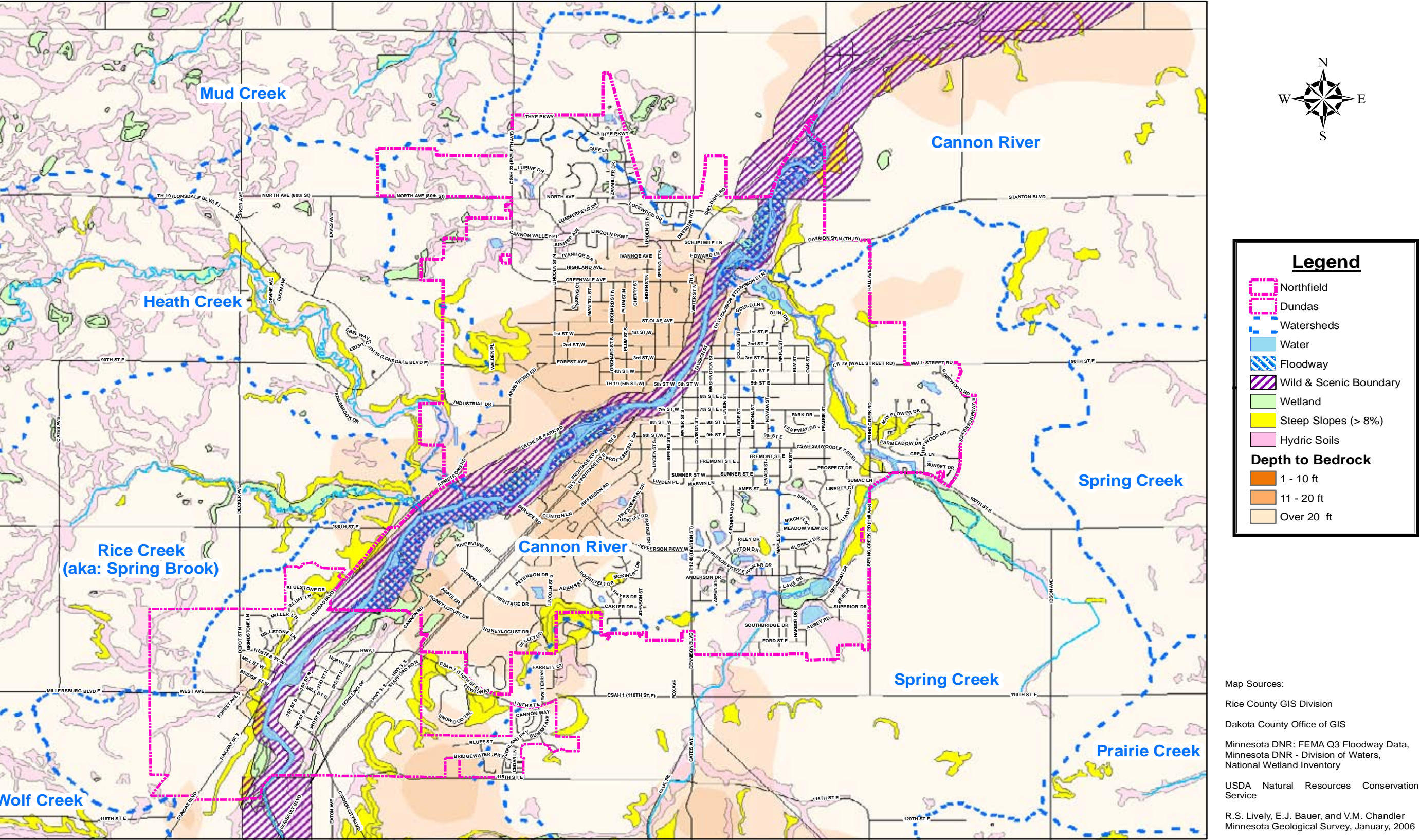
Groundwater

Aquifers provide the groundwater for the city and surrounding areas. The main aquifers within or near the city are the St. Peter Aquifer, the Prairie Du Chien-Jordan Aquifer, the St. Lawrence-Franconia Aquifer, and the Mt. Simon-Hinckley Aquifer. Within the city, five ground water wells provide the source for potable water needs. Groundwater resource data for areas within the city are available in the Rice County Water Resource Management Plan, as well as the Dakota County and Rice County Geological Atlas.

Watersheds

Northfield is part of the Cannon River Watershed. This watershed can be subdivided into four subwatersheds within the city that feed the Cannon River. These subwatersheds include Spring Creek, Rice Creek (locally known as Spring Brook), the Lincoln Waterway, and Heath Creek (Map 5.1). The City's Surface Water Management Plan describes these subwatersheds in more detail. The Cannon River and Rice Creek are waterways protected by the Minnesota Department of Natural Resources (DNR), which warrants further discussion of these waterways, below. The Lincoln Waterway and Heath Creek are discussed more in depth in the Surface Water Management Plan.

Map 5.1 Environmentally Significant Areas



- 1. Cannon River.** The Cannon River, one of the most significant identity elements of Northfield, originates in Rice County at Shields Lake and flows through the heart of Northfield's downtown en route to the Mississippi River.

Many tributaries in Northfield flow into the Cannon River providing surface (rain) water drainage for much of the community as well as some of the agricultural uses in surrounding townships.

In 1980, the Cannon River was added to Minnesota's State Wild & Scenic Rivers Program. This program was established by the State in 1973 in order to protect rivers with outstanding natural, scenic, geographic, historic, cultural and recreational values. Only six rivers have had segments designated as 'wild, scenic, or recreational' under the program. Each of the six designated river segments in Minnesota has a management plan outlining the rules and goals for that waterway. These rules work with local zoning ordinances to protect the rivers from factors that undermine the wild, scenic and recreational qualities for which they were designated; factors such as pollution, erosion, over-development and degradation.

Segments of the Cannon River fall under both "scenic" and "recreational" classifications. Through Northfield, the river is designated as "recreational", a designation given to those rivers that may have undergone some impoundment or diversion in the past and may have adjacent lands that are considerably developed, but are still capable of being managed in accordance with the act. This means that bordering lands may have already been developed for a full range of agricultural or other land uses, and may also be readily accessible by pre-existing roads or railroads.

- 2. Rice Creek (Spring Brook).** One of the more notable Cannon River tributaries is Rice Creek, located in the southwest portion of the community. Rice Creek is one of the last remaining cold water native trout streams in Minnesota and the only one in Rice County. Cool, clean, spring-fed water within this creek provides the necessary habitat for the survival and breeding of Brook Trout, the native trout species in Minnesota. In fact, the DNR has restocked Brook Trout in other streams throughout the state using fish eggs originating from Rice Creek.

Thus far, Rice Creek has been able to maintain the necessary habitat and water conditions for the survival of trout. The primary threats to this habitat come from existing agricultural practices or future development and include surface water runoff containing excessive sediment, pesticides, or fertilizers, and an increase to the speed, volume, or temperature of runoff water.

In 1997 the Cannon River Watershed Partnership began working with a committee composed of local landowners, representatives of various governmental jurisdictions, fishing enthusiasts, and the DNR to learn about Rice Creek and its watershed, and to discuss ways to preserve and protect it. The Committee created a vision for the watershed and Rice Creek entitled "Description of the Spring Brook Watershed in 2050."

The Surface Water Management Plan has identified three specific strategies for future regulations the City could adopt to protect and enhance the Rice Creek watershed. These strategies include more stringent rate and quality controls for any development project within the watershed. To achieve this, runoff from developed sites should be kept to a minimum and infiltration should be required to a greater degree than other watersheds within the city. The City will also work with Bridgewater Township and other regulatory agencies to develop a trout stream management plan.

Natural Communities

A Natural Resources Inventory (NRI) was completed in 2005. The NRI revealed that natural communities (a distinct and identifiable association of plants and animals), as well as a number of semi-natural areas that provide connectivity between the natural communities, are primarily concentrated along the river and stream corridors. Several important and unique natural features in the community were identified in an inventory in the NRI. These features are shown on Map 5.2 and listed below:

- Rich fen (a type of wetland) at Hauberg Woods
- High quality floodplain forests along the Cannon River
- Good quality maple-basswood and oak forests along the stream corridors, especially Heath Creek

- Rice Creek (this site is of regional significance as it is the only trout stream in Rice County, and is an uncommon resource type in southern Minnesota)
- Limestone cliffs along Heath Creek
- Numerous scenic overlooks along the stream corridors and in some outlying areas
- Cannon River (designated as a state Wild and Scenic River)
- Open space areas on the campuses of St. Olaf and Carleton Colleges, which have high ecological value due both to their overall size and the significant efforts the colleges are making to restore and manage existing native habitat. The Carleton College Arboretum provides areas of open space, native species and wetland restoration for both educational purposes and recreational enjoyment for students and Northfield residents. St. Olaf College also maintains a nature preserve containing open spaces, wetlands and natural habitat.

The NRI also described the quality of the various identified natural features. The “Qualitative Rank” and “Restoration Potential” described in the NRI, and the contiguity of non-developed space regardless of its quality, should be taken into account when determining whether the resource should be protected, restored, or allowed to be altered.

Additional Environmental Issues

Resource Conservation

The City makes use of many resources to enhance the quality of life, including the use of non-renewable fossil fuels. Conserving these resources to minimize the impact on the environment and provide for sustainability has become a goal of the City. Sustainable development practices are strategies and actions to achieve economic and social goals in ways that can be supported for the long term by conserving resources, protecting the environment, and ensuring human health and welfare. These practices ensure that current uses of resources and the environment do not restrict their use by future generations. Sustainable development is a process of change in which the use of resources, the direction of investments, the orientation of technological development and institutional change are made consistent with the future as well as present needs.

A task force was established in 2007 to assess opportunities for local development of energy efficiency and clean energy projects that will protect the

community from future energy price and supply instability, enhance local economic development, and provide local, regional and global environmental benefits. The task force will also assess the efficacy of creating a municipal electric utility or special energy district in achieving energy opportunities. Finally, the task force will recommend citywide target greenhouse gas emission reductions to fulfill Milestone 2 of the City’s commitment to the Cities for Climate Protection Campaign (CCPC) and develop an action plan to meet these targets. The City Council will evaluate the recommendations of the energy task force and implement new appropriate policies.

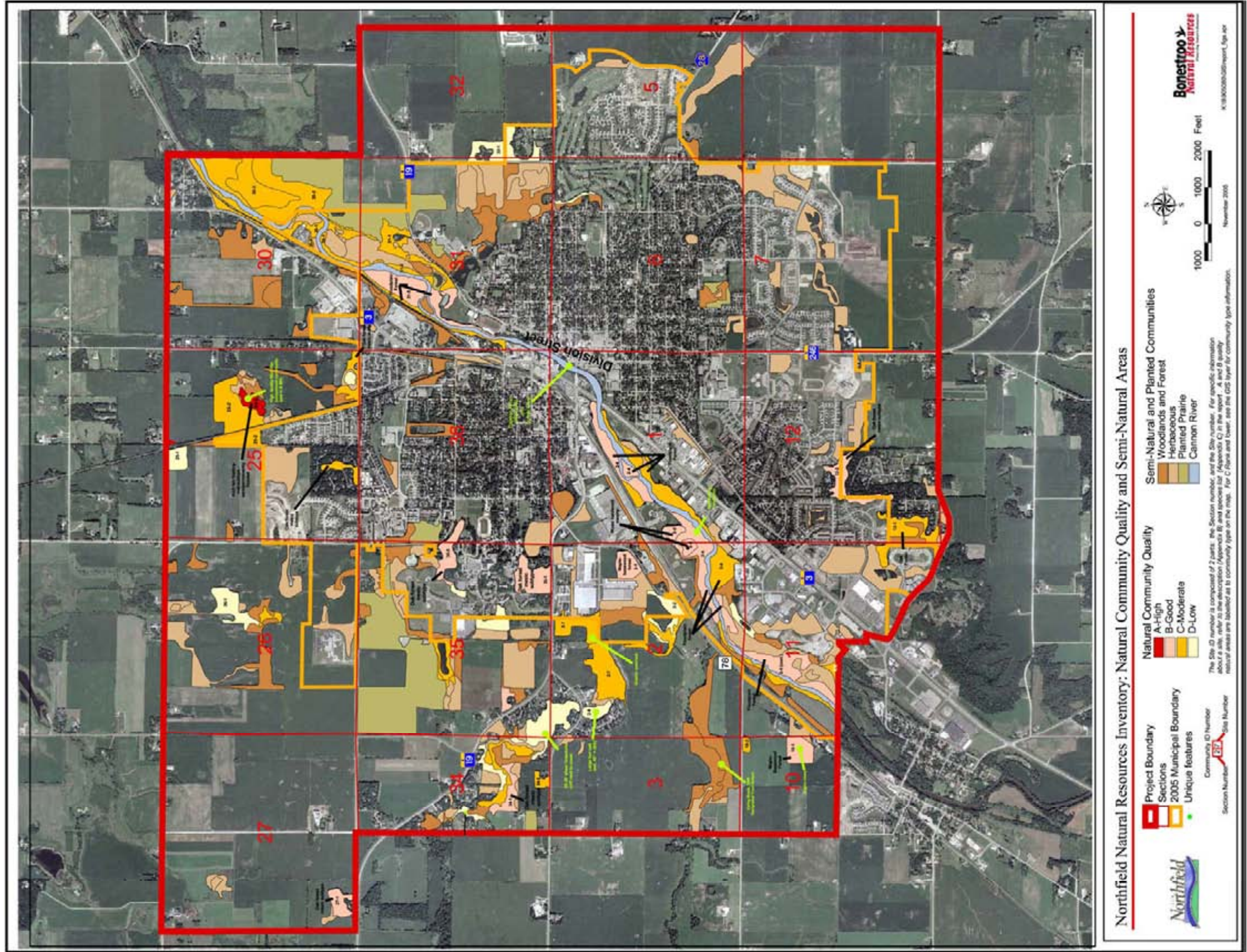
Reduction of Waste Materials

The City has a number of programs to encourage the reduction of waste materials. Normal curbside pickup of refuse is supplemented with single sort curbside recycling. The following materials can be comingled and are currently accepted for recycling curbside: aluminum cans, brown paper bags, glass bottles and jars, newspapers, small-mouth plastic bottles and jugs, tin and steel cans. Catalogs, magazines, phones books, cardboard boxes and mixed-use paper can also be comingled or dropped off at recycling containers located in the parking lots of two of Northfield’s major grocery stores. Households that produce less than 14 gallons of garbage or refuse per week may also qualify for a reduced garbage/recycling fee.

The City and the currently licensed refuse collector also sponsor Annual Clean-Up Days. Once a year, the currently licensed refuse collector provides dumpsters in Babcock Park located at Woodley Street and Hwy 3. City residents may unload debris from their households free of charge at the site. Disposal of electronic appliances are taken, but do require an additional disposal fee.

Yard waste (leaves, grass clippings and garden/flower waste) is collected curbside seasonally (spring and fall) if waste is contained in specially-marked biodegradable paper bags. Northfield residents also have the option of disposing of yard wastes, including brush, branches and shrubbery, at the City’s and Rice County’s compost sites. Finished compost is also available for pickup at the site. The City’s compost site is located between Northfield and Dundas on Armstrong Road, just south of Sechler Park. The Rice County compost site is located between Northfield and Faribault off Hwy 3 on County Road 75.

MAP 5.2 NATURAL COMMUNITY QUALITY AND SEMI-NATURAL AREAS



Source: City of Northfield

Hazardous Materials

Minimizing the contamination of the environment, whether its water, soil or air pollution, is a priority. Practices within the community can have both a local and regional affect on the environment. Locally there are a number of facilities that store and use hazardous materials that have the potential to pollute the environment. Federal and state regulations require these facilities to address storage and handling of these materials and develop a plan of action in the unlikely event that these harmful substances are released into the environment. The City, along with the other required authorities, should be notified in the event of a regulated release that could potentially be harmful.

Much of the city's solid waste products are taken to the Rice County landfill. The landfill is permitted to accept certain waste products such as household refuse, furniture, empty dried paint cans and construction materials. Hazardous waste is not allowed to be disposed of in the Rice County Landfill, as they have the potential to contaminate the landfill. Household Hazardous Waste (HHW) and qualifying Very Small Quantity Generators (VSQG) can dispose of their hazardous waste at the Rice County Hazardous Waste Facility and/or Dakota County Hazardous Waste Facility. Disposal of Household Hazardous Waste should take place in residents' respective counties. Business VSQG hazardous waste is paid for by the company and on appointment. There is also the potential that these materials are disposed of in an illegal matter such as dumping in the storm sewer system. As part of the City's NPDES MS4 permit, the City will develop an education program on the proper disposal of household hazardous materials.

Air Quality

The City values the quality of the air in and around the community. In general, the City controls and directs those activities that would subject the citizens of the community to unacceptable air pollutants, such as burning of hazardous materials and burning leaves and brush. Currently, the City does not have regulations prohibiting residential burning of wood in conventional fireplaces, wood and pellet stoves, or outdoor wood-fired boilers. The City has adopted by reference the Minnesota Pollution Control Agency's (MPCA) regulations and standards relating to air quality.

Noise Pollution

The City currently has several ordinances in place that address various noise disturbances. These disturbances include animals, parties or large assemblies, and other noise producing activities in residential or commercial areas. These ordinances should be evaluated to determine if further measures could be taken to reduce noise impacts.

Current Protection Programs

Environmental Quality Commission

The City maintains a citizen advisory board called the Environmental Quality Commission. This volunteer board advises the City Council on the creation of appropriate policies, programs, and regulations for the protection and preservation of the community's natural resources.

NPDES MS4 Permit

The MPCA implemented the National Pollutant Discharge Elimination System (NPDES) Phase II Stormwater Program in March 2003. Phase II requires (as amended in 2006) municipal separate storm sewer systems (MS4s) in urban areas with a population over 10,000 to obtain an NPDES permit. Permits for construction sites greater than one acre are also required as part of the Phase II requirements. The City submitted its Notice of Intent (NOI) and Stormwater Pollution Prevention Plan (SWPPP) in conformance with the MPCA guidelines in the spring of 2007. More information about the permit can be found in the City's Surface Water Management Plan.

Organic Pest Management Policy

The City acknowledges the potential health risks associated with exposure to pesticides and is committed to phasing out the use of pesticides on City owned land through the implementation of an Organic Pest Management Policy for Turf & Non-Aquatic Landscape ("OPM Policy"). Organic Pest Management (OPM) is a problem-solving strategy that prioritizes a natural, organic approach to turf grass and landscape management without the use of synthetic pesticides. It mandates the use of natural, organic cultural practices that promote healthy soil and plant life as a preventative measure against the onset of turf and landscape pest problems. OPM responds to site-specific conditions by

integrating cultural, biological and mechanical practices that foster cycling of resources and promote ecological balance and conserve biodiversity. Implementation of the OPM Policy is intended to augment and guide the existing turf and landscape management practices on property under the City's control and to set an example for residents of environmentally sustainable turf and landscape practices.

Other Protection Programs

- The City currently has a tree preservation policy, which will be updated in the revision of the Land Development Regulations.
- The City has a Well Head Protection Program that is detailed in Chapter 6, Sewer and Water Resources.
- The City will strive to use Leadership in Energy and Environmental Design (LEED) standards for environmentally sustainable construction of public facilities.
- The Greater Northfield Greenway System Action Plan preserves a corridor for trail connections and recreation, and also serves as a stream buffer to filter pollutants and preserve wildlife habitat. Further detail about the greenway corridor is found in Chapter 8.
- There are many other tools and strategies for protecting environmental resources, some of which are very aggressive and require high degrees of public involvement, and others that are less aggressive and require minimal to no public involvement. These strategies may assume a variety of forms including regulatory requirements, incentives, or a combination of both. The following is a list of strategies for environmental and open space preservation/protection that may be targeted towards significant tree stands (woodlands), stream buffers that may also serve as trail corridors, or areas with significant natural habitats/species. The zoning and subdivision revision currently underway may make some of the strategies less appropriate.
 - ❖ *Fee simple acquisition* – A municipality or land trust purchases the desired preservation area outright, guaranteeing its protection and public access.
 - ❖ *Conservation or preservation easement* – A landowner agrees to place desired preservation areas in an easement that is

recorded on the deed and prohibits development of the land. In return, the property owner receives some property tax relief. The easement should be conveyed to an organization that will be responsible for management of the easement area.

- ❖ *Purchase of Development Rights* – A municipality or land trust purchases the development rights (PDR) to the property allowing the private landowner to retain ownership, but not the property's development rights. The private landowner would be required to place the land area that would have been developed in a permanent conservation easement or other land protection program.
- ❖ *Overlay Zoning* - Overlay zones are a type of resource protection zoning superimposed on traditional zoning in order to protect environmentally sensitive areas while still allowing the underlying use in suitable forms. As an example, Northfield has a flood plain district in its zoning code that complies with the Federal Flood Insurance Program and regulates what can be done in the flood plain area. In the area designated as an Overlay District, the use and intensity of riparian activities are regulated by a zoning ordinance containing several riparian corridor protection standards. This strategy considers all the land uses that are within the federally designated flood plain areas and gives Northfield legal control of the area without having to own the property.
- ❖ *Transfer of Development Rights* – A transfer of development rights (TDR) program allows municipalities to preserve unique and environmentally sensitive areas through a form of overlay zoning that targets specific segments of a community for preservation. Landowner property values are protected because they are permitted to transfer their right to develop, based on the underlying zoning district, to a portion of the municipality designated for more intensive development (i.e., sell development rights to other developers within the community). This allows the environmental corridors to be permanently preserved while still

providing a return on investment to the developer and retaining additional development capacity in the community. The community would have to identify areas where the transfer of density is desired (sending areas) and areas where the density would be received (receiving areas) within its zoning code. This approach relies on a market that is accepting of higher density development patterns.

- ❖ *Bonus/Incentive Zoning* – Bonus zoning is similar to transferable development rights except that the additional development rights are generated and used by the developer rather than purchased from another landowner. Incentive zones may establish a required set of conditions and an optional set of incentives that the developer may choose to meet in exchange for greater flexibility. For example, an incentive zoning law may allow a developer to build in a zone at a higher density than is normally allowed if the developer agrees to set aside more open space or adopt certain energy-saving or transportation measures.
- ❖ *Clustering* – This strategy, sometimes called open space zoning, allows municipalities to offer incentives or use regulation to ensure that new subdivisions cluster homes on smaller lots, allowing the environmentally sensitive area to be set aside and protected as a common area for the enjoyment of those who live in the community.
- ❖ *Performance-based Zoning* – This type of subdivision expands on the overlay concept. The municipality identifies the performance criteria that must be met by any development in the zone, but gives the developer flexibility in planning and developing the subdivision, as long as the criteria are met.
- ❖ *Streambank Setback or Resource Protection Zones* – The municipality can protect environmentally sensitive areas through use of an established buffer strip. The buffer is similar to a utility right-of-way. The width of the setback is determined before construction of the subdivision begins. Zoning ordinances use two approaches – a

fixed buffer or a floating buffer. A fixed buffer may prohibit development within 200 feet of the high water line of a perennial stream, but a floating buffer may vary in width depending on site, soil and runoff characteristics.

- ❖ *Urban Growth Boundaries* – This is a zoning district established to encourage development within the district and discourage development outside the district boundaries.

Collaboration Opportunities

Many organizations have an interest in preserving the environment and maintaining an abundance of open space. The opportunity to work with many special interest groups, private philanthropists, the development community and other regulatory agencies should be explored when seeking solutions to environmental protection. There are a number of state and local agencies that regulate many of the environmental features within Northfield. The Surface Water Management Plan has a list of these agencies. The University of Minnesota Extension Service and the Cannon River Watershed Partnership are good sources for technical and educational materials. The Department of Natural Resources (DNR) and other governmental agencies such as the Minnesota Pollution Control Agency (MPCA) and the Rice County Soil and Water Conservation District also offer good technical and/or financial resources.

D. Objectives and Strategies

Outlined below are ten objectives and 32 strategies. The objectives indicate a specific policy direction and help organize strategies. Strategies are detailed actions necessary to initiate or complete an objective such as a program, policy or a project.

Objective 1: Develop and approve a city-wide sustainability plan.

ER 1.1 Promote education about energy and resource conservation in the community.

ER 1.2 Incentives should be developed to promote energy efficiency in the design, construction and

operation of residential, commercial and industrial buildings.

ER 1.3 Natural resource conservation will be incorporated into the design and construction of residential, commercial and industrial development.

ER 1.4 New development will enhance conservation of surface water resources, including management of storm water runoff.

Objective 2: Protect and enhance environmentally significant areas.

ER 2.1 Maintain standards and regulations to control development on steep slopes (generally those over 12%) to control soil erosion and sedimentation and to minimize the removal of natural vegetation.

ER 2.2 Preserve sufficient natural open space, and greenway corridors, as identified in the 2008 Park System Plan and the Natural Resources Inventory (NRI), in order to provide habitat for wildlife and provide scenic and recreational qualities for the community.

ER 2.3 Encourage planting of native vegetation and development of habitat (such as native species, trees and grasses with deep root structures) within buffer areas and along streams and waterways as identified in the Greater Northfield Greenway System Action Plan and the NRI, and educate residents about the benefits of using native plant species in residential landscaping.

ER 2.4 The NRI should be consulted when development is proposed to verify the presence of any significant natural resources. Also, land use decisions in natural areas should consider the connectivity of a given natural area to other nearby areas. The loss of lower-quality natural areas can affect the ecological function of other nearby natural areas, including higher-quality areas. For this reason, the criteria for protecting or restoring a natural area should not be limited to the quality rank or restoration potential, but should also consider the location of a natural area in the local landscape and the potential utilization of the area by local wildlife.

Objective 3: Protect and enhance water quality.

ER 3.1 As the City looks at infiltration practices in stormwater management, care will be taken to locate these features away from shallow bedrock areas that could increase the risk of groundwater contamination.

ER 3.2 Protect and enhance the quality of groundwater to minimize the potential of contamination to the drinking water supply.

ER 3.3 Protect and enhance the quality of surface waters including the Cannon River and its creek tributaries. The Surface Water Management Plan identifies current strategies that should be updated periodically to remain current with regulations and acceptable practices. The City may consult with other educational and technical agencies and/or organizations to achieve this strategy.

ER 3.4 The City will cooperate with Bridgewater Township, the City of Dundas, the Minnesota DNR and any other regulatory agency to manage the regional creeks, especially Rice Creek, which is a trout stream.

Objective 4: Conserve energy in public and private sector development efforts.

ER 4.1 Encourage the use of energy conservation technologies and techniques, and promote the exploration and innovation of new methods to conserve energy.

ER 4.2 Strive to build or renovate city-owned buildings to meet LEED standards.

ER 4.3 Building design standards will allow for and accommodate changing solar technologies.

ER 4.4 Evaluate the recommendations of the Energy Task Force and promote implementation of the strategies as appropriate.

Objective 5: Promote the reduction of solid waste generated.

ER 5.1 Promote programs to reduce the amount of solid waste generated in the City and to increase the use of recyclable, reusable or biodegradable materials.

ER 5.2 The City will work with its contracted waste haulers to provide volume pricing that encourages the reduction of waste.

ER 5.3 The City will develop programs that promote and facilitate the reuse of building and construction materials in demolition, remodeling and new construction projects in Northfield in consultation with regional conservation groups such as the Green Institute's Re-Use Center in Minneapolis.

Objective 6: Minimize the negative consequences of hazardous materials.

ER 6.1 The City will review its use of hazardous materials and substitute safer alternatives wherever possible.

ER 6.2 Educate Northfield businesses and residents on the storage, use and disposal of hazardous materials.

ER 6.3 Promote organic pest management policies and objectives, including establishing a baseline inventory and reduction in the use of synthetic chemicals on City-owned properties.

Objective 7: Work toward the goal of maintaining or improving air quality in the community.

ER 7.1 City will evaluate its current ordinances and policies that affect air quality and adopt ordinances and policies, as applicable.

ER 7.2 Plan and implement a multi-faceted program of education and regulation regarding the use of indoor fireplaces and wood and pellet burning stoves, and outdoor wood-fired boilers, to protect residents from pollutants and unhealthy emissions from airborne toxins and fine particulate matter.

ER 7.3 Explore the possibility of incentives to encourage the use of high-efficiency carbon neutral stoves.

ER 7.4 Educate the businesses and residents on alternatives that can provide better air quality, such as encouraging the planting of perennials and groundcover, reducing lawn size, which leads to less frequency of use of gasoline-powered lawn mowers.

Objective 8: Minimize negative noise impacts within the community.

ER 8.1 City will review ordinances and policies related to noise to see if improvements can be made.

Objective 9: Increase the density of the community's urban forest.

ER 9.1 The City will develop an urban forest management policy that addresses protection or replacement of significant trees on developed property and all land scheduled for development. This management policy will also establish standards for tree species and location within and near public right-of-way and easements.

Objective 10: The City will remain responsive to issues of climate change and will act to reduce Northfield's contribution to climate change.

ER 10.1 Continue to act on its commitment to the Cities for Climate Protection campaign begun in 2005.

ER 10.2 Develop land use policies to manage and reduce urban heat island effects, including promoting shading of streets and parking lots with more trees.

ER 10.3 Promote the reduction of green house gas emissions at residential, industrial and commercial scales.

ER 10.4 Encourage conservation standards at residential, industrial and commercial scales.

6. Sewer and Water Resources

Organization

- A. Overview
- B. Goal
- C. Key Findings
- D. Objectives and Strategies

Purpose

The purpose of the Sewer and Water Resources Chapter is to identify the existing potable water and sanitary sewer systems and surface water management controls and provide guidance for development of these systems.

A. Overview

Principle 3 in Chapter 4, Land Use, states that: When new growth occurs on the edge of the community through annexations, it will be done with a planned growth pattern which minimizes infrastructure and community services. How the community uses the natural resources to meet its current needs without compromising the environment for future generations is an important question that planning for sewer and water infrastructure seeks to answer. Achieving a sustainable development pattern will require good planning for sewer and water infrastructure systems including sanitary sewer, storm sewer and public water supply.

Northfield completed a Comprehensive Sanitary Sewer Plan in 2007, a Comprehensive Water Plan in 2006, and a Surface Water Management Plan in 2007. These documents address the technical aspects of each system and will continue to be updated on a regular basis to stay ahead of development. This chapter of the Comprehensive Plan inventories the current infrastructure system and identifies areas that require further detailed planning for infrastructure needed to accommodate existing and projected growth to 2027. This chapter will establish key objectives and strategies for the timely, fiscally responsible, and environmentally conscious extension and management of the potable water, sanitary sewer and surface water infrastructure systems. In the event there is a conflict between this Comprehensive Plan and the technical infrastructure plans, the more specific document will guide.

B. Goal

A goal is a policy statement that states a desired outcome in general terms. The goal for potable water, sanitary sewer, and surface water infrastructure was developed by considering key findings related to these systems and integrating public input generated as part of the Comprehensive Plan update.

Provide potable water, wastewater collection and treatment, and surface water control to the community in an environmentally sensitive, financially equitable and fiscally-responsible manner.

C. Key Findings

Public Water Supply and Distribution System

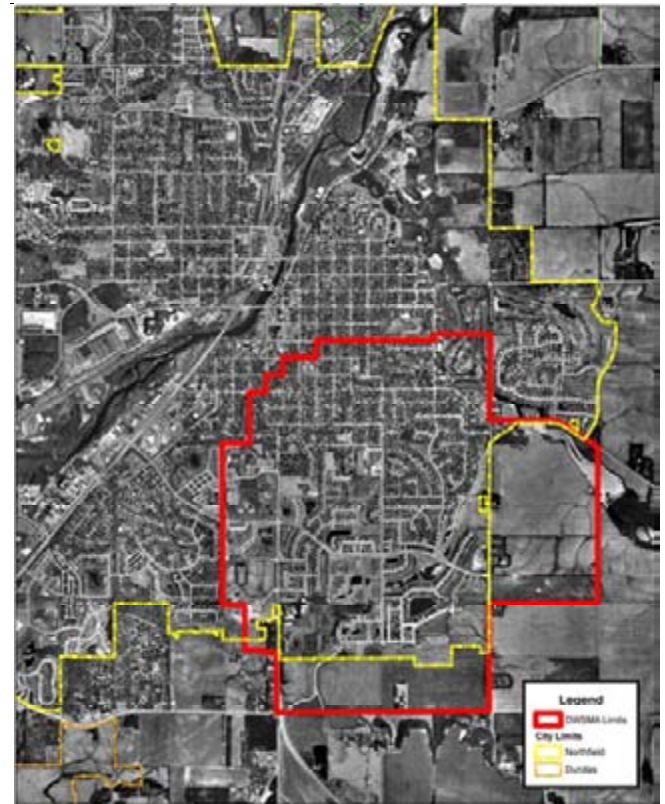
The current public water supply system includes water source, storage and distribution that serve an approximate population of 19,000, which includes college students. The system consists of five deep wells (four active and one inactive), two ground storage reservoirs, one elevated storage tank, a booster station and almost 93 miles of distribution piping. The existing water distribution system is shown on Map 6.1.

Supply and Treatment

The city gets its water supply from four deep wells. Three wells are normally in operation, being controlled by the water level in the ground storage tanks. As the water level in the tanks decreases, the wells successively turn on until they catch up with system water demands and the tanks refill. One of the wells draws from the Jordan and Prairie-du-Chien aquifers. The other three withdraw water from the Jordan Aquifer. The total supply capacity of the Northfield system is approximately 7.6 million gallons per day (MGD). The firm capacity is 5.6 MGD. Firm capacity is that which can be supplied reliably, even during maintenance activity or an emergency situation where the largest well pump might be out of service. Raw water pumped by these wells is treated with chlorine (for disinfection), fluoride (for dental health), and polyphosphate (for red water inhibition). These water treatment chemicals are added at the well pumping stations on the distribution system.

Land use around all of the well locations is regulated under the Well Head Protection Program. This program is intended to prevent contamination of public drinking water supplies by identifying water supply recharge areas and implementing management practices for potential pollution sources within those areas. The program also regulates certain land uses such as service stations, industry and farming, and outlines procedures for clean up should contamination occur. Under this program, the Drinking Water Supply Management Area (DWSMA) is mapped to indicate where surface water may reach the wellhead within ten years (See Figure 6.1).

FIGURE 6.1 DRINKING WATER SUPPLY MANAGEMENT AREA (DWSMA)

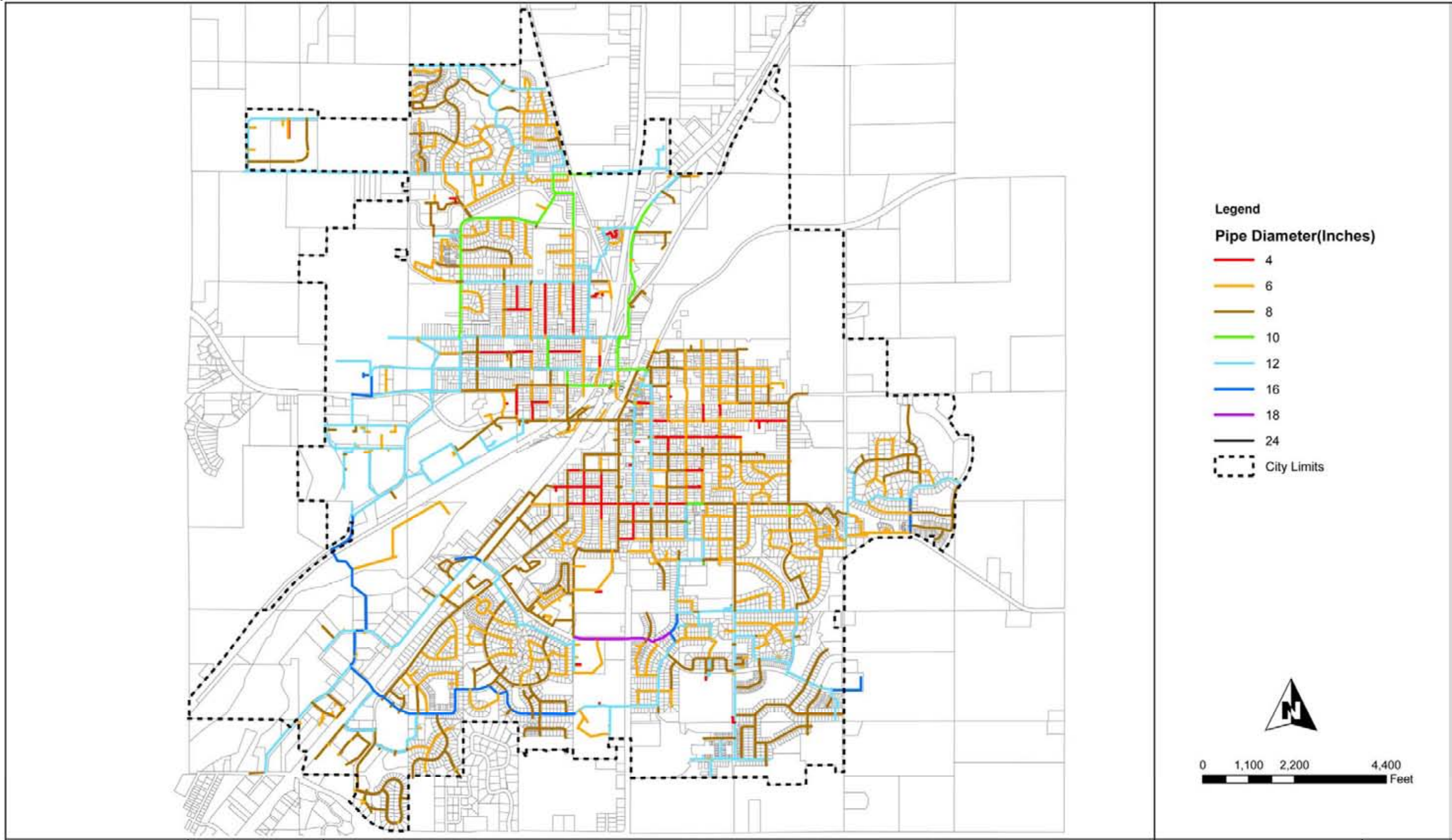


Source: City of Northfield

Storage

Storage facilities on a water system allow a more constant supply during variable demand conditions. During high demands, when water customers are using a greater volume of water, part of that demand can be met by storage reserves in addition to direct pumping from wells. During low demand conditions, the well pumps can continue to operate, with excess supply going to fill storage for later withdrawal. In addition to this operational function, storage tanks can serve as an emergency water source in the case of a supply failure (i.e. power outage, well maintenance, etc.). They also increase the amount of water available during a fire. Northfield currently has two gravity-operated ground storage tanks, each with a capacity of 1,000,000 gallons, and one elevated storage tower with a capacity of 1,000,000 gallons. The level of these tanks controls the pressure of the system.

MAP 6.1 – EXISTING WATER SYSTEM



Source: City of Northfield – March 2006

Distribution System

The Northfield water system is comprised of water mains ranging in size from 4" to 24" in diameter. The system serves an elevation range of approximately 890' to 1,050' with pressures in the system ranging from 30-100 pounds per square inch (psi) during average day demands. Pressures drop in the system to 20-90 psi during peak water usage.

Northfield maintains a connection to the City of Dundas' water system and there is an agreement between both cities for the water usage. The connection consists of a 6" valved line that provides water to Dundas in the event that pressures in their system drop to a certain level. This connection also has the ability to provide flow to Northfield in the event that pressure in the Northfield system drops below a set level.

There is a secondary 12" valved connection that can provide additional capacity to the City of Dundas in the event of an emergency. St. Olaf and Carleton Colleges maintain their own distribution systems. However, both colleges are connected to the city's water system. St. Olaf College abandoned its private well in 2001 and is now supplied water from the city and operates on a separate pressure zone. Carleton College still uses their private well to supply water to the campus. Both colleges maintain secondary connections to provide additional fire protection if needed.

Level of Service

The "Recommended Standards for Water Works, 2003 Edition," commonly referred to as the 10-States Standards, recommends normal working pressures in a distribution system be approximately 60-80 pounds per square inch (psi) and not less than 35 psi. During emergency conditions, such as a fire flow demand, pressures in the system should not drop below 20 psi. According to the American Water Works Association (AWWA), the minimum fire flow available at any given point in a system should not be less than 500 gallons per minute (gpm) while maintaining a pressure of 20 psi in the system. These standards form the lowest level of service that the City should provide. The Insurance Services Office (ISO) also has additional standards for required fire flow to properties based on building types, materials and spacing, for example. The City should strive to meet these standards as well.

The 2006 Comprehensive Water Plan evaluated the existing and future system against these standards and identified areas of concern. Four areas lying in the Urban

Expansion Area were identified as having low pressures. Since this time the City has completed the construction of a booster station to serve the northwest portion of the Urban Expansion Area. The remaining areas will require a method of boosting the pressures in order to adequately serve them. The City will have to consider the method and whether it is financially equitable and fiscally responsible to serve these areas. These areas are noted on the Framework Map (Map 4.4) in Chapter 4, Land Use.

Future Needs

The 1991 Comprehensive Water Plan was amended in 1994 to consider additional wells and additional storage capacity and also in 1995 and 1999 in order to site a new water tower and analyze the need for an additional well. The 1995 amendment projected water supply and distribution needs for a projected population of 20,000 by 2005. The 1999 amendment planned for a projected population of 26,746 by 2020. The 2006 Water Plan looked at the Urban Expansion Area as identified in the 2001 Comprehensive Plan. Using anticipated densities for the various land uses, the Water Plan estimated that Northfield would have a population of 41,207 if the Urban Expansion Area were fully developed. The Water Plan also estimated that this development might not occur for as many as 50 years. Using these population estimates, the 2006 Water Plan identified several projects to meet regulations and maintain the level of service. These include additional supply, treatment, storage, and distribution lines as development and population increases dictate. Map 6.2 shows the future water distribution system.

Sanitary Sewer System

The current sanitary waste system includes a treatment plant, a lift station, and collection system that serve Northfield and Dundas along with St. Olaf and Carleton Colleges. The system consists of the Wastewater Treatment Plant (WWTP) located in the northern area of Northfield along Hwy 3, a lift station located near the existing ice arena, and over 78 miles of collection lines. The existing sanitary waste system is shown on Map 6.3. Dundas and the colleges own and operate their own collection systems that discharge waste into the Northfield system that is in turn treated at the WWTP.

Wastewater Treatment

The Wastewater Treatment Plant (WWTP) was built in 1958 and has been upgraded over the years to treat wastewater before it is discharged into the Cannon River.

It is designed to serve an estimated population of 27,123 (Average Wet Weather Flow of 5.2 million gallons per day of effluent), which should adequately serve Northfield and its projected growth to 2027. Innovative space saving design will allow for another expansion to the WWTP estimated to double the plant capacity. The 2007 Comprehensive Sanitary Sewer Plan (CSSP) recommends that a study of the treatment capacity of the plant be completed at least seven years prior to needing the additional capacity. This time allows for evaluation of the plant, design of the new components, permitting and construction. Based on this recommendation, a study of the plant capacity should be completed in the next four to eight years, or before 2015.

The Cannon River, the effluent receiving water, is designated as an “Outstanding Resource Value Waters” as defined by the Minnesota Pollution Control Agency (MPCA). A key goal of the Outstanding Resource Value Waters program is “non-degradation”, which means that no additional pollutants should be added to the water resource. Carefully evaluating the value and benefits of industry, and heavy users of the wastewater treatment system, is one way to plan for adequate treatment capacity in the future.

Lift Stations

There is currently one lift station operated by the City, located south of the ice arena. This lift station currently serves the southern portions of Northfield and all of Dundas. It is anticipated that an interceptor will be constructed in 2009 that will eliminate this lift station.

Collection System

The City maintains approximately 78 miles of sanitary sewer pipes ranging in size from 6” to 42” in diameter. The smaller pipes are referred to as “laterals” and the larger pipes are called “interceptors” or “trunks.” The larger interceptors are generally located in low elevation areas of the community (such as along drainage ways) in order to utilize gravity to move the waste stream. Future extension of the sanitary sewer collection system and upgrades to the existing system will need to occur in order to serve projected growth in

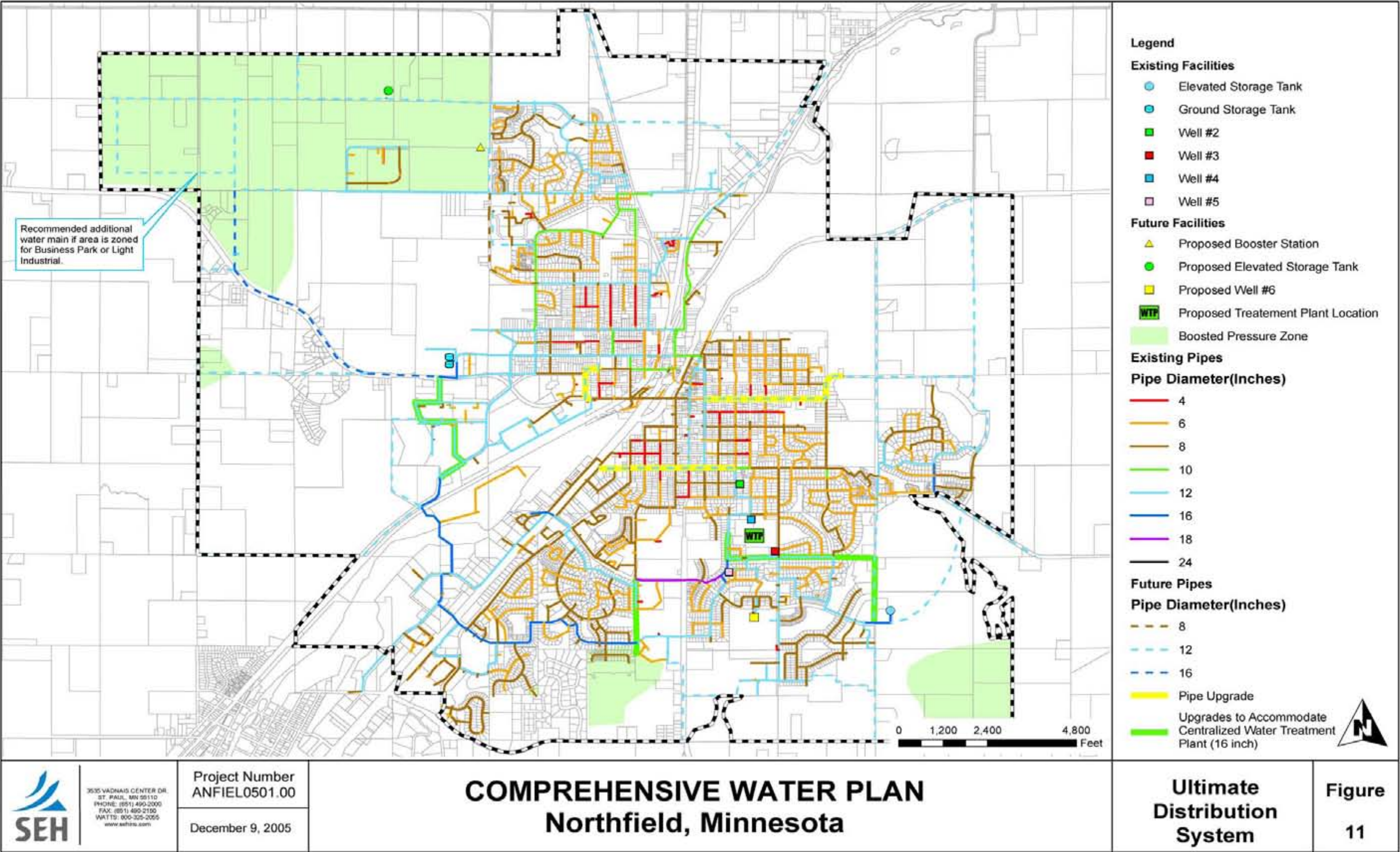
Northfield. The 2007 Comprehensive Sanitary Sewer Plan, which indicated there are 12 sewersheds and 121 sub-sewersheds, evaluated a revised Urban Expansion Area for future waste collection. Recommendations were made for sizing of interceptor lines serving the areas to be developed and noted pipes in the existing system that should be upgraded to handle the development. Map 6.4 shows the recommended interceptors and sizes. Exact locations of the interceptors will have to be evaluated and determined prior to development approvals.

Level of Service

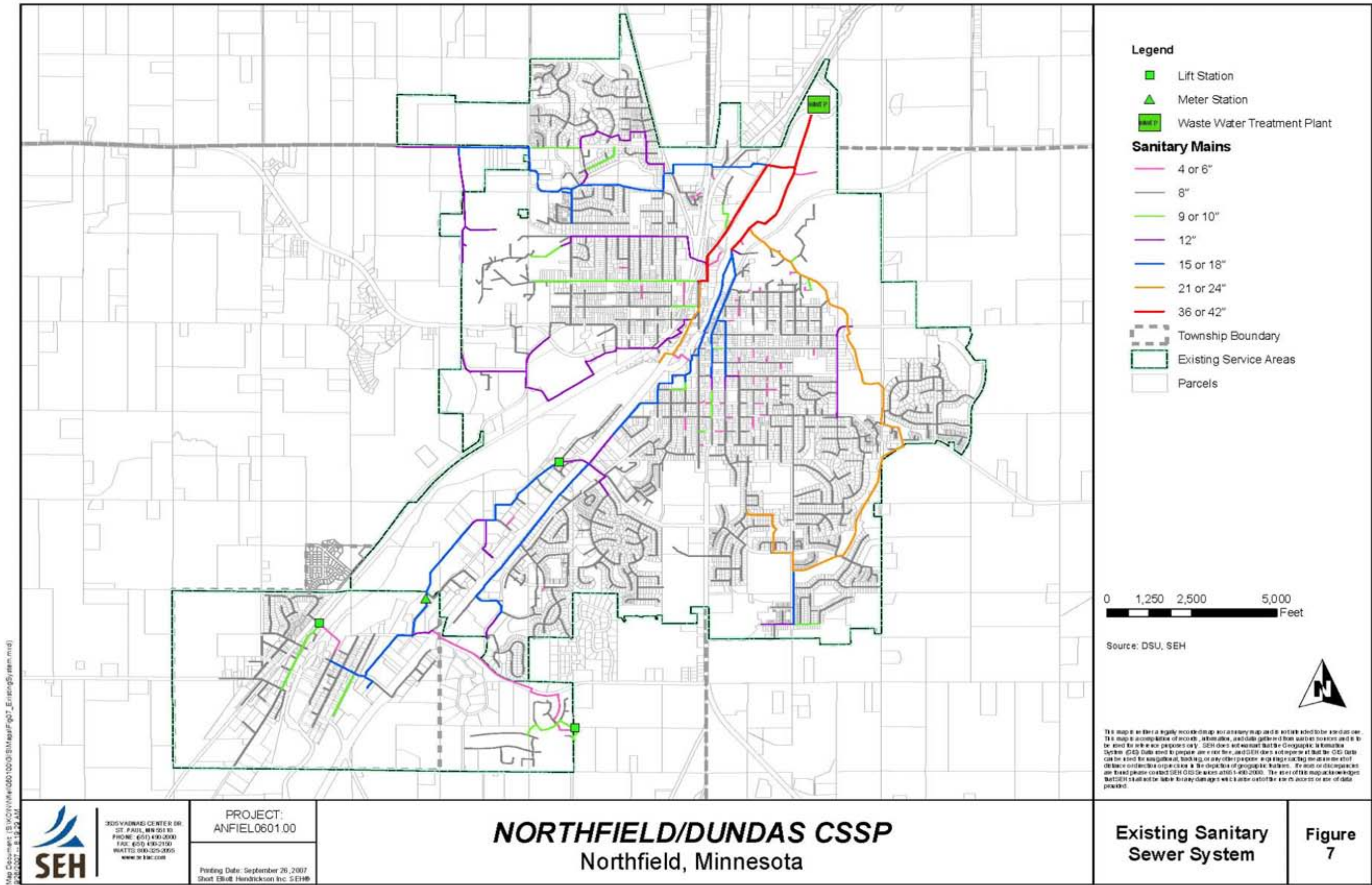
In general, sanitary sewer collection systems are designed to make use of gravity flow as is practical, financially equitable and fiscally responsible. As elevations dictate, gravity flow may not serve all areas, and pump or “lift” stations are used to provide collection from these areas. Capital, operation and maintenance costs can be prohibitive; therefore, the use of lift stations is generally limited in a system. Based on this general standard, the City can provide a higher level of service to those areas not requiring the use of lift stations.

The 2007 Comprehensive Sanitary Sewer Plan evaluated the existing and future system based on the premise of a gravity system. This plan identified the large “sewersheds” in and around Northfield that could be served by gravity. The City will provide a minimum level of service to all areas based on a gravity system. A portion of the revised Urban Expansion Area lies outside of the defined sewersheds, requiring the use of lift stations in order for the waste stream to get to the WWTP. These areas are noted on Map 4.4, Framework Map, in Chapter 4.

Map Document: (X:\CO\Nfile\050100\GIS\Fig11_UltimateDistributionSystem.mxd)
3/1/2006 - 1:03:10 PM



MAP 6.3 EXISTING SANITARY WASTE SYSTEM



Sanitary Sewer System Partners

The City accepts waste from various partners including Dundas, St. Olaf and Carleton Colleges, and larger industrial users such as Malt-O-Meal and Multek (formerly known as Sheldahl). Each of these entities maintains their own sanitary sewer collection systems that discharge to the Northfield system and ultimate treatment at the WWTP. Currently, both Colleges have connection points that are metered and are in turn charged for the actual waste contributed to the Northfield system. The City maintains agreements with larger industrial users that address flows, pollutant loads and rates. The City also maintains an agreement with the City of Dundas for the treatment of their sanitary waste. As these system partners expand, the City should consider updating the agreements as needed.

Future Needs

The 2007 Sanitary Sewer Comprehensive Plan was completed using the same assumptions as the water plan completed in 2006 (See Map 6.4). The Urban Expansion Area was revised to include additional service areas expected to serve 50 years of expansion if completely developed. Based on these assumptions, this plan indicates the general location and size of interceptors to serve the study area. This plan also evaluated the ultimate growth of the defined sewersheds. Although the complete development of all of these sewersheds is highly unlikely, the evaluation shows that the City may consider preservation of a larger corridor in the event that the sewer is upsized or a parallel line needs to be installed in the future.

The 2007 plan only addressed the collection system including lift stations. This plan did recommend considering evaluation of the capacity of the WWTP at least seven years prior to the need for additional capacity. Based on this recommendation and the projected growth, the City should undertake a study sometime between 2011 and 2015.

Storm Sewer System (Surface Water Management)

The City's drainage system is a complex network of stormwater detention/water quality treatment ponds, creeks, drainage ways, roadway gutters, overflow and yard drainage swales, catch basins, storm sewer lateral and storm sewer trunk main facilities. The existing drainage basins and watershed districts are shown on Map 6.5. The

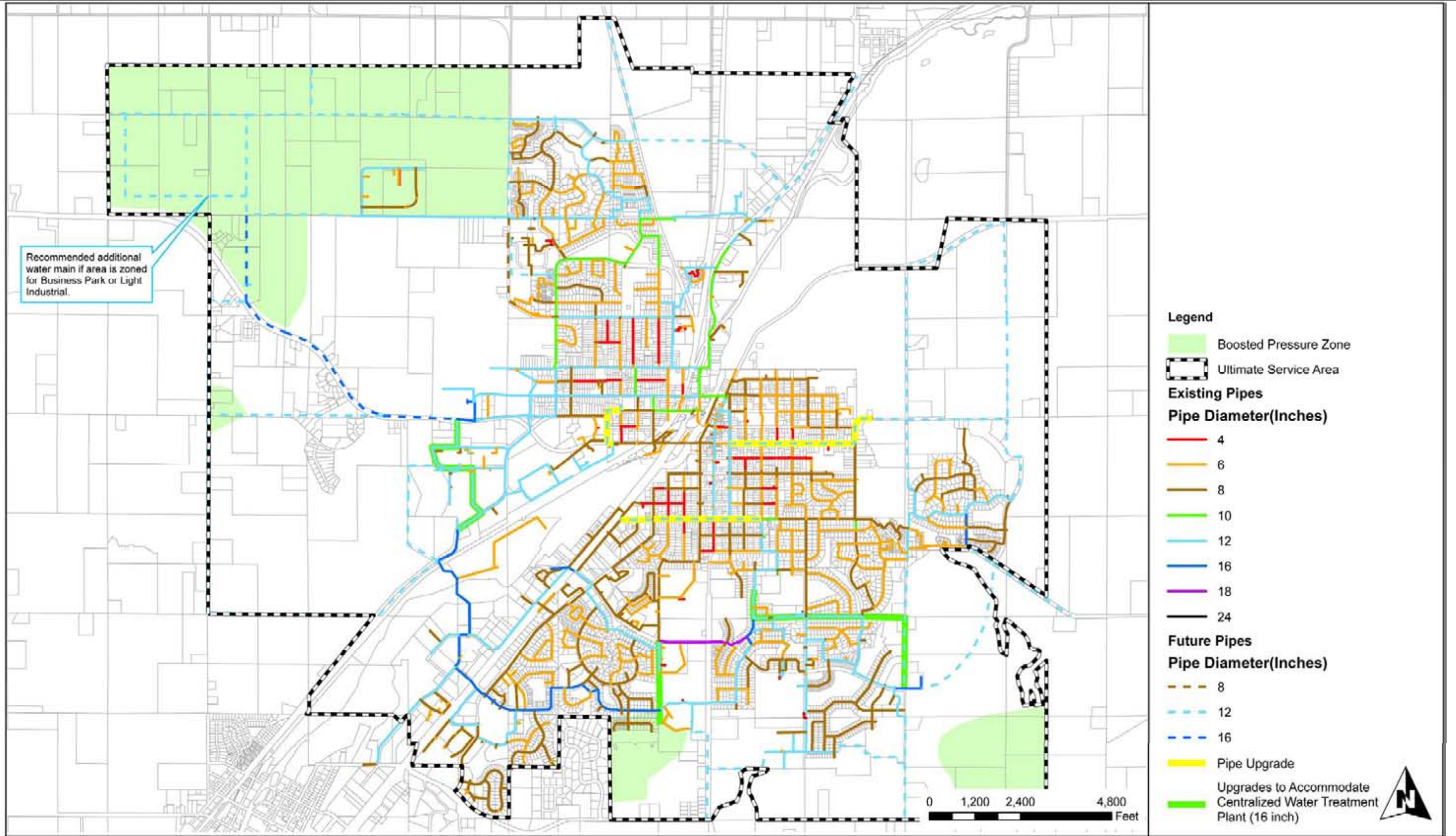
City is committed to managing its water resources so the benefits of wetlands, ponds, and streams will remain available to the existing and future community. Such uses may include aesthetic appreciation, wildlife habitat protection, nature observation and boating. The City recognizes a public need for water quality protection and improvement within its jurisdiction, and accepts water quality management as one of its highest priorities. Some areas in the community require special attention to surface water management controls. Rice Creek (also known as Spring Brook), for example, is home to a native trout species whose survival relies upon a constant volume of cool, clear water. In order to retain this unique wildlife habitat, management of surface water runoff into Spring Brook from the Rice Creek Watershed merits special attention.

The US Environmental Protection Agency (EPA) developed a surface water permitting program to address pollution issues known as the National Pollution Discharge Elimination System (NPDES). In 1999 Phase II of the stormwater program was passed requiring states to evaluate and designate Municipal Separate Storm Sewer Systems (MS4s) based on a set of minimum criteria to be subject to the program. Northfield has been designated as a NPDES Phase II city and has submitted a permit application to the Minnesota Pollution Control Agency (MPCA). The City addressed the six minimum control measures as required by the program. These include:

- public education and outreach,
- public participation,
- illicit discharge connection,
- construction site runoff control,
- post-construction site runoff control,
- good housekeeping/pollution prevention from municipal operations.

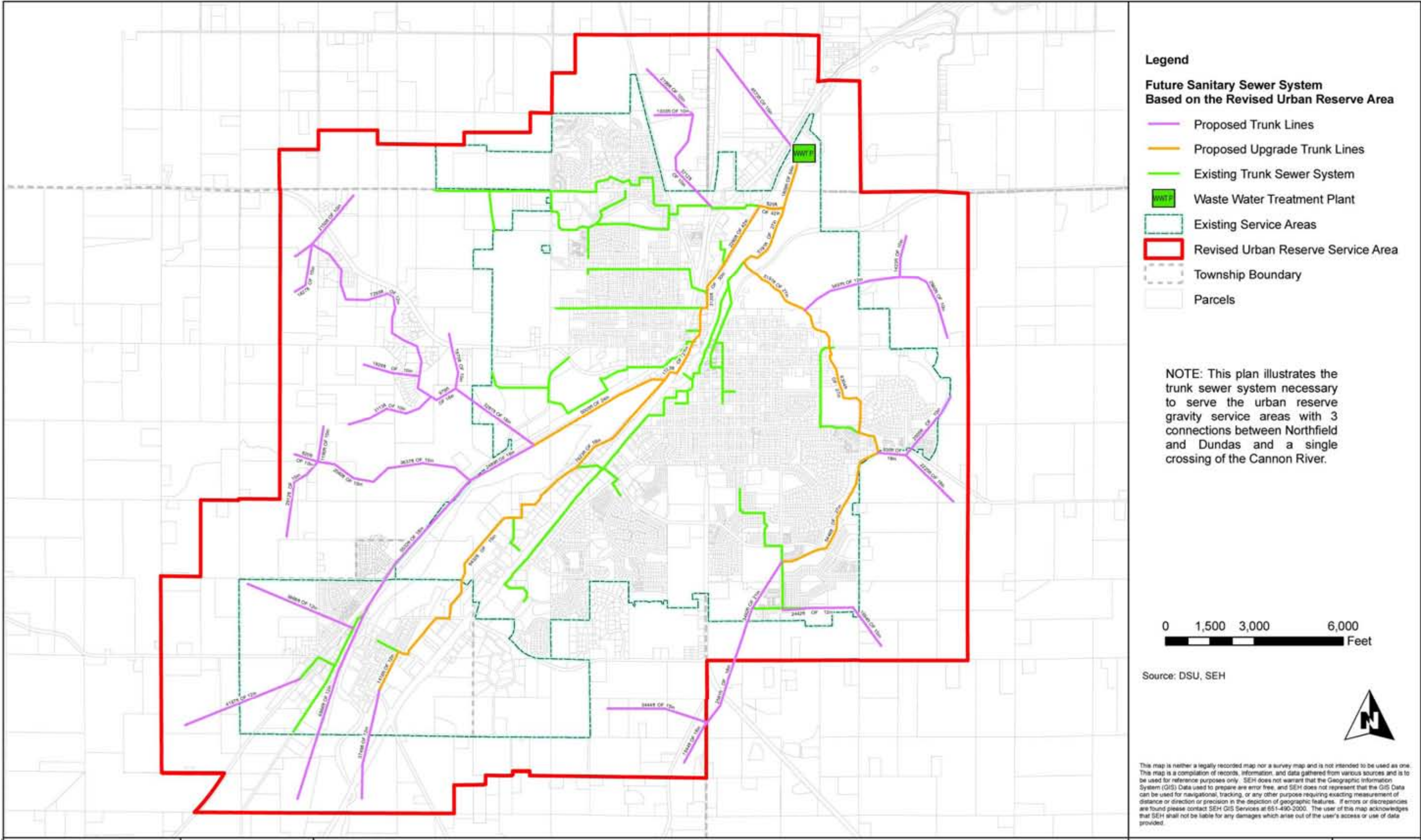
Northfield completed a Surface Water Management Plan in 2007. This plan provides a significant amount of information on Northfield's drainage patterns, watersheds, wetlands, floodplains and floodway areas and how surface water management technologies can be applied to improve water quality and environmental awareness. This plan also provides policy direction for surface water management in Northfield. Due to the complexity and technical nature of the document, the key policy categories are highlighted below. In general, this plan sets minimum standards for surface water management that allows flexibility for the use of current Best Management Practices (BMPs) where they are best suited.

MAP 6.4 FUTURE SANITARY SEWER SYSTEM



Source: City of Northfield – October 2007

MAP 6.5 EXISTING DRAINAGEWAYS AND WATERSHEDS



Source: City of Northfield

Rate Control

The Surface Water Management Plan sets a policy for control of the rate of surface water flow from a developing site. In general, development increases the amount of impervious surfaces that in turn increases the volume and rate of flow from a property. The policy requires that all new development, redevelopment and expansion projects provide rate control. The policy does set different standards for the different types of development along with setting more restrictive requirements for areas within the Rice Creek subwatershed, a protected trout stream.

Performance Standards

The Surface Water Management Plan also sets performance-based standards for total suspended solids and phosphorous removal. The standards allow for development, redevelopment and expansion projects to use the standard pond method for treatment or use new surface water management practices to accomplish the goal.

Volume Control

The Surface Water Management Plan sets a policy for controlling the volume of runoff from a developed site. Any new development, redevelopment or expansion project must consider infiltration practices to reduce the volume of runoff generated from the improvements. Various factors must be taken into consideration when determining the level of control required for each site. Parent soils, depth to bedrock and depth to groundwater can all determine the effectiveness of these types of facilities.

Other Policies

The Surface Water Management Plan identifies other policies to be implemented by the City. These policies address stormwater education, flood control, erosion and sediment control, greenway corridor and shoreland management, the use of low impact development strategies and internal operations. Details of these policies are located in Section V of the 2007 Surface Water Management Plan.

Future Needs

Section VI of the 2007 Surface Water Management Plan identifies several studies, capital improvement projects, and programs that the City should undertake or consider including to address the requirements of the

NPDES Phase II MS4 permit. The Surface Water Management Plan also estimates the cost of the study, project, or program along with identifying the possible funding source. Based on this list, the Surface Water Management Plan recommends that the City update the storm sewer charges that currently only consist of a utility fee. Evaluation of the storm sewer fees may include updating and simplifying the stormwater utility rates and consideration of other funding mechanisms such as a trunk sewer fee, pond fee, and/or sewer availability charge.

D. Objectives and Strategies

Outlined below are three objectives and 17 strategies. The objectives indicate a specific policy direction and help organize strategies. Strategies are detailed actions necessary to initiate or complete an objective such as a program, policy or project.

Objective 1: Provide potable water, sanitary waste collection and treatment, and surface water management to existing and future development areas in the city in an environmentally sensitive, financially equitable and fiscally responsible manner.

SW I.1 Provide a Level of Service to existing and future areas as defined in the Public Water and Sanitary Sewer sections above.

SW I.2 Maintain an infrastructure replacement program for the city, as detailed in the Capital Improvement Plan.

SW I.3 For orderly expansion of public services, new developments will be located in areas contiguous to existing development within the city limits.

SW I.4 Address legal limitations, fairness, property benefits, and responsible use of public funds when financing public utility extensions that reinforce the City's growth and redevelopment objectives. Priority will be given to infill and redevelopment of the existing urbanized area to maximize efficiency of the existing water and sewer infrastructure systems.

SW I.5 Provide the full range of public services to subdivisions at the time of development, including storm sewer, sanitary sewer, public water, sidewalks, parks and streets.

SW 1.6 Continue to implement and update, where necessary, the City's Well Head Protection program.

SW 1.7 Carefully evaluate and limit development in areas that require private sewer and water systems.

SW 1.8 Undertake a sewer capacity study for the Wastewater Treatment Plant sometime between 2011 and 2015.

SW 1.9 Carefully evaluate development that requires high levels of water and sewer services.

SW 1.10 Periodically review agreements with sewer system partners for any needed updating.

Objective 2: Manage water resources so that the beneficial uses of wetlands, ponds and streams remain available to the existing and future community (sustainability).

SW 2.1 Require Stormwater Management and Erosion Control Plans, as described in the 2007 Surface Water Management Plan, for projects that may have an impact on local surface water.

SW 2.2 Work with the counties, townships, watershed organizations, citizens and upstream landowners (outside the city's jurisdiction) to encourage upstream pollutant reduction similar to those being used within city limits.

SW 2.3 In new developments, redevelopments, and expansion projects encourage creative stormwater management solutions that make use of the most current stormwater management strategies including the use of Best Management Practices and Low Impact Development techniques.

SW 2.4 Give special attention to surface water management runoff controls in projects that might affect Rice Creek and the Rice Creek Watersheds.

SW 2.5 Evaluate and update current storm water fees and consider other funding mechanisms such as a trunk sewer fee, pond fee, and/or a sewer availability charge.

Objective 3: Heighten community awareness of sustainability issues through education and training.

SW 3.1 Educate the public and business community on the use of potable water conservation practices (such as water saver faucets, yard watering bans, and strategic landscaping).

SW 3.2 Develop and implement a public education and outreach program for all ages for stormwater in accordance to the requirements of Phase II of the National Pollution Discharge Elimination System (NPDES).

7. Transportation

Organization

- A. Overview
- B. Goal
- C. Key Findings
- D. Objectives and Strategies

Purpose

The purpose of the Transportation Chapter is to describe the key findings of the current transportation network so as to plan for its future management and expansion.

A. Overview

Principle 11 of Chapter 4, Land Use, states that: “Places will be better connected, in part to improve the function of the street network and also to better serve neighborhoods.” This principle reflects the community’s desire to provide a safe, convenient, multi-modal, and environmentally-responsible transportation system for Northfield and the surrounding region. It also reflects the desire for transportation investments to support land use and community identity preferences. In 2008, the City approved the Comprehensive Transportation Plan Update. This Update incorporated previous planning efforts relating to transportation, including the 2025 Rice County Transportation Plan completed in 2006, the Dakota County 2025 Transportation Plan completed in 2004, the Greater Northfield Greenway System Action Plan completed in 2007, which proposed areas where future non-motorized transportation connections could occur, and the Northwest Northfield Highway Corridor Study, led by Dakota County staff and completed in 2008. Preliminary information was also included from an access management and safety study of Hwy 19 by the Minnesota Department of Transportation (MnDOT), which is proposed to be completed in 2009. The 2008 Comprehensive Transportation Plan Update considered different modes of transportation, including motorized, non-motorized, mass transit, and rail. This chapter will establish key objectives and strategies for the transportation system in Northfield. This Transportation chapter is a summary chapter of a separate, stand-alone document, the 2008 Comprehensive Transportation Plan Update, and represents the work of City staff, a technical advisory group and consultant, rather than the Planning Commission. This Plan was presented directly to and adopted by the City Council on November 17, 2008. In the event there is a conflict between this Comprehensive Plan and the 2008 Comprehensive Transportation Plan Update, the more specific document will guide.

B. Goal

A goal is a policy statement that states a desired outcome in general terms. The goal for transportation is provided below. The goal was developed by considering key findings related to transportation and integrating public input generated as part of the Comprehensive Plan update.

Facilitate the movement of people, goods, and services within and through the city on a safe, convenient, coordinated and fiscally responsible network of routes using a variety of transportation modes.

C. Key Findings

Existing conditions research was conducted as part of the Comprehensive Plan update. Information was compiled from a variety of sources such as existing plans and input from several public meetings. Outlined below is a summary of key findings related to Northfield's Transportation system.

Roadway Functional Classification: Most travel involves movement through a network of roadways. It becomes necessary to determine how this travel can be channelized within the network in a logical and efficient manner. Functional classification defines the nature of this channelization process by defining the part that any particular road or street should play in serving the flow of trips through a roadway network. Functional classification is the process by which streets and highways are grouped into classes according to the character of service they are intended to provide, and then determining what functions each roadway should perform prior to determining its design features, such as street widths, speed, design perimeters for trails and sidewalks, and intersection control. Northfield's transportation system is classified into:

- **Principal arterials** – streets that connect large urban areas to other large urban areas, or they connect metro centers to regional business concentrations via a continuous roadway without stub connections
- **Minor arterials** – streets that link urban areas and rural principal arterials to larger towns and other major traffic generators capable of attracting trips over similarly long distances.
- **Major collectors** – streets that link neighborhoods together within a city or they link neighborhoods to business concentrations.
- **Minor collectors** – city streets and rural township roadways which facilitate the collection of local traffic and convey it to major collectors and minor arterials.
- **Local streets** – City streets and rural township roadways, which facilitate the collection of local traffic and convey it to collectors and minor arterials. Their emphasis is to provide direct property access.

The existing road transportation functional classification system is shown on Map 7.1.

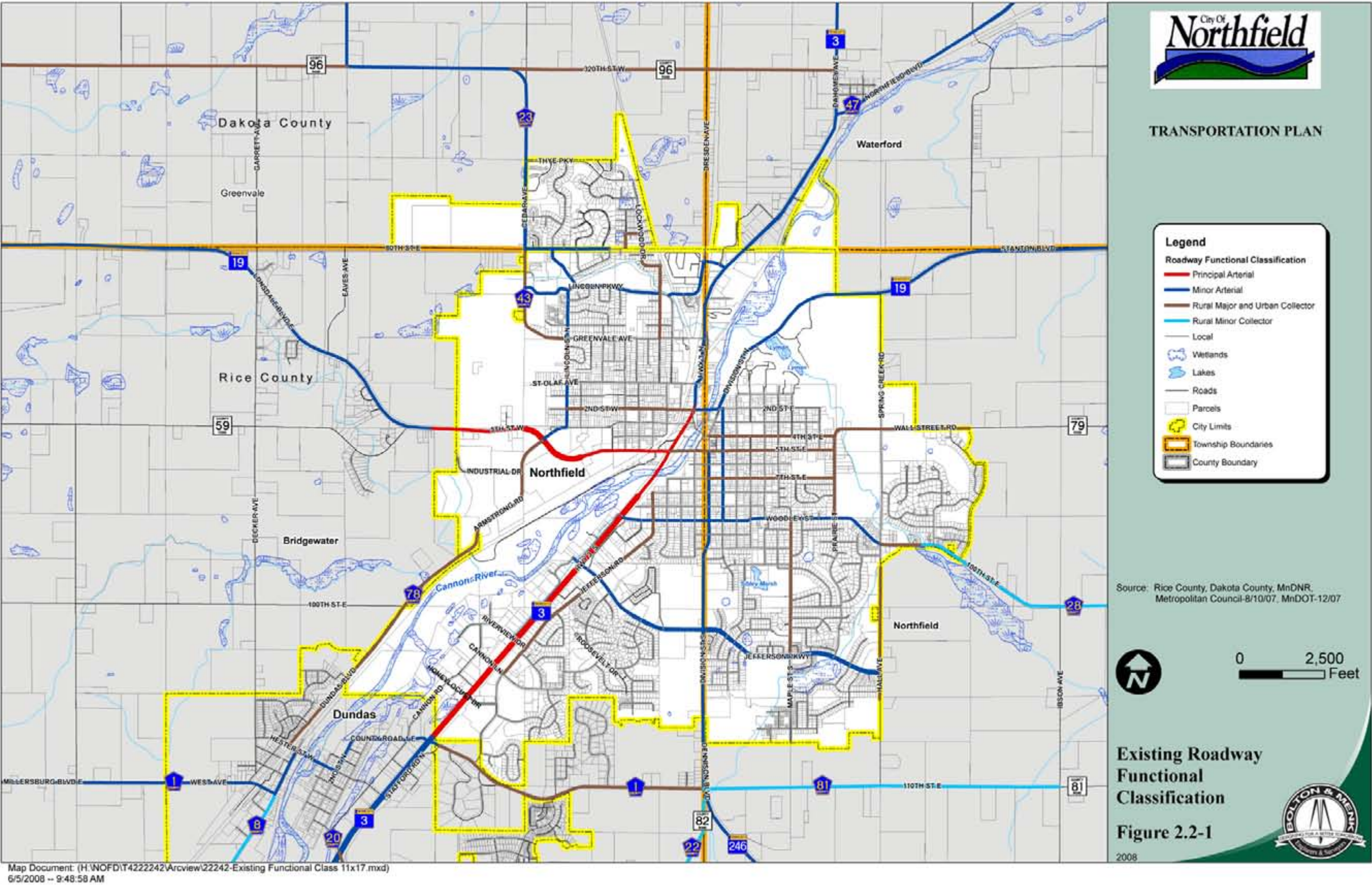
Street Types: Chapter 4, Land Use, of this Comprehensive Plan, recommends a set of land use principles to illustrate the form, pattern, and character of future development, infill, and redevelopment. Within the land use plan, city streets are guided to provide an attractive public realm that better connects places in the community, serve neighborhoods, and better serve non-motorized forms of transportation. Building upon the context established by the Comprehensive Plan, roadway design guidelines are provided to achieve the desired role of city streets within the community, as well as provide their intended function within the roadway network. The street types established by Chapter 4 of the Comprehensive Plan set the context of cross sectional view of particular roadways in the city. The street types may be used for several classifications of roadways; however, design parameters are established for each street type relative to its intended function and integration of multimodal components. The six street types are:

- **Parkways** – a long distance thoroughfare designed with naturalistic landscaping including a median.
- **Drives** – a thoroughfare along the boundary between an urbanized and natural condition.
- **Avenue** – a free-movement thoroughfare connecting civic locations in an urbanized area of finite length.
- **Road** – a local, slow-movement thoroughfare suitable for rural areas.
- **Street** – a slow-movement thoroughfare for urban areas with high density land uses.
- **Main Street** – a local, slow-movement thoroughfare for urban areas with higher residential density and commercial land uses.

These street types are shown in Table 7.1 with the roadway functional classification.

TABLE 7.1 - STREET TYPES BY ROADWAY FUNCTIONAL CLASSIFICATION						
Roadway Functional Classification	Parkway	Drive	Avenue	Road	Street	Main Street
Minor Arterial	X		X			
Major Collector	X	X	X	X	X	X
Minor Collector				X	X	X
Local Street		X		X	X	

Map 7.1 Existing Roadway Functional Classification



Traffic volumes: The existing traffic volumes within the area were collected from the Minnesota Department of Transportation (MnDOT), including recent counts by the City of Northfield, Rice County, and Dakota County, and are represented in Map 7.2. Level of Service (LOS) is a measure of the quality of traffic flow dependent on traffic volumes and road geometry. Six LOS's are defined for roadways. LOS A represents the best operating conditions and LOS F represents the worst. Capacity improvements are recommended on any roadway with a future level of service of D, E, or F. In Northfield, five roadways are recommended to be monitored and programmed for capacity improvements when necessary:

- Hwy 3 from Woodley Street to Hwy 19/5th Street
- Hwy 19 from Eaves Avenue to CR 59 and from CSAH 78 to TH 3
- Water Street from 5th Street to 7th Street
- Division Street from 5th Street to 8th Street
- Jefferson Parkway from Hwy 3 to the east leg of Roosevelt Drive

In the 2008 Comprehensive Transportation Plan Update, traffic volumes were forecasted for collector and arterial roadways for the year 2030 using industry accepted modeling methodology. This modeling methodology is described in detail on pages 4-13 and 4-14 in the 2008 Comprehensive Transportation Plan Update and considered the possible locations for commercial and industrial development on Map 10.1 in Chapter 10, Economic Development, of the Comprehensive Plan. As growth continues in the Northfield area, these travel demand forecasts serve as a basis to understand anticipated capacity and safety challenges, as well as pavement management needs. Appendix B shows graphically some of the results of the traffic counts. Detailed results are found in the 2008 Comprehensive Transportation Plan Update.

Non-Motorized transportation: Non-motorized transportation, such as pedestrians and bicyclists, are legitimate users of the transportation system and should be able to use the transportation infrastructure safely and without unreasonable delay. Unfortunately, motorized transportation, such as passenger cars and commercial vehicles, can often dominate the transportation infrastructure due to their disproportionate size and numbers. Astute planning and design of transportation infrastructure is one component necessary in achieving an integrated motorized and non-

motorized transportation system that is relatively safe and efficient for all users.

The City's Parks, Open Space and Trail Systems Plan provides guidance and a vision for developing an integrated system of trails throughout the city. It includes a variety of trails, bikeways, and sidewalks defined and their purpose within the community. Map 8.2 in Chapter 8, Parks and Recreation, of the Comprehensive Plan shows the proposed trail system for Northfield. This document should be used in concurrence with the Transportation Plan as guiding documents in establishing the City's non-motorized transportation system.

Mass transit: Various methods of travel impact the economic vitality of a city, county, or broader region. The term transit applies to all forms of sharing rides, regardless of whether the service is provided by a public or private entity. Currently, Northfield Transit is the only government-sponsored transit service provider in Northfield. It provides curb-to-curb ride, dial-a-ride service opportunities within city limits. Other local services provide rides to and from places of work. The Jefferson Lines provides riders with service to the Burnsville transit station, as well as destinations around the United States. Transit studies should evaluate current transit service performance and analyze the market to identify any unmet needs and to look for opportunities to enhance transit service. Map 7.3 shows the existing and future transit services in Northfield, as identified in the 2008 Comprehensive Transportation Plan Update.

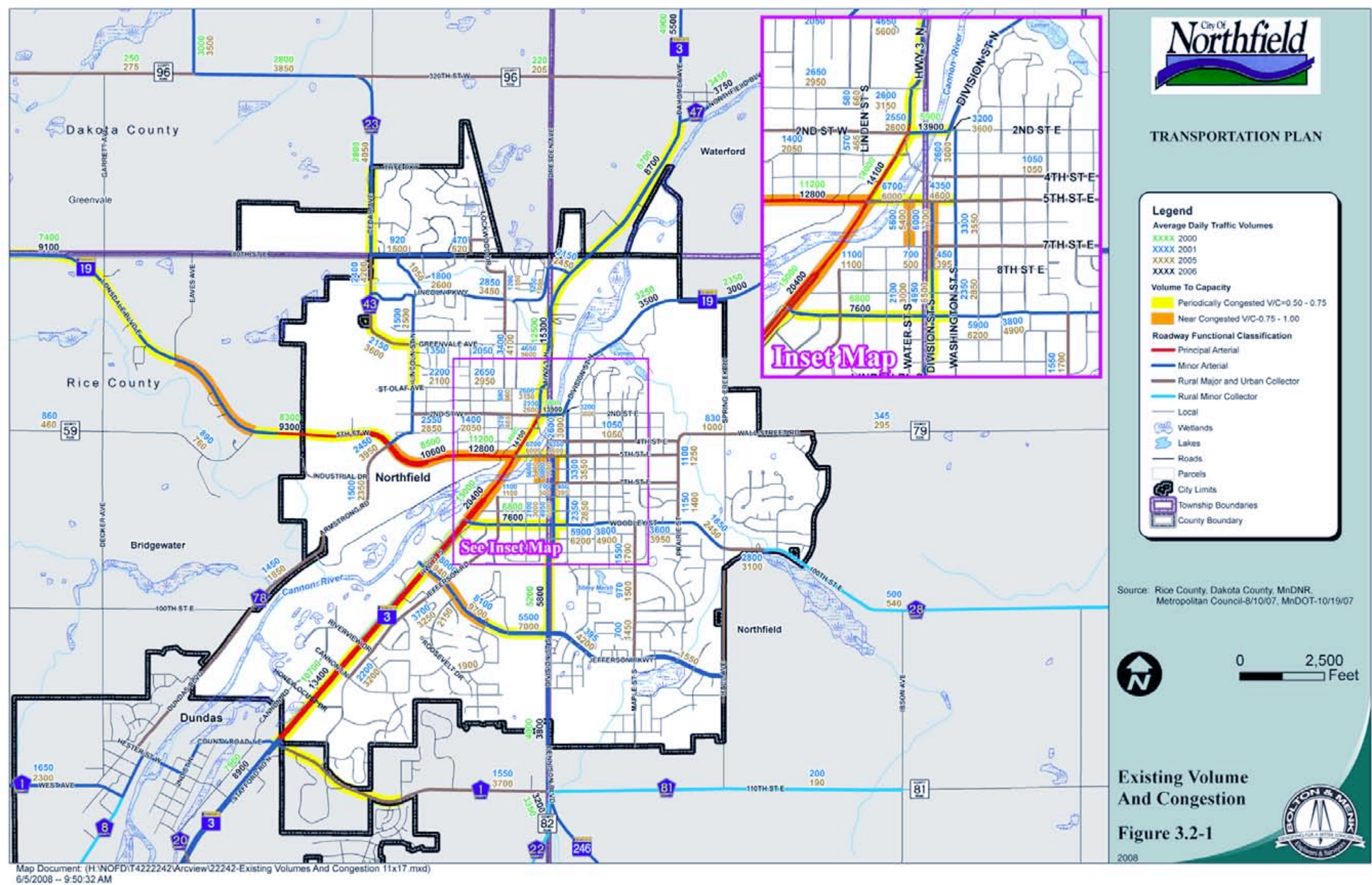
Northfield Transit has developed a proposed concept for a transit hub/multimodal facility which is proposed to serve as a transit hub/transfer station, park & ride location, intercity hub, and trailhead. The project is proposed to be located in Laurel Court, near the intersection of Hwy 3 and Hwy 19 in Northfield. The location provides connections to the Mill Towns State Trail, bike paths, and sidewalks providing interconnectivity throughout the community. The location is also adjacent to the railroad line in Northfield, which may provide an opportunity for passenger rail service in the future.

Rail: There are three rail lines in the Northfield area. The primary line is operated by Union Pacific, with eleven operations per day. This line runs generally

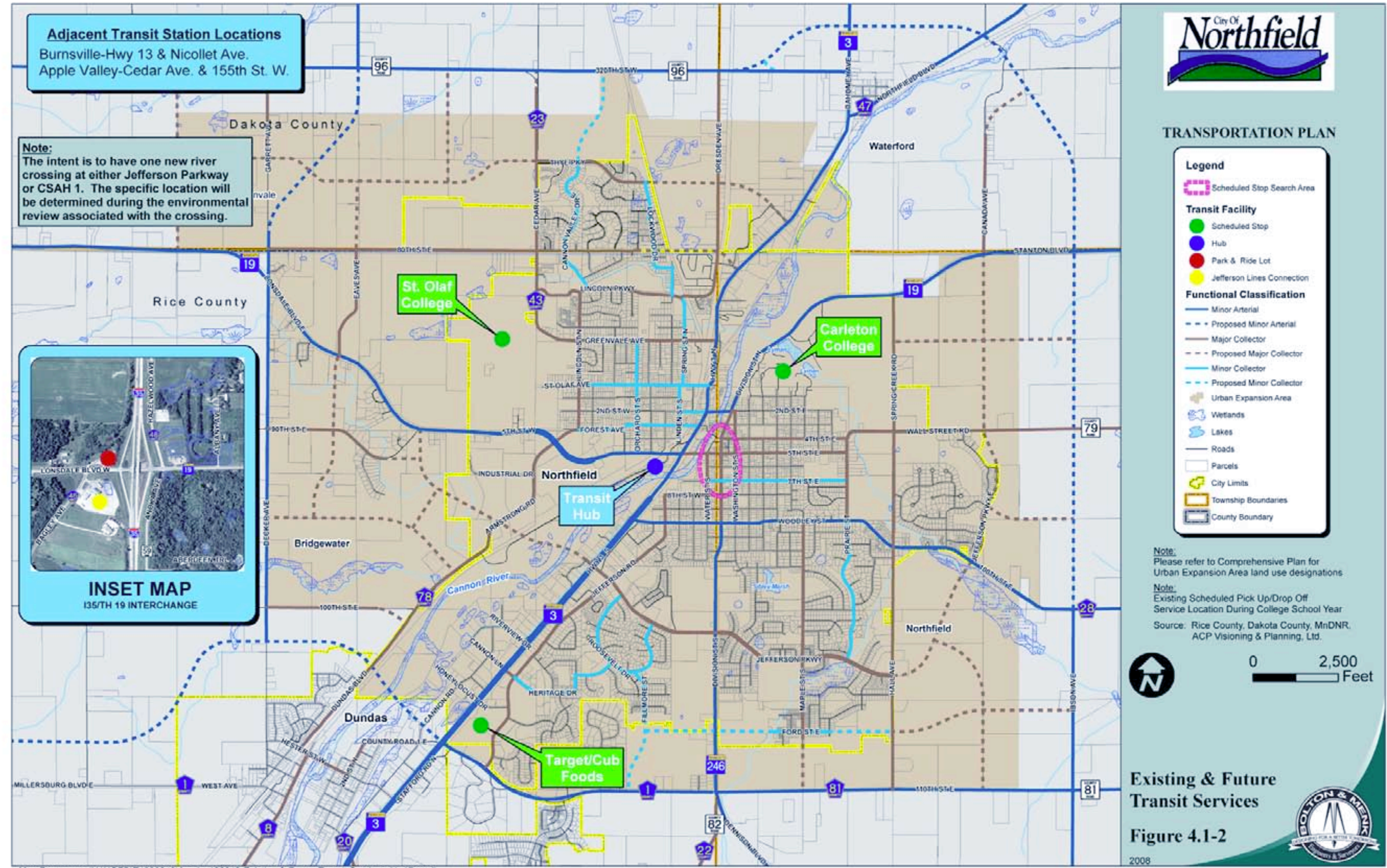
parallel to the Hwy 3 corridor. Two other lines are operated by Progressive Rail.

Future Transportation System: The supporting future road network has been developed to accommodate potential long-term growth in the Urban Expansion Area (beyond the Priority Growth Area), as discussed in Chapter 4, Land Use. The future roadway classification system is shown on Map 7.4. A balanced set system of minor arterials, and major and minor collectors, is needed to provide acceptable motorized and non-motorized mobility and access to developing areas, as well as to enable the principal and minor arterials to serve longer, regional travel. It is not anticipated that all of the proposed roadways will be constructed by 2030, but these roadways should be constructed as development occurs.

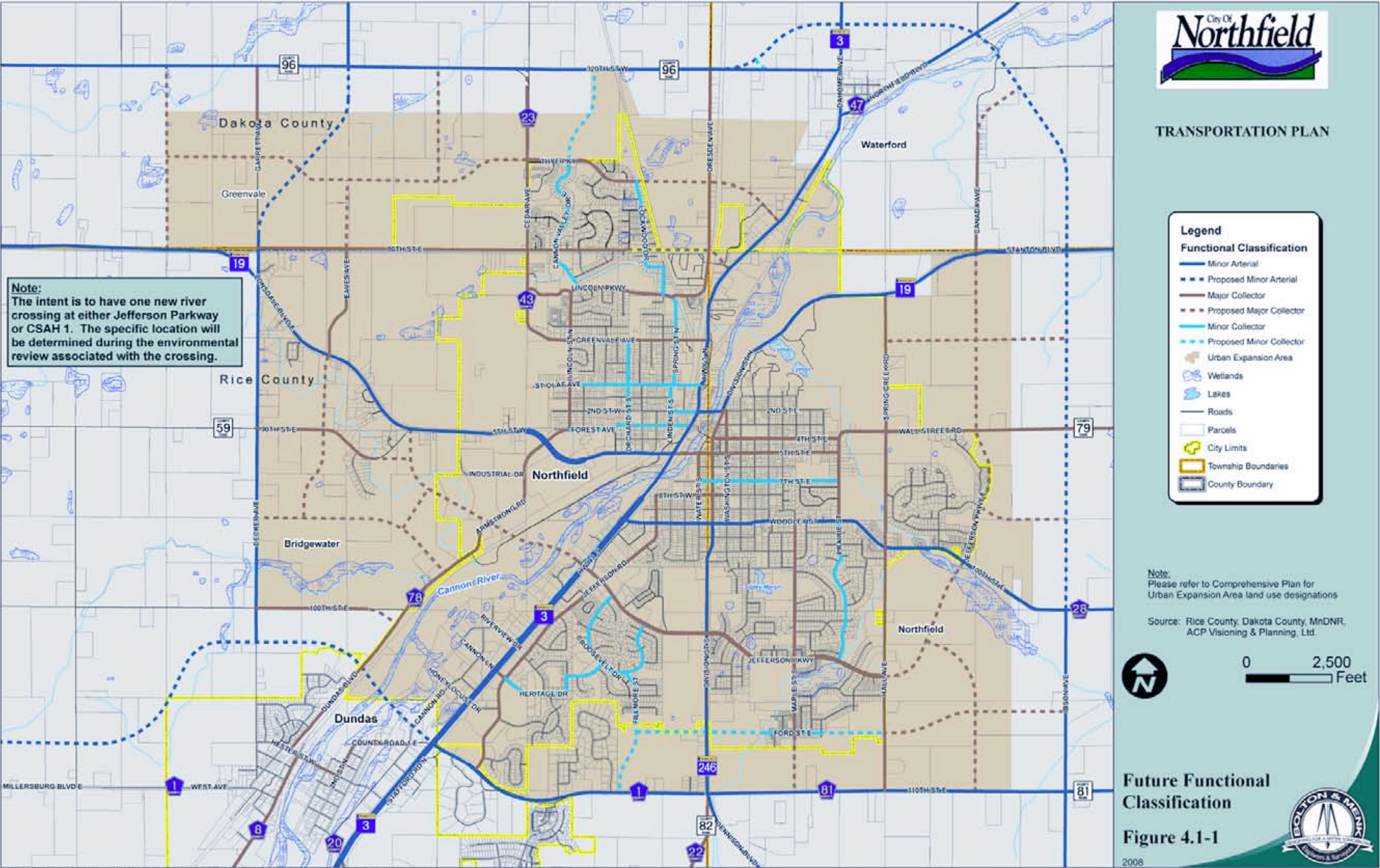
Map 7.2 Existing Volume and Congestion



Map 7.3 Existing and Future Transit Services



Map 7.4 Future Roadway Functional Classification



D. Objectives and Strategies

Outlined below are four objectives and 26 strategies. The objectives indicate a specific policy direction and help organize strategies, while the strategies are detailed actions necessary to initiate or complete an objective such as a program, policy or a project.

Objective 1: Effectively manage the transportation needs of a vibrant, growing town and the surrounding area for residents, businesses and visitors.

TR 1.1 – Develop and implement corridor design guidelines that enable safe and efficient travel for all modes of transportation within the context of the natural and developed environment.

TR 1.2 – Ensure adequate access into the downtown area for vehicles, pedestrians, and bicycles to support public activities and events, private business uses and residences.

TR 1.3 – Maintain and, where possible, improve access to business concentrations that enable successful business practices while managing safe traffic operations.

TR 1.4 – Promote multi-modal transportation uses and principles throughout the city.

TR 1.5 – Establish bicycling as a sustainable, safe and convenient, year-round mode of transportation in Northfield.

TR 1.6 – Enhance and expand public transit services to ensure mobility for all residents and visitors.

TR 1.7 – Require local street and trail connectivity between adjacent residential neighborhoods and other land uses for newly developing areas.

TR 1.8 – Create opportunities to improve existing local street and trail connectivity between adjacent residential neighborhoods and other land uses.

Objective 2: Facilitate the movement of people, goods, and services within and through the city

on a safe, convenient, coordinated, and fiscally-responsible network of routes using a variety of transportation modes.

TR 2.1 – Provide a transportation system for vehicles, bicycles, and pedestrians balancing safety and fiscal resources.

TR 2.2 – Establish a balanced roadway network based on the principal of roadway functional classification.

TR 2.3 – Provide adequate roadway and intersection capacity to accommodate anticipated growth of the community and resulting forecasted traffic volumes.

TR 2.4 – Establish a pedestrian walkway system connecting residential, educational, commercial/retail, employment and recreational destinations throughout the city.

TR 2.5 – Establish trails and on-street routes for the use of bicycles as a year-round mode of transportation.

TR 2.6 – Determine and enhance designated public service routes to provide priorities to emergency, civil and transit services.

Objective 3: Balance transportation needs with the Land Use Principles identified in Chapter 4 of the 2008 Comprehensive Plan.

TR 3.1 – Establish a transportation system vision to provide the necessary transportation network to support the density and type of existing and future land uses.

TR 3.2 – Enhance the small-town character of the city through multi-modal transportation choice and context-sensitive corridor design.

TR 3.3 – Balance the transportation system needs with the potential impacts and affects upon the natural features of the community.

TR 3.4 – Enhance the community by providing convenient access to natural features and opportunities to support active and healthy lifestyles.

TR 3.5 – Encourage interconnected development

patterns to create more convenient travel options for residents, foster a sense of neighborhood and maintain acceptable traffic volume levels.

Objective 4: Implement the transportation vision through strategic funding, and objective and definitive decision making, with the collaboration of surrounding jurisdictions.

TR 4.1 – Establish concentrated and consistent support for local and regional political leadership to achieve components of the transportation system vision.

TR 4.2 – Empower City staff to pursue state and federal transportation funding and evaluate non-traditional transportation funding mechanisms.

TR 4.3 – Establish an area transportation advisory committee with the state, Rice and Dakota Counties, the City of Dundas and surrounding townships to coordinate and strategize regional transportation planning initiatives. (Hwy 19 between Northfield and I-35, Cannon River Crossing/CSAH 1 Preservation, NW Corridor).

TR 4.4 – Plan for and preserve opportunities for necessary transportation system improvements.

TR 4.5 – Achieve necessary transportation system improvements in a cost-effective, timely fashion.

TR 4.6 – Establish momentum in the pursuit of the transportation system vision by periodic recognition of basic accomplishments and celebration of milestone achievements.

TR 4.7 – Encourage business owners, residents and community groups to be active participants in seeking funding by contacting local, state and federal decision makers in support of transportation funding.

8. Parks and Recreation

Chapter 8 is organized into the following sections:

- A. Overview
- B. Goals
- C. Key Findings
- D. Objectives and Strategies

Purpose:

The purpose of the Parks and Recreation Chapter is to describe the existing park and trail system in Northfield and plan for its future extension.

A. Overview

Two land use principles (Principles 2 and 12) in Chapter 4, Land Use, that relate to Parks and Recreation state that “the natural environment will be protected, enhanced and better integrated in the community”, and “opportunities will be created to walk and bike throughout the community.”

Northfield provides a variety of recreational opportunities for its residents. Whether it is swimming at the Northfield municipal pool, participating in a soccer match in Spring Creek Park or a baseball game at Sechler Park, enjoying quiet time along the Cannon River or riding a bicycle on one of the community’s trails, a full range of recreational pursuits is offered in the community.

Over the last several years, Northfield has added parks and trails as development has occurred in various parts of the community. Public and private schools supplement the recreational facilities supplied by the City, and St. Olaf and Carleton Colleges both provide recreational facilities, some of which are available to the community at-large.

In 2008, the City will consider approval of a document called the “Northfield Parks, Open Space, and Trail System Plan” (referenced in this chapter as the “2008 Park System Plan”). Although not yet adopted by the City Council as of the date of adoption of the 2008 Comprehensive Plan, the 2008 Park System Plan was considered complete. This chapter of the 2008 Comprehensive Plan based its goal, findings, objectives, and strategies on the 2008 Park System Plan. Over the next 20 years, the community will need to continue to build the park and trail system in order to keep pace with the recreational demands of a growing population. This means investing in park and trail infrastructure as described in the 2008 Park System Plan.

The 2008 Park System Plan was developed using information from a Natural Resources Inventory (NRI) completed in 2005, and a Greater Northfield Area Greenway System Action Plan completed in 2007. The 2008 Park System Plan serves as a foundation for this Comprehensive Plan chapter. In the event there is a conflict between this chapter and the 2008 Park System Plan, the 2008 Park System Plan will prevail.

B. Goal

A goal is a policy statement that states a desired outcome in general terms. The goal for parks and recreation is provided below. The goal was developed by considering key findings related to parks and recreation, and integrating public input generated as part of the Plan update.

Promote a high quality of life in Northfield by providing a balanced and sustainable system of parks, natural open spaces, athletic facilities and trails consistent with the historic sense of place in the community.

C. Key Findings

The 2008 Park System Plan noted several influences for the future development of the park and trail system in Northfield. First, demographic influences such as new families with young children moving into the community, the growth in population of “empty nesters” and seniors and the influence of the large college student population in Northfield. Second, recreational trends such as the difficulty in engaging today’s youth in “traditional” recreational activities influence the types of park land uses and programs that should be developed. Third, public input received in the creation of the park plan also guides City leaders in the development of the park system.

- Community parks typically serve a broader and more specialized purpose than neighborhood parks. Their focus is on meeting community-based recreational needs, as well as preserving unique landscapes and open spaces. For example, “Everybody’s Playground”, located within the Spring Creek Soccer Athletic Complex, is a playground created specifically to meet disabled children’s needs.
- Nature parks are lands set aside for preserving natural resources, remnant landscapes and open space, and providing visual aesthetics/buffering. They also provide passive use opportunities.
- Athletic complexes are consolidated programmed adult and youth athletic fields and associated facilities.

The City maintains a volunteer citizen advisory board called the Park and Recreation Advisory Board (PRAB), which advises City Staff and public officials regarding the public park system and on recreational facilities within the city. The PRAB also assists with long-range planning for land acquisition of parks, natural areas and trails, as well as detailed plans for park development, and the development of recreational facilities.

Existing Park and Trail System Plan

Currently, there are 31 public parks in Northfield, 21 miles of trails and numerous athletic facilities (Map 8.1). Parks are divided into neighborhood parks, community parks, nature parks, and athletic complexes (Table 8.1). Some of these facilities, including the soccer fields, ballfields and ice arena, are owned by the City. Other facilities, such as school playground areas, are owned by various organizations, such as the School District. In addition, there may be existing trails located on private property, such as St. Olaf or Carleton Colleges, which may not be available to the general public. Below is a description of the types of parks within Northfield:

- Neighborhood parks are the basic unit of the park system and serve a recreational and social purpose. Development focuses on informal recreation. Programmed activities are typically limited to youth sports practices and, very occasionally, games.

MAP 8.1 – EXISTING PARK AND TRAIL SYSTEM PLAN

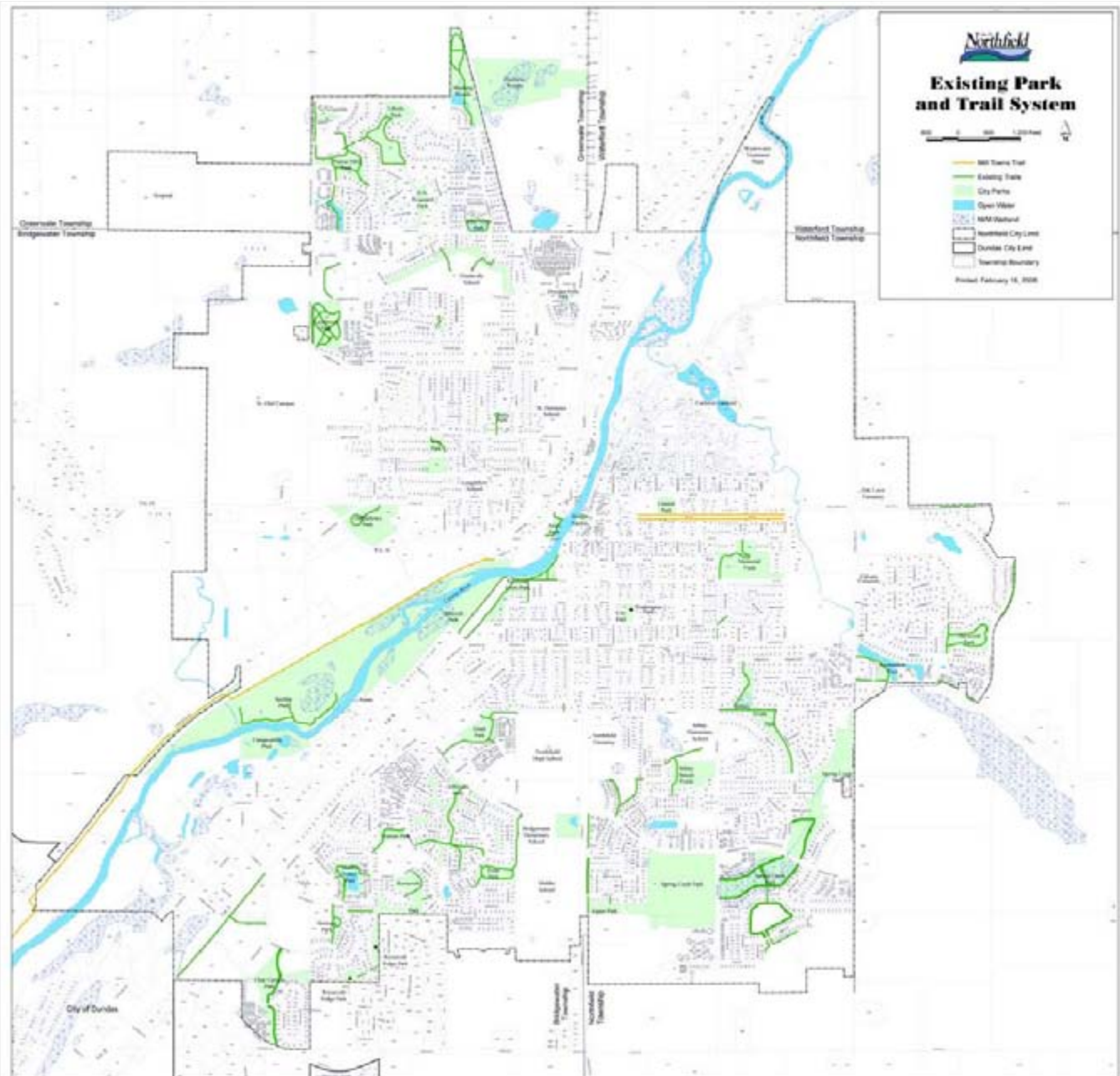


TABLE 8.1 – EXISTING NORTHFIELD PARKS

Name	Type of Park
Aspen Park	Neighborhood
Central Park	Neighborhood
Cherry Park	Neighborhood
Dresden Hills Park	Neighborhood
Grant Park	Neighborhood
Heritage Park	Neighborhood
Heywood Park	Neighborhood
Jefferson Park	Neighborhood
John North Park	Neighborhood
Lashbrook Park	Neighborhood
Liberty/Prairie Hill Park	Neighborhood
Roosevelt/Roosevelt Ridge Park	Neighborhood
Sibley Swale Park	Neighborhood
Truman Park	Neighborhood
Tyler Park	Neighborhood
Washington Park	Neighborhood
Way Park	Neighborhood
Downtown area: <ul style="list-style-type: none"> • Ames • Bridge Square • Babcock • Riverside Lions 	Community
Memorial Park	Community
Oddfellows Park	Community
Campostella Park	Nature
Char Carlson Park	Nature
Hidden Valley Park	Nature
Hauberg Woods	Nature
Par Meadow Park	Nature
Spring Creek Park	Nature
Sechler Park	Athletic Complex
Spring Creek Soccer	Athletic Complex

Source: City of Northfield

Proposed Park and Trail System Plan

The 2008 Park System Plan describes the goals for the next several years in developing the parks and trails system in Northfield (Map 8.2), and emphasizes quality of the system as opposed to quantity (number of parks and trails). The following are some highlights of the proposed system plan:

Natural greenway corridor system:

The proposed trail plan for the city will be consistent with the Greater Northfield Area Greenway System Action Plan, adopted in 2007. The greenway corridor system is defined as a connected system of protected natural areas and cultural resources for human use that will consist of both publicly-owned and privately-owned land perpetually protected as open space. The natural greenway system plan is one of the most ambitious and inspired aspects of Northfield's overall park, open space

and trail system. It will also be one of the most challenging to implement given the many parcel-by-parcel acquisition variables that will have to be addressed as land use decisions are made over time. Nonetheless, the public value of such a system has consistently proven to be very high and fully justifies the local commitment that will be needed to attain it.

City and School District cooperation:

The 2008 Park System Plan is intrinsically interconnected to School District properties. This is especially the case with athletic facilities, in which continued collaboration is necessary to effectively and efficiently serve local needs. Currently, the City and the School District have a recreation program agreement in place, which allows for cooperation in use, operations, and maintenance of athletic facilities for various sites. Continuing this relationship remains important in order to maximize the efficient use of land and funding sources to meet local needs.

Stewardship Plan:

Another important component of the 2008 Park System Plan is to establish a Stewardship Plan, which would be an on-going effort to protect natural areas. The Cannon River corridor is one of numerous examples in the city where maintaining its high value as a natural resource amenity will require a long-term commitment to its ecological health. Lacking that commitment, this type of resource will slowly degrade due to lack of natural processes and the collective impact of invasive species, fragmentation and hydrological changes associated with adjacent development.

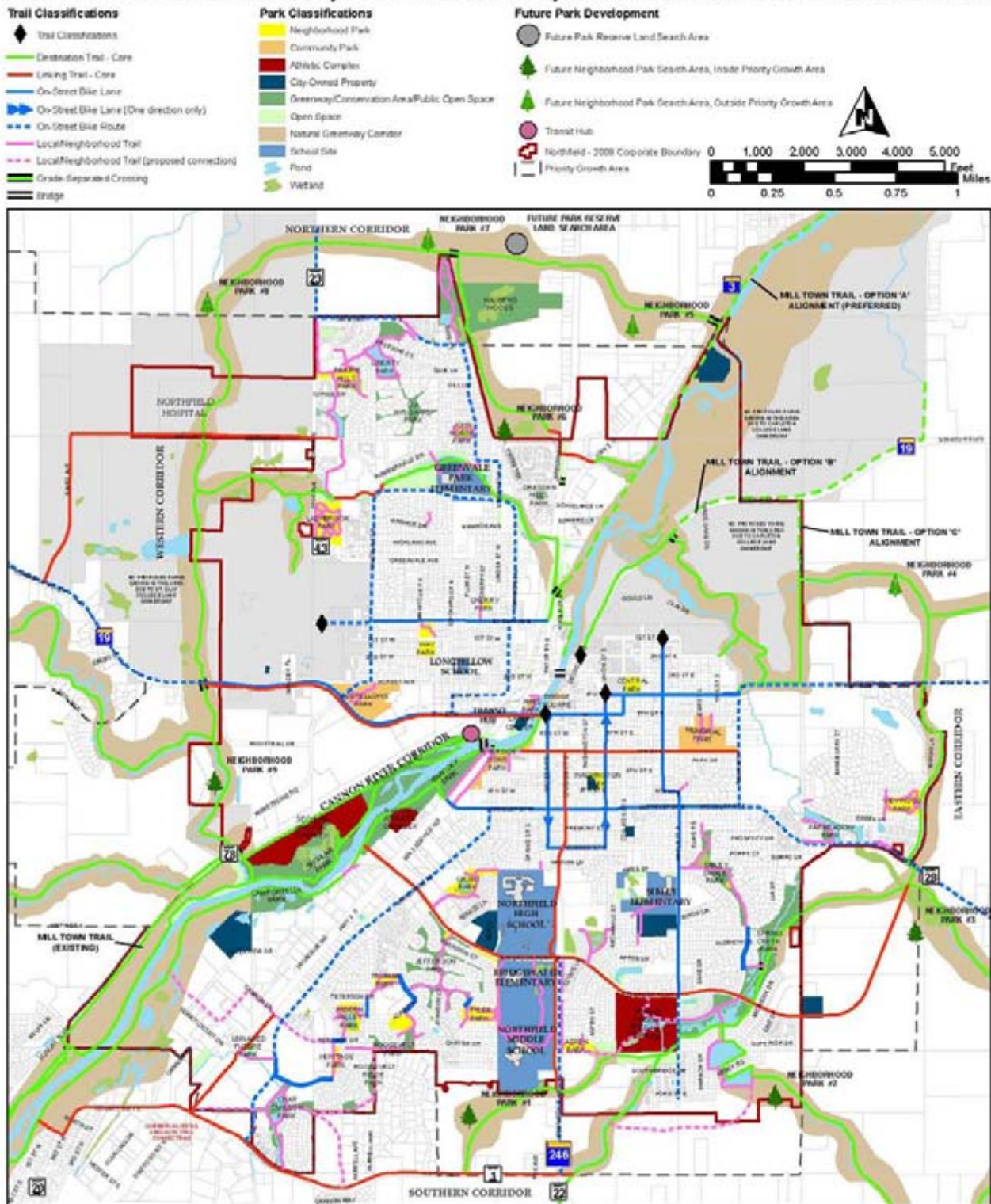
D. Objectives and Strategies

Outlined below are eight objectives and 24 strategies. The objectives indicate a specific policy direction and help organize strategies. Strategies are detailed actions necessary to initiate or complete an objective such as a program, policy or a project.

Objective 1: Implement a cohesive, effective and efficient comprehensive system plan.

PR 1.1 Routinely evaluate and update the 2008 Park System Plan and recreational needs of the community to ensure adequate parks, athletic facilities, open space and trails are provided.

NORTHFIELD PARKS, OPEN SPACE, AND TRAIL SYSTEM PLAN



Based on the Northfield Parks, Open Space and Trail System Plan

Updated Oct. 8, 2008

PR 1.2 Use the 2008 Park System Plan for the purpose of guiding implementation.

Objective 2: Provide residents with parks and natural areas for recreational uses, protection of the natural environment, and visual/physical buffering of land development as a means to maintain the sense of place, ambiance, appearance and history of the community.

PR 2.1 Enhance the quality of life within the city by providing adequate parkland and natural areas to fulfill the present and future needs of residents.

PR 2.2 Use the parks, natural areas and interconnecting trail corridors as a major factor in shaping development.

PR 2.3 Maintain and enhance the natural character of the community by providing parks and natural areas.

PR 2.4 Encourage sequential growth within the city in harmony with the natural environment.

Objective 3: Provide residents with a high-quality, interconnected trail system for recreation and transportation as a means to tie parks and open space together.

PR 3.1 Provide a trail system that emphasizes harmony with the natural environment.

PR 3.2 Allow for relatively uninterrupted pleasure hiking, biking, and other uses to and through the City's park and open space system and developed areas.

PR 3.3 Effectively tie the various parks together into an interconnected, high-quality system and effectively tie the City trail system with those of the adjacent townships and regional park and trail system.

PR 3.4 Protect trails from future development and from vehicular traffic.

Objective 4: Provide for the preservation and conservation of ecological systems and natural resources within the city.

PR 4.1 Preserve significant natural resources as open space and a highly valued aspect of the overall open space system.

PR 4.2 Maintain and enhance the character or appeal of the community through interconnected natural open spaces.

PR 4.3 Encourage orderly and sequential growth within the community and in harmony with the natural environment.

PR 4.4 Ensure sustainable and desirable natural resource areas and ecological systems are protected and managed within the city.

Objective 5: Establish an effective, ongoing means of communicating and interacting with residents about issues related to parks and recreation facilities, programs and future development. Provide residents with opportunities to participate in recreational activities and programs throughout the City and various civic and volunteer organizations.

PR 5.1 Promote active and ongoing interaction between the City and its constituents to ensure effective recreational programming and facility development.

PR 5.2 Promote ongoing communication between the Park and Recreation Advisory Board (PRAB) and residents.

PR 5.3 Promote ongoing volunteer programs and civic and athletic/youth organizations to encourage residents and community organizations to assist in park improvements, maintenance and providing recreation programs.

Objective 6: Maximize the park and recreational opportunities available to residents through the development of fair and equitable working partnerships between the City and the local recreational program providers, local school district, adjacent cities and townships, counties, churches and civic organizations.

PR 6.1 Fairly and equitably integrate the City's park and recreation facilities with those of the other partners.

PR 6.2 Fairly and equitably integrate the City's programs with those of the other partners.

Objective 7: Secure the funding necessary to carry out the mission of the 2008 Park System Plan.

PR 7.1 Define the funding options available for implementation of the 2008 Park System Plan and to maximize the use of each source.

PR 7.2 Prepare an implementation plan that defines the relative timing and extent of acquisition and development of system components.

Objective 8: Working with local recreational program providers, the City will strive to provide residents with the opportunity to participate in recreation activities and programs through well-designed, effective and interesting recreation programs.

PR 8.1 Support local recreational providers' efforts to meet local needs, including those of children, teens, adults, elderly and the disabled.

PR 8.2 Support and encourage a wide diversity of recreation interests within the community.

PR 8.3 Work with program providers to provide adequate facilities for programmed use on a fair and equitable basis to ensure that all individuals receive reasonable access to facilities.

9. Community Facilities

Organization

- A. Overview
- B. Goals
- C. Key Findings
- D. Objectives and Strategies

Purpose

The purpose of the Community Facilities Chapter is to identify current community facilities in Northfield so as to plan for their future renovation or expansion. This chapter will also review the current status of municipal facilities and discuss the comprehensive facility study currently underway.

A. Overview

Community facilities are a public or semi-public use such as government services (administration, police, fire and public works), religious institutions, public schools, libraries, museums, community centers, or other uses that are open to public use for little or no profit. Planning for community facilities is important because such facilities often form a major identity element of a community or neighborhood as well as provide essential services for the community's businesses, employees, visitors and residents. As Northfield grows in population and number of businesses, it is important to plan for the future expansion of community facilities to service the needs of a larger population.

In Northfield, community facilities in the past have been typically located in the downtown area (Library and museum) or integrated into the residential neighborhoods (churches and schools). These important components of the community helped create the small-town, pedestrian-friendly, neighborhood-oriented environment that makes Northfield so unique. However, as the community and the region continue to grow, some of these facilities, such as schools, have recently begun to locate on the edges of town as they face a need for expanded facilities. The choice from a cost and facilities management standpoint is easy, but with respect to a community's livability, an elementary school integrated into a residential area offers benefits that cannot be measured in terms of money. Such a neighborhood school is closer to student's homes, a safer environment and a neighborhood identity builder. Churches are facing similar economic issues when confronted with the prospect of expanding into large-scale uses with a full schedule of weekly activities. Principle 4 of Chapter 4, Land Use, states that: "Community gathering areas will be integrated into new residential areas to promote opportunities for social interaction and public events."

In 2007, the City completed a Municipal Facilities Space Needs Analysis. The location of key City facilities is shown on Map 9.1. The intent of the study was to identify municipal facilities, define their current use, document their location and analyze their programmatic use. Information from this study will be used in the completion of the Capital Improvement Plan (CIP) and comprehensive facilities improvement plan. Simply stated, the charge was to determine if the City has, or will have, enough space in the coming years to adequately conduct city business and provide for the safety and welfare of the community. The core efforts of this study focused

Community Facilities

on primary municipal facilities including City Offices and Council Chambers (City Hall), Police Department, Fire Department and the Library (in 2006, a separate study was completed for the Library). The 2007 study also addressed the Water Department, Waste Water Treatment Facility, Public Works Maintenance Facility, the Municipal Liquor Store, Recreational Facilities, and the Northfield Community Resource Center.

It was determined that the city will have a core deficit of nearly 34,000 square feet of space by the year 2023 and that to accommodate this need, additional remodeling, renovations, and/or expansion and/or reuse must be undertaken, in addition to new construction. A

likely need will be to renovate or build over 100,000 square feet of space by the year 2023.

B. Goal

A goal is a policy statement that states a desired outcome in general terms. The goal for community facilities is provided below. The goal was developed by considering key findings related to community facilities, and integrating public input generated as part of the Plan update.

Plan for and prioritize the construction of community facilities

MAP 9.1 NORTHFIELD FACILITIES



Source: Hay Dobbs

so as to provide the greatest benefit to the residents in the most cost-effective manner possible, with the most positive effect on the immediate surroundings.

C. Key Findings

Existing Facilities

City Hall

City Hall houses Northfield's administrative services and also provides space for Rice County administrative services and miscellaneous community activities. Located in a former elementary school on Washington Street that was constructed in 1954, City Hall has inflexible office space. Figure 9.1 shows the current City Hall. To meet the needs of a growing population and growing demand for administrative services, it is believed that the building will either need to be remodeled or a new building constructed. The Municipal Facilities Space Needs Analysis concluded that parking is ample for the size and occupancy of the use, but the space is very inflexible and departments are space locked. Several scenarios were proposed in the study to either renovate the existing building or construct a new building that may be combined with a new public safety or library facility. No conclusion has occurred on which scenario is being pursued.

Schools

Within the public school system, there are three elementary schools, a middle school and a high school (Table 9.1 and Map 9.2). The community also has charter and private schools. Schools play many important roles within neighborhoods including providing recreational areas (tot lots or playgrounds), providing voting locations, serving as meeting places, and of course providing a place to learn within walking distance of many of its students. The more recent trend in school development is for schools to locate on the edge where there is an abundance of vacant land. Such development in Northfield has occurred south along Hwy 246/Division Street South where Bridgewater Elementary opened in 1998 and where the middle school opened in 2004. The school district has indicated that they do not plan to construct any new schools for the foreseeable future. Therefore, the need to identify or reserve land resources for future school facilities is not apparent at this time.



Figure 9.1. Northfield's existing City Hall and grounds.

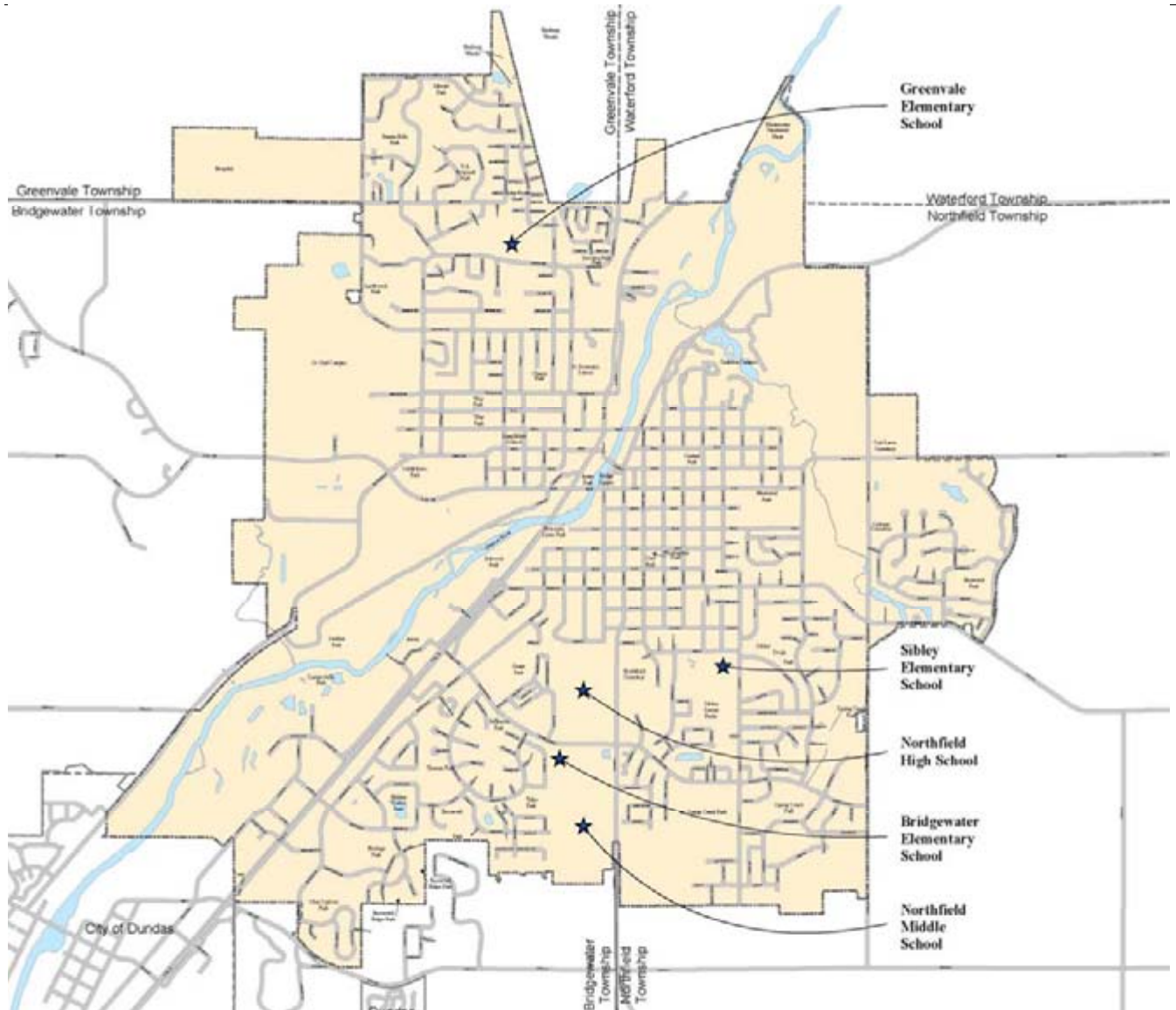
The transportation system around schools is also an important factor. Even when schools are adjacent to residential neighborhoods, if there are no streets or walking paths connecting them, the schools function as separate automobile destinations instead of integral parts of the neighborhood, thus creating a travel pattern that has to be carefully planned and accommodated in residential neighborhoods.

TABLE 9.1 NORTHFIELD PUBLIC SCHOOLS

Name of School	Location	Size of Property
Bridgewater Elementary	Jefferson Pkwy/Hwy 246	13.5 acres
Greenvale Park Elementary	Lincoln Parkway	14.6 acres
Sibley Elementary	Maple Street	15.5 acres
Northfield Middle School	Division Street South (Hwy 246)	61 acres
Northfield High School	Division Street South (Hwy 246)	36 acres

Source: City of Northfield

MAP 9.2 PUBLIC SCHOOLS



Source: City of Northfield

Houses of Worship

Some of the community's religious institutions are integrated into residential areas and form cornerstones in their respective neighborhoods. The churches close to the downtown area also present good examples of popular architecture of the late 19th and early 20th Centuries. Because many churches enjoy growing congregations and draw members from both Northfield and rural areas surrounding Northfield, they are being forced to consider expansion or relocation alternatives similar to those faced by the school system. New or expanded church facilities will be part of the future land use and development pattern of the city. Similar to schools, churches are a welcome component in

residential neighborhoods, but due to larger traffic volumes can be disruptive if careful and effective measures are not applied.

Library

The Public Library, constructed in 1910 as a Carnegie Library (with a major addition in 1985), is located in downtown Northfield, and is currently considering options for expanding (See Figure 9.2). A study completed in 2006 indicated a desire to significantly increase the size of the existing Library building. An expanded library facility may be possible at its current downtown location with additional space built to the south of the existing building. If that site does not offer enough space for an adequate expansion, another



Figure 9.2. City of Northfield Library.

downtown location should be used, consistent with the land use principles in Chapter 4, Land Use, that identify the Public Library as a key component in a vital and historic downtown district.

Museum/Theater

The old City Hall is now the home of the Arts Guild and currently houses a gallery, shop, and studio. Located just west of downtown, the Arts Guild Theater is an attraction both for tourists and Northfield residents. The Historical Society Museum, a popular attraction for tourists interested in such historic events as the Jesse James/Cole Younger raid in 1876, is also located downtown. Discussions have been held about the possible development of a downtown community cultural center to provide areas for various resources: performances, retail, studios, gallery, library, meeting spaces and organizational offices.

Public Safety (Police and Fire)

Police and Fire protective services are located in the same facility, known as the Public Safety Center, on the southeast quadrant of 5th Street and Hwy 3. The building

was constructed in 1971 (See Figure 9.3). The Public Safety Center also houses the Emergency Operations Center and Rice/Steele County Combined Dispatch Center Backup Unit.



Figure 9.3. The Public Safety Center.

The Fire Department is currently 100% volunteer and in addition to serving Northfield, serves adjacent townships. Emergency response times within the community are generally under 10 minutes, but limited river crossings and only one grade-separated crossing at the railroad tracks can create problems for responding to emergencies. As Northfield and adjacent townships grow, additional demand is placed on the Fire Department to provide fire protection. Also important to the fire station is the ability to draw additional volunteer firefighters. Recent trends across the country have found it increasingly difficult to find volunteers.

The Police Department authorizes 23 licensed police officers. This equates to a ratio of 1.21 sworn officers per thousand persons in Northfield. The average ratio of sworn officers per thousand persons in cities of 10,000 to 25,000 persons is 2.32 sworn officers. Police calls in Northfield are usually “quality of life issues” and domestic calls.

The Municipal Facilities Space Needs Analysis concluded that the building is landlocked on a busy intersection with one outlet for fire and the public. The facilities are not compliant with Americans with Disabilities Act (ADA) requirements and police detention does not meet Minnesota Department of Corrections requirements. Several scenarios were proposed in the study, including renovating the building for Fire Department use and relocating the Police Department. Other options include constructing a new building that may be combined with a new City Hall or Library facility. The ability to influence the community identity with the redevelopment or expansion of a Public Safety Center is an opportunity that must be recognized by the City.

Northfield Community Resource Center (NCRC)

The NCRC is a 58,451 square-foot facility completed and opened to the public in 2000. The multi-million dollar building, funded through a variety of public and private funding sources and conveniently located on Jefferson Parkway just west of the Northfield High School, has four wings: the Youth wing, Human Services wing, Shared Services wing, and the Senior Center wing. The facility is open to the residents of Northfield and the surrounding communities and houses a wide variety of service and educational organizations, including the Northfield Senior Organization, the Community Action Center, Food Shelf, Clothes Closet, continuing education center, Head Start, Three Rivers Community Action, and a daycare.

Northfield Hospital

The Northfield Hospital, which opened a new 60-acre medical campus in 2003, is located along North Avenue in the northwest area of the community. At that location, it offers 37 acute-care beds for inpatient care, a 40-bed long-term care center and a full range of outpatient services. In 2007, the Hospital further expanded its operations with an attached 18,000 square foot multi-specialty clinic and hospital addition. It also developed clinics in Lonsdale in 2006 and Farmington and Lakeville in 2007. Separate from the main campus, the Hospital also operates the large Center for Sports Medicine and Rehabilitation, the Orthopedic and Fracture Clinic of Northfield, Northfield Homecare, and Northfield Emergency Medical Services (ambulance).

Because of its outreach efforts, as well as continued growth of the local Allina Clinic, the Hospital expects to serve a growing portion of the approximately 80,000 residents who live in its Rice, Dakota, Scott and Goodhue Counties' service area. As its base of patients grows, the Hospital plans to develop an extensive array of new health care services on its main campus. Its present employee staff of well over 500 people will continue to expand, as will the volume of its outpatient services. Taken together, these factors are expected to lead to significant growth of the campus over the next 15-20 years, and to increase traffic in Northfield, with a significant amount arriving from the north.

Other City Facilities

Other facilities owned and operated by the City include the following:

Public Works Maintenance Facility, constructed in 1994, is an approximately 20,000 square foot building that houses streets and parks employees, as well as large maintenance equipment.

Water Division Building, constructed in 1978, houses City staff. Office space is ample. However, there is a need for more cold storage for off-season equipment. There is little room for expansion due to its residential location.

Wastewater Treatment Plant (WWTP) was constructed in 1958 and serves both Northfield and Dundas. Continued population growth indicates the treatment facility may need to be enlarged, with a study to determine this by 2015. The facility works well, although there is a need for more garage space.

Transit Facility, built in 2002, houses office space, 5,871 square feet of heated garage, and 920 square feet of cold storage.

Municipal Liquor Store was constructed in 1957. Profits from the store directly support public services and projects. Currently, the City is considering relocating the store to accommodate more room for parking and operations.

Northfield Ice Arena was constructed in 1975 and sold to the City in 1984. The present arena was built by local citizens and has housed many teams. The Municipal Facilities Space Needs Analysis study concluded that the current facility is no longer keeping up with current demands. Issues relating to ADA accessibility requirements, locker rooms, and seating capacity need to be resolved to adapt to future needs. Local citizens are currently working to see if a new facility could be constructed.

City Owned Parcels that are vacant are located throughout the community. Most of these parcels are too small to accommodate future public facilities. However, there is a five acre parcel located near the Transit Facility and a 2.5 acre parcel located near the intersection of St. Olaf Avenue and Water Street North that might be able to accommodate a future facility.

D. Objectives and Strategies

Outlined below are two objectives and seven strategies. The objectives indicate a specific policy direction and help organize strategies. Strategies are detailed actions necessary to initiate or complete an objective such as a program, policy or a project.

Objective 1: Provide key facilities that reflect the community's values and needs, and support the functioning of those who serve the public.

CF 1.1 The City's Capital Improvement Plan should include funding for future building renovations and/or new construction.

CF 1.2 The City should prioritize which facilities will be renovated and/or replaced.

CF 1.3 City-owned facilities will add to the community's sense of place through high-quality architectural design and site orientation that follows the land use principles of Chapter 4.

Objective 2: For those community facilities considering expansion or relocation, ensure that new facilities have a positive impact on surrounding neighborhoods.

CF 2.1 Expansion of such facilities should be closely monitored so that facilities do not negatively impact (with excessive parking, traffic, and noise) the character of a neighborhood. New facilities should reflect, whenever possible, the character of the existing neighborhood.

CF 2.2 Locate and retain community facilities within the downtown area where appropriate and possible.

CF 2.3 Construction or renovation of publicly-owned buildings should be environmentally-responsible and energy efficient.

CF 2.4 Whenever possible, the City should encourage civic uses such as schools and houses of worship to locate as part of a residential neighborhood.

10. Economic Development

Organization

- A. Overview
- B. Goal
- C. Key Findings
- D. Priority Strategies
- E. Objectives and Strategies

Purpose

The purpose of the Economic Development Chapter is to identify the objectives and strategies for the success of economic development in Northfield.

A. Overview

Northfield is in an enviable position for a community of approximately 19,000 residents. The city boasts a number of assets and a unique character. An historic downtown and neighborhood, vital arts and culture presence, burgeoning riverfront and distinctive retailers make Northfield a popular destination. Two nationally-recognized liberal arts colleges, Carleton and St. Olaf, create intellectual capital that extends beyond students and faculty. This contributes to the community's economic development in a unique and distinct manner. The colleges also provide a wide variety of cultural offerings for the community as a whole.

These attributes, in addition to a strong employment base and easy access to the Twin Cities, Rochester, and the evolving southeast Minnesota corridor create conditions under which growth must be planned for and managed. While rapid suburban development is a national pattern – resulting in communities with no real sense of identity – Northfield has defied the odds. It has done so by maintaining both its own employment base and its downtown core while being dedicated to thoughtful growth and preserving the city's quality of place. Northfield's ability to offer a diverse mix of employment and housing opportunities, to maintain and enhance the downtown, and to provide the level of services that current and future residents demand will hinge on the community's commitment to pursuing specific economic development objectives – and to do so in a highly visible and assertive manner. The following land use principles of Chapter 4 relate to economic development:

- The preference for accommodating future growth is in infill locations, then redevelopment/land intensification opportunities; and then on the edge of existing developed areas (Principle 3).
- Places with a mix of uses that are distinctive and contribute to increasing the city's overall vitality are preferred (Principle 6).
- Neighborhood-serving commercial will be small scale and integrated with the residential context (Principle 7).

B. Goal

A goal is a policy statement that states a desired outcome in general terms. The goal for economic development is provided below. The goal was developed by considering key findings related to economic development and integrating public input generated as part of the 2006 Economic Development Plan.

Promote economic development by supporting existing businesses, by talent attraction and retention, by aggressive business recruitment, and by increasing the availability of commercial and industrial land. A further goal is to reposition Northfield to become more competitive in its economic development initiatives in relation to the Twin Cities, the Rochester corridor and its neighboring communities.

The 2006 Economic Development Plan contains a detailed explanation of all the strategies associated with maintaining and expanding the economy. Where more detail is needed to understand the full context of the Economic Development Plan, refer to the 2006 Economic Development Plan.

TABLE 10.1 NORTHFIELD SWOT ANALYSIS

Strengths	Weaknesses	Opportunities	Threats
Highly educated workforce	Lack of commercial and industrial space and land resources	Riverfront development	"Northfield is becoming an increasing suburban bedroom community."
Authentic & thriving downtown business sector	Low rates of retention of graduates	Medical and related industries	Loss of independent retail downtown
Presence of St. Olaf and Carleton Colleges	Limited number of Employment opportunities	Business expansion out of Minneapolis-St. Paul	Under-developed
Growing health care sector	Limited housing, social and recreational opportunities for young adults	Expansion of existing businesses	Land underutilized
	Overpriced Housing	Draw from Twin Cities Labor Pool	Limited diversity of retail downtown

Source: TIP Strategies and Northfield Economic Development Authority

C. Key Findings

The community's opportunities and challenges were identified in the Comprehensive Economic Development Plan, adopted by the Economic Development Authority (EDA) in 2006, and are identified in Table 10.1, above. The information in this table highlights Northfield's strengths, weaknesses, opportunities, and threats, commonly referred to as a SWOT analysis. Broadly speaking, economic development strategies emerge directly from the SWOT analysis. Weaknesses – even if not directly related to economic development – must be addressed, and strengths must be supported and reinforced. Similarly, threats to the economic well-being of the community must be anticipated and responded to before they become crises. Opportunities, on the other hand, should be acted upon assertively and, if possible, collaboratively.

D. Priority Strategies

The 2006 Economic Development Plan describes three priority strategies for the community:

- Diversify the economic base.
- Maintain Northfield's sense of place.
- Attract and retain talent.

1. Diversify the economic base.

The availability of land for commercial and industrial expansion and recruitment continues to be at the forefront of community discussions. This type of development leads to quality employment opportunities, increased tax base and ancillary businesses that support existing businesses. Strong residential demand and limited annexation powers combine to drive up land costs, making available property costly for development. Providing specific commitments to offer suitable land for commercial and industrial expansion, it is reasonable to expect that future industrial and commercial growth can occur. Because of the higher property class rate assigned to nonresidential property, commercial and industrial property typically generates more tax revenue than residential property. Businesses also generally require fewer public services, such as police and fire, often making them a net gain to the City's tax base. Commercial and industrial development also has a "multiplier effect" as spending generated by companies and their workers circulate through the local economy.

In addition to the direct fiscal implications, uncontrolled residential growth without a corresponding growth in the commercial and industrial economy can

create a number of unintended consequences. These include increasing commute times (because residences and businesses are further apart) and demographic shifts (as developers cater to specific markets, such as senior housing or upper income markets), as well as the impact of market forces themselves. Strong residential demand creates dramatic rises in housing costs and speculation, while weakening demand can leave the community with vacant housing units, falling home values and deteriorating neighborhoods.

If this situation is to be resolved given the current competitive environment, increasing the availability of commercial and industrial land for existing business expansion and new business attraction is of utmost importance. In fact this issue is the highest priority for the Northfield EDA. This can be accomplished by accommodating the expansion needs of existing businesses, marketing the community strengths, and recruiting targeted commercial and industrial businesses. The City and the EDA are exploring alternative locations for commercial/industrial development that involve the identification of sites that are suitable for infill development, redevelopment/intensification and the creation of a new commercial and industrial center as identified on Map 10.1.

On Map 10.1, numerous locations for infill development and redevelopment/land intensification have been identified along Hwy 3 and along the Cannon River corridor with a total of approximately 30 acres available for commercial and industrial infill. In addition, there are approximately 91 acres of vacant land within the city zoned “mixed use” that are also available for development. Three possible locations for a new commercial and industrial center are also identified as:

- West of the Northfield Hospital.
- West of the existing industrial area along Armstrong Road and Industrial Boulevard south of Hwy 19.
- Area north of the city limits along the corridor that would be the extension of Thye Parkway to Hwy 3.

Because of market considerations and the potential negative impacts of too much commercial and industrial development, the size of the new commercial and industrial center should relate to the overall pattern of the community. Currently, commercial and industrial land uses represents 14.7% of the total land area of the city. As Northfield continues to grow and expand, the City should attempt to increase the proportion of land devoted to commercial and industrial uses to sustain the overall health and vitality of the community.

Ultimately, the size and location of any new commercial/industrial center should relate to the overall development pattern of the community, and will be influenced by such factors as infrastructure feasibility, landownership realities, intergovernmental agreements and market absorption influences.

2. Maintain Northfield’s Sense of Place.

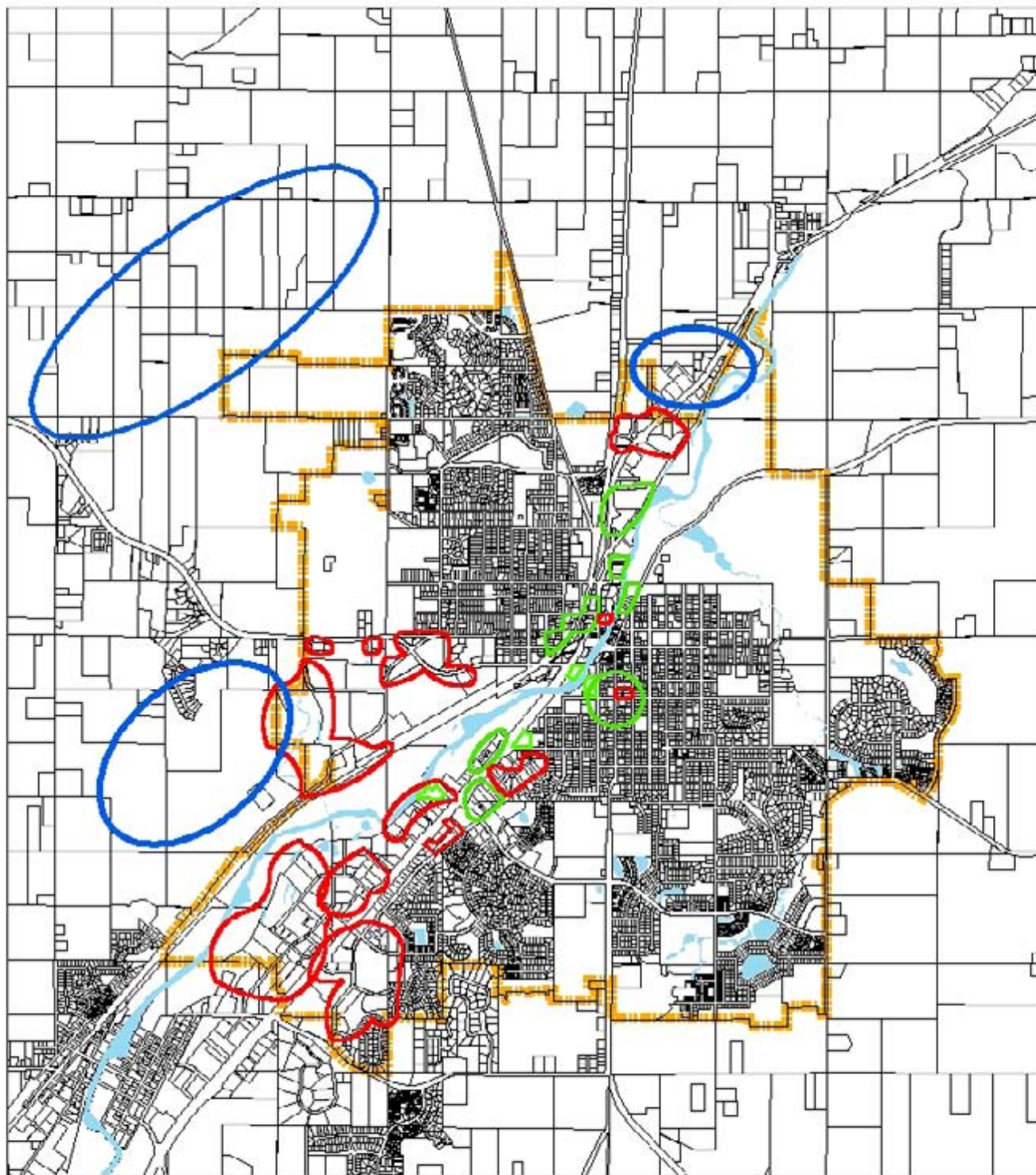
The downtown area is essential to Northfield’s sense of place. It is widely recognized that a healthy retail area is a key indicator of the health of downtown. On this point, Northfield’s story is no different than that of many other communities. Independent retailers, whom are working with limited profit margins, are often unable to absorb rising costs or to offset even a small amount of competition from national chain stores. Faced with dramatic increases in property taxes and competition from larger retailers locating on Hwy 3, the future of Northfield’s independent retailers is vulnerable.

In addition to its historic character, downtown Northfield has an asset that many communities do not — the Cannon River. Once pivotal to the city’s existence, the river has faded in importance from an economic development standpoint. Despite recent developments, linkage to the downtown is still unfocused. Activating the entire riverfront by orienting development to it and encouraging uses that maximize a riverfront location can help invigorate the downtown and integrate it with other areas of the city.

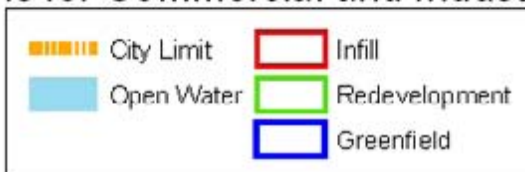
Recent development proposals, including a redevelopment project called The Crossing at Hwy 3 and 2nd Street West set the tone for additional redevelopment and infill projects along the river. Emphasis should be placed on orienting new development to the river. This means ensuring that buildings have access to the river as well as to the street, creating additional pedestrian areas along the riverfront, requiring common architectural elements and adequate lighting and encouraging uses that relate to the riverfront. These uses could include sporting goods stores (with equipment rental options), cafés, and offices with river views as well as professional services and business support activity.

The City will continue to work with the EDA, the Northfield Downtown Development Corporation, the Northfield Area Chamber of Commerce, the Latino Enterprise Center, the Northfield Enterprise Center, the Northfield Housing and Redevelopment Authority and

MAP 10.1 POSSIBLE LOCATIONS FOR COMMERCIAL AND INDUSTRIAL DEVELOPMENT



Possible Locations for Commercial and Industrial Development



the Rice County Economic Development office to strengthen the retail environment, promote tourism, increase the range of professional services and provide a range of housing options. The expansion and revitalization of the entire riverfront will accomplish many of these objectives. The City and the EDA currently provide financial support to many of the entities.

3. Attract and retain talent.

As worker shortages loom nationwide and competition for workers increases, attracting and retaining talent has become the focus of economic development organizations across the country. The concept of “talent” means more than a skilled workforce. It means recruiting talented people as well as cultivating the current talent pool represented by students. It also means ensuring that employees and companies that have been responsible for Northfield’s growth see a reason to remain in the area.

Northfield has a unique advantage due to the presence of St. Olaf and Carleton Colleges. Few cities of Northfield’s size are fortunate enough to have one institution – let alone two – directing a steady stream of young people to the community year after year. Collectively, the Colleges enroll nearly 5,000 students in a school year. The growing relationship of higher education to economic development and the opportunity presented by the graduates of St. Olaf and Carleton Colleges make the attraction and retention or return of alumni the most promising strategy for developing Northfield’s talent base.

Northfield would also do well to provide affordable housing to those who wish to work and live in the community. In the 2006 Economic Development Plan, major employers listed housing costs as a perceived barrier to the recruitment and retention of workers (this is addressed in Chapter 11).

The 2006 Economic Development Plan also noted that Northfield is reliant on neighboring communities to supply much of its labor force. For example, more than half of workers at local companies commute from outside the community. Many of Northfield’s more highly-paid workers commute from Dakota and Hennepin Counties. The relatively high cost of housing contributes to these commuting patterns and to the difficulty in attracting and retaining young people.

Finally, it was noted in the 2006 Economic Development Plan that immigration to Northfield

continues to be a factor in its growth as it has been from its inception. Newcomers bring gifts of talent, energy and a desire to make a better life. These have been assets that contributed to the growth of Northfield to this point in time and are required for its continued vitality. At the same time, immigration requires that the current residents reduce barriers to participation so that potential contributions can be made real. Successful economic development will require addressing housing, employment, education and social needs of all residents of Northfield, including recent immigrants.

E. Objectives and Strategies

Several factors shape the philosophy of economic development in this plan. First and foremost is the definition of economic development as outlined in the Economic Development Plan:

“Economic development is the application of public resources to stimulate private investment.”

With this in mind, the role of the public sector gains clarity that other definitions obscure. Public officials and local government employees do not create jobs or generate wealth. But they do control significant resources. Directing these resources effectively and efficiently is their paramount duty. Effective programs should be judged by how well public resources can create a response from private investors. An understanding of trends affecting the practice of economic development across the United States frames the concept of economic development in Northfield. The strategies outlined below are designed to build on the city’s existing assets, while recognizing that change is an inevitable part of growth and that the growth the community will experience should be both manageable and sustainable.

Outlined below are four objectives and 19 strategies. The objectives indicate a specific policy direction and help organize strategies. Strategies are detailed actions necessary to initiate or complete an objective such as a program, policy or project. These objectives and strategies, when combined with the more detailed implementation matrix of the Economic Development Plan, will serve as an effective guide to ensure a coordinated approach to the enhancement of the economy of Northfield.

Objective 1: The City will support existing businesses.

ED 1.1 Seek opportunities to address barriers to retention and expansion of existing businesses.

ED 1.2 Assure availability of key informational resources to support decision-making of existing businesses.

ED 1.3 Offer leveraging financial tools to strengthen businesses and promote business expansions.

ED 1.4 Adopt a regulating policy that accommodates and provides incentives for infill and redevelopment and land intensification opportunities.

Objective 2: The City will make sufficient land resources available for the needs of existing and future businesses in line with the strategies outlined in the 2006 Economic Development Plan.

ED 2.1 Land resources within the community that are served or can be easily served by infrastructure and are suited for commercial and industrial intensification and redevelopment will be zoned appropriately to enable full and efficient utilization.

ED 2.2 Land resources that are adjacent to the city limits of Northfield and are relatively easy to serve with the extension of infrastructure should be pursued for future commercial and industrial development.

ED 2.3 The City will support strategies of annexation that are designed to provide additional land resources for commercial and industrial development, and that are in compliance with the overall objectives of the Comprehensive Plan.

ED 2.4 The areas that have been identified west of the Northfield Hospital, west of the existing industrial area and south of Hwy 19, and north of the city limits in Waterford Township along the Thye Parkway corridor should be viewed as priority areas for additional evaluation and possible annexation into the city. When these areas are considered for annexation, the City will review the requests with a Master Plan for the area.

Objective 3: Expanding and revitalizing the Cannon River corridor will be a pivotal part of the strategy to maintain the historic character that is Northfield.

ED 3.1 Sites that are suitable for land infill and redevelopment/intensification along the Cannon River south of 5th Street should be identified, and strategies to encourage new investment in these areas should be pursued.

ED 3.2 Any infill and redevelopment/intensification along the Cannon River corridor should be oriented to maximize the advantage that the river corridor creates for such opportunities.

ED 3.3 Development design along the Cannon River should incorporate the following concepts:

- A distinctive pattern of architectural and urban design elements that includes many of the design concepts that have been developed from the Downtown Streetscape Framework Plan.
- Link existing pedestrian improvements, including walks and trails, with similar improvements that are required as infill and redevelopment/intensification occurs along the corridor.
- A development pattern that emphasizes pedestrian scale, minimizes building setbacks, ensures the public's health and safety by protecting the floodplain, and discourages large parking areas in front of buildings.

ED 3.4 Encourage further redevelopment/intensification in downtown as a means to maintain and add to the vitality of this area. Downtown redevelopment/intensification should focus on retail uses, professional services, arts activities including opportunities for live-work development, businesses that support other businesses, and downtown housing.

ED 3.5 Establish regulations for locating neighborhood serving commercial nodes. These regulations will address the viability of the commercial node, the relation of the commercial node to the surrounding neighborhood, and strategies to prevent commercial nodes from competing with other commercial areas.

Objective 4: Support the economic vitality of the community through business retention and recruitment and enhancement of tourism opportunities.

ED 4.1 Target the retention and recruitment of those industries having the highest potential for success in Northfield, as outlined in the Economic Development Plan, such as logistics, specialty manufacturing, environmental technologies, healthcare and medical, professional and technical services and information technology.

ED 4.2 Seek opportunities for the Northfield Hospital to be a stimulus for economic development.

ED 4.3 Promote economic development opportunities that arise from the development of intellectual capital at Carleton and St. Olaf Colleges.

ED 4.4 Seek ways to better integrate the economically-challenged into the economic life of Northfield, such as providing for affordable housing and targeting small business incentive programs to this segment of the economy.

ED 4.5 Generate the type of economic growth that preserves the small-town character and is consistent with the overall objectives of the Comprehensive Plan.

ED 4.6 Support programming efforts to further tourism in Northfield, e.g., Historic and Festival Programs, Arts and Cultural Programs and Tours.

11. Housing

Organization

- A. Overview
- B. Goal
- C. Existing Housing Conditions
- D. Key Findings
- E. Objectives and Strategies

Purpose

The purpose of the Housing Chapter is to describe current housing conditions in Northfield and plan for future development relative to need and demand.

A. Overview

While people may work, shop or seek entertainment in Northfield, their decision to live in the community depends on the availability of a quality housing stock diverse enough to fit the needs of a person or family regardless of what those needs may be. Housing in Northfield has evolved over the years, reflecting the needs and desires of residents. Northfield's many neighborhoods will reveal a variety of styles, many of which are historically significant.

Northfield's vision recognizes the small-town, and in many cases the historic, character of the community. The following land use principles in Chapter 4, relate to housing:

- The preference for accommodating future growth is in infill locations, then redevelopment/land intensification opportunities and then on the edge of existing developed areas (Principle 3).
- New and redeveloped residential communities (areas) will have strong neighborhood qualities (Principle 4).
- Environmentally-sensitive and sustainable practices will be integrated into new developments and redeveloped areas (Principle 5).
- A wider range of housing choices will be encouraged – in the community as well as in neighborhoods.
- The small town character will be enhanced (Principle 1).

These principles provide a framework for the Housing Plan.

This chapter summarizes findings from a housing market assessment prepared in 2007 as input to the 2008 Comprehensive Plan, and a housing study completed in 2006 for the Housing and Redevelopment Authority (HRA). The housing market assessment sought to focus on several key housing questions that have arisen as part of the comprehensive planning process. The housing study examined existing data on the city's housing supply and basic market trends.

This chapter provides a brief summary of existing housing conditions and an analysis of supply and demand, as well as an assessment of demographics, rental housing inventory and single-family housing stock. Specific attention is paid to the need for housing that is affordable to residents and workers in Northfield.

B. Goal

A goal is a policy statement that states a desired outcome in general terms. The goal for housing is

provided below. The goal was developed by considering key findings related to housing and integrating public input generated as part of the Plan update.

Provide housing opportunities for all people who live and work in Northfield. A variety of housing options, including rental housing, should be available as first-time homebuyers have families, become empty nesters, become elderly and eventually need assisted living services. Green technology, environmental considerations and strong neighborhood qualities should be combined to provide a safe, secure and pleasing living environment.

C. Existing Housing Conditions

This section summarizes existing conditions with respect to housing supply in Northfield. Information was collected through field reconnaissance, interviews with real estate professionals, and from Census and other data with respect to existing neighborhoods, tenure, construction trends and housing product. The city's housing stock was analyzed in terms of its overall marketability for meeting the demands of the current and future market.

Existing Housing Stock

As noted previously, the 2006 Housing Study summarized existing housing stock and provided information on housing conditions within each of Northfield's neighborhoods. In order to provide context for the 2007 market assessment, several key factors relating to existing housing stock are summarized below.

Housing Stock and Tenure

According to the 2000 Census, Northfield had a total of 5,119 housing units, of which 4,909 (95.9%) were occupied and 210 (4.1%) were vacant. This is a normal vacancy rate, which indicates that there was generally a balance in the supply and demand for housing in the market in 2000.

Housing Types. According to the 2000 Census, almost 56% of the city's housing was in single-family, detached units. Only 9% of the existing housing stock in 2000 was in attached housing, and yet attached twin homes have accounted for roughly 50% of all new housing permitted since 2000 (see Construction Trends). Thus, recent construction represents an aberration from historic trends. About 24.7% of Northfield's housing was in multi-family buildings with five units or more.

Much of the newer housing has taken the form of conventional suburban-style development, particularly in terms of site planning. The City's land use regulations have successfully encouraged developers to build at higher densities, but the style and layout of housing within new developments has typically not changed to match the change in density patterns. As a result, there are some new residential neighborhoods that appear over-built with houses. These areas contrast sharply with the city's older neighborhoods and historic districts, which offer a sense of place and a scale of housing that meets the requirements of the respective site.

Tenure. The national average of owner-occupied housing in 2000 was 66%. In Northfield, more than 68% of the city's housing was owner-occupied in 2000. Additionally, 96% of single-family housing stock was owner-occupied, and 77% of one- to three-unit structures are owner-occupied. Similarly, about 32% of the city's housing was renter-occupied, again consistent with national figures.

Age and Condition

Less than 20% of the city's housing stock was built prior to 1940, so there has been less time for Northfield's housing to age and for conditions to degenerate. In fact, most of the city's housing stock was built between 1970 and 2000, averaging 1,031 new units per decade.

However, the period since 2000 has seen the pace of housing construction double from its previous trend, with almost 1,200 units permitted during the five-year period from 2000 to 2005 alone. Construction trends are summarized below.

Construction Trends

A total of almost 1,200 residential building permits were issued by the City between 2000 and 2005. The vast majority of these units (91.9%) were issued for single-family homes, although the mix of units was split between detached houses (52.4%) and attached twin homes (47.6%).

There were also 88 multi-family (four or more) units constructed during the six-year period, accounting for 7.4%. This is a typical number for a small city, but is surprisingly small for a college town. Northfield also issued eight permits for three-unit buildings.

Northfield averaged permitted construction of about 200 units per year between 2000 and 2005. However, the city experienced a growth spurt in permits for

detached housing, starting in 2003. Prior to 2003, the City had issued about 75 detached housing permits per year. From 2003 to 2005, the City issued an average of 115 such permits per year.

The overall construction trend suggests an increase between 2001 and 2003 in terms of the supply coming on line each year. Most of this increase was attributable to a growth in the number of single-family detached permits.

Absorption

A sample of 23 active Northfield housing projects was analyzed to assess overall absorption trends, in terms of the pace at which residential lots are being built out in the city. This sample only includes projects that started building since January 2000, so it excludes older projects some of which are still building out.

Detached Lots

There are 15 detached housing projects in the sample with a total of 314 units built between 2000 and 2006. Total absorption among these projects has been averaging 3.97 units built per month or 47.7 units built per year. A typical project would have averaged absorption of about one unit every two months or slightly less than six units per year.

Consistent with the permitting data, construction of detached housing units increased markedly during the 2003-2004 period, when annual absorption jumped from 24.15 to 76.50. That pace appears to have fallen in the 2005-2006 period, based on data collected to date (although there is an estimated eight-month lag in the data).

The most active detached housing projects have been Liberty Park and Fargaze Meadows, with 55 and 53 units built between 2000 and 2006, respectively. These projects have also seen the fastest pace of absorption at 16.1 and 17.7 units per year, respectively. In fact, these two projects accounted for about 71% of all detached Northfield housing absorption over the six-year period.

Attached Lots

A total of 177 attached “twin-home” or townhouse units have been built since 2000 yielding a total annual absorption rate of 28.32. Thus, detached homes are being built at a faster rate than attached houses in Northfield. This trend is counter-intuitive given that attached housing is typically priced less than a detached

house and is, therefore, affordable to a larger cross-section of the market.

The typical attached home developed has seen monthly absorption of about 0.75 units or annual absorption of 9 units. The rate of building increased substantially during the 2003-2004 period, when lot absorption increased from 2.7 to 60.5 per year. Absorption appears to have fallen back to about 25 units per year through 2006. Most of the attached housing has been built at Liberty Park and Southbridge, with annual absorption rates of 21.4 and 23.2 respectively.

Development Build-Out

According to the City's Community Development Department, there were 700 single-family detached lots in the development pipeline on November 29, 2006. Of that number, 465 (66%) had been built and there were approximately 235 remaining lots. Based on the average absorption pace of 47.7 lots per year in the newer developments, it would take about five years to build out existing projects. However, the overall absorption pace is much slower when including the older projects and the absorption trend has slowed in the past year, so build-out is likely to take somewhat longer.

Similarly, there were 324 twin home or townhouse lots in the development pipeline. Of these, approximately 200 (60%) had been built with another 120 lots remaining. With average absorption in new projects at 28.3 attached units per year, there would be another 4¼ years remaining to build out existing developments. Again, overall absorption is slower and the pace has declined significantly in the past year. At the 2005-2006 absorption rate, it would take closer to five years for build out of existing developments.

Population History

Group Quarters

Northfield has two liberal arts colleges, St. Olaf and Carleton, each having excellent national reputations. Carleton College has approximately 1,900 students and St. Olaf College has about 3,000. These colleges have an impact on the local housing market, although they provide campus housing for most of their students. As of 2000, Northfield had 4,713 residents in group housing (including mainly dormitories, but also senior homes). This group housing population accounted for 27.5% of the total population of Northfield, which is a significant number. Northfield's group quarters population is

expected to continue growing, although at a slightly slower pace than in the recent past.

D. Key Findings

Even though it has historic residential districts, Northfield is a relatively new city in terms of the majority of its housing stock. As a result, the condition and marketability of the housing stock is still relatively high. The city has recently passed through an extraordinary period of housing development that has left it with a large stock of new single-family detached and attached housing. The number of attached townhomes built in the past five or six years far exceeds that built during the city's past growth periods. At the absorption pace of the last six years, Northfield would currently have at least a five-year inventory of detached and attached building lots for build out. However, the pace of absorption has slowed significantly during the past years and build out is likely to take much longer. These should be considerations that influence near-term annexation decisions now and in the future. Moreover, there is a need to take a long-term perspective in housing and other land use components to maintain a balance in the makeup of the community.

Housing Demand Assessment

This section provides an assessment of housing demand in the community. The Northfield market is characterized in terms of geography and key demand drivers. Housing sales trends are discussed as pertinent to the supply and demand for housing. A demographic analysis was conducted as a basis for determining future demand, which is related back to local supply and the competitive market.

Northfield Market Area & Sources of Demand

Northfield functions as part of the Rice County housing market. However, Northfield and Rice County are increasingly influenced by the ebb and flow of the housing market in Minneapolis-St. Paul. Roughly 21% of Northfield residents commuted to work in the Twin Cities area in 2000. As housing prices in the suburbs increased rapidly and Northfield offered "more house for the money" for those workers, that number continued to increase. At the same time, the number of workers commuting to Northfield from areas further south has also increased. Some of those workers were priced out of the local housing market, suggesting a larger

workforce population making a wage that is not livable for Northfield.

The geographic sources of Northfield's housing demand have, therefore, become more complex in the last few years. There are naturally some local "move-ups" from rental properties or smaller homes within Northfield, as well as some "move-downs," such as empty nesters moving from large homes to smaller ones. The general "aging" of the population suggests potential increase in demand for senior-oriented housing products. There are also college-related relocations from other parts of the country, such as faculty who are recruited or hired from other colleges or universities. And finally, there are the workers in local industries and services that would relocate to Northfield if housing were affordable. Many of these workers appear to be bypassing Northfield and settling in communities to the south.

Sales Trends

The number of houses sold in Northfield increased gradually from 1995 through 2003, from about 150 units to 250 units per year. Much of that activity was focused in attached housing, with a 235% growth in the number of town-home sales in 2005 versus ten years earlier. Meanwhile, 78% more detached houses sold in 2005 than ten years earlier.

Even so, townhomes represent a smaller portion of all houses sold, as compared with detached houses. In 2006, detached homes accounted for 66% of all homes sold in Northfield, while townhomes accounted for 34% of sales.

When there is a significant upturn in housing prices, demand increases significantly for more affordable product such as townhouses (or twin homes) and condominiums, as well as detached housing located in less accessible or less desirable communities. During the 2003-2005 period, Northfield experienced both the push out from closer, more accessible suburbs of Minneapolis-St. Paul as well as increased demand for townhouse products.

Days on Market

The number of days that housing spends on the market before it is sold provides an indication of the balance between supply and demand at that time. In 2001, houses of all types spent an average of 66 days on the market before being sold. However, by 2006, that number had increased to 142 days. Condominiums spent an average of 154 days on the market, and detached

houses required an average of 129 days in 2006. In March 2007, there were almost 200 houses listed in the Northfield market, suggesting an inventory of at least one year's supply.

Pricing

There has been a steady, uninterrupted upward trend in Northfield housing prices since at least 1995. This trend generated average annual price increases of about 11% until 2006, when prices suddenly dipped by 6.2%. According to the Southern Twin Cities Association of Realtors, the average housing sale price in Northfield was about \$245,064 in July 2007, an increase of 123% over the 1995 average sale price of about \$109,000.

Single-family home prices increased faster (12.2% annually) than those for townhouses and condominiums (10.9%). Townhouse and condominium prices peaked at \$204,000 on average in 2005, up from only \$87,000 in 1995. Single-family home prices peaked at \$283,100, versus \$114,600 in 1995.

Population

Northfield's population increased by almost 1,900 people, or 1.6% per year, between 2000 and 2006 based on Census data and estimates. The city's population is expected to increase at a slower pace during the next five years, adding 1,240 people or 1.3% per year by 2012.

Household growth is a primary driver for housing demand. Northfield gained about 650 households between 2000 and 2007, generating an annual growth rate of 1.9%. However, household growth is expected to slow significantly during the next five years, with the city adding a projected 426 households or 1.5% per year. Therefore, the need for new housing unit production will decrease in the near term as well. Complete demographic data can be found in Chapter 2 of this Comprehensive Plan.

Median Income

Another important demographic indicator is household income growth, which can also feed demand for housing so long as interest rates remain relatively stable or decline. Between 2000 and 2007, Northfield's median household incomes increased from \$49,964 to \$58,456 in current dollars (including inflation), yielding an annual increase of 2.4%. Incomes are expected to increase at 1.8% annually through 2012.

Demand Forecasts

Housing demand was forecasted primarily for for-sale units. There are two basic components of this demand assessment. First is the calculation of net demand during the period from 2000 to 2007. This period marked a transition from one in which there was a relative balance in the demand and supply of housing in Northfield to a situation where there is an "overhang" in supply over demand that has resulted in it taking longer for houses on the market to sell. The second component of the assessment focused on projected growth in the market from 2007 through 2012. This demand forecast accounted for demographic changes and other factors like the competitive framework.

Market Over-Supply

The analysis of existing supply and demand found that an over-supply of about 470 to 540 units was permitted during the period from 2000 through 2007 that is affecting current market conditions. The supply of existing permitted units is at least five years from build-out, if not longer. Therefore, in reviewing residential annexation requests, the City should consider possible market over-supply as a factor in determining whether an annexation request is approved.

Table 11.1 illustrates market-over-supply for housing in Northfield. The building department issued 1,180 housing (lot) permits and projected growth for the City was 650-760 households. The number of permits allowed was higher than the projected number of households, subsequently creating an "overhang" of potential units to be built. "Overhang" indicates the number of potential units to be built, whereas "over-supply" indicates an actual number of units already constructed.

TABLE 11.1 – MARKET OVER-SUPPLY, 2007

Housing (lot) Permits	1,180 Permits
Household Growth	650 – 760 Households
Housing Units Built	750 Units
"Overhang" by 2006	420 – 530 Units

Source: City of Northfield

Projected Demand

The projected demand in housing involved looking at *household growth* as well as *housing demand* (housing demand includes projected household growth, plus replacement, vacancy and other factors affecting housing

demand). *Household growth* was forecasted based on projected demographic growth within Northfield but also on a capture of household growth within the larger south suburban market area. Based on this analysis of *household growth*, it is anticipated that Northfield could expect to add a maximum of between 520 and 620 households through 2012 if housing were developed in such a way as to compete for higher market share in the region. However, an overall lower share of housing demand could be generated from the regional market than in the past few years, due to the competitive supply of housing in suburban communities closer to the Twin Cities (See Table 11.2).

Gross *housing demand* for 580 to 660 housing units could be anticipated, accounting for competition, replacement, normal vacancy and other factors.

However, given the current over-supply in the market, net demand for additional new housing stock would be closer to 110 to 160 for-sale units during the five-year period. This net demand calculation assumes the absorption and build-out of all existing lots, which is unlikely. It provides an indication of the impact of the existing over-supply in the market as summarized in Table 11.1.

TABLE 11.2 HOUSEHOLD GROWTH AND CAPTURE, 2007

Household Growth & Capture	520 – 620
Households	
Locally-generated	40%-50%
Regional market	50%-60%

Source: Randall Gross/Development Economics

It is important for the City to consider the growth demand-supply imbalance when approving additional residential developments in the future. Over the life of the Comprehensive Plan, care should be taken with proposed residential projects to make certain balance with commercial and industrial development can be achieved and maintained throughout the community.

Housing Affordability

As part of the comprehensive planning process, it is important to consider whether the city’s housing mix and pricing is meeting the needs of its residents and workers. Additional discussion of affordable housing for those who wish to live and work in Northfield is found in Chapter 10. Housing affordability has become a critical issue in many communities due to the rapid escalation in prices in

recent years. There is a need to continually monitor the affordability of housing in Northfield for its residents and workforce.

Resident Housing Affordability

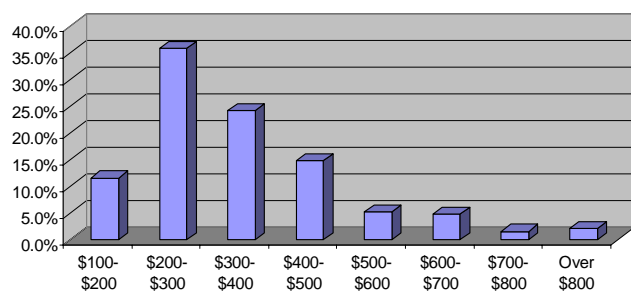
One way to assess affordability is to determine whether the community’s housing prices are aligned with existing residents’ ability to pay for housing. The U.S. Department of Housing and Urban Development (HUD) has a definition of affordability for housing used for Federal Housing Administration (FHA) loans, as well as several first-time homebuyer programs. Affordability is generally calculated by assuming that no more than 35% of a household’s income is paid towards housing costs, and total debt to income ratio is less than 43%. According to Multiple Listing Service (MLS) data (the database available to real estate brokers to share data), the median price for single-family detached housing in Northfield was determined to be \$241,600 (approximately \$1,600/month in principle and interest) while the median attached housing price was at \$191,400 (approximately \$1,259 in principle and interest monthly). This data suggests that to purchase a median-priced single family home in Northfield, a household must have an annual income of at least \$54,857 and no more than \$365 in monthly debt. To purchase a median-priced attached home, a household must have an annual income of \$43,165 and no more than \$287 in monthly debt.

Note: While the simple equation of income to house payment may indicate that a large portion of Northfield’s housing is affordable to the majority of the community, expenses such as car payments, credit card debt and school loan debt are not calculated into that equation. Caution should be taken when using only income and housing prices as a means to assess affordability.

Market Implications

About 35% of the city’s housing is priced within the \$200,000 to \$300,000 range, with up to 10% also priced lower in the \$100,000 to \$200,000 range (See Table 11.3). These prices may be relatively affordable on a national basis and for a portion of existing residents of Northfield, especially given the continuing low level of interest rates.

However, there are a number of residents who are completely priced out of home ownership in Northfield. Homeownership is unlikely without public or non-profit assistance.

TABLE 11.3 NORTHFIELD LISTED HOUSING BY PRICE RANGE

Source: Randall Gross/Development Economics

Workforce Housing

Another approach to the question of housing affordability is to examine whether the city's housing is affordable to its existing workforce. These workers do not necessarily live in Northfield now; and, in fact, many of them commute from other places. Based on 2005 projected census data, the average annual wage for employees of firms and agencies located in Northfield is \$30,105. Assuming 1.8 wage earners per household, the total wage income for these households is estimated at \$54,189. Therefore, this annual income cannot support the median price of a detached house in Northfield. However, attached housing may be more affordable for those with the average income or higher. This in turn may suggest that many homeowners are not employed in Northfield.

Clearly, as with residents, there is a share of workers who will not be able to afford housing in Northfield. This is especially true for singles or for those households with only one wage earner. In those cases, the average wage can only support housing priced up to \$119,100, which is significantly lower than the median price of housing in Northfield, and almost out of range for the purchase of any housing currently on the market. There is clearly a gap in housing affordability for single workers and one wage-earner households in the Northfield labor market.

The lack of affordable housing for lower wage and single workers may help explain why there has been "leakage" in the housing market to more affordable towns. Such communities have attracted homebuyers who work in Northfield's service and industrial sectors, as well as those on moderate income who want more house for their money.

E. Objectives and Strategies

Outlined below are four objectives and 31 strategies. The objectives indicate a specific policy direction and help organize strategies. Strategies are detailed actions necessary to initiate or complete an objective such as a program, policy or a project.

Objective 1: Housing will strengthen the unique physical character of the community.

HS 1.1 For new developments, establish standards for creating a rich diversity of architectural housing styles appropriate for Northfield in order to avoid monotony.

HS 1.2 Revise zoning and subdivision ordinances to ensure opportunities for development of alternative housing types and styles, including mixed-use neighborhoods, accessory or mother-in-law apartments, modular homes, manufactured home parks and other innovative approaches to housing.

HS 1.3 Establish development regulations that provide for a greater degree of connection between neighborhoods through efficient street design and use of pedestrian trails and sidewalks.

HS 1.4 Establish standards for creative mixed-use development that integrates housing with public places, retail and service commercial.

HS 1.5 As determined necessary, conduct a city-wide housing analysis to identify current housing types, densities, values, vacancy rates and locations for use as a guide to future housing development and as a measure of affordable housing.

HS 1.6 Establish standards for compact residential development and intensified land uses.

HS 1.7 The preference for new residential development should be for infill, then redevelopment/land intensification, and then greenfields within the city limits, and then within the Priority Growth Area.

HS 1.8 The needed balance between housing and commercial/industry and the current supply of housing will be important factors in consideration of annexation requests for additional housing.

Objective 2: Preserve the character and style of existing neighborhoods that have created Northfield's sense of place.

HS 2.1 Establish standards for replacement of homes in existing neighborhoods to ensure new homes are compatible with the design and scale of the neighborhood.

HS 2.2 Encourage the preservation of existing neighborhoods by rehabilitating deteriorating houses where practical, adaptive reuse of existing buildings and construction of new homes on infill lots and redevelopment sites.

HS 2.3 Establish regulations for the demolition or moving of buildings in neighborhoods.

HS 2.4 Consider establishing a review board to determine if infill housing is compatible with the design and scale of the existing neighborhood.

HS 2.5 Encourage the preservation of historically-significant structures, business and commercial areas and neighborhoods. Historical significance includes architectural features as well as significant historical and cultural events.

HS 2.6 Consider creating historic neighborhood conservation overlay district(s).

Objective 3: The City should assist in providing affordable housing.

HS 3.1 Encourage private developers to provide a variety of housing options by providing financial assistance, assistance in planning, building, and renovation, reducing right-of-way and street widths, waiving various City fees, reducing minimum lot sizes and increasing densities, consistent with the Comprehensive Plan.

HS 3.2 Encourage joint public and private participation through local, state and federal programs to help cover the financial gap between affordable housing and the actual cost of developing housing.

HS 3.3 Encourage developments with a mix of housing price ranges and incomes. Options should be considered for both owner-occupied and renter-occupied units.

HS 3.4 Continue to utilize community organizations and area agencies that promote affordable housing, such as the Rice County HRA, land trust organizations, non-profit organizations familiar with affordable housing and Habitat for Humanity, to plan and develop affordable housing.

HS 3.5 Provide housing that is accessible to community resources such as jobs, commercial districts, and bike and pedestrian paths.

HS 3.6 Research available funding for programs that rehab existing rental or single-family home-owner properties.

HS 3.7 Provide public education of various federal, state, county and local financial assistance programs for first time home-buyers.

HS 3.8 Work with local lending institutions, real estate professionals and government agencies to provide homebuyer and seller education seminars, and to provide a publication identifying local resources for homebuyer assistance.

HS 3.9 Strive to identify and subsequently eliminate or reduce the impact of various factors that increase housing prices.

HS 3.10 Encourage the availability and upgrading of manufactured home parks for affordable housing.

HS 3.11 Encourage local employers to identify and meet the housing needs of their workforce by providing opportunities for local government and employers to cooperate in the provision of housing. Cooperation could occur through low-interest loans, employee-buyer programs and other housing-related benefits.

Objective 4: The City will encourage homes to be well-maintained, environmentally friendly and energy efficient.

HS 4.1 Establish standards for and encourage the use of "green" building techniques to provide housing that is energy efficient and environmentally friendly.

HS 4.2 Investigate "green" practices that would reduce the costs of housing.

HS 4.3 Review the City's non-conforming structures ordinance for mechanisms to allow homeowners to intensify, rehabilitate and maintain nonconforming structures.

HS 4.4 Enforce rental ordinances that provide for minimums in housing maintenance.

HS 4.5 Enforce blight standards for all city residences.

HS 4.6 Revise City zoning and other applicable ordinances to ensure implementation of these Objectives and Strategies.

12. Implementation

Chapter 12 is organized into the following sections:

- A. Overview
- B. How to Use the Plan
- C. Actions
- D. Implementation Matrix

Purpose:

The purpose of the Implementation Chapter is to provide guidance for maintaining accountability, monitoring activities, creating appropriate development regulations and procedures, and involving the community in implementation of the Plan.

A. Overview

The Northfield Comprehensive Plan process engaged hundreds of residents and businesses in a broad, collaborative effort to develop a Comprehensive Plan. Once the Plan is finalized the community will need to shift its energies towards successful implementation of the strategies it has identified.

This chapter of the Comprehensive Plan provides guidance for maintaining accountability, monitoring activities, creating appropriate development regulations and procedures, and involving the community in implementation of the Plan.

A total of 53 key objectives and 279 strategies have been identified to support implementation. This chapter recommends a number of actions to support effective implementation of the Comprehensive Plan for Northfield. Following this Introduction it is divided into the following sections.

B. How to Use this Plan summarizes the basic steps for how the Plan should be used to affect public and private decision-making in Northfield.

C. Actions outlines six objectives and a series of supporting actions that will facilitate implementation of the Plan. The objectives touch upon six broad implementation considerations:

- Involve a wide variety of stakeholders in implementation. Residents and other stakeholders must be actively involved with implementing the Plan.
- Monitor and evaluate implementation. Implementation will be monitored on a regular basis, including evaluating, reporting results, promoting successes, and maintaining public and media relations.
- Provide resources for implementing the Plan. The City will to the greatest extent possible secure and allocate the necessary funding to implement priorities, especially through updating the Capital Improvement Plan and annual departmental budgets.
- Develop appropriate regulatory tools to implement the Plan. The City will update key development regulations and processes for plan review.
- Require concurrence with the Plan. The City will require concurrence with the Comprehensive Plan in rezoning or development approvals, and call for written

interpretations of decisions in order to create a public record for consistency.

- Since the Plan is an active document that is to be referred to on a continual basis, the City will amend, modify and update the Plan as necessary. The Planning Commission will review the Plan as necessary to accomplish this objective.

D. Implementation Matrix organizes the Comprehensive Plan strategies into a simplified chart format.

B. How to Use the Plan

The Plan is to be used on a regular basis as public and private decisions are made concerning development, redevelopment, land intensification, capital improvements, economic incentives and other matters affecting the community. The following is a summary of how it should be used.

1. Annual Work Programs and Budgets

Individual departments and administrators should be cognizant of the recommendations of the Plan when preparing annual work programs and budgets. Several strategies can be implemented in this way.

2. Development Approvals

Administrative and legislative approvals of development proposals, including rezoning and subdivision plats, should be a central means of implementing the Plan.

3. Capital Improvement Plan

The annual, five-year, and 10-year Capital Improvement Plan (CIP) should be consistent with the Plan's land use policies and infrastructure recommendations. New improvements that are not reflected in the Plan – and which could dramatically impact the Plan's land use recommendations – should necessitate at least a minor update to the Plan.

4. Economic Incentives

Economic incentives should be reviewed in light of recommendations of the Plan. These incentives should be integrated with other Plan policies to ensure consistency, particularly with the Plan's land use recommendations.

5. Private Development Decisions

Property owners and developers should consider the recommendations of the Plan in their planning and

investment decisions. Public decision-makers will be using the Plan as a guide in their development-related deliberations, such as zoning matters and infrastructure requests. Property owners and developers should have an understanding of the Comprehensive Plan when submitting proposals to public bodies.

6. Future Interpretation

The City Council should call upon the Planning Commission to provide a written interpretation of major items that are unclear or which are not fully addressed in the Plan. The Planning Commission may call upon outside experts and other groups for advice.

C. Actions

Outlined below are the actions to support the implementation of the Plan.

Objective 1:

IM1. Involve a wide variety of stakeholders in implementation.

As implementation of the Comprehensive Plan gets underway, the City will collaborate with a host of stakeholders. This will include local boards and commissions, community organizations, other units of government, and other parties with particular interest in specific objectives and strategies. Such partnerships will be critical to successful implementation of the Plan.

IM1.A Establish a program to provide ongoing public education on the Plan.

Residents can also play an important role in implementing the Comprehensive Plan. Public participation has been a significant component in the development of the Plan. A public outreach and education program should be created to provide residents with ongoing opportunities to become familiar with the Plan, and to understand their role in achieving the goals in the Plan. The City's website will be an important source of information and interaction.

IM1.B Provide ongoing educational opportunities on innovative planning and development practices for the Planning Commission and other officials.

The Plan calls for some innovative development concepts. City staff should organize educational programs and materials that provide examples from other

communities. Staff, the Planning Commission, and elected officials should conduct site visits to other communities to observe firsthand development projects that may serve as appropriate examples for Northfield.

IM1.C Provide final copies of the Comprehensive Plan on the City’s website and at the Public Library.

Upon completion and approval, final copies of the Comprehensive Plan will be made available via the City website. The purpose of this strategy is to make the Plan available to residents as part of the education and outreach process. Making these documents available on the website will also allow developers and property owners to become familiar with the Plan and its development recommendations.

IM1.D Design and implement a site plan review procedure for the administration and implementation of the new hybrid form-based code regulations.

Implementation of a hybrid code will initially require a review process that includes City staff and the Planning Commission, but also could include public participation through a charrette process, for example. The public process elicits design controls that are supported and desired by the community, and creates a code understood and trusted by residents.

Objective 2:

IM2. Monitor and Evaluate Implementation.

Implementation of the Plan will be monitored and evaluated on an ongoing basis. This will ensure that the Plan is successfully followed and will result in desired changes in the community. Specific activities will include issuing an annual report and publicizing examples of successful implementation.

IM2.A Prepare annual report that summarizes the status of all actions.

An annual report will be prepared by the City Planner that summarizes the status of implementation of all strategies. It will highlight key strategies that have been completed over the course of the year. It will also identify any delays in implementation that need to be addressed by the community. Changes or additions to the Plan will also be highlighted in the report.

IM2.B Issue summary of annual report to the media and public.

The annual report will be issued to the media and general public in a summary form. This may include preparing promotional brochures and information packets. Any material that is produced should be made available on the City’s website.

IM2.C Present the annual report at a public meeting.

The annual report will be presented by the City Planner at a Planning Commission meeting. The meeting will focus on Plan accomplishments, as well as any changes and additions that have been made to the Plan.

IM2.D Issue news releases that promote significant accomplishments relative to a specific strategy.

As significant accomplishments occur relative to a specific strategy, news releases will be issued to publicize successes.

Objective 3:

IM3. Provide Resources for Implementing the Plan.

The Plan identifies the need for resources to implement certain strategies. For some strategies new resources will need to be identified; for others it may be an issue of reallocating existing resources.

IM3.A Update the Capital Improvement Plan (CIP) based on the Plan.

The CIP will be updated in line with the Comprehensive Plan. A CIP is a fundamental management document that outlines projected capital needs, funding estimates and sources and timeframes for completion. In updating the CIP, the City should monitor implementation to ensure that they are consistent with the recommendations of the Comprehensive Plan.

IM3.B Prepare annual departmental work programs and budgets with awareness of the Plan.

Departmental work programs and budgets will demonstrate consistency with the Comprehensive Plan.

IM3.C Identify and secure funds for prioritized initiatives. (This could include grants, tax measures, bonds, and private investments)

Funding efforts should focus specifically on those strategies that the community has identified as being high priority. Funding may come from the City, other governmental sources (state, federal), tax measures, private sector investment, or a combination thereof. The community should seek to maximize the use of non-municipal resources. This strategy should occur in line with annual budget cycles.

IM3.D Award economic and regulatory incentives based on consistency with the Plan.

The City will determine appropriate economic and regulatory incentives that could be instituted to achieve critical development, redevelopment, and land intensification objectives, as recommended by the Comprehensive Plan.

IM3.E Monitor and ensure fiscal accountability.

The City will monitor and ensure fiscal accountability in undertaking all of its responsibilities, including those associated with implementation of the Comprehensive Plan.

Objective 4:

IM4. Develop appropriate regulatory tools to implement the Plan.

The Comprehensive Plan has identified the need for updated development regulations that are aligned with the community's land use objectives. Adopting new regulatory tools will facilitate plan implementation.

IM4.A Update the regulations as recommended in the Plan.

Northfield's development regulations will be updated as recommended in the Plan. Concurrent to preparation of the Comprehensive Plan, the City is reviewing their development regulations.

IM4.B Monitor the implementation of new regulations and correct as needed.

As new regulations are used, the outcomes will be monitored to determine if the regulations are achieving the expected results as recommended in the Comprehensive Plan. If the outcomes are not as expected, the regulations will be modified as appropriate.

Objective 5:

IM5. Require Concurrence with the Plan.

Future decisions in the community regarding development, capital improvements, and budgeting will concur with the applicable provisions of the CIP and the Comprehensive Plan.

IM5.A Require concurrence in rezonings and other major development approvals.

Major development approvals and rezonings will concur with the applicable policies of the Comprehensive Plan. Actions by boards, commissions and staff will document such concurrence in all decisions. A summary will be prepared at the end of each year.

IM5.B Require interpretation of Plan to be in writing.

Upon request, interpretation of the policies of the Plan should be prepared in writing to create a public record. This will ensure consistency in applying these planning documents in day-to-day situations. Such interpretations made by the Planning Commission or City Council will be shared with other entities to determine concurrence on the interpretation. This may be coordinated by staff or addressed at a joint work session.

IM5.C Require staff reports to reference the Plan.

All staff reports related to policy recommendations, annual work programs and budgets shall reference relevant Comprehensive Plan recommendations.

IM5.D Establish a procedure to promote productive and full communications between the Planning Commission and the City Council regarding interpretation of the Plan.

Systematic communications between the two bodies regarding their respective interpretations of the Plan and regulations must be clear and frequent, particularly in the initial period. A procedure to determine similarities and differences in interpretation as applied to individual cases will be critical to a productive, constructive implementation.

Objective 6:**IM6. Update the Plan as necessary**

Since the Plan is an active document that is to be referred to on a continual basis, the City will amend, modify and update the Plan as necessary. The Planning Commission will review the Plan as necessary to accomplish this objective.

IM6.A Design the Planning process.

The Planning Commission, with City staff assistance, will design the Planning process. They will also work with staff to determine the necessary resources for undertaking the update and recommending it to the City Council. The City Council will allocate the resources as necessary.

IM6.B Prepare an updated Comprehensive Plan.

The Planning Commission will lead the process to update the Comprehensive Plan. The process should incorporate public involvement similar to the effort to prepare this Plan. Other aspects of the process shall be defined as well. The total process for completing and adopting the update should take less than 18 months.

D. Implementation Matrix

Community Identity	Objective / Strategy
CI 1	Continue to preserve Northfield's rural heritage.
CI 1.1	Preserve the scenic quality of the rural landscape by defining the edge of the community and maintain the rural character of roadways on the edges of the community.
CI 1.2	Preserve, protect and enhance rural heritage preservation sites in collaboration with surrounding jurisdictions.
CI 1.3	Support small-scale, farm-to-table programs (such as a farmers' market) to promote the health of the local agricultural economy.
CI 1.4	Ensure that all development, redevelopment and expansion be compatible with the desirable features of the natural and man-made environment.
CI 2	Strengthen downtown as an historical and cultural center of the community.
CI 2.1	Maintain and enhance existing public spaces and create new public gathering places for social interaction.
CI 2.2	Identify strategic locations to more effectively integrate the Cannon River into the fabric of the downtown, while also protecting its environmental quality and enhancing its visual appearance.
CI 2.3	Create new educational, artistic, cultural and recreational activities along the Cannon River in and around the downtown.
CI 2.4	Identify and designate an arts and cultural district in the downtown.
CI 2.5	Support existing and new local businesses that provide dining, retail, arts and entertainment.
CI 3	Preserve historic sites and structures.
CI 3.1	Work with the Northfield Heritage Preservation Commission to create a priority list for designating buildings (those that aren't already listed), structures and districts on local, state and or national historic registers.
CI 3.2	Provide economic incentives and design flexibility to aid in the restoration and long-term economic vitality of historically significant buildings in the Downtown.
CI 3.3	Consider becoming an officially designated Mainstreet program by the National Trust for Historic Preservation, or incorporating Mainstreet's principles into existing economic development, historic preservation, or community planning programs.
CI 3.4	Cooperate with appropriate community groups, such as the Northfield Historical Society, in protecting and enhancing structures in the historic neighborhoods, and improving the general appearance of these areas.
CI 4	Encourage a traditional development pattern.
CI 4.1	Guide new development to be compatible with, and/or expand, on the existing grid network (see Figure 3.3).
CI 4.2	Provide for a mix of uses to create new neighborhood centers as new development occurs (see Figure 4.6).
CI 4.3	Ensure new development provides for areas that contribute to the public realm, such as plazas and other public gathering places.
CI 4.4	Require new neighborhoods to create neighborhood-scaled streets, with street trees and sidewalks (see Figure 4.4).

CI 4.5	Regulate the placement of buildings onsite by regulating short front yard setbacks to orient buildings to the street/public realm (see Figure 4.4).
CI 4.6	Encourage architectural styles and scales that contain a relationship to the overall community identity.
CI 5	Improve the entry points (gateways) into the community.
CI 5.1	Create gateways at the north and south Hwy 3 entryways near city limits.
CI 5.2	When appropriate, include attractive landscaping and public art at identified gateways.
CI 5.3	Modify the overlying zoning districts at targeted gateways to create a defined streetscape with building fronts oriented to the street and parking to the rear of the structure.
CI 5.4	Work with the State transportation department to implement traffic calming techniques and pedestrian-friendly crossings on Hwy 3 and Hwy 19.
CI 6	Continue to host and sponsor local arts and cultural activities and festivals.
CI 6.1	Develop initiatives in collaboration with the Arts and Culture Commission to promote the arts and cultural qualities of Northfield.
CI 6.2	Solicit input from members of the local design community when building or renovating public facilities to enhance the quality of these facilities and grounds.
CI 6.3	Create opportunities, in collaboration with local students and Northfield arts organizations, for the public to contribute to sense of place (e.g., public art, landscaping, and outdoor activity areas).
CI 6.4	Create a community seal to be used in a wide range of public improvements.
CI 6.5	Explore regulations to implement a “percent-for-arts” requirement in community-funded projects.
CI 6.6	Develop an “artist in residence” program in the public works department.
CI 6.7	Incorporate public art into the design of existing and public places including community buildings and infrastructure.
CI 7	Continue to support local schools and colleges.
CI 7.1	Coordinate with the school district on population growth and residential development trends in order to reserve sites for future school facilities as population growth may require.
CI 7.2	Cooperate with the local colleges to minimize negative impacts of parking and traffic on Northfield neighborhoods.
CI 7.3	Collaborate with the local colleges to provide the overall community with quality public programs and quality open spaces.
Land Use	Objective / Strategy
LU 1	Protect and enhance the small town character.
LU 1.1	Create regulations that yield commercial and office structures that reflect local vernacular (and minimize franchise/corporate structures).
LU 1.2	Create regulations that require coordination and blending of public realm/streetscape with new developments.
LU 1.3	Encourage the development of identifiable neighborhood districts within the community.
LU 1.4	Create regulations that allow for and encourage appropriately-scaled places for structured and casual interaction.
LU 1.5	Maintain the rural character of selected roads (see “Road” graphic in Figure 4.3). A road is typically a local slow movement thoroughfare for rural areas with rural characteristics including no curb and gutter.
LU 1.6	Annually monitor the land use of residential as compared to commercial and industrial land uses as shown in Table 4.1 and Map 4.1, as a means to accomplish the overall planning objectives of the city.

Implementation

LU 1.7	The City Council should determine, through a process involving the Planning Commission, Economic Development Authority, and citizens, what would constitute an acceptable balance between residential and commercial/industrial uses. This balance could be measured by analyzing tax revenues, jobs in Northfield versus commuters, and other factors. Once the definition of acceptable balance is determined, the City Council should prepare policies and ordinances to bring about the desired balance.
LU 2	The downtown core is an important aspect of community life.
LU 2.1	Promote general merchandise retailers, financial institutions, office developments and entertainment uses within the downtown core. Create new opportunities for businesses by reinvesting in the infrastructure and public spaces in and around the downtown.
LU 2.2	Provide and support new opportunities for residents to live in or near the downtown.
LU 2.3	Adopt a shared parking ordinance to facilitate new development in the downtown.
LU 2.4	Encourage pedestrian paths and trail connections from commercial uses to adjoining residential developments and places of employment.
LU 2.5	Encourage more compact housing as a component of infill, redevelopment or land intensification projects.
LU 2.6	Integrate the Cannon River, where feasible, into downtown development.
LU 3	Encourage a compact development pattern, and support infill, redevelopment and land intensification.
LU 3.1	Create incentives to encourage infill, redevelopment, and land intensification.
LU 3.2	Work collaboratively to identify structures and sites for redevelopment, intensification or reuse.
LU 3.3	The Economic Development Authority (EDA), with the assistance of City staff, will prepare a marketing program for targeted structures and/or sites for infill, redevelopment, and land intensification.
LU 3.4	Establish priorities for capital improvements that are directed toward infill sites and mature neighborhoods.
LU 3.5	Facilitate redevelopment of uses that do not fit the development pattern of downtown (i.e. single story uses surrounded by parking), but which with better design could increase density and provide more commercial, office or housing opportunities.
LU 4	Facilitate the creation of residential areas with strong neighborhood qualities.
LU 4.1	Require major subdivisions to complete a master plan, which incorporates the principles of traditional neighborhood design and addresses the environment, transportation system, park and open space system, and provision of municipal utilities.
LU 4.2	Permit small-scale neighborhood commercial services as part of master plan developments.
LU 4.3	Create standards for developments with neighborhood qualities.
LU 4.4	Create regulations that require high-quality pedestrian streets with sidewalks, street trees, and adequate lighting, where appropriate.
LU 4.5	Create regulations that allow for or require a mix of housing types within new and existing neighborhoods that are also compatible with development patterns in these neighborhoods.
LU 4.6	Permit accessory structures as residential housing units (granny flats or mother-in-law apartments) within existing neighborhoods, especially near downtown.
LU 4.7	Encourage connections among neighborhoods via roads, sidewalks and multi-use paths.
LU 5	Guide new commercial/retail and office developments in a mixed use pattern.
LU 5.1	Encourage small-scale retail and service commercial uses to locate in the downtown area.
LU 5.2	Create regulations that allow for mixed-use commercial developments.
LU 5.3	Create regulations that require future commercial developments to provide public space.

LU 5.4	Create design standards that orient commercial buildings in a way that helps to define the streetscape.
LU 5.5	Regulate additional “big box” and other large-format retail establishments to minimize their fiscal, transportation and infrastructure impacts. “Big box” establishments should also be compatible with the form and context of the area in which it is located.
LU 6	Be a good steward of the natural environment.
LU 6.1	When appropriate, establish development patterns that respect the natural environment by mandating conservation subdivisions.
LU 6.2	Prepare educational material on alternative development choices for protecting natural areas — for the public and development community.
LU 6.3	Modify existing regulations and create new policies that mandate environmentally-sensitive and sustainable planning and building practices, as identified and defined in the City’s Natural Resources Inventory Final Report adopted in 2005.
LU 6.4	Identify and prioritize land for open space preservation.
LU 6.5	Create a program to acquire open space and environmentally significant lands.
LU 6.6	Require dedication of existing significant tree stands and critical riparian habitat as part of the subdivision process for major subdivisions as identified in the Natural Resources Inventory.
LU 6.7	Conduct coordination meetings with neighboring jurisdictions on protecting and linking open space, especially as pertains to Rice Creek with Dundas and Bridgewater Township.
LU 6.8	Improve buffers along the Cannon River to enhance the natural qualities of the river. For the areas in and around downtown, care should be taken to improve the natural qualities of the river, while still respecting the existing built environment.
LU 7	Support local agriculture.
LU 7.1	Support and create opportunities for cooperative agricultural production to provide local residents with quality local foods by creating areas for farmers’ markets and community foods festivals.
LU 7.2	Encourage and/or support the dedication of underutilized or vacant sites that are not developable for community gardens.
LU 7.3	As part of the subdivision approval process, require new developments on the fringe to educate future residents of that neighborhood about the impacts of nearby agricultural operations to avoid future conflicts among uses. Examples of impacts from agricultural operations that may affect residents include: noxious odors from livestock, noise from the use of heavy machinery and stormwater issues.
LU 7.4	Encourage the use of conservation easements as a means to preserve productive agricultural land, greenways and environmentally significant areas.
LU 7.5	Work with other units of government, including Rice and Dakota Counties, to preserve agricultural land uses.
LU 8	Provide locations that facilitate economic development opportunities.
LU 8.1	Identify sites for commercial and industrial development.
LU 8.2	Identify sites for new office development.
LU 8.3	Facilitate the development of new business parks.
LU 8.4	Ensure land served by public infrastructure is available to accommodate future economic growth.
LU 8.5	Create architectural and site controls for development on Hwy 19 and Hwy 3, in order to present a high quality image for the character of the city.
LU 9	Improve transportation choices and efficiency.
LU 9.1	Incorporate “park once” site design requirements in areas that call for mixed use development.
LU 9.2	Expand the multi-use path system to connect neighborhoods, districts and corridors.
LU 9.3	Require site design principles that encourage the use of public transit (i.e., on street sidewalks and trails, parking lots at side or rear of buildings, sidewalk connections from the street to the building entrances). Sources of public transit include bus or vanpools from colleges, nearby towns, a possible future commuter rail station, taxi service, or the Northfield Transit service.

Implementation

LU 9.4	Improve walking and biking travel patterns by improving connections to the Northfield trail system, improved street crossings and foot-bridges.
LU 10	Improve the development review process.
LU 10.1	Improve the clarity and efficiency of the development review process.
LU 10.2	Seek acknowledgement and support of the Plan and its implementation strategies from counties and townships.
LU 10.3	Support multi-jurisdictional review of policy decisions affecting land-use, especially with Dundas.
LU 10.4	Streamline the development review process for projects that incorporate high-quality environmental and neighborhood standards.
LU 11	Monitor the effectiveness of the development regulations.
LU 11.1	Update the development regulations to be consistent with the recommendations in the Plan.
LU 11.2	Create new development regulations that are based on form and are prescriptive in nature, stating what is desired by the city.
LU 11.3	Periodically interview members of the development community to identify short falls in the regulations.
Environmental Resources	Objective / Strategy
ER 1	Develop and approve a city-wide sustainability plan.
ER 1.1	Promote education about energy and resource conservation in the community.
ER 1.2	Incentives should be developed to promote energy efficiency in the design, construction and operation of residential, commercial and industrial buildings.
ER 1.3	Natural resource conservation will be incorporated into the design and construction of residential, commercial and industrial development.
ER 1.4	New development will enhance conservation of surface water resources, including management of storm water runoff.
ER 2	Protect and enhance environmentally significant areas.
ER 2.1	Maintain standards and regulations to control development on steep slopes (generally those over 12 percent) to control soil erosion and sedimentation and to minimize the removal of natural vegetation.
ER 2.2	Preserve sufficient natural open space and greenway corridors, as identified in the 2008 Park System Plan and the Natural Resources Inventory, in order to provide habitat for wildlife and provide scenic and recreational qualities for the community.
ER 2.3	Encourage planting of native vegetation and development of habitat (such as native species, trees and grasses with deep root structures) within buffer areas and along streams and waterways as identified in the Greater Northfield Greenway System Action Plan and the Natural Resources Inventory (NRI), and educate residents about the benefits of using native plant species in residential landscaping.
ER 2.4	The NRI should be consulted when development is proposed to verify the presence of any significant natural resources. Also, land use decisions in natural areas should consider the connectivity of a given natural area to other nearby areas. The loss of lower quality natural areas can affect the ecological function of other nearby natural areas, including higher-quality areas. For this reason, the criteria for protecting or restoring a natural area should not be limited to the quality rank or restoration potential, but should also consider the location of a natural area in the local landscape and the potential utilization of the area by local wildlife.

ER 3	Protect and enhance water quality.
ER 3.1	As the City looks at infiltration practices in stormwater management, care will be taken to locate these features away from shallow bedrock areas that could increase the risk of groundwater contamination.
ER 3.2	Protect and enhance the quality of groundwater to minimize the potential of contamination to the drinking water supply.
ER 3.3	Protect and enhance the quality of surface waters including the Cannon River and its creek tributaries. The Surface Water Management Plan identifies current strategies that should be updated periodically to remain current with regulations and acceptable practices. The City may consult with other educational and technical agencies and/or organizations to achieve this strategy.
ER 3.4	The City will cooperate with Bridgewater Township, the City of Dundas, the Minnesota DNR and any other regulatory agency to manage the regional creeks, especially Rice Creek, which is a trout stream.
ER 4	Conserve energy in public and private sector development efforts.
ER 4.1	Encourage the use of energy conservation technologies and techniques, and promote the exploration and innovation of new methods to conserve energy.
ER 4.2	Strive to build or renovate city-owned buildings to meet LEED standards.
ER 4.3	Building design standards will allow for and accommodate changing solar technologies.
ER 4.4	Evaluate the recommendations of the Energy Task Force and promote implementation of the strategies as appropriate.
ER 5	Promote the reduction of solid waste generated.
ER 5.1	Promote programs to reduce the amount of solid waste generated in the City and to increase the use of recyclable, reusable or biodegradable materials.
ER 5.2	The City will work with its contracted waste haulers to provide volume pricing that encourages the reduction of waste.
ER 5.3	The City will develop programs that promote and facilitate the reuse of building and construction materials in demolition, remodeling and new construction projects in Northfield in consultation with regional conservation groups such as the Green Institute's Re-Use Center in Minneapolis.
ER 6	Minimize the negative consequences of hazardous materials.
ER 6.1	The City will review its use of hazardous materials and substitute safer alternatives wherever possible.
ER 6.2	Educate Northfield businesses and residents on the storage, use and disposal of hazardous materials.
ER 6.3	Promote organic pest management policies and objectives, including establishing a baseline inventory and reduction in the use of synthetic chemicals on City-owned properties.
ER 7	Work toward the goal of maintaining or improving air quality in the community.
ER 7.1	City will evaluate its current ordinances and policies that affect air quality and adopt ordinances and policies, as applicable.
ER 7.2	Plan and implement a multi-faceted program of education and regulation regarding the use of indoor fireplaces and wood and pellet burning stoves, and outdoor wood fired boilers, to protect residents from pollutants and unhealthy emissions from airborne toxins and fine particulate matter.
ER 7.3	Explore the possibility of incentives to encourage the use of high efficiency carbon neutral stoves.
ER 7.4	Educate businesses and residents on alternatives that can provide better air quality, such as encouraging the planting of perennials and groundcover or reducing lawn size, which leads to less frequency of use of gasoline-powered lawn mowers.
ER 8	Minimize negative noise impacts within the community.
ER 8.1	City will review ordinances and policies related to noise to see if improvements can be made.

ER 9	Increase the density of the community's urban forest.
ER 9.1	The City will develop an urban forest management policy that addresses protection or replacement of significant trees on developed property and all land scheduled for development. This management policy will also establish standards for tree species and location within and near public right-of-way and easements.
ER 10	The City will remain responsive to issues of climate change and will act to reduce Northfield's contribution to climate change.
ER 10.1	Continue to act on its commitment to the Cities for Climate Protection campaign begun in 2005.
ER 10.2	Develop land use policies to manage and reduce urban heat island effects, including promoting shading of streets and parking lots with more trees.
ER 10.3	Promote the reduction of green house gas emissions at residential, industrial and commercial scales.
ER 10.4	Encourage conservation standards at residential, industrial and commercial scales.
Sewer & Water Resources	Objective / Strategy
SW 1	Provide potable water, sanitary waste collection and treatment, and surface water management to existing and future development areas in the city in an environmentally sensitive, financially equitable and fiscally responsible manner.
SW 1.1	Provide a Level of Service to existing and future areas as defined in the Public Water and Sanitary Sewer sections above.
SW 1.2	Maintain an infrastructure replacement program for the city, as detailed in the Capital Improvement Plan.
SW 1.3	For orderly expansion of public services, new developments will be located in areas contiguous to existing development within the city limits.
SW 1.4	Address legal limitations, fairness, property benefits, and responsible use of public funds when financing public utility extensions that reinforce the City's growth and redevelopment objectives. Priority will be given to infill and redevelopment of the existing urbanized area to maximize efficiency of the existing water and sewer infrastructure systems.
SW 1.5	Provide the full range of public services to subdivisions at the time of development, including storm sewer, sanitary sewer, public water, sidewalks, parks and streets.
SW 1.6	Continue to implement and update, where necessary, the City's Well Head Protection program.
SW 1.7	Carefully evaluate and limit development in areas that require private sewer and water systems.
SW 1.8	Undertake a sewer capacity study for the Wastewater Treatment Plant sometime between 2011 and 2015.
SW 1.9	Carefully evaluate development that requires high levels of water and sewer services.
SW 1.10	Periodically review agreements with sewer system partners for any needed updating.
SW 2	Manage water resources so that the beneficial uses of wetlands, ponds and streams remain available to the existing and future community (sustainability).
SW 2.1	Require Stormwater Management and Erosion Control Plans, as described in the 2007 Surface Water Management Plan, for projects that may have an impact on local surface water.
SW 2.2	Work with the counties, townships, watershed organizations, citizens and upstream landowners (outside the city's jurisdiction) to encourage upstream pollutant reduction similar to those being used within city limits.
SW 2.3	In new developments, redevelopments, and expansion projects encourage creative stormwater management solutions that make use of the most current stormwater management strategies including the use of Best Management Practices and Low Impact Development techniques.
SW 2.4	Give special attention to surface water management runoff controls in projects that might affect Rice Creek and the Rice Creek Watersheds.

SW 2.5	Evaluate and update current storm water fees and consider other funding mechanisms such as a trunk sewer fee, pond fee, and/or a sewer availability charge.
SW 3	Heighten community awareness of sustainability issues through education and training.
SW 3.1	Educate the public and business community on the use of potable water conservation practices (such as water saver faucets, yard watering bans and strategic landscaping).
SW 3.2	Develop and implement a public education and outreach program for all ages for stormwater in accordance to the requirements of Phase II of the National Pollution Discharge Elimination System (NPDES).
Transportation	Objective / Strategy
TR 1	Complete the revision of the Transportation Plan in 2008. Effectively manage the transportation needs of a vibrant, growing town and the surrounding area for residents, businesses and visitors.
TR 1.1	Develop and implement corridor design guidelines that enable safe and efficient travel for all modes of transportation within the context of the natural and developed environment.
TR 1.2	Ensure adequate access into the downtown area for vehicles, pedestrians, and bicycles to support public activities and events, private business uses and residences.
TR 1.3	Maintain and, where possible, improve access to business concentrations that enable successful business practices while managing safe traffic operations.
TR 1.4	Promote multi-modal transportation uses and principles throughout the city.
TR 1.5	Establish bicycling as a sustainable, safe and convenient, year-round mode of transportation in Northfield.
TR 1.6	Enhance and expand public transit services to ensure mobility for all residents and visitors.
TR 1.7	Require local street and trail connectivity between adjacent residential neighborhoods and other land uses for newly developing areas.
TR 1.8	Create opportunities to improve existing local street and trail connectivity between adjacent residential neighborhoods and other land uses.
TR 2	Facilitate the movement of people, goods, and services within and through the city on a safe, convenient, coordinated, and fiscally-responsible network of routes using a variety of transportation modes.
TR 2.1	Provide a transportation system for vehicles, bicycles, and pedestrians balancing safety and fiscal resources.
TR 2.2	Establish a balanced roadway network based on the principal of roadway functional classification.
TR 2.3	Provide adequate roadway and intersection capacity to accommodate anticipated growth of the community and resulting forecasted traffic volumes.
TR 2.4	Establish a pedestrian walkway system connecting residential, educational, commercial/retail, employment and recreational destinations throughout the city.
TR 2.5	Establish trails and on-street routes for the use of bicycles as a year-round mode of transportation.
TR 2.6	Determine and enhance designated public service routes to provide priorities to emergency, civil and transit services.
TR 3	Balance transportation needs with the Land Use Principles identified in Chapter 4 of the 2008 Comprehensive Plan.

Implementation

TR 3.1	Establish a transportation system vision to provide the necessary transportation network to support the density and type of existing and future land uses.
TR 3.2	Enhance the small-town character of the city through multi-modal transportation choice and context-sensitive corridor design.
TR 3.3	Balance the transportation system needs with the potential impacts and affects upon the natural features of the community.
TR 3.4	Enhance the community by providing convenient access to natural features and opportunities to support active and healthy lifestyles.
TR 3.5	Encourage interconnected development patterns to create more convenient travel options for residents, foster a sense of neighborhood and maintain acceptable traffic volume levels.
TR 4	Implement the transportation vision through strategic funding, and objective and definitive decision making, with the collaboration of surrounding jurisdictions.
TR 4.1	Establish concentrated and consistent support for local and regional political leadership to achieve components of the transportation system vision.
TR 4.2	Empower City staff to pursue state and federal transportation funding and evaluate non-traditional transportation funding mechanisms.
TR 4.3	Establish an area transportation advisory committee with the state, Rice and Dakota Counties, the City of Dundas and surrounding townships to coordinate and strategize regional transportation planning initiatives. (Hwy 19 between Northfield and I-35, Cannon River Crossing/CSAH I Preservation, NW Corridor).
TR 4.4	Plan for and preserve opportunities for necessary transportation system improvements.
TR 4.5	Achieve necessary transportation system improvements in a cost-effective, timely fashion.
TR 4.6	Establish momentum in the pursuit of the transportation system vision by periodic recognition of basic accomplishments and celebration of milestone achievements.
TR 4.7	Encourage business owners, residents and community groups to be active participants in seeking funding by contacting local, state and federal decision makers in support of transportation funding
Parks & Recreation	Objective / Strategy
PR 1	Implement a cohesive, effective and efficient comprehensive system plan.
PR 1.1	Routinely evaluate and update the 2008 Park System Plan and recreational needs of the community to ensure adequate parks, athletic facilities, open space and trails are provided.
PR 1.2	Use the 2008 Park System Plan for the purpose of guiding implementation.
PR 2	Provide residents with parks and natural areas for recreational uses, protection of the natural environment, and visual/physical buffering of land development as a means to maintain the sense of place, ambiance, appearance and history of the community.
PR 2.1	Enhance the quality of life within the city by providing adequate parkland and natural areas to fulfill the present and future needs of residents.
PR 2.2	Use the parks, natural areas and interconnecting trail corridors as a major factor in shaping development.
PR 2.3	Maintain and enhance the natural character of the community by providing parks and natural areas.
PR 2.4	Encourage sequential growth within the city in harmony with the natural environment.
PR 3	Provide residents with a high-quality interconnected trail system for recreation and transportation as a means to tie parks and open space together.
PR 3.1	Provide a trail system that emphasizes harmony with the natural environment.

PR 3.2	Allow for relatively uninterrupted pleasure hiking, biking, and other uses to and through the City's park and open space system and developed areas.
PR 3.3	Effectively tie the various parks together into an interconnected, high-quality system and effectively tie the City trail system with those of the adjacent townships and regional park and trail system.
PR 3.4	Protect trails from future development and from vehicular traffic.
PR 4	Provide for the preservation and conservation of ecological systems and natural resources within the city.
PR 4.1	Preserve significant natural resources as open space and a highly-valued aspect of the overall open space system.
PR 4.2	Maintain and enhance the character or appeal of the community through interconnected natural open spaces.
PR 4.3	Encourage orderly and sequential growth within the community and in harmony with the natural environment.
PR 4.4	Ensure sustainable and desirable natural resource areas and ecological systems are protected and managed within the city.
PR 5	Establish an effective, ongoing means of communicating and interacting with residents about issues related to parks and recreation facilities, programs, and future development. Provide residents with opportunities to participate in recreational activities and programs throughout the City and various civic and volunteer organizations.
PR 5.1	Promote active and ongoing interaction between the City and its constituents to ensure effective recreational programming and facility development.
PR 5.2	Promote ongoing communication between the Park and Recreation Advisory Board (PRAB) and residents.
PR 5.3	Promote ongoing volunteer programs and civic and athletic/youth organizations to encourage residents and community organizations to assist in park improvements, maintenance and providing recreation programs.
PR 6	Maximize the park and recreational opportunities available to residents through the development of fair and equitable working partnerships between the City and the local recreational program providers, local school district, adjacent cities and townships, counties, churches, and civic organizations.
PR 6.1	Fairly and equitably integrate the City's park and recreation facilities with those of the other partners.
PR 6.2	Fairly and equitably integrate the City's programs with those of the other partners.
PR 7	Secure the funding necessary to carry out the mission of the 2008 Park System Plan.
PR 7.1	Define the funding options available for implementation of the 2008 Park System Plan, and to maximize the use of each source.
PR 7.2	Prepare an implementation plan that defines the relative timing and extent of acquisition and development of system components.
PR 8	Working with local recreational program providers, the City will strive to provide residents with the opportunity to participate in recreation activities and programs through well-designed, effective, and interesting recreation programs.
PR 8.1	Support local recreational providers' efforts to meet local needs, including those of children, teens, adults, elderly and the disabled.
PR 8.2	Support and encourage a wide diversity of recreation interests within the community.
PR 8.3	Work with program providers to provide adequate facilities for programmed use on a fair and equitable basis to ensure that all individuals receive reasonable access to facilities.
Community Facilities	Objective / Strategy

Implementation

CF 1	Provide key facilities that reflect the community's values and needs, and support the functioning of those who serve the public.
CF 1.1	The City's Capital Improvement Plan should include funding for future building renovations and/or new construction.
CF 1.2	The City should prioritize which facilities will be renovated and/or replaced.
CF 1.3	City-owned facilities will add to the community's sense of place through high-quality architectural design and site orientation that follows the land use principles of Chapter 4.
CF 2	For those community facilities considering expansion or relocation, ensure that new facilities have a positive impact on surrounding neighborhoods.
CF 2.1	Expansion of such facilities should be closely monitored so that facilities do not negatively impact (with excessive parking, traffic, and noise) the character of a neighborhood. New facilities should reflect, whenever possible, the character of the existing neighborhood.
CF 2.2	Locate and retain community facilities within the downtown area where appropriate and possible.
CF 2.3	Construction or renovation of publicly-owned buildings should be environmentally responsible and energy efficient.
CF 2.4	Whenever possible, the City should encourage civic uses such as schools and houses of worship to locate as part of a residential neighborhood.
Economic Development	Objective / Strategy
ED 1	The City will support existing businesses.
ED 1.1	Seek opportunities to address barriers to retention and expansion of existing businesses.
ED 1.2	Assure availability of key informational resources to support decision-making of existing businesses.
ED 1.3	Offer leveraging financial tools to strengthen businesses and promote business expansions.
ED 1.4	Adopt a regulating policy that accommodates and provides incentives for infill and redevelopment opportunities.
ED 2	The City will make sufficient land resources available for the needs of existing and future businesses in line with the strategies outlined in the 2006 Economic Development Plan.
ED 2.1	Land resources within the community that are served or can be easily served by infrastructure and are suited for commercial and industrial intensification and redevelopment will be zoned appropriately to enable full and efficient utilization.
ED 2.2	Land resources that are adjacent to the city limits of Northfield and are relatively easy to serve with the extension of infrastructure should be pursued for future commercial and industrial development.
ED 2.3	The City will support strategies of annexation that are designed to provide additional land resources for commercial and industrial development, and that are in compliance with the overall objectives of the Comprehensive Plan.
ED 2.4	The areas that have been identified west of the Northfield Hospital, west of the existing industrial area and south of Hwy 19, and north of the city limits in Waterford Township along the Thye Parkway corridor should be viewed as priority areas for additional evaluation and possible annexation into the city. When these areas are considered for annexation, the City will review the requests with a Master Plan for the area.
ED 3	Expanding and revitalizing the Cannon River corridor will be a pivotal part of the strategy to maintain the historic character that is Northfield.
ED 3.1	Sites that are suitable for land infill and redevelopment/intensification along the Cannon River south of 5th Street should be identified, and strategies to encourage new investment in these areas should be pursued.
ED 3.2	Any infill and redevelopment/intensification along the Cannon River corridor should be oriented to maximize the advantage that the river corridor creates for such opportunities.

ED 3.3	Development design along the Cannon River should incorporate the following concepts: <ul style="list-style-type: none"> * A distinctive pattern of architectural and urban design elements that includes many of the design concepts that have been developed from the Downtown Streetscape Framework Plan. * Link existing pedestrian improvements, including walks and trails, with similar improvements that are required as infill and redevelopment/intensification occurs along the corridor. * A development pattern that emphasizes pedestrian scale, minimizes building setbacks, ensures the public's health and safety by protecting the floodplain, and discourages large parking areas in front of buildings.
ED 3.4	Encourage further redevelopment/intensification in downtown as a means to maintain and add to the vitality of this area. Downtown redevelopment/intensification should focus on retail uses, professional services, arts activities including opportunities for live-work development, businesses that support other businesses, and downtown housing.
ED 3.5	Establish regulations for locating neighborhood serving commercial nodes. These regulations will address the viability of the commercial node, the relation of the commercial node to the surrounding neighborhood, and strategies to prevent commercial nodes from competing with other commercial areas.
ED 4	Support the economic vitality of the community through business retention and recruitment and enhancement of tourism opportunities.
ED 4.1	Target the retention and recruitment of those industries having the highest potential for success in Northfield, as outlined in the Economic Development Plan, such as logistics, specialty manufacturing, environmental technologies, healthcare and medical, professional and technical services and information technology.
ED 4.2	Seek opportunities for the Northfield Hospital to be a stimulus for economic development.
ED 4.3	Promote economic development opportunities that arise from the development of intellectual capital at Carleton and St. Olaf Colleges.
ED 4.4	Seek ways to better integrate the economically-challenged into the economic life of Northfield, such as providing for affordable housing and targeting small business incentive programs to this segment of the economy.
ED 4.5	Generate the type of economic growth that preserves the small-town character and is consistent with the overall objectives of the Comprehensive Plan.
ED 4.6	Support programming efforts to further tourism in Northfield, e.g., Historic and Festival Programs, Arts and Cultural Programs and Tours.
Housing	Objective / Strategy
HS 1	Housing will strengthen the unique physical character of the community.
HS 1.1	For new developments, establish standards for creating a rich diversity of architectural housing styles appropriate for Northfield in order to avoid monotony.
HS 1.2	Revise zoning and subdivision ordinances to ensure opportunities for development of alternative housing types and styles, including mixed-use neighborhoods, accessory or mother-in-law apartments, modular homes, manufactured home parks and other innovative approaches to housing.
HS 1.3	Establish development regulations that provide for a greater degree of connection between neighborhoods through efficient street design and use of pedestrian trails and sidewalks.
HS 1.4	Establish standards for creative mixed-use development that integrates housing with public places, retail and service commercial.
HS 1.5	As determined necessary, conduct a city-wide housing analysis to identify current housing types, densities, values, vacancy rates and locations for use as a guide to future housing development and as a measure of affordable housing.
HS 1.6	Establish standards for compact residential development and intensified land uses.

Implementation

HS 1.7	The preference for new residential development should be for infill, then redevelopment, and then greenfields within the city limits, and then within in the Priority Growth Area.
HS 1.8	The needed balance between housing and commercial/industry and the current supply of housing will be important factors in consideration of annexation requests for additional housing.
HS 2	Preserve the character and style of existing neighborhoods that have created Northfield's sense of place.
HS 2.1	Establish standards for replacement of homes in existing neighborhoods to ensure new homes are compatible with the design and scale of the neighborhood.
HS 2.2	Encourage the preservation of existing neighborhoods by rehabilitating deteriorating houses where practical, adaptive reuse of existing buildings and construction of new homes on infill lots and redevelopment sites.
HS 2.3	Establish regulations for the demolition or moving of buildings in neighborhoods.
HS 2.4	Consider establishing a review board to determine if infill housing is compatible with the design and scale of the existing neighborhood.
HS 2.5	Encourage the preservation of historically-significant structures, business and commercial areas and neighborhoods. Historical significance includes architectural features as well as significant historical and cultural events.
HS 2.6	Consider creating historic neighborhood conservation overlay district(s).
HS 3	The City should assist in providing affordable housing.
HS 3.1	Encourage private developers to provide a variety of housing options by providing financial assistance, and assistance in planning, building and renovation, and by reducing right-of-way and street widths, waiving various City fees, reducing minimum lot sizes and increasing densities, consistent with the Comprehensive Plan.
HS 3.2	Encourage joint public and private participation through local, state and federal programs to help cover the financial gap between affordable housing and the actual cost of developing housing.
HS 3.3	Encourage developments with a mix of housing price ranges and incomes. Options should be considered for both owner-occupied and renter-occupied units.
HS 3.4	Continue to utilize community organizations and area agencies that promote affordable housing, such as the Rice County HRA, and land trust organizations, non-profit organizations familiar with affordable housing, and Habitat for Humanity, to plan and develop affordable housing.
HS 3.5	Provide housing that is accessible to community resources such as jobs, commercial districts, and bike and pedestrian paths.
HS 3.6	Research available funding for programs that rehab existing rental or single-family homeowner properties.
HS 3.7	Provide public education of various federal, state, county and local financial assistance programs for first time homebuyers.
HS 3.8	Work with local lending institutions, real estate professionals and government agencies to provide homebuyer and seller education seminars, and to provide a publication identifying local resources for homebuyer assistance.
HS 3.9	Strive to identify and subsequently eliminate or reduce the impact of various factors that increase housing prices.
HS 3.10	Encourage the availability and upgrading of manufactured home parks for affordable housing.
HS 3.11	Encourage local employers to identify and meet the housing needs of their workforce by providing opportunities for local government and employers to cooperate in the provision of housing. Cooperation could occur through low-interest loans, employee-buyer programs and other housing-related benefits.
HS 4	The City will encourage homes to be well-maintained, environmentally friendly and energy efficient.
HS 4.1	Establish standards for and encourage the use of "green" building techniques to provide housing that is energy-efficient and environmentally friendly.
HS 4.2	Investigate "green" practices that would reduce the costs of housing.

HS 4.3	Review the City's non-conforming structures ordinance for mechanisms to allow homeowners to intensify, rehabilitate and maintain nonconforming structures.
HS 4.4	Enforce rental ordinances that provide for minimums in housing maintenance.
HS 4.5	Enforce blight standards for all city residences.
HS 4.6	Revise City zoning and other applicable ordinances to ensure implementation of these Objectives and Strategies.

Appendix A - Built Environment Existing Conditions Report

Presented to the Planning Commission by ACP Visioning and Planning
on April 2, 2007.



COMPREHENSIVE PLAN UPDATE

Built Environment

Overview

Understanding the characteristics of the land and how the land within Northfield is currently being used is a key element of the Comprehensive Plan. Land is an exhaustible resource that, once developed and converted to a use, is often difficult to change. Land will continue to be developed, but the pattern, rate, timing and location of that development are up to the residents and other stakeholders in Northfield. The question is not whether Northfield will grow and change, but how it will grow and change.

This Existing Conditions report provides a description of growth within Northfield, the current pattern of development, and the amount of remaining land that is suitable for development. The report also identifies the urban form characteristics of Northfield as they relate to the context zone within which development occurs. For the purpose of this analysis the community is defined according to the following primary elements of place: neighborhoods, districts, and corridors. The characteristics impacting urban form are described and analyzed within this chapter.

The primary sources of information used to prepare this analysis are Geographic Information System (GIS) data provided by the City, and U.S. Census Data.

Key Findings

Land Use Development Patterns

- Northfield contains 4,908 acres (7.67 square miles), which includes streets and water bodies.
- Northfield has grown in land area from 2,443 acres in 1966 to 4,908 acres at present.
- The predominant land uses within the city changed from agricultural (39.6%) in 1966 to residential (36.3%) in 2007.
- The priority growth area is 6,370 acres (9.95 square miles), while the urban expansion area is 8,636 acres (13.50 square miles).
- Single family residential is the predominant land use within Northfield making up 28.2% of the total land area.
- College uses comprise 16.7% of the total land area.
- Agriculture is the predominant use within both the priority growth area and urban expansion area, accounting for 33.3% (2,121 acres) and 46.1% (3,981 acres) of land within each area.

Undevelopable Land: Preserve and Environmentally Sensitive

- Agricultural land covers 51 acres or 1.3% of the total land area within Northfield.
- Preserve and environmentally sensitive land cover 1,612 acres within Northfield.

Developable Land

- The amount of total developable land within the City equates to approximately 260 acres or 5.3% of the total land area.
- Including preliminary approved subdivisions as of April 2007 the total developable land equates to approximately 80 acres.

Land Consumption

- The City of Northfield will require 1,309 acres of land by the year 2027 based on historical land consumption rates, or 1,711 acres of land by 2027 based on current land consumption rates.
- For the purpose of this analysis an average of these two numbers was taken to determine the City would need approximately 1,510 acres of developable land by the year 2027.

Urban Form

- Northfield is classified into 10 context zones including: Center, Core, Corridor, District, Educational District, Neighborhood General 1, Neighborhood General 2, Neighborhood General 3, Edge and Rural. Each context zone has unique characteristics making it identifiable.
- Block length, block depth, lot width, connectivity and access are key characteristics which identify each context zone.

Land consumption rates are based on population forecast as determined by the City of Northfield, and historical development patterns. These figures can vary depending on the projected population, and the location, density and pattern of future development.

Detailed Information Existing Plans and Studies

Listed below in Table 1.1 are the City's existing plans and studies. They were evaluated based on three criteria: policy content, technical content, and adoption status. The evaluation codes are as follows: "X" indicates low utility, "+" indicates positive value, and "++" indicates a high level of significance for current planning efforts.

TABLE 1.1 EXISTING PLANS AND STUDIES

Plan	Policy	Technical	Adopted
<i>Comprehensive Plan</i> (1966)	X	++	-
<i>Comprehensive Plan Update</i> (1977)	X	++	-
<i>Comprehensive Plan Update</i> (1988)	X	++	-
<i>Comprehensive Plan Update</i> (1998)	X	++	-
<i>Comprehensive Plan</i> (2001)	+	++	-
<i>Comprehensive Housing Study: Northfield, Minnesota by DSU</i> (2003)	+	+	Accepted 10/03/03
<i>City of Northfield Natural Resources Inventory Report by Bonsetroo & Associates</i> (2005)	+	++	-
<i>Strategic Vision for Arts and Culture in Northfield</i> (2006)	X	X	Accepted 12/13/06
<i>Northfield Housing Study by Community Partners Research, Inc.</i> (2006)	+	+	-
<i>Downtown Northfield Streetscape Framework Plan</i> (2006)	+	++	-
<i>Comprehensive Economic Development Plan by TIP Strategies</i> (2006)	+	X	-

Source: ACP Visioning & Planning, Ltd.

Summary of Existing Plans and Studies

Table 1.2 below provides a brief summary of Northfield's existing plans and studies. The documents are listed in chronological order, and the table provides information about the purpose and key recommendations for each plan or study.

These existing plans and studies can help in the formulation of the Comprehensive Plan update. The City can build upon what has already been accomplished. The process can balance new input with results of previous efforts. Where there is intersection between the community's vision for the future and the policies in existing plans and studies, these documents can serve as a resource. However, it is also important to note that the Comprehensive Plan update is a new process to create a broad policy document and development regulations for the future, and it is not required to subscribe to the policies or strategies of the existing plans.

The summaries provided here should not be considered exhaustive. It is a great challenge to summarize hundreds of pages, and Table 1.2 is simply meant to provide an overview of the most pertinent aspects of the planning documents (especially with regard to land use), and help to direct readers to information sources related to specific topics. The complete documents are available from the City.

Table 1.2 Summaries of Selected Plans and Studies

Title	Year	Purpose	Summary of Recommendations
Comprehensive Plan	1966	The City's first Comprehensive Plan. The Plan was viewed as necessary due to the growth of the City and Carleton and St. Olaf Colleges	The Plan envisioned Northfield as having a growing role in education due to the colleges and also as a retirement community. At this time, agriculture was still an important use within the city. The major recommendations of this Plan focused on the central area of the community. These recommendations included: addressing parking and transportation issues, promoting retail uses within the core, and allowing for a less intense pattern within the core fringe area. Other major recommendations of this Plan included: the rerouting of Hwy 19, the prevention of strip development along Hwy 3, the need for 950 new housing units, and the directing of growth to areas already within the city limits.
Comprehensive Plan Update	1977	This Plan was the first major update of the original 1966 Plan.	Major recommendations from this Plan included: creation of land use categories for residential development ranging from low to high density, the projected need of 2,090 new units by 2000, and recommendations for the location of industrial uses along the north and south ends of Hwy 3. The Plan recommended the city to grow in phases by expanding residential uses to the north and south.
Comprehensive Plan Update	1988	This Plan was an update of previous planning efforts.	The major recommendation and outcome of this Plan was the creation of an Urban Expansion Boundary. The boundary was created through a partnership between the City and Rice County. This was created to direct growth and to prevent the community from sprawling into the rural agricultural areas. The land use recommendations sought to protect environmentally significant areas, as well as concentrate retail and service uses in the core.
Comprehensive Plan Update	2001	This Plan further updated the previous planning efforts.	The major land use recommendations of this Plan included: continue to focus on maintaining downtown as the center of the community, develop in a manner respectful of the environmentally sensitive areas within the city, encourage a traditional street framework for new development, and project a clear community identity.
Comprehensive Housing Study: Northfield	2003	This report analyzed the housing market conditions within the city and made housing growth projections through 2010.	The key recommendations from this Plan included: encouraging a mix of housing styles, creating affordable housing in order to attract young families, investing in the city's existing housing stock, and ensuring development and growth are proportional and coinciding.
Natural Resources Inventory report	2005	This report assesses natural and open space areas to guide planning efforts in order to ensure a balance between growth and the preservation of natural areas.	The Plan recommends and prioritizes areas of conservation and development. A major recommendation of this Plan is the creation of a greenway system within Northfield and the surrounding area.
Strategic Vision for Arts and Culture in Northfield (ArtsPlan06)	2006	The purpose of this document is to assist Northfield to be a place where the arts and culture are vital components of community life and are valued for their economic benefits.	Key recommendations include: create an Arts and Culture Commission, develop an arts and culture district in the downtown area, develop design guidelines, explore the feasibility of creating a Community Cultural Center, and attract artists and further develop an arts community within Northfield.

Title	Year	Purpose	Summary of Recommendations
Northfield Housing Study	2006	This study analyzes the housing needs and conditions within the city and updates the information from the 2003 housing study.	The study projects the city will have 6,547 households by the year 2010 and will gain an average of 176 new households per year between 2005 and 2010. The City should encourage the creation of life cycle housing; lower priced housing should also be encouraged. The City should consider using CDBG funds for housing rehab. It should develop affordable housing set aside requirements; purchase Florella's Manufactured Home Park, as well as numerous other recommendations.
Downtown Northfield Streetscape Framework Plan	2006	The purpose of this Plan was to work with the public to identify specific improvements to the public realm that would reinforce a unique identity and improve the image, function, and livability of Downtown Northfield.	Many recommendations are made to improve the downtown streetscape within Northfield. Recommendations include edge treatments of parking lots, and a series of focal point projects throughout the downtown area dubbed "A String of Pearls," among others.
Comprehensive Economic Development Plan	2006	The Plan encourages the active promotion of economic development by increasing the availability of commercial land, aggressive business recruitment, and talent attraction. The Plan seeks to reposition Northfield with relation to the Twin Cities and its neighboring communities.	The key recommendations of this Plan include: increasing the availability of business and industrial land, leveraging the Cannon River and recapturing the alumni of St. Olaf and Carleton Colleges.
Greater Northfield Area Greenway System Action Plan	2007	This Plan identifies a system of greenway corridors for the community and a strategy for creating the greenway system.	The key recommendation of this Plan is the creation of a greenway system centered along the Cannon River and extending through Northfield into Dundas and surrounding townships.

Land Use Development Patterns

Historic Land Use

This section summarizes the historic land use trends within the corporate boundaries of the city. The land uses have been grouped into general classifications. The general land use classifications represent how land was being used at the time of the first comprehensive plan and subsequent comprehensive plan updates. The existing land use section will provide more detailed land use classifications.

Northfield has grown in land area from 2,443 acres in 1966 to 4,908 acres at present. These acreages were derived from previous comprehensive plan documents provided by the city. Historic land use can be found in Table 1.3. The predominant land use within Northfield changed from predominantly agricultural (39.6%) in 1966 to primarily public (37.0%) and residential (31.5%) in 2001. For this analysis public uses include all public lands as well as quasi-public uses such as colleges and religious institutions.

TABLE 1.3 NORTHFIELD HISTORIC LAND USE

Land Use Type	1966 Acres	Percent	1977 Acres	Percent	1988 Acres	Percent	2001 Acres	Percent
Residential	431.5	17.6%	604.0	20.3%	1,012.0	31.2%	1,197.0	31.5%
Commercial	33.0	1.3%	61.6	2.1%	98.0	3.0%	235.0	6.2%
Industrial	37.6	1.5%	81.5	2.7%	164.0	5.1%	345.0	9.1%
Public*	549.6	22.5%	1,155.1	38.9%	1,173.0	36.1%	1,406.0	37.0%
Streets	370.9	15.2%	-	-	-	-	96.0 **	2.5%
Water Bodies	53.3	2.2%	-	-	-	-	-	-
Agricultural/Vacant	966.8	39.6%	1,069.7	36.0%	797.0	24.6%	517.0	13.6%

Source: ACP Visioning & Planning, Ltd.

Note: * Public includes quasi-public institutions such as churches.

** Railroad right-of-way

The historical land use data illustrates how the community has changed over time. Agricultural and vacant lands have seen a sharp decline within Northfield since 1966. Agriculture and vacant land comprised 39.6% of the total land area within the city in 1966 and accounted for only 13.6% of the city's total in 2001. Residential uses have increased from 17.6% in 1966 to 31.5% in 2001. Table 1.4 shows the percent change in land uses in the time period between each Comprehensive Plan update.

TABLE 1.4 NORTHFIELD PERCENT CHANGES IN LAND USE BETWEEN PLAN UPDATES

Land Use Type	1966-1977 Pct. Change	1977-1988 Pct. Change	1988 - 2001 Pct. Change
Residential	40.0%	67.5%	18.2%
Commercial	86.6%	59.1%	139.7%
Industrial	116.7%	101.2%	110.3%
Public*	25.5%	1.5%	19.8%

Source: ACP Visioning & Planning, Ltd.

Existing Land Use

This section summarizes the existing land use within the corporate boundaries of Northfield, the priority growth area, and the urban expansion area. The priority growth area is the area within the urban expansion area that future development should be focused within. The urban expansion area is the future development area created in partnership between the City and Rice County. The urban expansion area was created to protect the rural character of surrounding townships and to provide land for future development for a growing Northfield. The land uses have been grouped into different classifications than the land usage in the historical land use section. Each classification represents how the land is currently being used, not the land's current zoning classification. The area consumed by streets and water bodies is not included in the land use calculations.

Northfield contains 4,096 acres (6.4 square miles). These acreages were derived from land use maps generated using GIS technology and the data provided by the City. Detailed land use data for Northfield, the priority growth area, and the urban expansion area can be found in Table 1.5 and Map 1.1 on the following page. The predominant land use within Northfield is residential, which comprises 36.3% of all uses within the city. The residential uses within the city have seen a 5% increase since 2001. The majority of the residential uses with the city are single-family residential, which accounts for 28.2% of land uses. College uses and Parks/Open Space also make up a significant portion of the uses within the city, with each accounting for 16.1% and 16.7% of land use respectively.

Note: The 4,097 acres listed in Table 1.5 does not include streets and water bodies.

TABLE 1.5 NORTHFIELD EXISTING LAND USE 2007

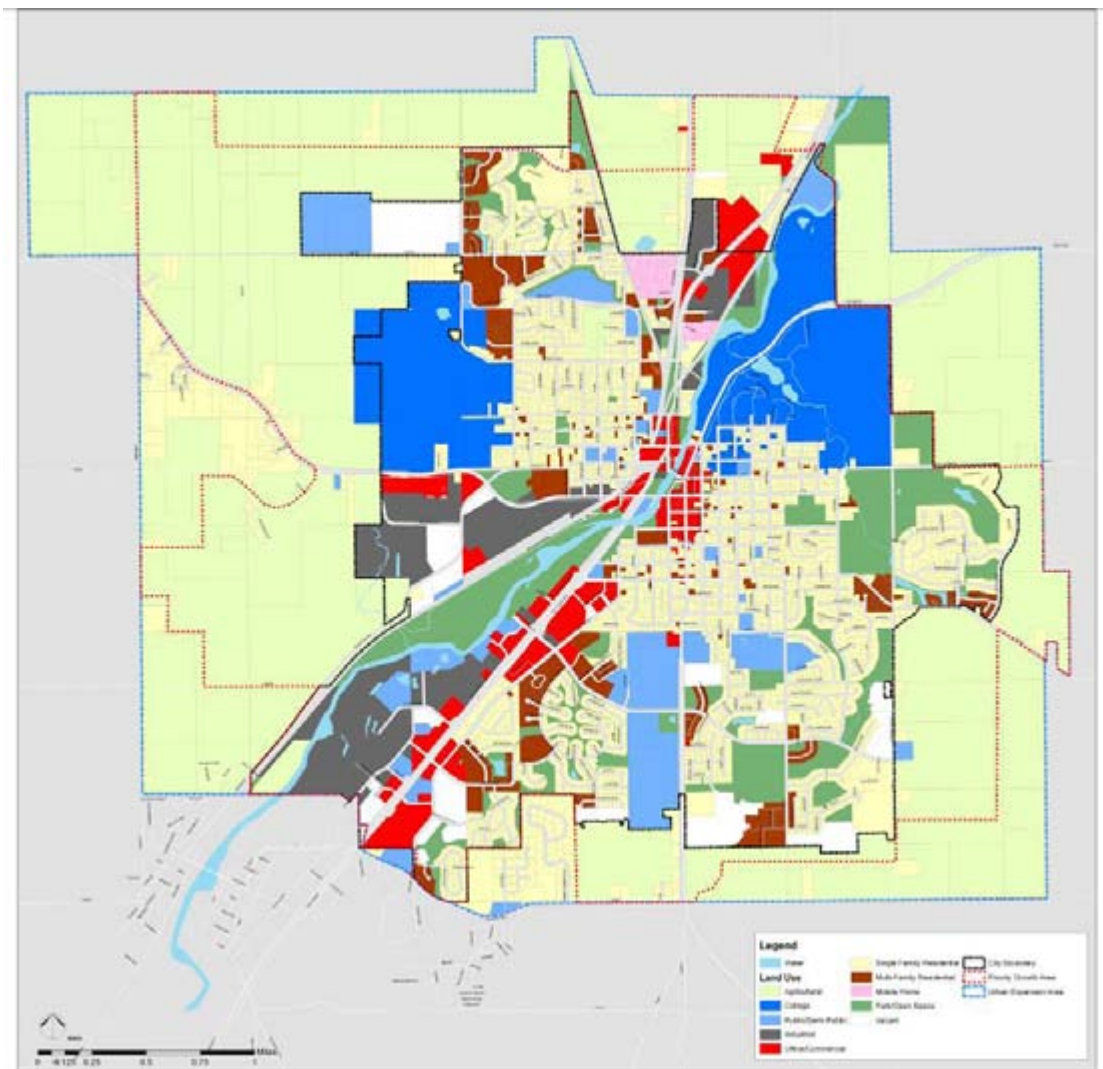
Land Use Type	Acres	Percentage	Acres	Percentage	Acres	Percentage
Public/Semi-Public	368	9.0%	376	5.9%	388	4.5%
Park/Open Space	658	16.1%	661	10.4%	706	8.2%
College	684	16.7%	716	11.2%	716	8.3%
Mobile Home	36	0.9%	36	0.6%	36	0.4%
Multi-Family Residential	294	7.2%	294	4.6%	294	3.4%
Single Family Residential	1,157	28.2%	1,281	20.1%	1,627	18.8%
Office/Commercial	208	5.1%	240	3.8%	241	2.8%
Industrial	392	9.6%	392	6.1%	392	4.5%
Agricultural	51	1.3%	2,121	33.3%	3,981	46.1%
Vacant	249	6.0%	253	4.0%	255	2.9%
Total	4,097	100.0%	6,370	100.0%	8,636	100.0%

Source: ACP Visioning & Planning, Ltd.

The priority growth area is 6,370 acres (9.95 square miles), while the urban expansion area is 8,636 acres (13.50 square miles). The land use figures for the priority growth area include all land within the city and the priority growth area and the figures for the urban expansion area include all land within the city, priority growth area, and urban expansion area.

Agriculture is the predominant use within both the priority growth area and urban expansion area, accounting for 33.3% (2,121 acres) and 46.1% (3,981 acres) of land within each area. If the amount of residential land within the city is subtracted from the total amount of residential land within the priority growth area and urban expansion area, the resulting amount of residential land within each area is minimal. The amount of residential land area within the priority growth area is 124 acres and the amount within the urban expansion area is 346 areas. These figures show that the area outside of the city limits is still primarily undeveloped and used for agricultural purposes.

MAP 1.1 NORTHFIELD EXISTING LAND USE



Source: ACP Visioning & Planning, Ltd.

Land Consumption and Projections

The rate of land consumption has increased slightly over time. The land consumption ratio per resident will enable the city to forecast the amount of land needed to accommodate future population growth.

The developed land consumption rate was calculated in two ways to provide both a historical (conservative) consumption rate that takes the historical growth of the community into account and a current land consumption rate. The historical (conservative) land consumption rate accounts for all development that has taken place since the community was formed. The total amount of developed land (3,797 acres) was divided by the 2007 population estimate of Northfield (19,036), which equates to a historical land consumption rate of 0.199 acres/person. Developed land, for the purpose of this analysis, includes all the lands that have been developed within the city including: residential, commercial, industrial, public, and streets.

The current land consumption ratio was calculated by taking an average for the time periods of 1970-1980, 1980-1990, 1990-2000, and 2000-2007. The change in population and change in developed land area was calculated for each of these periods (see Table 1.6). The change in developed land area was divided by the change in population to determine the land consumption rate for each time period. The four consumption rates were averaged together in order to show a more current trend of land consumption within Northfield of 0.26 acres/person. This estimate is more aggressive than the previous consumption rate because it only accounts for development that has occurred since 1970. The historic land consumption rate takes into account all development from the beginnings of the community to present, and is therefore more conservative as it is skewed by the land area in the dense urban core and does not accurately reflect the conventional suburban development pattern that has taken place in the community over the past 30 to 40 years.

TABLE 1.6 NORTHFIELD DEVELOPED LAND CONSUMPTION RATES 1970-2007

Year	Population	Dev. Land Area	Time period	Change Pop.	Change Land	Acres per person
2007	19,036	3,797	00-07	1,889	518	0.27
2000	17,147	3,279	90-00	2,463	832	0.34
1990	14,684	2,447	80-90	2,122	545	0.26
1980	12,562	1,902	70-80	2,327	479	0.21
1970	10,235	1,423	60-70	1,528	-	-

Source: ACP Visioning & Planning, Ltd.

The amount of land the city will need in order to accommodate the projected population growth was calculated using population data and the historic and current land consumption rates.

These projections should be viewed with the consideration that the future growth and development of the community may not follow historic or current patterns of development. The calculations do however allow the city to plan for where growth should occur. Population data shows Northfield has

Note: Developed land projections were calculated twice, using a historic land consumption rate and a current consumption rate

a current population of 19,036, and will have 23,616 residents by 2020 and 25,615 residents by the year 2027 (Source: Development Economics, Chapter 4, Northfield Comprehensive Plan, Northfield/Dundas CSSP). The amount of acreage needed based on this forecast can be found in Table 1.7 for the years 2020 and 2027.

TABLE 1.7 NORTHFIELD DEVELOPED LAND PROJECTION

Time Period	Population Change	Acres per Person	Total Land	Acres per Person	Total Land
07'-20'	4,580	0.260	1,191	0.199	911
20'-27'	1,999	0.260	520	0.199	398
Total	6,579	-	1,711	-	1,309

Source: ACP Visioning & Planning, Ltd.

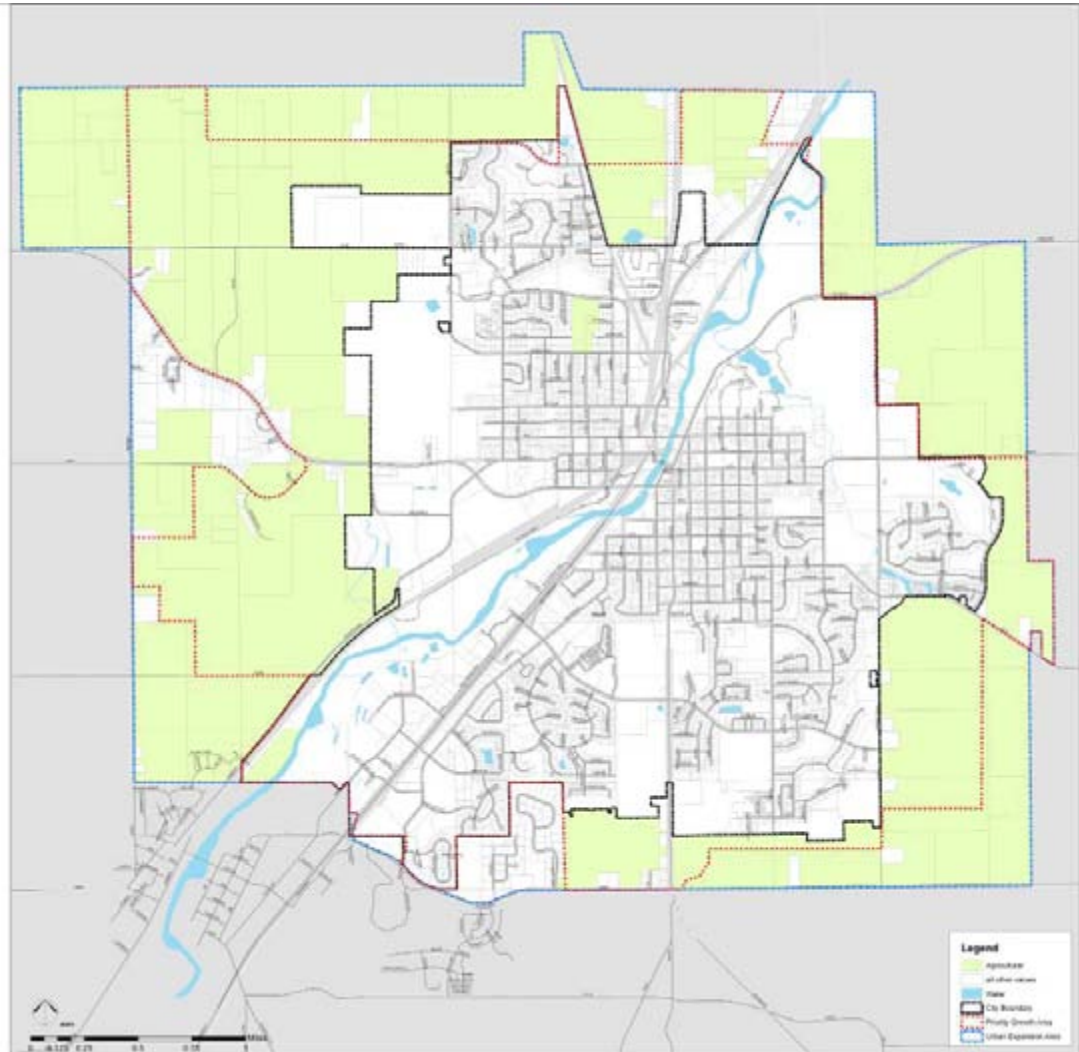
Northfield will require 1,309 acres of land by the year 2027 based on historical land consumption rates, or 1,711 acres of land by 2027 based on current land consumption rates. For the purpose of this analysis an average of these two numbers was taken to find that the city would need approximately 1,510 acres of developable land by the year 2027.

Agricultural and vacant lands comprise 299 acres or 7.3% of total land usage within the City. Agricultural land accounts for 51 acres or 1.3% of the total land area within the City.

Undeveloped Land: Agriculture, Preserve, and Reserve **Agriculture**

Agricultural and vacant lands comprise 299 acres or 7.3% of total land usage within the city. Agricultural land accounts for 51 acres or 1.3% of the total land area within Northfield. According to the American Farmland Trust (AFT), between 1987 and 1997 Minnesota lost 363,100 acres of prime farmland to development. Minnesota ranked nineteenth in the nation in the loss of prime agricultural land during this period. Although there is no data that describes the loss of prime farmland during this time within Northfield, the present patterns of development dictated by current zoning would result in the loss of more agricultural land. The importance of agricultural land should be considered, as agricultural lands account for the vast majority of land located outside the city boundaries. Agricultural lands account for 2,121 acres in the priority growth area and 3,981 acres in the urban expansion area. Map 1.2 shows agricultural lands in Northfield, priority growth area, and urban expansion area.

MAP 1.2 NORTHFIELD AGRICULTURAL LAND



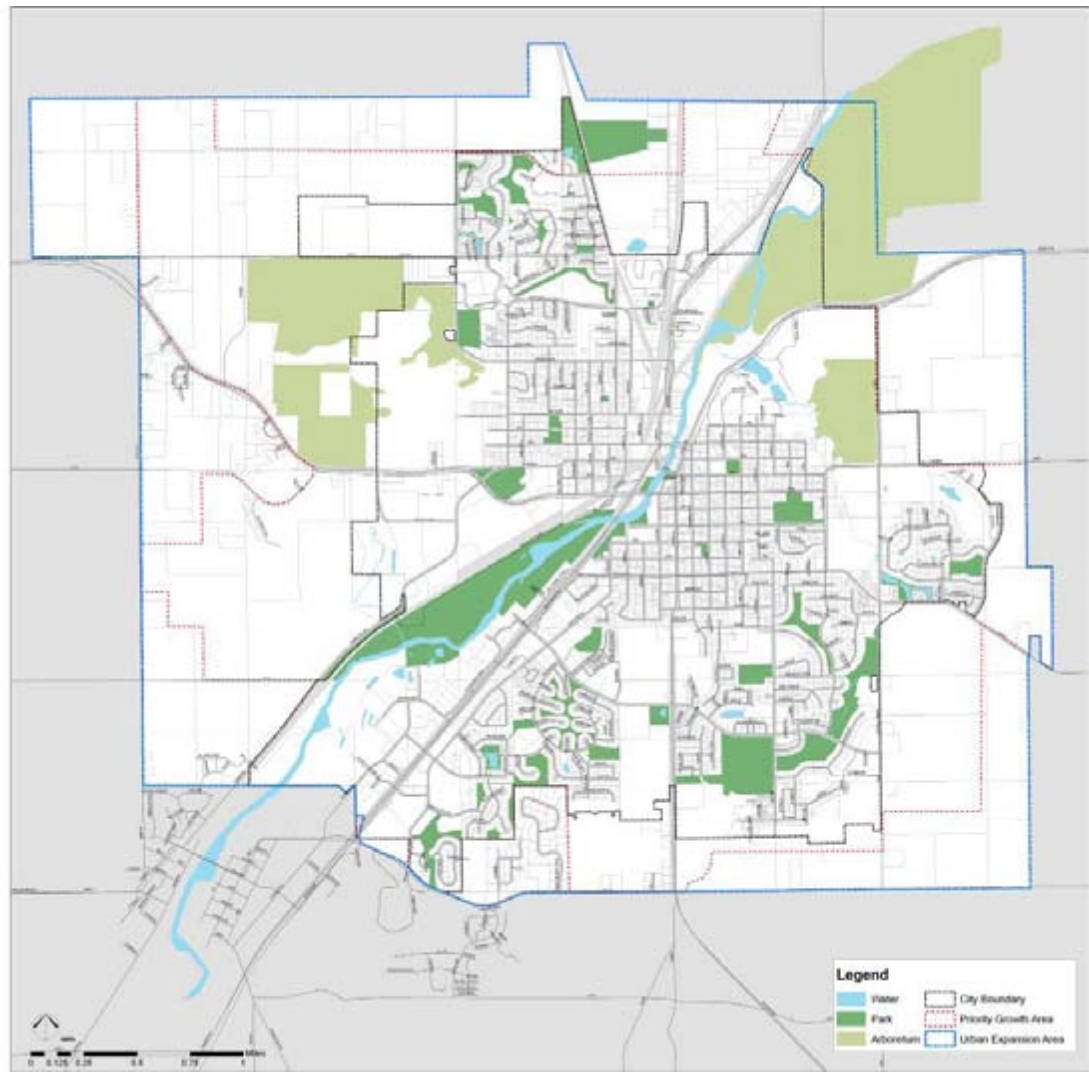
Source: ACP Visioning & Planning, Ltd.

Preserve and Environmentally Significant Lands

Preserve lands are permanently protected by federal, state, and local regulations.

Not all agricultural and vacant land, or that land which is available for development, is entirely suitable for being built upon. Preserve lands are permanently protected by federal, state, and local regulations. These lands include nature preserves, parks, outdoor recreation areas, and the natural areas maintained by St. Olaf and Carleton Colleges. Preserve lands amount to 919 acres or 18.7% of the total land area within Northfield. Preserve lands comprise 1,191 acres of the total land area within the priority growth area and 1,406 acres within the urban expansion area. The preserve lands within Northfield, the priority growth area, and urban expansion area are shown in Map 1.3.

MAP 1.3 NORTHFIELD PRESERVE LAND

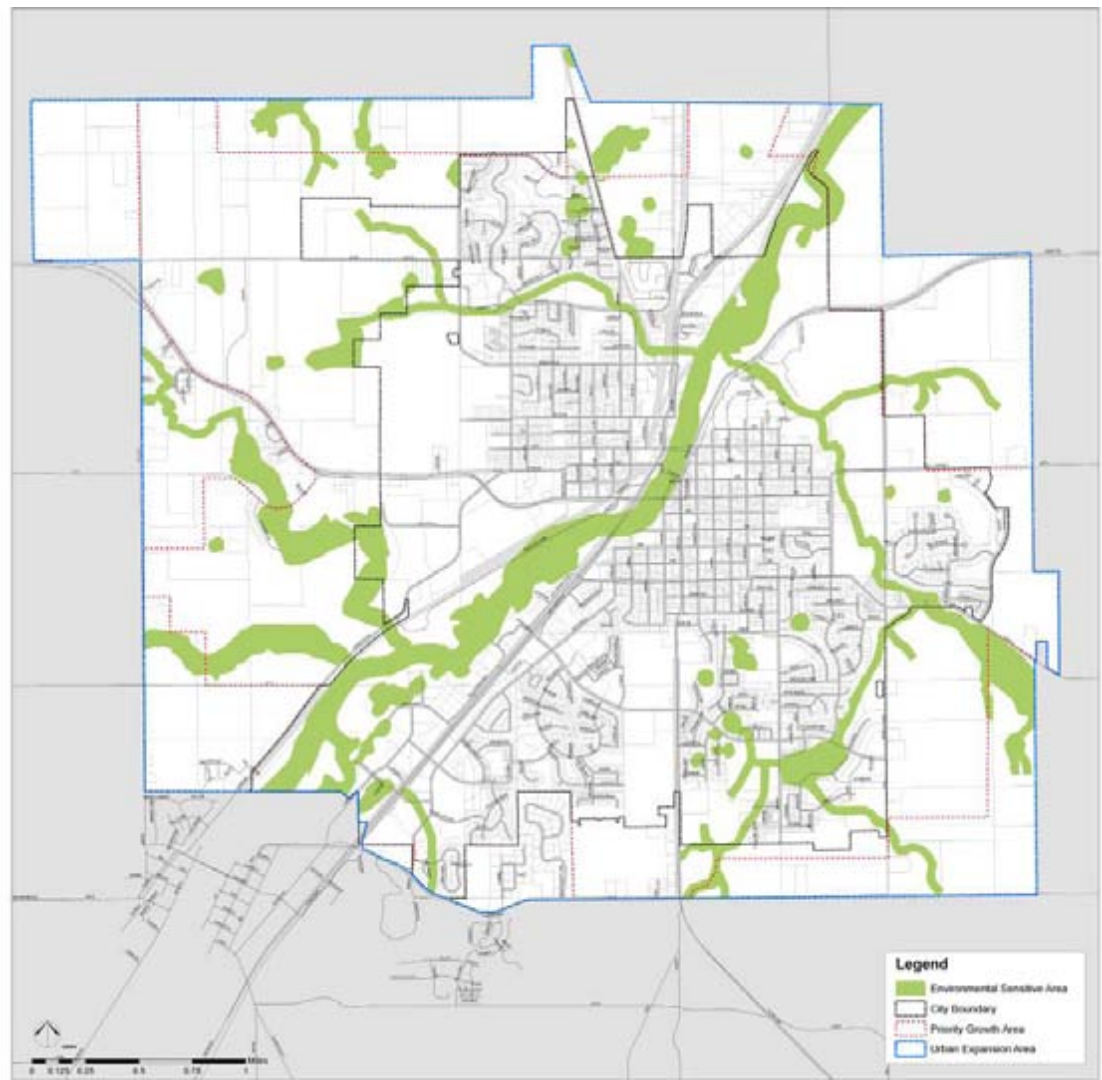


Source: ACP Visioning & Planning, Ltd.

Environmentally significant areas are defined as lands that are not part of the preserve, but due to environmental constraints and limitations, their development potential should be considered for future preservation.

Environmentally significant areas are defined as lands that are not part of the preserve, but due to environmental constraints and limitations, their development potential should be considered for future preservation. These include floodplain areas, hydric soils with steep slopes (over 12%), and wetlands, all of which could be developed, but not without additional effort or cost. The environmentally significant areas were identified in the Natural Resources Inventory report. The amount of land in environmentally significant status amounts to 693 acres or 14.2% of the total land area within the city. Environmentally significant lands make up 950 acres of the priority growth area and 1,205 acres of the urban expansion area. The environmentally significant areas within Northfield, priority growth area, and urban expansion area are shown in Map 1.4 on the following page.

MAP 1.4 NORTHFIELD ENVIRONMENTALLY SIGNIFICANT LAND



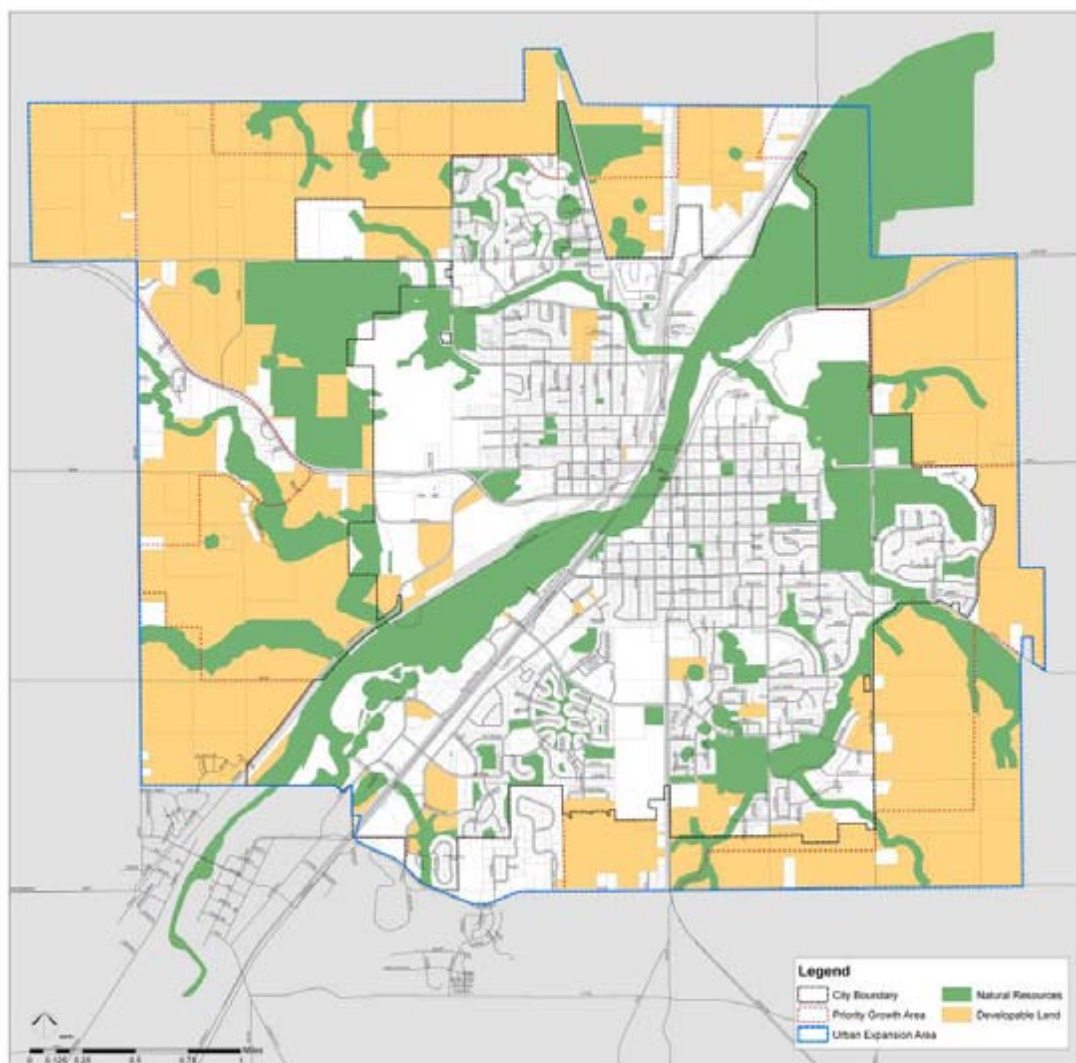
Source: ACP Visioning & Planning, Ltd.

Developable Land

The amount of developable land is calculated by adding the total amount of agricultural land and vacant land within the city, and then subtracting the preserve and environmentally significant lands that overlap. The total amount of developable land within Northfield amounts to 260 acres or 5.3% of the total land area within the city. This figure shows there is a limited amount of undeveloped land remaining for future development within Northfield, although much land remains in the priority growth and urban expansion areas. The priority growth area has 1,862 acres and the urban expansion area contains a total of 3,390 acres of potentially developable land. Map 1.5 on the following page shows the developable land within Northfield, the priority growth area, and urban expansion area.

The total amount of developable land within Northfield amounts to 260 acres or 5.3% of the total land area within the City. This figure shows there is a limited amount of undeveloped land remaining for future development within Northfield, although much land remains in the priority growth and urban expansion areas.

MAP 1.5 NORTHFIELD DEVELOPABLE LAND



Source: ACP Visioning & Planning, Ltd.

Areas for future greenfield, infill or refill development, and redevelopment will be identified in the Comprehensive Plan update, based on the availability of infrastructure, current zoning entitlements, and location within a particular Context Area. Northfield's Context Areas are described in the next section.

Northfield's 10 Context Zones

- Core
- Center
- Neighborhood General 1
- Neighborhood General 2
- Neighborhood General 3
- Edge
- Rural
- Corridor
- District
- Educational District

Each of these zones is described in detail later in the chapter.

Urban Form

This section analyzes Northfield's urban form in terms of the following features:

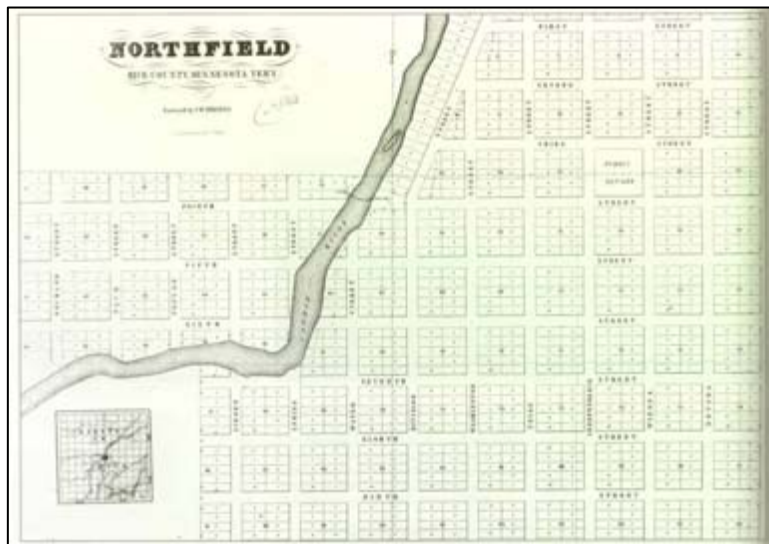
- **Framework and Pattern** – examines Northfield's road network, and shows how it impacts development.
- **Neighborhood Characteristics** – looks at block length, block depth, and other features that contribute to the character of Northfield's context zones.
- **Context Zones** – describes each of Northfield's ten context zones in detail. The list of context zones can be found in the sidebar at left.

The purpose of this analysis is to examine the different frameworks and patterns of development in the community, and the impacts the context zone characteristics have on character and mobility. The final plan will reference this chapter when considering the character and form of future development.

Framework and Pattern

The framework within Northfield is created by the development of the road network over time. The framework can be seen in Map 1.7 on the following page. The older area of the city was developed using a square grid located in what is now the central area of the city (see Map 1.6).

MAP 1.6 NORTHFIELD HISTORIC PLAT MAP

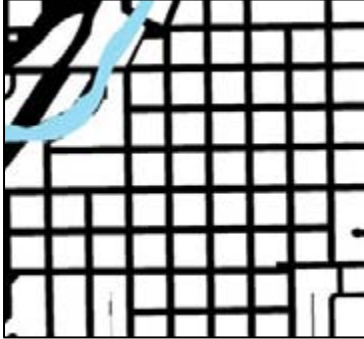


Source: ACP Visioning & Planning, Ltd.

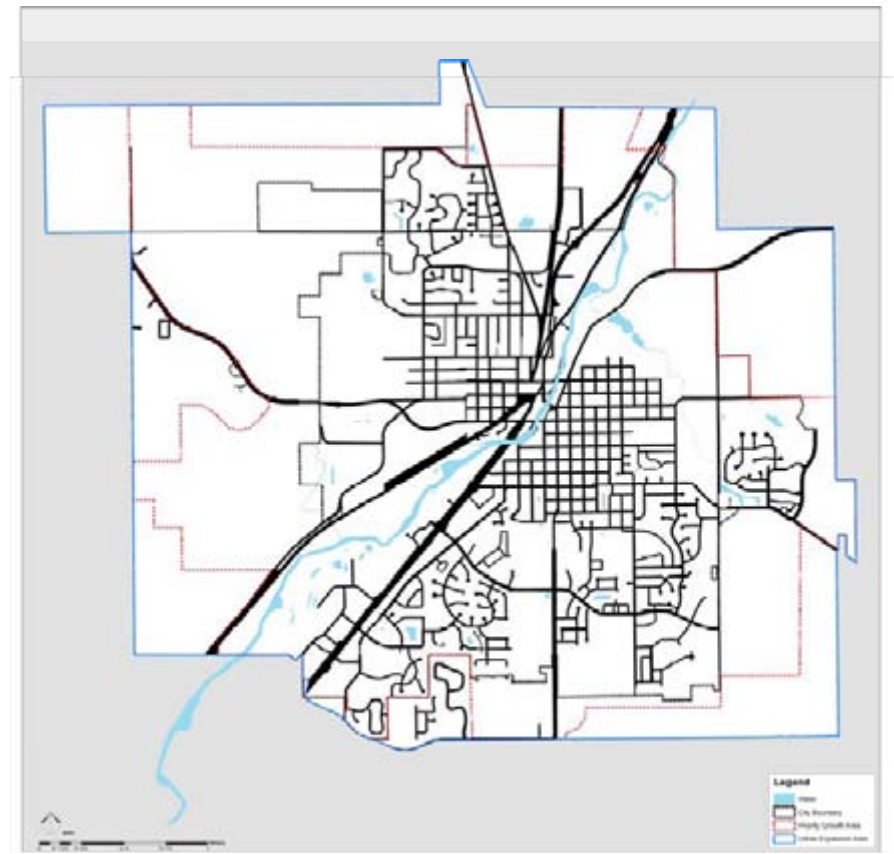
As time passed the continuance of the grid halted, and longer, more rectangular blocks were used in the next phase of development. The longer more rectangular blocks transition to the current curvilinear form of development. Curvilinear streets with the use of culs-de-sac characterize the majority of the more recently developed areas that surround the grid. It is evident that the newer development has decreased the overall connectivity of the street network and led to the creation of lower density sprawling

development. Map 1.7 provides visual evidence of the change in development over time within the city.

MAP 1.7 NORTHFIELD FRAMEWORKS



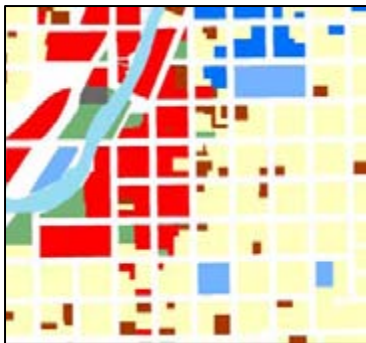
Above: Older, grid street pattern
Below: Newer, curvilinear streets



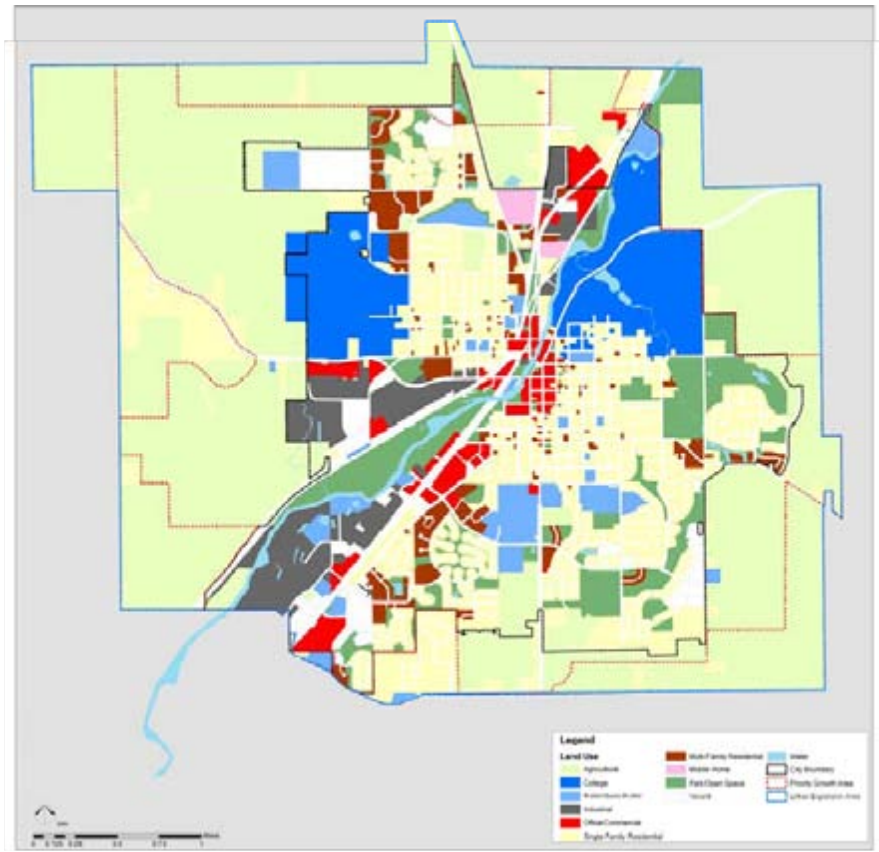
Source: ACP Visioning & Planning, Ltd.

As the framework of development has changed over time, so too has the pattern of land uses. The older areas using the grid framework allow for and have a higher mixture of uses. This can be seen in Map 1.8 below. Multi-family residential, public, and commercial uses are better integrated into the neighborhoods within this area. The uses may be mixed into the neighborhood on a parcel-by-parcel basis, as opposed to large areas of a single use. Moving away from older grid area of the city, the pattern begins to change, as does the framework. The curvilinear, less connected framework helps to create a pattern characterized by larger single use areas. This is evident as large single family, multi-family, commercial, and public areas are not as integrated as the central area of the city. These large predominantly single-use areas lack the parcel-by-parcel integration found in the older areas of the community.

MAP 1.8 NORTHFIELD PATTERN



Above: Integrated mix of uses.
Below: Larger single use areas.



Source: ACP Visioning & Planning, Ltd.

Neighborhood Characteristics

Block Length. Block length can play an important role in creating an area's form and character. Specifically, the walkability of a neighborhood is directly related to block size. Blocks that are too long can create neighborhoods that feel distant and disconnected, and may deter people from walking. The existing range of block length is noted in Table 1.9.

Block Depth. Block depth also plays a part in creating an area's form and character. The block depth in a neighborhood is also a primary factor in determining an area's scale, feel, and to the extent of which it supports pedestrian mobility. Block depth also helps to define lot size on the block.

Lot Width. Although lot width is a site characteristic, it has an impact on the scale of a neighborhood. Lot width helps to mold a neighborhood's appearance through its impact on building width, side yard setback, and the building's orientation to the street.

Access. Access to and from a neighborhood and site determines how well traffic flows and the number of conflicts between pedestrians and vehicles. It can strengthen or weaken an area's walkability. Access is primarily by the street in all context zones within Northfield. Alleys are not integrated into the urban form of the community. In the case of lots that have driveways with street access, vehicle and pedestrian conflict exists at every lot. Table 1.9 shows the characteristics of each of seven of the ten context zones. District, Educational District, and Rural zones were not analyzed for these characteristics.

TABLE 1.9 NEIGHBORHOOD SCALE MEASUREMENTS

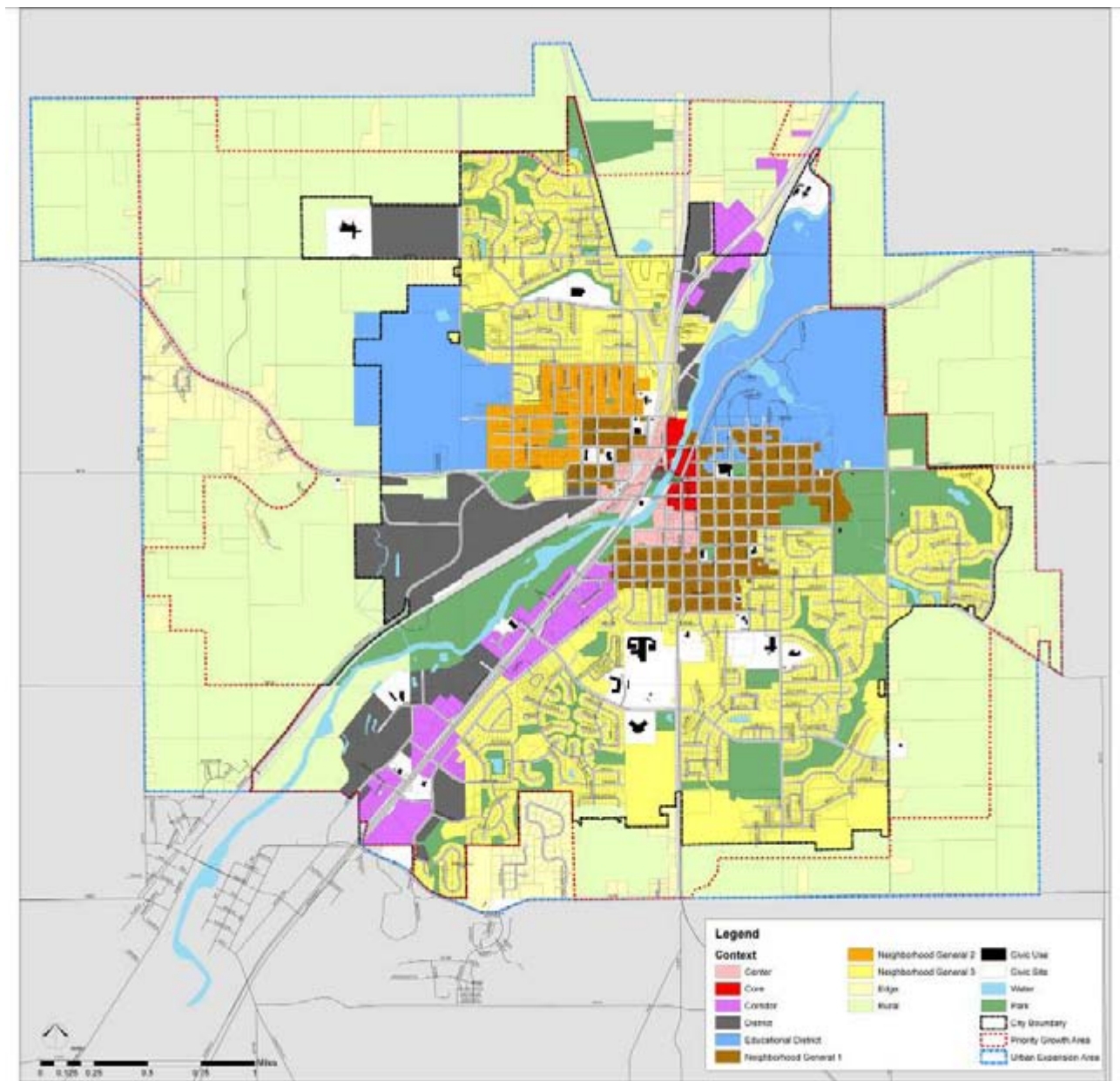
Table of Neighborhood Survey Measurements							
Context Zones	Block Length		Block Depth		Lot Width		Access
	Approx. Existing Range	Longest Existing Block Length	Approx. Existing Range	Longest Existing Block Depth	Existing Range	Most Common	
Center	355-740	740	275-355	355	60-575	65	Street
Core	350-785	785	150-330	330	10-160	20-25	Street
Neighborhood General 1	375	375	375	375	45-85	65	Street
Neighborhood General 2	565-1650	1650	260-660	660	60-130	65	Street
Neighborhood General 3	210-795	795	250-260	260	65-100	80	Street
Edge	560-985	985	260-330	330	130-400	230	Street
Corridor	1810-1865	1865	200-675	675	45-300	100	Street

Source: ACP Visioning & Planning, Ltd.

Context Zones

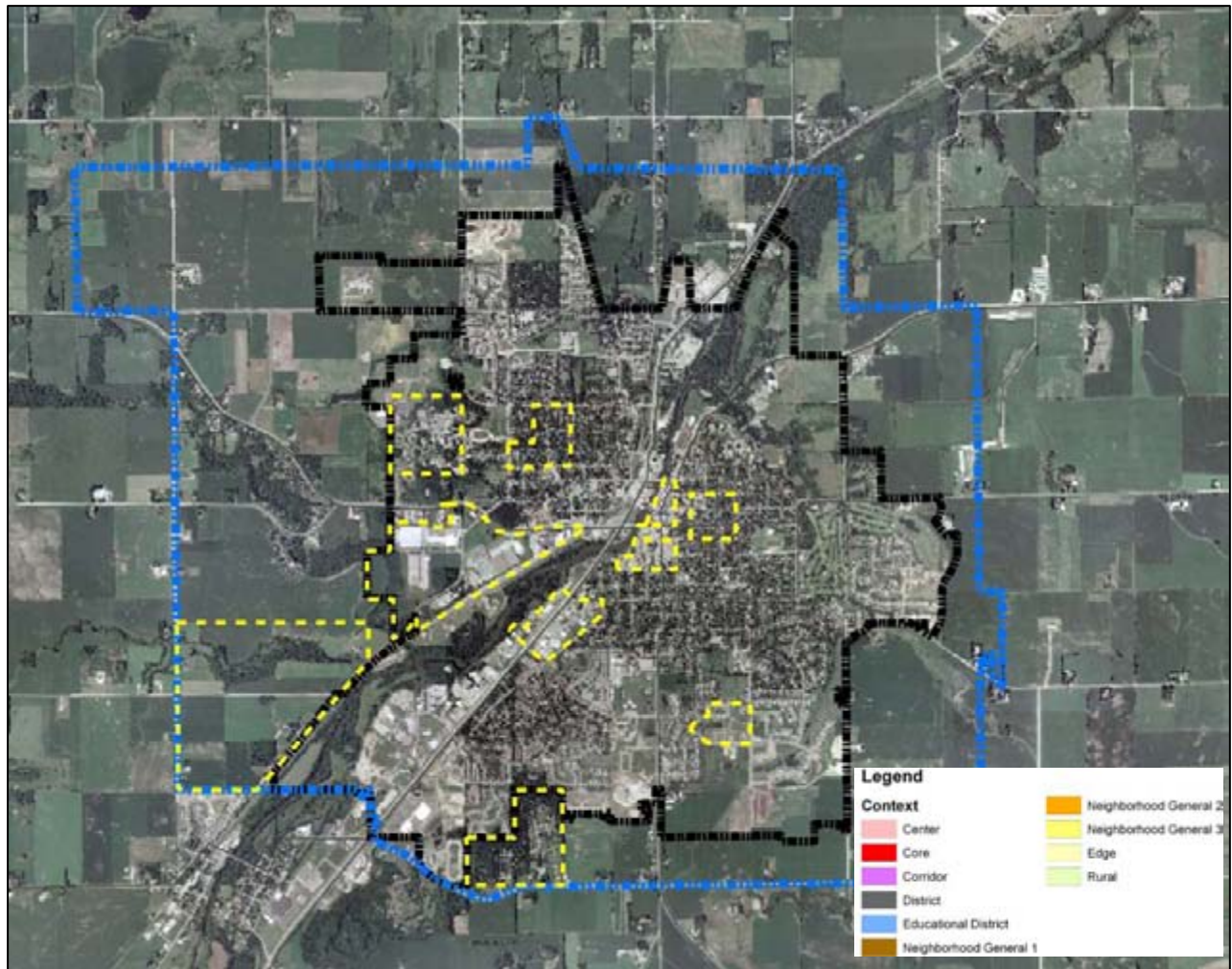
This section summarizes the urban form and characteristics of the context zones within Northfield. Map 1.9 shows these ten context zones. This analysis will describe the neighborhood characteristics unique to each context zone. Map 1.10 depicts sample areas that will be used to illustrate each context zone. The neighborhood characteristics analyzed in this section include: block length, block depth, lot width, and access.

MAP 1.9 NORTHFIELD CONTEXT ZONES



Source: ACP Visioning & Planning, Ltd.

MAP 1.10 NORTHFIELD CONTEXT ZONE EXAMPLES



Source: ACP Visioning & Planning, Ltd.



Above: Pedestrian walkway in the Core zone.

Core

The Core is the zone of densest development within the city, and is located in the center of the original plat of Northfield (see Map 1.11). The area offers a mix of uses including employment and commercial areas. The area is highly walkable due to the compactness of development.

Walkable block lengths support pedestrian mobility, as most blocks within this zone are approximately 400 feet long. Block depth within this zone ranges from 150 to 330 feet. Lot width tends to be smaller within this zone, ranging from 10 to 160 feet with the most common lots sizes between 10 and 25 feet in order to facilitate increased compactness. The grid pattern is well established within this zone, which creates many points of access that provide pedestrians and vehicles with a variety of options for moving in and around the district. The Core zone also provides access to the Cannon River waterfront along the riverwalk located within this zone.

MAP 1.11 NORTHFIELD CORE ZONE



Source: ACP Visioning & Planning, Ltd.

Center

The Center is the transitional zone of development between the Core and the neighborhood areas. This area also offers a mix of uses including employment, commercial, and residential areas, but development is not as compact as the Core zone. The center zone contains large structure commercial development with major parking areas, which leads to decrease in walkability. The block length for the Center zone ranges from 355 to 740 feet. The larger commercial structures within this zone have created an increased number of longer blocks. Block depth within this zone ranges from 275 to 355 feet, and is somewhat deeper than the block depth within the Core zone. Lot width is larger within this zone, ranging from 60 to 575 feet in order to provide for large commercial structures. The grid framework remains well established within this zone, which provides for a high level of accessibility within this area (see Map 1.12).

MAP 1.12 NORTHFIELD CENTER ZONE



Source: ACP Visioning & Planning, Ltd.



Above: Home, Neighborhood General 1

Below: Street, Neighborhood General 1



Neighborhood General 1

The Neighborhood General 1 zone is typified by traditional urban development consisting of detached single-family homes on smaller lots (10,000 to 14,000 square feet), which may also include some multiple-family and mixed-use type developments. These areas are often walkable and include a range of housing types. These neighborhoods include consistent block size and a range of housing styles.

The Neighborhood General 1 zone can be found within the original plat of Northfield (see Map 1.13). The blocks within the zone are square and form a strong grid framework. The block length and depth are both approximately 375 feet creating the square blocks. The lot width within this zone ranges from 45 to 85 feet and the most common lot width is 65 feet. Lot size is not consistent within this zone. Some blocks contain irregularly shaped and sized lots, while other blocks are composed of lots of uniform size. Inconsistent lot size does not affect walkability within this zone due to the consistent block shape. The neighborhood contains a mix of uses as multi-family and commercial uses are interspersed throughout the neighborhood on a parcel-by-parcel basis. The Neighborhood General 1 zone is further characterized by having a discernable center and an edge. A discernable center is often characterized by civic uses such as parks or schools, religious institutions and small commercial districts. This area is where the community gathers to recreate or hold community events. It is also an area that serves as a “way finding” feature and orients residents and visitors to the larger district.

MAP 1.13 NORTHFIELD NEIGHBORHOOD GENERAL 1 ZONE



Source: ACP Visioning & Planning, Ltd.

Neighborhood General 2



Above: Home, Neighborhood General2

The Neighborhood General 2 zone is typified by single-family homes on lots similar in size to those found in Neighborhood General 1. The block size varies within this zone, as the framework begins to change slightly. This zone is a walkable area much like the Neighborhood General 1 zone. The Neighborhood General 2 zone can be found adjacent to the Neighborhood General 1 zone on the west side of the Cannon River. This area can easily be distinguished from Neighborhood General 1, as the framework begins to transition from the urban type square grid to the suburban style curvilinear development. In Neighborhood General 2, the grid changes form and begins to lose consistency with square blocks as well as longer rectangular blocks (See Map 1.14).

The block length within this zone ranges from 565 to 1,650 feet and the block depth ranges from 260 to 660 feet. Most blocks within this zone are still a walkable length. Lot width ranges from 60 to 130 feet, and the most common width is 65 feet, similar in size to Neighborhood General 1.

MAP 1.14 NORTHFIELD NEIGHBORHOOD GENERAL 2 ZONE



Source: ACP Visioning & Planning, Ltd.

Neighborhood General 3

The Neighborhood General 3 zones are be found outside the historic plat of Northfield and are typified by single family homes with lots that are generally larger than those found in Neighborhood General 1 and Neighborhood General 2 (see Map 1.15).

There is a significant change in the street framework within this district, moving from a linear grid to curvilinear. The change in framework reduces the connectivity and accessibility of the road network. The diminishing quality of connectivity and accessibility due to block length and a single use zoning pattern creates an area that is less walkable than the Neighborhood General 1 and General 2 zones.

The block length varies widely within this zone and can be hard to determine due to the curvilinear framework. Block length ranges from 210 to 795 feet and block depth is approximately 250 feet. The lot width varies widely within this zone and many lots are irregular in shape. The zone is characterized by single use areas such as large multiple family housing areas, commercial areas, and single family residential. These uses are not as integrated as they are in Neighborhood General 1.



Above: Home, Neighborhood General 3

MAP 1.15 NORTHFIELD NEIGHBORHOOD GENERAL 3 ZONE



Source: ACP Visioning & Planning, Ltd.

Edge

Edge zones are typically found in outlying areas of the community near the border of Northfield's city limits. The framework of development in these zones is similar to Neighborhood General 3 with curvilinear streets and culs-de-sac. Map 1.16 shows an example of Edge development along the city's southern boundary. The street network in this zone lacks sufficient connectivity similar to Neighborhood General 3. This street framework deters pedestrian mobility and also makes it more difficult for police, fire, and other emergency management services to provide adequate coverage and response times to residents in these areas.

The example edge type development consists of large homes on large lots with a development framework similar to that described above (see Map 1.16). The block length for the Edge zone ranges from 560 to 985 feet, while the block depth ranges from 260 to 330 feet. Lot width within this zone is inconsistent, with the most common width being approximately 230 feet.

MAP 1.16– MAP OF NORTHFIELD EDGE ZONE

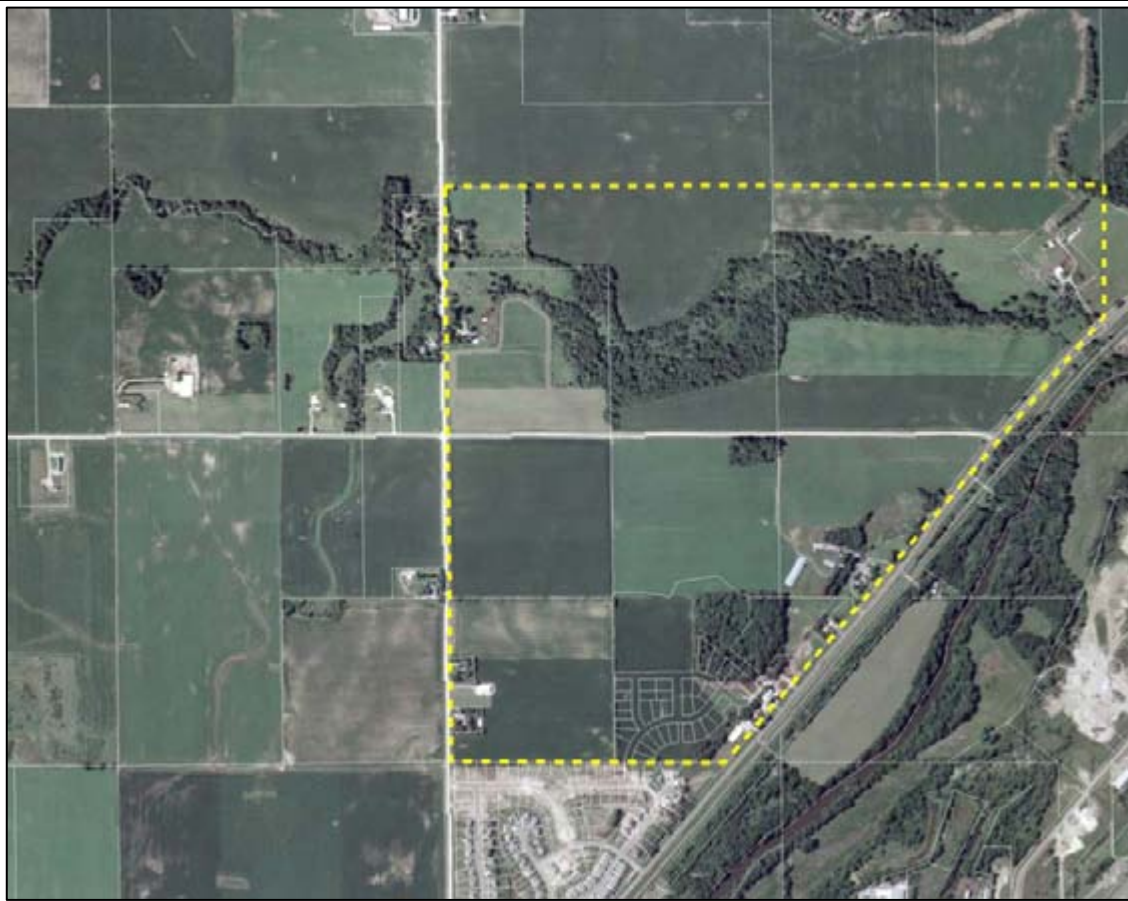


Source: ACP Visioning & Planning, Ltd.

Rural

Rural zones are composed of primarily agricultural uses and are located outside of the city. Residential uses are found in rural zones, but they are limited to those residences associated with agricultural production in the zone. Preserve and environmentally significant areas are also located within this zone. Rural zones define the majority of the area outside the city in the priority growth and urban expansion areas. Map 1.17 below shows a portion of the rural zone in the urban expansion area.

MAP 1.17 NORTHFIELD RURAL ZONES



Source: ACP Visioning & Planning, Ltd.

Corridor

The Corridor zones can be found along arterials or major collectors. These zones include all the parcels that front the roadway. Corridors are generally made up of non-residential uses (eg: commercial or office). These zones are often not pedestrian friendly. They may include sidewalks; however, the auto-oriented nature of the corridor zones and the amount of traffic from commercial structures creates conflict zones for pedestrians.

In Northfield, Corridor zones are found where commercial development exists. The Corridor zone exists primarily along Hwy 3, a large arterial roadway in Northfield (see Map 1.18). The roadway is not pedestrian friendly due to the scale of the street, large parking lots and commercial structures creating many conflict areas. The block length for the Corridor zone is over 1,800 feet and the block depth ranges from 200 to 675 feet. The lot width within this zone varies, with the most common width being approximately 100 feet. The Corridor zone is the primary location of large-scale retail structures with large parking lots.



Above: Commercial development,
Corridor Zone

MAP 1.18 NORTHFIELD CORRIDOR ZONE



Source: ACP Visioning & Planning, Ltd.

District

Districts are generally special use areas found within the city. For the purpose of this analysis, industrial areas of Northfield have been classified as districts. The districts within Northfield are typically of a single use; in this case composed of large industrial structures. Districts are located along collectors and arterial roadways within Northfield. An example industrial district is shown in Map 1.19.

MAP 1.19 – MAP OF NORTHFIELD DISTRICT ZONE



Source: ACP Visioning & Planning, Ltd.

Educational District

The other district type found within Northfield is an Educational District. Educational districts within the city are created by the campus areas of St. Olaf and Carleton Colleges. The campuses of these two colleges account for a significant portion of the city. The campus areas are walkable and offer many recreational opportunities for students and residents. Both campuses also have arboretums, which preserve a large amount of open space for the good of the community. St. Olaf College is shown in Map 1.20.



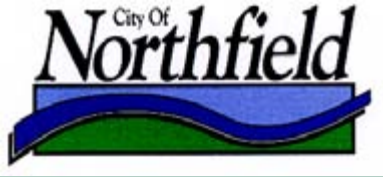
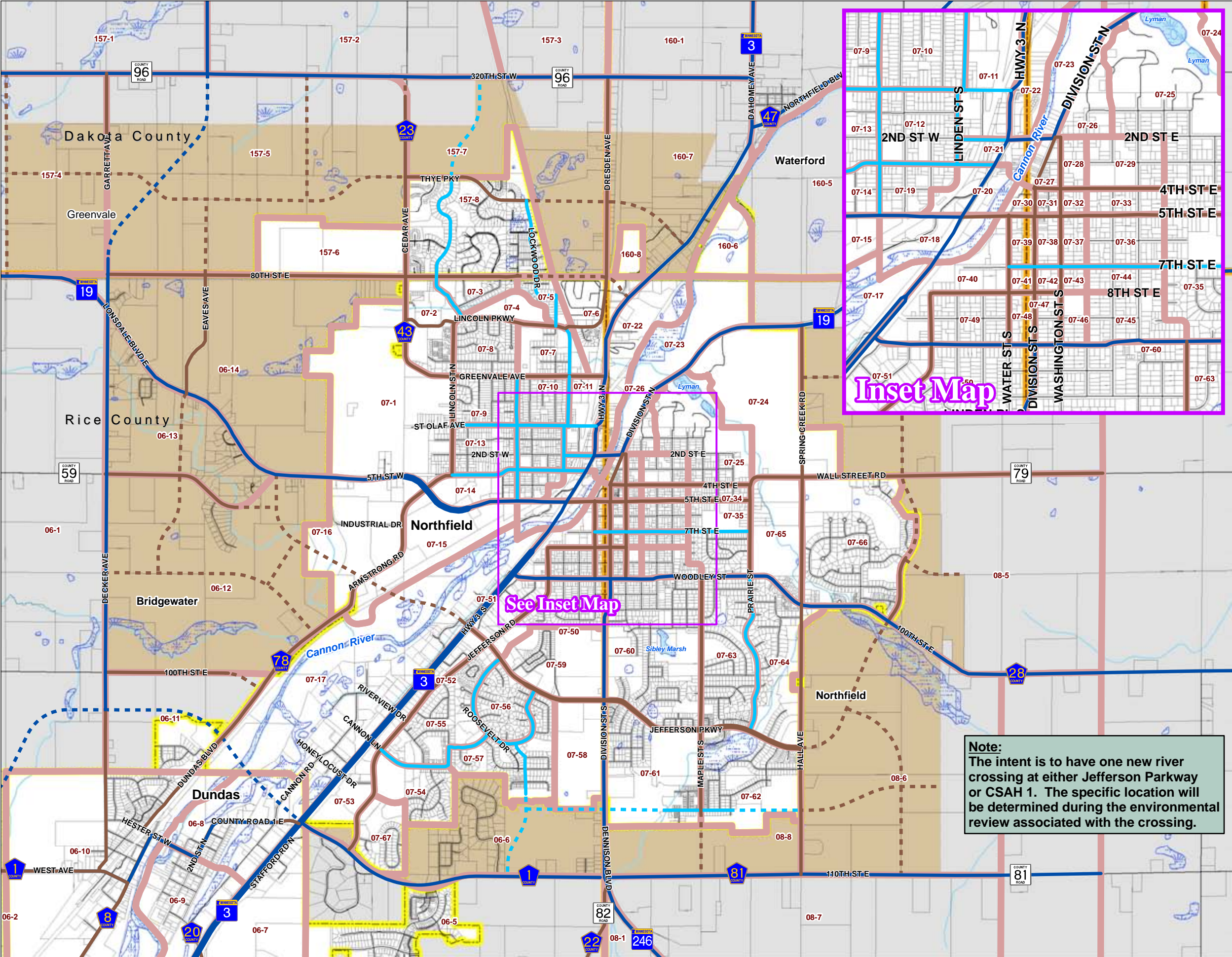
Above: Multi-Unit Housing, Educational District

MAP 1.20 NORTHFIELD EDUCATIONAL DISTRICT ZONE



Source: ACP Visioning & Planning, Ltd.

Appendix B - Traffic Counts



TRANSPORTATION PLAN

Legend

Transportation Analysis Zones

Functional Classification

Minor Arterial

Proposed Minor Arterial

Major Collector

Proposed Major Collector

Minor Collector

Proposed Minor Collector

Urban Expansion Area

Wetlands

Lakes

Roads

Parcels

City Limits

Township Boundaries

County Boundary

Note:
Please refer to Comprehensive Plan for Urban Expansion Area land use designations

Source: Rice County, Dakota County, MnDNR, Metropolitan Council-8/10/07, MnDOT-10/19/07



0 2,500 Feet

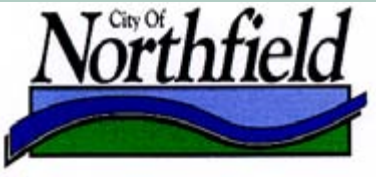
Note:
The intent is to have one new river crossing at either Jefferson Parkway or CSAH 1. The specific location will be determined during the environmental review associated with the crossing.

Transportation Analysis Zones

Figure 4.2-1

2008





TRANSPORTATION PLAN

NO BRIDGE

Legend

XXXX 2030 Forecasted Average Daily Traffic Volume

Volume To Capacity

- Periodically Congested V/C=0.50 - 0.75
- Near Congested V/C=0.75 - 1.00
- Congested V/C>1.00

Functional Classification

- Minor Arterial
- Proposed Minor Arterial
- Major Collector
- Proposed Major Collector
- Minor Collector
- Proposed Minor Collector
- Urban Expansion Area
- Wetlands
- Lakes
- Roads
- Parcels
- City Limits
- Township Boundaries
- County Boundary

Note:
Please refer to Comprehensive Plan for Urban Expansion Area land use designations

Source: Rice County, Dakota County, MnDNR, ACP Visioning & Planning, Ltd., MnDOT Metropolitan Council

Traffic Forecast Volumes Rounded To:
Nearest 10 If < 1000
Nearest 100 If > 1000
Forecast Volumes Have A Likely Confidence Range Of ±15%

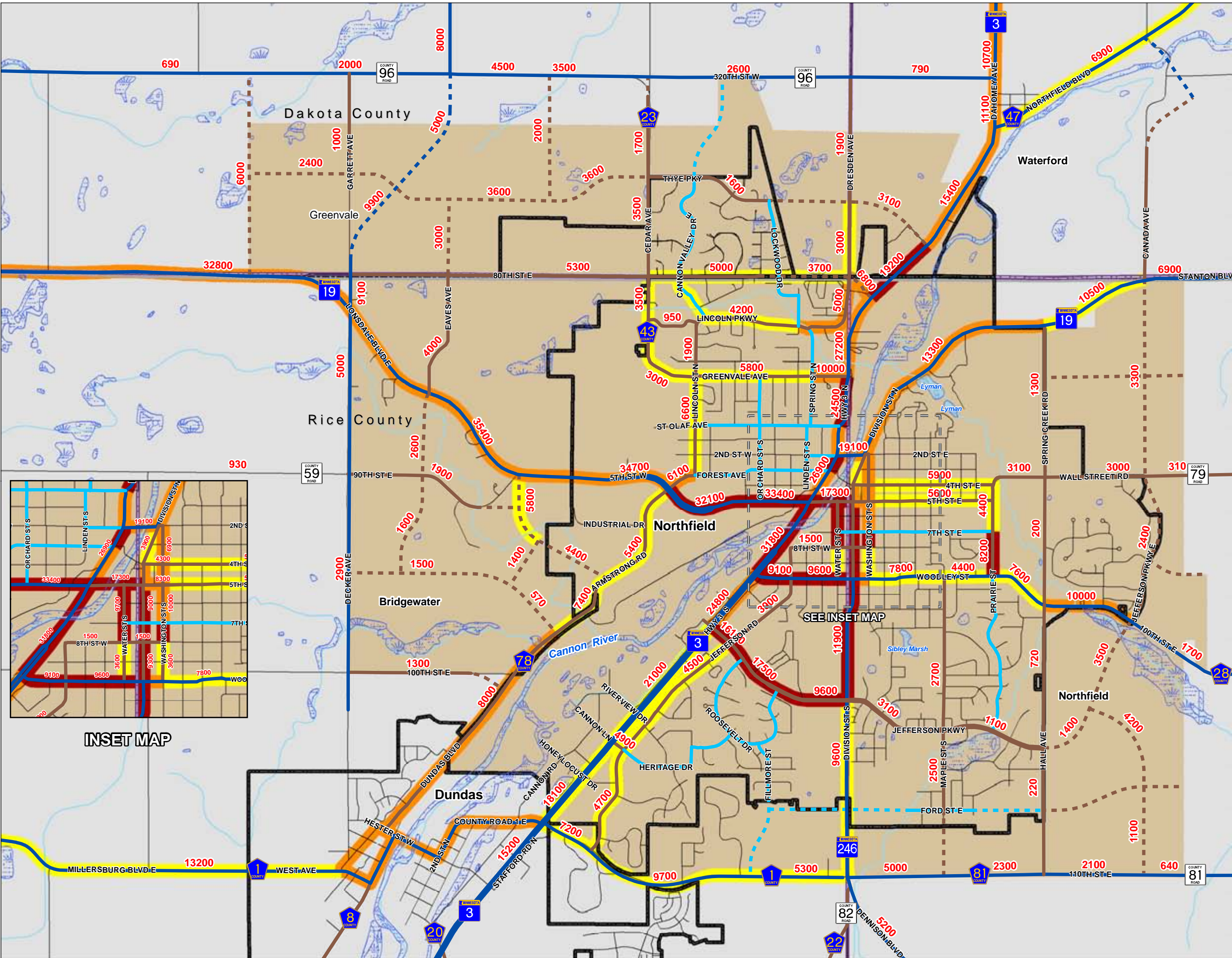


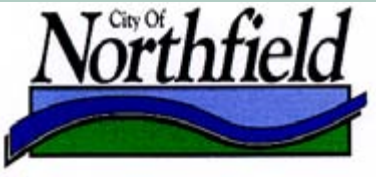
0 2,500 Feet

2030 Volume And Congestion

Figure 4.2-2

2008





TRANSPORTATION PLAN

JEFFERSON PARKWAY BRIDGE

Legend

XXXX 2030 Forecasted Average Daily Traffic Volume

Volume To Capacity

- Periodically Congested V/C=0.50 - 0.75
- Near Congested V/C=0.75 - 1.00
- Congested V/C>1.00

Functional Classification

- Minor Arterial
- Proposed Minor Arterial
- Major Collector
- Proposed Major Collector
- Minor Collector
- Proposed Minor Collector
- Urban Expansion Area
- Wetlands
- Lakes
- Roads
- Parcels
- City Limits
- Township Boundaries
- County Boundary

Note:
Please refer to Comprehensive Plan for Urban Expansion Area land use designations

Source: Rice County, Dakota County, MnDNR, ACP Visioning & Planning, Ltd., MnDOT Metropolitan Council

Traffic Forecast Volumes Rounded To:
Nearest 10 If < 1000
Nearest 100 If > 1000
Forecast Volumes Have A Likely Confidence Range Of ±15%



0 2,500 Feet

2030 Volume And Congestion

Figure 4.2-3

2008

