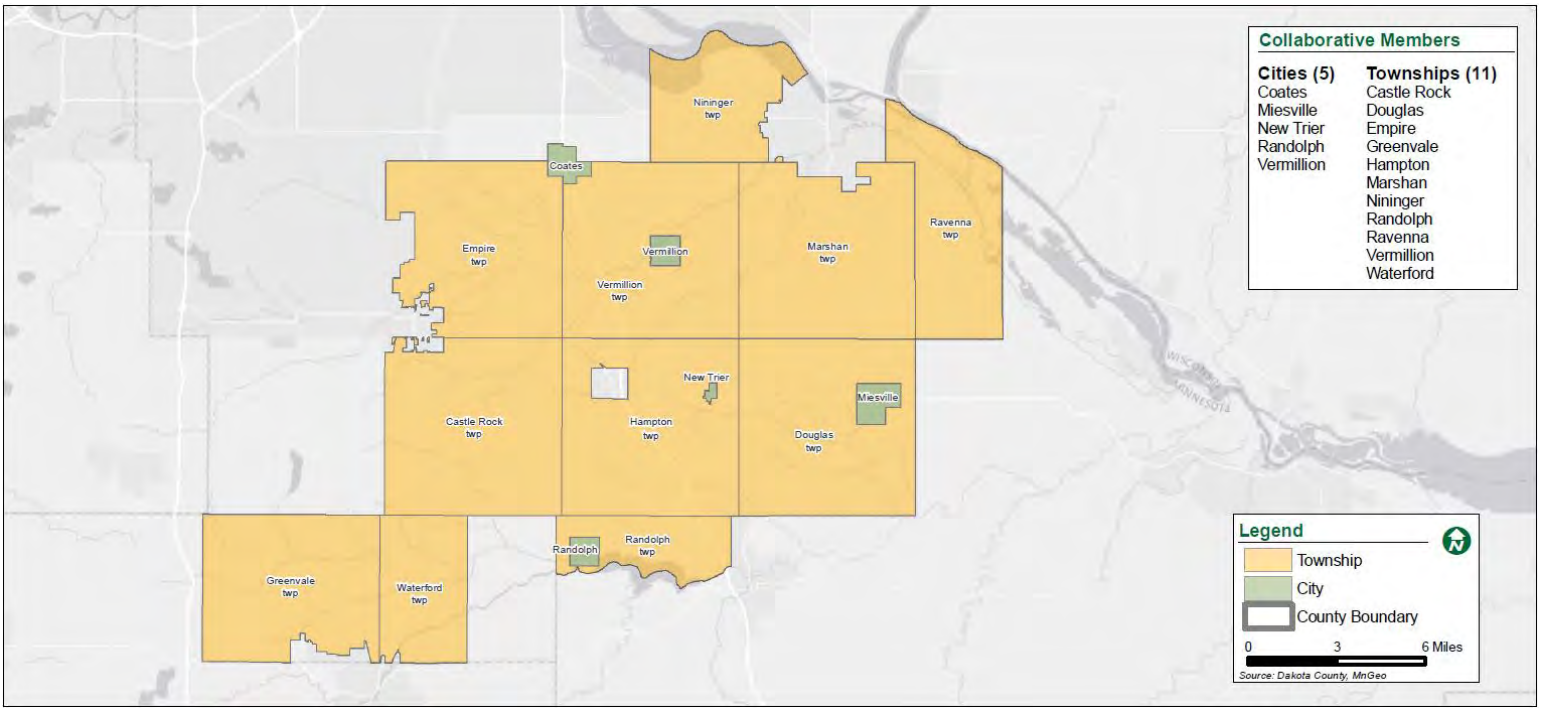
Dakota County Rural Collaborative
2040 Comprehensive Plan

Approved by Metropolitan Council August 28, 2019



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I. INTRODUCTION

The Metropolitan Council updated its regional plan, *Thrive MSP 2040*, and issued "Systems Statements" to all jurisdictions in the seven-county metropolitan area in 2015. The systems statements identify changes in metropolitan system plans and basic planning issues that must be addressed in local plans.

Cities and Townships have had land use and zoning authority in Dakota County since the 1970s. The majority of rural City and Township comprehensive plans in southern Dakota County were initially completed and adopted in the late 1970's or the early 1980's, having been prepared and approved as a requirement of the Metropolitan Land Planning Act of 1976. All cities and townships implement their own zoning and subdivision ordinances.

The Metropolitan Land Planning Act of 1995 required that a review of local plans be completed every ten years to ensure that local plans are consistent with the regional plans prepared by the Metropolitan Council. A collaborative of 13 townships and five rural cities completed "A Composite Comprehensive Plan Update for Eighteen Cities and Township" in 2000 and was found to be consistent with the Metropolitan Council's Regional Blueprint. A collaborative of 12 townships and four rural cities completed the "Dakota County Rural Collaborative Comprehensive Plan" in 2009 and was found consistent with the *Development Framework* of the Metropolitan Council.

This plan is being updated based on *Thrive MSP 2040 Plan*. Eleven townships and five rural cities adopted joint resolutions in fall 2016 to participate in the joint planning process for the land use plan update and assistance in meeting local water management planning requirements. Participating jurisdictions include:

Castle Rock Township	City of New Trier
City of Coates	Nininger Township
Douglas Township	City of Randolph
Empire Township	Randolph Township
Greenvale Township	Ravenna Township
Hampton Township	City of Vermillion
Marshan Township	Vermillion Township
City of Miesville	Waterford Township

Many communities have stand-alone or individual plans that have been prepared in addition to and independent of the collaborative plan update. In some instances, these more detailed plans have been required because of local public utility systems and other community planning issues. In other instances, it is the preference of the community to have a local plan that reflects a separate process and identity in addition to the collaborative effort. The individual plans are the official plans of the communities that also participated in the collaborative plan update. Communities with separate local plan updates include:

City of Coates	City of New Trier
Empire Township	City of Randolph
City of Miesville	City of Vermillion

Components of this collaborative plan update include:

- Population, household, and employment trends
- Land use characteristics and agricultural land identification
- Future land use plan
- Solar protection and historic preservation
- Housing
- Parks and Trails

- Transportation
- Water Resources, including
    - Surface water management
    - Subsurface sewage treatment systems (SSTS) management
- Implementation

A. Goals and Policies

Goals and policies are official community positions that provide the basis for strategies to manage growth and change. Goals are general statements that reflect community values regarding the built and natural environments. Policies are more specific, official positions of communities that guide future planning decisions and implementation strategies. The goals for future growth management within the collaborative communities are outlined below.

1. Agricultural Goals
    - Minimize conflicts between land uses.
    - Protect the rural atmosphere of the area.
    - Minimize the impact on long-term agricultural areas by maintaining very low density residential development.
    - Preserve agriculture as a primary land use and economic opportunity in the area.
    - Minimize the conversion or disruption of agricultural land uses by limiting non-farm uses in long-term agricultural areas.

    Agricultural Policies:
        - Limit non-farm residential development densities in long-term agricultural areas to one home per quarter-quarter section.
        - Encourage farm practices that are consistent with conservation methods.
        - Support and encourage incentives that will maintain and enhance farming operations and agricultural land use.
        - Limit home occupations from expanding into non-agricultural businesses that should be located in cities or areas with appropriate services and facilities.
        - Promote right-to-farm provisions and protection in long-term agricultural areas.
        - Support voluntary enrollment of land in the Agricultural Preserves Program in areas designated for long-term agriculture.
        - Prohibit development in the long-term agricultural area that requires public utilities or extensive public services.
        - Limit business development in long-term agricultural areas to businesses that directly serve or support agriculture or are located in areas clearly planned and designated for business development.
        - Promote MPCA's and other related or appropriate agency's "best management practices" for farmland to ensure that soils are protected and water quality standards are maintained.
        - Enforce uniform feedlot standards.

2. Residential Goals
    - Protect residential uses from potential impacts of incompatible uses.
    - Maintain the quality and character of existing residences.
    - Promote higher density housing, life-cycle housing, and affordable housing opportunities in the communities with public utilities.
    - Support affordable housing opportunities for all age groups.

- Limit non-farm residences in areas designated long-term agriculture.
- Educate non-farm residents on the potential impacts from normal farm practices and the support for long-term agriculture as a primary land use in the area.
- Maintain the rural atmosphere.

Residential Policies:

- Minimize conflicts between residential and non-residential uses through appropriate land use designation and official controls.
- Require that the staging of new residential development in communities with public utilities is consistent with utility staging plans.
- Limit residential development and densities consistent with planned land use designations and local ordinances.
- Protect and maintain the quality of existing housing stock.
- Participate in or promote county and state programs for housing maintenance and rehabilitation assistance to sustain and improve existing housing quality and retain affordable housing options.
- Require development agreements for all platted subdivisions to ensure that the regulations of the community are met.
- Promote minimum residential densities of three units per acre in new developments with access to public utilities.
- Promote life cycle housing choices and affordable housing opportunities in communities with access to public utilities.

3. Commerce/Industry Goals
   - Promote the expansion of non-farm business development in area cities and designated rural centers.
   - Support agri-business expansion in the community and retain existing service industries.
   - Promote the economic viability and vitality of long-term agricultural operations.
   - Limit non-farm business development to areas not designated for long-term agriculture and areas where the provisions for higher levels of service may be available.

   Commercial and Industrial Policies:

   - Ensure that business developments are designed in a manner that is compatible with adjacent land uses, functional, safe and aesthetically pleasing.
   - Evaluate business development opportunities that are consistent with local land use designations and zoning regulations.
   - Require adequate lot size, site coverage, setback, parking, access, environmental controls, screening and landscaping standards for business development in order to provide safe and convenient access, and compatibility with adjoining land uses.

4. Public Facilities and Services Goals
   - Cooperate and coordinate with area communities and governments on issues that have the potential for affecting the long-term goals of the community.
   - Support the preservation of cultural heritage sites.
   - Maintain responsible fiscal management based upon limited tax values and government aids.
   - Protect the health, safety, and welfare of area residents and businesses.
   - Maintain a level of public services appropriate for the rural/agricultural nature of the area, the needs and desires of the community, and the priorities of the community.
   - Ensure that residents have the opportunity to offer input and have access to local government activities.

- Promote solar access and sustainable energy alternatives for residents and businesses.

  Public Facilities and Services Policies:
  - Implement existing and proposed plans, ordinances, and regulations to promote and protect the public health, safety, and welfare.
  - Evaluate cooperative service delivery options with adjacent communities and appropriate agencies.
  - Identify ongoing administrative requirements as communities grow.
  - Provide cost effective delivery of services through periodic analysis and updates of services, operating budgets, and capital improvement needs.
  - Identify and plan for cost-effective improvements to public facilities as needs arise.
  - Evaluate public safety needs and service options as communities grows.
  - Ensure the proper functioning of individual sewage treatment systems through proper installation and periodic inspections through programs established in cooperation with Dakota County.
  - Cooperate with the watershed management authority on area-wide capital improvement needs.
  - Maintain and improve existing public utility systems consistent with permitting standards.
  - Accommodate provisions for the delivery of essential services that are consistent with need and the protection of public health, safety, and welfare.

5. Environmental Resources Goals
   - Ensure that all land use activities take place in harmony with natural systems.
   - Protect the open space quality
   - Reduce instances of harmful erosion, sedimentation, and pollutants from affecting water resources.
   - Protect surface waters and wetland areas to promote water quality, natural habitat areas, groundwater recharge, and recreational opportunities.
   - Protect the natural habitat qualities and biodiversity of the area.
   - Protect and preserve natural systems for the collection and dispersion of stormwater and runoff.
   - Protect existing woodlands throughout the area.
   - Protect the quality and quantity of the groundwater supply.
   - Protect high quality aggregate resources for future use.

     Environmental Resources Policies
     - Work cooperatively with Dakota County and other organizations that support the goals of protecting natural areas and corridors in southern Dakota.
     - Develop and implement a protection and management plan for natural areas that includes:
       - A cohesive system of natural areas connected by natural corridors
       - Areas identified and prioritized for preservation, protection, or restoration
       - A functional classification of natural areas based upon appropriate use, including recreation, preservation, hunting, agricultural, private.
       - Land protection strategies for targeted areas, including voluntary conservation plans, donation or purchase of conservation easements, transfer of development rights, purchase of development rights, acquisition.
       - Strategies and standards for the long-term management of natural areas.

    - A description of partnerships with other units of government to protect shared natural areas.
    - Innovative and appropriate natural area agricultural practices.
    - Funding and funding sources.
- Work with Dakota County and Dakota SWCD to identify, evaluate, and map locally important natural areas.
- Enforce provisions in local ordinances that provide for and promote the protection of regionally and locally-important natural areas, including:
    - Protection of undisturbed natural areas in southern Dakota County;
    - Protection of natural areas with scientific, cultural, or local significance;
    - Protection and enhancement of the ecological diversity of southern Dakota County.
- Involve citizens and stakeholders in the planning process and in programs for managing and restoring natural areas.
- Use park dedications or cash-in-lieu donations in new cluster developments to acquire high quality natural areas.
- Encourage permanent set-aside programs to create and protect open space, create wildlife habitat, protect surface and ground water quality, and reduce erosion and sedimentation in streams.
- Encourage the use of native species in plantings where soil disturbance requires long-term erosion control, through local ordinance regulation and WMO standards, on public lands, reclamation projects on private land, natural areas, and similar projects.
- Actively seek funding to acquire priority areas
- Support education of residents to increase the knowledge, skills, motivation, and commitment to work individually and collectively toward protecting natural resources.

6. Recreation and Open Space Goals
    - Preserve open spaces that enhance rural aesthetic values, protect natural habitat, allow recreational uses, and promote area-wide greenway corridor potential.
    - Support active youth and senior recreational opportunities and facilities in area cities and schools.
    - Support recreational opportunities that are not disruptive to long-term agriculture and are compatible with the rural character of the area.
    - Promote regional trails that provide connectivity between communities, regional parks, water resources, and significant natural features.

    Parks, Recreation, Trails, and Natural Areas Policies:
    - Design and maintain local parks to ensure public and property safety.
    - Periodically evaluate community parks, trails, and recreation needs and opportunities.
    - Coordinate regional parks planning and regional trail opportunities with Dakota County and adjacent communities.
    - Evaluate potential land gifts, conservation easements, and property forfeitures in areas with recreational development opportunities or natural resource protection that benefit the community and region.
    - Review and evaluate opportunities to implement the Dakota County Land Conservation Program.
    - Identify the potential for trail corridors in the community that link local and regional trails, parks, natural features, and community destinations.
    - Evaluate regional greenway concepts in cooperation with Dakota County and local participation opportunities.

- Monitor local land use development activities for compatibility with existing and proposed parks and recreation areas, natural features, and trails.

7. Water Resources Goals
   - Maintain and enhance natural systems and water resources for future generations to enjoy.
   - Protect the habitat and biodiversity of the area.
   - Protect water resources from improper land use resulting in unnecessary impacts.
   - Protect surface waters and wetland areas to promote water quality, recreation opportunities, aesthetic qualities, natural habitat areas, and ground water recharge.
   - Work with local watershed organizations to improve water resources.

   Water Resources Policies
   - Cooperate and coordinate actions with Dakota County regarding the enforcement of the County Shoreland and Floodplain Management Ordinance.
   - Develop goals and policies related to the prevention of agricultural runoff and water quality, including educational programs in cooperation with the Dakota Soil and Water Conservation District.
   - Incorporate stormwater management practices and regulations through amendments to local zoning ordinances or separate ordinances, consistent with watershed plans and standards.
   - Require, as part of any proposed subdivision, that the natural drainage system remain intact to the extent practicable.
   - Adopt and enforce wetland alteration and mitigation requirements consistent with the Wetlands Conservation Act.
   - Approval of land disturbance activities will be consistent with the Rural Collaborative Water Resources Management Ordinance, NCRWMO model Erosion Control and Stormwater Management Ordinance and/or pending NCRWMO model wetland management ordinance.
   - Prohibit development on slopes greater than 18%.
   - The natural drainage will be protected and used to the extent possible for storage and flow of runoff. Wetlands should be used as natural recharge areas. Pre-settling of runoff will be required prior to discharge to wetlands.
   - Temporary storage areas and pre-sedimentation ponds will be required to accommodate peak flows of water runoff. Newly constructed stormwater sedimentation ponds will be required to meet pond design standards of the Nationwide Urban Runoff Program (NURP).
   - Monitor actions of the Vermillion River Watershed JPO and/or North Cannon River WMO to ensure that local interests are addressed in a coordinated and equitable manner.
   - Use MPCA's urban "Best Management Practices" (currently titled "Protecting Water Quality in Urban Areas") for all new or redeveloped land developments.
   - Require and review Stormwater Pollution Prevention Plans (SWPPP) that provide preventive measures for erosion and sedimentation related to proposed development.
   - Require and review NPDES Construction Permit documentation for all land disturbances exceeding one acre in area.
   - Require development proposals to include measures for preventing erosion, minimizing site alteration, minimizing and improving the quality of runoff, and addressing view impacts during and after construction.
   - Establish and enforce standards and regulations restricting the clear cutting of woodland areas.

- Encourage development to conform to the natural limitation of the topography and soil so as to create the least potential for soil erosion.
- Proposed extraction operations shall be required to submit permit documentation and land reclamation plans consistent with standards outlined in local ordinances.
- If erosion is resulting from an agricultural operation, the Soil and Water Conservation District should be consulted regarding possible corrective or preventive measures.
- Wet soils and high water table areas will be regulated through the Zoning Ordinance.
- Adopt the Vermillion River Watershed JPO and the North Cannon River WMO local water management plans by reference and update community ordinances as needed.
- Work with the Dakota Soil and Water Conservation District to enhance education and programs related to the prevention of agricultural runoff and water quality.
- Utilize services through the Soil and Water Conservation District to review predevelopment in steep sloped areas, wet soils, and high water table areas.

<u>Subsurface Sewage Treatment System Policies</u>

- Update local ordinances to incorporate amended MPCA Rules Chapters 7080-7083 standards
- Require existing individual sewage treatment systems that need to be expanded or replaced to meet the standards of MPCA Rules Chapters 7080-7083, as amended, and Dakota County Ordinance #113 standards and regulations. Only alternative or non-standard systems identified in MPCA Chapter 7080 will be allowed in communities under special circumstances.
- Maintain the joint management program for individual sewage treatment systems that includes pump maintenance. Other components are the responsibility of the following
    - Design, construction, and inspection of new systems (responsibility of licensed septic professional);
    - Record keeping of existing systems (responsibility of township);
    - Pumping and inspection of systems every three years (responsibility of township);
    - Repair or replacement of systems found to be an imminent public health threat or failure (responsibility of township).
- Require SSTS inspectors to maintain adequate training and certification regarding updated installation techniques and regulations relating to individual sewage treatment systems.

B. Purpose of the Plan

This Comprehensive Plan responds to the requirements of the Metropolitan Land Planning Act: Minnesota Statutes, Section 473.859. The plan is intended to guide future land use development, redevelopment, and other planning and policy concerns for communities in the Rural Collaborative.

C. Process

Descriptive data about communities in the Dakota County Rural Collaborative were gathered through a variety of sources. This data includes existing land use, basic demographics of the area.

- A series of orientation meetings, open houses, and public hearings were held between January 2017 and April 2018 with each of the collaborative communities to review the various issues addressed within the Collaborative Plan.
- The executive committee of the Dakota County Township Officers Association met with the planning consultants several times throughout the comprehensive planning process to review updated background information, updated mapping and draft plan components.

D. Regional Setting

The communities that make up the Dakota County Rural Collaborative are located on 301 square miles in the southern half of Dakota County, accounting for 51% of the County's total land area. As shown in Figure 1, most of the communities in the Collaborative are designated as Agricultural. These areas are planned for long-term agricultural use and development is discouraged to preserve their agricultural assets.

The sewered area in the City of Vermillion is designated by the Metropolitan Council as a Rural Center. Rural Centers are local commercial, employment, and residential activity centers for the region's rural areas. The remainder of land in the City is designated Agricultural by the Metropolitan Council, which allows for future growth areas within the City limits.

The Cities of Coates, Miesville, New Trier, Randolph, the southern half of Randolph Township, and Ravenna Township are designated as Diversified Rural by the Metropolitan Council. Diversified Rural Communities have areas that contain a variety of agricultural, rural residential and other non-agricultural land uses. These areas both protect rural, agricultural lands while offering potential for future development.

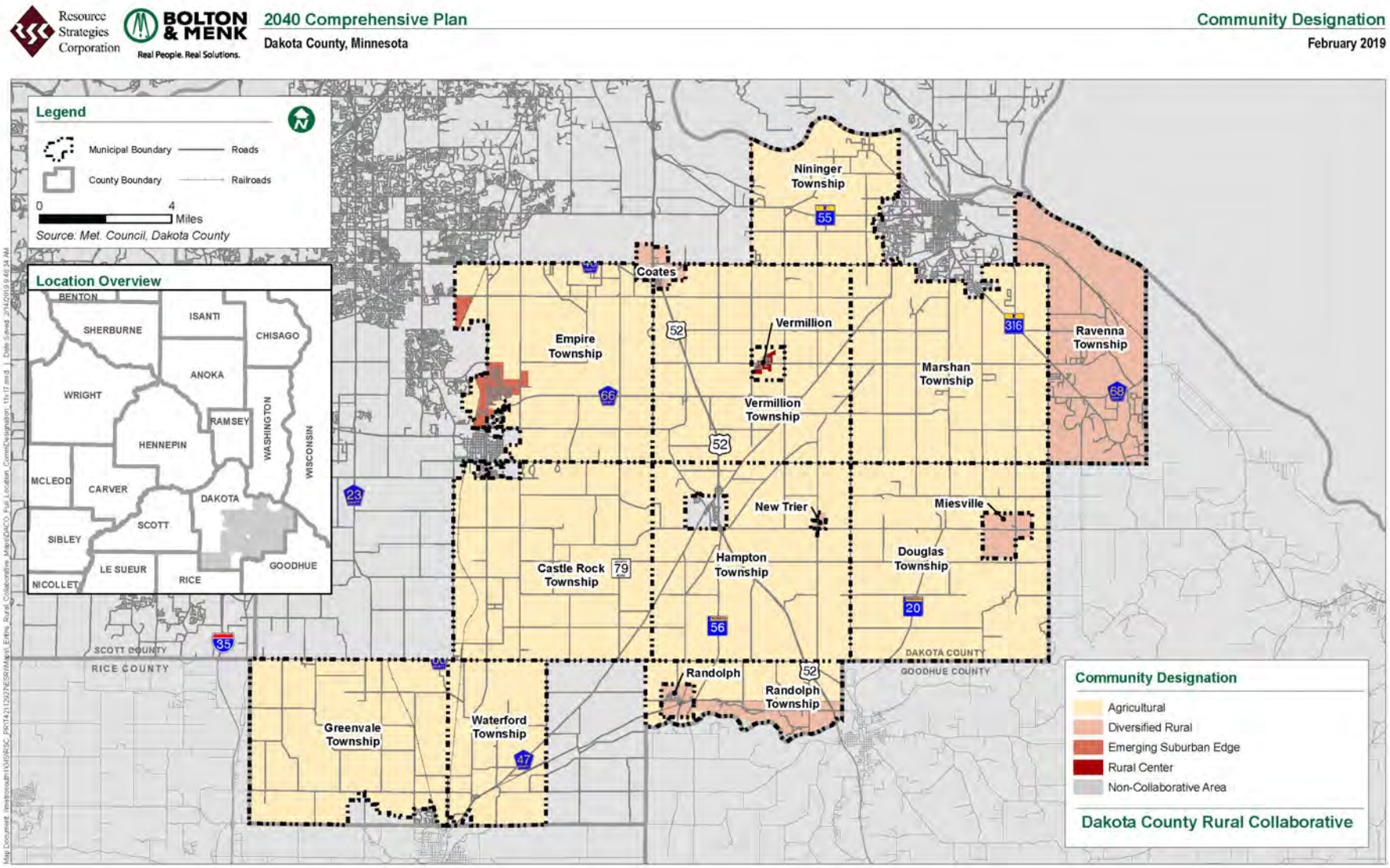
Western portions of Empire Township are designated Emerging Suburban Edge by the Metropolitan Council. These areas are part of the Metropolitan Urban Service Area (MUSA) and have access to the regional sewer.

The map on the following page identifies the community designation for each of the collaborative communities. Table 1 identifies the Metropolitan Council expectations for average net density. Neighborhoods in each community may develop at higher or lower densities.

Table 1 - Overall Density Expectations for New Growth, Development & Redevelopment	
Metropolitan Urban Service Area: Minimum Average Net Density	
Emerging Suburban Edge	3-5 units/acre
Rural Service Areas: Maximum Allowed Density, except Rural Centers	
Rural Center	3-5 units/acre minimum
Diversified Rural	4 units/40 acres
Agricultural	1 unit/40 acres

Source: Metropolitan Council

Figure 1: Community Designations from Metropolitan Council



Source: Metropolitan Council

II. LAND USE

A. Historical Figures

Over the last 40 years, Dakota County has had increasing numbers in population, households and employment. Table 2 identifies the population, household, and employment trends in the collaborative communities from 1970 to 2015. Population within the rural collaborative communities have increased in all censuses taken since 1970. Between 1970 and 1980 there was a significant increase in population (30%); no other decade shows a greater than 8.5% increase in population.

Table 2 – Historical Collaborative Population, Housing & Employment

Category	1970	1980	1990	2000	2010
Population	9,265	12,010	12,450	13,511	14,201
Households	2,051	3,335	3,830	4,433	5,060
Employment	300	897	1,205	3,690	2,507

As a percentage of the total county population, the rural collaborative communities have seen a decreasing share of the County population. Table 3 details population trends by community. The rate of population growth has been very small or declining in most communities, and the few communities seeing population growth have grown by at least 20% since 2000. These communities have higher concentrations of diversified rural land (Randolph) or are sewered communities, such as Empire Township. The average annual rate of population growth from 2000 to 2015 was 0.5% in the rural collaborative compared to a 1.1% rate of growth in Dakota County as a whole. The collaborative communities represented 6.6% of the total county population in 1970, but declined to 3.5% of the County's total population in 2015.

Table 3 – Historical Population Trends by Community

Category	1970	1980	1990	2000	2010	2015
Castle Rock Twp	1,235	1,340	1,480	1,495	1,342	1,331
Coates	212	207	186	163	161	160
Douglas Twp	552	614	670	760	716	711
Empire Twp	1,136	1,224	1,340	1,638	2,444	2,839
Greenvale Twp	624	641	685	684	803	818
Hampton Twp	595	848	866	986	903	913
Marshan Twp	1,186	1,655	1,286	1,263	1,106	1,117
Miesville	192	179	135	135	125	127
New Trier	153	115	96	116	112	110
Nininger Twp	554	774	805	865	950	862
Randolph	350	351	331	318	436	458
Randolph Twp	267	385	448	536	659	682
Ravenna Twp	550	1,683	1,926	2,355	2,336	2,331
Vermillion	359	438	510	437	419	431
Vermilion Twp	779	1,070	1,201	1,243	1,192	1,212
Waterford Twp	521	486	485	517	497	503
Subtotal	**9,265**	**12,010**	**12,450**	**13,511**	**14,201**	**14,605**
Dakota County	139,808	194,279	275,227	355,904	398,552	414,490
Percent of County	6.6%	6.2%	4.5%	3.8%	3.6%	3.5%

Source: Metropolitan Council

Table 4 illustrates the household trends in the individual collaborative communities and Dakota County from 1970 to 2015. The household growth rates are higher than population growth rates due in part to decreasing average household size. While household growth was greater than population growth, the number of households in Collaborative Communities did not keep pace with the county, meaning households in Collaborative Communities make up a smaller portion of Dakota County's total households. Projected household trends are discussed in Chapter III.

Table 4 – Historical Household Trends by Community

Category	1970	1980	1990	2000	2010	2015*
Castle Rock Twp	290	395	460	514	504	522
Coates	61	65	66	64	66	71
Douglas Twp	122	164	192	235	259	277
Empire Twp	271	360	426	515	792	926
Greenvale Twp	151	187	228	227	275	291
Hampton Twp	126	223	260	320	329	336
Marshan Twp	253	431	373	404	403	424
Miesville	43	49	47	52	52	59
New Trier	32	31	29	31	41	42
Nininger Twp	121	201	241	280	372	390
Randolph	96	110	111	117	168	185
Randolph Twp	69	118	158	192	246	276
Ravenna Twp	12	433	546	734	780	816
Vermillion	81	123	157	160	156	162
Vermillion Twp	171	281	354	395	424	476
Waterford Twp	152	164	182	193	193	205
Subtotal	**2,051**	**3,335**	**3,830**	**4,433**	**5,060**	**5,458**
Dakota County	37,650	64,087	98,293	131,151	152,060	159,189
Percent of County	5.5%	5.2%	3.9%	3.4%	3.4%	3.4%

*Source: US Census; *Metropolitan Council Estimates*

Table 5 identifies the employment trends in the collaborative communities and Dakota County as a whole from 1970 to 2015. There are a number of "unsubstantiated" employment estimates in several communities and some questionable fluctuations and recent increases in other communities. As a percent of total employment in Dakota County, the Collaborative communities have averaged about 1.5% throughout the past 45 years. Of the non-ag employment, the single largest industries worked in within the collaborative communities are construction (12%) and educational services (8%).

Table 5 – Historical Employment Trends by Community

Category	1970	1980	1990	2000	2010	2015
Castle Rock Twp	40	50	100	1,044	356	376
Coates	10	50	90	252	109	123
Douglas Twp	-	50	50	96	92	125
Empire Twp	40	107	167	217	255	267
Greenvale Twp	-	50	50	68	49	93
Hampton Twp	10	50	50	178	85	99
Marshan Twp	-	50	50	220	117	186
Miesville	20	50	50	97	116	128
New Trier	10	50	50	30	35	-
Nininger Twp	10	20	20	165	149	151
Randolph	30	50	50	123	122	141
Randolph Twp	10	50	50	130	113	193
Ravenna Twp	50	20	20	115	38	68
Vermillion	20	100	167	221	93	158
Vermillion Twp	-	50	50	280	90	125
Waterford Twp	30	100	191	461	679	723
Subtotal	**280**	**897**	**1,205**	**3,697**	**2,498**	**2,233**
Dakota County	31,100	62,134	102,677	154,242	170,235	185,818
Estimated Percent of County	1%	1.4%	1.2%	2.4%	1.5%	1.6%

Source: Metropolitan Council

B. Forecasts

As of 2015, approximately 14,600 people lived in Dakota County Rural Collaborative communities in roughly 5,225 households. Projected populations, households, and employment in the Collaborative are detailed in Table 6:

Table 6 – Forecasted Collaborative Population, Housing, & Employment

	2010	2015*	2020	2030	2040
Population	14,201	14,605	15,090	16,190	17,220
Households	5,060	5,225	5,660	6,300	6,890
Employment	2,498	2,905	3,120	3,410	3,670

**Metropolitan Council Estimates*

Population in the collaborative communities is expected to increase by roughly 3,000 persons between 2010 and 2040. Empire Township is forecasted to add 2,386 persons over the three decades, which is over 75% of the projected collaborative community's population increase. The annual rate of population growth in the collaborative area is projected to be about 0.6%, which is less than the average growth rate for the previous 30 years.

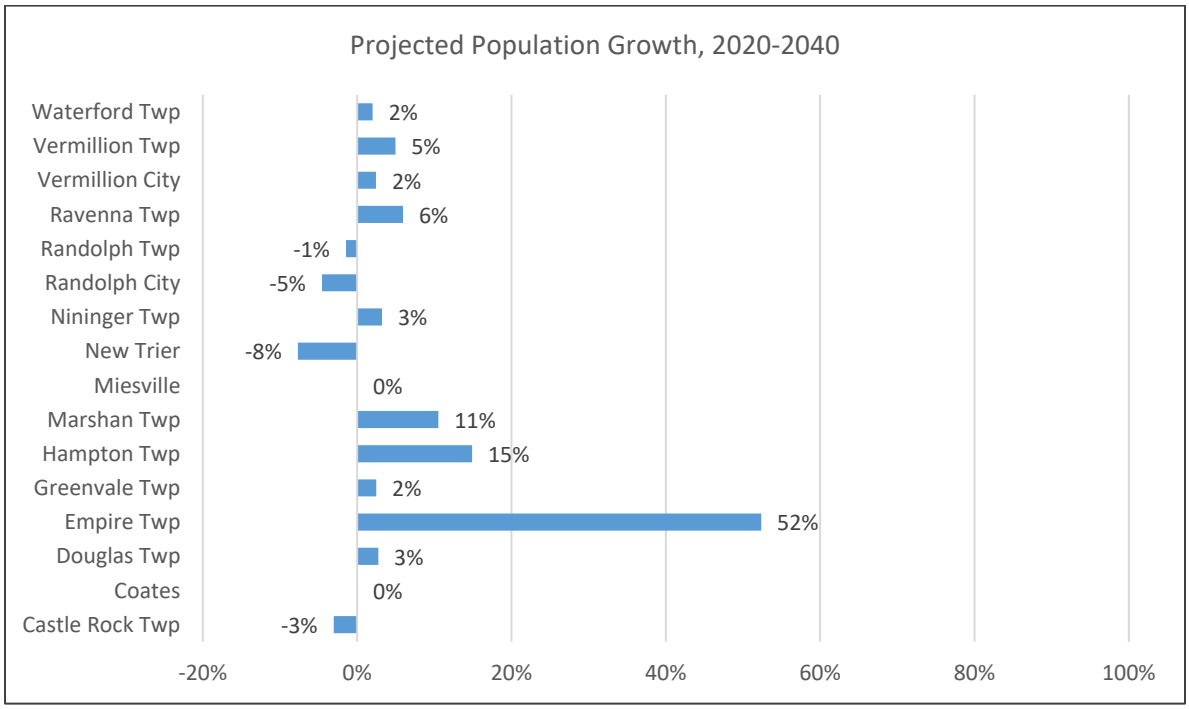
Dakota County is expected to add 115,498 persons in the 30-year period. This is about a 1% annual growth rate, which is less than the 1980-2010 average annual rate of 1.5%. The projected collaborative community percentage of total Dakota County population in 2040 is 3.3%, which is slightly lower than the 3.6% percentage in 2010.

Table 7 – Projected Population Trends by Community

Category	2010	2020	2030	2040
Castle Rock Twp	1,342	1,320	1,300	1,280
Coates	161	170	170	170
Douglas Twp	716	730	740	750
Empire Twp	2,444	3,170	3,990	4,830
Greenvale Twp	803	810	850	830
Hampton Twp	903	940	1,000	1,080
Marshan Twp	1,106	1,140	1,200	1,260
Miesville	125	140	140	140
New Trier	112	130	120	120
Nininger Twp	950	930	960	960
Randolph	436	440	440	420
Randolph Twp	659	690	680	680
Ravenna Twp	2,336	2,360	2,430	2,500
Vermillion	419	410	420	420
Vermillion Twp	1,192	1,210	1,240	1,270
Waterford Twp	497	500	510	510
Subtotal	**14,201**	**15,090**	**16,190**	**17,220**
Dakota County	398,552	435,870	474,670	514,050
Percent of County	3.6%	3.5%	3.4%	3.3%

Source: Metropolitan Council

Growth in the collaborative area over the next 20 years is expected to be minimal. Some communities have outpaced and may continue to outpace Metropolitan Council forecasts. Most growth is expected to be concentrated in specific of communities, as shown in the figure below.



Source: Metropolitan Council Population Forecasts

Employment estimates and forecasts from 2010-2040 are illustrated in Table 8. There are relatively few areas within the collaborative that are designated for future commercial or industrial development, which will impact the number of jobs available in the collaborative area. It is anticipated that employment in the rural collaborative will maintain about the same proportion of the total County employment.

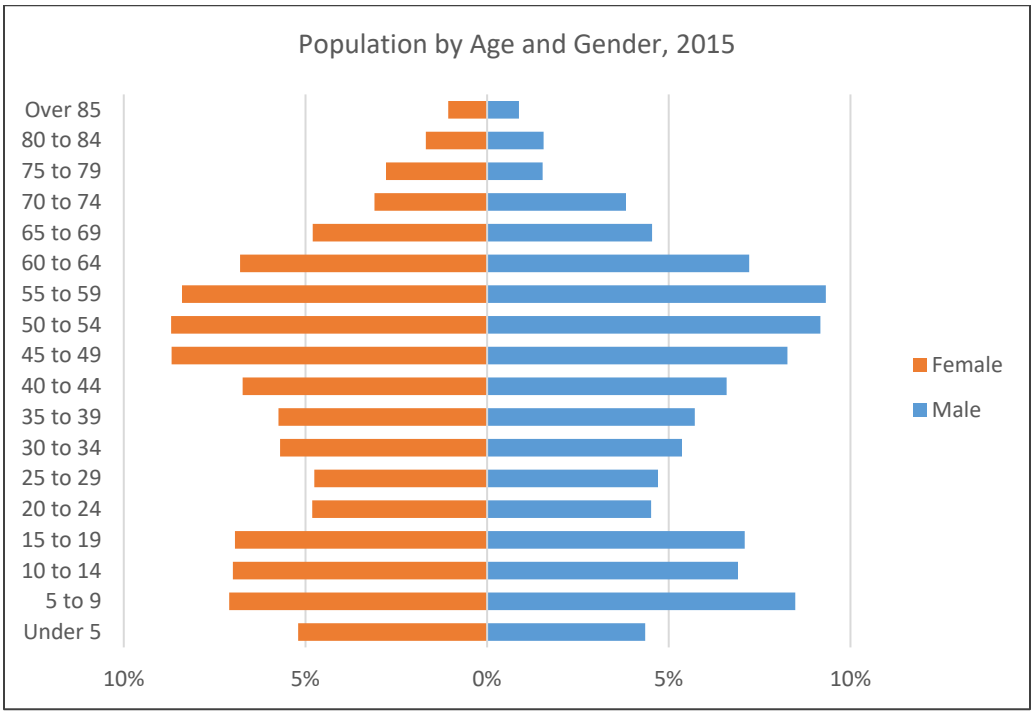
Table 8 – Projected Employment Trends by Community

Category	2020	2030	2040
Castle Rock Twp	360	360	360
Coates	120	120	120
Douglas Twp	120	120	130
Empire Twp	340	380	420
Greenvale Twp	150	200	260
Hampton Twp	90	100	100
Marshan Twp	230	290	350
Miesville	120	130	130
New Trier	50	60	60
Nininger Twp	160	200	250
Randolph	130	130	130
Randolph Twp	160	160	160
Ravenna Twp	50	60	60
Vermillion	150	180	200
Vermillion Twp	140	160	160
Waterford Twp	750	760	780
Subtotal	**3,120**	**3,410**	**3,670**
Dakota County	203,130	219,660	236,300
Estimated Percent of County	1.5%	1.6%	1.6%

Source: Metropolitan Council

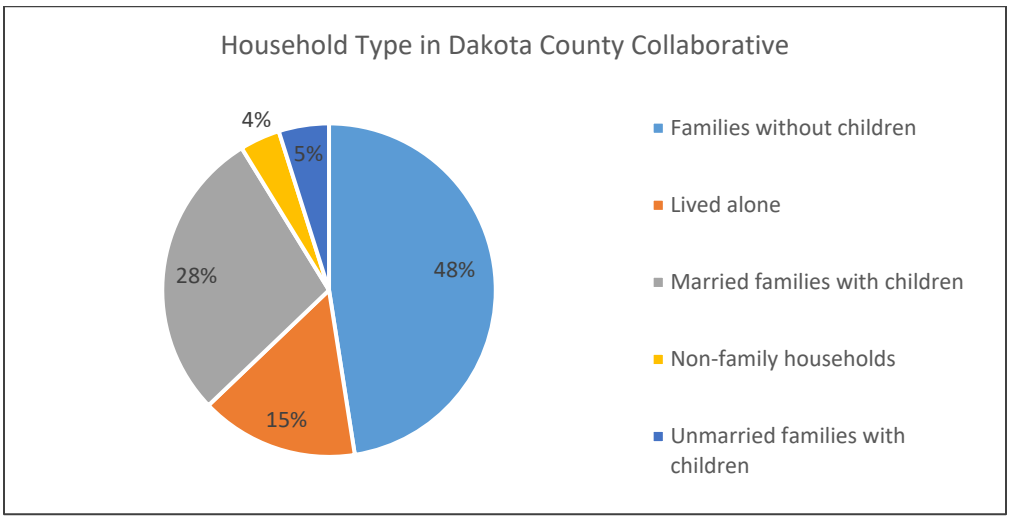
1. Demographics

The figure below shows the age and gender composition of the Rural Collaborative Population. The largest age groups are the three cohorts between 45 and 59 years old, which represents 26.3% of the collaborative' s total population. When compared to Dakota County as a whole, the distribution of age and gender is very similar.



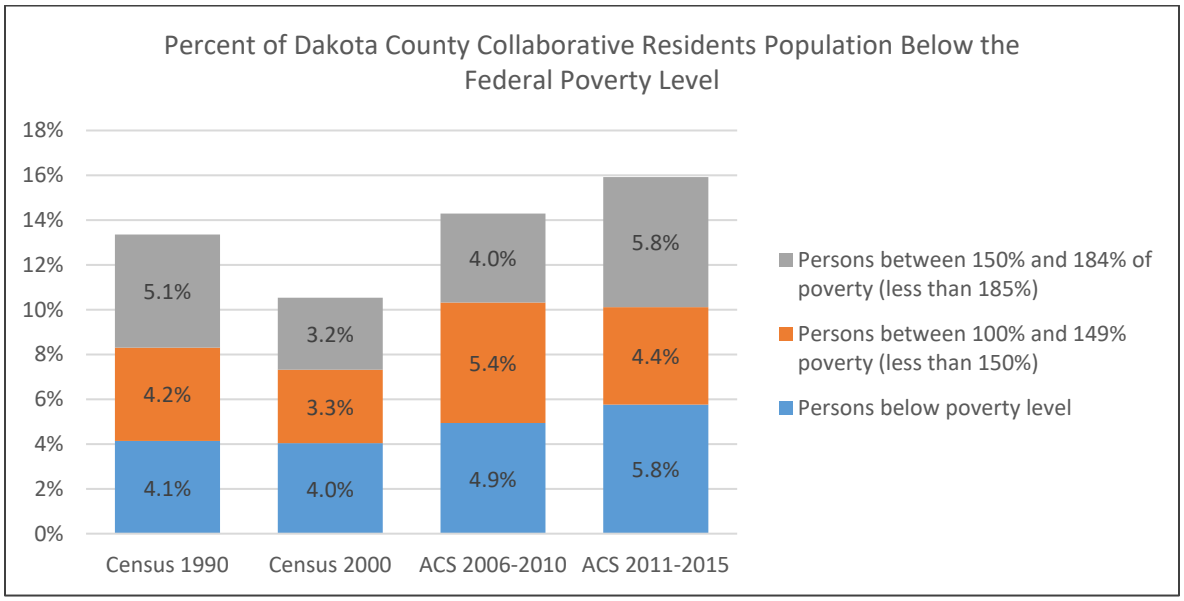
Source: Metropolitan Council Tabulation of American Community Survey Data

Nearly half of all households (48%) are married families without children. When compared to Dakota County as a whole, there is a significant higher percentage of families without children in the Collaborative then Dakota County (35%). The Collaborative has significantly less 'live alone' households (15%) then Dakota County (24%). About one third of all collaborative households have children most of which are married couples.



Source: Metropolitan Council Tabulation of American Community Survey Data

The figure below shows recent trends of the rural collaborative residents with low income. About 10% of residents are between 100% and 185% of the federal poverty level while roughly 6% of residents are below the federal poverty level. These rates are comparable to Dakota County averages.



Source: Metropolitan Council Tabulation of US Census and American Community Survey Data

C. Existing Land Use

The existing land use in the collaborative communities is primarily utilized for agricultural purposes, either productive, tilled land, or pasture land, with nearly 85% of collaborative area utilized for agricultural land use. This predominant land use reflects local policies to preserve agricultural land. This is accomplished primarily through implementation of density standards that limit consumption of agricultural land for non-agricultural uses, while still allowing for the ability to provide opportunities for some residential growth. Existing land use is illustrated in Figure 2 on the following page.

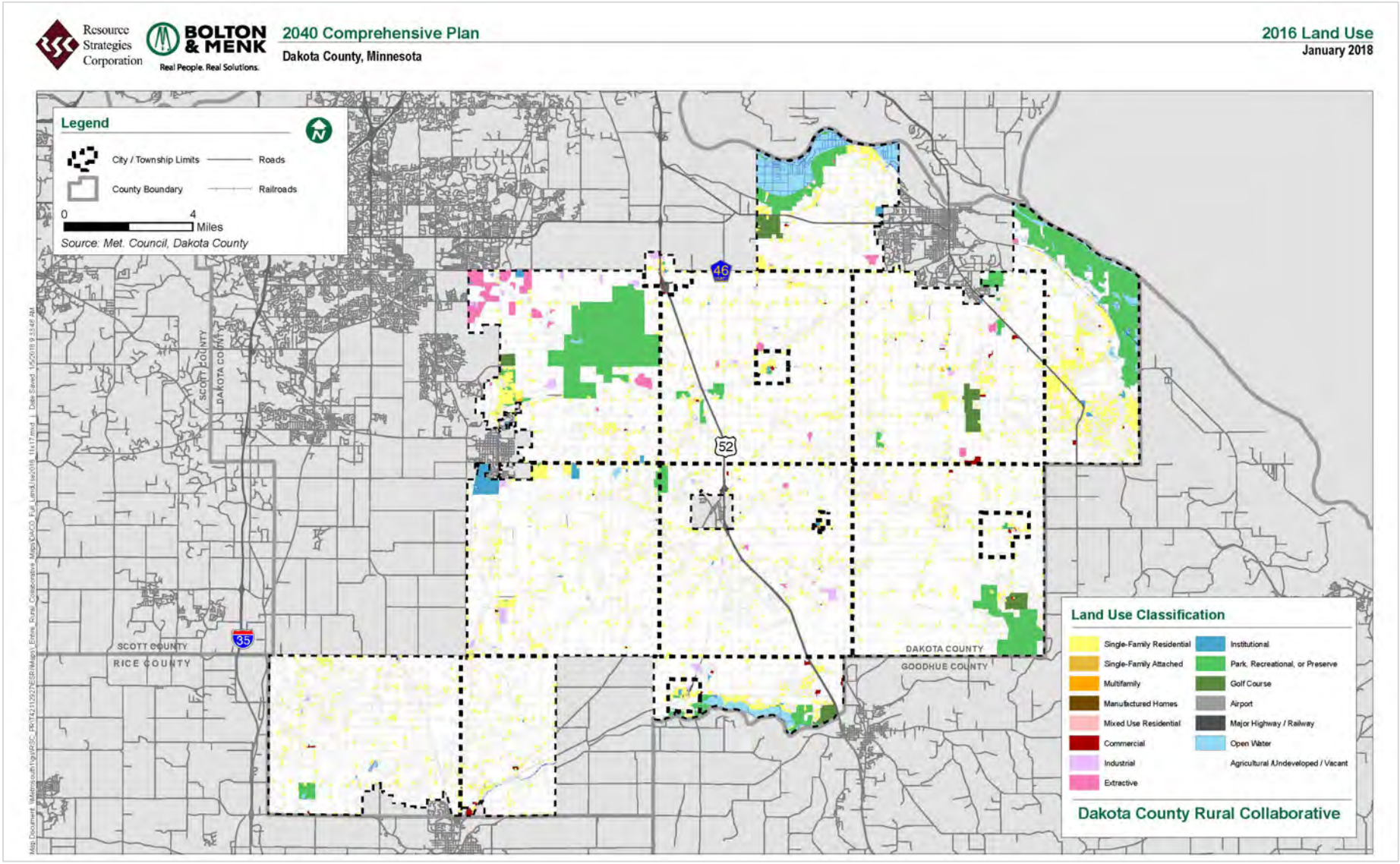
The collaborative townships are primarily Agricultural, with the exception of Empire, Ravenna, and portions of Randolph Townships. Approximately one-quarter of the land in Empire Township is consumed by the University of Minnesota, Wildlife Management Areas, Metropolitan Council wastewater treatment facility, and Dakota County land. The majority of household growth in Empire is included in the Metropolitan Urban Service Area (MUSA). The majority of Ravenna Township is developed as Rural Residential and a large portion of the township is located in the Mississippi River bottoms and included in Wildlife Management Areas.

The City of Vermillion has a private wastewater treatment facility and urban levels of residential and commercial development; yet, two-thirds of Vermillion remain agricultural. The Cities of Coates and Miesville have clusters of residential and commercial development. The remaining collaborative communities are largely agricultural that may include some small pockets of residential neighborhoods.

Agricultural properties account for about 95% of the Collaborative's total residential area. However, agriculture properties contain less than half of the Collaborative's total number of housing units (47%). The rest of the Collaborative's total residential area (5%) contains over half of the Collaborative's total number of housing units (53%). These housing units are located in cities, sewered areas, or scattered in clustered rural residential developments.

Table 9 – Existing Land Use Characteristics		
Land Use	**Acres**	**Percent of Total**
Agricultural / Undeveloped	163,231	84.7%
Airport	34	0.0%
Commercial	325	0.2%
Extractive	1,105	0.6%
Golf Course	1,263	0.7%
Industrial	757	0.4%
Institutional	677	0.4%
Major Highway / Railway	1,265	0.7%
Mixed Use Residential	24	0.0%
Multifamily	12	0.0%
Open Water	5,349	2.8%
Park, Recreational, or Preserve	10,279	5.3%
Single-Family Attached	34	0.0%
Single-Family Residential	8,405	4.4%
Total	**192,760**	**100.0%**

Figure 2: Existing Land Use



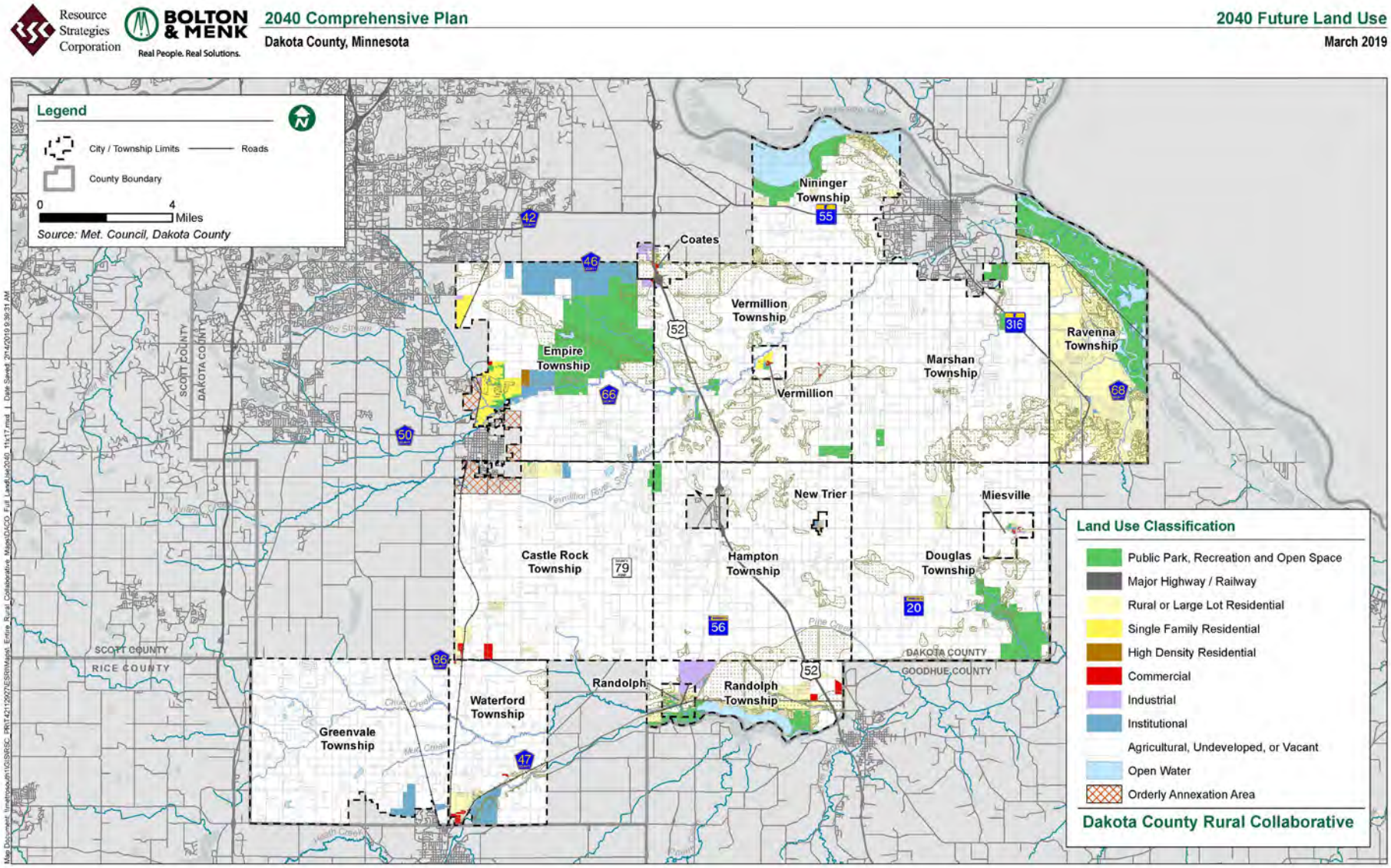
D. Future Land Use

The future land use categories in this section identify the specific rationale for growth management in townships and cities in the Rural Collaborative. The land use categories are the framework upon which the official controls, such as the zoning ordinances and subdivision regulations, are based and provide implementation for future growth. The land use categories identify the regulatory concepts for agricultural protection, residential growth, commercial and industrial expansion, and conservation. The 2040 Land Use Plan, shown in Figure 3, identifies the specific land use categories within townships and cities. The planned future land uses shown on this map reflect previous community planning efforts as well as desired updates identified as part of the 2018 Comprehensive Plan Update process.

Table 10 – Future Land Use Characteristics

Land Use	Acres	Percent of Total
Agricultural / Undeveloped	155,814	80.8%
Commercial	339	0.2%
High Density Residential	83	0.04%
Industrial	729	0.4%
Institutional	3,400	1.8%
Major Highway / Railway	1,289	0.7%
Open Water	5,349	2.8%
Orderly Annexation Area	1,372	0.7%
Park, Recreational, or Preserve	12,086	6%
Rural or Large Lot Residential	11,188	6%
Single-Family Residential	1,111	0.58%
Total	**192,760**	**100.00%**

Figure 3: Future Land Use



Future Land Use Categories

The following land use descriptions will be used for providing the basis for these land use categories. They prescribe the types of uses, density, and other performance standards for the purposes of maintaining compatible land uses within the collaborative. Table 11 at the end of this section provides the planned residential density ranges for future land uses allowing residential development in each of the Collaborative Communities.

- **Agriculture, Undeveloped or Vacant**

Agriculture areas represent a substantial, contiguous land base that has been predominantly used for agriculture. Collaborative area communities have consciously protected the economic and social value of farmland from the premature conversion of agricultural uses to non-farm uses for the past several decades. The vast majority of the Agricultural area is limited to one home per quarter-quarter section (1:40). The Agricultural area also includes modest rural residential development areas: many pre-existing and limited planned areas.

The Agriculture area also includes limited farm-related service businesses. Most community zoning ordinances allow agricultural support industries, such as elevators, mills, supply centers, and implement sales and service as conditional uses within the agricultural area. Churches, public and private schools, golf courses and other public recreation uses are also typical conditional uses within agricultural areas. Sand, gravel, and limestone extraction have been expanding in the collaborative area. Communities regulate extraction as conditional or interim uses in agricultural areas and regulate the intensity of such uses to minimize impacts on long term agricultural uses.

The close proximity of the collaborative area to the Twin Cities Metropolitan Area and Dakota County suburbs presents challenges for rural growth management. Collaborative member communities are committed to long term agricultural protection within the area to promote the economic and social values associated with farming. Some communities currently have cluster provisions in their zoning ordinances that allow the "transfer" of eligible building rights under single ownership and contiguous property. This typically means allowing the building site of the "back 40" to be added to the "front 40," which may already have a home on the quarter-quarter section. Other communities have expressed the desire to consider clustering. The Implementation section of this Plan includes the recommendation for preparing model clustering provisions for communities to add to their official controls.

- **Rural or Large Lot Residential**

The cities of Coates, New Trier, Randolph and Miesville have pre-existing smaller lot, higher density residential development without public sewer systems. Each of these communities are designated Diversified Rural communities by the Metropolitan Council. The cities of Randolph and New Trier operate municipal water systems. Future growth in the cities without municipal sewer is limited, averaging less than one-half dwelling unit per year together over the 20-year planning period. These communities also have individual comprehensive plans that identify municipal services and growth strategies in more detail.

Ravenna Township and the southerly half of Randolph Township are also designated Diversified Rural. These areas are predominantly rural in nature with a mix of large lot residential and agricultural uses. The rural developments range from one-acre densities in pre-existing developments along Lake Byllesby in Randolph to 10-acre densities planned in Ravenna. There are a handful of developed and planned rural residential areas scattered throughout the Agricultural area. Agricultural communities that allow rural residential development, such as Castle Rock, Nininger and Waterford, limit new residential densities to one home per 10 acres.

- **Single Family Residential**

Empire Township and the City of Vermillion have municipal sewer services available that facilitate higher density residential development. A portion of Empire Township is located within the MUSA, which allows a combination of detached and attached residences and will develop this area at a density of three dwelling units per acre. Vermillion owns and operates a municipal sewer and water system and has developed a compact rural center with higher residential densities. Both communities have individual comprehensive plans that identify municipal services and growth strategies in more detail.

- **High Density Residential**

High Density Residential areas are largely limited to existing parcels occupied with multiple family dwellings in the Cities of Randolph and Vermillion, due to the limited capacity or absence of wastewater systems. The planned density for these areas in Randolph and Vermillion are four to eight units/acre. Additional details about High Density Residential areas can be found in the individual plans for the Cities of Randolph and Vermillion. The only area in the Collaborative open to new High Density residential development is in Empire Township in specified areas within the 2040 MUSA. Empire Township's individual plan provides more detail on potential future High Density future land uses.

- **Commercial/Industrial**

Commercial and industrial areas in the collaborative area are typically limited to existing developed areas. There is very little planned commercial or industrial development, with the exception of modest expansion areas in the City of Coates and Empire Township. Coates has also distinguished the town center commercial area as the Central Business District. There are existing commercial/industrial areas in Castle Rock, Waterford, and Randolph City and Township with vacant land to support additional limited non-farm business opportunities. Other commercial and industrial development opportunities are limited to agri-business, service industries, and private golf courses, which are allowed in the Agriculture area rather than separate commercial or industrial land use categories. Employment numbers for the commercial and industrial land use districts are anticipated to be 8 to 12 employees per acre.

- **Institutional**

Institutional land is generally limited within the Collaborative area. Institutional land uses are generally defined as land uses developed which serve a community's social, educational, health, cultural and recreational needs. They include government owned and operated facilities or may be privately owned and operated. Typical institutional uses include government facilities, churches, and schools. Employment levels for these land uses are anticipated to be 6 to 10 employees per acre. Most communities allow these uses in other land use and zoning categories, such as agriculture or residential. Regional parks and wildlife management areas, while public, are categorized separately in the Park, Recreation or Preserve land use designation and discussed in the Regional Parks and Trails chapter of this comprehensive plan.

Municipal sewer and water services, located only in Empire Township and Vermillion City, are discussed in the individual comprehensive plans of those communities and are not examined in any further detail in the Rural Collaborative Plan.

- **Park, Recreational or Preserve**

Most park space in collaborative communities are regional parks. Primary land uses for public regional parks include trails, visitor centers, cabins and/or campgrounds, and passive open space. Other more local park uses include tot lots, neighborhood parks, community parks, ball fields, public gardens, greenways and trail corridors, and beaches.

- **Open Water**

This category includes permanently flooded open water, rivers, streams, wetlands, and periodically flooded areas.

- **Major Right of Way**

This category includes public vehicular, transit, railway, and/or pedestrian right-of-way.

Table 11 - Planned Residential Density Ranges (all are maximum density unless otherwise noted)

Category	Agricultural	Rural or Large Lot Residential	Low Density/ Single Family	Medium Density	High Density
Castle Rock Twp	4 units/40 acres	1 unit/acre	-	-	-
Coates	4 units/40 acres	-	1-2 units/acre	-	-
Douglas Twp	4 units/40 acres	1 unit/10 acres	-	-	-
Empire Twp	4 units/40 acres	-	3-6 units/acre	-	8-10 units/acre
Greenvale Twp	4 units/40 acres	-	-	-	-
Hampton Twp	4 units/40 acres	-	-	-	-
Marshan Twp	4 units/40 acres	-	-	-	-
Miesville	4 units/40 acres	1 unit/acre	-	-	-
New Trier	4 units/40 acres	-	2-3 units/acre	-	4-8 units/acre
Nininger Twp	4 units/40 acres	1 unit/10 acres	-	-	-
Randolph	4 units/40 acres	1- 3 units/acre	-	-	4-8 units/acre
Randolph Twp	4 units/40 acres	1 unit/5 acres	-	-	-
Ravenna Twp	4 units/40 acres	1 unit/10 acres	-	-	-
Vermillion	4 units/40 acres	1 unit/5 acres	3-6 units/acre	-	4-8 units/acre
Vermillion Twp	4 units/40 acres	1 unit/acre	-	-	-
Waterford Twp	4 units/40 acres	1 unit/10 acres	-	-	-

Density Calculations

Housing density is a measure of the number of housing units in an area. It is measured on a per acre basis. Density calculations are based on the existing number and location of units. The land use calculations are based on planned land use categories. Some future land use designations are changing from the existing land use.

Table 12 – Existing Net Residential Density

Future Land Use Categories	Existing Single Family Number of Units	Existing Multi-Family Number of Units	Planned Gross Acres	Undevelopable Acres	Net Residential Acres	Existing Net Density Units/Acre
Agricultural	2502	92	155,814	18,756	137,058	0.02
Commercial	10	47	339	176	163	0.35
High Density	0	12	83	0	83	0.28
Institutional	4	0	3,400	723	2,677	0.001
Park, Recreational, or Preserve	17	0	12,086	11,358	728	0.02
Rural or Large Lot Residential	1714	28	11,188	4,448	6,740	0.26
Single Family Residential	879	23	1,111	867	244	3.18
Total	5126	202	184,021	36,328	147,693	0.04

Cabin/Seasonal (not included in total) - 7

E. Staged Development or Redevelopment

The goal of the Staging Plan is to manage growth and guide the orderly and cost-effective provision of infrastructure at a rate that is consistent with forecasted growth, at the same time responding appropriately to market conditions.

Based on the future land use plan, residential and commercial land use requirements have been analyzed to help Dakota County Rural Collaborative communities plan for growth to meet Metropolitan Council projections for population, households, and employment. Residential calculations for the entire Rural Collaborative are detailed in Tables 13 and 14, and employment calculations are detailed in Table 15.

Table 13 – Planned Residential Density Ranges in Developable Areas

	Density Range (Units/Acre)		Units Needed	Minimum Acres	Maximum Acres
	Minimum	Maximum			
Agricultural	NA	0.025	200	7,992	NA
High Density	8	10	119	12	15
Rural or Large Lot Residential	0.1	0.2	416	2,081	1,606
Single Family Residential	3	6	930	155	310
Total			1,665	10,240	12,631

Future land use guides properties that have development potential. It is anticipated that most housing development will be split between the Agricultural, Rural Residential and Single-Family Residential land use districts. High density housing development will be limited to areas within the MUSA in Empire

Township. The Metropolitan Council projects an increase of 1,665 housing units during this planning period.

Table 14 below shows the amount of developable land in each respective land use district, the number of housing units that are anticipated to be developed in these districts, and the staging of development anticipated between the periods of 2016-2020, 2020-2030 and 2030-2040. With the exception of the agricultural land use, the minimum density range was used in Table 14 below to assure there is enough developable land in each planned land use district that will accommodate housing projections. There is an abundance of agricultural development rights in the Collaborative areas that can accommodate minimal housing projection increases.

Table 14 – Rural Collaborative Staged Future Land Use - Residential Units

Future Residential Land Uses	Average Density Range Housing Units/Acre		Undeveloped (2015)	Existing Developed (2015)	Staged Development						Undeveloped Acres (2040)
					2020		2030		2040		
	Existing	Max	Acres	Acres	Units	Acres	Units	Acres	Units	Acres	Acres
Agricultural	NA	0.025	136,936	155,771	24	959	130	5,195	46	1,838	128,944
High Density	8	10	80	2	0	0	119	15	0	0	65
Rural or Large Lot Residential	0.1	0.2	6,720	11,168	50	500	271	2,706	96	957	2,558
Single Family Residential	3	6	567	1,435	126	42	562	187	241	80	258
TOTALS			144,303	168,376	200	1,500	1,082	8,103	383	2,876	131,825

Employment

The Metropolitan Council has made projections for employment levels in all rural collaborative communities. Employment is anticipated to increase by 755 jobs during this planning period. Given published levels of employment for land use districts and anticipated distribution of employment in each respective land use district, the rural collaborative is able to identify the inventory of developable land and make certain that land is guided in a manner that will meet the needs of the rural collaborative communities going forward. Employment projections will be met between the Commercial, Institutional and Industrial land use districts.

Table 15 – Rural Collaborative Staged Future Land Use – Jobs and Acres

Commercial or Industrial Land Uses	Estimated Employment/Acre		Developable Acres (2015)	2020		2030		2040		Developable Acres (2040)
	Min	Max	Acres	Jobs	Acres	Jobs	Acres	Jobs	Acres	
Commercial	8	12	163.18	38	4	113	11	38	4	144
Institutional	6	10	2,671.20	8	1	23	3	8	1	2,666
Industrial	8	12	548.58	106	11	317	32	106	11	496

Source: Metropolitan Council Local Planning Handbook, Land Use Density Calculator

Emerging Suburban Edge communities and communities with wastewater systems must include a staging plan to show the sequence of growth and anticipated timing. Staging Plans to guide the contiguous pattern and location of growth based on current development patterns and the availability of infrastructure are included in the Empire Township and the City of Vermillion Comprehensive Plans. The earliest staging years are adjacent to existing development and then extending from this point in a logical sequence based on what the city believes is the most logical and efficient pattern of growth.

To help Empire Township and the City of Vermillion meet Metropolitan Council projections for population, households, and employment, Tables 16 and 17 offer a summary of staging for these two sewered communities. Full staging details are provided in each community's individual comprehensive plan.

Table 16 – Sewered Communities Staged Future Land Use – Residential Units

Community	Metropolitan Council Community Designation	Residential Land Uses	Average Density Range Housing Units/Acre		Existing Developable (2015)	Staged Development						Undeveloped Acres (Post 2040)
						2020		2030		2040		
			Min	Max	Acres	Units	Acres	Units	Acres	Units	Acres	
City of Vermillion	Agricultural	Rural or Large Lot Residential	0.1	0.2	2.12	0	0	0	0	1	2	0
	Rural Center	Single Family Residential	3	6	9.6	1	.3	3	1	3	1	7.3
		Subtotal			11.72	1	.3	3	1	4	3	7.3
			Min	Max	Acres	2020		2030		2040		
						Units	Acres	Units	Acres	Units	Acres	
Empire Township	Agricultural	Agricultural	NA	0.025	10,272.5	3	120	4	160	3	120	9,872.5
	Emerging Suburban Edge	Mixed Residential	3	6	447	171	57	227	76	347	116	198
		High Density	8	10	80	0	0	119	15	0	0	65
		Subtotal			10,799.5	174	177	350	251	350	236	10,135.5

Table 17 – Sewered Communities Staged Future Land Use – Employment										
Community	**Future Land Use**	**Estimated Employment / Acre**		**Staged Development**						**Acres Needed for Development**
City of Vermillion		**Min**	**Max**	**2020**		**2030**		**2040**		
				Jobs	**Acres**	**Jobs**	**Acres**	**Jobs**	**Acres**	
	Commercial	8	12	0	0	12	1.5	9	1.1	2.6
	Institutional	6	10	0	0	10	1.7	11	1.8	3.5
Empire Township		**Min**	**Max**	**2020**		**2030**		**2040**		
				Jobs	**Acres**	**Jobs**	**Acres**	**Jobs**	**Acres**	
	Commercial	8	12	2	0.2	0	0.2	2	0.2	0.6
	Institutional	6	10	20	2.5	24	2.5	22	2.8	7.8
	Industrial	8	12	20	2.0	54	2.0	23	2.3	6.3

The staging plan cannot force development to occur, but can be used as a tool to guide development appropriately. It should be clear that while there are legitimate reasons why communities should stage and time growth in an orderly and contiguous manner, there is nothing about adopting a staged growth plan that forces a private property owner to sell their land before they wish to do so.

The staging is limited to the areas within Empire Township that are located within the MUSA. City services will need to be extended to accommodate the density planned in this area. Empire Township has a separate individual comprehensive plan that discusses accommodating the staged development plan.

F. Natural Resources

"Natural resources" include undeveloped habitats, surface water and ground water resources, undeveloped open space, significant scenic and scientific areas, and, in some cases, agricultural land. "Natural areas" are areas of natural resources that are largely unaltered by modern human activity, where native vegetation is distributed in naturally occurring patterns. Rural communities in southern Dakota County have a strong history of commitment to protecting agricultural land and other natural resources in order to preserve the rural character of the area. This commitment is reflected in existing local comprehensive plans that were approved almost twenty years ago. As a result, a great majority of the land in southern Dakota County is still protected for agricultural use, where development cannot exceed one residence per 40 acres. This longstanding policy has provided an opportunity to further protect natural resources and the rural character of the area.

Providing for the protection of natural areas and corridors is directly related to the preservation of the rural character and economy of rural Dakota County. For example, the tools available to protect agricultural land are similar in many respects to those available to protect other natural resource areas. Currently, each community uses official controls to limit density of development in order to protect agricultural land. Other tools are also being investigated in various forums, including the possibility of using purchase of development rights (PDR), transfer of development rights (TDR) and conservation easements. These tools are also useful for protection of areas that are sensitive to development, such as wetlands, wooded areas, prairies and unique wildlife areas. The Dakota County Land Conservation Program is a voluntary program in which the county and other partners work with willing landowners to achieve mutual land protection and natural resources stewardship goals through the acquisition of conservation easements or fee title. The major goal of the program is to protect large, contiguous agricultural areas, while protecting water quality and wildlife habitat benefits and to protect, connect, and

manage priority natural areas. Land in this program are not shown on any Collaborative maps but are included in the County plan.

Natural resources are beneficial to the social, environmental, and economic vitality of a community. To ensure their quality and benefits, it is essential to plan and manage natural resources. Local units of government can protect natural resources with land use controls such as zoning, platting, and growth management. Although only a small percentage of the land in cities and townships in the Collaborative remains in its natural vegetated state, these areas support much of the remaining native vegetation and high value wildlife habitat. There are eight Wildlife Management Areas in Dakota County and five within the collaborative area. The WMA's in the collaborative area are: Hampton Woods WMA in Castle Rock Township, Mud Creek WMA in Greenvale Township, Gores Pool WMA in Ravenna Township, and Vermillion Highlands Research Recreation and WMA and Vermillion River WMA in Empire Township.

G. Special Resource Protection

Portions of the Rural Collaborative area are identified with commercial grade aggregate deposits, including sand, gravel, and limestone. There are several existing commercial mining operations, as well as borrow pits throughout the collaborative area. Local communities regulate mining operations individually as part of zoning regulations or separate mining ordinances. With exception of existing development areas and planned growth areas, the majority of the aggregate reserves in the Collaborative area is protected for future use by the limited development density allowed in the Agriculture area and, to a certain extent, within the Rural Residential and Diversified Rural areas. As the regional supply of commercial aggregate decreases and the value of aggregate increases, additional interest in and pressure for mining will occur throughout the Collaborative area.

There are four sites within the rural collaborative that are identified in the National Historic Register: the current Nininger Town Hall (Good Templars Hall, 1858), The Church of St. Mary's in New Trier, a bridge in Waterford Township and the current Waterford Town Hall (District No. 72 School, 1882). Collaborative communities support historic preservation as a part of retaining the rural atmosphere and small town values throughout the area. The current low density and modest forecasted growth in the rural area assist in the preservation of all cultural resources. It is the policy of the collaborative communities to work with the Dakota County Historical Society, the State Historic Preservation Office, the Preservation Alliance of Minnesota, and the National Park Service in efforts to preserve cultural heritage.

Church of St. Mary's, New Trier

Waterford Bridge, Waterford Twp.

Waterford Town Hall, Waterford Twp.

Good Templars Hall, Nininger Twp.

Two communities in the Collaborative are part of the Mississippi River Critical Area Corridor. Nininger and Ravenna Townships border and include portions of the Mississippi River in their boundaries. In 2016, the Minnesota DNR developed and passed into law rules relating to the Critical Area Corridor. These rules are intended "to preserve and enhance the natural, aesthetic, economic, recreational, cultural, and historical values of the Mississippi River" and surrounding sensitive areas. Nininger and Ravenna Townships will review their land use plans and regulations to ensure compliance with the Critical Area Corridor guidelines and requirements. The MRCCA Plan is located in Appendix F.

H. Solar

The Metropolitan Land Planning Act (Minnesota Statues 473.859, Subd. 2) requires local comprehensive plans to include for the protection and development of access to direct sunlight for solar energy systems. The Collaborative communities acknowledge the importance of protecting solar access from potential interference by adjacent structures. Due to the rural, low-density characteristics of the majority of the collaborative area, it is unlikely that solar energy systems would be precluded by structure interference. Zoning provisions within individual ordinances also regulate density, height, and structure setback in higher density residential areas and in commercial and industrial areas to provide adequate protection for solar energy access. It is the policy of the collaborative communities to protect solar access through adequate zoning standards.

Solar potentials and the solar suitability figure is located in Appendix B. The solar potential calculations assume a 10% conversion efficiency and current (2016/17) solar technologies. The solar potential table is for illustrative purposes only and do not represent any planned solar development.

III. HOUSING

A. Existing Housing

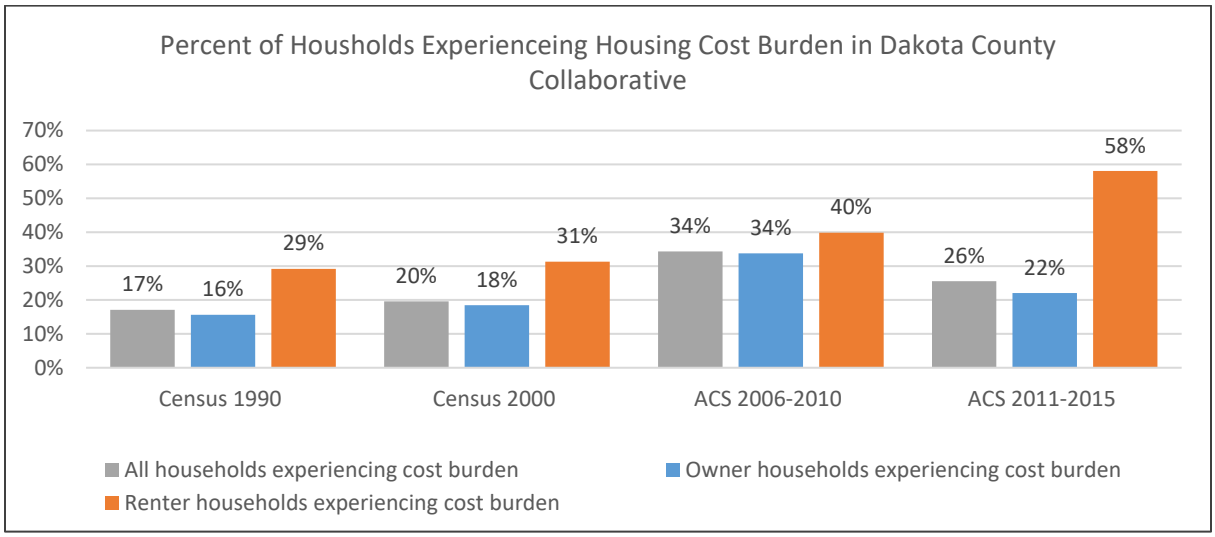
In 2015, the Dakota County Rural Collaborative contained approximately 5,462 housing units according to the ACS Community Survey, 96% of which were single family and 4% of which were multi-family. Most homes are owner occupied (84%). About 40% of homes in collaborative communities are affordable to households at or below 80% area median income (AMI). However, about 26% of all households in the collaborative communities experience cost burden. There are no publicly subsidized housing units the 16 Rural Collaborative Communities.

Table 18 – Housing Conditions, 2015

	Number of Units	Percent of Total
Total of Housing Units	5,462	100%
Housing Units		
– Owner Occupied	4,608	84%
– Rental	602	11%
- Vacant	212	4%
Single Family Homes	5,283	96%
Multi-family Homes	179	4%
Housing Units affordable to households with incomes at or below 30% Area Median Income (AMI)	102	2%
Housing Units affordable to households with incomes between 31 and 50% Area Median Income (AMI)	438	8%
Housing Units affordable to households with incomes between 51 and 80% Area Median Income (AMI)	1,642	30%
Households experiencing housing cost burden with incomes below 30% AMI	337	6%
Households experiencing housing cost burden with incomes between 31% and 50% AMI	220	4%
Households experiencing housing cost burden with incomes between 51% and 80% AMI	357	7%

Source: Metropolitan Council Estimates

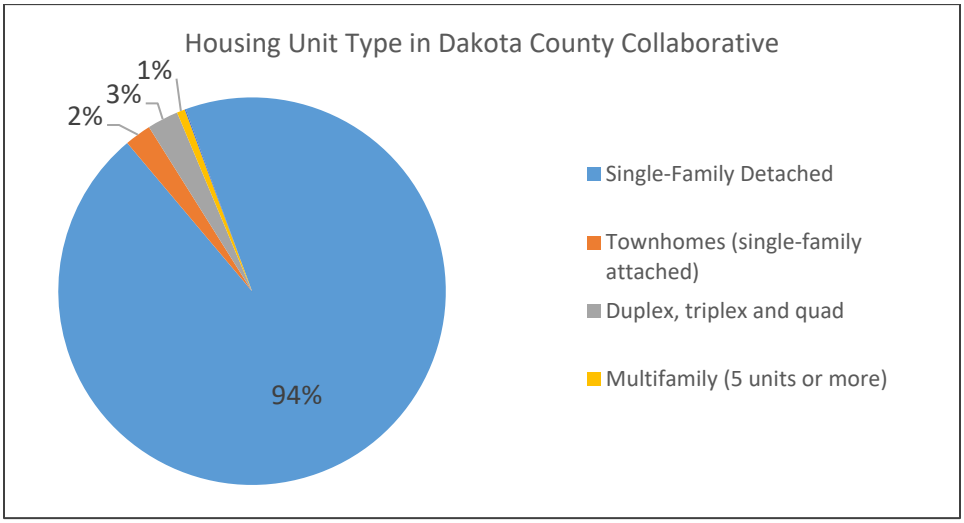
The graphic on the following page details housing cost burden in Rural Collaborative Communities since 1990. Housing cost-burden occurs when households spend 30% or more of their income on housing costs. The percentage of cost-burdened households in the Collaborative Area has been gradually increasing. While cost burden for owner-occupied units decreased between 2010 and 2015, cost burden for renter households increased nearly 20%. Furthermore, the percentage of cost burdened owner-occupied households is still higher than in 2000, before the collapse of the housing market and subsequent recession. The presence of cost-burdened households suggests housing costs are, and could continue to be, a concern within the Collaborative Area.



Source: Metropolitan Council Tabulation of US Census and American Community Survey Data

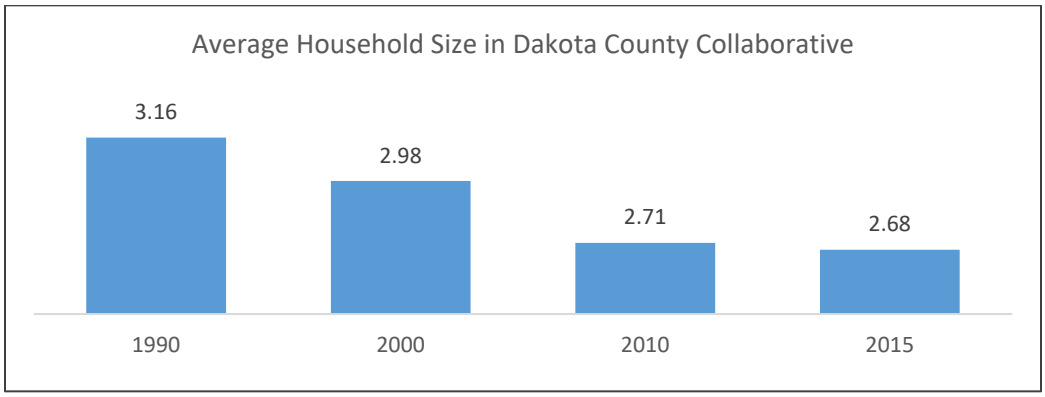
1. Housing Types

As noted above and detailed in the figure below, most housing units in collaborative communities are single family, detached units. About 3% of housing units are duplexes, triplexes, or quads.



Source: Metropolitan Council Tabulation of American Community Survey Data

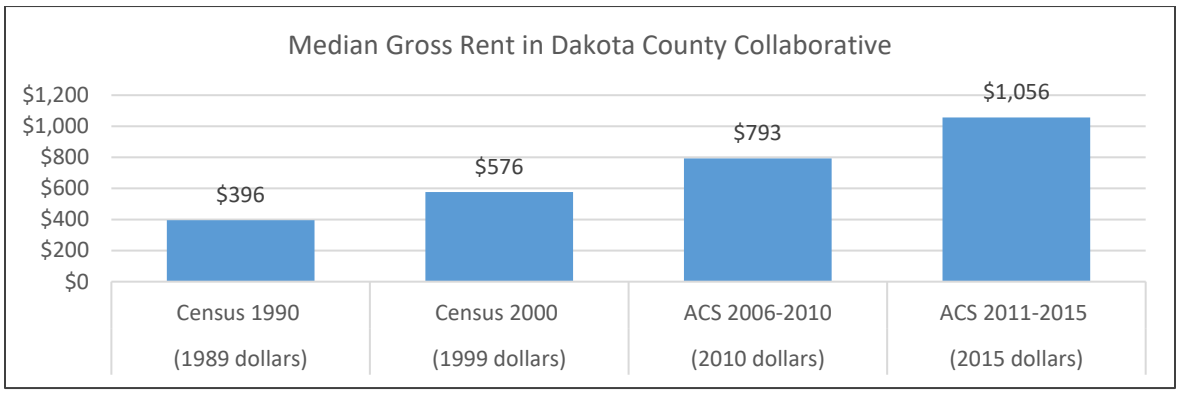
The average household size in Dakota County Rural Collaborative is 2.68 persons per household, which has decreased from 3.16 in 1990. This trend of decreasing average household size is being noted across the Twin Cities Metropolitan Area. If household sizes continue to decrease, more housing units will be needed to accommodate existing populations and the slight projected population growth.



Source: Metropolitan Council Tabulation of US Census and American Community Survey Data

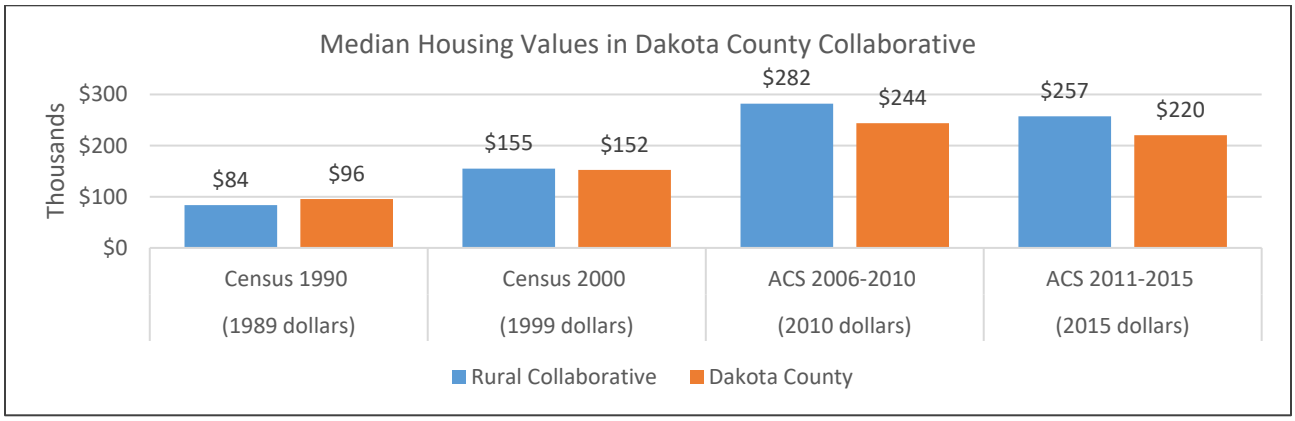
2. Housing Values and Costs

Median rent in Collaborative communities have continued to rise with the largest increase (22%) occurring between 2010 and 2015. This may be due to the conversion of single family homes from owner to renter occupancy. This increase in rent is likely contributing to housing cost burden among renter households.



Source: Metropolitan Council Tabulation of US Census and American Community Survey Data

Since 2000, median housing values in Collaborative communities have been higher than Dakota County's median housing value. While higher home values can benefit the community, it can also price young families out of homeownership opportunities.



Source: Metropolitan Council Tabulation of US Census and American Community Survey Data

B. Projected Housing Needs

Projected household growth from 2010 to 2040 is depicted in Table 19. Collaborative communities are expected to add 1,830 new households in this 30-year period, which is a 36% increase from the number of households in 2010. Over half of all household growth in the collaborative area is anticipated to take place in Empire Township (75% of forecasted housing units). The projected annual rate of increase in households from 2010-2040 in the collaborative area is 0.9%, which is down slightly from the previous 30-year period.

Dakota County as a whole is expected to add 52,690 new households over the next three decades, which is a 35% increase from the number of households in 2010. The county-wide annual rate of increase for the 30-year period is 1.2%, which is down slightly from the previous three decades. The projected collaborative community percentage of total households in Dakota County in 2040 is anticipated to be 3.4%, which will maintain the Collaborative's current proportion of the County's total households.

Table 19 – Projected Household Trends by Community

Community	2010	2020	2030	2040
Castle Rock Twp	504	520	520	520
Coates	66	70	70	70
Douglas Twp	259	280	300	320
Empire Twp	792	1,100	1,450	1,800
Greenvale Twp	275	300	340	350
Hampton Twp	329	360	400	450
Marshan Twp	403	440	480	520
Miesville	52	60	60	60
New Trier	41	50	50	50
Nininger Twp	372	380	400	400
Randolph	168	180	180	180
Randolph Twp	246	270	280	280
Ravenna Twp	780	840	920	1,000
Vermillion	156	160	160	170
Vermillion Twp	424	450	480	510
Waterford Twp	193	200	210	210
Subtotal	5,060	5,660	6,300	6,890
Dakota County	152,060	170,940	187,980	204,750
Percent of County	3.3%	3.3%	3.4%	3.4%

Source: Metropolitan Council

With a large age bracket in the Rural Collaborative being 50 to 69 years old (29% of the total population), there may be a desire in some communities to promote aging in place or to encourage senior housing options. Senior housing alternatives are typically limited to larger cities, but opportunities may occur through partnerships with Dakota County. These may include grant or funding opportunities, including amendments to zoning ordinances to permit flexible housing options or renovations of existing units to become more accessible. Additionally, the presence of cost-burdened households suggests housing costs are, and could continue to be, a concern within the Collaborative Area. Strategies to address housing costs and affordability are presented in section D.

C. Affordable Housing Allocation

Most Metropolitan Urban Service Area (MUSA) communities have an Affordable Housing Allocation reflecting the region's forecasted population that will need affordable housing. Most rural collaborative communities are not included in the MUSA and do not have an affordable housing allocation. Only Empire Township has a portion located in the MUSA. Empire Township's affordable housing allocation is 119 units. Of this, 72 will be affordable to individuals at or below 30% AMI, 44 will be affordable to individuals between 31 and 50% AMI, and 3 will be affordable to individuals between 51 and 80% AMI. Empire Township has established a Planned Unit Development (PUD) process to allow homes to be developed at higher densities (eight units per acre) that will help create opportunities for affordable housing that meet the Metropolitan Council's allocation. Empire Township has additional information on the affordable housing allocation within their individual comprehensive plan.

D. Housing Implementation Plan

Collaborative communities will cooperate with the Dakota County Community Development Agency and the Minnesota Housing Finance Agency for home improvement, weatherization grant and loan programs, and homeownership resources. Affordable housing opportunities in the Collaborative area are generally limited to the rehabilitation of and resale of existing homes due to limited sewer and low-density restrictions.

The potential implementation tools listed in Table 20 will be considered by Dakota County Rural Collaborative Communities on a case-by-case basis, as development occurs. Due to the current size of the individual communities, their lack of staff and financial resources, and the small amount of forecasted growth in each community, most of the Collaborative Communities are unlikely to utilize many of the available implementation tools. Townships and small cities must generally rely on the Dakota County Community Development Authority to implement most of the available housing tools, because they either do not have the statutory authority to implement these tools, or they are cost prohibitive. Programs specific to Empire Township, the only Collaborative Community with growth potential, are listed in the Empire Township individual plan.

Table 20– Housing Implementation

Housing Goal/Need	Available Tool	Opportunity and Sequence of Use
Multi-Generational Community Living (all income levels)	Start-Up Loan Program	Minnesota Housing offers first-time homebuyers assistance with financing a home purchase and down payment assistance through a dedicated loan program
	Home Improvement Loans	Minnesota Housing and Dakota County CDA offers assistance to homeowners in financing home maintenance projects to accommodating a physical disability
	ADU Ordinance	Individual communities will consider developing an ordinance permitting the construction of accessory dwelling units or guest homes in specific zoning districts
	Program or Framework	Individual communities will consider working with groups and stakeholders to develop guiding principles, frameworks, and action plans to consider and incorporate the needs of older residents into development decisions on a case-by case basis.
	TIF	It is unlikely communities will consider using TIF for this purpose.

Table 20– Housing Implementation		
Housing Goal/Need	**Available Tool**	**Opportunity and Sequence of Use**
	Tax Abatement	It is unlikely communities will consider using Tax Abatement for this purpose.
	Super RFP	It is unlikely individual communities will consider supporting an application to RFP programs for this purpose.
	CDA	The communities will work with the Dakota County CDA to provide information on potential resources.
	Local Funding Resources: LCDA	Most communities are not eligible for Livable Communities Account programs, so are unlikely to use this resource.
	Local Funding Resources: CDBG	The individual communities are unlikely to use allocated CDBG funds for this housing type.
	Housing Bonds	The individual communities are unlikely to use allocated CDBG funds for this housing type.
	Preservation Strategies: 4d	The individual communities will provide referrals to the CDA and other agencies who offer resources to owners of existing rental properties regarding 4d program tax breaks.
	Site Assembly	It is unlikely individual communities will consider using this tool for this purpose.
	Planned Unit Developments (PUDs)	Individual communities would consider planned unit developments to meet overall community land use, housing, density goals that may otherwise not be permitted through regular zoning requirements.
	Expedited Pre-application Process	The individual communities would consider creating a pre-application process to identify ways to minimize unnecessary delay for projects prior to formal application process.
	Referrals	The communities will work with the Dakota County CDA to provide information on potential resources.
Maintaining Existing Housing Units	Home Improvement Loans	The Dakota County CDA and Minnesota Housing can assist homeowners in financing home maintenance projects like roof repair, plumbing and electrical work, accommodating a physical disability, or select energy efficiency improvement projects. Individual communities would refer homeowners to those agencies.
	Foreclosure Prevention	The Dakota County CDA and Minnesota Housing can connect homeowners with resources, education, and counseling to prevent foreclosures. Individual communities would refer homeowners to those agencies.
	CDBG	It is unlikely individual communities would consider using a portion of their total CDBG allocation to develop and maintain a home/property rehab program for low and moderate income households.
	Rental License and Inspection Program	Due to limited resources, it is unlikely individual communities will develop rental license and inspection programs.

Table 20– Housing Implementation		
Housing Goal/Need	**Available Tool**	**Opportunity and Sequence of Use**
Housing Affordability (all income levels)	Planned Unit Developments (PUDs)	Individual communities would consider planned unit developments to meet overall community land use, housing, density goals that may otherwise not be permitted through regular zoning requirements.
	Community Land Trust	It is unlikely individual communities would consider using this tool for this purpose.
	Housing Bonds	The individual communities are unlikely to use allocated CDBG funds for this housing type.
	Housing Opportunities Enhancement Program (HOPE)	Dakota County has been providing gap financing to assist in the development and preservation of affordable housing throughout the county. Funding is provided in the form of a deferred loan, and requires a 2:1 match of other public or private funding sources. HOPE funds must be used to provide rental housing opportunities for households at or below 50% of area median income or homeownerships opportunities for households at or below 80% of area median income. Individual communities will refer potential applicants to the Dakota County CDA.
	TIF	It is unlikely communities will consider using TIF for this purpose.
	Tax Abatement	It is unlikely communities will consider using Tax Abatement for this purpose.
	Super RFP	It is unlikely individual communities will consider supporting an application to RFP programs for this purpose.
	CDA	The communities will work with the Dakota County CDA to provide information on potential resources.
	Local Funding Resources: LCDA	Most communities are not eligible for Livable Communities Account programs, so are unlikely to use this resource.
	Local Funding Resources: CDBG	The individual communities are unlikely to use allocated CDBG funds for this housing type.
	Preservation Strategies: 4d	The individual communities will provide referrals to the CDA and other agencies who offer resources to owners of existing rental properties regarding 4d program tax breaks.
	Site Assembly	It is unlikely individual communities will consider using this tool for this purpose.
	Expedited Pre-application Process	The individual communities would consider creating a pre-application process to identify ways to minimize unnecessary delay for projects prior to formal application process.
	Referrals	The communities will work with the Dakota County CDA to provide information on potential resources.
General Housing Needs	Fair Housing Policy	Due to limited resources, it is unlikely individual communities will adopt a Fair Housing Policy.
	Participation in Housing-Related Organizations	Due to limited resources, it is unlikely individual communities will participate.

Table 20– Housing Implementation		
Housing Goal/Need	**Available Tool**	**Opportunity and Sequence of Use**
	Referrals	The communities will work with the Dakota County CDA to provide information on potential resources.
	Rental License and Inspection Program	Due to limited resources, it is unlikely individual communities will develop rental license and inspection programs.

IV. PARKS AND TRAILS

A. Regional Parks and Trails

1. Parks

There are four regional parks in the Dakota County Rural Collaborative area:

Lake Byllesby Regional Park is a 462-acre park located on the east end and west end of Lake Byllesby in Randolph Township. The developed areas include a swimming beach, boat launch, campground, picnic area, playground, hiking and cross-country ski trails. The hydroelectric dam on the Cannon River that created the lake in 1910 is still operating. Future expansion includes an additional acquisition of 148 acres.

Miesville Ravine Park Reserve is a 1405-acre natural area, located in Douglas, featuring hiking trails and trout fishing in Brook Creek, a tributary to the Cannon River. By definition a park "reserve" is a regional recreation area in which no more than 20% of the land area is developed. Miesville Ravine includes a 200-feet deep ravine along Brook Creek through oak forests. The park reserve also includes a picnic area and canoe launch. The Cannon River forms the southerly boundary of the regional park. An additional 262 acres have been identified for future acquisition.

Spring Lake Regional Park Reserve is located in Nininger along the Mississippi River. The park reserve is 928 acres in area and features hiking, cross country ski, and nature trails, a boat launch, picnic area, playground, and campground. Future acquisitions for the park include an additional 231 acres. Spring Lake is a "pool" in the Mississippi River created by Lock and Dam No. 2 in Hastings. Part of the Mississippi River Regional Trail is designated within the park reserve.

Whitetail Woods Regional Park, a 460-acre regional park in Empire Township, is the newest park in Dakota County. Park acquisition was completed in 2008, and the park opened to the public in 2014. The regional park is adjacent to the 2800-acre UMore Park/Vermillion Highlands Modified Wildlife Management Area and the 800- acre Miles Wildlife and Aquatic Management Area. Whitetail Woods Park features several amenities, such as camping cabins, hiking and snowshoeing trails, a nature play space, geocaching, and bonfire pits. Future plans for the park include a dog park and a disc golf course.

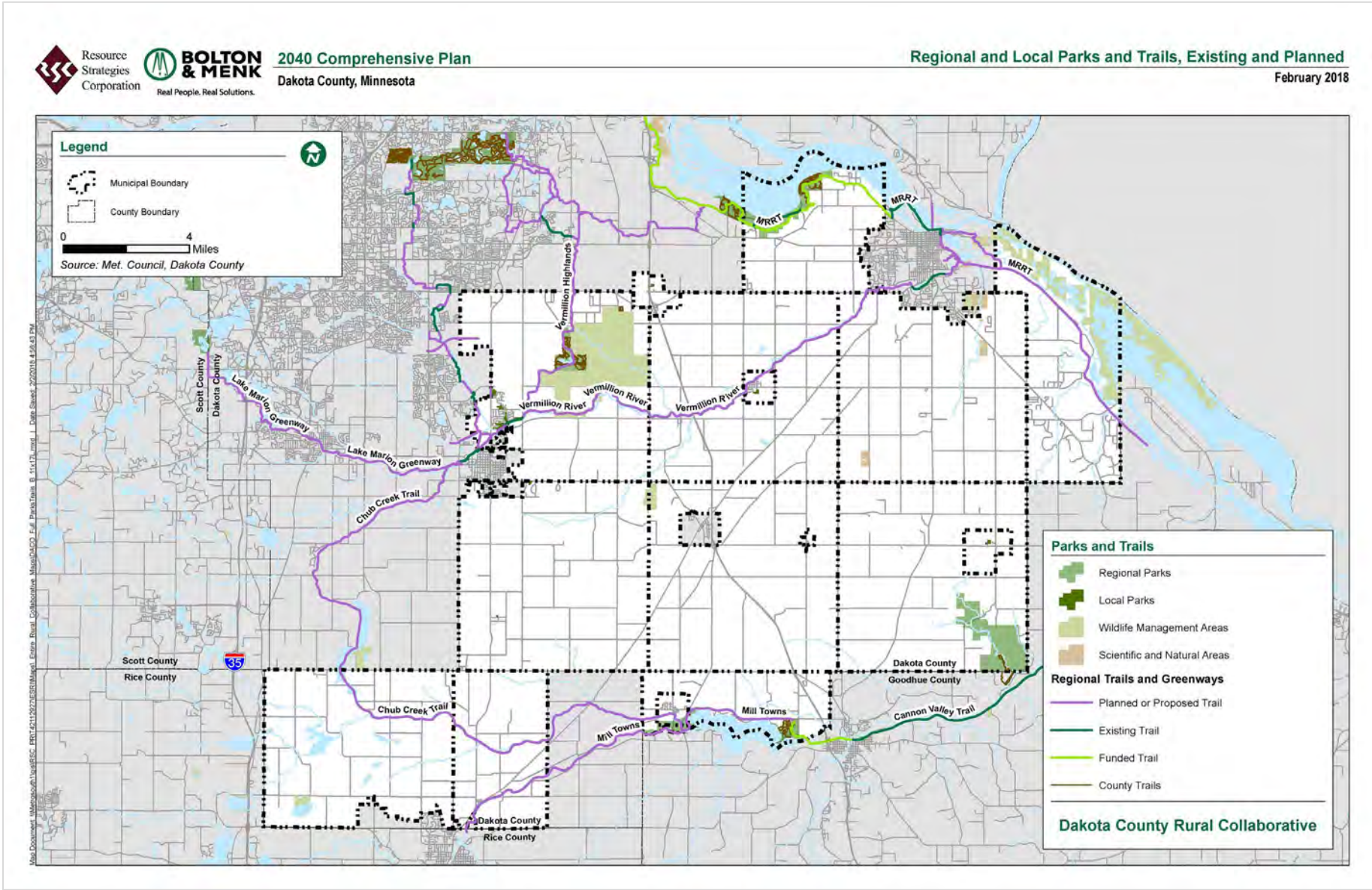
Dakota County also owns and operates the **Dakota Woods Dog Park**, a 16-acre off-leash dog run area in Empire (120-acre County-owned site). The park also features walking trails and a picnic area for human patrons.

Chimney Rock SNA, a 76-acre Scientific and Natural area located in Marshan Township, managed by the Minnesota DNR. This site has no maintained trails or recreation facilities and is surrounded by private homes. The site contains a significant geologic feature consisting of three St. Peter Sandstone chimney formations capped by Platteville Formation rock. The harder Platteville capstone has protected the soft sandstone from eroding, preserving the unusual and attractive chimney formations.

Hastings Sand Coulee SNA, a 263.4 acre area is located in Marshan Township and is managed by the Minnesota DNR. A prescribed burn at the adjacent to the Hastings Wildlife Management Area uncovered a remarkable array of native prairie plants within this critical habitat. A tributary stream to the Vermillion River meanders through all three parcels of this SNA, which serve to protect high quality native plant communities including dry sand-gravel prairie, mesic prairie, oak woodland and oak forest in an area otherwise dominated by agricultural land use and expanding housing developments.

There are no plans for additional regional park facilities in the Rural Collaborative at this time.

Figure 4: Regional and Local Parks and Trails



2. Trails

Each of the four regional parks noted above have walking or hiking trails. These trails are currently not connected to larger, regional networks. Several regional trails have been identified within the collaborative area, but none have been completed. Select trail segments, which will become part of future regional trails or greenway networks, have been constructed in Empire and Nininger Townships. These segments, shown in Figure 4, will become part of the Vermillion River Greenway and the Mississippi River Greenway/Regional Trail, respectively.

Future **regional trail corridors** that have been identified by Dakota County as part of a "Greenways" network are primarily located along the major rivers in the rural area, including four regional trail corridors, noted below:

- Vermillion Highlands Greenway Regional Trail (Empire Township)
    - This is a planned regional trail that has not yet been constructed. It will connect Farmington to Rosemount along the Vermillion River Corridor and route through portions of the Vermillion WMAs and the newly opened Whitetail Woods Regional Park. This trail will be 13.5 miles long.
- North Creek Greenway (Empire Township)
    - This is a planned regional trail that has not yet been constructed. It will connect Farmington and Empire Township to Apple Valley and Lebanon Hills Regional Park along the North Creek Corridor and Johnny Cake Ridge Road. This trail will be 14 miles long.
- Vermillion River Greenway Regional Trail (Empire, Vermillion, and Marshan Townships, City of Vermillion)
    - This trail will connect Whitetail Woods Regional Park to Hastings and the Mississippi River Corridor. It is estimated this trail will be about 17 miles long.
- Mississippi River Greenway or Mississippi River Regional Trail (MRRT) (Ravenna Township)
    - This trail will along the Mississippi River between Dakota and Washington County. The trail head could be located in the township, depending on trail alignment and planning. It is estimated this trail will be about 13 miles long.

The following state trail has a planned alignment that runs through the most southern portion of the collaborative area. This trail has not been funded and there is no anticipated opening at this time.

- Mill Towns State Trail – Cannon River (Waterford, Randolph Townships)
    - This trail will connect three existing trail segments, creating a continuous connection from Dundas to Cannon Falls. This trail would go through a portion of Lake Byllesby Regional Park as part of the network.

The following potential regional trail is being considered and searched with no set plans or anticipated opening.

- Chub Creek Greenway Regional Trail (Greenvale, Waterford, Randolph Townships, City of Randolph)
    - This trail is in a search corridor phase of planning. The current search corridor would connect Farmington to the City of Randolph, traveling along the Chub Creek Corridor. This trail has the potential to connect westward to Scott County regional trails as part of long term plans. It is estimated that this trail will be about 20 miles long.

B. Local Parks and Trails

The primary local parks and trails in the collaborative area are located in the rural cities, rural residential and diversified rural areas, and the urban service area in Empire Township. Open space and recreation

opportunities are provided in the collaborative communities in university owned lands, wildlife management areas, and other public land.

Table 21 – Park Amenities by Location

Community	Park	Park Size (Acres)	Walking/Hiking Trails	Picnic Area/Shelter	Playground	Ice Skating	Disc Golf (# of holes)	Volleyball	Restroom	Tennis Court	Ballfield	Basketball	Parking	No Existing Facilities
Castle Rock Township	Castle Rock Park	2												X
	Castle Rock Country Side Park	6		X					X		1		X	
Coates	Coates City Park	6		X	X					1	1	1		
Empire Township	Empire River Preserve Park	24.7	X	X	X		9	2					X	
	Sachs Park	2.3			X	X			X		1	1	X	
	Town Hall Park	1.58	X	X	X					2		1	X	
	Stelzel Fields	18.2			X				X		4		X	
Miesville	Jack Ruhr Field	5		X					X		1		X	
	Miesville Lions Park	7.77		X	X						2		X	
New Trier	Church of St. Mary's Ballfield (publicly maintained)	2.3		X	X						1	1	X	
Vermillion	Vermillion Park	8.9			X	X					3		X	
Vermillion Township	Empire Town Park	1												X

There are no local parks within the communities of: Douglas Township; Greenvale Township; Hampton Township; Marshan Township; New Trier; Nininger; Randolph; Randolph Township; Ravenna Township; and Waterford Township. There are no local trails in any of the collaborative communities.

Castle Rock Park *(Castle Rock Township):* Located East of Chippendale Ave W (County Highway 3), on the north side of 263rd St. W, this 2.2 acre park has no current facilities and consists of an open grassy field with an evergreen wind-screen on the north boundary.

Castle Rock Country Side Park *(Castle Rock Township):* This six acre park includes a gravel parking lot, picnic shelter, ball field, portable toilets, and an open grass field. The park is located on 220th St. W (County Highway 50), 1.25 miles from the intersection of Chippendale Ave W (County Highway 3).

Coates City Park *(Coates):* This six acre park is located just east of US Hwy 52 (Coates Blvd.), off of 158th St. E. The park's facilities include: a ball field, a tennis court, a half-basketball court, a playground, and a picnic shelter.

Empire Park *(Empire Township):* This 24.71 acre park is located just north of the Vermillion River, between Biscayne Ave and Cabrilla Way. The park has a nine-hole disc golf course, a gravel parking lot, an asphalt multi-use trail running through it, a playground, two volleyball nets, and picnic facilities.

Sachs Park *(Empire Township):* This 2.3 acre park has a play area, water fountain, bathroom, full size

basketball court, and a youth baseball field. It is located at the intersection of 200th St. and Calgary Trail.

Town Hall Park *(Empire Township):* Located on the same parcel as the Empire Township Hall, this 1.58 acre park includes an asphalt parking lot, two tennis courts, one full-sized basketball court, a basketball hoop off of the parking lot, a playground, a picnic shelter, and access to a multi-use trail.

Stelzel Fields *(Empire Township):* This 18.21 acre recreation area includes four softball fields, with concessions, restrooms, asphalt parking lots, and a playground. The park is located off of Chippendale Ave (CSAH 3), just south of the Southern Hills Golf Course.

Jack Ruhr Field *(Miesville):* Jack Ruhr Field is a lit baseball field located off of Highway 61 (240th St E) adjacent to the Miesville City Office. There is a gravel and asphalt parking lot, spectator bleachers, concessions and picnic tables on the five acre lot.

Miesville Lions Park *(Miesville)*: Two ball fields, a playground, a picnic shelter, and a gravel parking lot make up this 7.77 acre park in the center of Miesville.

Vermillion Park *(Vermillion):* This 8.91 acre park, located at the intersection of Park Ave S and Mill S E, south of Main St E (CSAH 62), includes three ball fields, a playground, a picnic shelter, an ice rink, and a gravel parking lot.

Empire Town Park *(Vermillion Township):* Located just south of 200th St. E, off of Doffing Ave., this one-acre park is primarily an open grassy area with a coniferous screen from the surrounding neighborhood and a few deciduous shade trees.

V. TRANSPORTATION

A. Overview

Overall, the transportation network in southern Dakota County is sufficient to meet community needs. Identified transportation improvements aim to improve regional mobility, safety, and access in the area, which in turn will improve conditions for local traffic. Few roads in collaborative communities are reaching or exceeding capacity, though this may change should development occur at higher levels than anticipated.

The primary purpose of this Transportation chapter is to provide guidance to Rural Collaborative community members and elected officials regarding the implementation of effective, integrated transportation facilities and programs through the 2040 planning timeframe. This chapter is consistent with regional requirements for transportation as captured in the Metropolitan Council's 2040 *Local Planning Handbook*.

This section is organized into the following sections:

- Transportation Goals and Objectives
- Existing Roadway Conditions
- Roadway System Plan
- Transit Plan
- Non-Motorized Transportation Plan
- Aviation Plan
- Freight Plan

B. Transportation Policies

The transportation policies from the 2030 Dakota County Rural Collaborative Comprehensive Plan have been updated and refined for this 2040 Transportation Plan. These updates are based on technical review, community engagement, and consultation with the executive committee.

It is the policy within Rural Collaborative Communities to:

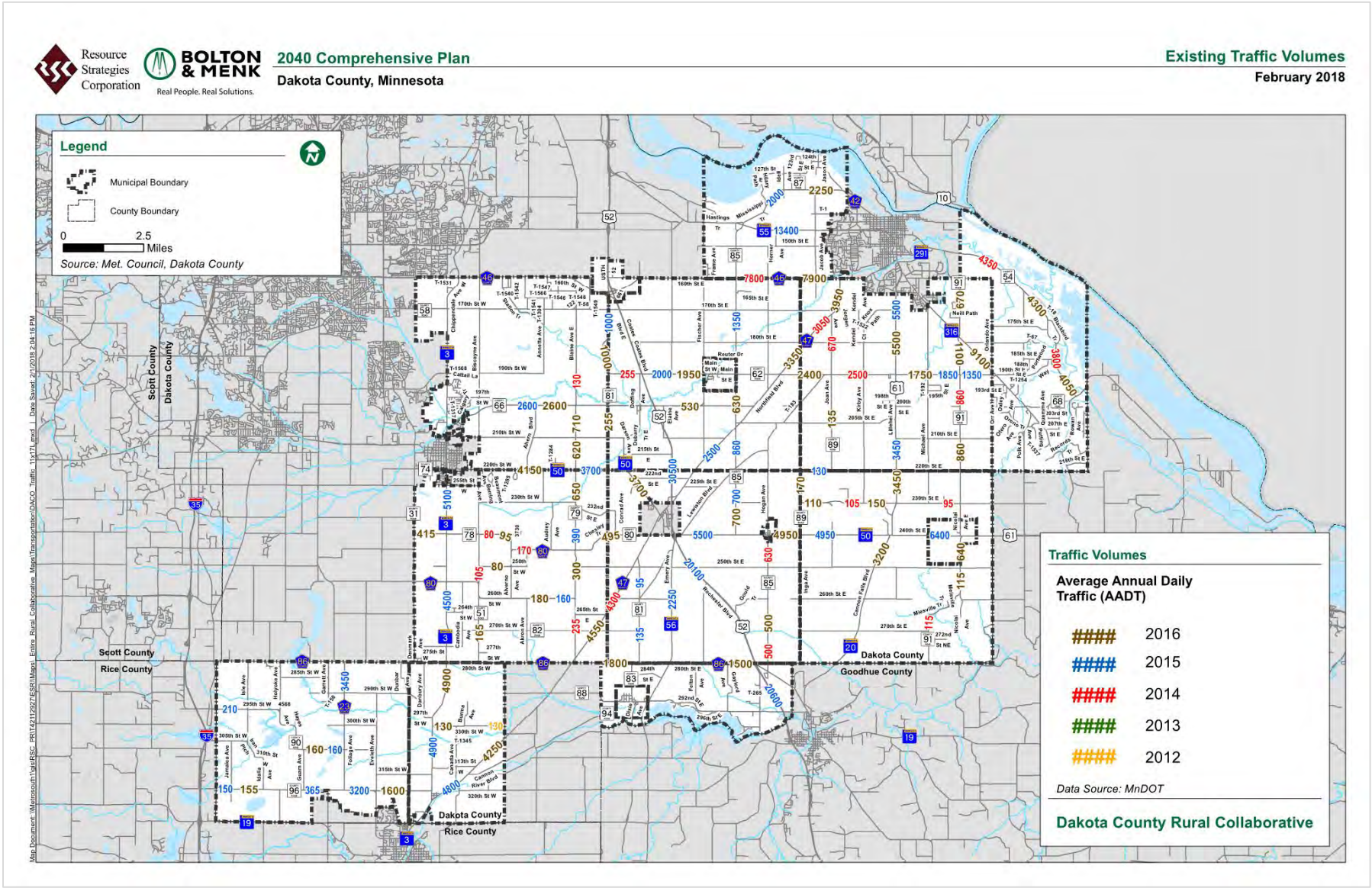
- Enforce county and state access spacing guidelines by limiting access to major roads in the community and encouraging shared access, frontage roads and local road intersection spacing guidelines.
- Coordinate transportation planning and system improvements with local, county, regional and state jurisdictions.
- Cooperate and coordinate with area communities, the county, and state for the development of regional trail corridors.
- Cooperate with county and state agencies in preserving right-of-way needs for future roadway improvements.
- Evaluate land use development standards that promote safety for both vehicles and pedestrians.
- Periodically review priorities to improve the local transportation system.
- Evaluate and coordinate available and potential transit programs and opportunities for residents and businesses, such as park and ride facilities, rideshare programs, and dial-a-ride services.
- Evaluate cooperative efforts and opportunities to preserve long-range potential transportation corridors needed to serve the region.
- Protect navigable airspace by limiting structure heights consistent with FAA rules.

C. Existing Roadway Conditions

1. Existing Traffic Volumes

The most basic characteristic of a given roadway is the volume of traffic that it carries. Existing traffic volumes, or the most recent volumes available, on roadways within the collaborative area are presented in Figure 5. These data were obtained from either MnDOT or Dakota County.

Figure 5: Existing Traffic Volumes



2. Crash Data

Public safety responsibility of the roadway system in the Dakota County Rural Collaborative is shared by the Cities, the Townships, Dakota County, and the Minnesota Department of Transportation (MnDOT). Crash data for the most recent available three-year time period from January 1, 2013, through December 31, 2015, are analyzed to determine where current safety issues are located. Crash data are shown in Figure 6. There have been five fatal crashes in the Rural Collaborative in the three-year period:

- MN Highway 3 at CR 96
- US Hwy 52 at 180th St
- CR 85 at 180th St E
- US Hwy 52 at CSAH 86
- CR 54 at 185th St E

Locations with the highest crash frequency are detailed below.

United States Trunk Highway (Hwy) 52 Corridor

- Hwy 52 at CSAH 46 – Highway ramps, two-way stop control, wide intersection (City of Coates)
- Hwy 52 at CR 62 – Side street stop, wide intersection, 4-lane divided on Hwy 52 (Vermillion Township)
- Hwy 52 at CSAH 66 – Constructed three-quarter intersection (Vermillion Township)
- Hwy 52 at CSAH 86 – Constructed Overpass (border of Hampton and Randolph Townships)

All of above locations are on the Trunk Highway System. Based on the County's Capital Improvement Plan 2017-2022, the County is anticipated to have a traffic study of Hwy 52 at CSAH 66 in 2018 to identify the long-term footprint. The intersection of Hwy 52 at CSAH 86 has had a recent project that is anticipated to alleviate safety concerns.

Minnesota State Highway 3 Corridor

- Hwy 3 at CSAH 46 – Signalized intersection, high traffic volume, change from 4-lane divided to 2-lane highway east of the intersection (border of Empire Township and City of Rosemount)
- Hwy 3 at CR 58 – Side street stop, wide intersection (Empire Township)
- Hwy 3 at CSAH 86 (280th St) – Side street stop, wide intersection, business driveway near the intersection (border of Castle Rock and Waterford Townships).

All of above locations are on the State Highway System. Based on the County's Capital Improvement Plan 2017-2022, the County is anticipated to have a roadway reconstruction from MN Highway 3 at CSAH 86 to improve safety.

Hwy 56 Corridor

- Hwy 56 at CSAH 86 (280th St) – Side street intersection, curved intersection (border of Hampton and Randolph Townships)

Based on the County's Capital Improvement Plan 2017-2022, the County is anticipated to have a roadway reconstruction project at Hwy 56 and CSAH 86 to improve safety.

County State Aid Highway (CSAH) 47 Corridor

- CSAH 47 at CSAH 62 – Side street intersection, skewed intersection (border of Marshan and Vermillion Townships)

Based on the County's Capital Improvement Plan 2017-2022, the County is anticipated to have a realignment at CSAH 62. This project will improve CSAH 62 at CSAH 47 intersection operations, make safety improvements, and provide for increased traffic level.

CSAH 46 Corridor

- CSAH 46 at CSAH 47 – T intersection, side street intersection, high traffic volume (Marshan Township)

The county and state highways generally accommodate higher traffic volumes, which may result in a higher number of crashes. The safety of these intersections should be reviewed to determine if crash concerns could be alleviated with spot safety improvements on a case-by-case basis or as part of a larger corridor analysis.

Future Study Recommendations:

Locations recommended for future study based on crash frequency and patterns identified above include the following intersections:

- US Hwy 52 at CSAH 46
- MN Hwy 3 at CR 58
- MN Hwy 3 at CSAH 46
- CSAH 46 at CSAH 47

Additional intersections for future consideration, both of which are offset intersection with high crash frequency involving left or right turning movements:

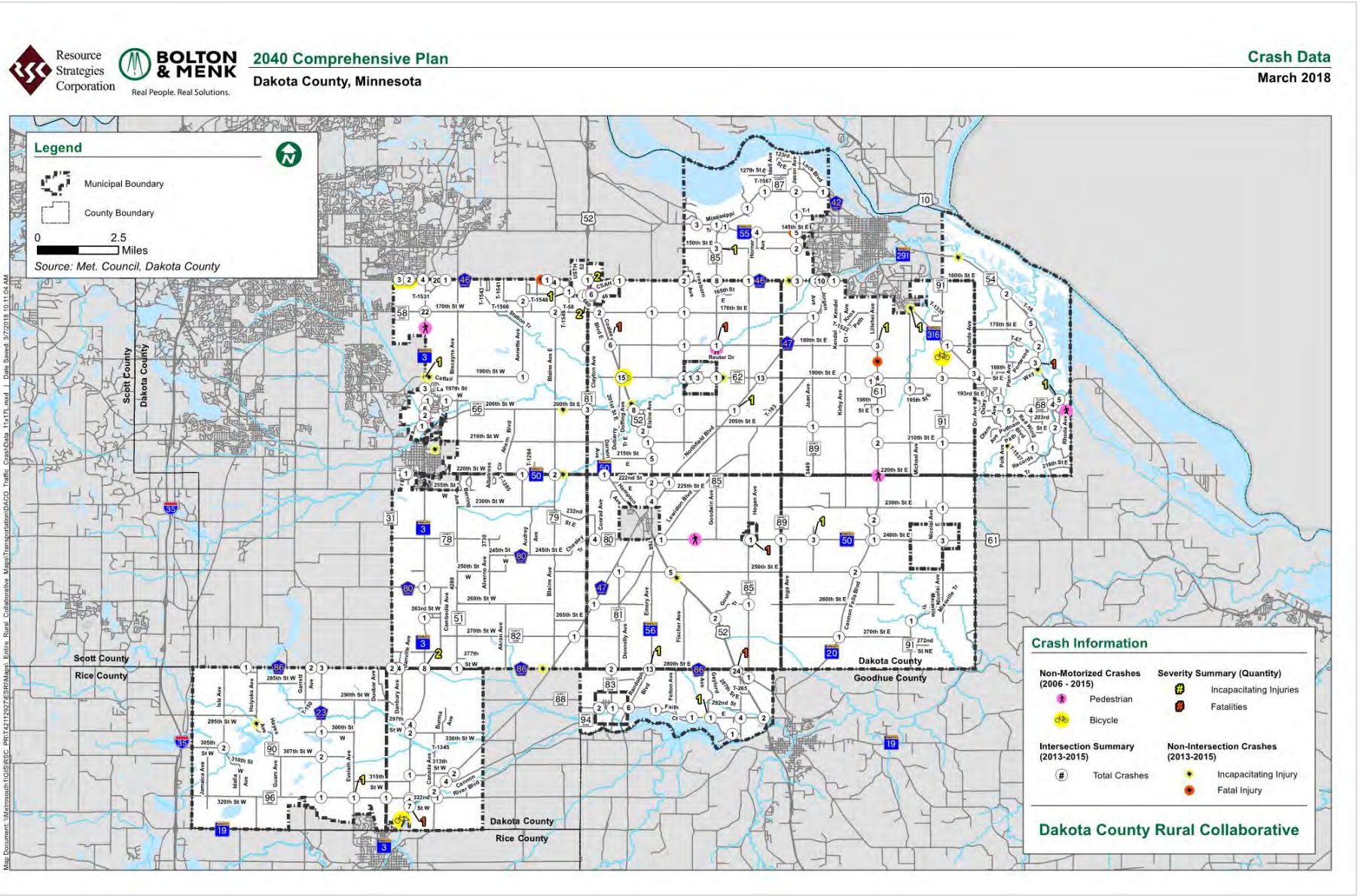
- US Hwy 61 (240th St) at Nicolai Ave (City of Miesville)
- US Hwy 61 (240th St) at Cannon Falls Blvd/Lillehei Ave (Douglas Township)

Township Intersections Recommended for Future Monitoring

- Ravenna Trail from Polk Ave to 185th St (Ravenna Township)
    - Approximately 47% of total crashes within a 10-year period along this corridor were ran-off-road crashes. Ravenna Trail along this 2.5 mile, curved corridor is a two-lane undivided roadway with no passing lane.

- CR 68 from 190th St Way to Polk Ave (Ravenna Township)
    - Approximately 42% of total crashes in a 10-year period along this corridor were ran-off-road crashes. CR 68 along this 3.3 mile, curved corridor is a two-lane undivided roadway with no passing lane.

Figure 6: Crash Data



3. Jurisdictional Classification

Roadways are classified on the basis of which level of government has jurisdiction over them. Figure 7 depicts the existing roadway jurisdictional classification system in the collaborative area.

4. Functional Classification

Functional classification is a cornerstone of transportation planning. The functional classification system is a roadway network that distributes traffic from neighborhood streets to collector roadways, then to minor arterials, and ultimately the Metropolitan Highway System[1]. Roads are placed into functional categories based on the degree to which they provide **access** to adjacent land uses and lower level roadways versus providing higher-speed **mobility** for "through" traffic. Within this approach, roads are located and designed to perform their designated function.

The current roadway functional classification map for Dakota County Rural Collaborative as identified by the Metropolitan Council is presented in Figure 8**.** The roadway system presently consists of six functional roadway classifications:

- Principal arterial
- "A" minor arterial
- "B" minor arterial
- Major collector
- Minor collector
- Local street

The Metropolitan Council has defined four sub-categories of "A" minor arterials: reliever, expander, connector, and augmenter. These sub-categories have to do primarily with Metropolitan Council's allocation of federal funding roadway improvements but do not translate into specific design characteristics or requirements. In the Rural Collaborative, there are only two types of "A" minor arterials, connectors and expanders.

For arterial roadways, the Metropolitan Council has designation authority. Local agencies may request that their roadways become arterials (or are downgraded from arterial to collector), but such designations or re-designations must be approved by the Metropolitan Council. The agency which has jurisdiction over a given roadway has the authority to designate collector status.

<u>Principal Arterials</u>

Principal arterials comprise the highest roadway functional classification and make up the Metropolitan Highway System. The primary function of these roadways is to provide mobility for regional trips. They do not provide a land access function. They are intended to interconnect regional business concentrations in the metropolitan area, including the central business districts of Minneapolis and St. Paul. These roads also connect the Twin Cities with important locations outside the metropolitan area. Principal arterials are generally constructed as limited access freeways, but may also be multiple-lane divided highways.
The principal arterials within the Rural Collaborative are shown in Figure 8 and are listed below:

- US TH 52
- MN TH 55
- MN TH 316

Currently, Dakota County is studying the future classification of roadways as principal arterials to address gaps in the current road network. This study is discussed in more detail in Section C-5.

[1] The Metropolitan Highway System is made up of the region's principal arterials. These roads are part of the National Highway System and are owned and operated by MnDOT and the seven metropolitan counties (Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington).

Figure 7: Existing Jurisdictional Classification

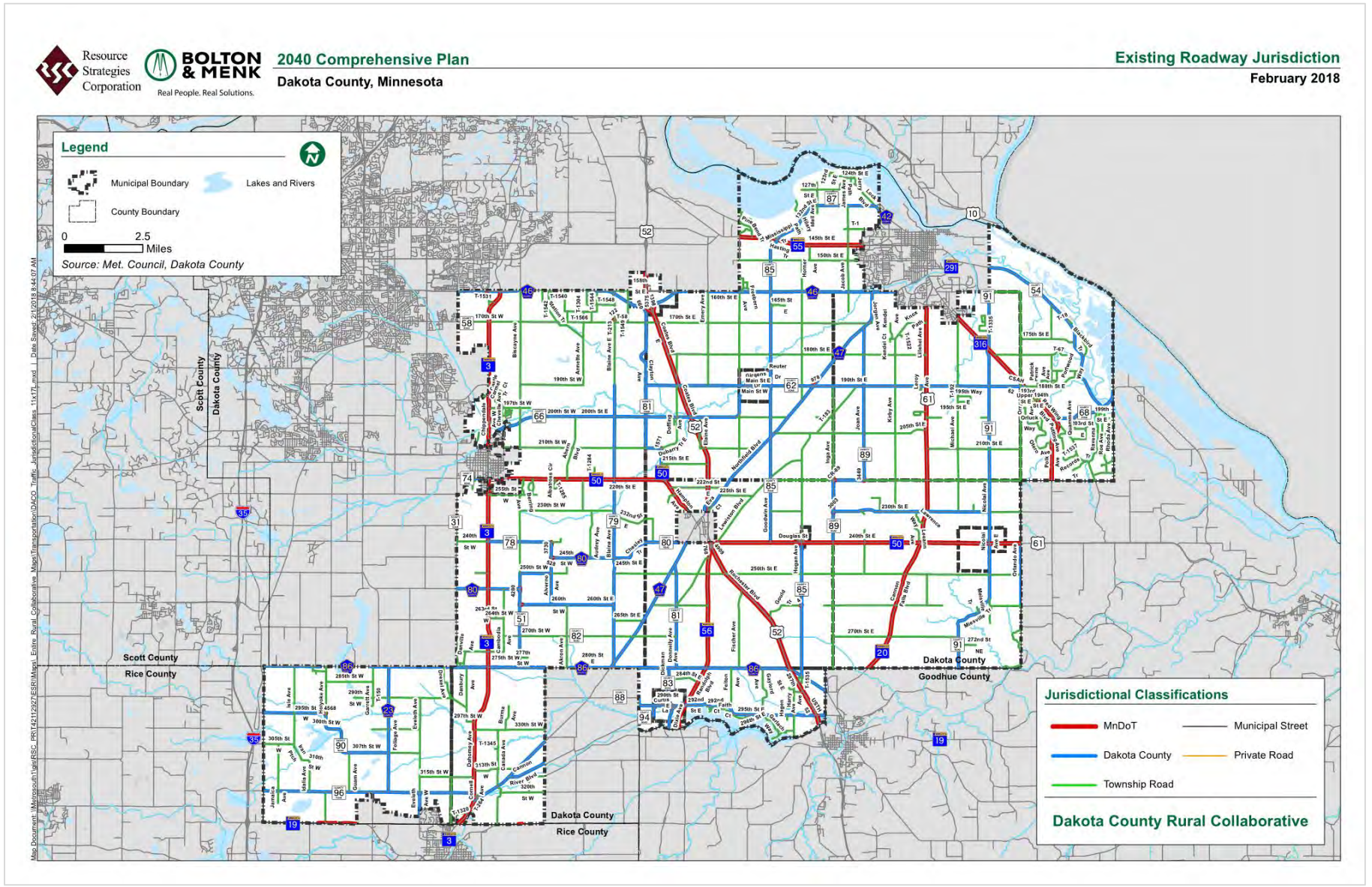
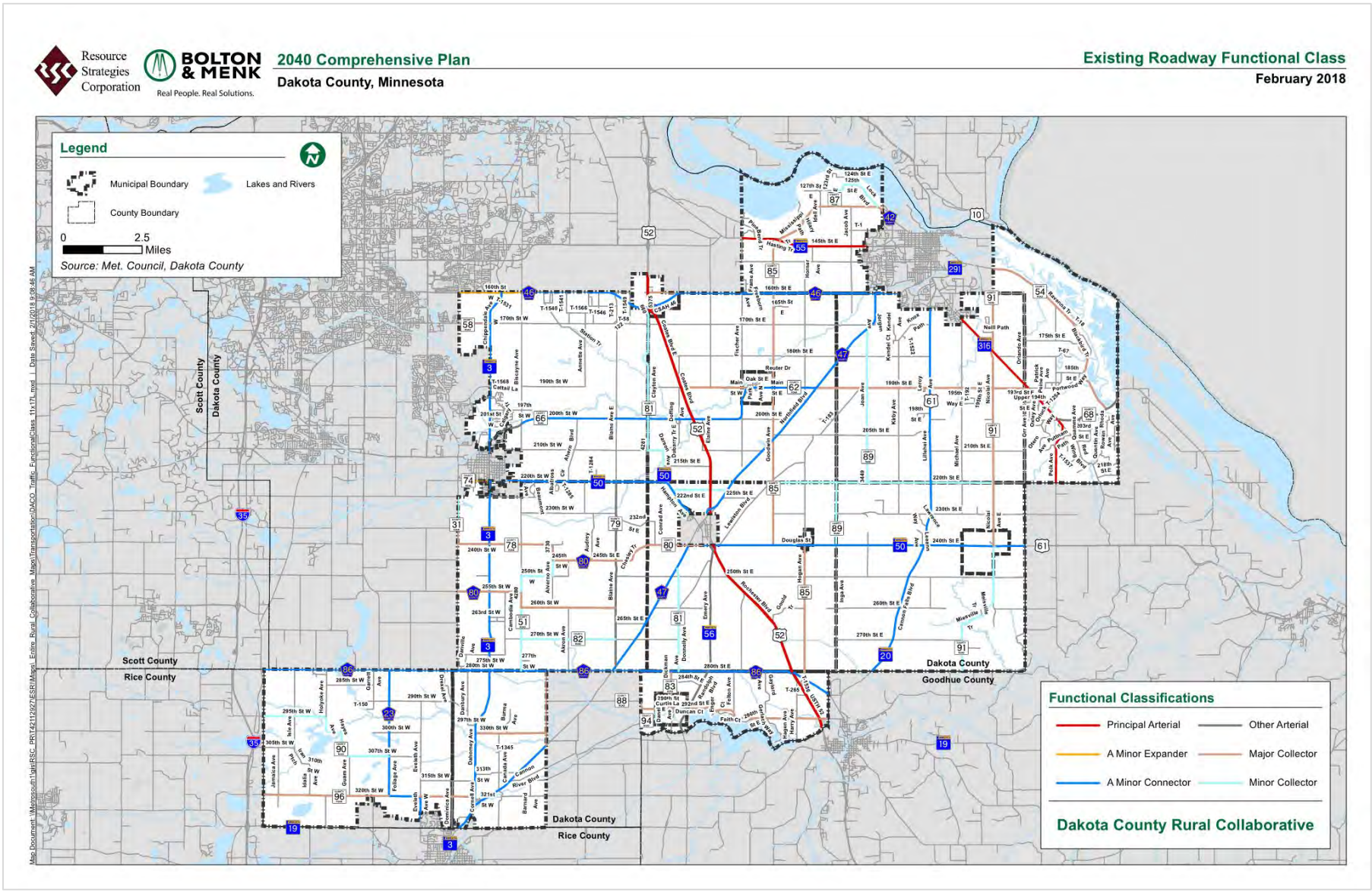


Figure 8: Existing Functional Classification



"A" Minor Arterials

These roads connect important locations within the Dakota County Rural Collaborative with access points of the Metropolitan Highway System and with important locations outside the collaborative area. These arterials are intended to carry short to medium trips that would otherwise use principal arterials. While "A" minor arterial roadways provide more access than principal arterials, their primary function is also to provide mobility rather than access to lower level roadways or adjacent land uses. The "A" minor arterial roadways in Dakota County Rural Collaborative are identified in Figure 8 and in Table 22, below.

Table 22 – "A" Minor Arterial Roadways

Roadway	From	To	Number of Travel Lanes
US TH 61/ Lillehei Ave/ 240th Street E	Hastings	Douglas Twp	2
MN Hwy 3/ Chippendale Ave/ Dahomey Ave	Empire Twp	Waterford Twp	2
MN Hwy 20/ Cannon Falls Blvd	MN Hwy 50/ 240th St E	Southern Douglas Twp boundary	2
CR/CSAH 23/ Foliage Ave/ Eveleth Ave	CR/CSAH 86	Southern Greenvale Twp boundary	2
CR/CSAH 46/ Brandel Drive/ 160th Street	Hastings	Apple Valley	2
CR/CSAH 47/ Northfield Blvd/Jorgen Ave	Hastings	Waterford Twp	2
MN Hwy 50/ 220th Street W/ Hampton Ave/ 240th Street E	Empire Twp	Douglas Twp	2
CR/CSAH 66/ 200th Street/ Fischer Ave/ Vermillion River Trail	Vermillion Twp	Farmington	2
CR/CSAH 86/ 280th Street/ Rochester Blvd	Western Greenvale Twp boundary	Eastern Randolph Twp boundary	2
CR 96/ 320th Street W	CR/CSAH 23/ Foliage Ave	CR/CSAH 23/ Eveleth Ave	2

"B" Minor Arterials

Like "A" minor arterials, these roadways also serve more of a mobility function than access function. However, they may not have as much regional importance as "A" Minor Arterials and are not eligible for federal roadway improvement funding. "B" minor arterials within the collaborative area are identified in Table 23, below.

Table 23 – "B" Minor Arterial Roadways

Roadway	From	To	Number of Travel Lanes
CR/CSAH 79/ Blaine Ave	MN Hwy 50/ 220th Street W	CR/CSAH 86/ 280th Street	2
MN Hwy 56/ Emery Ave	US TH 52	Southern Randolph Twp boundary	2
CR/CSAH 68/ 200th Street W	MN TH 316	Eastern Ravenna Twp boundary	2

Major and Minor Collectors

Collector roadways provide a balance of the mobility and land-use access functions discussed above. They generally serve trips that are entirely within a municipality and connect neighborhoods and smaller commercial areas to the arterial network. Minor collectors generally are shorter in length, with lower volumes and lower speeds than major collectors. Current collector roadways are identified in Figure 8 and in Table 24.

Table 24 – Major and Minor Collector Roadways			
Roadway	**From**	**To**	**Number of Travel Lanes**
Major Collectors			
CR/CSAH 42/ 132nd Street	Eastern Nininger Twp boundary	MN TH 55/ Hastings Trail	2
CR 48/ 160th Street E	US TH 52	CR/CSAH 46/ 160th Street E	2
CR 51/ 255th Street W/ Biscayne Ave	CR/CSAH 80/ 255th Street W	CR 80S/ 260th Street W	2
CR 53/ Arkansas Ave	CR/ CSAH 86	CR/CSAH 47/ Northfield Blvd	2
CR/CSAH 54/ Ravenna Trail	CR/ CSAH 68	Hastings	2
CR 58/ 170th Street W	MN Hwy 3/ Chippendale Ave	Western Empire Twp Boundary	2
CR/CSAH 62/ 190th Street E/ Main Street W	CR/CSAH 47	MN TH 316	2
CR/CSAH 78/ Alverno Ave/ 240th Street	Western Castle Rock Twp boundary	CR/CSAH 80	2
CR/CSAH 80/ 240th Street E/ 245th Street E/ 255th Street W	CR/CSAH 78	Eastern Castle Rock Twp boundary	2
CR 80S/ 260th Street W	CR/CSAH 79/ Blaine Ave	CR 51/ Biscayne Ave	2
CR 83/ Dickman Ave	CR/CSAH 86	CR/CSAH 88	2
CR/CSAH 85/ Hogan Avenue/ Goodwin Ave	Northern Randolph Twp boundary	Nininger Twp	2
CR/CSAH 88/ 292nd Street/ 295th Street	Eastern Randolph Twp boundary	CR/CSAH 47	2
CR/CSAH 91/ Nicolai Ave/ Michael Ave	Hastings	Southern Douglas Twp boundary	2
CR 96/ 320th Street W	MN Hwy 3/ Dahomey Ave	CR/CSAH 23/ Eveleth Ave	2
Minor Collectors			
CR 31/ Denmark Ave	CR 74/ 220th Street W	CR/CSAH 78	2
CR 51/ 255th Street W/ Biscayne Ave	CR 80S/ 260th Street W	CR/CSAH 86/ 280th Street	2
CR/CSAH 78/ Alverno Ave	CR/CSAH 78/ 240th Street	CR/CSAH 80/ Alverno Ave	2
CR/CSAH 80/ Alverno Ave/ Biscayne Ave/ 250th Street W	CR/CSAH 80/ 245th Street W	CR/CSAH 80/ 255th Street W	2
CR 81/ 210th Street E/ Darsow Ave/ Clayton Ave	Northern Hampton Twp boundary	CR/CSAH 46/ Brandel Drive	2
CR 82/ 270th St	CR 51/ Biscayne Ave	CR/CSAH 79/ Blaine Ave	2
CR 83/ Donnelly Ave	CR/CSAH 47	CR/CSAH 86/ 280th Street	2
CR 89/ Joan Ave/ 220th Street E	CR/CSAH 47	CR/CSAH 91 / Nicolai Ave	2
CR 89/ 220th Street E	CR/CSAH 91/ Nicolai Ave	CR/CSAH 85/ Goodwin Ave	2
CR 89/ Inga Ave	CR 89/ 220th Street E	MN Hwy 50/ 240th Street	2
CR 90/ 295th Street W/ 300th Street W/ 307th Street W/ Hayes Ave/ Holyoke Ave	Western Greenvale Twp boundary	CR/CSAH 23/ Foliage Ave	2
CR/CSAH 91/ Michael Ave/ Nicolai Ave	US TH 61/ 240th Street	Southern Douglas Twp boundary	2
CR 94/ Cannon River Blvd/ Cooper Ave	CR/CSAH 88/ 292nd Street E	Western Randolph Twp boundary	2

5. Problem Issues and Locations

Based on discussions with the executive committee, elected officials, and community members, general issues and locations of concern will be reviewed and documented as part of the Dakota County Collaborative Plan update.

6. Summary of Relevant Transportation Studies and Plans

A summary of transportation studies relevant to southern Dakota County's roadway system is provided below.

Statewide Studies

Highway 52 Freeway Partnership (2007)
The Highway 52 Freeway Partnership is an on-going collaboration between MnDOT, Dakota County, Goodhue County, and Olmstead County to improve safety and congestion on the TH 52 Interregional Corridor between the Twin Cities and Rochester. Future improvements include a proposed realigned CSAH 66/TH 52 interchange in Vermillion Township and a proposed CSAH 86/TH 52 interchange in Randolph and Hampton townships.

Dakota County Studies and Plans

Dakota County Pedestrian and Bicycle Plan (Current)
Dakota County is developing a pedestrian and bicycle plan to create a comprehensive, cohesive vision for countywide walking and bicycling networks. This plan will analyze existing conditions for walking and biking, develop a countywide pedestrian and bicycle system plan, and provide a toolkit of policies, strategies, and best practices for implantation. This plan will be completed in mid-late 2018.

Dakota County Principal Arterial Study (2018)
The Dakota County Principal Arterial Study studied potential highways in the county for designation as future principal arterials. This is intended to provide a safe and efficient transportation system in the long term and filling transportation needs. Presently, there are no principal arterials running east/west south of CR/CSAH 42, and there are no principal arterials running north/south west of US TH 52 within Dakota County. This limits access and connectivity of collaborative communities. Traffic volumes, connections to other principal arterials, and the ability to support freight were considered as part of analysis. Corridors recommended for future principal arterial designation within the Rural Collaborative include:

- US Highway 61
- MN Highway 3
- MN Highway 50
- County Road 86

This study will be completed in early-mid 2018.

Dakota County East-West Transit Study (2016)
This study evaluated transportation and transit needs and trends within Dakota County. The majority of transit options currently available or planned in Dakota County run north/south, meaning east/west transit options are needed to connect routes and destinations within the county. Corridors studied within the Rural Collaborative area include 160th Street West and County Road/CSAH 42. At this time, these corridors have not been recommended for further study. The western segment of County Road/CSAH 42 (from the City of Savage in Scott County to the City of Rosemount) has been recommended for further transit corridor consideration.

Dakota County 2030 Transportation Plan (2012)
Dakota County updated its 2030 Transportation Plan, adopted in 2008, to incorporate updates from the county's 2030 Comprehensive Plan, adopted in 2009, as well as relevant state and regional transportation plans, updated traffic modeling, and completed county and regional transportation studies. The county is in the process of updating its Transportation Plan as part of the county's 2040 Comprehensive Plan.

Rosemount/Empire/UMore Transportation System Study (2010)
This study investigated the future needs associated with development of the UMore area and preservation of the Vermillion Highlands area. The study identified a transportation system that results in safe and efficient area travel, supports land use plans, is cost-effective, and allows for greater collaboration between agencies. Major findings, influences or considerations incorporated into the Plan include:

- Identification of a regional arterial road network system to be used by study partners and surrounding communities as land use and transportation plans are implemented.
- Identification of selected roadway expansion from 2 to 4 lanes on various roadway segments and 4 to 6 lanes on County Road/CSAH 42.
- Identification of a new alignment and expansion consideration on Biscayne Avenue and County Road 73/Akron Avenue.
- Identification of a new alignment and expansion consideration on Blaine Avenue and County Road 81/Clayton Avenue.

D. Roadway System Plan

1. Assumed 2040 Roadway Network

The roadway network assumed for the 2040 analysis includes the existing network, plus programmed and/or planned projects. The roadway projects that will enhance the existing network that are anticipated to be in place as part of the 2040 network are summarized below:

Existing Roadway Improvements

- County Road/CSAH 78 – A segment of County Road 78/240th Street/Denmark Ave in Castle Rock Township, from County Road 78/235th Street and County Road 31 intersection to MN Hwy 3, has been reconstructed and paved. This includes paved shoulders and the installation of railroad crossing signals and gates.

- County Road/CSAH 23 – A segment of County Road 23/Foliage Ave in Greenvale Township, from County Road 96/320th Street to County Road 86/280th Street and the east-west portion of County Road 23 from Foliage Avenue to west of County Road 23/Eveleth Avenue is planned for reconstruction. This project will include the addition of paved shoulders and right turn or bypass lanes at intersections and a review of drainage areas for proper culvert sizing. Construction is scheduled for 2019.

- County Road/CSAH 42 – A segment of County Road 42/Mississippi Trail in Nininger Township, from MN Hwy 3 to Lock Boulevard, will be reconstructed. The reconstruction includes a slight roadway alignment shift, addition of paved shoulders, left and right turn lanes or bypass lanes, new bituminous pavement, and improved ditches to infiltrate and/or convey stormwater drainage. The construction is anticipated to begin in the spring of 2019.

- County Road/CSAH 62 – Realign County Road 62 in Vermillion Township and add turn lanes on CSAH 47 for County Road 62 access. This project is anticipated for 2020.

- County Road/CSAH 86 – A segment of County Road 86/280th Street along the borders of Castle Rock, Hampton, and Randolph Townships, from County Road 47 to US TH 52, was reconstructed in 2017.

- County Road/CSAH 86 – A segment of County Road 86/280th Street in Castle Rock and Waterford Townships, from MN Hwy 3/Chippendale Ave to County Road 47/Northfield Blvd, will be reconstructed. The 2018 project will include the improvement of the road surface quality, the addition of paved shoulders and turn or bypass lanes, and review of drainage areas for proper culvert sizing.

- County Road/CSAH 88 – A segment of County Road 88 in Randolph Township, from Highway 56 to Fullerton Road, is proposed for future reconstruction. County Road 88 is an east-west collector roadway in Randolph Township and serves as the primary roadway through the City of Randolph, connecting residential, commercial and agricultural properties in southern Dakota County to Cannon Falls. To more effectively meet safety and mobility goals, a preliminary design phase is being conducted to evaluate solutions to address the issues and existing deficiencies along the corridor.

- County Road/CSAH 91 – Segments of County Road 91 in Miesville and Douglas and Marshan Townships are planned to be reconstructed in 2021.

Proposed New and Extended Roads

The following proposed new and extended roads have been identified as part of the county's road network in 2030. However, there is no timetable for these roads, and none have been programed at this time.

- County Road 64 – A proposed extension of County Road 64 would extend the existing roadway east into Empire Township, connecting with the southern extension of County Road 71 (see below). This extension would serve existing and planned development areas of the township.

- County Road 71 – There are plans to extend County Road 71 south, connecting to County Road 81 south of Coates. This would require coordination with Rosemount, Empire Township, and the University of Minnesota, as the planned road would pass through UMore Park. This would help provide relief for connecting roadways that are anticipated to be approaching or over capacity by 2040.

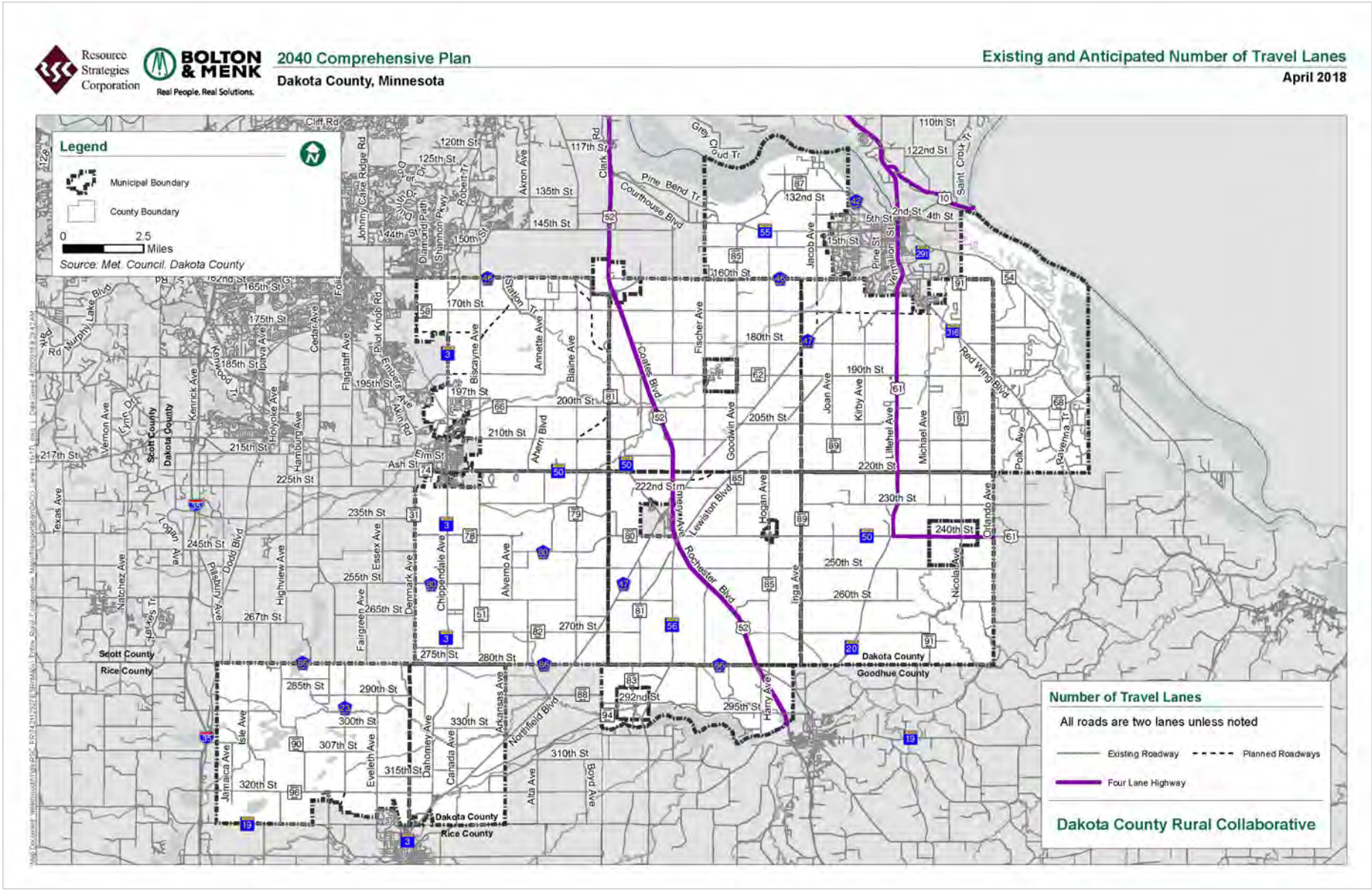
- County Road 73 – There are plans to extend Country Road 73 south of County Road 42, connecting to County Road 46 and County Road 66. The proposed alignment would run west of Whitetail Woods Regional Park, towards and through developing portions of Empire Township. This roadway is expected to serve as a "B" minor arterial in the regional network and would help provide relief for connecting roadways that are anticipated to be approaching or over capacity by 2040. This would require coordination with Rosemount, Empire Township, and the University of Minnesota, as the planned road would pass through UMore Park.

- Future 178th Street – There are plans for a new east/west county road from County Road 9 in Lakeville to Empire Township. The proposed alignment will connect to extension of County Road 73 (see above) and is expected to serve as a "B" Minor Arterial in the regional network.

- New County Road/170th Street E – There are also plans for a new county road in Marshan Township, running east/west across the northern portion of the township. The proposed alignment would connect County Road 46, County Road 47, County Road 89, and Highway 61. This would provide access to key collectors and arterials in the region and help provide relief for connecting roadways that are anticipated to be approaching or over capacity by 2040. This roadway is expected to serve as a "B" minor arterial in the regional network.

Figure 9 depicts existing and anticipated 2040 number of travel lanes on roadways within the collaborative area.

Figure 9: Existing and Anticipated 2040 Travel Lanes



2. Assumed 2040 Land Use and Transportation Analysis Zone Information

Traffic projections are based on the use of Transportation Analysis Zones (TAZs). The TAZs for the Dakota County Collaborative, as defined by the Metropolitan Council, are presented in Figure 10. The anticipated land use patterns discussed in Chapter II of this Comprehensive Plan were assumed for the 2040 transportation projections. The 2040 land use map for Dakota County Rural Collaborative is presented in that chapter. The TAZ socioeconomic data projected for 2040 conditions are presented in the following tables (25A – 25P). The data presented are forecasts for only the portion of the TAZ area within Collaborative communities, since some TAZ boundaries span more than one jurisdiction.

Figure 10: TAZ Data

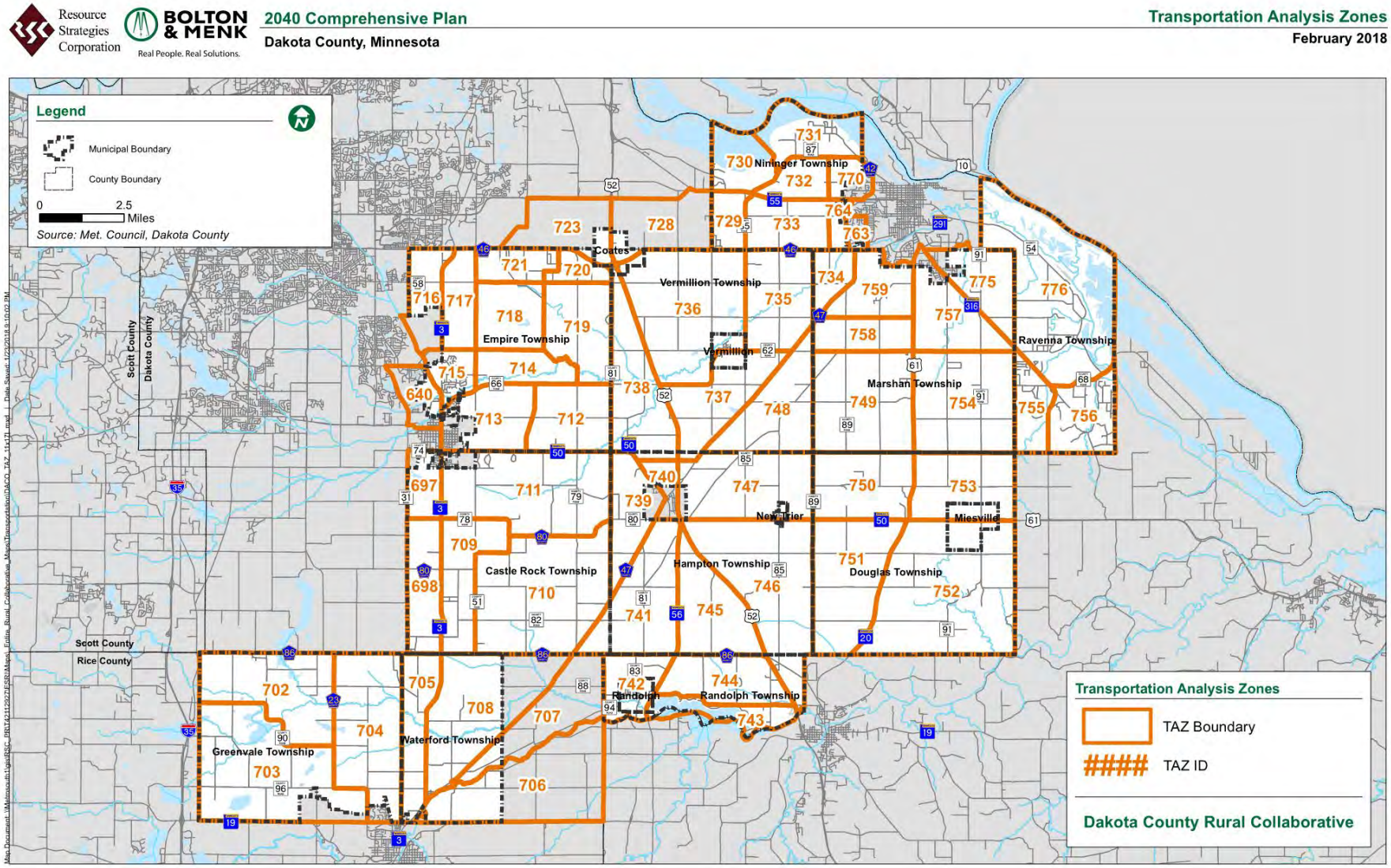


Table 25A – Castle Rock Township TAZ Data						
TAZ	*Year*	*Population*	*Households*	*Retail Jobs*	*Non-Retail Jobs*	*Total Jobs*
697	2010	74	32	0	25	25
	2020	83	33	0	34	34
	2030	82	33	0	32	32
	2040	80	33	0	32	32
698	2010	264	101	0	97	97
	2020	263	104	20	123	143
	2030	259	104	20	118	138
	2040	254	104	20	112	132
709	2010	204	74	62	7	69
	2020	195	76	19	40	59
	2030	192	76	16	40	56
	2040	189	76	13	40	53
710	2010	303	118	0	69	69
	2020	310	123	0	26	26
	2030	306	123	10	38	38
	2040	302	123	10	41	51
711	2010	490	178	5	90	95
	2020	466	183	7	90	97
	2030	459	183	4	90	94
	2040	451	183	0	90	90
741	2010	7	1	0	1	1
	2020	3	1	0	1	1
	2030	3	1	0	2	2
	2040	3	1	0	2	2

Table 25B – City of Coates TAZ Data						
TAZ	*Year*	*Population*	*Households*	*Retail Jobs*	*Non-Retail Jobs*	*Total Jobs*
723	2010	30	11	8	17	25
	2020	28	12	10	25	35
	2030	28	12	10	25	35
	2040	28	12	10	25	35
728	2010	131	55	10	74	84
	2020	142	58	10	75	85
	2030	142	58	10	75	85
	2040	142	58	10	75	85
738	2010	0	0	0	5	5
	2020	0	0	0	12	12
	2030	0	0	0	15	15
	2040	0	0	0	15	15

Table 25C – Douglas Township TAZ Data						
TAZ	*Year*	*Population*	*Households*	*Retail Jobs*	*Non-Retail Jobs*	*Total Jobs*
750	2010	229	86	0	19	19
	2020	240	92	10	13	23
	2030	238	96	10	14	24
	2040	232	99	17	10	40
751	2010	140	49	0	0	0
	2020	139	53	0	0	0
	2030	144	58	0	0	0
	2040	150	64	0	0	0
752	2010	234	83	0	52	52
	2020	235	90	0	38	38
	2030	240	97	0	38	38
	2040	246	105	0	42	42
753	2010	113	41	0	21	21
	2020	116	45	0	59	59
	2030	118	49	0	58	58
	2040	122	52	0	61	61

Table 25D – Empire Township TAZ Data						
TAZ	*Year*	*Population*	*Households*	*Retail Jobs*	*Non-Retail Jobs*	*Total Jobs*
640	2010	182	65	0	3	3
	2020	285	99	0	4	4
	2030	383	139	0	4	4
	2040	489	182	0	4	4
712	2010	212	70	4	9	13
	2020	166	58	10	17	37
	2030	167	61	3	40	43
	2040	193	72	3	45	48
713	2010	127	46	0	19	19
	2020	106	38	0	29	29
	2030	106	40	0	41	41
	2040	123	47	0	56	56
714	2010	42	12	0	1	1
	2020	90	31	0	1	1
	2030	217	79	0	6	6
	2040	410	153	0	16	16
715	2010	1726	548	0	31	31
	2020	2235	775	0	67	67
	2030	2584	939	0	71	71
	2040	2729	1018	0	75	75

Table 25D – Empire Township TAZ Data						
TAZ	*Year*	*Population*	*Households*	*Retail Jobs*	*Non-Retail Jobs*	*Total Jobs*
716	2010	22	6	0	68	68
	2020	25	9	0	71	71
	2030	30	11	0	73	73
	2040	34	13	0	73	73
717	2010	45	17	0	55	55
	2020	123	43	0	81	81
	2030	290	106	0	85	85
	2040	542	202	0	86	86
718	2010	21	9	0	3	3
	2020	57	20	0	0	0
	2030	122	44	0	0	0
	2040	219	81	0	0	0
719	2010	51	17	6	18	24
	2020	71	24	0	9	9
	2030	78	27	0	14	14
	2040	76	27	0	18	18
720	2010	16	3	0	0	0
	2020	12	4	0	3	3
	2030	12	4	0	3	3
	2040	12	4	0	4	4
721	2010	0	0	0	38	38
	2020	0	0	0	38	38
	2030	1	0	0	40	40
	2040	3	1	0	40	40

Table 25E – Greenvale Township TAZ Data						
TAZ	*Year*	*Population*	*Households*	*Retail Jobs*	*Non-Retail Jobs*	*Total Jobs*
702	2010	269	100	0	11	11
	2020	293	108	0	37	37
	2030	304	122	0	48	48
	2040	293	124	0	62	62
703	2010	323	104	0	25	25
	2020	307	114	0	70	70
	2030	323	129	0	93	93
	2040	317	134	0	119	119
704	2010	211	71	0	13	13
	2020	210	78	0	43	43
	2030	223	89	0	59	59
	2040	220	92	0	79	79

Table 25F – Hampton Township TAZ Data						
TAZ	*Year*	*Population*	*Households*	*Retail Jobs*	*Non-Retail Jobs*	*Total Jobs*
737	2010	10	4	0	4	4
	2020	12	4	0	4	4
	2030	11	5	0	5	5
	2040	11	5	0	4	4
738	2010	12	5	0	0	0
	2020	14	5	0	0	0
	2030	14	6	0	0	0
	2040	14	6	0	0	0
739	2010	124	50	0	1	1
	2020	141	54	0	2	2
	2030	146	58	0	2	2
	2040	151	62	0	2	2
740	2010	17	9	0	32	32
	2020	25	10	0	30	30
	2030	26	11	0	31	31
	2040	28	12	0	29	29
741	2010	137	50	0	9	9
	2020	143	54	0	6	6
	2030	153	60	0	7	7
	2040	168	70	0	8	8
745	2010	88	32	0	1	1
	2020	92	35	0	0	0
	2030	101	40	0	0	0
	2040	116	49	0	0	0
746	2010	274	91	19	12	31
	2020	262	101	20	15	35
	2030	282	113	20	20	40
	2040	308	128	20	22	42
747	2010	241	88	0	8	8
	2020	251	97	0	13	13
	2030	267	107	0	15	15
	2040	284	118	0	15	15

Table 25G – Marshan Township TAZ Data						
TAZ	*Year*	*Population*	*Households*	*Retail Jobs*	*Non-Retail Jobs*	*Total Jobs*
734	2010	46	19	0	0	0
	2020	57	22	0	1	1
	2030	65	26	0	1	1
	2040	72	30	0	1	1

Table 25G – Marshan Township TAZ Data						
TAZ	*Year*	*Population*	*Households*	*Retail Jobs*	*Non-Retail Jobs*	*Total Jobs*
749	2010	326	116	0	16	16
	2020	350	133	0	33	33
	2030	394	154	0	49	49
	2040	440	176	0	69	69
754	2010	262	91	0	80	80
	2020	237	94	19	117	136
	2030	226	94	19	137	156
	2040	215	93	15	153	168
757	2010	150	55	0	3	3
	2020	142	56	0	9	9
	2030	134	56	0	10	10
	2040	126	55	0	11	11
758	2010	101	39	0	13	13
	2020	117	45	10	30	40
	2030	130	51	10	48	58
	2040	142	58	5	75	80
759	2010	143	53	0	5	5
	2020	159	60	0	7	7
	2030	177	69	1	10	11
	2040	195	78	3	14	17
775	2010	78	30	0	0	0
	2020	78	30	0	4	4
	2030	74	30	0	5	5
	2040	70	30	0	5	5

Table 25H – City of Miesville TAZ Data						
TAZ	*Year*	*Population*	*Households*	*Retail Jobs*	*Non-Retail Jobs*	*Total Jobs*
752	2010	72	28	10	36	46
	2020	75	32	28	29	57
	2030	75	32	30	31	61
	2040	75	32	30	32	62
753	2010	53	24	70	0	70
	2020	65	28	33	30	63
	2030	65	28	39	30	69
	2040	65	28	38	30	68

Table 25I – City of New Trier TAZ Data						
TAZ	*Year*	*Population*	*Households*	*Retail Jobs*	*Non-Retail Jobs*	*Total Jobs*
746	2010	28	12	0	3	3
	2020	38	15	0	10	10
	2030	35	15	0	12	12
	2040	35	15	0	13	13

Table 25I – City of New Trier TAZ Data						
747	2010	84	29	3	30	33
	2020	92	35	5	35	40
	2030	85	35	8	40	48
	2040	85	35	7	40	47

Table 25J – Nininger Township TAZ Data						
TAZ	*Year*	*Population*	*Households*	*Retail Jobs*	*Non-Retail Jobs*	*Total Jobs*
729	2010	262	82	0	70	71
	2020	199	84	10	50	60
	2030	200	86	10	60	70
	2040	195	85	10	64	74
730	2010	146	49	0	0	0
	2020	126	50	0	7	7
	2030	133	54	0	8	8
	2040	135	54	0	10	10
731	2010	244	94	0	46	46
	2020	242	95	0	55	55
	2030	255	102	0	73	73
	2040	260	104	0	96	96
732	2010	45	15	0	10	10
	2020	39	15	0	18	18
	2030	44	18	0	24	24
	2040	47	19	0	31	31
733	2010	125	47	0	0	0
	2020	115	49	0	1	1
	2030	117	51	0	1	1
	2040	115	50	0	1	1
763	2010	12	6	0	0	0
	2020	15	6	0	0	0
	2030	14	6	0	0	0
	2040	14	6	0	0	0
764	2010	74	65	0	0	0
	2020	158	67	0	0	0
	2030	158	68	0	0	0
	2040	154	66	0	0	0
770	2010	42	14	0	21	21
	2020	36	14	0	16	16
	2030	39	15	0	24	24
	2040	40	16	0	38	38

Table 25K – City of Randolph TAZ Data						
TAZ	*Year*	*Population*	*Households*	*Retail Jobs*	*Non-Retail Jobs*	*Total Jobs*
742	2010	432	167	0	122	122
	2020	437	179	0	130	130
	2030	437	179	0	130	130
	2040	417	179	0	130	130
743	2010	4	1	0	0	0
	2020	3	1	0	0	0
	2030	3	1	0	0	0
	2040	3	1	0	0	0

Table 25L – Randolph Township TAZ Data						
TAZ	*Year*	*Population*	*Households*	*Retail Jobs*	*Non-Retail Jobs*	*Total Jobs*
742	2010	33	12	0	16	16
	2020	34	13	0	22	22
	2030	35	15	0	22	22
	2040	37	15	0	22	22
743	2010	376	146	4	19	23
	2020	404	160	10	60	70
	2030	392	162	10	60	70
	2040	387	160	10	61	71
744	2010	201	74	9	65	74
	2020	211	82	8	60	68
	2030	212	87	8	60	68
	2040	216	89	7	60	67
746	2010	49	14	0	0	0
	2020	41	15	0	0	0
	2030	41	16	0	0	0
	2040	40	16	0	0	0

Table 25M – Ravenna Township TAZ Data						
TAZ	*Year*	*Population*	*Households*	*Retail Jobs*	*Non-Retail Jobs*	*Total Jobs*
755	2010	624	210	0	9	9
	2020	631	226	0	20	20
	2030	643	245	0	23	23
	2040	653	262	0	23	23
756	2010	823	282	1	16	17
	2020	856	302	0	18	18
	2030	870	326	0	22	22
	2040	875	346	0	22	22
776	2010	889	288	0	12	12
	2020	873	312	0	12	12
	2030	917	349	5	10	15
	2040	972	392	5	10	15

Table 25N – City of Vermillion TAZ Data						
TAZ	*Year*	*Population*	*Households*	*Retail Jobs*	*Non-Retail Jobs*	*Total Jobs*
736	2010	268	98	10	38	28
	2020	254	101	10	29	39
	2030	260	101	20	30	50
	2040	260	107	23	35	58
737	2010	151	58	65	0	65
	2020	156	59	75	36	111
	2030	160	59	70	60	130
	2040	160	63	70	72	142

Table 25O – Vermillion Township TAZ Data						
TAZ	*Year*	*Population*	*Households*	*Retail Jobs*	*Non-Retail Jobs*	*Total Jobs*
735	2010	205	73	1	29	30
	2020	208	78	0	55	55
	2030	215	83	0	70	70
	2040	221	89	0	70	70
736	2010	307	107	0	39	39
	2020	306	114	5	40	45
	2030	315	122	5	42	48
	2040	325	130	0	50	50
737	2010	109	44	0	14	14
	2020	126	47	0	26	26
	2030	130	50	0	25	25
	2040	134	54	0	23	23
738	2010	368	135	2	3	5
	2020	384	143	5	7	12
	2030	390	151	0	15	15
	2040	395	158	0	15	15

Table 25O – Vermillion Township TAZ Data						
748	2010	203	65	0	2	2
	2020	186	68	0	2	2
	2030	190	74	0	2	2
	2040	195	78	0	2	2

Table 25P – Waterford Township TAZ Data						
TAZ	*Year*	*Population*	*Households*	*Retail Jobs*	*Non-Retail Jobs*	*Total Jobs*
705	2010	201	76	4	335	339
	2020	197	79	40	330	370
	2030	200	82	20	355	375
	2040	199	82	10	375	385
706	2010	60	23	0	23	23
	2020	60	24	0	37	37
	2030	62	25	0	37	37
	2040	62	25	0	39	39
707	2010	23	10	0	0	0
	2020	25	10	0	0	0
	2030	26	11	0	0	0
	2040	26	11	0	0	0
708	2010	213	84	0	318	318
	2020	218	87	20	323	343
	2030	222	92	10	338	348
	2040	223	92	10	346	356

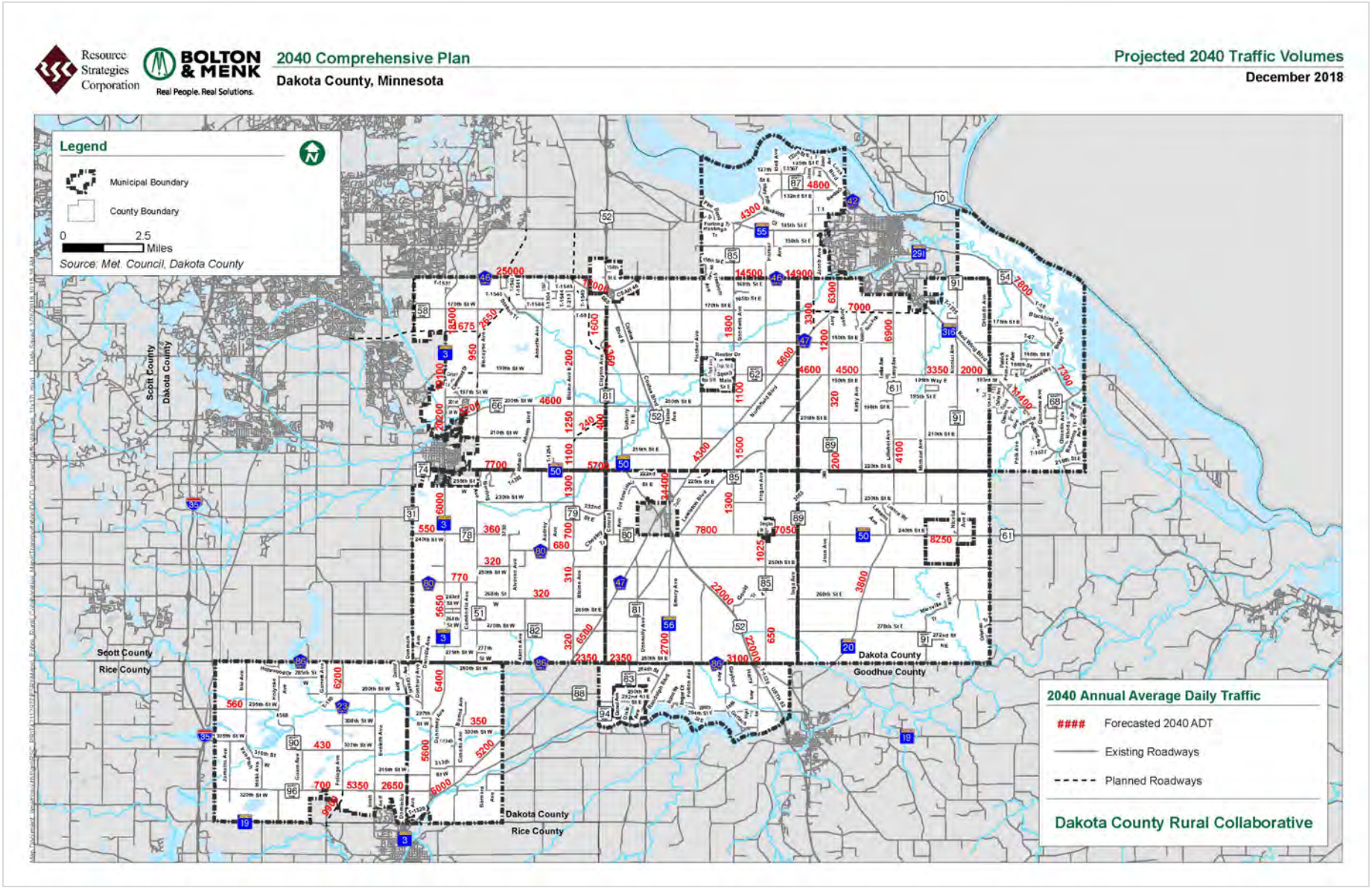
3. 2040 Traffic Projections

2040 traffic projections were made using a combination of methods and sources including the following:

- Historic trend analysis for volumes
- Assessment of anticipated local and regional development patterns and associated TAZ information
- Discussion and coordination with Dakota County Transportation staff
- Review of other studies and plans for consistency

The projected 2040 traffic volumes are presented in Figure 11.

Figure 11: Future Traffic Projections



4. Future Capacity Deficiencies

A planning-level analysis was performed to identify roadway segments where capacity problems are anticipated to occur by 2040. Based on the projected 2040 traffic volumes and the assumed 2040 roadway network, an analysis of anticipated future congestion conditions was performed. This analysis used the volume-to-capacity method. The volumes were taken from the 2040 projections discussed under the previous heading. The capacity is based on typical capacity levels for different non-freeway types and configurations of roadways as summarized in Table 26.

Table 26 – Typical Traffic Capacity by Roadway Type/Configuration

Facility Type	Functional Classification	Planning Level Capacity (ADT)
Gravel Road	Local Road	1,000
2-Lane Local/Residential Road		1,700
Rural 2-Lane Highway	Major Collector, Minor Arterial, Principal Arterial	13,000
Rural 3-Lane	Major Collector, Minor Arterial, Principal Arterial	18,000
Rural 4-Lane Undivided		34,000
Rural 4-Lane Divided		37,000
Urban 2-Lane Undivided		11,000
Urban 2-Lane Divided		16,000
Urban 3-Lane		22,000
Urban 4-Lane Undivided		22,000
Urban 4-Lane Divided		32,000
4-Lane Rural Expressway	Minor Arterial, Principal Arterial	61,000
4-Lane Urban Expressway		68,000
4-Lane Rural Freeway	Principal Arterial	71,000
4-Lane Urban Freeway		76,000

The results are shown in Figure 12**.** The roadway segments where projected volumes exceed planning-level capacity are summarized below. Volume to capacity ratios over 1.0 are considered over capacity. There are some roadway segments which are "approaching capacity," defined has having a volume-to-capacity ratio of 0.85 – 0.99. These are locations which should be monitored in the coming years to determine if problem conditions develop and next steps should be implemented including more detailed analysis.

Table 27 – Projected 2040 Roadway Capacity Deficiencies

Roadway Segment	Volume to Capacity Ratio
MN Hwy. 3 (Empire Township)	1.16 to 1.26
CR/CSAH 46/ 160th St (Empire Township)	1.39
CR/CSAH 46/ 160th St (City of Coates)	1.06
CR/CSAH 46/ 160th St (Nininger and Vermillion Twp)	0.91 to 0.93

Figure 12: Projected 2040 Volume to Capacity Ratio

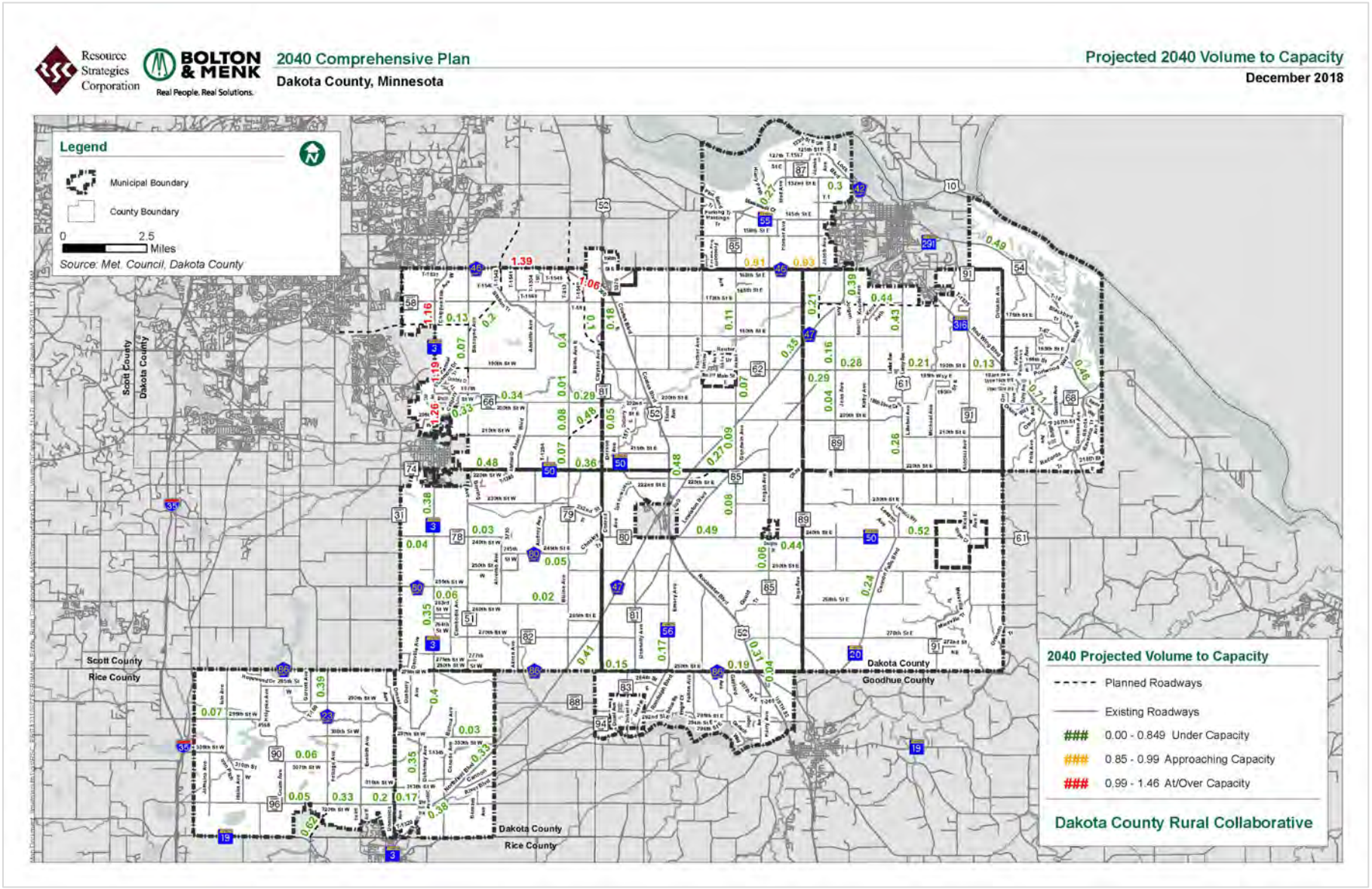
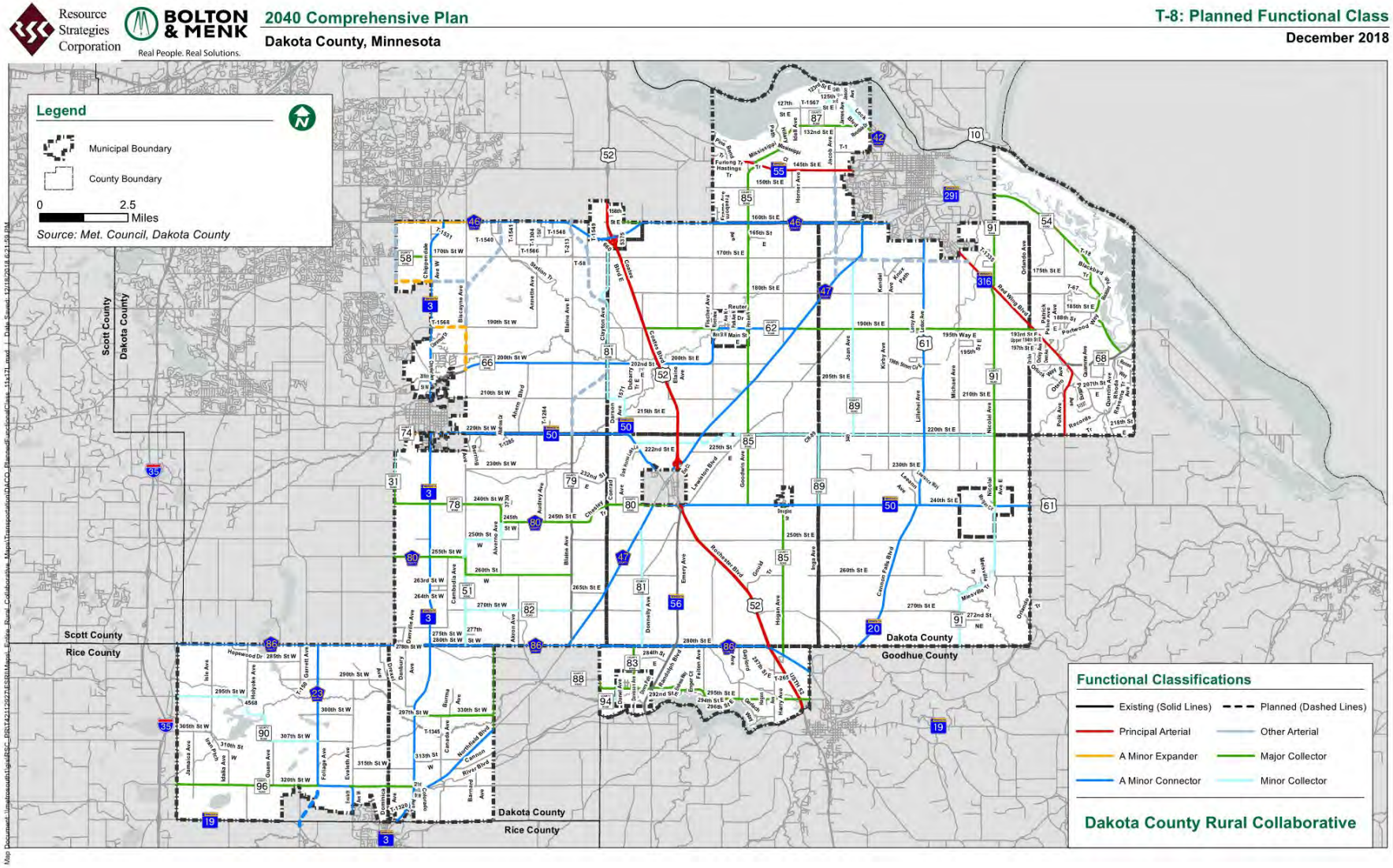


Figure 13: Planned Functional Class



5. Future Functional Classification

Future functional class roadways within the Rural Collaborative are shown in Figure 13. Table 28 denotes the functional class of planned, future roadways in the collaborative area.

Table 28 – Planned Functional Classification for Future Roadways			
Functional Class	**Roadway**	**From**	**To**
"B" Minor Arterial	Future 178th Street	MN Hwy 3/ Chippendale Ave	Future CR 73
"B" Minor Arterial	Future CR 71	CR/CSAH 46/ 160th Street E	CR 81/ Clayton Ave
"B" Minor Arterial	Future CR 73	CR/CSAH 46/ 160th Street E	CR/CSAH 66/ 200th Street E
"B" Minor Arterial	Future CR 79	CR 81/ Darsow Ave	MN Hwy 50/ 220th Street E
"B" Minor Arterial	Future CR/CSAH 47	CR/CSAH 46/ 160th Street E	CR/CSAH 47/ Northfield Blvd
"B" Minor Arterial	Future 170th Street	CR/CSAH 47/ Northfield Blvd	US TH 316/ Red Wing Blvd

Re-designations of roadways involving the A-minor arterial functional classification (e.g. from collector to arterial, from arterial to collector, or changing designations within arterial) is under the authority of the Metropolitan Council. For collector roadways, the functional class designation is under the authority of the agency which owns the given road. The Dakota County Rural Collaborative executive committee feels the functional classifications of various roadways should be revised from existing or proposed conditions. These revisions are summarized in Table 29, based on input from Dakota County staff and executive committee conversations**.**

Table 29 – Proposed Functional Classification Changes for Existing Roadways					
Current Functional Class	**Proposed Functional Class**	**Roadway**	**From**	**To**	**Comments**
"A" Minor Connector	Principal Arterial	MN Hwy 3/ Chippendale Ave	Inver Grove Heights	Northfield	Recommendation from Principal Arterial Study
"A" Minor Connector	Principal Arterial	US TH 61	Hastings	Douglas Twp	Recommendation from Principal Arterial Study
"A" Minor Connector	Principal Arterial	MN Hwy 50	Farmington	Douglas Twp	Recommendation from Principal Arterial Study
"A" Minor Connector	Principal Arterial	CR/CSAH 86	Greenvale Twp	Randolph Twp	Recommendation from Principal Arterial Study
Collector	"B" Minor Arterial	CR 81/ Clayton Ave	Future CR/CSAH 71	Future CR/CSAH 79/ 210th Street E	To provide local access between CR/CSAH 46, future CR 71, and CR/CSAH 66

6. Future Jurisdictional Classification

The Dakota County 2030 Transportation Plan identifies existing county roads that are candidates for jurisdictional transfer or turnback to local units of government. Such turnbacks will add responsibilities for additional roadway maintenance to local communities. Roads located in the collaborative area that are turnback candidates, as identified in the Dakota County 2030 Transportation Plan, are detailed in Table 30 by County priority. The majority of these roads are gravel roads. There are also discussions between MnDOT and Dakota County regarding the turnback of Highways 3, 56, and 61 from the state to the county; there are no timelines for these turnbacks.

Table 30 – Proposed County Roadway Turnbacks in Dakota County Rural Collaborative		
Roadway	**Segment**	**County Priority**
CR 48/ 160th Street E	0.84 miles in Coates and Rosemount	High, within 5 years of plan adoption
CR 76/ 230th Street E	5 miles in Douglas Township	High, within 5 years of plan adoption
CR 23/ Eveleth Ave	0.5 miles in Greenvale Township	Moderate, within 10 years of plan adoption
CR 53/ Arkansas Ave	2.4 miles in Waterford Township	Moderate, within 10 years of plan adoption
CR 62/ 190th Street E/ Main Street W	3.1 miles in Vermillion and Vermillion Township	Moderate, within 10 years of plan adoption
CR 94/ Cannon River Blvd/ Cooper Ave	1.2 miles in Waterford Township	Moderate, within 10 years of plan adoption
CR 81/ 210th Street E/ Darsow Ave/ Clayton Ave	3 miles in Empire and Vermillion Townships	Low, within 20 years of plan adoption
CR 83/ Connelly Ave	5.6 miles in Randolph and Hampton and Randolph Townships	Low, within 20 years of plan adoption
CR 90/ 295th Street W/ 300th Street W/ 307th Street W/ Hayes Ave/ Holyoke Ave	5.1 miles in Greenvale Township	Low, within 20 years of plan adoption
CR 93/ Orlando Ave	2 miles in Douglas Township	Low, within 20 years of plan adoption

7. Access Management

Access management refers to balancing the need for connections to local land uses (access) with the need for network-level movement (mobility) on the overall roadway system. Arterials generally have limited access in the form of driveways and low volume side streets because their role in the network is to support relatively long, high speed traffic movements; collectors allow a greater degree of access given their combined mobility/access function, and local streets have relatively few limits on access. Dakota County has identified and adopted guidelines from MnDOT for access locations on all major roadways. MnDOT access management guidelines are provided in Appendix D.

E. Transit Plan

1. Transit Market Area

The Metropolitan Council has defined Transit Market Areas based on the following primary factors:

- Density of population and jobs
- Interconnectedness of the local street system
- Number of autos owned by residents

In general, areas with high density of population and jobs, highly interconnected local streets, and relatively low auto ownership rates will have the greatest demand for transit services and facilities. Transit Market Areas are a tool used to guide transit planning decisions. They help ensure that the types and levels of transit service provided match the anticipated demand for a given community or area.

Based on this analysis, the Metropolitan Council categorizes all Dakota County Rural Collaborative communities in Transit Market Area V. As identified in Appendix G of the Metropolitan Council's 2040 Transportation Policy Plan (TPP), the characteristics of this category area are as follows:

Transit Market Area V has very low population and employment densities and tends to be primarily Rural communities and Agricultural uses. General public dial-a-ride service may be appropriate here, but due

to the very low-intensity land uses these areas are not well-suited for fixed-route transit service. Transit Market Index Range (TMI) is less than 32.0.

Also, from Appendix G of the 2040 TPP (Table G-2), the typical transit service within this Market Area consists of the lowest potential ridership and is not well-suited for fixed route service. Primary emphasis is on general dial-a-ride service.

2. Current and Planned Service Facilities

All collaborative communities are outside the Transit Taxing District. There are no existing transit facilities or services and no plans for transit services in the collaborative area, shown in Figure 14. As noted above, County Roads 42 and 46 have been identified as possible east-west transit corridors in the future. These roads have not been identified for further study at this time.

The closest regularly scheduled services are in the City of Rosemount at the Rosemount Transit Station (Routes 420, 476, 478, and 484) or the City of Apple Valley at the 157th Street Station (Routes 477 and 479). Future Red Line extensions into the City of Lakeville will provide additional connection options. Currently, Dial-a-Ride services are provided through Dakota County, serving transit needs within the Rural Collaborative Area.

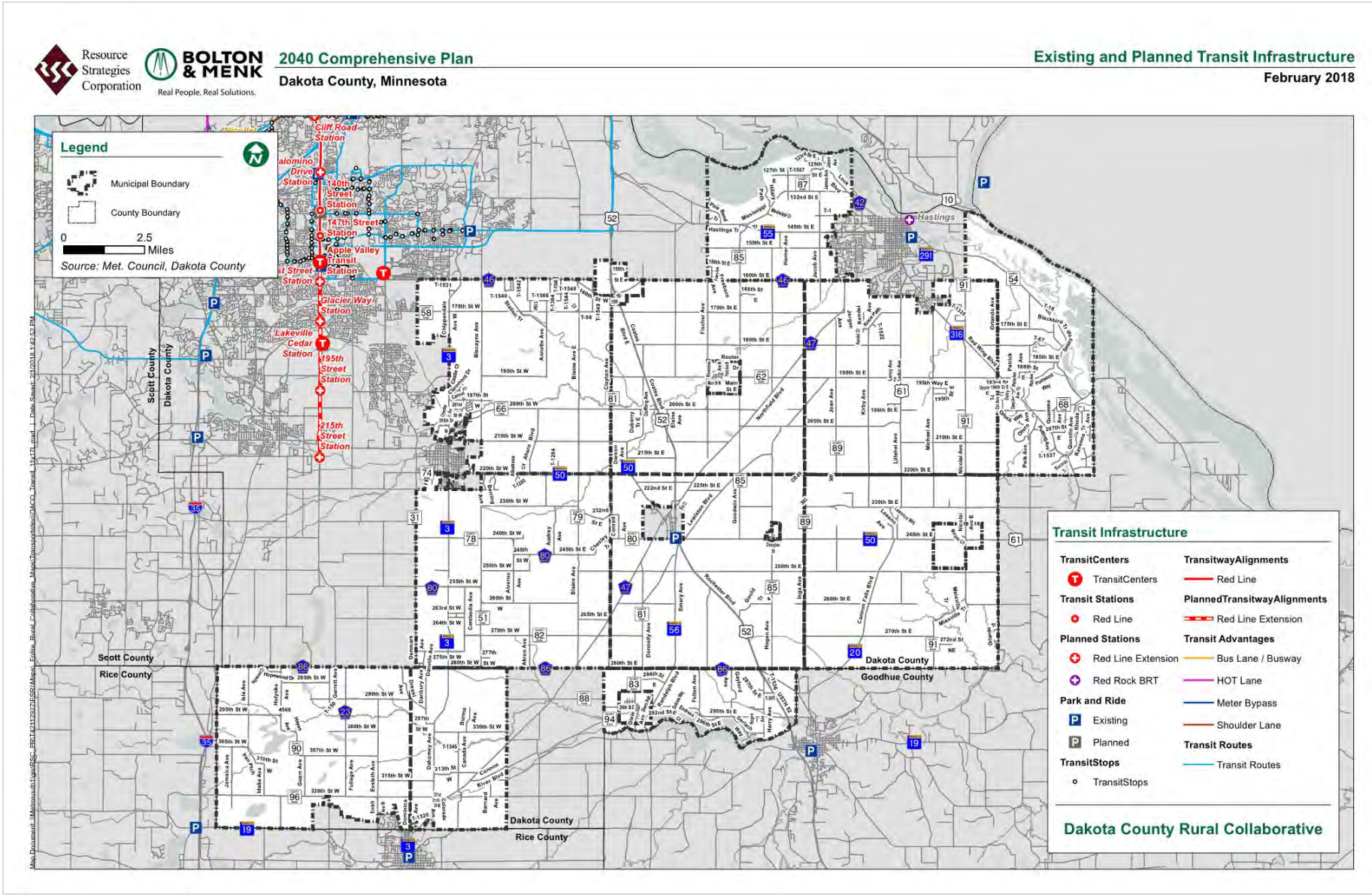
Dial-a-Ride Service

Collaborative communities are serviced by Transit Link, the dial-a-ride service provided through the Metropolitan Council at the county level. Transit Link provides metro-wide transit connections and access to qualifying rides, such as last mile service, connections between transit stations, or to and from area not serviced by regular bus routes. Any member of the public may reserve a qualifying ride. Each trip is assessed to ensure it does not overlap with regular route bus services. Starting and ending destinations must be more than ¼ mile from regular route transit in winter months (November –March) and more than ½ mile from regular route transit in summer months (April- October). Transit Link Service does not operate on Thanksgiving Day, Christmas Day, and New Year's Day.

Transit Link fares are determined by distance traveled. Trips less than 10 miles are $2.25 one way, trips between 10 and 20 miles are $4.50 one way, and trips more than $20 miles are $6.75 one way. ADA-certified riders pay a maximum of $4.50 one way regardless of distance traveled. This fare includes transfer to a regular service route except for the Northstar Line or peak hour services.

Transit Link service offered through Dakota County serves all cities and townships in the county. Service is available Monday-Friday from 6:00am –7:00pm. Transfers between Transfer Link and regular service routes take place at one of the following transit hubs: Signal Hills Shopping Center, Eagan Transit Center, Apple Valley Transit Center, Burnsville Shopping Center, and Burnsville Transit Station. The following stations in Hennepin County are also available for transfer service: Bloomington South Transit Center and Mall of America Transit Center.

Figure 14: Existing and Planned Transit Infrastructure



F. Non-Motorized Transportation Plan

1. Existing Bicycle Facilities

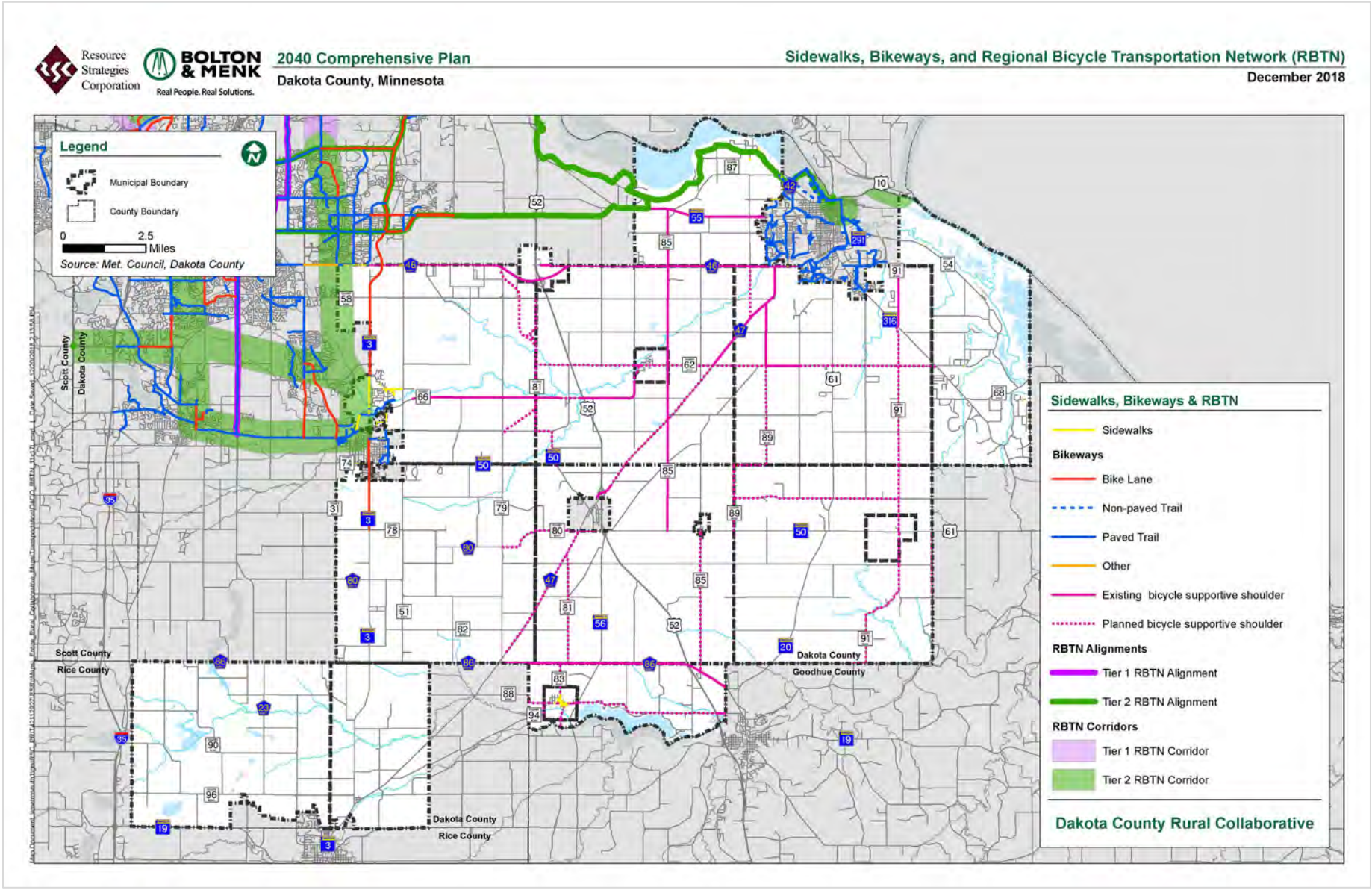
Existing bicycle trails in the collaborative area are primarily on-road (shoulder) bikeways. Existing bikeways include portions of MN Highways 3 and 56 and County Roads 42, 47, 62, 66, 68, 78, 85, 88, 88, and 91. Empire Township has also created an off-street, paved (bituminous) trail along MN Hwy 3 between 195th Street W and the Vermillion River.

In addition, the Metropolitan Council has designated the Regional Bicycle Transportation Network (RBTN). This consists of prioritized alignments and corridors (where alignments have not yet been established) that were adopted in the Metropolitan Council's 2040 Transportation Policy Plan. In the Rural Collaborative, a Tier 2 corridor/alignment runs north/south along the western edge of Empire Township, shown in Figure 15. Existing bicycle facilities are also depicted in Figure 15.

2. Planned Bicycle Facilities

As noted in Section C-5, Dakota County is currently in the process of developing a Pedestrian and Bicycle Plan. At present, future trail corridors have been identified by Dakota County as part of a "Greenways" network. These proposed alignments are primarily located along the major rivers in rural areas. These facilities are shown and discussed in detail in Figure 4 in Chapter IV, Parks and Trails. Planned greenways (Lake Marion Greenway and an unnamed north/south greenway) loosely align with Tier 2 RBTN search corridors near and in Empire Township.

Figure 15: Bikeways and RBTN



G. Aviation Plan

There are no airports located in any of the Collaborative communities. Airlake Airport is the nearest airport facilities within the regional system. Airlake Airport is located on the border of Eureka Township and the City of Lakeville and is classified as minor reliever airports within the regional system. The airport is just over three miles from the western Castle Rock Township border, outside the airport's area of influence.

There are also two private airstrips in the Collaborative, located in the City of Coates and Empire Township.

The Metropolitan Council states that each community has a responsibility to identify policies and ordinances that protect regional airspace from obstructions, including meeting any Federal Aviation Administration (FAA) notification requirements Any applicant who proposes to construct a structure 200 feet or more above the ground that could affect navigable airspace level must get appropriate approvals. The Federal Aviation Administration and the Minnesota Department of Transportation must be notified at least 30 days in advance in advance of construction, as required by law per MCAR 8800.1200, Subpart 3 and FAA Form 7460-8.

H. Freight Plan

Freight transport is the physical process of transporting commodities and merchandise goods and cargo. Collaborative communities are dependent on the efficient movement of freight. Figure 16 illustrates the important corridors important to Collaborative communities in regards to the freight plan.

1. Trucks

The movement of freight by trucks is important to economic vitality. Trucks are the predominate mode for most regional and short-haul freight trips. Future economic competitiveness will depend in part on a transportation system that allows efficient movement of freight. There are several 10-ton highways running through collaborative communities, shown in Figure 16. The Metropolitan Council's 2017 Freight Study recognizes three tiers of truck corridors based on truck volume and proximity to freight or industrial facilities. Tier One corridors are the busiest or most heavily truck trafficked corridors in the seven-county Metropolitan Area. There are four Tier One corridors in the Rural Collaborative: US TH 52, MN TH 55, MN T 316, and MN TH 47.

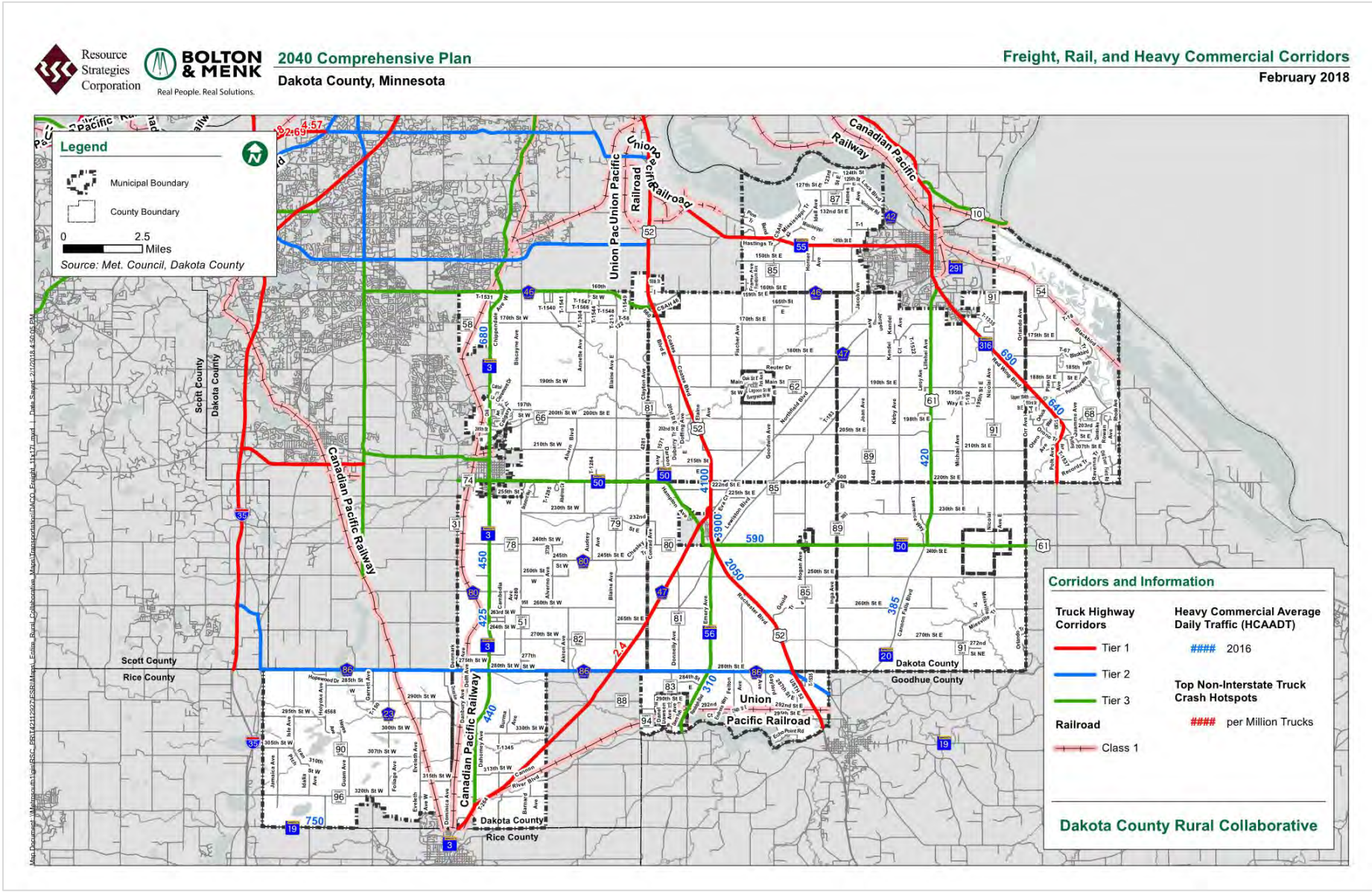
Figure 16 also depicts average daily heavy commercial traffic and non-intersection truck crash hotspots. The most notable heavy truck crash hotspot in the Rural Collaborative is along MN TH 47 between Hampton Township and Waterford Township, which has about 2.4 crashes per million trucks.

Given the rural character of the Dakota County Collaborative communities, there is little freight generated within the Collaborative. Based on future land use plans, there is the potential for freight generation in a small planned industrial area in the City of Randolph and Randolph Township. This area, shown in the Future Land Use Map in the Land Use Chapter of this plan, is located off of a branch of the Canadian Pacific Railway and County Roads 86 and 94.

To accommodate the large number of trucks on highways, the Dakota County 2030 Transportation Plan identified a 10-ton highway system to help facilitate truck traffic in the County. Proposed routes are within the County's jurisdiction and would support existing freight routes on the state highway system. According to this plan, County Roads 46 and 47 meet technical criteria and require action through Township Boards, City Councils and/or County Board of Commissioners resolutions. Contingent 10-ton

routes on County Roads 71, 79, and 86 have been identified if the routes are expanded or receive infrastructure improvements.

Figure 16: Freight, Heavy Rail, and Commercial Corridors



2. Railroads

Railroads are a significant element in the transportation system. Two Class I rail carriers operate in collaborative Communities. Class I rail carriers are defined by exceeding approximately $350 million in annual operating revenues. The two Class I carriers operating in the collaborative area are the Canadian Pacific Railway and the Union Pacific Railroad, shown in Figure 16. The Canadian Pacific Railway has an active line in Ravenna Township. Union Pacific has active lines in Castle Rock Township, Empire Township, Greenvale Township, the City of Randolph, Randolph Township, and Waterford Township

Dakota County anticipates having an ongoing role in state and federal planning processes for intercity passenger rail and high-speed rail service. The Dakota County Regional Railroad Authority currently participates on the Minnesota High Speed Rail Commission, which advocates for the development of a high-speed rail connection between Minneapolis-St. Paul and Chicago as part of a larger Midwestern high-speed rail network. Planning work undertaken jointly by the Departments of Transportation in Minnesota and Wisconsin is currently determining the most feasible route alignment based on ridership potential, cost of improvements, and other physical constraints; several alternatives may route trains through collaborative communities.

The Minnesota Comprehensive Statewide Freight and Passenger Rail Plan (2010) developed by MnDOT identifies intercity passenger rail service planned for a 'Phase I' implementation that would operate through Dakota County on existing freight rail infrastructure within collaborative communities. Service between the Twin Cities and Mankato (Minnesota Valley Line) estimates four trips per day with a maximum speed of 79 mph, with total infrastructure improvement costs of $615 million per year and operating costs of $14.1 million. Service between the Twin Cities and Rochester (Rochester Rail Link) is planned for 8 trips per day with a maximum speed of 110 mph; total infrastructure and operating costs are estimated at $835.9 million and $28.9 million, respectively. No timeline is presently set for development of these services.

VI. WATER RESOURCES

A. Wastewater

1. Forecast Table

According the Metropolitan Council population, household, and employment forecasts, the Dakota County Rural Collaborative will have the following sewer demands, as detailed in Table 31.

Table 31 – Population, Housing, & Employment Sewer Allocation Forecasts

	Forecast Component	2010	2020	2030	2040
Population	MCES Sewered	1,922	2,632	3,447	4,278
	Municipal Sewered	399	398	408	408
	Unsewered	11,880	12,053	12,335	12,534
	Total	**14,201**	**15,083**	**16,190**	**17,220**
Households	MCES Sewered	618	923	1,269	1616
	Municipal Sewered	150	154	154	164
	Unsewered	4,292	4,583	4,877	5,110
	Total	**5,060**	**5,660**	**6,300**	**6,890**
Employment	MCES Sewered	36	130	160	200
	Municipal Sewered	93	150	180	200
	Unsewered	2,369	2,840	3,070	3,270
	Total	**2,498**	**3,120**	**3,410**	**3,670**

2. Existing System

The cities and townships are not served by public sewer systems, with the exception of western portions of Empire Township and portions of the City of Vermillion that are served with municipal sewers. Hence, the vast majority of households and businesses in the collaborative area are dependent upon subsurface sewage treatment systems (SSTSs). It is estimated that there are approximately 5,000 residential and commercial individual sewage treatment systems in the collaborative area. The sewer systems in Empire Township and Vermillion City are fully detailed in the respective individual community plans.

Minnesota Pollution Control Agency Rules Chapter 7080 (now amended to incorporate Chapters 7081-7083), require that certain standards be met for all SSTS installers, maintainers, haulers, designers, and inspectors, service providers, as well as administration and enforcement of the Rules by local units of government. Dakota County Ordinance #113 governs SSTS regulations in areas of its jurisdiction. The ordinance provides standards, guidelines, and regulations for the compliance and enforcement of the proper siting, design, construction, installation, operation, maintenance, repair, reconstruction, inspection, and permanent abandonment of SSTSs.

Collaborative Communities have adopted Ordinance #113 and are responsible for the review, permitting, and inspections of new and existing SSTSs. All SSTS designers, installers, inspectors, and maintainers, and service providers must be licensed by the MPCA. Dakota County maintains authority for permitting and inspections within shoreland and floodplain areas, as well as regulates individual septic systems in communities that have turned back permitting to Dakota County (Randolph and Waterford Townships and the Cities of New Trier and Randolph).

The collaborative member communities and Dakota County have established a cooperative three-year inspection program for SSTS monitoring and maintenance. The County provides notification to approximately one-third of the SSTS owners in each community every year. The notification includes the requirement for the pumping of septic tanks and visual inspection of the system.

SSTS owners are required to contract with licensed maintainer for the maintenance and inspection program. Maintainers are required to submit pumping and inspection records to the County. If the inspection reveals necessary or potential repairs to a system the County refers the action to the local unit for appropriate enforcement. If SSTS owners do not respond to the maintenance and inspection requirement after a third notice, the County refers the matter to the local unit for enforcement. Inspection violations, complaints, and potential repairs are referred to local Building Officials for enforcement. If the Building Official cannot remedy violations and repairs through normal enforcement procedures, the matter is turned over to the Township Attorney or City Attorney for prosecution.

Appendix E shows SSTS located in the Collaborative Area. "Systems with Problems" only include systems serviced by Dakota County in 2018 that had documented drainage or leakage. While these data are the best available, there may be other systems or systems with problems present in collaborative communities. Table 31 above should be used for planning purposes regarding capacity and SSTS in the City.

3. Capacity

Empire Township and Vermillion City are the only communities within the Collaborative to have sewer systems and wastewater treatment plants. Table 32 shows actual and projected MGD (million gallons per day) flows for wastewater treatment plants. The current systems have sufficient capacity to meet the demands of population forecasts in sewered areas of the Collaborative.

Table 32 – Actual and Projected MGD Flows

Treatment Facility	2010	Current Flow Average	2040 Planned Capacity	Planned Long-Term Capacity
Empire WWTP	24	10	24	50
Vermillion WWTP	0.03	0.035	0.05	0.05

Source: Metropolitan Council, in million gallons/day

The Vermillion Plant has a design capacity of 54,000 gallons per day in wet weather conditions and 43,200 gallons per day in dry weather conditions. Anticipated development in Vermillion City will put the system at capacity. Wastewater flows through a ditch to the Vermillion River after it has been treated at the Vermillion Plant. Biochemical oxygen demand and suspended solids are the two effluent limits, or pollutants that are monitored closely for amounts discharged.

Tables 33 and 34 detail the projected population of the Empire WWTP service area and the treatment plant flow projections. The Empire WWTP has capacity for 14 MGD of additional wastewater treatment. If all seven new service districts were to develop fully, on average, 1.8 MGD of additional wastewater would be produced in Empire Township. Unless other cities contribute a large amount of additional wastewater, the Empire WWTP will have capacity for all new development in the Township. Empire Township will work with MCES to ensure the WWTP has capacity before any expansion of the system occurs.

Table 33 – Sewered Population and Employment Forecasts

	2010 Pop.	2010 Employment	2040 Pop.	2040 Employment
Empire Plant Service Area	131,120	35,170	215,580	57,040

Table 34 – Treatment Plant Flow Projections

	2010	2020	2030	2040
Empire Plant	9.98	11.31	12.84	14.48
Empire Twp	0.13	0.17	0.21	0.25

In million gallons/day

4. Long Term Capital Improvements

The following projects are anticipated for the Empire WWTP, as noted in the Metropolitan Council's Water Resources Policy Plan:

- Solids processing (accommodate growth & replacement of existing systems); $15 million, 2016 - 2020
- Effluent Forcemain (accommodate growth); $20 million, 2031-2040
- Rehabilitation (replacement); $80 million, 2031-2040

B. Surface Water: Local Water Management Plan

1. Executive Summary

This Local Water Management Plan (LWMP) contains the elements needed to be consistent with the requirements Minnesota Statutes 103B and Minnesota Rules 8410. This plan is consistent with the goals and policies of the Metropolitan Council's Water Resources Management Policy Plan and the watershed management organizations having jurisdiction within the planning area. The LWMP includes the following:

- Water Resource Related Agreements
- Physical Environmental and Land Use
- Existing and Potential Water Resource Problems
- Goals and Policies
- Implementation Priorities
- Amendment Procedures

Dakota County has primary responsibility for enforcement of zoning regulations to protect rivers, streams and lakes in the unincorporated townships through administration of the County Shoreland and Floodplain Management Regulations, while the responsibility within incorporated areas lies with each individual city. The County regulations are in conformity with the shoreland and floodplain regulations established by the Department of Natural Resources.

2. Water Resource Related Agreements

Most local units in southern Dakota County have informal agreements to receive technical assistance from the Dakota County Soil and Water Conservation District (SWCD).

All townships and cities in the rural collaborative are located within either the Vermillion River Watershed or the North Cannon River Watershed. The Vermillion River Watershed Joint Powers Organization (VRWJPO), spanning Scott and Dakota Counties, adopted its current watershed plan in 2016. The North Cannon River Watershed Organization (NCRWMO) adopted its current watershed plan in 2013. Collaborative communities have adopted by reference the VRWJPO Watershed Management Plan (June 2016, http://www.vermillionriverwatershed.org/plans-reports/watershed-management-plan/) or the NCRWMO Watershed Management Plan (August 2013) within their respective watershed areas.

In adopting the Vermillion River Watershed Management Plan by reference, communities are agreeing to submit proposed plans to the VRWJPO for review and comment if plans include the following attributes:

- Variances from local ordinances that affect surface water or impact surface water/groundwater interactions
- Diversions
- Intercommunity flows (to or from)
- Project site size of 40 acres or more
- Activities directly adjacent to the Vermillion River, its tributaries, a lake, or a protected water.

NCRWMO has been participating in the development of a Comprehensive Watershed Management Plan for the Cannon River Planning Area. This planning effort is part of the Board of Water and Soil

Resources One Watershed, One Plan (1W1P) program. The vision for 1W1P is to align local water planning on major watershed boundaries with state strategies towards prioritized, targeted and measurable implementation plans. The NCRWMO intends to adopt the Cannon River Comprehensive Watershed Management Plan as the NCRWMO Watershed Management Plan. The NCRWMO member communities will be able to adopt the Comprehensive Watershed Management Plan by reference just as they have done with the previous NCRWMO Watershed Management Plans.

The primary purpose of the watershed organizations is to protect and preserve natural drainage systems, surface water quality, and groundwater quality. The organizations are also responsible for insuring that jurisdictions properly and consistently implement local water management plans, unless permitting jurisdiction has been relinquished to the watershed authority. Where issues concerning more than one jurisdiction cannot be resolved through efforts at the local level, the JPO and WMO will act to settle such issues at the request of the jurisdictions.

3. Physical Environment and Land Use

The rural collaborative communities are located within either the Vermillion River Watershed or the North Cannon River Watershed. Surface water features and watershed boundaries in southern Dakota County are identified in Figure 17. Several of the more significant water resources in the study area include: Cannon River, Vermillion River, Lake Byllesby and Spring Lake.

Vermillion River Watershed

Ten northerly rural collaborative communities are located within the Vermillion River Watershed. Three of these – Castle Rock Township, Hampton Township, and Douglas Township– are also located within the North Cannon River Watershed. The VRWJPO adopted its Watershed Management Plan in June, 2016. The Standards include a policy statement, basic regulation, and specific criteria to be met for each regulation in the following categories:

- Floodplain Alteration Standards
- Wetland Alteration Standards
- Buffer Standards
- Agricultural Standards
- Erosion and Sediment Control Standards
- Stormwater Management Standards
- Drainage Alteration Standards

All rural collaborative communities currently implement the Standards through their own local ordinances. The Water Resources Management Ordinance (2010 Update) for the Dakota County Rural Collaborative is the controlling ordinance for local implementation of the Standards and will be updated to meet the VRWJPO Standards within nine months of the adoption of this comprehensive plan. If a local community is not implementing the ordinance or chooses to relinquish regulatory control, the VRWJPO implements a permitting program and its Rules in the affected area of the community.

North Cannon River Watershed

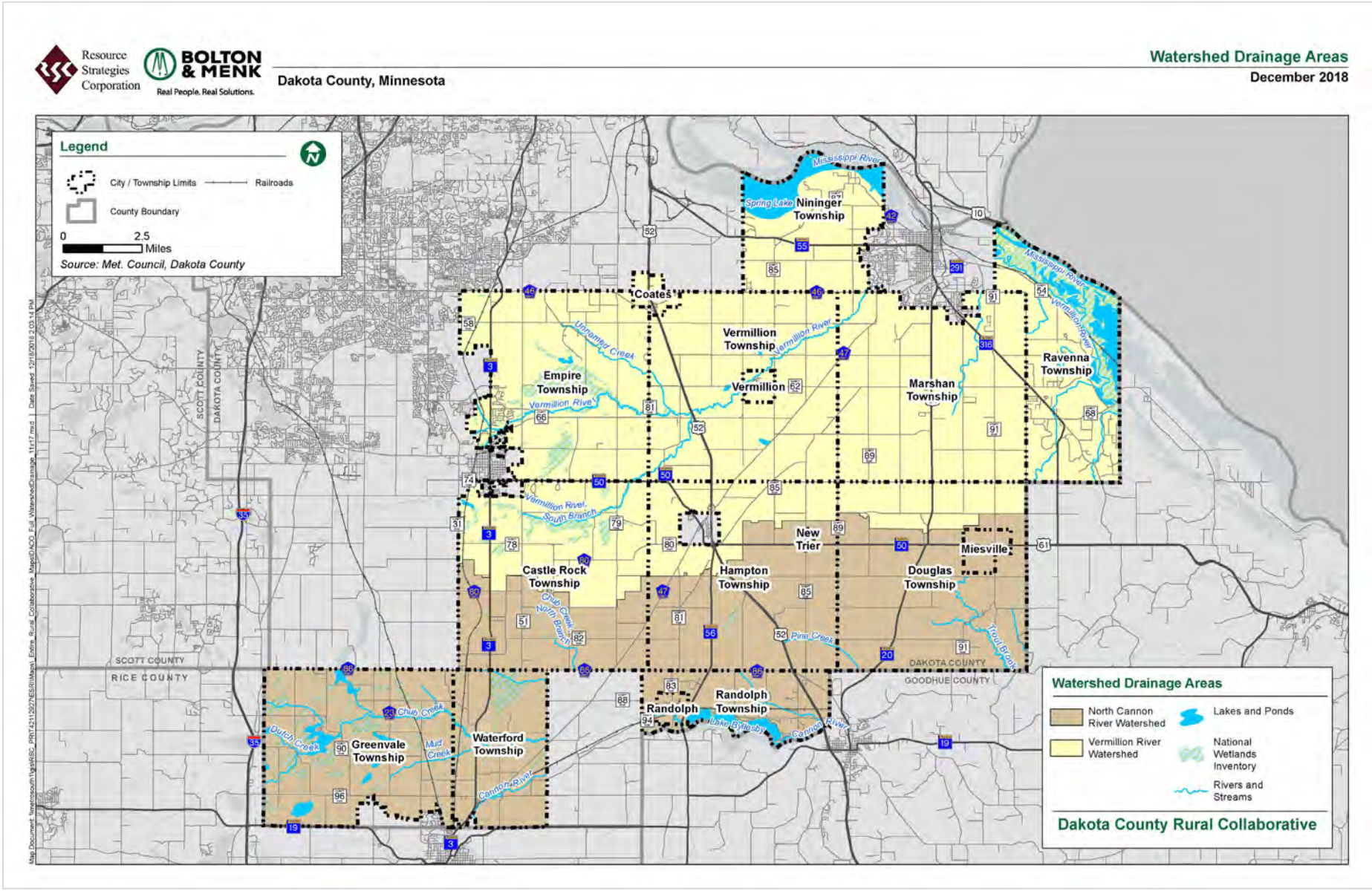
Nine southerly rural collaborative communities are located within the North Cannon River Watershed. The NCRWMO adopted its Watershed Management Plan in November, 2013. Implementation of the 2013 plan will require local governing bodies to adopt and enforce a number of existence ordinances if they have not already done so. Member communities will also be required to comply with and report their actions to complete and enforce the policies of the watershed plan. The NCRWMO may adopt the Comprehensive Watershed Management Plan when it is complete and approved by BWSR. Goals intend to stay the same regardless of which Plan is referenced. The Dakota County Soil and Water Conservation District (SWCD) acts as administrator and technical advisor to the NCRWMO. The NCRWMO Watershed Management Plan includes the following goals:

- Wildlife, Habitat and Recreation: To promote the protection and restoration of high quality natural areas throughout the watershed including wetlands, woodlands, prairies, and riparian corridors for the improvement of water-based recreation, fish and wildlife habitat, and water quality.
- Wetlands: To protect wetlands from destruction or deterioration and to restore wetlands where possible.
- Groundwater: To protect groundwater quality and quantity.
- Soil Erosion and Sedimentation: To reduce soil erosion throughout the watershed.
- Surface Water Quality: To protect and improve the water quality of streams, rivers, and lakes such that each water body is "fully supporting" for its use designations according to MN State Standards.
- Surface Water Quantity: To decrease the rate and volume of water that may contribute to flooding or non-point source pollution from overland runoff and subsurface drainage and dewatering activities.
- Education and Outreach: To increase the awareness of water resources and practices needed for their improvement or protection among all sectors of the community.
- Administration: To fulfill statutory requirements and effectively and efficiently perform the strategies of this Watershed Management Plan.

Each of the North Cannon River and Vermillion River watershed plans have extensive inventories of the water resources in their respective watersheds. See these plans for additional information on:

- Topography
- Soils
- Geology
- Groundwater
- Precipitation
- Land Use and Recreation
- Water Quality and Quantity

Figure 17: Watershed Map



4. Existing and Potential Water Resource Related Problems

The watershed plans describe identify issues associated within their organizations. The primary surface water management issues in the study area are summarized below:

- An increase in agricultural field drainage which alters normal stream flow and can lead to streambank erosion, channel cutting, and high turbidity levels.
- Declining water quality and increased sedimentation in Lake Byllesby.
- Changing climate patterns pose a threat to water quality, wildlife and infrastructure.
- Enforcement of ordinances related to subsurface sewage treatment systems (SSTS) and the possible need for a collective wastewater treatment plant in the City of Randolph.
- Erosion along watercourses due to tree removal and lack of riparian buffers.
- Groundwater consumption increase threatens future supply and health risks due to nitrate in some areas.
- Loss of wetlands due to farming practices, sod farms and some development.
- Loss of wildlife habitat due to an increase in row crops and some development.
- Additional water resource education of watershed residents of the following: buffers, nitrates, innovative practices or latest agricultural best management practices.
- Administrative issues include the need for additional collaboration with agencies and organizations, a concern about overreaching mandates and requirements that unfairly impact watershed residents.

Several water bodies in the VRWJPO are impaired for aquatic recreation or aquatic consumption. An index of biological integrity (IBI) is a score that compares the types and numbers of fish or plants observed in a lake to what is expected for a healthy lake. Impaired water bodies in Collaborative communities within the VRWJPO are listed in Table 35. Impaired waters in Collaborative communities within the NCRWMO watershed are listed in Table 36. These waterbodies are shown in Figure 18.

Table 35 – Impaired Waters in VRWJPO and Collaborative Communities as of 2012

Water Body	Jurisdiction	Nutrients	Bacteria	Turbidity	Nitrates	Mercury and PCBs	Invert and Fish IBI
Vermillion River 504	Ravenna Twp.			X		X	
Vermillion River 507	Vermillion & Empire Twps.		X			X	X
Vermillion River 691	Vermillion Twp.					X	X
Vermillion River 692	Vermillion, Marshan, & Nininger Twps.		X			X	X
South Branch 706	Castle Rock Twp.		X				
South Branch 707	Vermillion, Empire, & Castle Rock Twps.		X				X
Unnamed Creek 545	Empire Twp.	X	X				
Unnamed Creek 671	Empire Twp.		X				

Table 36 – Impaired Waters in the NCRWMO as of 2012							
Water Body	**Jurisdiction**	**Nutrients**	**Bacteria**	**Turbidity**	**Nitrates**	**Mercury and PCBs**	**Invert and Fish IBI**
Cannon River	Waterford, Randolph, and Douglas Twps.		X	X		X	X
Lake Byllesby	Randolph Twp.	X				X	
Chub Creek	City of Randolph and Greenvale, Randolph, and Waterford Twps.		X				X
Dutch Creek	Greenvale Twp.						X
Mud Creek	Greenvale and Waterford Twps.		X				
North Branch of Chub Creek	Castle Rock Twp.		X				
Trout Brook	Douglas Twp.				X		X
Pine Creek	Hampton and Douglas Twps.				X		

The Priority Lakes List provides useful information for the management of the region's lakes and their watersheds. The Priority Lakes List:

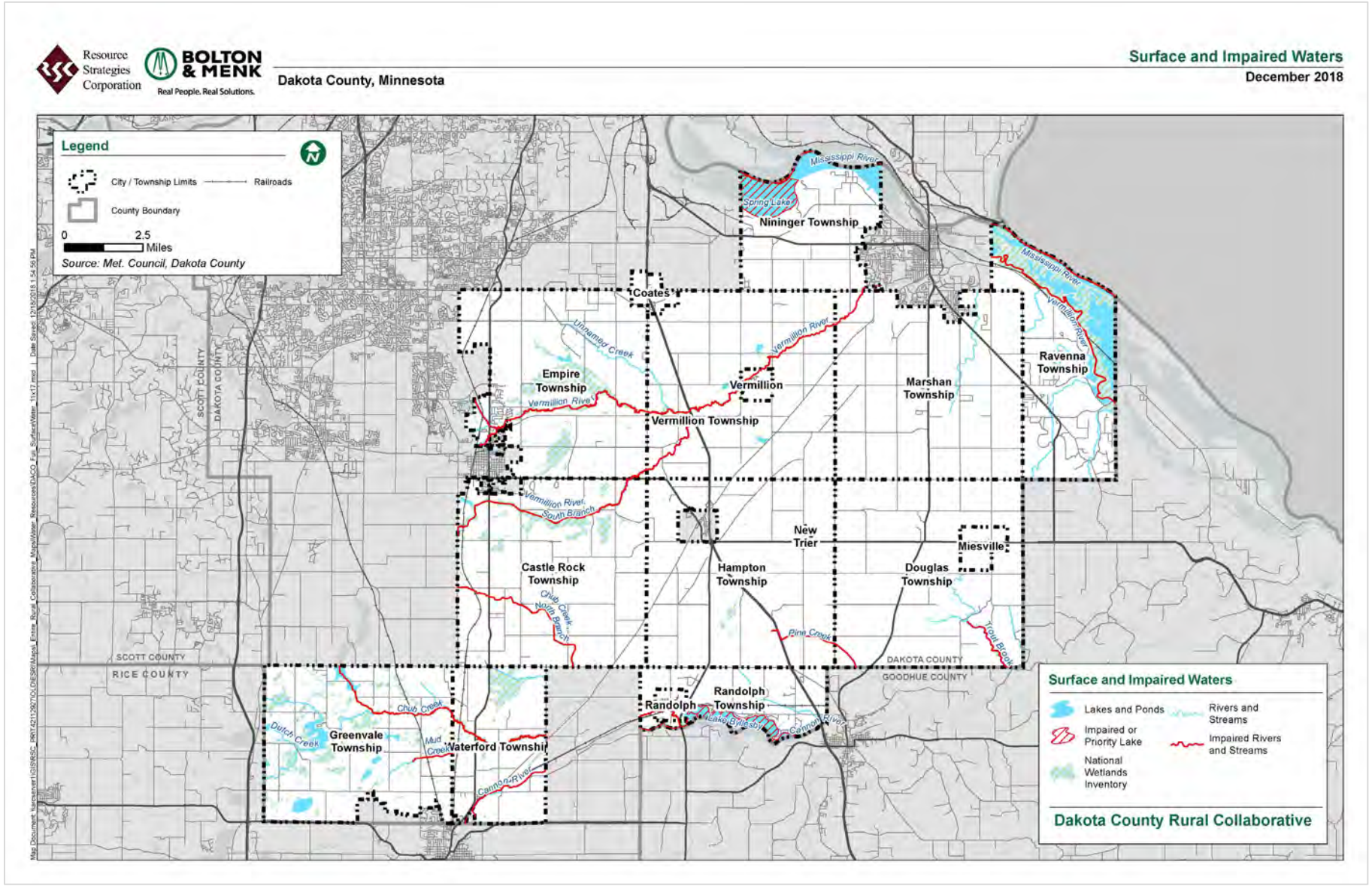
- Indicates the criteria for categorizing a lake as a Council Priority Lake.
- Identifies basic lake characteristics that can influence the management of the lake and its watershed. This type of information can be used to rapidly assess, on a large scale, the appropriate management techniques and challenges for a lake and its watershed. For example, it can be useful in reviewing watershed and surface water management plans, or prioritizing limited funding for lake/watershed improvement projects.

Priority lakes within the Dakota County Rural Collaborative are detailed in Table 37.

Table 37 – Priority Lakes List						
Community	**Lake**	**Surface Area**	**Recreation Use**	**Impaired Beneficial Use**	**Watershed Area**	**Watershed Area to Lake Area Ratio**
Randolph Twp.	Lake Byllesby	1,369	Yes	R = Aquatic Recreation Hg - mercury	733,166	535.7
Nininger Twp.	Spring Lake	1,839 acres	Yes	L (TSS) – Aquatic life impaired by total suspended solids, C, (PCB – Aquatic consumption impaired by PCBs, PFOS, Hg - mercury)	23,780,000	12,931

Local planning and infrastructure improvement projects are being considered by communities in order to improve surface water quality in and around the respective jurisdictions. This may include purchase of sewer and water capacity from a local jurisdiction with capacity to extend service into communities or constructing wastewater stabilization ponds in communities with failing septic tanks. At this time, the City of Randolph is the only community considering a wastewater infrastructure improvement project due to failing SSTS's in the community.

Figure 18: Impaired Waters



5. Implementation Priorities

The MPCA has identified impaired waters in the Vermillion River Watershed JPO and North Cannon River WMO, which are listed in Tables 34 and 35. The communities will participate in the Total Maximum Daily Load (TMDL) studies of impaired waters as needed, and will implement the TMDL plans on projects as they develop.

The Collaborative communities will continue to work with the Dakota County SWCD in implementation of the Wetland Conservation Act (WCA), and the SWCD will continue to act as the Local Government Unit (LGU) in administering the WCA.

The Collaborative communities will continue to implement the standards of the Vermillion River Watershed JPO, as they apply to each community in the watershed. In adopting the Vermillion River Watershed Plan by reference, Collaborative communities also adopt the implementation plan and will participate in and/or support projects located within their jurisdiction (see section 7 of the Vermillion River Watershed Management Plan). This implementation plan performed a subwatershed-level analysis to identify priorities and projects on a more local level.

The Collaborative communities will continue to implement the standards of the North Cannon River Watershed WMO, as they apply to each community in the watershed. In adopting the North Cannon River Watershed Plan by reference, Collaborative communities also adopt the implementation plan and will participate in and/or support projects located within their jurisdiction (see section 6 of the North Cannon River Watershed Management Plan).

6. Amendment Procedures

The Local Water Management Plan may be amended as needed, following the same procedures that are used to amend the Comprehensive Plan. See the Plan Amendment Process in Chapter VII for additional information about the amendment process.

C. Water Supply

1. Private Water Supply

Dakota County Ordinance Number 114 provides standards and regulations of private wells and water supplies. The Ordinance regulates all of the following: construction, reconstruction, operation, maintenance, repair, permanent sealing, and annual maintenance permitting of all wells within Dakota County, except community wells. Within the Ordinance Minnesota Rules Chapter 4725 is adopted. Municipality authorization is required for construction, reconstruction, permanent sealing, or initial annual maintenance.

A valid permit is required from Dakota County before anyone is allowed to engage in construction, reconstruction, permanent sealing, or annual maintenance permitting. Only well contractors licensed by the Minnesota Department of Health may apply for and receive permits for construction, reconstruction, or permanent sealing, except as allowed by state statute or code. Annual Maintenance Permits are required for all environmental wells (monitoring, remedial, or product recovery) and dewatering wells that have been in use for fourteen months or longer and unused wells.

The Ordinance contains rules to ensure wells are safe for potable water. Proper disinfection of new or reconstructed wells, its appurtenances, and the water supply system shall be done using methods approved by Dakota County and the Minnesota Department of Health. Water tests results from new or

reconstructed wells must meet the Acceptance Standards established in the Ordinance. To sell a property, the property owner must have a water analysis performed and approved by a Minnesota Department of Health certified lab within six months of the property sale.

The location of wells has an impact on the environment. The Ordinance contains a section describing that wells may be prohibited if it is found by Dakota County or the Minnesota Department of Health that the location of the well endangers the environment and groundwater quality or quantity.

2. Community Public Water System

All public water suppliers in Minnesota that operate a public water distribution system, serve more than 1,000 people and/or all cities in the seven-county metropolitan area, must have a water supply plan approved by the Department of Natural Resources (DNR). Water supply plans must be updated and submitted to the DNR for approval every ten years. This requirement, in place since the 1990s, is designed to encourage communities to deal proactively with providing sustainable drinking water for citizens, businesses, and industry. Empire Township and the Cities of New Trier, Randolph and Vermillion will submit the plan through the Minnesota DNR Permitting and Reporting System (MPARS).

3. Assessing and Protecting the Water Source

The location of wells has an impact on the environment. The Ordinance contains a section describing that wells may be prohibited if it is found by Dakota County or the Minnesota Department of Health that the location of the well endangers the environment and groundwater quality or quantity. The location of groundwater observation wells is detailed in Figure 19. Drinking Water Supply Management Areas are detailed in Figure 20.

Figure 19: Observation Wells

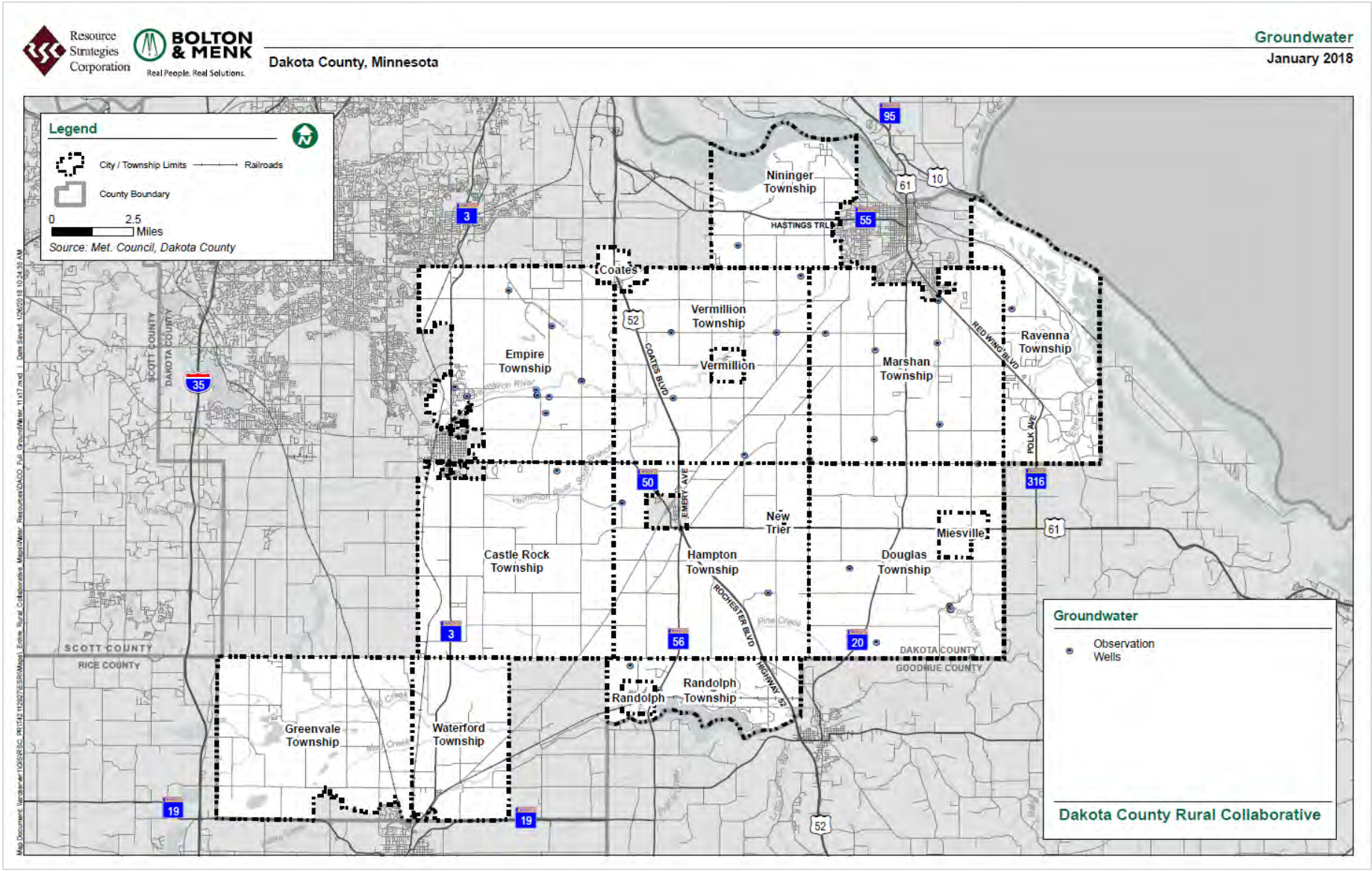
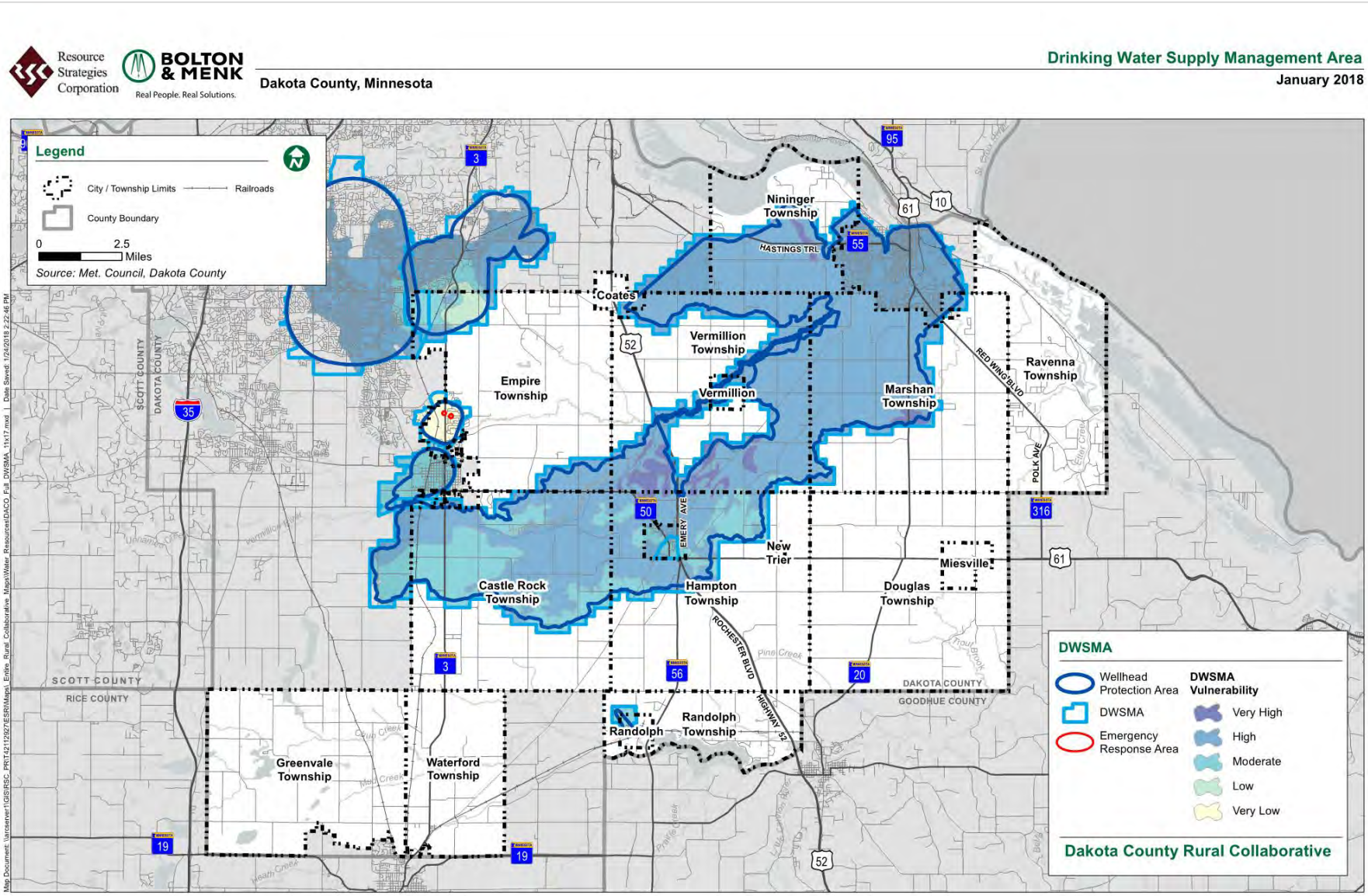


Figure 20: Drinking Water Supply Management Area



VII. IMPLEMENTATION

A. Implementation Plans

This Plan has been prepared with the guidance and direction of the collaborative communities participating in the joint planning effort, and through financial assistance of the Metropolitan Council and Dakota County. The Plan has been adopted by resolution of the collaborative communities, subject to review by the Metropolitan Council.

The participating townships and cities believe that this Collaborative Plan will provide a strong basis upon which to review and implement official controls in order to protect the health, safety and welfare of the residents of the communities. The following describes the methods by which the townships and cities intend to implement this Plan.

1. Official Controls

The townships and cities in the Collaborative area will be evaluating their existing zoning and subdivision ordinances for consistency with the Rural Collaborative Plan. The Collaborative communities will be seeking a Community Development Block Grant to collectively review and prepare ordinance amendments that are of most importance to the joint participants. Potential amendments to local ordinances will reflect any revised policy directions as identified in this Plan and will eliminate any inconsistencies with this Plan.

Collaborative communities in the Vermillion River Watershed have adopted the most recent watershed plan by reference. The collaborative communities have completed the Water Resources Management Ordinance, approved by the VRWJPO, to implement the local water management plan. Collaborative communities in the North Cannon River Watershed have all adopted the most recent watershed plan by reference.

Cities and townships are responsible for the adoption and enforcement of local zoning and subdivision ordinances. Dakota County administers the Shoreland and Floodplain Management Regulations in the townships. Subdivision and platting of land within the townships and cities will be required to conform to provisions of the local zoning and subdivision ordinances. Local zoning ordinances also have performance standards that address development requirements as they relate to densities, lot size, and other dimensional standards.

Dakota County administers the County Contiguous Plat Ordinance, which places requirements on residential development in unincorporated areas of the County and adjacent to County roads. The County Plat Commission is authorized to review plats of proposed subdivisions adjacent to County roads and to limit direct access to County roads. The Plat Commission reviews access requests according to a set of access spacing guidelines adopted by the County Board. The Plat Commission requires sub-dividers to place access restrictions on new plats as a condition of approval.

Dakota County administers Ordinance No. 113, which establishes provisions for SSTS permitting, monitoring, and inspections in the County. The collaborative communities permit and inspect new SSTSs, while the County assists the communities in a three-year inspection and maintenance program of existing SSTSs. The collaborative communities are responsible for enforcement of the inspection and maintenance program, unless the entire management of the program is assigned to the County; Dakota County is responsible for septic inspection in Randolph Township, Waterford Township, and the Cities of New Trier and Randolph. The County also has SSTS permitting and land use management authority within shoreland and floodplain areas. Dakota County amended Ordinance No. 113 for consistency with recent amendments to the Minnesota Pollution Control Agency Rules Chapter 7080, governing SSTSs in 2008.

2. CIP

Collaborative communities have few capital expenditures outside of those periodically added to general operating budgets. The exceptions include a few of the communities which have developed independent comprehensive plans in addition to the Rural Collaborative Plan. Any Capital Improvement Plan adopted by those communities is included in their independent comprehensive plan.

At this time, the Collaborative Townships, except Empire Township, do not have any capital improvements planned between 2019-2024 that would have potential to impact regional transportation, sewers, parks, water supply, and open space facilities. All Collaborative Communities have adopted their respective watershed management implementation plans by reference.

3. Schedule of Changes

To meet the goals of the 2040 Comprehensive Plan update and remove any potential inconsistencies in policy, changes and amendments to community zoning codes and ordinances will need to be made. These changes will begin review and consideration nine months after the official adoption of the 2040 Comprehensive Plan update.

4. Zoning

Zoning codes regulate land use to promote the health, safety, order, convenience, and general welfare of all citizens. They regulate location, size, use and height of buildings, the arrangement of buildings on lots, and the density of population within a community. Zoning Maps and Ordinances for Collaborative communities are included in Appendix A.

To ensure compliance with this 2040 Comprehensive Plan, the following zoning ordinance changes will need to be implemented:

- Updated zoning maps based on the future land use plan
- Reconcile inconsistencies between current zoning ordinances and intended future land uses.

These changes are the responsibility of cities and townships.

5. Plan Amendment Process

The provisions of the zoning ordinances will be maintained and preserved through the term of the Comprehensive Plan, unless formally amended. Amendments to the local zoning ordinances will be consistent with the Comprehensive Plan.

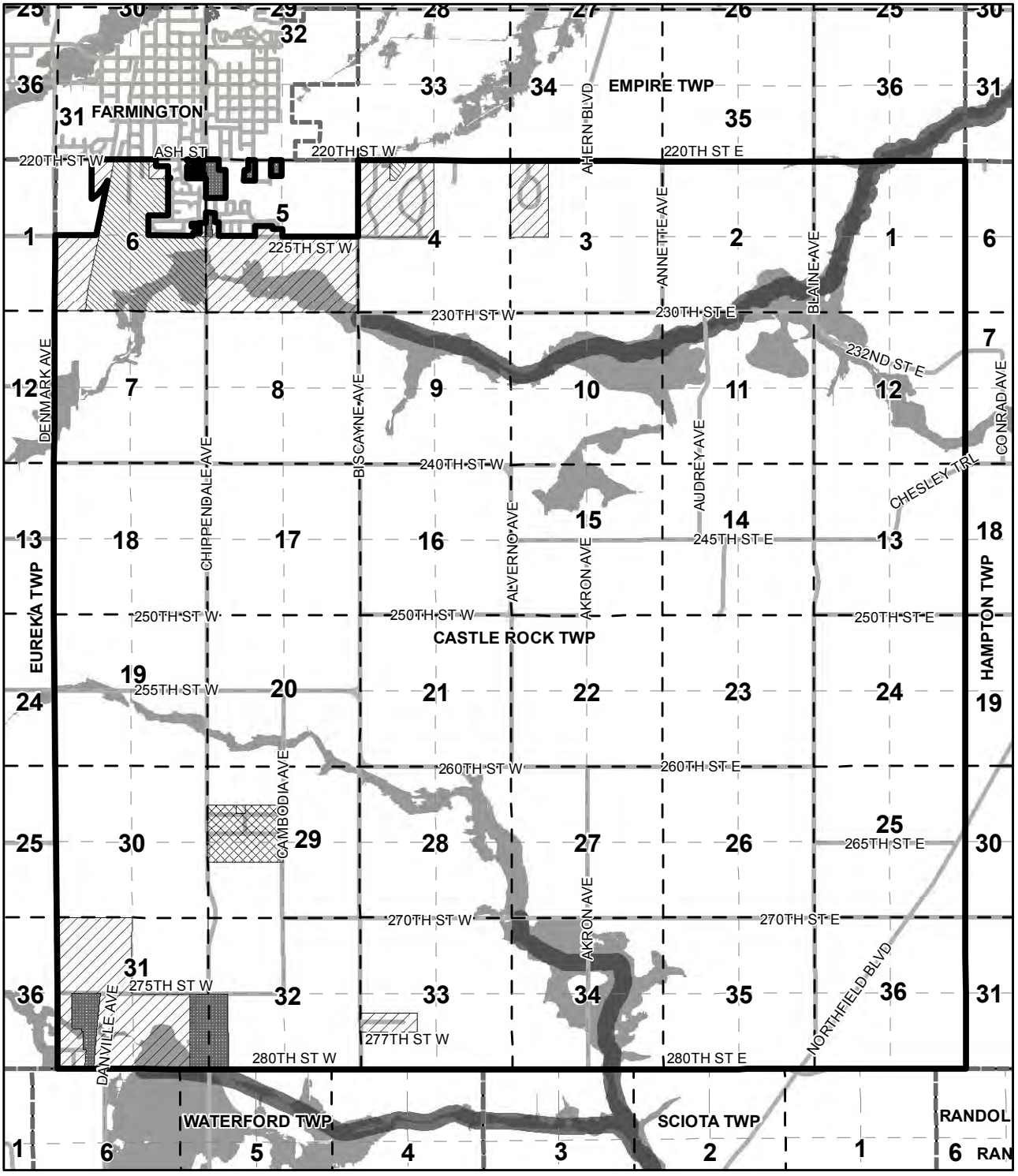
When considering amendments to this plan, local units will use the following procedure:

1. Landowners, the Planning Commission, the Town Board/City Council or other interested parties may initiate amendments.
2. The Planning Commission will conduct a thorough analysis of the proposed amendment.
3. The Planning Commission will prepare a report analyzing the proposed changes, including their findings and recommendations regarding the proposed plan amendment.
4. The Planning Commission will hold a formal public hearing on the proposed amendment.
5. Following the public hearing, the Planning Commission will make a recommendation to the Town Board/City Council.
6. The Town Board/City Council will receive the recommendation from the Planning Commission and make a final decision on whether to adopt the amendment.
7. All amendments to the plan will be submitted to adjacent and affected jurisdictions and the Metropolitan Council for review prior to implementation, as required by State law.

Appendix A: Zoning Maps

Castle Rock Township

CASTLE ROCK TOWNSHIP - ZONING MAP



N

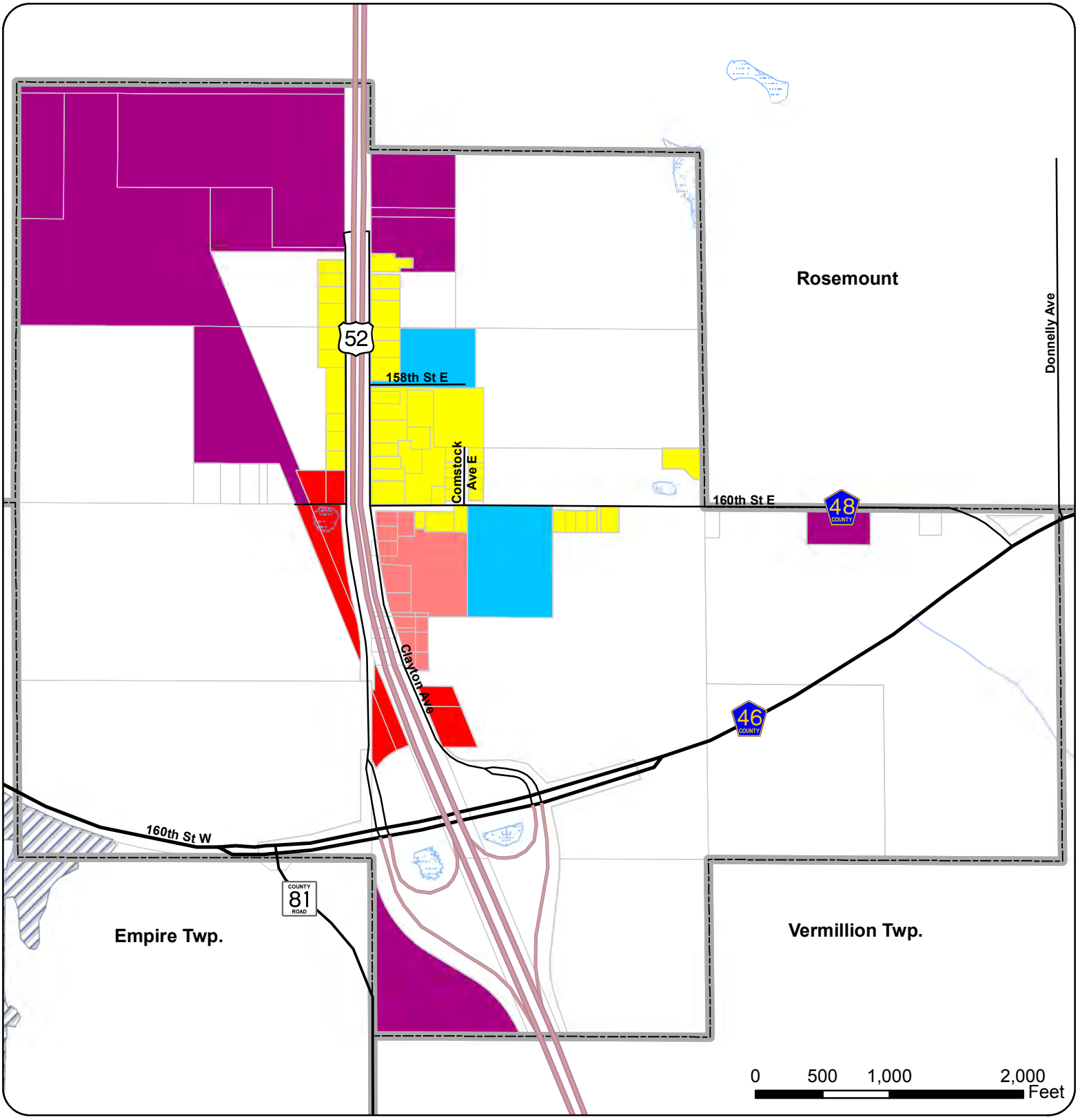
Legend

- AG
- COM/IND
- PUB/REC
- RR-1
- RR-2
- Shoreland Overlay
- Floodplain Overlay
- Castle Rock Twp

0 0.5 1 2 Miles

December 26, 2012

City of Coates



Official Zoning Map
Zoning Districts

City of Coates
Dakota County, MN

- Agriculture
- Low Density Residential
- Central Business District
- General Commercial
- Limited Industrial
- Public/Institutional
- 100 Year Flood Zone
- NWI Wetlands
- Lakes
- Rivers & Streams

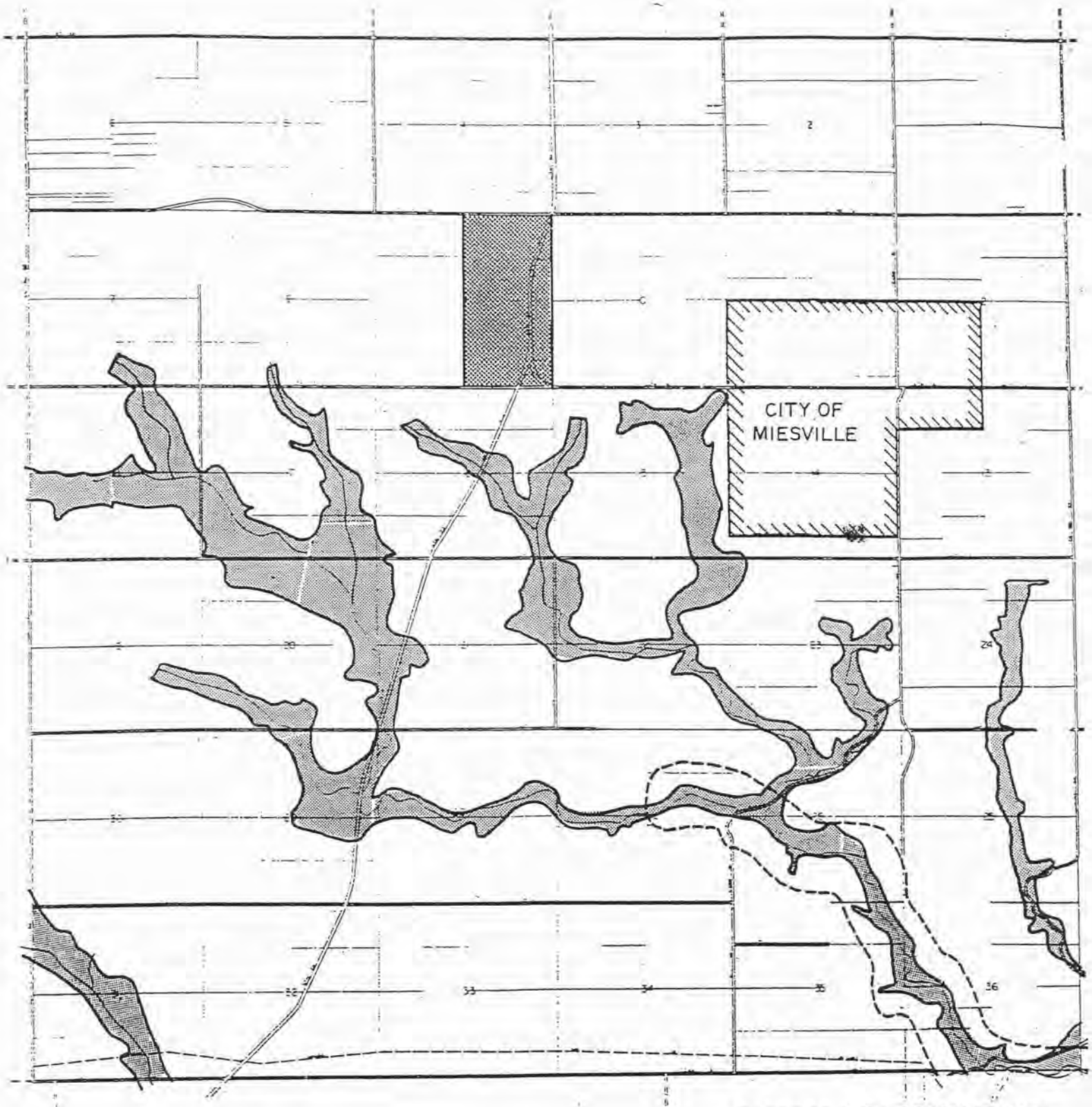
BOLTON & MENK

Resource Strategies Corporation

N

Source: Dakota County GIS November 2016

Douglas Township



AGRICULTURAL PRESERVATION

RURAL RESIDENTIAL

SHORELAND OVERLAY DISTRICT

FLOOD PLAIN OVERLAY DISTRICT

DOUGLAS TOWNSHIP

DAKOTA COUNTY, MINNESOTA

ZONING

0 1/2 1

Prepared by: DAKOTA CO. PLANNING DEPT.

Empire Township

Resource Strategies Corporation

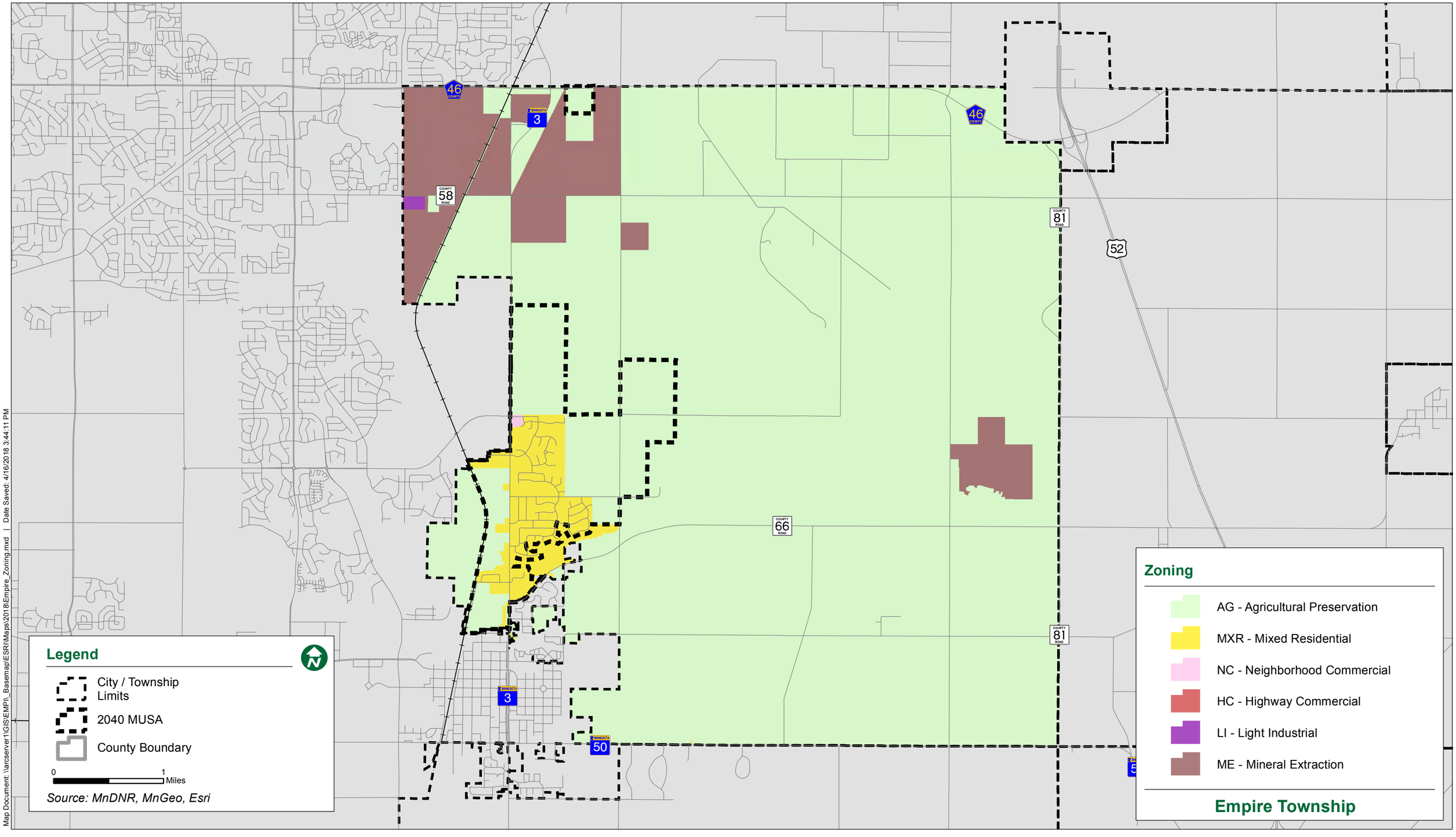
BOLTON & MENK
Real People. Real Solutions.

2040 Comprehensive Plan

Empire Township, Minnesota

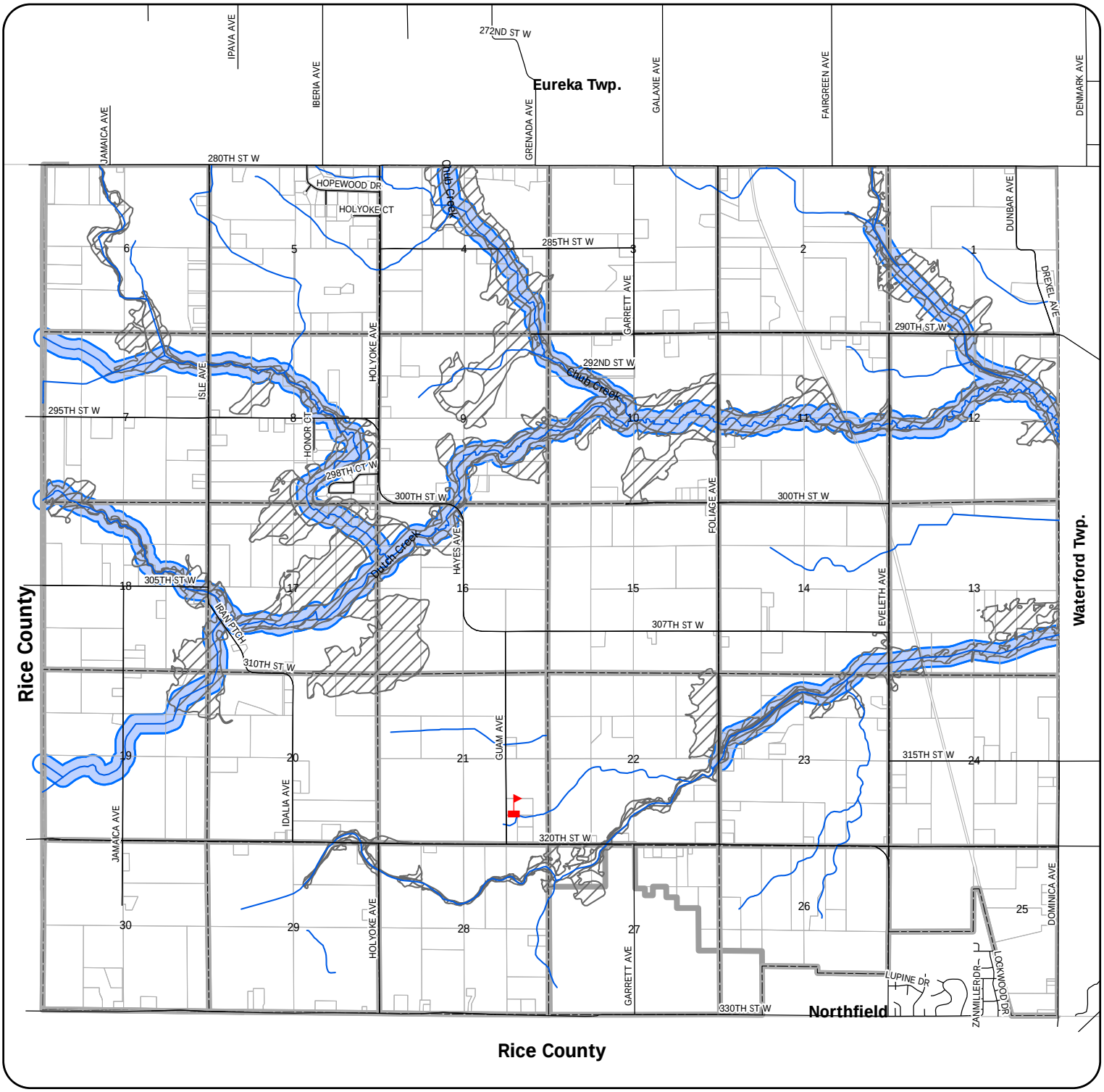
Zoning

April 2018



Map Document: \\arcserver1\GIS\EMP_Basemap\ESRI\Maps\2018\Empire_Zoning.mxd | Date Saved: 4/16/2018 3:44:11 PM

Greenvale Township



Zoning Map

Greenvale Township

Dakota County, MN

- A - Agriculture Preservation District
- 300' Shoreland Overlay
- Floodplain Overlay
- River or stream
- Town Hall

0 0.125 0.25 0.5 0.75 1 Miles

N

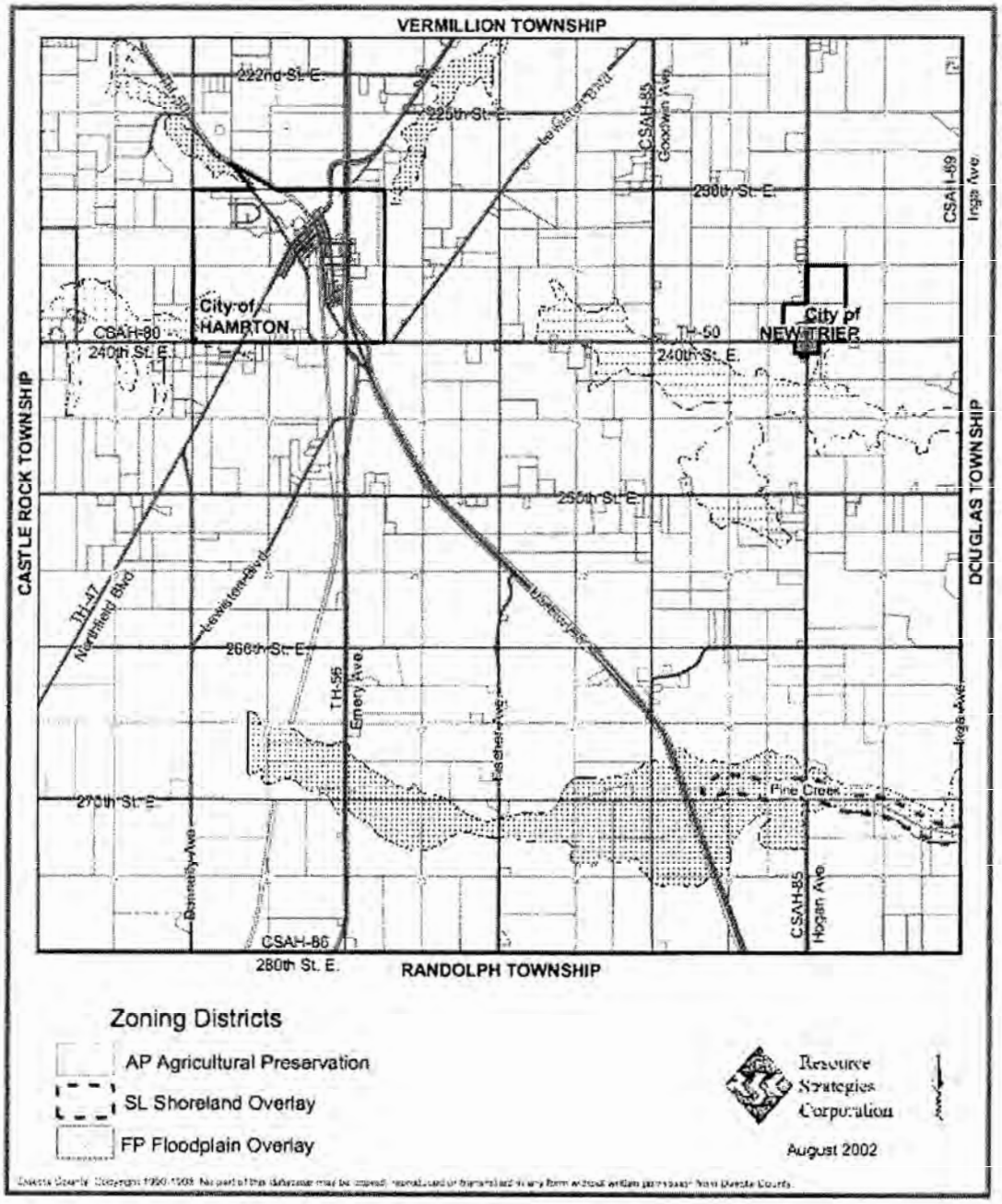
Resource Strategies Corporation

Source: Dakota County GIS

August 2011

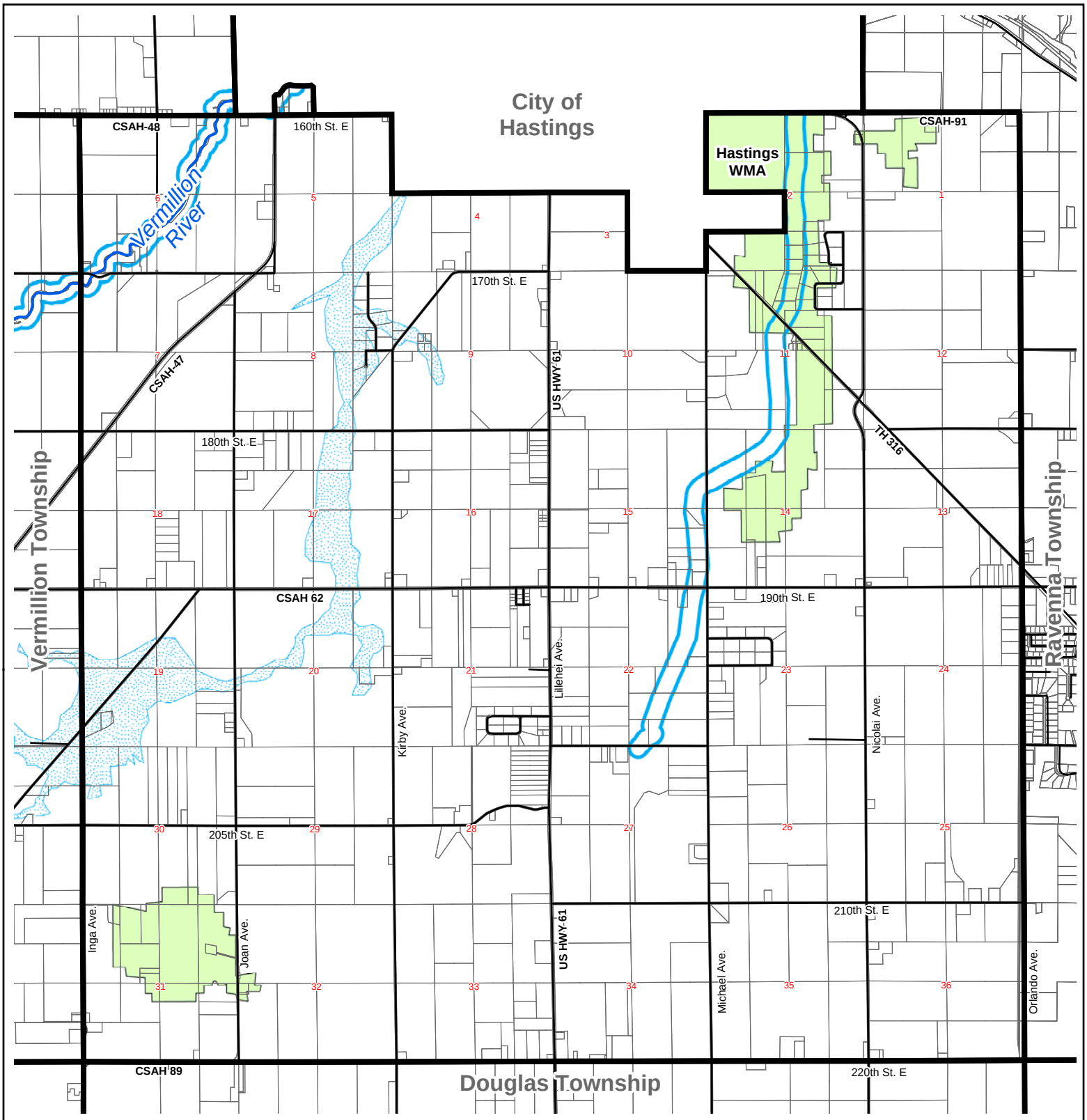
Hampton Township

Hampton Township
Zoning Map



Marshan Township

Zoning Map
Marshan Township



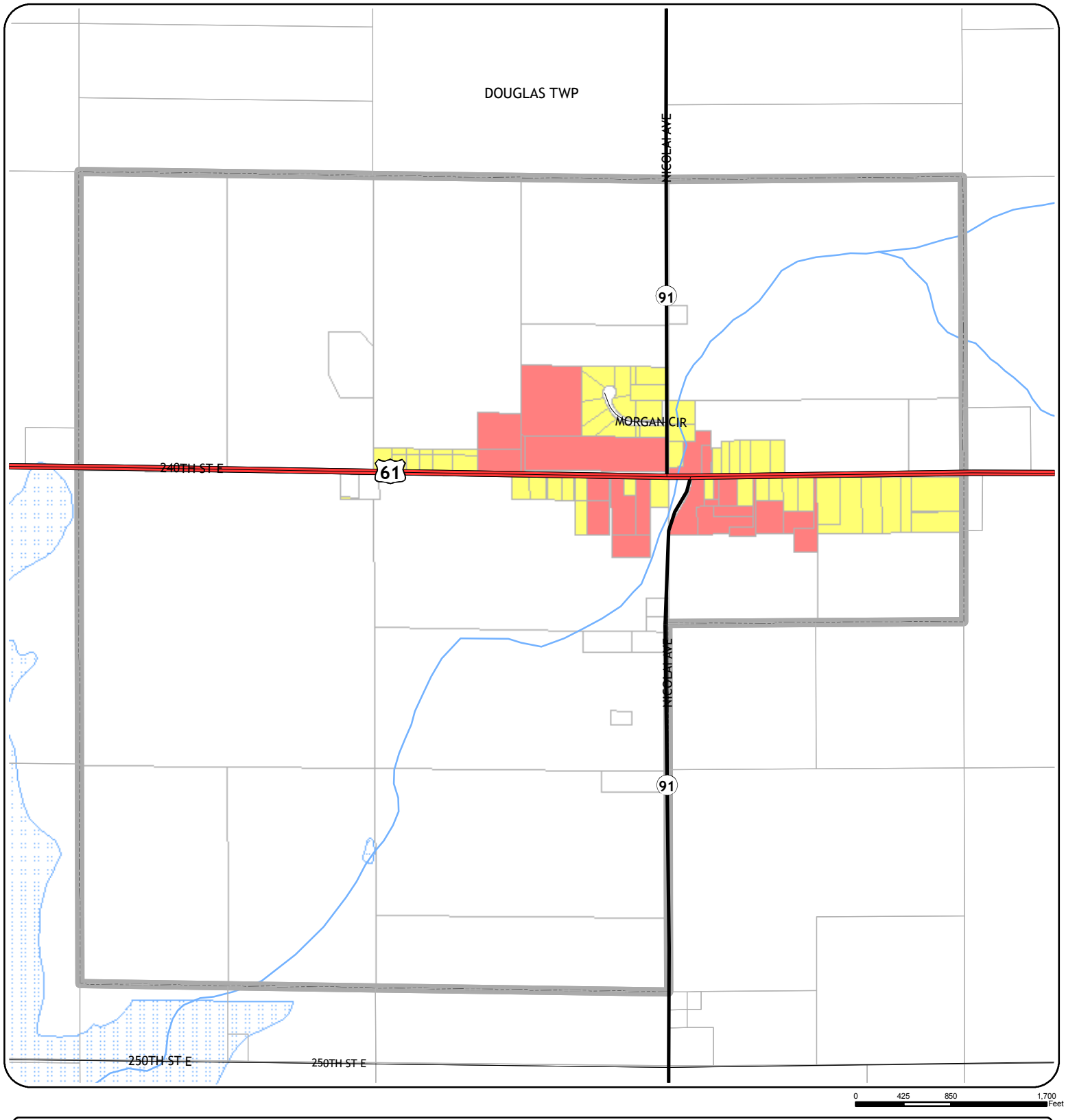
Zoning Districts

- Agriculture
- Conservation
- Shoreland Overlay
- Floodplain Overlay

Resource Strategies Corporation

October 2010

City of Miesville



Zoning Map

Zoning Districts

- AP - Agricultural Preservation
- RR - Rural Residential
- RB - Rural Business

- NWI Wetlands
- Floodplain Area
- Streams

City of Miesville
Dakota County, MN

N

Source: Dakota County GIS May 2010

Resource Strategies Corporation

Nininger Township

Nininger Township

Dakota County, MN

Official Zoning Map

January 2012

Zoning Districts

- Agriculture
- Rural Residential
- Agriculture - Regional Park
- Shoreland Management Area
- Mississippi River Critical Area

- Lakes/Rivers
- NWI Wetlands

N

0 0.25 0.5 0.75 1 Miles

Source: Dakota County GIS

Resource Strategies Corporation

City of Randolph

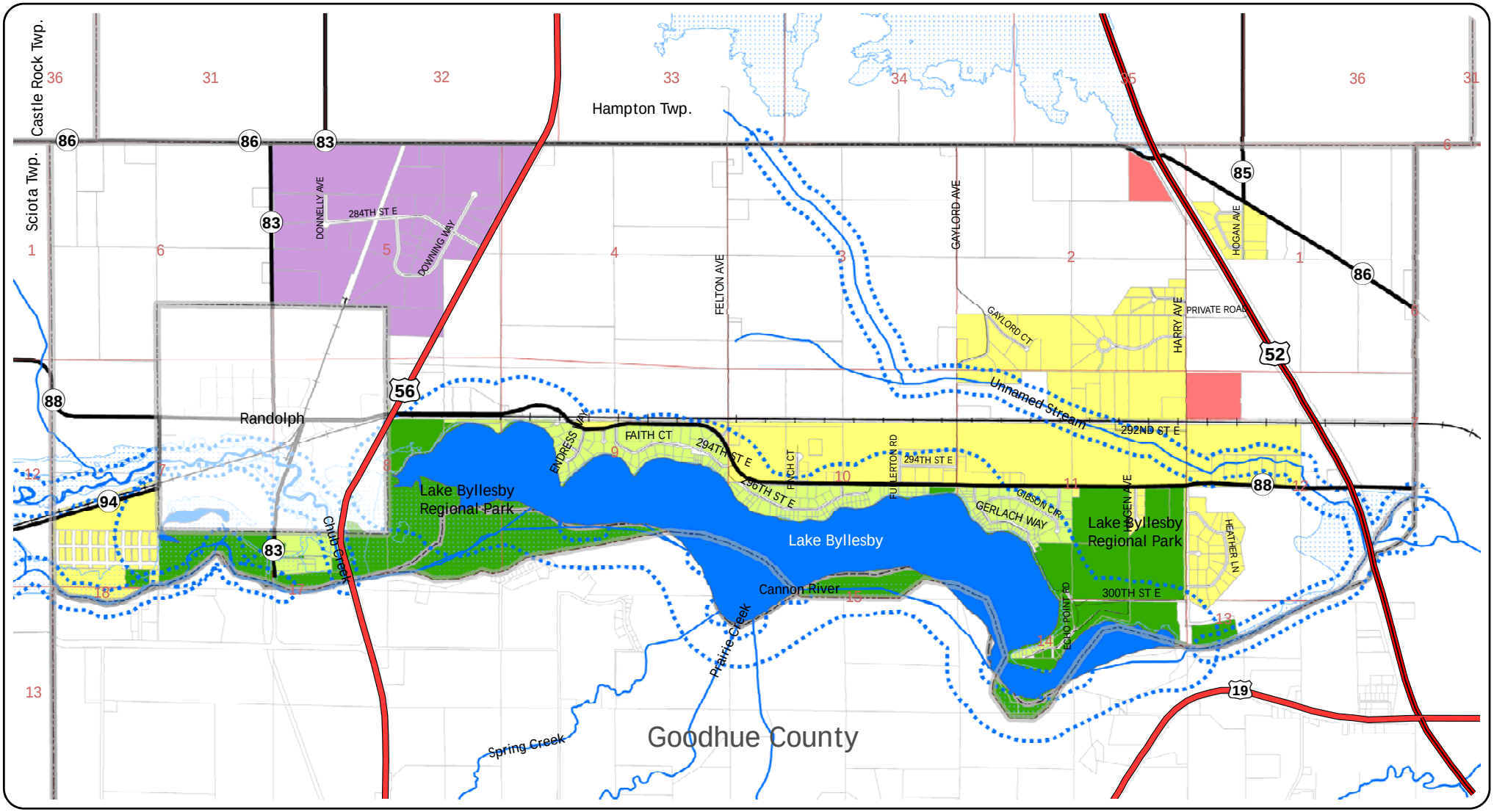
LEGEND

- AG - AGRICULTURAL
- UR - URBAN RESIDENTIAL
- RR - RURAL RESIDENTIAL
- NC - NEIGHBORHOOD COMMERCIAL
- HC - HIGHWAY COMMERCIAL
- LI - LIMITED INDUSTRIAL
- FP - FLOOD PLAIN
- P/I - PUBLIC /INSTITUTIONAL
- CON - CONSERVATION OVERLAY
- SL - SHORELEND MANAGEMENT AREA OVERLAY

CANNON RIVER BLVD
LAKE BYLLESBY

290TH ST. E
291ST ST. E
UPPER 291ST ST. E
292ND ST. E
DANIEL AVE
DAVISON AVE
DAWSON AVE
DINSMORE AVE
DUNCAN CT
DUNCAN AVE
DOUGLAS AVE
DISTAD PATH
DIVERS PATH
DOYLE TRL
CORDELL CT
CHUB CREEK
UNION PACIFIC
DIXIE AVENUE
RANDOLPH BLVD
CANNON RIVER BLVD
LAKE BYLLESBY
88
83
56
94

Randolph Township



Zoning

- AP - Agricultural Preservation
- SR - Shoreland Residential
- RR - Rural Residential
- HC - Highway Commercial
- LI - Light Industrial
- Lake Byllesby Regional Park (AP)
- Shoreland Overlay
- Floodplain Area
- Streams

0 0.25 0.5 1 Miles

N

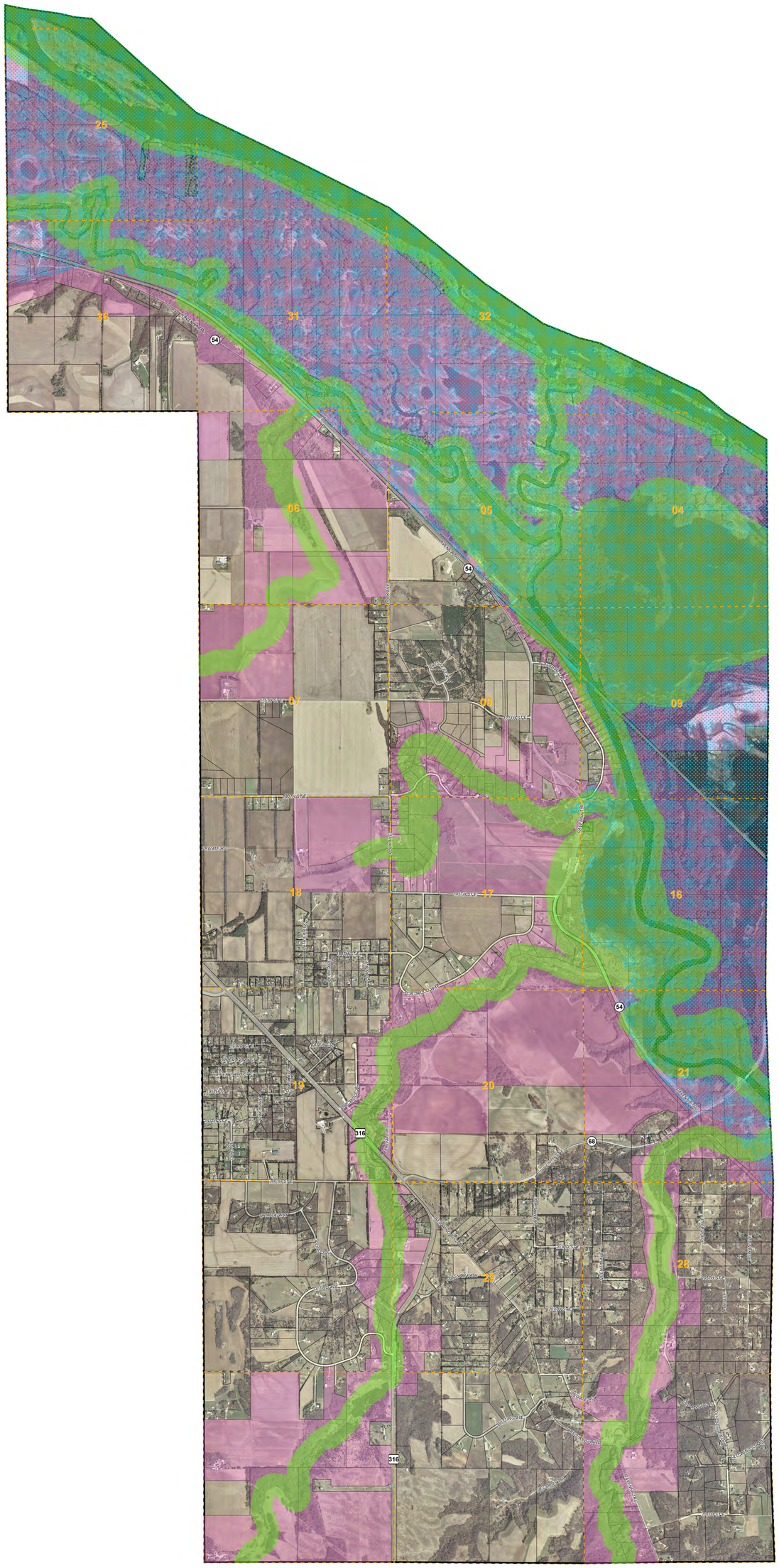
Zoning Map

RandolphTownship
Dakota County, MN

November 2011
Source: Dakota County GIS

Resource Strategies Corporation

RavennaTownship



All of Ravenna is zoned Rural Residential. This figure shows the floodplain overlay.

0 0.25 0.5 0.75 1 Miles

0 1,000 2,000 3,000 4,000 5,000 Feet

Shoreland and Floodplain Management is the regulatory responsibility of Dakota County. County permits are required for all building, grading, excavation and vegetation removal in all DNR designated shoreland and FEMA designated floodplain areas.

The location of shoreland or floodplain in relation to construction activities must be verified by the Dakota County Water Resources Department. Please contact Dee McDaniels, Water Resources Technician at 952-891-7024 or dee.mcdaniels@co.dakota.mn.us for proper verification.

Ravenna Township
Shoreland and Floodplain District

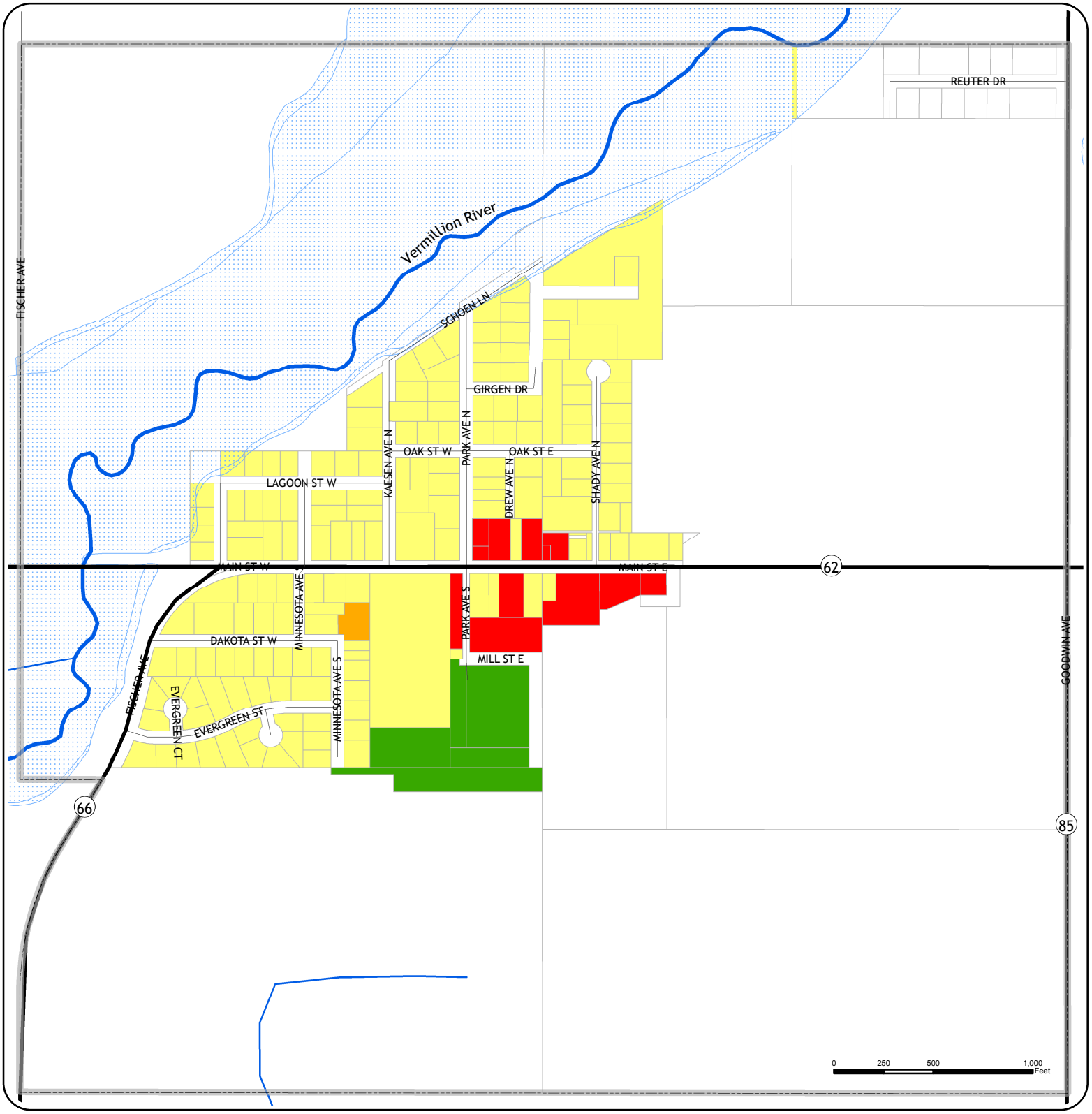
N W E S

Legend

- Section Lines
- Floodplain
- Shoreland Buffer
- Shoreland/Floodplain Parcels
- Parcels
- Municipal Boundary

All of Ravenna Twp. is zoned Rural Residential (RR1). Please see Township Zoning Ordinance Sec. 101 for definition.

City of Vermillion



Zoning Map

City of Vermillion

Dakota County, MN

Zoning District

- Agricultural
- R-1 Low Density Residential
- R-2 Medium Density Residential
- C-1 General Commmercial
- R-OS Recreation-Open Space
- Floodplain
- Streams

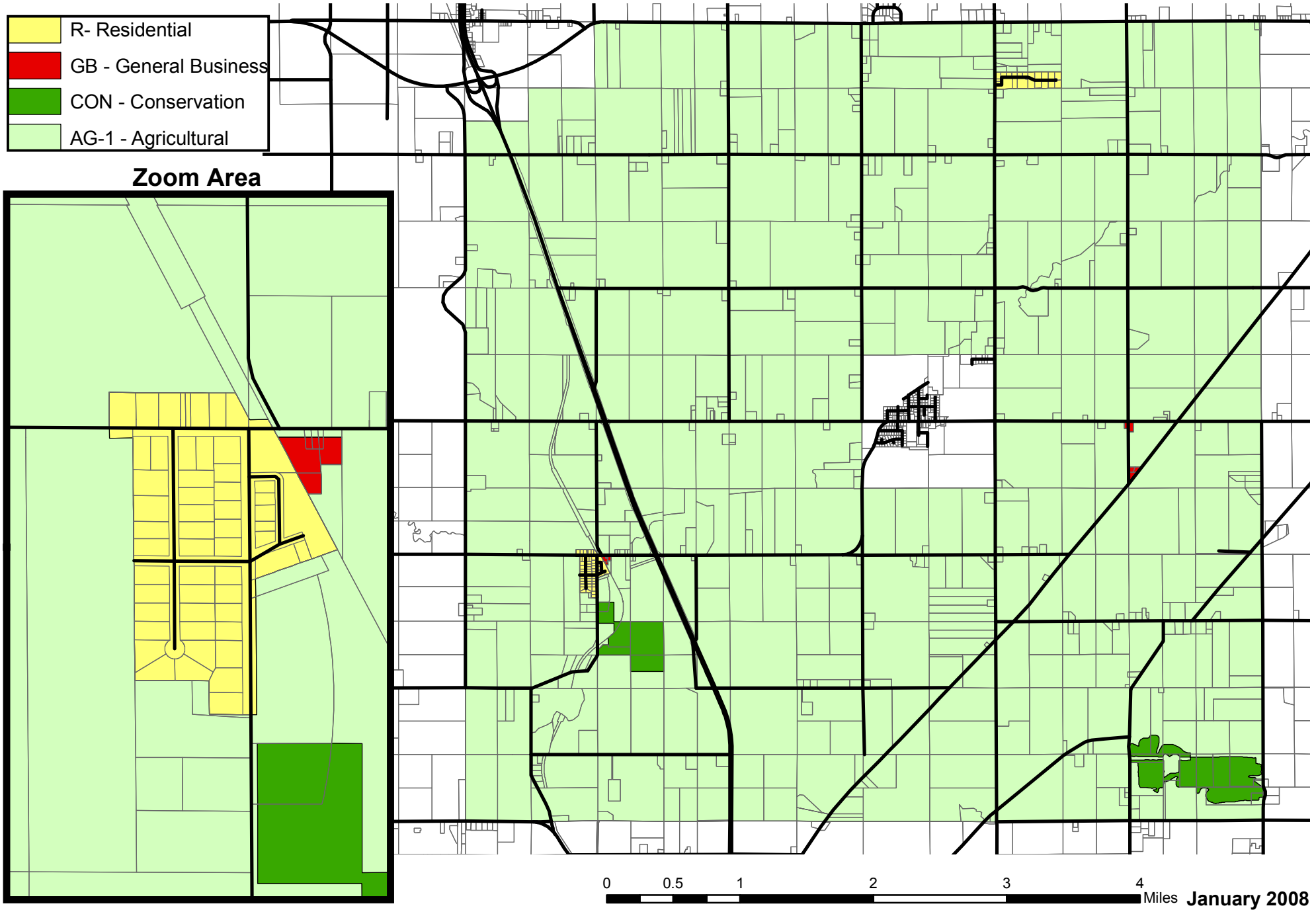
N

Parcel Source: Dakota County December 2008

Resource Strategies Corporation

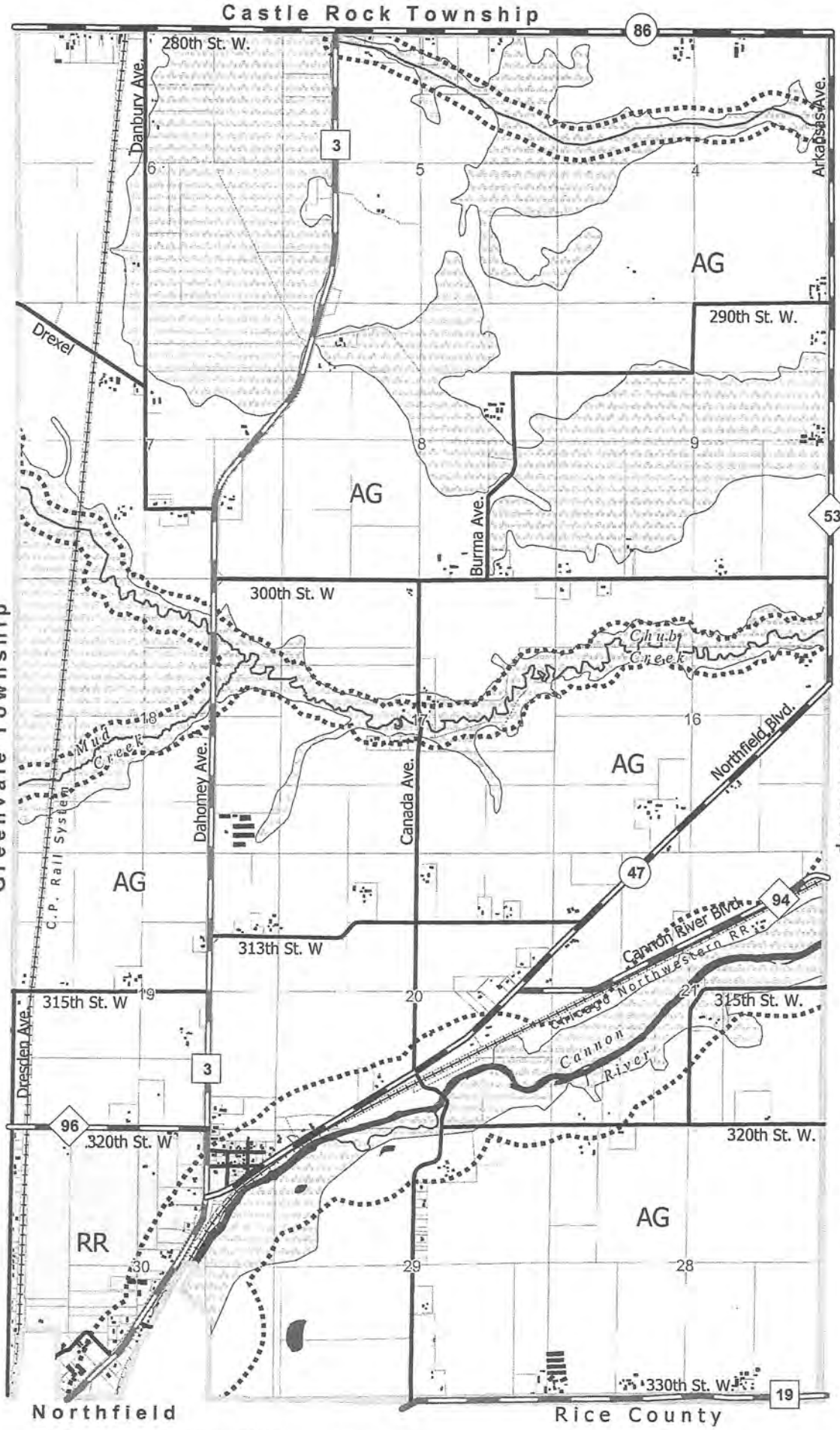
Vermillion Township

Vermillion TWP



FILE: //snap2/share1/GIS/City/Maps/Departmental Maps/CommunityDevelopment/MaryAnn/2008 Vermillion .mxd

Waterford Township



ZONING MAP

Waterford Township

Zoning Districts

- AG — AG Agriculture Preservation
- RR — RR Rural Residential
- ME — ME Mineral Extraction

Overlay Districts

- Shoreland Overlay
- Floodplain Overlay

Source: Waterford Township

- Existing Structures
- Surface Water
- Trunk Hwy
- County State Aid Hwy
- County Road
- Local Road

Resource Strategies Corporation

May 2001

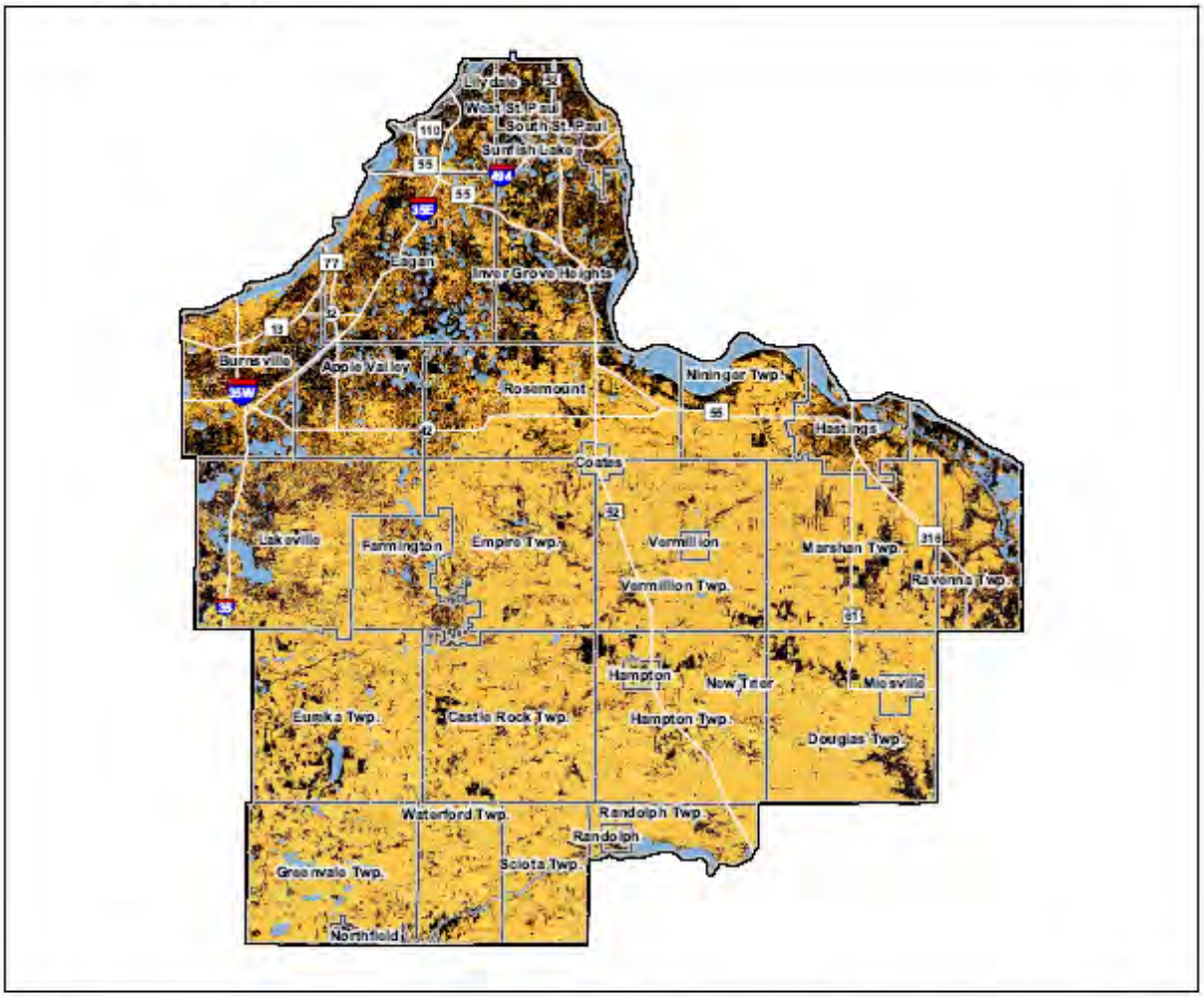
N

Appendix B: Solar Potential and Suitability

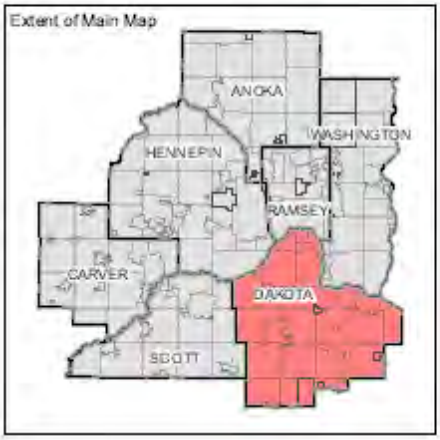
Appendix B: Solar Energy Potential				
Community	**Gross Potential (Mwh/yr)**	**Rooftop Potential (Mwh/yr)**	**Gross Generation Potential (Mwh/yr^2)**	**Rooftop Generation Potential (Mwh/yr^2)**
Castle Rock Twp	92,899,312	240,482	9,289,931	24,048
Coates	3,823,587	29,796	382,358	2,979
Douglas Twp	88,649,963	155,881	8,864,996	15,588
Empire Twp	82,830,897	231,412	8,283,089	23,141
Greenvale Twp	73,432,921	135,191	7,343,292	13,519
Hampton Twp	92,489,984	182,262	9,248,998	18,226
Marshan Twp	87,739,452	211,594	8,773,945	21,159
Miesville	4,742,475	24,095	474,247	2,409
New Trier	470,233	6,716	47,023	671
Nininger Twp	30,953,813	103,599	3,095,381	10,359
Randolph	2,057,934	41,543	205,793	4,154
Randolph Twp	24,564,154	83,397	2,456,415	8,339
Ravenna Twp	34,630,287	180,429	3,463,028	18,042
Vermillion	2,534,611	28,872	253,461	2,887
Vermillion Twp	92,543,880	228,600	9,254,388	22,860
Waterford Twp	38,251,783	106,128	3,825,178	10,612
Subtotal	752,615,286	1,989,997	75,261,523	198,993
Dakota County	1,285,255,000	25,795,965	128,525,500	2,579,596
Percent of County Total	59%	8%	59%	8%

Source: Metropolitan Council

Gross Solar Potential
Dakota County



5/6/2017



0 2.5 5 10 15 20

Miles

Gross Solar Potential
(Watt-hours per Year)

High : 1303217

Low : 900001

Solar Potential under 900,000 watt-hours per year

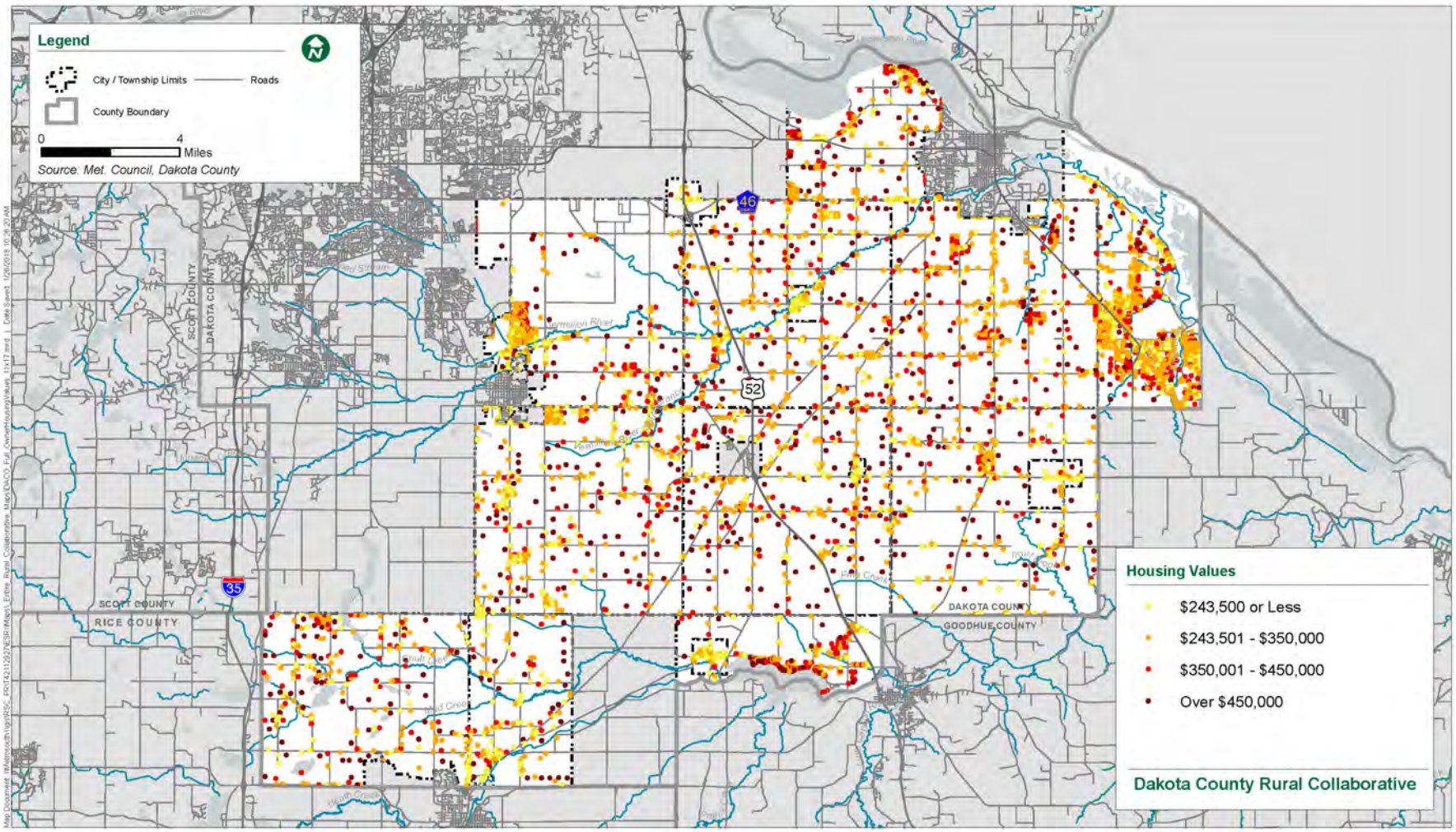
County Boundaries

City and Township Boundaries

Wetlands and Open Water Features

Source: University of Minnesota U-Spatial Statewide Solar Raster.

Appendix C: Housing Values Map


Resource Strategies Corporation
BOLTON & MENK
Real People. Real Solutions.
2040 Comprehensive Plan
Dakota County, Minnesota
Owner Occupied Housing Values, 2016
January 2018
Legend
City / Township Limits
Roads
County Boundary
0
4
Miles
Source: Met. Council, Dakota County
Housing Values
$243,500 or Less
$243,501 - $350,000
$350,001 - $450,000
Over $450,000
Dakota County Rural Collaborative
SCOTT COUNTY
RICE COUNTY
DAKOTA COUNTY
GOODHUE COUNTY
46
52
35

Appendix D: Access Guidelines

Mn DOT Access Management Guidelines

Chapter 3
Guidelines for Public Street and Driveway Connections

3.1 Overview

For each access category, guidelines have been developed for the spacing of public street connections and the allowance of driveways to the state trunk highway system. The guidelines are summarized in Figures 3.1 and 3.2.

3.2 Public Street Connections

3.2.1 Background and Approach

Guidelines for the spacing of public street connections to the trunk highway system are based on the following principles and technical considerations:

1. Network Connectivity

   To promote the development of a hierarchical network of interconnected roads throughout the state, the guidelines use a tiered approach to access connections. Access is limited and reserved first for primary, full-movement intersections connecting major public streets and highways. The guidelines provide for additional secondary public street intersections at one-half the spacing of full-movement intersections, under certain conditions.

2. Urban Arterials: Balancing Safety and Mobility through Coordinated Signal Progression

   State highways and major arterials extending through urban communities serve two groups of customers with somewhat competing needs: the through-trip drivers, who desire to travel through the community without undue speed reductions and signal delays, and the local-trip drivers, who need to cross or travel on a segment of the highway to get to home, work, and services within the community. To determine the optimal balance between these competing demands, Mn/DOT conducted corridor simulations for 1 mile, ½ mile, and ¼ mile intersection spacing to compare the mobility benefits of signal progression on the mainline with overall network travel time and delays.

   Based on these simulations, the recommended spacing of primary, full-movement intersections is directly related to the spacing of signals and the need to achieve signal progression. This is because every full-movement intersection represents the potential for a traffic signal. When signalized intersections are uniformly and adequately spaced, however, platoons of vehicles can travel in both directions through the corridor at uniform speeds without needing to stop for each signal. This reduces delays for through-movements and increases the carrying capacity of the roadway.

   The intersection spacing guidelines also make allowance for additional unsignalized intersections at one-half the spacing of signalized intersections, but restrict turning movements to right-in/right-out-only on higher-volume, divided roadways. This denser network of intersecting streets may disperse traffic among multiple access points and may actually eliminate or delay the need for signalization at an intersection. The additional street access also can reduce the need for individual driveways by providing a denser supporting road network for the corridor.

3. Rural Areas: Maintaining the Historical Road Network

   Throughout much of rural Minnesota, the Township-Range System and the US Public Land Survey's one-mile section grid have served as the framework for the development of a roadway grid system spaced at 1 mile, ½ mile, and ¼ mile intervals. Over time, some of these roads have assumed a more important function within the network and have been classified as minor arterials and collectors. Typically, the more important roads were about a mile apart and located on the township or range lines. This grid system remains the prevailing factor in the spacing allowance of rural intersections.

4. Rural Areas: Providing Adequate Intersection Geometrics

   The spacing of intersections on state highways in rural areas is also based on providing sufficient area for left-turn lanes. On two-lane rural highways, the distance needed to construct a left-turn lane typically exceeds 1000 feet.

3.2.2 Policy Guidelines for Public Street Connections

The location of new or reconstructed public street connections should conform to the recommended spacing, summarized in Figures 3.1 and 3.2, for the access category assigned to the roadway segment.

Primary Intersections on IRCs and Non-IRCs
Primary intersection allowance, as summarized in Figures 3.1and 3.2, refers to full-movement intersections that may be considered for signalization if the appropriate signal warrants have been met. The spacing of primary intersections is governed by the need to provide uniform spacing for effective signal coordination in urban/urbanizing areas and adequate spacing for left-turn lanes on unsignalized highways in both urban and rural areas.

Secondary Intersections on IRCs and Non-IRCs
Secondary intersection spacing and allowance, as summarized in Figures 3.1 and 3.2, refers to intersections that may be accommodated midway between primary intersections if they do not create a high-risk conflict condition.

1. On **undivided highways**, a secondary intersection may be provided if the analysis of future traffic conditions, per the *Gap Analysis Procedure* (Section 3.2.3), indicates that a low-risk conflict condition can be maintained. If the analysis indicates a high-risk conflict condition is anticipated, the intervening intersection should not be allowed. Where an undivided highway is planned to become a divided highway, the secondary intersection should be analyzed as if it were a divided highway.
2. On **rural divided highways**, a secondary intersection may provide full movement if the analysis of future traffic conditions, per the *Gap Analysis Procedure* (Section 3.2.3), indicates that a low-risk conflict condition can be maintained. A full-movement, intervening secondary intersection may be subject to future conversion to a right-in/right-out or to a ¾ movement (right-in/right-out/left-in-only) intersection if increased traffic growth creates the potential for a high-risk conflict.

   If the analysis indicates that a full-movement intersection on a divided highway would create a high-risk conflict condition, further analysis, per the *Gap Analysis Procedure* (Section 3.2.3), should be conducted to determine whether restricting the intersection to right-in/right-out-only would maintain a low-risk conflict condition. If the analysis indicates that a high-risk conflict condition would still be created, the intervening intersection should not be allowed, or it should be restricted to a right-in-only, if practicable, given the supporting road network.
3. On **urban/urbanizing and urban core divided highways**, the secondary intersection should be limited to right-in/right-out-only. Secondary intersections in urban/urbanizing areas are not conducive to two-way coordinated signal progression, and therefore, should not be signalized. If a secondary intersection meets warrants for a traffic signal, alternatives such as eliminating some turning movements or diverting some traffic should be considered instead of installing a traffic signal.

Figure 3.1 – Summary of Recommended Street Spacing for IRCs

Category	Area or Facility Type	Typical Functional Class	Public Street Spacing		Signal Spacing
			Primary Full-Movement Intersection	Secondary Intersection	
1	**High-Priority Interregional Corridors & Interstate System (IRCs)**				
1F	Interstate Freeway	Principal Arterials	Interchange Access Only		⊘
1AF	Non-Interstate Freeway		Interchange Access Only (see Section 3.2.7 for interim spacing)		See Section 3.2.5 for Signalization on Interregional Corridors
1A	Rural		1 mile	1/2 mile	
1B	Urban/ Urbanizing		1/2 mile	1/4 mile	
1C	Urban Core		300-660 feet dependent upon block length		
2	**Medium-Priority Interregional Corridors**				
2AF	Non-Interstate Freeway	Principal Arterials	Interchange Access Only (see Section 3.2.7 for interim spacing)		See Section 3.2.5 for Signalization on Interregional Corridors
2A	Rural		1 mile	1/2 mile	
2B	Urban/ Urbanizing		1/2 mile	1/4 mile	
2C	Urban Core		300-660 feet, dependent upon block length		1/4 mile
3	**Regional Corridors**				
3AF	Non-Interstate Freeway	Principal and Minor Arterials	Interchange Access Only (see Section 3.2.7 for interim spacing)		Interim
3A	Rural		1 mile	1/2 mile	See Section 3.2.5
3B	Urban/ Urbanizing		1/2 mile	1/4 mile	1/2 mile
3C	Urban Core		300-660 feet, dependent upon block length		1/4 mile

Figure 3.2 – Summary of Recommended Street Spacing for Non-IRCs

Category	Area or Facility Type	Typical Functional Class	Public Street Spacing		Signal Spacing
			Primary Full-Movement Intersection	Secondary Intersection	
4	**Principal Arterials in the Twin Cities Metropolitan Area and Primary Regional Trade Centers (Non-IRCs)**				
4AF	Non-Interstate Freeway	Principal Arterials	Interchange Access Only (see Section 3.2.7 for interim spacing)		Interim
4A	Rural		1 mile	1/2 mile	See Section 3.2.5
4B	Urban/ Urbanizing		1/2 mile	1/4 mile	1/2 mile
4C	Urban Core		300-660 feet, dependent upon block length		1/4 mile
5	**Minor Arterials**				
5A	Rural	Minor Arterials	1/2 mile	1/4 mile	See Section 3.2.5
5B	Urban/ Urbanizing		1/4 mile	1/8 mile	1/4 mile
5C	Urban Core		300-660 feet, dependent upon block length		1/4 mile
6	**Collectors**				
6A	Rural	Collectors	1/2 mile	1/4 mile	See Section 3.2.5
6B	Urban/ Urbanizing		1/8 mile	Not Applicable	1/4 mile
6C	Urban Core		300-660 feet, dependent upon block length		1/8 mile
7	**Specific Area Access Management Plans**				
7	All	All	By adopted plan		

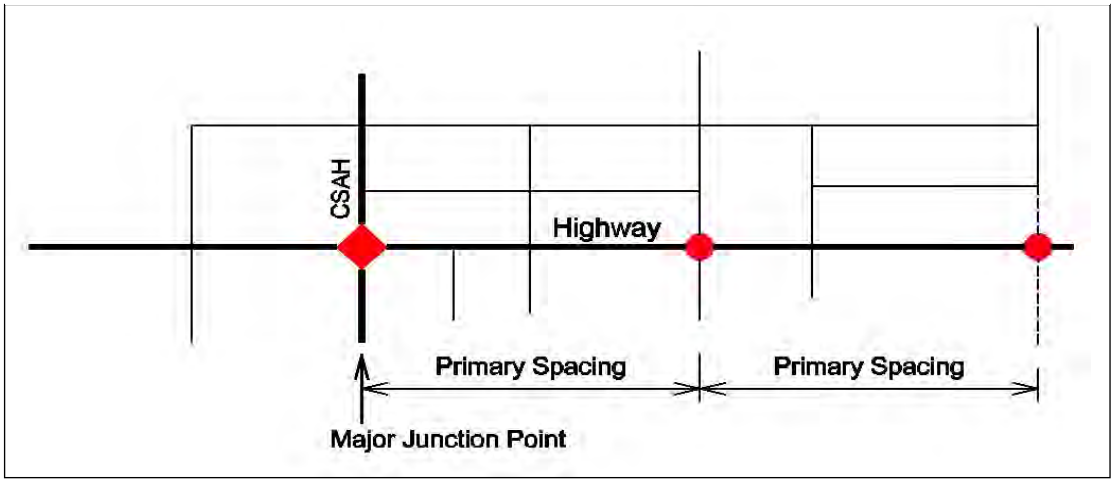
Identifying Primary and Secondary Intersections

Three steps are involved in the spacing of proposed public street intersections, as discussed in the following paragraph.

Step 1. To evaluate the consistency of a proposed public street intersection with the spacing guidelines, the reviewer must first determine the location of existing primary and secondary intersections along the corridor. Typically, a primary intersection is the junction between two major roads, and a secondary intersection is a junction between a major road and a minor road or a local street.

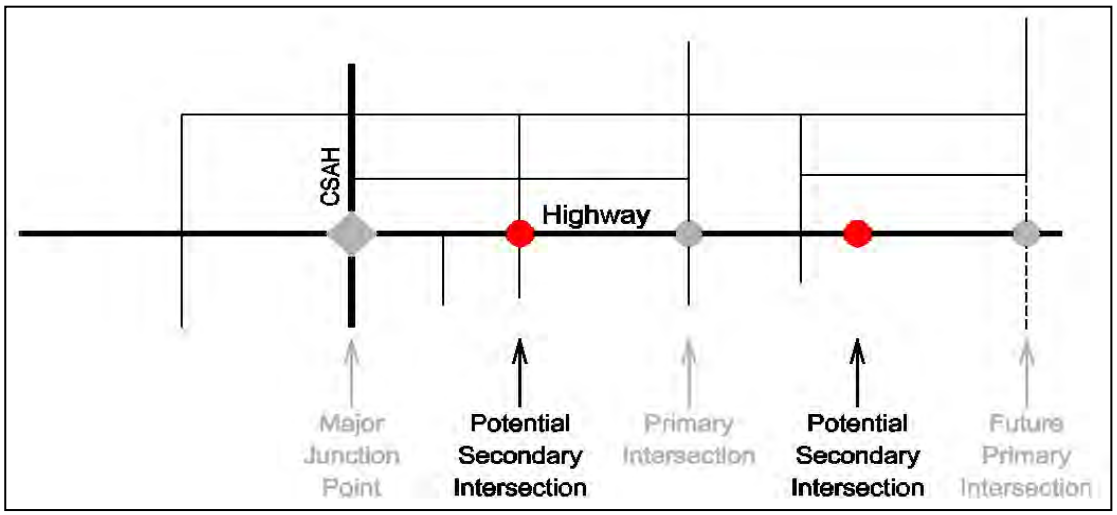
Step 2. Once identified, the major junction point becomes the beginning terminus from which the spacing of conforming intersections along the corridor is determined. In Figure 3.3, the junction of the CSAH and the trunk highway is identified as the major junction point. The primary intersection spacing is measured from that point.

Figure 3.3: Identifying Primary Intersection Spacing



Step 3. After the reviewer has determined the location of the primary and intersections along the corridor, they then identify the potential locations for secondary intersections. As shown in Figure 3.4, secondary intersections are typically located half way between the primary intersections.

Figure 3.4: Identifying Secondary Intersection Spacing



General Guidance for All Public Street Connections
The guidance below applies to all primary and secondary public street connections:

1. A high-volume driveway (Access Type 3) may substitute for an at-grade public street if:

   - The location is consistent with spacing guidelines for a public street connection;
   - The driveway is designed to provide access to a large development area encompassing multiple properties or structures served by a clearly-defined system of internal streets; and,
   - The driveway does not negatively impact the accessibility of adjacent land areas by disrupting the connectivity of the local supporting street network.

2. At-grade public street spacing should be measured from cross-street centerline to cross-street centerline along the primary highway. Minor variance, within 5% of the recommended spacing, constitutes conformance to the spacing guidelines if required to accommodate topographical constraints or connectivity to the established road network. Street spacing within 5% of the recommended distance should, in most cases, provide sufficient space to accommodate turn lanes, weaving maneuvers, and signal progression.

3. Breaks in existing access control to construct a new at-grade public street connection consistent with these guidelines may be considered, if necessary, to provide reasonable access and network connectivity. For Category 1F, 1AF, 2AF, 3AF, and 4AF highways, breaking access control should be considered only for a new interchange (Future chapters in this manual will provided additional guidance).

4. With regard to the impact of public street connections on the safety and operations of the transportation network, the location and design of each public street connection should be consistent not only with the guidance in this section, but also with the guidance provided in Section 3.4.

3.2.3 Secondary Intersections and Gap Analysis Procedure

Secondary Intersections Analysis
A secondary intersection is allowed between two primary intersections (per Section 3.2.2) if the secondary intersection does not create a potential risk to the safety and mobility. The Gap Analysis Procedure as described below and is illustrated with graphs (Figures 3.5 – 3.9) is part of the process of determining the appropriateness of a secondary intersection.

The Gap Analysis Procedure is used to evaluate the ability of vehicles at an access location to find adequate gaps in mainline traffic flows. If there are insufficient gaps, longer queues and delays will be experienced and the potential for greater risk-taking will occur. On low-volume highways, there will be fewer conflicting vehicles and many more gaps available. These low-volume roads allow for easier decision-making and less judgment by the driver. To identify potential high-risk areas where additional access is not advised, a simplified approach to gap analysis has been developed for application to unsignalized corridors.

This approach depends upon a series of risk-conflict graphs (Figures 3.5 – 3.7) that identify high-risk areas along unsignalized corridors, based on roadway configuration. These graphs are presented on the next page.

The gap analysis is intended for use on highways operating under a condition of random arrival. For this reason, the risk-conflict graphs are primarily applicable to unsignalized roadway segments. These unsignalized roadway segments include Category 1A, 2A, 3A, 4A, 5A, and 6A (rural areas) roadways.

Risk-Conflict Graphs

The risk-conflict graphs in Figures 3.5 – 3.7 were developed to be applied to specific roadway designs based on methodology in the *Highway Capacity Manual 2000*. The methodology assumes the following roadway design conditions:

- Side streets are stop-controlled;
- Traffic from nearby intersections does not impact the subject intersection or access point; and,
- Under wide median conditions (Figure 3.7), vehicles entering and crossing the mainline may use a two-step maneuver.

Figures 3.5 – 3.7 represent risk-conflict conditions based on roadway design. To select the appropriate figure to use, the reviewer chooses the graph representing the type of median on the primary roadway that is under consideration.

Figure 3.5 – Undivided Two-Lane Roadways

Figure 3.5 is used for all two-lane undivided roadways. Use this figure if there is no median along the primary highway.

Figure 3.5: Gap Analysis Graph for Undivided Two-Lane Roadways

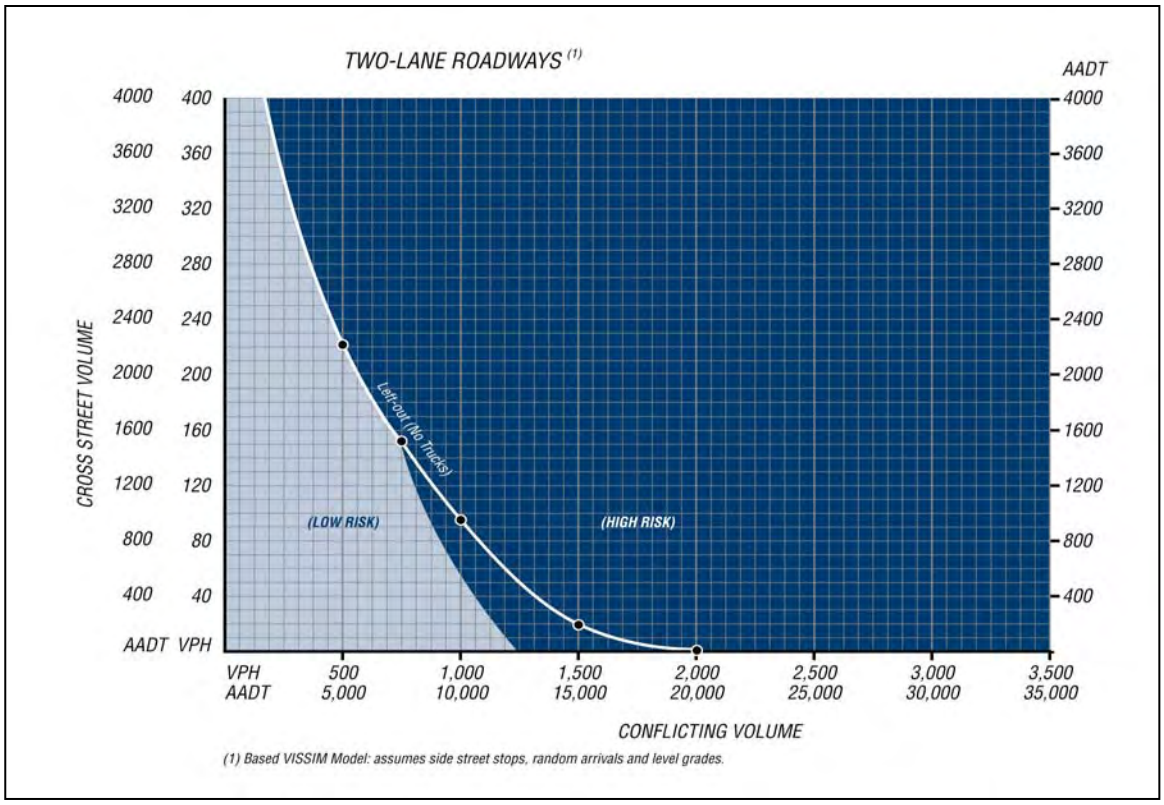


Figure 3.6 – Divided Four-Lane Roadways (with Narrow Medians)
Figure 3.6 is used for divided roadways with narrow medians. A narrow median is defined as having no storage space. Narrow medians require all vehicles crossing or turning left from the cross street to complete the maneuver as a single movement. This figure is also used when looking at right-in/right-out intersections.

Figure 3.6: Gap Analysis Graph for Divided Four-lane roadways with Narrow Medians

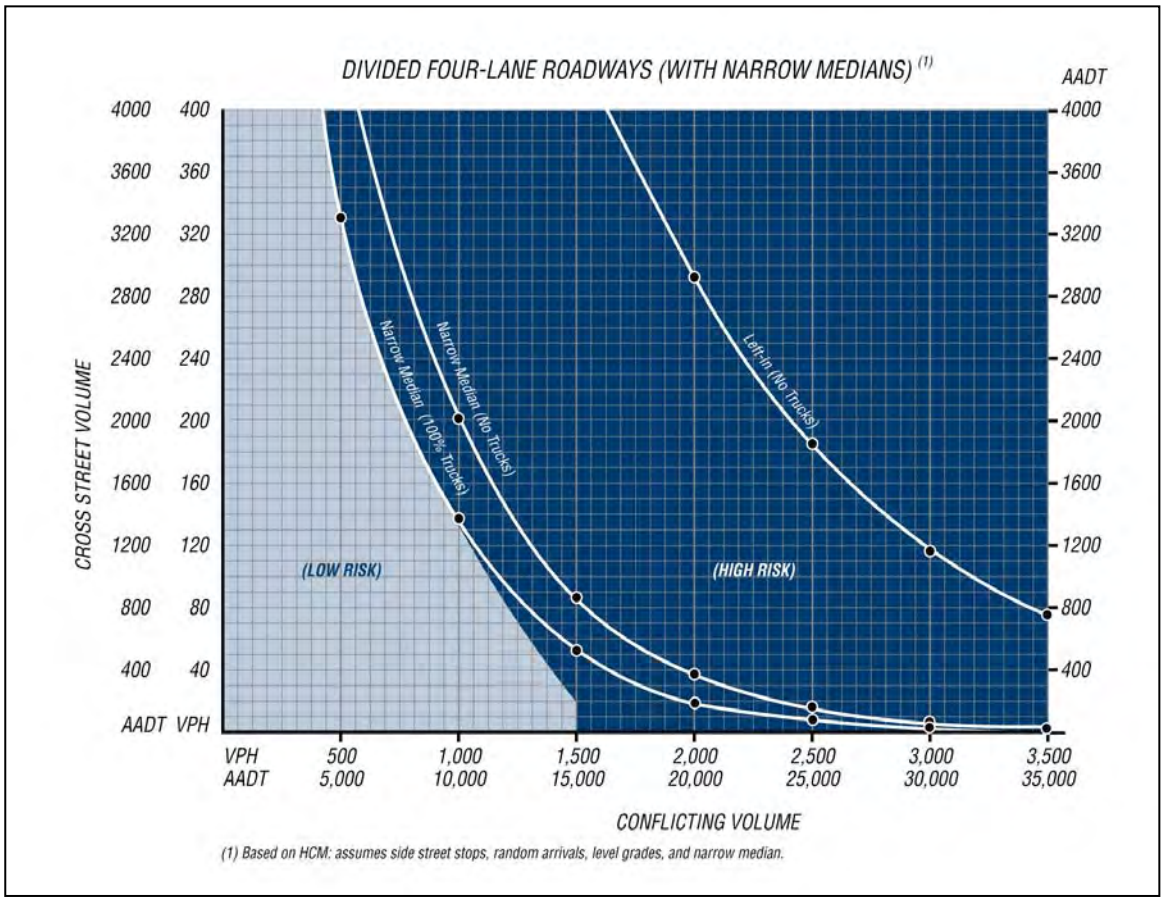
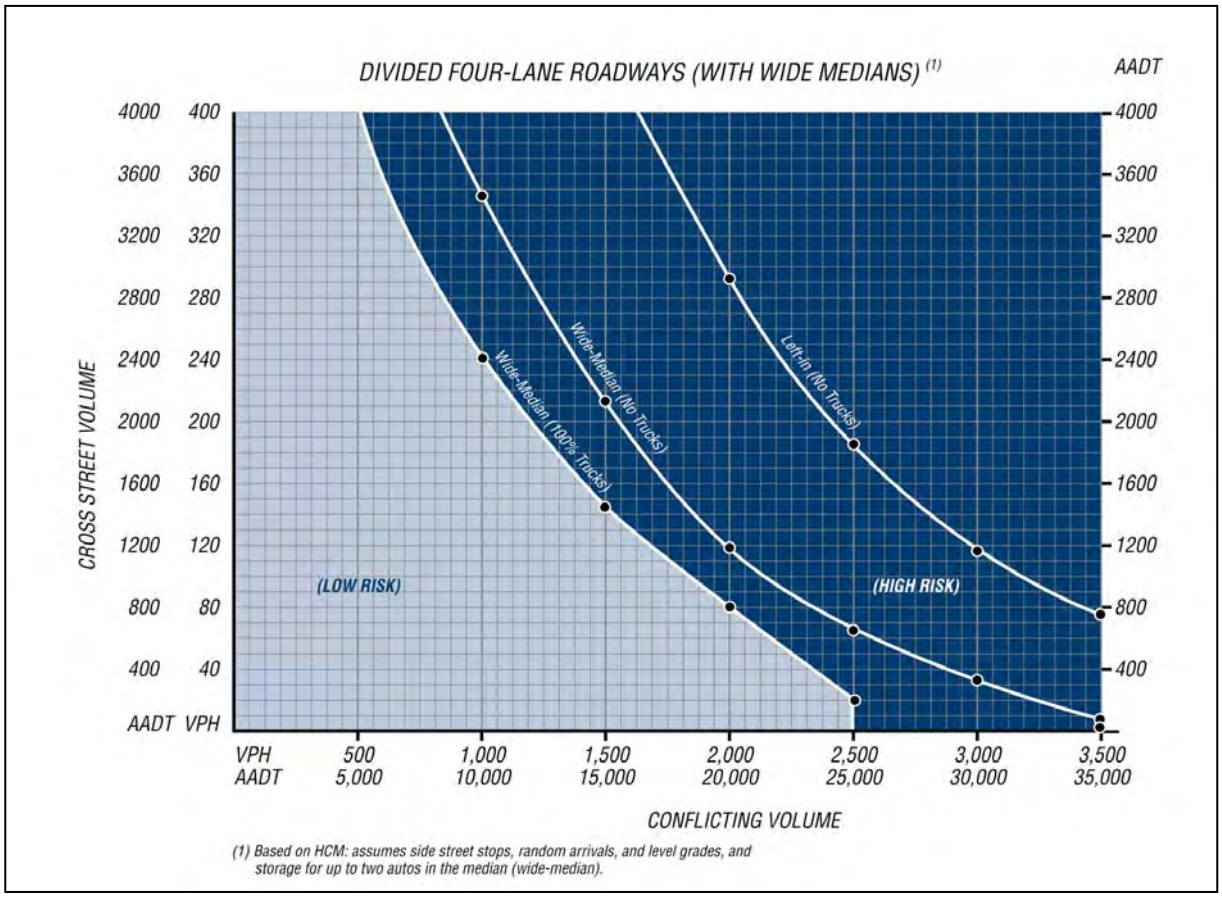


Figure 3.7 – Divided Four-Lane Roadways (with Wide Medians)
Figure 3.7 is used for divided roadways with wide medians. A wide median is defined as having storage for up to two vehicles in the median. This allows vehicles crossing or turning left from a side street to complete the maneuver in two steps.

Figure 3.7: Gap Analysis Graph for Divided Four-lane Roadways with Wide Medians



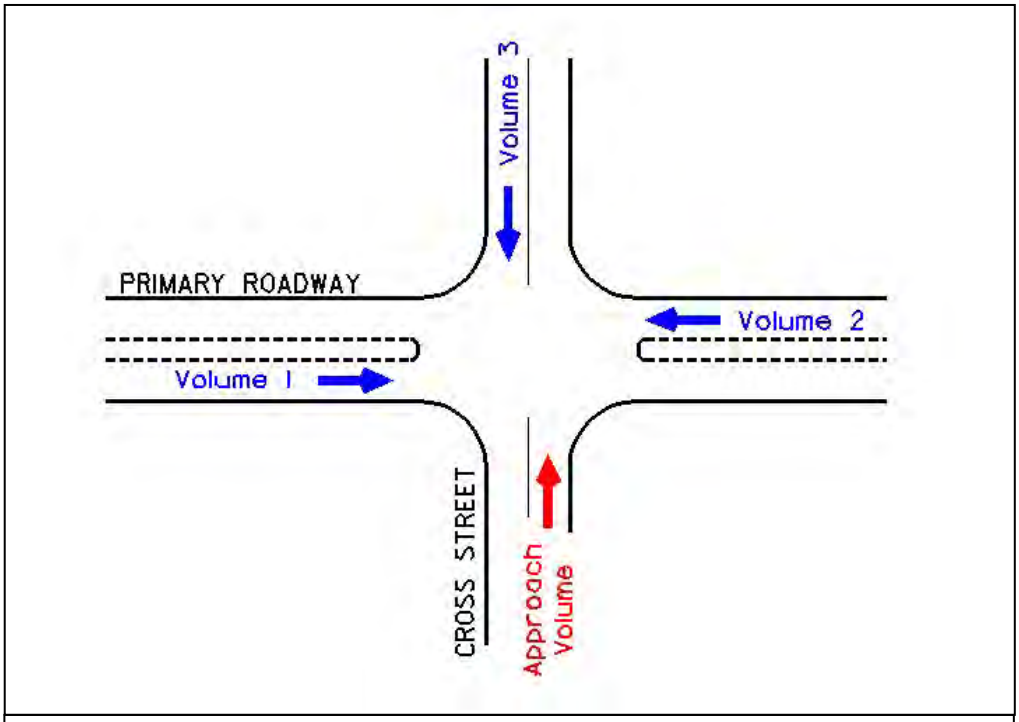
Using the Risk Conflict Graphs
The Risk Conflict Graphs are used to compare the approach volume on the potential secondary intersection with the conflicting volumes on the primary roadway and other legs of the potential intersection. The analysis looks first at whether the secondary intersection would safety operate as a full-movement intersection. If the secondary intersection would not safety operate as a full-movement intersection, it would be analyzed as a right-in/right-out-only intersection to see if would safely operate. If it would not operate safely either as full-movement intersection or a right-in/right-out-only intersection, the intersection should not be allowed. The following sections, and Figures 3.8 and 3.9, explain the calculations for determining the secondary intersection that should be allowed.

Full-movement Intersection Analysis

The following five steps determine whether a full-movement intersection is appropriate,

Step 1. The Conflicting Volume (horizontal axis on Figure 3.5, 3.6, or 3.7) is the estimated 20-year AADT of the primary roadway plus one-half of the 20-year cross street AADT (*in Figure 3.8, the Conflicting Volume is Volume 1 + Volume 2 + Volume 3*). At T-intersections, the horizontal axis of the graphs is only the estimated 20-year AADT of the primary roadway (*in Figure 3.8, the Conflicting Volume is Volume 1 + Volume 2*). The Approach Volume (vertical axis on Figure 3.5, 3.6, or 3.7) is one-half of the estimated 20-year AADT of the cross street or access point. If actual traffic data is available, that data should be used to determine the approach volume and the conflicting volumes.

Figure 3.8: Approach Volume and Conflicting Volumes for a Full-movement Intersection



Calculations:
Volume 1 = One-half of the Primary Roadway AADT
Volume 2 = One-half of the Primary Roadway AADT
Volume 3 = One half of the Cross Street AADT
Approach Volume = One-half of the Cross Street AADT
Conflicting Volume = Volume 1 + Volume 2 + Volume 3

Step 2. Determine which graph (Figure 3.5, 3.6, or 3.7) to use.

Step 3. Compare the Approach Volume (vertical axis) with the Conflicting Volume (horizontal axis) to determine the intersection condition. If the intersection falls within the low-risk conflict condition, a full- movement intersection may be allowed.

Step 4. If the intersection falls within the high-risk conflict condition and is located on a divided roadway, the intersection should be analyzed to determine if a right-in/right-out-only intersection is acceptable (see Right-in/Right-out-only Intersection Analysis below).

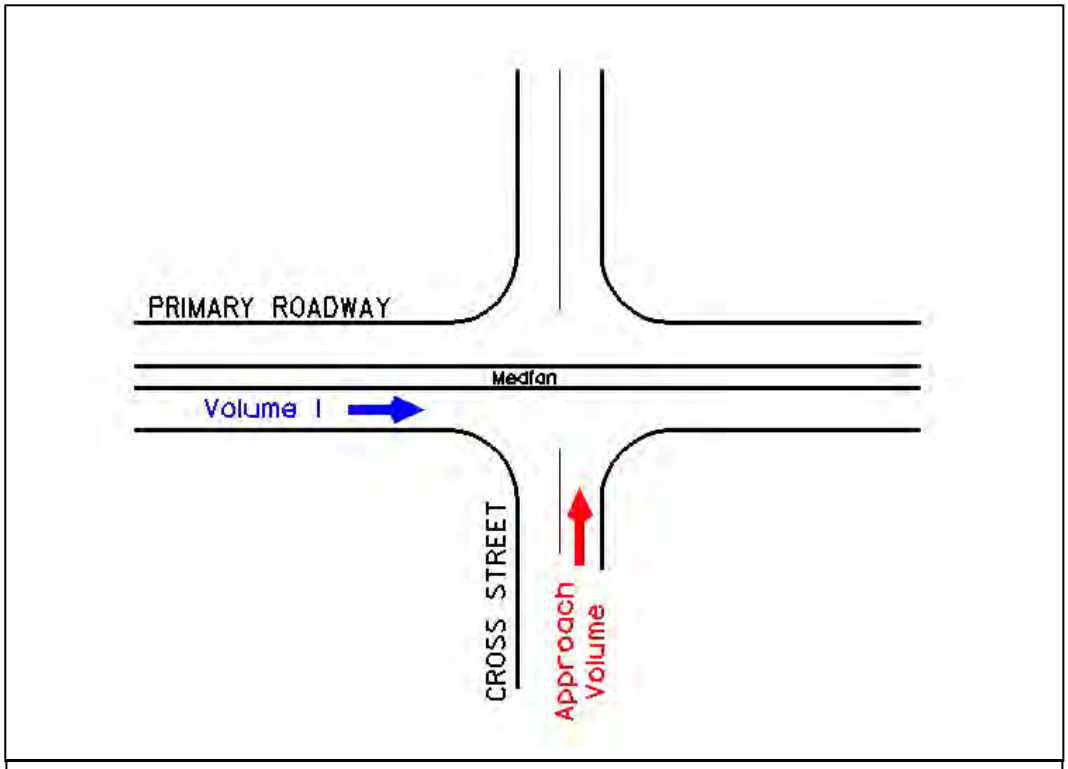
Step 5. If the intersection or access point falls within the high-risk conflict condition and is located on a two-lane undivided roadway, the intersection or access point should not be allowed.

Right-in/Right-out-only Intersection Analysis

The following two steps determine whether a right-in/right-out-only intersection is appropriate,

Step 1. Figure 3.6 represents the risk conflict conditions for right-in/right-out-only intersections. The Conflicting Volume (horizontal axis on Figure 3.6) Is one-half of the estimated 20-year AADT of the primary roadway (*in Figure 3.9, the Conflicting Volume is Volume 1*). The Approach Volume (vertical axis on Figure 3.6) is one-half of the estimated 20-year AADT of the cross street or access point.

Figure 3.9: Approach Volume and Conflicting Volumes for a Right-in/Right-out-only Intersection



Calculations:
Volume 1 = One-half of the Primary Roadway AADT
Approach Volume = One-half of the Cross Street AADT
Conflicting Volume = Volume 1

Step 2. Compare the Approach Volume (vertical axis) with the Conflicting Volume (horizontal axis) on Figure 3.6 to determine the intersection condition. If the intersection falls within the low-risk conflict condition, a right-in/right out only intersection may be allowed. If the intersection falls within the high-risk conflict condition, no intersection should be allowed. Alternatively, a right-in only intersection with a right-turn lane may be considered if connectivity to the supporting street network provides full circulation and return movements.

3.2.4 Guidelines for Supporting Street Connectivity

As communities grow and land is subdivided for development, it is important to promote the continuation and extension of the existing local street system. Dead-end streets, cul-de-sacs, and gated communities force traffic to use major roadways even for short local trips. Fragmented street systems also impede emergency access and increase the length of automobile trips.

A new public street connection to the trunk highway system should also provide direct connections to the existing or planned local street system.

Local subdivision regulations should also promote and support network connectivity.

In some cases, supporting street connectivity may not be feasible or appropriate, such as:

- Where existing topographical constraints or historical street patterns may prevent connectivity with the local street system;
- Where large developments with potential security concerns would warrant fewer access points, such as military bases, parks, airports, ports, and similar facilities; or,
- Where large regional developments would generate primarily long-distance or regional trips and would result in unacceptable traffic volumes on the local street system.

3.2.5 Guidelines for Signalization

Closely- or irregularly-spaced traffic signals result in frequent stops, unnecessary delays, increased fuel consumption, excessive vehicular emissions, and increased highway crash rates. Alternatively, uniform signal spacing facilitates coordinated signal timing plans that can effectively accommodate varying traffic conditions during peak and off-peak periods, and also allows for adaptation of a traffic control system as changes occur over time. Therefore, selecting uniform signalized intersection spacing is an essential element in establishing access spacing standards.

In rural areas, where traffic signals are usually isolated (spacing greater than one mile), this approach does not apply. Traffic signal spacing is most relevant in urban and urbanizing areas where through-traffic mobility and side-street accessibility are typically balanced through the use of signalized intersections.

The following tables (Figures 3.10 and 3.11) outline methods for determining signal spacing.

Figure 3.10: Signal Spacing Guidance for IRCs

Category	Signal Spacing Guidance
Interregional Corridors & Interstate Highways	
The Interregional Corridor system identifies important statewide mobility corridors. On these highways, performance targets have been developed based on overall corridor speed. A traffic signal on one of these corridors represents a delay penalty or a reduction in the corridor speed; therefore, a new traffic signal on an Interregional Corridor should generally be avoided, if possible. When a district is considering a new signal on an Interregional Corridor, the Office of Investment Management is available to assist in calculating the impact of the signal on the overall corridor performance.	
1F	All access to the interstate system is via interchanges. Signal spacing is not applicable.
1AF **2AF**	**Full Access-Controlled Highways:** All access to the highway system is via interchanges. Signal spacing is not applicable. **Transitioning Highways:** On IRC highways transitioning to a full freeway design, new traffic signals should not be considered unless no other economically feasible alternative is available. The new traffic signal should be considered interim, and a plan for its future removal should be developed. Wherever possible, the new traffic signal should be located where a future interchange is planned.
1A **2A**	On rural IRC highways, a new traffic signal may be considered if warranted and if it does not lower the performance of the corridor below the target speed. However, if the signal is warranted and needed for safety, and a cost-effective alternative is not feasible, an interim signal may be considered, even though it would lower the performance of the corridor below the target speed.
1B **2B**	On urban/urbanizing IRC highways, a new traffic signal may be considered if warranted, but it should be both uniformly-spaced and interconnected with other signals along the corridor to minimize delay and to promote platoon flow. • **Category 1B: The recommended signal spacing is one-half mile. The new traffic signal should be considered interim and a plan for its future removal should be developed.** • **Category 2B: The recommended signal spacing is one-half mile**.

Note:
The information provided in this Mn/DOT Access Management Manual does not supersede the Mn/DOT Traffic Engineering Manual or the Mn MUTCD.

Mn/DOT Traffic Engineering Manual:
"Traffic signals should not be installed unless one or more of the signal warrants in the Mn MUTCD are met, but the meeting of a warrant or warrants does not alone justify the installation of a signal."

Figure 3.11: Signal Spacing Guidance for Non-IRCs

Category	Signal Spacing Guidance
Non-IRC Highways	
3AF **4AF**	**Full Access-Controlled Highways:** All access to the highway system is via interchanges. Signal spacing is not applicable. **Transitioning Highways:** On highways transitioning to a full freeway design, new traffic signals should not be considered unless no other economically feasible alternative is available. The new traffic signal should be considered interim, and a plan for its future removal should be developed. Wherever possible, the new traffic signal should be located where a future interchange is planned.
3A **4A** **5A** **6A**	**Rural:** Because traffic signals located in rural areas are generally isolated, they do not directly impact the spacing of at-grade public street connections. In these areas, traffic progression is not an issue and traffic signals are generally installed to address safety concerns. In rare cases, two or more traffic signals may be closely spaced (spacing of one-half mile or less) along an otherwise rural and unsignalized highway. These signals should be interconnected and timing should be coordinated to minimize the impact on the mobility of the through-traffic.
1C **2C** **3B & 3C** **4B & 4C** **5B & 5C** **6B & 6C**	**Urban/Urbanizing and Urban Core:** The public street connection spacing policy is based on providing two-way coordinated traffic progression (or platoon flow) through a series of traffic signals. The policy balances mobility and accessibility and relies on the ability to provide uniform and interconnected traffic signal spacing. • **Categories 3B & 4B: The recommended signal spacing is one-half mile;** • **Categories 5B & 6B: The recommended signal spacing is one-quarter mile;** • **Category 1C: The recommended signal spacing is one-quarter mile. The new traffic signal should be considered an interim solution, and a plan for its future removal should be developed;** • **Categories 2C, 3C, 4C, & 5C: The recommended signal spacing is one-quarter mile;** • **Category 6C: The recommended signal spacing is one-eighth mile.**
7	By adopted plan

Note:
The information provided in this Mn/DOT Access Management Manual does not supersede the Mn/DOT Traffic Engineering Manual or the Mn MUTCD.

Mn/DOT Traffic Engineering Manual:
"Traffic signals should not be installed unless one or more of the signal warrants in the Mn MUTCD are met, but the meeting of a warrant or warrants does not alone justify the installation of a signal."

3.2.6 Guidelines for Other Higher-Level Traffic Control

Other higher-level traffic control, including roundabouts, four-way stop conditions, and continuous flow intersections may impact highway mobility and platoon flow. Where platoon flow is critical, these other traffic control methods need to be thoroughly analyzed with regards to corridor mobility before being considered as alternatives to traffic signals. The use of other higher level traffic control methods should be consistent with primary intersection spacing, as discussed above, in Section 3.2.2.

3.2.7 Interim Spacing on Transitioning Subcategory AF Highways

On subcategory AF highways transitioning to freeways, it is likely that both at-grade intersections and interchanges will be present. All at-grade intersections should be considered interim. The desirable spacing between an at-grade intersection and the merge point of the closest ramp should be a minimum of one-half mile (see Figure 3.35). If one-half mile cannot be attained, a shorter spacing may be considered if analysis shows that the shorter distance would not create unacceptable weaving operations.

The spacing between two at-grade, full-movement intersection spacing on an AF Highway should be one mile.

3.3 Driveway Connections

3.3.1 Background and Approach

Mn/DOT's policy on driveway connections is designed to respect the legal rights of abutting property owners while preserving safety and mobility on the trunk highway system. **Except where Mn/DOT has acquired access rights, abutting property owners are entitled to reasonably convenient and suitable access to the highway.**

Mn/DOT regulates access as an exercise of the police power of the state: the power to impose restraints on private rights as necessary for the general welfare. Regulations or restrictions on access that are legitimate exercises of the police power are generally not compensable. However, if the restriction on access denies a property owner reasonably convenient and suitable access, the denial becomes a taking of a property right, subject to compensation. The policy guidelines for driveway allowance are intended to support Mn/DOT's legitimate exercise of its regulatory authority without creating an unintended compensable taking.

The policy reflects the following considerations regarding driveways and property access:

- Property access via the **local street system**, when available, is generally preferred over direct driveway connections to the trunk highway system, as this is most conducive to safety and mobility. However property access via the local street system must provide reasonably convenient and suitable access.

- Within **urban/urbanizing areas**, Mn/DOT strongly encourages the development of a complete supporting local road network to serve as an alternative to direct driveway access to the trunk highway system. Urban/urbanizing areas offer the greatest opportunity to improve mobility and safety through access management.

- Within **rural areas**, Mn/DOT recognizes that developing a complete supporting road network may not be economically feasible. In many parts of the state, the road network is sparse and trunk highways must provide both mobility and property access. However, to preclude private access to the trunk highway altogether would overly restrict the economic use of the surrounding area.

- Where the combination of high speeds and high traffic volumes precludes the safe accommodation of driveways, Mn/DOT may seek to acquire access control or construct access roads to provide alternative access. On much of the rural trunk highway system, however, this level of investment is not feasible or cost-effective. Nevertheless, with proper consideration for location and design (Section 3.4), a driveway may be accommodated without unduly affecting safety and mobility.

The table that follows (Figure 3.12) provides an overview of Mn/DOT's policy on driveway connections to trunk highways.

Figure 3.12: Summary of Driveway Allowance

Category	Area or Facility Type	Driveway Allowance
1F	Interstate Freeways	• No private driveways are allowed
1AF, 2AF, 3AF & 4AF	Non-Interstate Freeways & High-Priority IRCs	• On facilities transitioning to full access control, driveways should not be permitted if reasonably convenient and suitable alternative access is available. • Where reasonably convenient and suitable alternative access is not available, an interim driveway may be permitted, and if possible, it should be designed so that traffic can be redirected to another road when the facility becomes fully access-controlled.
1A, 2A, 3A, 4A & 5A	Rural (Not planned for full access control)	• If a property retains access rights but no reasonably convenient and suitable alternative access is available, a driveway is permitted. • The driveway should be located and designed to minimize the impact on the safety and operations of the highway. • All driveways (Types 1, 2, and 3) should be spaced in accordance with Figure 3.27.
1B, 2B, 3B, 4B & 5B	Urban/ Urbanizing	• If a property retains access rights but no reasonably convenient and suitable alternative access is available, a driveway is permitted. • It is Mn/DOT's preference to permit public street connections rather than driveways in Urban/Urbanizing areas. Where possible, Mn/DOT should work with local agencies to encourage the development of a supporting road system to serve the property. • High-volume (Type 3) driveways should be spaced in accordance with Figure 3.27. • Driveways should be permitted as interim where a future supporting street system is anticipated.
1C, 2C, 3C, 4C & 5C	Urban Core	• If a property retains access rights but no reasonably convenient and suitable alternative access is available, a driveway is permitted. • The spacing of driveways will vary based on reasonableness of use and driver expectancy.
6A, 6B & 6C	All Collectors	• If a property retains access rights and no reasonably convenient and suitable alternative access is available, a driveway is permitted. • The spacing of driveways will vary based on reasonableness of use and driver expectancy.
7	Specific Access Plan	• The adopted Category 7 Plan should address the allowance and spacing of driveways.

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3.3.2 Policy on Driveway Connections

Policy
Where access rights have been acquired and complete access control established, direct property access is prohibited. At all other locations, driveways are allowed conditionally, subject to the following findings:

1. The property retains access rights (Section 3.3.3); and,
2. Reasonably convenient and suitable alternative access to the property is not otherwise available (Section 3.3.4).

If both of these findings are satisfied, a driveway should be allowed. Generally, only one driveway is allowed unless additional driveways are necessary to provide reasonably convenient and suitable access to the existing or proposed land use.

The location and design of the driveway should be considered after determining whether access is allowed. Considerations regarding the location and design of a driveway are described in Section 3.4.

Note: There may be circumstances where the reviewer determines that even though these two findings are satisfied, and location and design guidance are applied, the driveway connection would significantly impair the safety or mobility of the highway. In these situations, the District Engineer must determine whether investing in acquisition of the property's access rights to prevent the driveway is warranted.

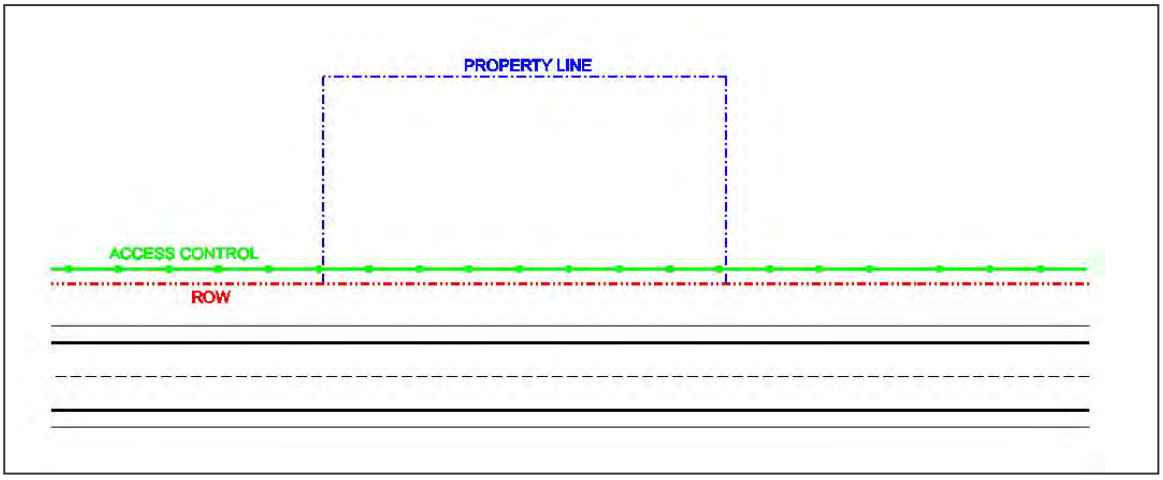
3.3.3 Findings: The Property Retains Access Rights

Mn/DOT and local governments have the authority to acquire access rights. The degree to which access rights are acquired will impact how Mn/DOT addresses driveway access.

Full Access Control
Full access control is the condition by which the right of access is acquired along the entire frontage of the property. The right of access may be acquired by Mn/DOT or by a local road authority through purchase, gift, or deed. Once the right of access is acquired along the property's frontage, it is considered Full Access Control, and the property retains **no right of access**.

Where Full Access Control exists, it is Mn/DOT's policy that driveway connections not be allowed.

Figure 3.13: Full Access Control

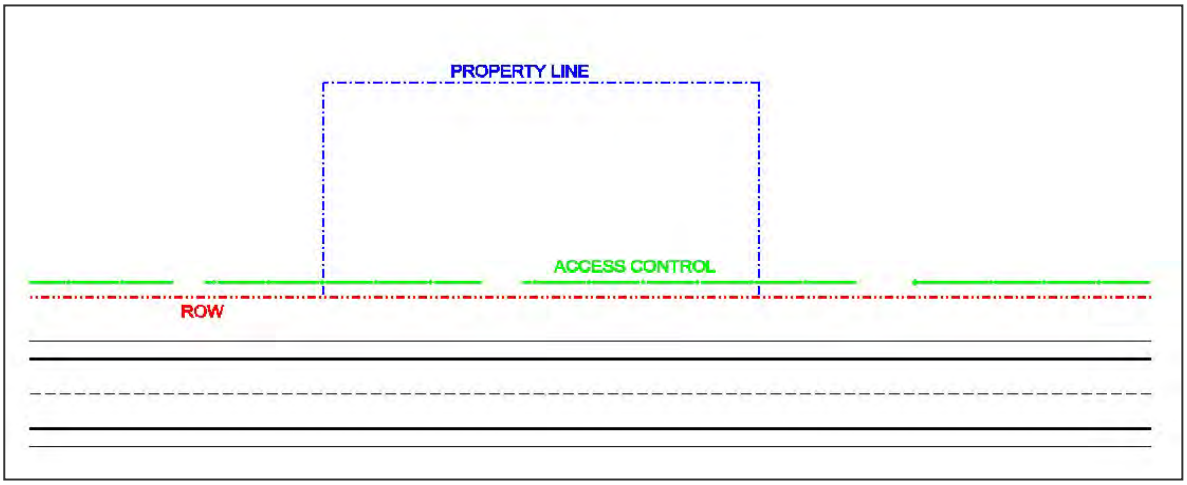


Partial Access Control

Partial Access Control is the condition by which the right of access is acquired along only parts of the property's frontage. The property owner retains the right of reasonably convenient and suitable access at those points or at remaining "openings" in access control where rights have not been acquired.

It is Mn/DOT policy that an opening established through the acquisition of partial access control does not confer an automatic right to a direct driveway connection at that point; rather, it is Mn/DOT's policy that a driveway be allowed at an opening in partial access control, subject to the finding that reasonably convenient and suitable alternate access is not available.

Figure 3.14: Partial Access Control

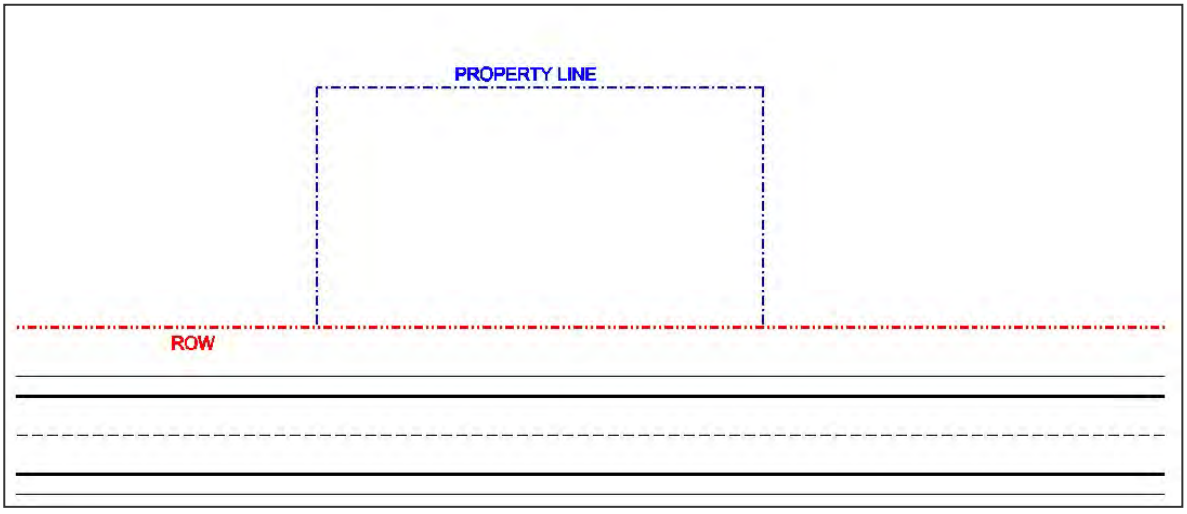


No Access Control

No Access Control is the condition by which the right of access has not been acquired at any point between a parcel and a highway.

It is Mn/DOT policy that a driveway be allowed from a property where Mn/DOT has not acquired any access rights, subject to the finding that reasonably convenient and suitable alternate access is not otherwise available.

Figure 3.15: No Access Control



Easements for Nonabutting Property

Minnesota Statute 160.18, Subdivision 3, provides statutory guidance regarding easements for property abutting a highway, as follows:

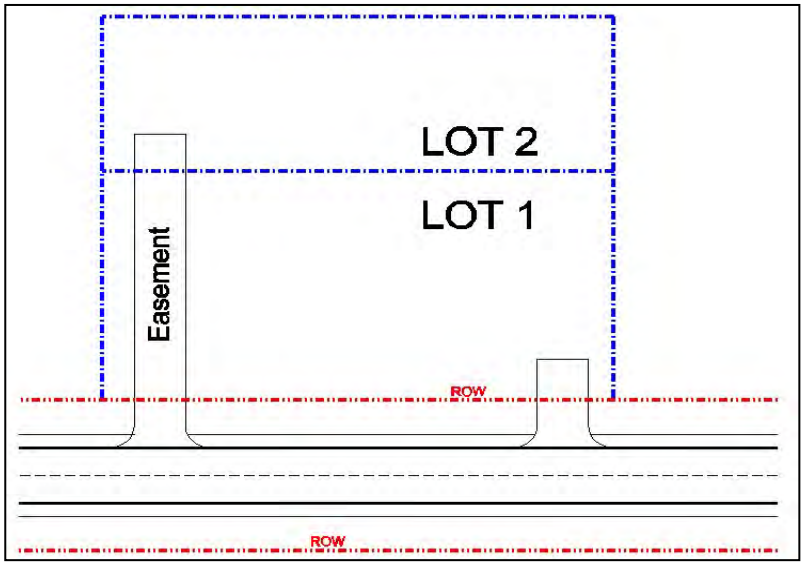
"The owner or occupant of property abutting upon a public highway, having a right of direct private access thereto, may provide such other or additional means of ingress from and egress to the highway as will facilitate the efficient use of the property for a particular lawful purpose, subject to reasonable regulation by and permit from the road authority as is necessary to prevent interference with the construction, maintenance and safe use of the highway and its appurtenances and the public use thereof."

Generally, only property abutting a highway has a right of access to the highway; therefore, it is Mn/DOT policy that a nonabutting parcel or lot does not have a right of access, unless all of the following findings are met:

- The nonabutting parcel or lot has a legal and documented easement; and,
- The easement represents the only reasonably convenient and suitable access to the nonabutting parcel or lot.

In Figure 3.16, Lot 2 is a nonabutting lot with an easement through Lot 1. If Lot 2 is landlocked and has no reasonably convenient and suitable alternative access, Lot 2 has a right to access to the highway, subject to the reasonable regulation as described in Section 3.4.

Figure 3.16: Access to Nonabutting Lot



An easement for a nonabutting parcel or lot is an unusual circumstance. Normally the local land use authority will not allow such a subdivision.

3.3.4 Findings: Reasonably Convenient and Suitable Alternative Access

Definition
The definition of "reasonably convenient and suitable alternative access" will vary depending on the specific circumstances of the property. It will also vary depending on the importance and function of the highway.

It is generally accepted that reasonably convenient and suitable access entitles the landowner access from the property to only the near lane of travel. On divided highways, the landowner is not legally entitled to a median opening.

What is reasonably convenient and suitable not only guides the location and design of a driveway, but also guides the determination of the number of driveways necessary to reasonably serve the property. In most cases, one driveway per parcel is sufficient to provide reasonably convenient and suitable access. In rare cases, though, multiple driveways may be necessary if the property cannot otherwise be developed or utilized using a single driveway.

In addition, Mn/DOT may recommend multiple driveways as an alternative to a single driveway where multiple driveways would lessen the impact on the safety and operations of the highway.

Guidance
While the ultimate decision on what is reasonably convenient and suitable alternative access can only be established through the judicial system, Mn/DOT staff must exercise administrative judgment when reviewing permits or designing projects. The following questions are provided as a guide to evaluating whether the potential alternative access is reasonably convenient and suitable:

- Are the existing or proposed structures and parking areas situated to allow use of the potential alternative access?
- Are there any environmental, topographic, or other physical constraints or easements associated with the property or surrounding area that would prevent reasonable use of the potential alternative access?
- Does the potential alternative access provide sufficient on-site circulation for the anticipated type of customer and delivery vehicles?
- Will the potential alternative access to the property be consistent or comparable with similar properties on the corridor?
- Are the potential alternative street routes functionally suitable and structurally capable of carrying the anticipated traffic volumes and vehicle types?
- Will the anticipated traffic volumes and vehicle types be compatible with the surrounding neighborhood?
- Is the functional classification of the potential alternative street route equal to or lower than that of the directly-abutting highway?
- Can the potential alternative access be constructed to meet design criteria, such as sight distance?
- Is the site adequately and safely served by a single access point?

3.4 Location and Design Considerations

The location and design of a public street connection or driveway should minimize the impact on the safety and operations of the transportation network to the greatest extent possible while still providing reasonably convenient and suitable access.

This section provides guidance and examples of access-related elements that should be considered when designating the location and design of a public street connection or driveway:

- Number of Driveways;
- Sight Distance;
- Spacing between Driveways;
- Corner Clearance and Access within the Functional Area of an Intersection;
- Offset Driveways and Streets;
- Restricted Movements and Median Openings;
- Shared Driveways;
- Interim Access; and
- Auxiliary or Turn Lanes.

3.4.1 Number of Driveways

Definitions
A **lot** is a designated tract or area of land established by plat, subdivision, or as otherwise permitted by law, to be separately owned, used, developed, or built upon.

A **parcel** is any contiguous quantity of land in the possession of, owned by, or recorded as the property of the same owner. A parcel may encompass one or more lots.

Guidance and Examples
The need for multiple driveways serving the same lot should be reviewed on a case-by-case basis.

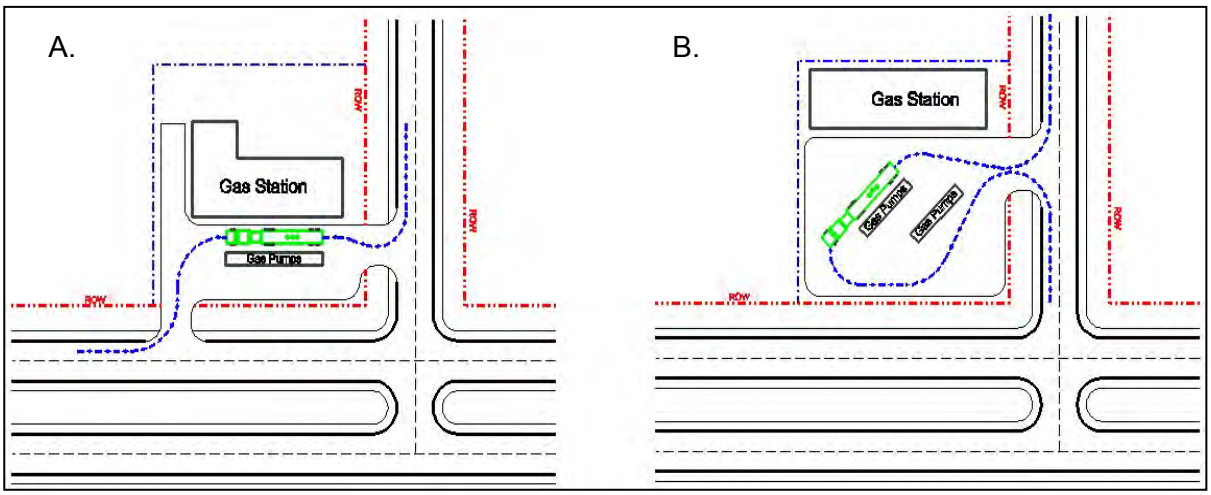
In most cases, one driveway per parcel is sufficient to provide reasonably convenient and suitable access. In rare cases, though, multiple driveways may be necessary if the property cannot otherwise be developed or utilized using a single driveway. Figure 3.17 demonstrates how the layout of a parcel can affect the number of driveways. In Figure 3.17A the location of the building and small pump area prevents a delivery truck from using a single driveway (without backing into the street). In Figure 3.17B the building is located back further and the pump area is larger, therefore a delivery truck would be able to enter and exit the property through a single driveway.

Examples of when an additional driveway may be considered include the situations cited below, as illustrated on the next few pages:

- A small parcel or lot where large delivery trucks are unable to safely maneuver and circulate on-site;

- A small parcel or lot serving highly-directional, highway-oriented traffic movements (such as service stations or drive-through banks, as shown in Figure 3.17) where the logical flow of traffic would be safely directed into the parcel at one driveway and out of the parcel at another driveway.

Figure 3.17: Multiple Driveways for Small Parcels



- A parcel or lot to separate incompatible vehicle uses (see Figure 3.18). *Examples of incompatible vehicle uses include: farms where one driveway would serve the house and another would serve an agribusiness; large commercial businesses where one driveway would serve employees and customers and another driveway would serve delivery trucks.*

Figure 3.18: Multiple Driveways for Incompatible Vehicle Uses

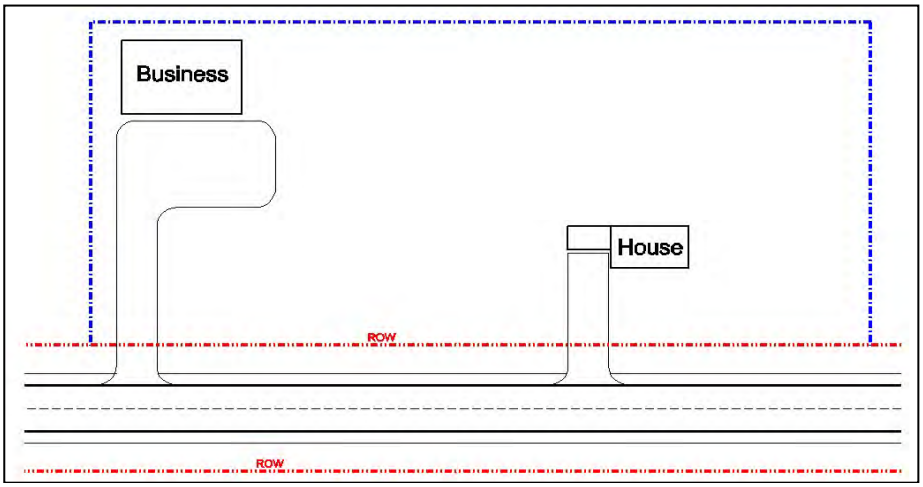
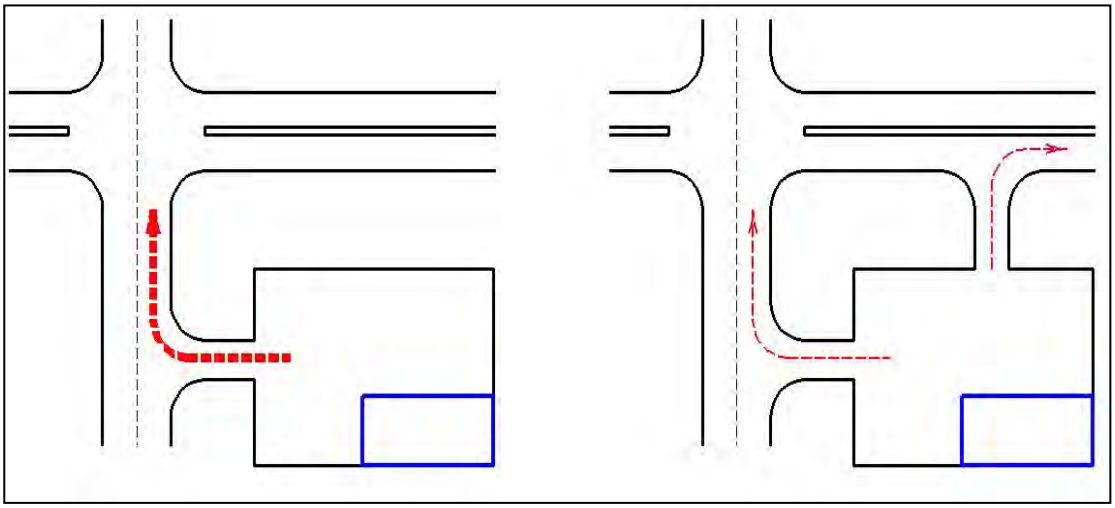


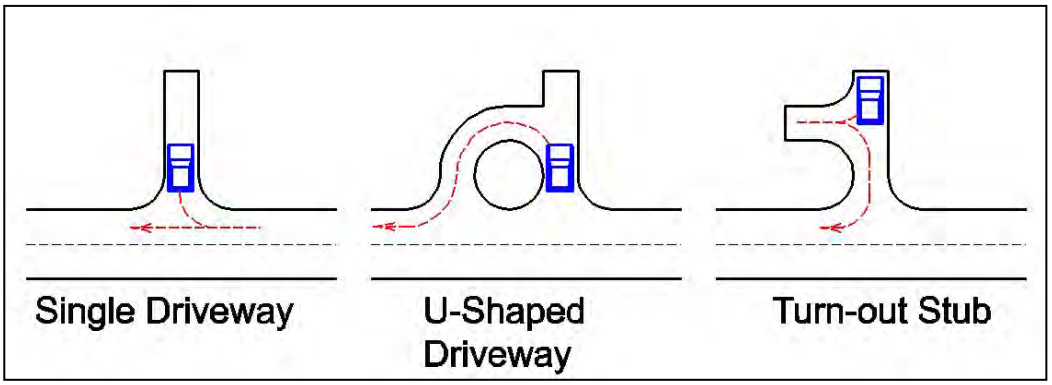
Figure 3.19: Multiple Driveways to Redirect Traffic



- A parcel or lot where there is a significant safety or congestion problem at one driveway or at a nearby public intersection. An additional driveway may be beneficial if the additional driveway would improve the travel patterns (see Figure 3.19). In some cases, an additional driveway may alleviate the immediate need for a traffic signal. *Example: if a public intersection serving a large development is overloaded, an additional driveway serving only the development may be considered to redirect traffic and relieve the traffic conditions at the public intersection. This approach may be more cost-effective than reconstructing the intersection.*

- A parcel or lot may be a candidate for a U-shaped driveway where exiting traffic would otherwise have to back up onto the highway, but where a turn-out stub is not practical. Generally, this is only applicable where having only one access point would greatly impact the safety of the highway, such as having large trucks or farm equipment backing up onto the highway. This is normally not the case with residential driveways.

Figure 3.20: U-Shaped Driveways & Turn-out Stubs

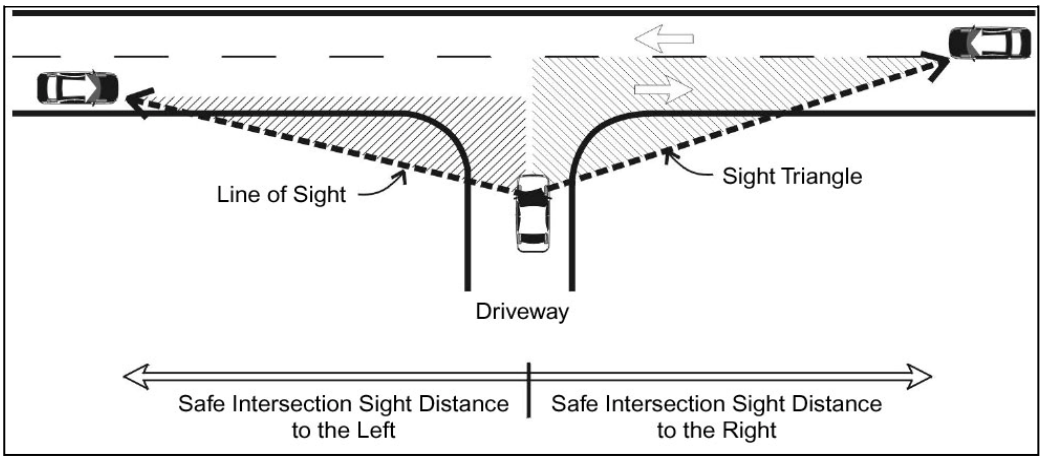


3.4.2 Sight Distance

Definitions

Intersection Sight Distance (ISD), as illustrated in Figure 3.21, allows vehicles entering a highway to turn into the through-lane and get up to running speed without adversely slowing down through-traffic. The *Mn/DOT Road Design Manual*, Section 5-2.02, provides a detailed description of Intersection Sight Distance.

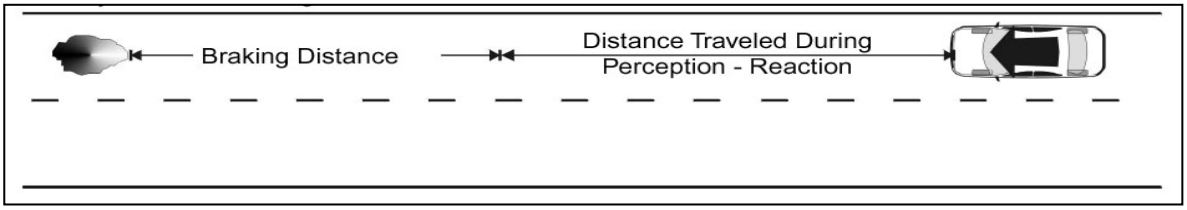
Figure 3.21: Intersection Sight Distance



Decision Sight Distance, also known as the Ten-Second Decision Sight Distance, allows a driver adequate time to react to a situation on the highway and maneuver, whether to stop or change lanes. Possible applications of Decision Sight Distance, including its application to driveways, are provided in the *Mn/DOT Road Design Manual*, Section 2-5.09.04. *As a rule of thumb, the Decision Sight Distance is determined by the distance at which an approaching vehicle has ten seconds from the moment it is within the driver's sight-line until the moment it reaches the access point.*

Stopping Sight Distance (SSD), shown in Figure 3.22, allows through-traffic adequate time and distance to stop in order to avoid a collision with a vehicle entering the highway from a driveway.

Figure 3.22: Stopping Sight Distance



Guidance and Examples

All public street connections and driveways should have adequate sight distance. This ensures that a vehicle entering the highway from a street or driveway can safely perform the maneuver while having a minimal impact on through-traffic. Adequate sight distance will vary, depending on the intensity of traffic at the access point. The recommended sight distance that should be applied, based on the access type, is shown in Figure 3.23.

Figure 3.23: Sight Distance Based on Access Type

Access Type		Recommended Sight Distance
1	Residential/Field Entrance	Decision Sight Distance
2	Low-volume Commercial	Decision Sight Distance
3	High-volume Commercial	Intersection Sight Distance
4	Public Intersections	Intersection Sight Distance

Sources:
Intersection Sight Distance (Mn/DOT Road Design Manual Section 5-2.02)
Decision Sight Distance (Mn/DOT Road Design Manual Section 2-5.09.04)

Figure 3.24: Stopping Sight Distance [(1)]

Design Speed (mph)	Stopping Sight Distance (feet) [(2)(3)]
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645
70	730
75	820

(1) Stopping Sight Distance based on AASHTO Green Book, 5th Ed. 2004 and Mn/DOT Road Design Manual, Table 2-5.09A.

(2) The values shown in this table may be superceded to avoid the functional area (see Section 3.4.4) of adjacent intersections and driveways, or to accommodate turn lanes for the proposed access.

(3) Stopping Sight Distance is based on a level roadway without any horizontal curvature. In areas with vertical and horizontal curves, additional distance may be needed. See Mn/DOT Road Design Manual Table 2-5.09B.

When the recommended sight distance, as shown in Figure 3.23, cannot be met, the street connection or driveway should be located where the best possible sight distance can be achieved. Additional efforts to obtain the recommended sight distance may include the following:

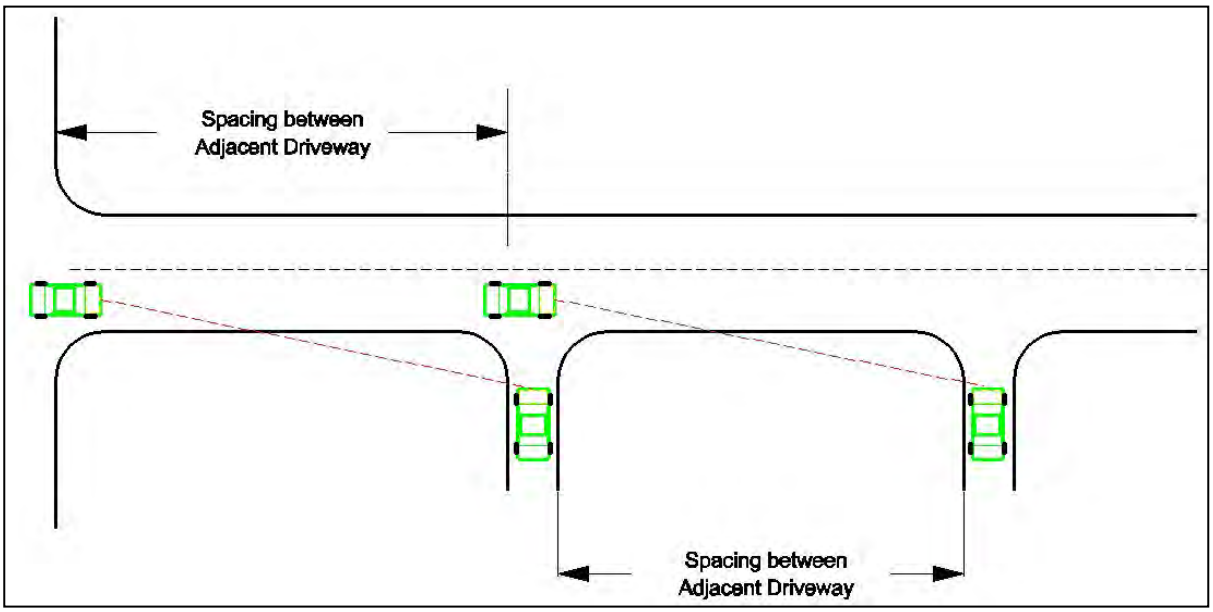
- Grading the slope or clearing a sight triangle to improve the sight distance;
- Installing warning signs along the highway;
- Recommending the construction of a turn lane (See Section 3.4.9); and,
- Developing a shared driveway with an adjacent parcel at a location where adequate sight distance exists (see Section 3.4.7). *(This condition cannot be required as a permit condition.)*

3.4.3 Spacing between Driveways

Definitions

The **Spacing between Driveways** is the spacing between adjacent driveways as measured from the near edges of each driveway (see Figure 3.25). The driveways may be on the same side of the highway or on opposing sides of the highway.

Figure 3.25: Spacing between Adjacent Driveways



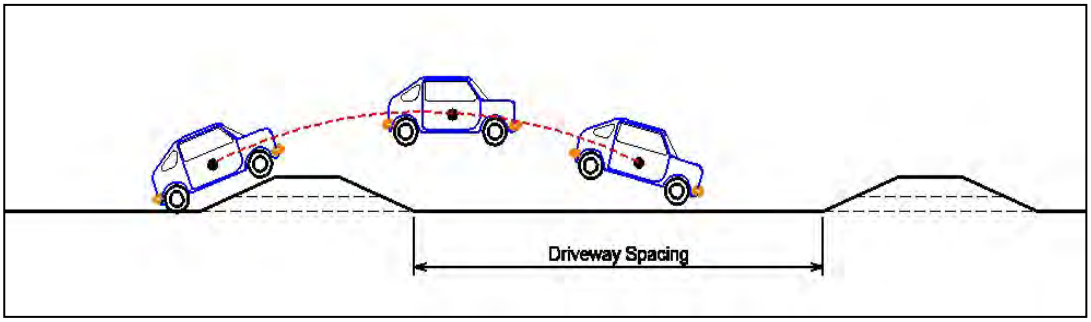
Guidance and Examples

The spacing between two driveways affects the safety and operations of a highway differently, depending on the design of the driveway and the volume of traffic using the driveway.

- The spacing of high-volume (Type 3) driveways along a high-speed highway has the potential to affect the safety and operations of the highway. The potential impact occurs when vehicles queuing at one driveway block the sight distance at an adjacent driveway. This generally is a concern only at high-volume driveways where vehicle queuing may take place. At low-volume (Types 1 and 2) driveways, vehicle queuing is unlikely, and the likelihood of vehicles entering the highway from adjacent driveways at the same time is also small. Spacing between high-volume driveways is also important in order to reduce the potential for overlapping right-turn lanes, should two adjacent high-volume driveways require turn lanes.

- The spacing of all types of rural design driveways (Types 1, 2, and 3) has the potential to affect the safety of the highway. The potential impact occurs when a vehicle runs off the road and hits the driveway side slope. To minimize the severity of the crash, all driveways should be designed in accordance with the *Mn/DOT Road Design Manual*. The spacing between the driveways is based on providing a clear landing area beyond a driveway for errant vehicles to safely land if they are launched over a driveway (see Figure 3.26).

Figure 3.26: Rural Driveway Spacing



- In rural areas (Subcategories AF and A), the spacing between low-volume (Types 1 and 2) driveways should provide a safe landing area for errant vehicles. Figure 3.27 lists the spacing needed to provide an adequate and safe landing area. The spacing is applicable for the following:
    - For two driveways serving the same parcel or adjacent parcels; and,
    - For two driveways on the same side of the highway.
- In rural and urban/urbanizing areas (Subcategories AF, A and B), the spacing between high-volume (Type 3) driveways should provide adequate stopping sight distance for the posted speed of the highway, as shown in Figure 3.27. This spacing is applicable for the following:
    - For two driveways serving the same parcel or adjacent parcels; and,
    - For two driveways on the same side of a highway or on opposing sides of an undivided highway.
- In urban core areas (Subcategory C), highway speeds are generally low and parcels are generally small. Using the Spacing between Adjacent Driveways as the basis for the spacing of adjacent driveways generally is not practical.

Figure 3.27: Spacing between Adjacent Driveways

Posted Speed Limit (mph)	Rural (Types 1 & 2) Spacing between Adjacent Driveways (feet) [2][4]	Rural & Urban/Urbanizing (Type 3) Spacing between Adjacent Driveways (feet) [1][2][3]
40	--	305
45	50	360
50	75	425
55	100	495
60	100	570
65	--	645

(1) The Spacing between Adjacent High-Volume Driveways is based on the Stopping Sight Distance described in the AASHTO Green Book 2001 and the Mn/DOT Road Design Manual, Table 2-5.09A, but uses the posted speed of the highway instead of the design speed.

(2) The values shown in this table may be superceded to avoid the functional area (see Section 3.4.4) of adjacent intersections and driveways, or to accommodate turn lanes for the proposed access.

(3) The spacing between adjacent driveways is based on a level roadway without any horizontal curvature. In areas with vertical and horizontal curves, additional distance may be needed.

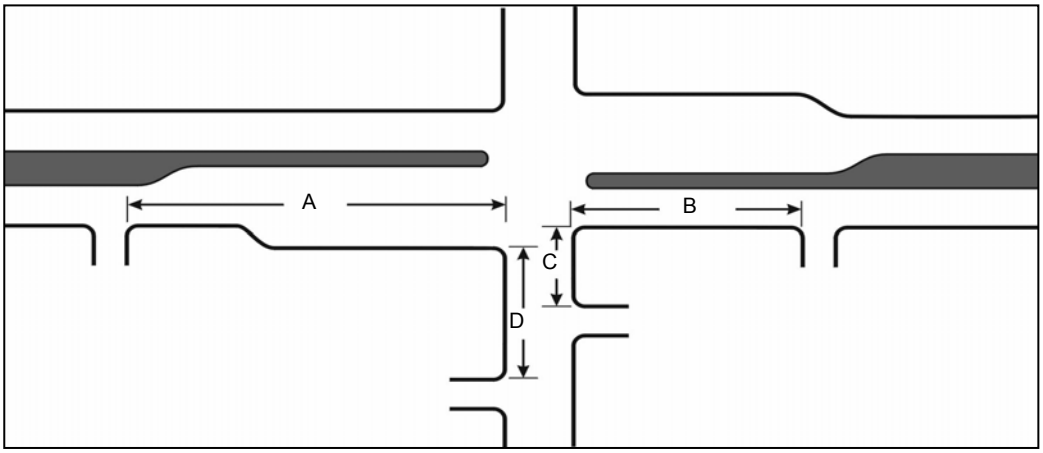
(4) Spacing based on the Texas Transportation Institute "Safety of Driveways in Close Proximity to Each Other." The spacing was modeled for speeds between 45 mph and 60 mph. No data is available for posted speeds below 45 mph or above 60 mph.

3.4.4 Access within the Functional Area of an Intersection

Definitions

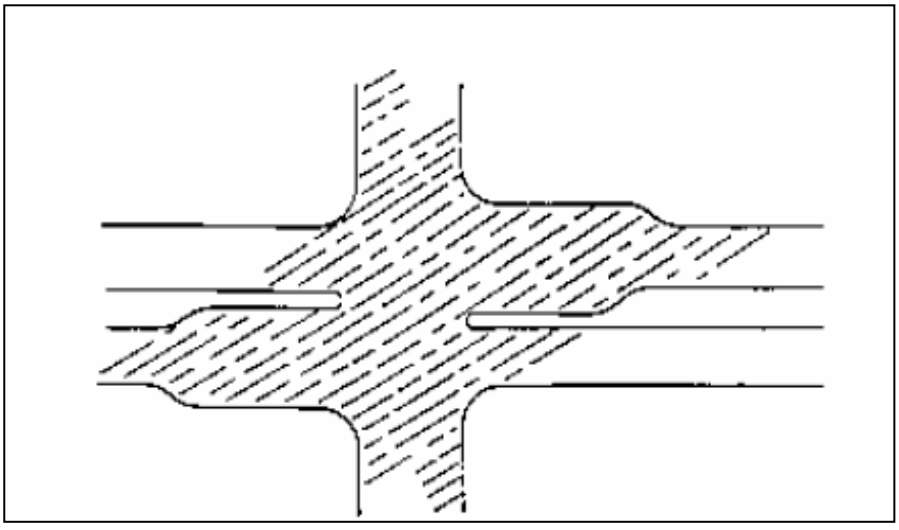
Corner Clearance – Mn/DOT defines corner clearance as the distance between the nearest edge of a driveway located next to an intersection and the nearest edge of the driving lane parallel to the driveway. The corner clearance may vary, depending on intersection geometrics, whether the driveway is located upstream or downstream of the intersection, and the priority of the intersection leg. In Figure 3.28, the distances "A," "B," "C," and "D" represent various corner clearances.

Figure 3.28: Corner Clearance



Functional Area –The functional area of an intersection, as shown in Figure 3.29, is the area beyond the physical intersection of intersecting roads that comprises decision and maneuvers distance, plus any required vehicle storage length. This area is protected through corner clearance standards and connection spacing standards.

Figure 3.29: General Intersection Functional Area

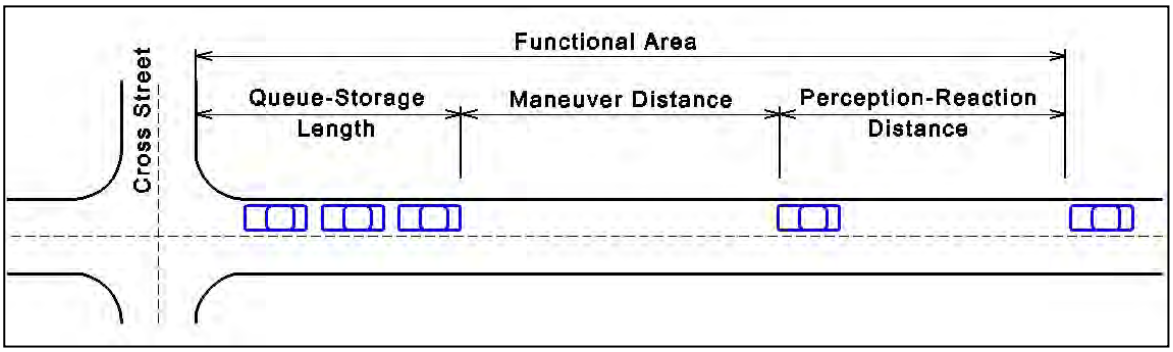


The functional area for each approach leg of an intersection consists of the three basic elements identified in Figure 3.30: perception-reaction distance, maneuver distance, and queue-storage length.

- The perception-reaction distance is the distance traveled during the perception-reaction time. The distance will depend upon vehicle speed, driver alertness, and driver familiarity with the location;
- The maneuver distance is the distance needed for both braking and lane changing (when a turn lane is present). In the absence of a turn lane, the maneuver distance is the braking distance required to make a comfortable stop; and,
- The queue-storage length is the distance needed to accommodate the longest queue that is expected most of the time, either in the turn lane or at the stop bar.

If no turn lane exists, the functional area of an intersection consists of only the perception-reaction distance and the maneuver distance and is considered the same as the Stopping Sight Distance (SSD) for the design speed on the highway (see Figure 3.24).

Figure 3.30: Basic Elements of Intersection Functional Area



Guidance and Examples

Mn/DOT delineates the functional area of an intersection by recommending corner clearance on each leg of an intersection. No access should be located within the corner clearance on a trunk highway. On non-trunk highway cross streets, the corner clearance is a recommendation to the local governmental unit.

Corner Clearance on Main Thoroughfares (Figure 3.28, "A" and "B")

In most cases, the main thoroughfare will be a trunk highway. The corner clearance on the main thoroughfare will vary, depending on the posted speed of the highway and whether a turn lane is present or planned. If a turn lane is present,

- On roadways with posted speeds of 45 mph or greater, the upstream corner clearance (distance "A" in Figure 3.28) is 650 feet; and,
- On roadways with posted speeds of less than 45 mph, the upstream corner clearance (distance "A" in Figure 3.28) is 435 feet.

If a turn lane is not present or planned on the highway, the upstream corner clearance is considered the same as the Stopping Sight Distance (SSD) for the design speed on the highway (see Figure 3.24).

On undivided roadways, the downstream corner clearance (distance "B" in Figure 3.28) is the same as the upstream corner clearance.

On divided roadways, the downstream corner clearance (distance "B" in Figure 3.28) is the greater of the following:

- If an acceleration lane is present or planned (including free-right turn merge areas): the length of the acceleration lane, or
- Stopping Sight Distance (Figure 3.24).

Corner Clearance on Cross Streets (Figure 3.28 "C" and "D")

The corner clearance on a cross street will vary, depending on the street's traffic volume:

- Major Cross Streets (Signalized Intersections) – On cross streets with an AADT greater than or equal to 2500, the upstream corner clearance (distance "C" in Figure 3.28) should be 225 feet;
- Minor Cross Streets – On cross streets with an AADT between 1000 and 2500, the upstream corner clearance (distance "C" in Figure 3.28) should be 125 feet;
- Local Cross Streets – On low-volume, low-speed local streets (AADT less than 1000), the upstream corner clearance (distances "C" in Figure 3.28) should be 75 feet; and,
- On all cross streets with existing or planned turn lanes, the access should be located outside the turn lane, if possible.

On undivided roadways, the downstream corner clearance (distance "D" in Figure 3.28) is the same as the upstream corner clearance (distance "C" in Figure 3.28).

On divided roadways, the downstream corner clearance (distance "D" in Figure 3.28) should be at least 75 feet.

When Corner Clearance Cannot Be Met

In some cases, no alternative access will be available, and an access will have to be provided. To minimize the impacts in these cases, the following options should be considered:

- The driveway should be located as far as possible on the parcel or lot from the intersection. A shared driveway with an adjacent parcel should be used to provide even greater clearance from the intersection (see Section 3.4.7);
- If a single driveway is being provided to a corner parcel, the driveway should be located on the cross street; and,
- A median may be installed on the approach legs to an intersection, or the driveway may be designed to prevent left-turn movements from crossing turn lanes.

3.4.5 Offset Driveways and Streets

Definitions
Figure 3.31, below, illustrates the varied configurations of aligned, offset**,** and overlapping driveways.

Guidance and Examples
On undivided highways, high-volume (Type 3) driveways and public street connections (Type 4) on opposite sides of a highway should be aligned with one another to the extent practicable, or they should be offset to minimize overlapping left turns and other maneuvers that could result in safety or operational problems.

High-volume (Type 3) Driveways

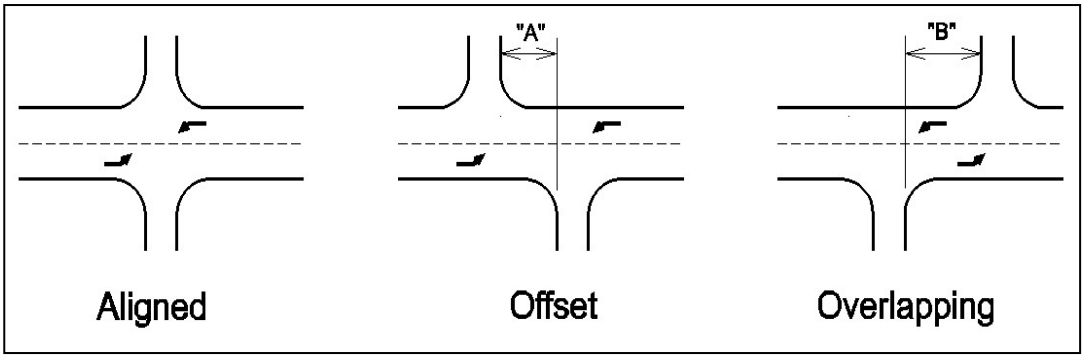
Aligned and Offset

High-volume (Type 3) driveways should be aligned to prevent opposing left-turning vehicles from blocking each other, as shown in Figure 3.31. The aligned and offset driveways allow opposing left-turn movements to occur at the same time. Offset driveways should be separated by at least the Spacing between Adjacent Driveways (Figure 3.27), as shown as distance “A” in Figure 3.31.

Overlapping

Overlapping driveways should be avoided, unless the access points can be separated by sufficient distance to allow back-to-back left-turn lanes (distance “B” in Figure 3.31).

Figure 3.31: Overlapping Driveways

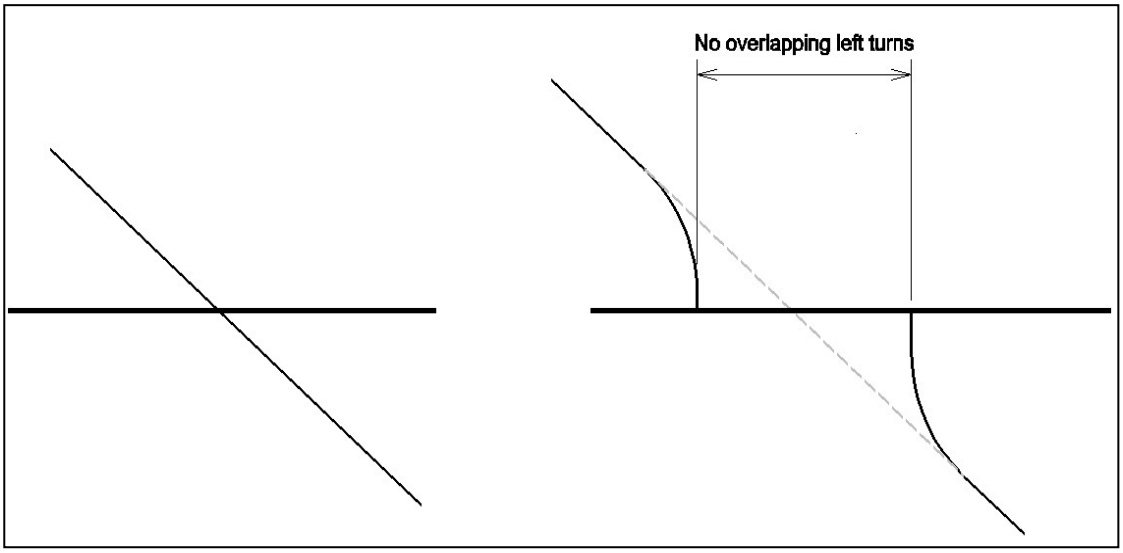


Public Street Connections (Type 4)

In some cases, an aligned four-legged intersection with a history of right-angle crashes or an intersection with an undesirable skew angle may be replaced with two “T” intersections. In these cases, left-turn movements should be carefully considered.

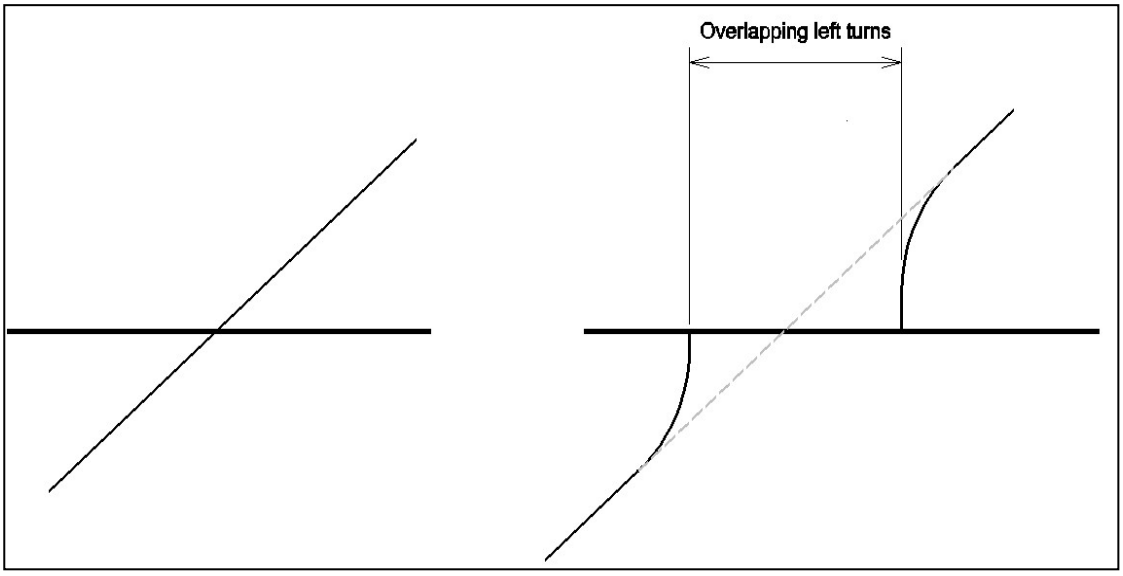
In Figure 3.32, left-turn movements are separated and do not overlap. The distance between the two “T” intersections should be at least the Spacing between Adjacent Driveways (Figure 3.27).

Figure 3.32: No Overlapping Left-turn Movements



In Figure 3.33, left-turn movements overlap, and the distance between the two "T" intersections should be sufficient of construct back-to-back turn lanes.

Figure 3.33: Overlapping Left-turn Movements



3.4.6 Restricted Movements and Median Openings

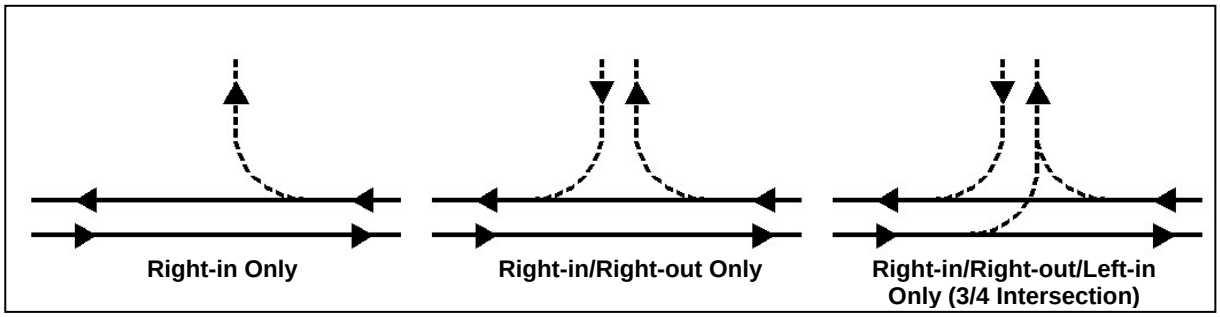
Definitions

Right-in-only permits access from the highway to a parcel or lot via a right-turn movement. Traffic leaving the parcel or lot cannot return to the highway using the same access.

Right-in/Right-out-only (RIRO) permits access between the highway and a parcel or lot via right-turn movements only. Left-turn movements are not permitted.

Right-in/Right-out/Left-in-only (3/4 Intersection) permits access between the highway and a parcel or lot via right-turn movements, and allows the left-turn movement from the highway into the parcel or lot. The left-turn movement returning to the highway is not permitted.

Figure 3.34: Restricted Turning Movement Definitions



Guidance and Examples

Turning and crossing movements at a public street connection or driveway may be restricted to address safety and operational concerns. Restricted movements are typically accomplished by the following methods:

- Closing a median opening on a divided highway;
- Constructing a median on an undivided highway; or
- Modifying the design of the driveway or intersection.

Restrictive signing and pavement markings may also be used but tend to be less effective where no physical barrier (median or traffic island) exists.

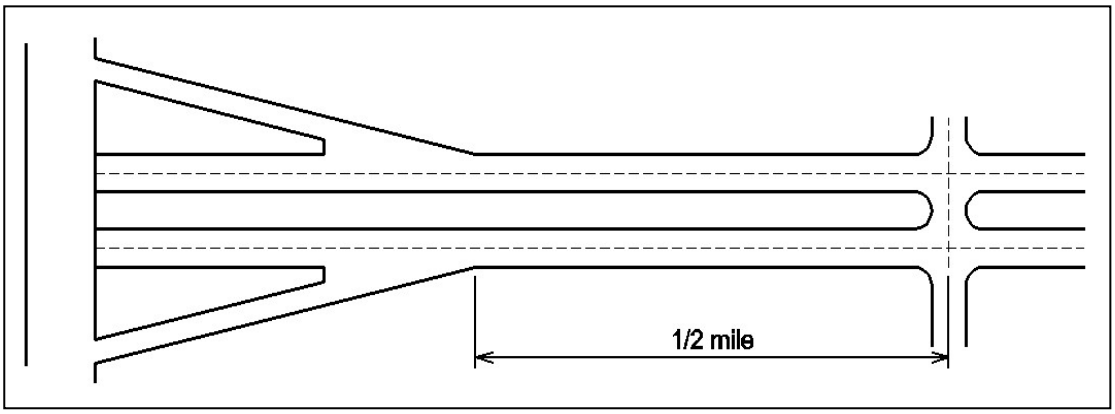
Restricting Movements using Medians
New median openings accommodating all turning movements should be provided only at public street connections, in accordance with Section 3.2.2.

New median openings should not be provided for driveways.

Existing, non-conforming median openings at either a public street connection or a driveway may be closed as a part of a construction project if the closure is considered necessary to address a safety or operational concern. Generally, a safety or operational concern includes any of the following:

- The median opening represents a high-risk conflict condition, as determined using the *Gap Analysis Procedure* (Section 3.2.3);
- The highway corridor has existing or planned signal coordination;
- There is a history of crashes of a type suitable to correction by closing the median (typically three or more left-turn crashes or right-angle crashes in one year) or where adequate trial of other remedies has failed to reduce the crash frequency;
- The median opening does not meet the intersection sight distance, and achieving adequate intersection sight distance is not economically feasible;
- The median opening is located within the functional area of an adjacent intersection and allows vehicles to cross through the turn lanes of the adjacent intersection;
- The median opening does not have a left-turn lane, and it would not be financially feasible to construct a turn lane to accommodate left-turn movements and U-turns;
- The median closure is part of a project converting a highway to a freeway;
- The median opening is located in an area transitioning from rural to urbanizing, and the closure is a part of a proactive and cost-effective plan to manage the transition; or,
- The median opening is located less than one-half mile from the merge point of an interchange ramp (as shown in Figure 3.35).

Figure 3.35: Spacing from Interchange Merge Point



Restricting Movements by Modifying the Access Point

Restricting movements by modifying the design of a driveway or intersection requires a combination of traffic islands, signing, and striping to be effective. This approach may be used both on undivided highways as well as in conjunction with medians on divided highways to address situations where the spacing guidance cannot be met. The design and approach will vary depending on the movements to be restricted. Some typical restrictions include the following:

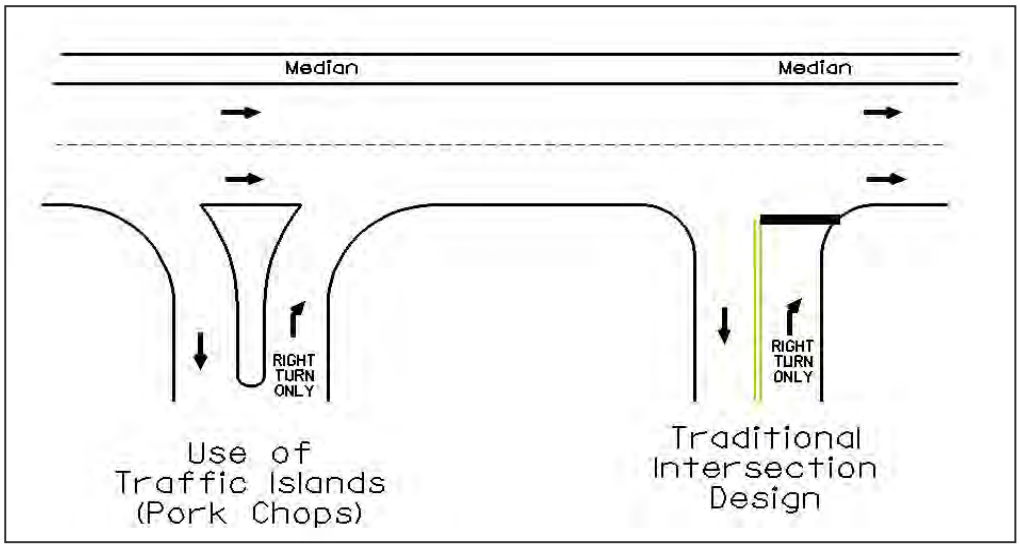
- When high traffic volumes result in a lack gaps for entering and exiting traffic to safely cross, left-turn movement and crossing movements may be restricted;
- When a driveway and an intersection are closely spaced such that a vehicle following a turning vehicle cannot anticipate where the lead vehicle will turn, right-in movements may be restricted;
- When an access is located where it may be blocked by queuing traffic from a nearby intersection, left-turn movements, crossing movements and right-out movements may be restricted;
- Where an access is needed for a specific movement such as a one-way driveway, the driveway may be limited to right-in-only or right-out-only;
- On a divided highway where a lack of gaps prevent entering traffic from safely weaving across multiple lanes to make a left-turn or U-turn, and a reasonably convenient and suitable alternative route is available, right-out movements may be restricted; or
- Where adequate sight distance does not exist for a specific movement, that movement may be restricted.

Considerations when Restricting Turning Movements

The impacts of restricting turning movements can extend beyond the immediate access point. The following issues should be considered before closing a median or restricting turning movements:

- Reasonably Convenient and Suitable Access – Restrictions on turning movements at a driveway cannot prevent reasonably convenient and suitable access for the existing or proposed land use;
- Redirection of Traffic – Restricting turn movements reduces the number of conflict points at the access by redirecting the traffic movements to other locations; it does not reduce the number of trips being generated by a development or along a cross street;
- Access Design – The design of the access point will vary depending of the characteristics of the access point and the highway (see Figure 3.36).
    - The use of traffic islands (pork chops) provides good directional guidance, thereby reducing illegal or wrong way maneuvers. Traffic islands also allow entering and exiting traffic to merge with through traffic, but the design of the islands may reduce the weaving distances to adjacent intersections and require acceleration and deceleration lanes.
    - The traditional intersection design requires entering traffic to stop and wait for a gap in through traffic, thereby eliminating weaving maneuvers. The traditional intersection also does a better job of accommodating the geometric issues associated with closely spaced access points, through additional signing and markings may be required to prevent wrong way movements. This design is ineffective on undivided highways because it does not provide a physical barrier to restrict movements.

Figure 3.36: Right-in/Right-out-only Examples



- Distance to Next Median Opening – The distance to adjacent median openings should allow reasonably convenient and suitable access for the users of the closed median opening. This distance generally should not exceed the recommended spacing of public intersections, per the Mn/DOT Access Management Policy;
- U-turn Operations at Next Opening – Adjacent median openings must facilitate u-turns for the design vehicle likely to make u-turns;
- Traffic Operations at Next Opening – Adjacent median openings should be analyzed to determine that the additional turning and u-turning traffic does not adversely affect safety and operations. This is critical at adjacent median openings with high traffic volumes or signalization;
- Impact to Local Street Network – The impact to cross-street traffic, adjacent neighborhoods, and the local street system should be reviewed with the local road authorities. The closure of a median opening should not redirect traffic to local streets not designed to accommodate the additional traffic or change in vehicle types (e.g., redirecting heavy truck traffic to residential streets).
- Pedestrians and Bikes – At median openings with measurable pedestrian and non-motorized vehicle traffic, the needs of non-motorized traffic must be reviewed by the local community. The closure of a median opening should not decrease the safety of non-motorized traffic or result in an unreasonable increase in the length of the trip. The Mn/DOT Bicycle Facility Design Guidelines provide additional guidance to address bicycle and pedestrian traffic;
- Emergency Vehicles – The median opening may be used by local emergency vehicles, the highway patrol, and maintenance vehicles. The local emergency services, highway patrol, and Mn/DOT District Maintenance staff should be contacted to determine if the median closure would have an adverse impact on their effectiveness.
- Trucks and Farm Equipment – At median openings that accommodate heavy truck and farm equipment traffic, the impacts of having heavy equipment crossing the highway compared to performing a u-turn movement should be reviewed. In some cases, the exposure time of heavy equipment to highway through-traffic has a greater impact on highway safety and operations during a u-turn maneuver than during a crossing maneuver; or,
- Coordination with Alternative Access – On highways transitioning to freeways, median closures should be coordinated with the construction of alternative access (such as frontage roads, service roads, or the redirecting of access to the local street system).

3.4.7 Shared Driveways

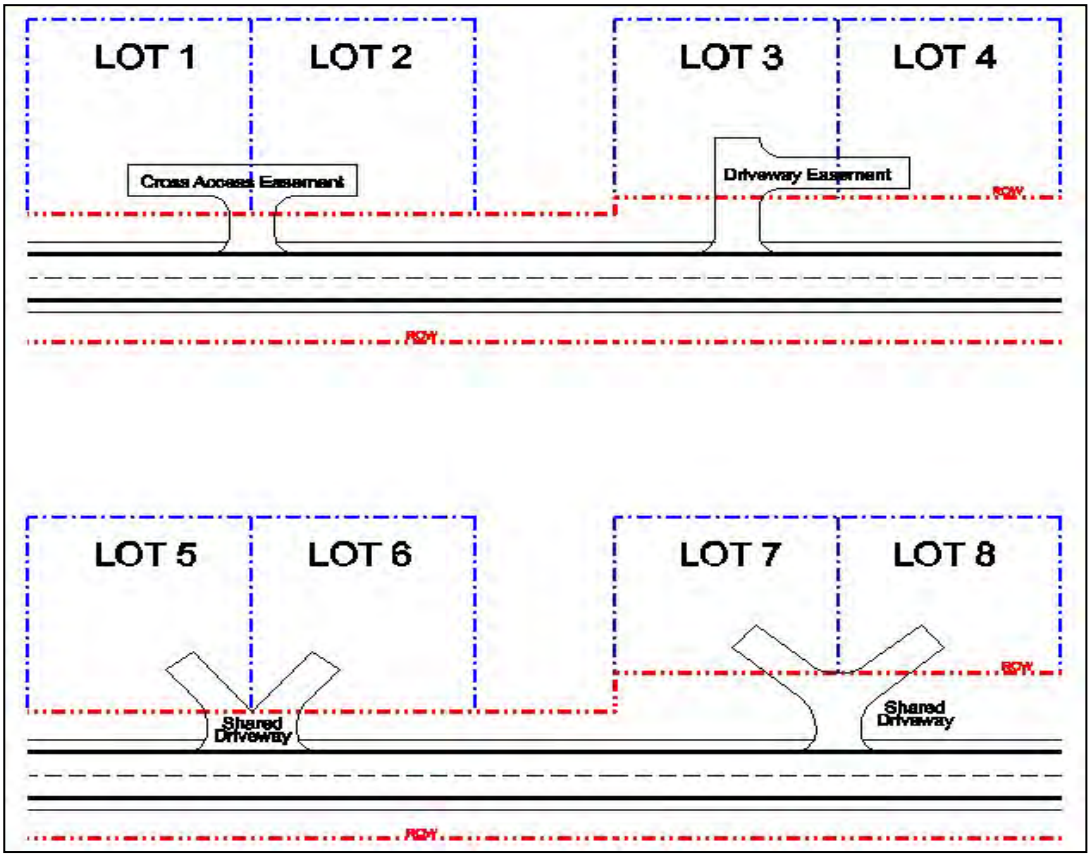
Definitions

A **Cross-Access Easement** allows two or more property owners to cross into each other's property for the purpose of accessing a public road. In Figure 3.37, lots 1 and 2 would require cross-access easements to share the driveway.

A **Driveway Easement** allows a property owner to cross through another parcel for the purpose of accessing a public road. In Figure 3.37, lot 4 is accessed via a driveway easement through lot 3.

A **Shared Driveway** is a single connection serving multiple lots or parcels. A shared driveway, in itself, does not allow property owners the right to use the portion of the driveway owned by another property owner. In Figure 3.37, lots 5 and 6, and lots 7 and 8 are served by shared driveways designed so property owners do not trespass.

Figure 3.37: Share Driveways, Cross-Access Easements & Driveway Easements



Guidance and Examples

A shared driveway, driveway easement, or cross-access easement may be considered to address the following safety or operational needs when:

- A driveway or private street connection is located within an existing turn lane or within the functional area of a public intersection without turn lanes;
- A driveway or private street connection does not have adequate stopping sight distance (Figure 3.24); or,
- Combining driveways would trigger the need for and construction of turn lanes and other geometric features.

For residential driveways, field entrances, and other low-volume driveways (Access Types 1 and 2), the combining of two driveways should be recommended for the purpose of removing a driveway from the functional area of an intersection, or for meeting stopping sight distance. This last solution should be considered only where sufficient right-of-way exists so that a cross-access easement would not be necessary.

The greatest advantage of a shared driveway is where ten or more low-volume driveways or multiple high-volume commercial driveways (Access Type 3) can be combined so that the shared driveway meets turn-lane warrants and turn lanes are constructed (see Section 3.4.9).

Additional guidance regarding driveways located within a turn lane or within the functional area of an intersection is found in Section 3.4.4.

Note: In all cases, a survey should be completed to determine exactly where the property line is before finalizing the location of the driveway. If a cross easement is provided, it should be legally recorded.

3.4.8 Interim Access

Definitions

An **Interim Access** is a public street agreement or driveway permit of limited duration. The agreement or permit specifies the time frame or conditions under which removal is required, requirements for the restoration of the right-of-way, and the location and design of any future access.

Guidance and Examples

An interim access may be considered if no reasonably convenient and suitable alternative access currently exists, but will exist in the future.

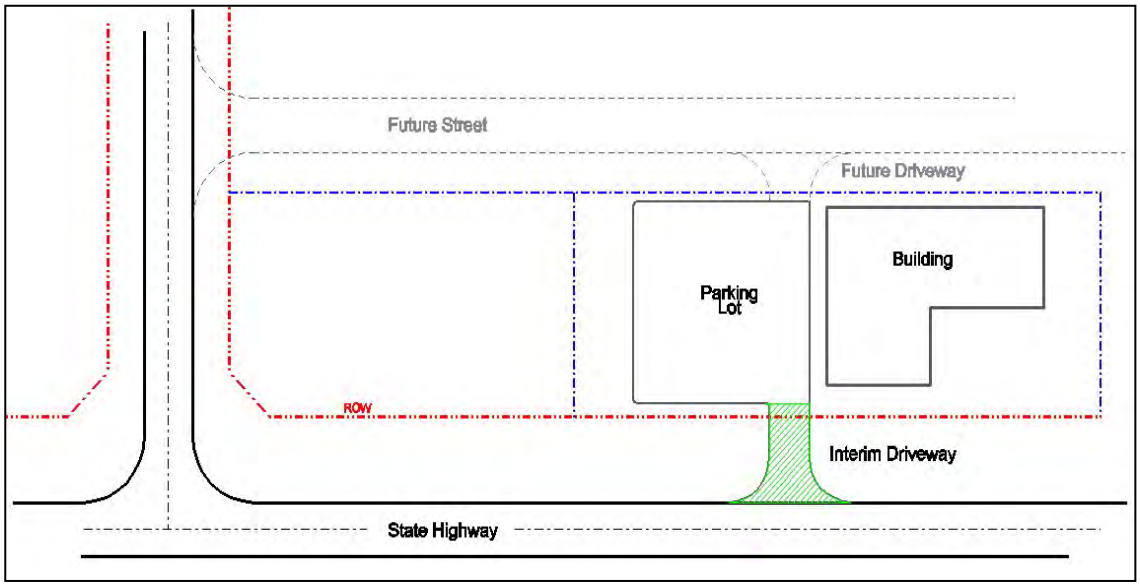
Improvements to the highway and local street system do not always occur in conjunction with the development or redevelopment of adjacent parcels. When parcels develop or redevelop before the road system does, it is preferable to have the parcel develop in a way that will function with any proposed changes to the highway. In this way, when the road system is improved, the impact on the development will be minimal. This can reduce the right-of-way costs and cost-to-cure damages due to the road improvements, and can limit disruption to the property.

Mitigation related to location

When a driveway cannot be located per the guidance shown in Section 3.4, an interim access may be necessary until a permanent solution is available.

Example: In Figure 3.38, a new development is constructed before the local street is constructed. An interim driveway is permitted, but when the future street is constructed, the interim driveway will be closed, and access will be provided from the future street. The proposed building and parking lot should be oriented to the future street.

Figure 3.38: Interim Access



Subcategory AF

Mn/DOT has categorized some highways as AF, indicating that they are either major mobility corridors with access only at interchanges, or they are moving towards having access only at interchanges. The transition to a fully access-controlled highway may take many years. Until that time, driveways may still be provided direct access with the understanding that some time in the future, alternative access will be required. Therefore, on subcategory AF highways, all new driveways should be considered interim. Where possible, these driveways should be designed to switch access to the local street system as the highway is converted to a fully access-controlled facility. The frontage of the building should be designed to take advantage of the future road system, and the parking lot should be constructed to provide circulation from the future access point.

3.4.9 Turn Lanes

Definitions

A **Turn Lane** is an auxiliary lane designed to separate turning vehicles from through-traffic. Turn lanes may be used on both divided and undivided highways (see Figure 3.39).

A **Right-Turn Treatment** is a modification to the roadway shoulder to accommodate right-turning vehicles (see Figure 3.39). A right-turn treatment may be used on divided or undivided highways and includes all of the following modifications to the outside shoulder:

- Widening the paved shoulder;
- Removing conflicting striping and shoulder rumble strips;
- Prohibiting on-street parking on the widened shoulder; and,
- Adding pavement thickness on the shoulder.

A **Bypass Lane** is an auxiliary lane on a two-lane undivided highway designed to guide through-traffic around left-turning vehicles stopped in the through-lane (see Figure 3.39).

Guidance and Examples

Turn lanes should be provided at public street connections and driveways in accordance with the Mn*/DOT Road Design Manual*, Section 5-3, and the guidance below.

Divided Highways

Left-Turn Lanes – A left-turn lane should be provided at all public street connections. For driveways, left-turn movements are generally not allowed; therefore, no left-turn lanes are needed. If a median opening is permitted, a left-turn lane should be provided.

Right-Turn Lanes – A right-turn lane should be provided at all public street connections, at all residential driveways serving more than five (5) units, and at all other driveways generating 50 or more trips per day.

Right-Turn Treatments – A right-turn treatment should be considered at all field entrances, residential driveways serving five (5) or fewer units, and all other driveways generating fewer than 50 trips per day.

Undivided Highways

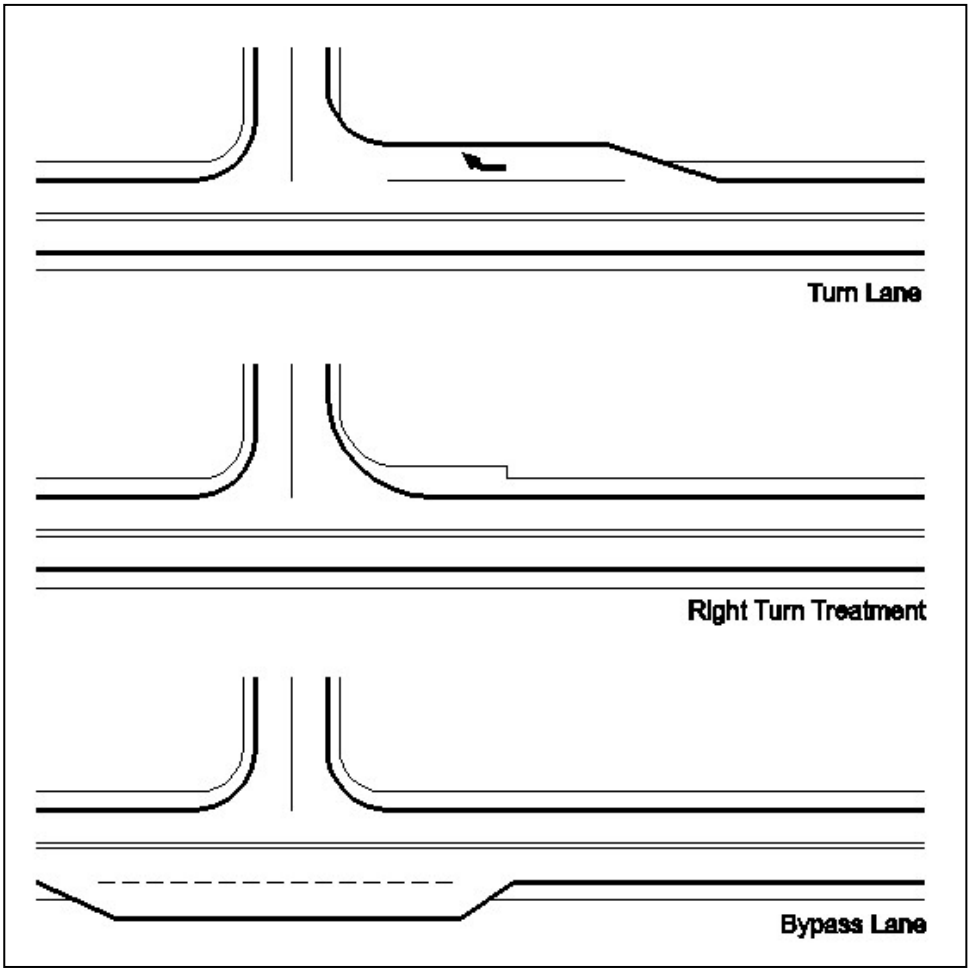
Left-Turn Lanes – A left-turn lane should be provided when there is a site-specific geometric or safety concern, as indicated by Turn-Lane Warrants 1 through 8 (shown below), or if the traffic volume levels meet Warrant 9, as shown in Figure 3.40.

Right-Turn Lanes – A right-turn lane should be provided when there is a site-specific geometric or safety concern, as indicated by Turn-Lane Warrants 1 through 8 (shown below), or if the traffic volume levels meet Warrant 9, as shown in Figure 3.41.

Bypass Lanes – A left-turn bypass lane may be considered when a left-turn lane is warranted but where its construction is not practical (due to limited right of way, steep terrain, existing structures, wetlands, or other protected features,). The bypass lane is for use at “T” intersections where no other public street connection or driveway will be located in the bypass lane or corresponding tapers.

Right-turn/bypass lanes at four-legged intersections should be used only after all other solutions have been found impractical and where the cross-street volume is low.

Figure 3.39: Right-turn Treatments & Bypass Lanes



Turn-Lane Warrants for Undivided Highways

The Turn-Lane Warrants for Undivided Highways are shown below. These warrants apply to both left-turn lanes and right-turn lanes.

- Warrant 1: Passing Lane/Climbing Lane – At high-volume driveways (> 100 trips per day) and all public street connections located on highway segments where passing lanes or climbing lanes are present in the approach direction.
- Warrant 2: Limited Sight Distance/Terrain – At all driveways and public street connections with inadequate stopping sight distance or located on short vertical curves or steep grades. Designers may consider alternative options, such as access relocation, vegetation removal, and spot grading as alternatives to building turn lanes.
- Warrant 3: Railroad Crossings – At high-volume driveways (> 100 trips per day) and all public street connections where a railroad is parallel to the highway and where the potential exists for vehicles delayed by a train to back up into the through-lanes of the highway, creating both safety and operational problems. At these locations, the queuing of traffic caused by train movements should be considered. If the cross street between the railroad and the highway does not provide adequate storage, then a turn lane or turn-lane treatment should be considered on the highway to provide the additional storage needed.

- Warrant 4: Signalized Intersections – At all signalized public street connections and driveways.
- Warrant 5: Heavy-Vehicle Traffic – At all driveways and public street connections on high-speed highways (posted speed ≥ 45 mph) where the heavy-vehicle turning volume is 15 or more vehicles per hour for at least eight hours a day for four months or more per year. Examples of this include gravel operations, large grain elevators, or large distribution centers.
- Warrant 6: School Entrances – At public and private school driveways on high-speed highways (posted speed ≥ 45 mph) used by school traffic.
- Warrant 7: Crash History – At high-volume driveways (>100 trips per day) and all public street connections that demonstrate a history of crashes of the type suitable to correction by a turn lane or turn-lane treatment (typically three or more correctable crashes in one year), or where adequate trial of other remedies has failed to reduce the crash frequency.
- Warrant 8: Corridor Crash Experience – On highway corridors that demonstrate a history of similar crash types suitable to correction by providing corridor-wide consistency in turn-lane use.
- Warrant 9: Vehicular Volume Warrant – At high-volume driveways (>100 trips per day) and all public street connections on high-speed highways (posted speed ≥ 45 mph) that satisfy the criteria in Figures 3.40 and 3.41 below.

Figure 3.40: Warrant 9 for Left-Turn Lanes

2-Lane Highway AADT	4-Lane Highway AADT	Cross Street or Driveway ADT	Turn Lane Requirement
1500 to 2999	3000 to 5999	> 1500	Left-turn lane warranted
3000 to 3999	6000 to 7999	> 1200	Left-turn lane warranted
4000 to 4999	8000 to 9999	> 1000	Left-turn lane warranted
5000 to 6499	10,000 to 12,999	> 800	Left-turn lane warranted
≥ 6500 AADT	≥ 13,000 AADT	101 to 400 > 400	Left-turn lane or bypass lane Left-turn lane warranted

Highway AADT one year after opening
Posted speed 45 mph or greater

Figure 3.41: Warrant 9 for Right-Turn Lanes

2-Lane Highway AADT	4-Lane Highway AADT	Cross Street or Driveway ADT	Turn Lane Requirement
≥ 1500 AADT	≥ 3000 AADT	> 100	Right-turn lane warranted

Highway AADT one year after opening
Posted speed 45 mph or greater

Appendix E: Subsurface Sewage Treatment Systems Map

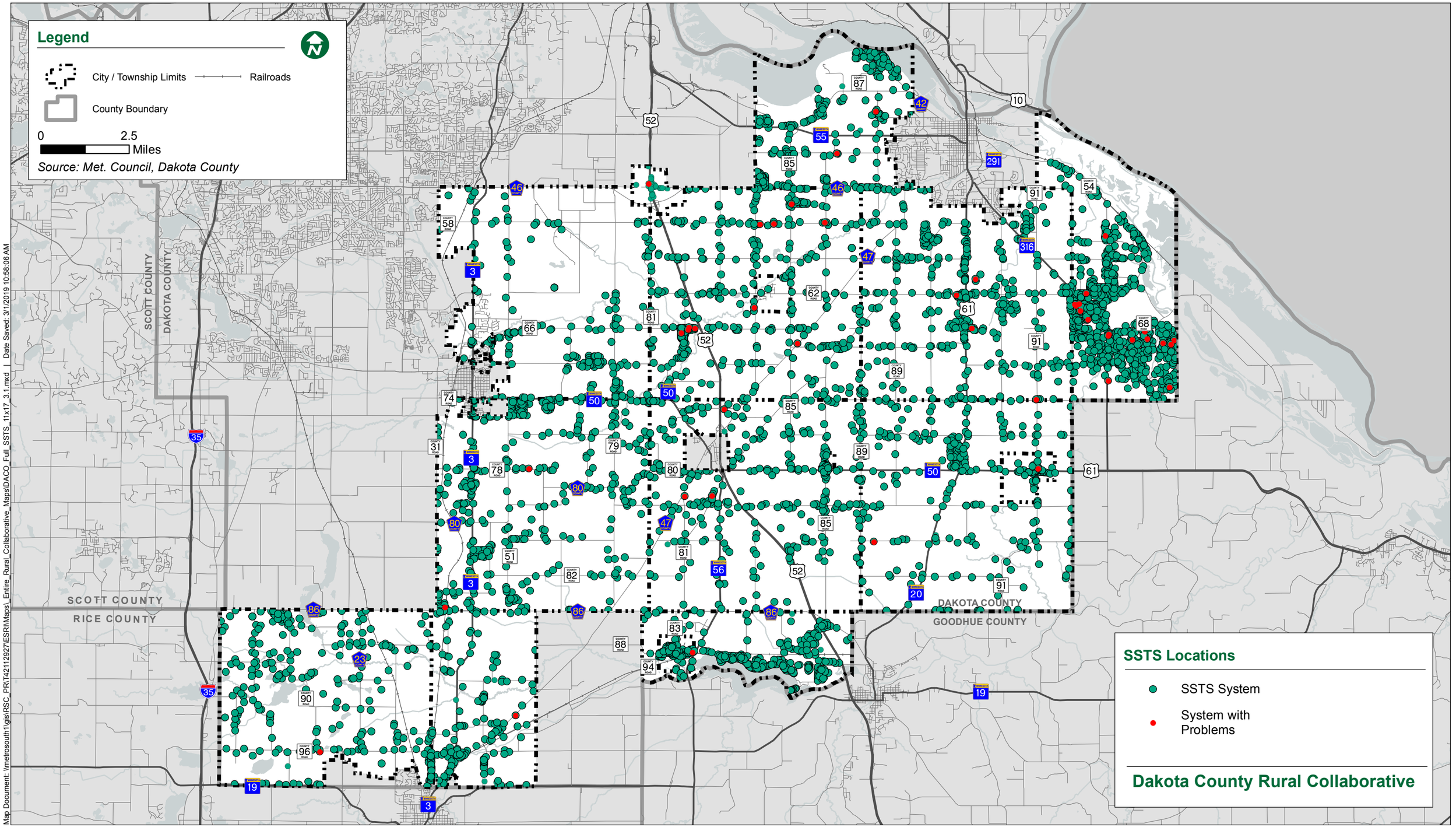
Resource Strategies Corporation

BOLTON & MENK
Real People. Real Solutions.

Subsurface Sewage Treatment Systems - SSTS

Dakota County, Minnesota

March 2019



Map Document: \\metrosouth1\gis\RSC_PR\T42112927\ESRI\Maps_Entire_Rural_Collaborative_Maps\DACO_Full_SSTS_11x17_3.1.mxd | Date Saved: 3/1/2019 10:58:06 AM

Appendix F: Mississippi River Corridor Critical Area Plan (MRCCA)

I. Introduction

Designated by Governor's Executive Order in the 1970s, the Mississippi River Corridor Critical Area (MRCCA) is a land corridor along the Mississippi River impacting Ravenna and Nininger Township and governed by special land development and planning regulations. These regulations, which are implemented through local MRCCA plans and ordinances, protect and preserve the natural, scenic, recreational, and transportation resources of the Mississippi River. The MRCCA comprises 72 miles of river and 54,000 acres of surrounding land in 30 local jurisdictions. Minnesota Rules, chapter 6106, lay out the land planning and regulatory framework. These rules became effective on January 4, 2017, and replace Executive Order 79-19, which previously governed land use in the MRCCA. The rules require that local governments update their MRCCA plans and ordinances for consistency with the rules as part of the community's Comprehensive Plan.

The Critical Areas Act (Minn. Stat., §116G) provides a general regulatory framework for protecting specific areas of the state that possess important historic, cultural, or aesthetic values or natural systems through a defined local-regional planning and regulation process. The MRCCA was the first and remains the only critical area in the state. The MRCCA protects these resources through local governments' land use plans and zoning ordinances that regulate structure placement, height, vegetation clearing, land alteration, and subdivision of land. Following is a timeline of key milestones in the MRCCA.

1973 Minnesota passes Critical Areas Act of 1973 (MN Statutes, Chapter 116G) Environmental Quality Board adopts rules to implement Act (MN Rules, parts 4410.8100 – 4410.9910)

1976 Mississippi River and adjacent corridor designated a state critical area by Governor Wendell Anderson (Executive Order No. 130)

1979 Designation continued by Governor Albert Quie (Executive Order 79-19) Metropolitan Council acts to make designation permanent (Resolution 79-48)

1988 Mississippi National River and Recreational Area (MNRRA) established by Congress as unit of National Parks Service (MNRRA shares same boundary as Mississippi River Corridor Critical Area)

1991 MNRRA designated a state critical area per Critical Areas Act (MN Statutes, section 116G.15)

1995 Responsibility shifts from Environmental Quality Board to DNR by Governor Arne Carlson (Reorganization Order 170)

2007 Legislature directs DNR to prepare report on the Mississippi River Corridor Critical Area (Completed January 2008)

2009 Legislature amends MN Statutes, section 116G.15 and directs DNR to conduct rulemaking for the Mississippi River Corridor Critical Area (MN Laws 2009, Chapter 172, Article 2, Section 5.e.)

2011 DNR develops draft rule after participatory stakeholder process, but rulemaking authority lapses

2013 Legislature directs DNR to resume rulemaking process in consultation with local governments

2017 Rules become effective January 4.

Ravenna and Nininger Township have been successful in preserving and making restoration progress towards the Critical Areas within the 2030 MRCCA plan. Critical Area policies, as developed as part of the previous planning efforts, are being updated as part of this process and in compliance with rules and policies. Once the MRCCA plan has been updated, Ravenna and Nininger will also update their MRCCA

zoning ordinance.

The MRCCA contains many significant natural and cultural resources, including: scenic views, water, navigational capabilities, geology and soils, vegetation, minerals, flora and fauna, cultural and historic resources and land and water-based recreational resources. The MRCCA is home to a full range of residential neighborhoods and parks, as well as river-related commerce, industry, and transportation. Though the river corridor has been extensively developed, many intact and remnant natural areas remain, including bluffs, islands, floodplains, wetlands, riparian zones, and native aquatic and terrestrial flora and fauna. Six districts are defined in the MRCCA rules. The districts are based on the natural and built character of different areas of the river corridor. Structure setbacks from the OHWL and bluffs, building height limits, and the amount of open space required for subdivisions/redevelopment vary by district.

II. Districts

The six districts of the MRCCA are as follows:

- Rural and Open Space District (CA-ROS)
- River Neighborhood District (CA-RN)
- River Towns and Crossings District (CA-RTC)
- Separated from River District (CA-SR)
- Urban Mixed District (CA-UM)
- Urban Core District (CA-UC)

Ravenna Township includes the River Neighborhood District (CA-RN), Separated from River District (CA-SR), and Rural and Open Space District (CA-ROS). Nininger Township includes only the Separated from River District (CA-SR), and Rural and Open Space District (CA-ROS). The River Neighborhood District, Separated from River District, and Rural and Open Space District are defined as follows:

Rural and Open Space District (CA-ROS).

The rural and open space district (CA-ROS) is characterized by rural and low-density development patterns and land uses, and includes land that is riparian or visible from the river, as well as large, undeveloped tracts of high ecological and scenic value, floodplain, and undeveloped islands. Many primary conservation areas exist in Ravenna and Nininger Townships

The CA-ROS district must be managed to sustain and restore the rural and natural character of the corridor and to protect and enhance habitat, parks and open space, public river corridor views, and scenic, natural, and historic areas.

River Neighborhood District (CA-RN).

The river neighborhood district (CA-RN) is characterized by primarily residential neighborhoods that are riparian or readily visible from the river or that abut riparian parkland. The district includes parks and open space, limited commercial development, marinas, and related land uses.

The CA-RN district must be managed to maintain the character of the river corridor within the context of existing residential and related neighborhood development, and to protect and enhance habitat, parks and open space, public river corridor views, and scenic, natural, and historic areas. Minimizing erosion and the flow of untreated storm water into the river and enhancing habitat and shoreline vegetation are priorities in the district.

Separated from River District (CA-SR).

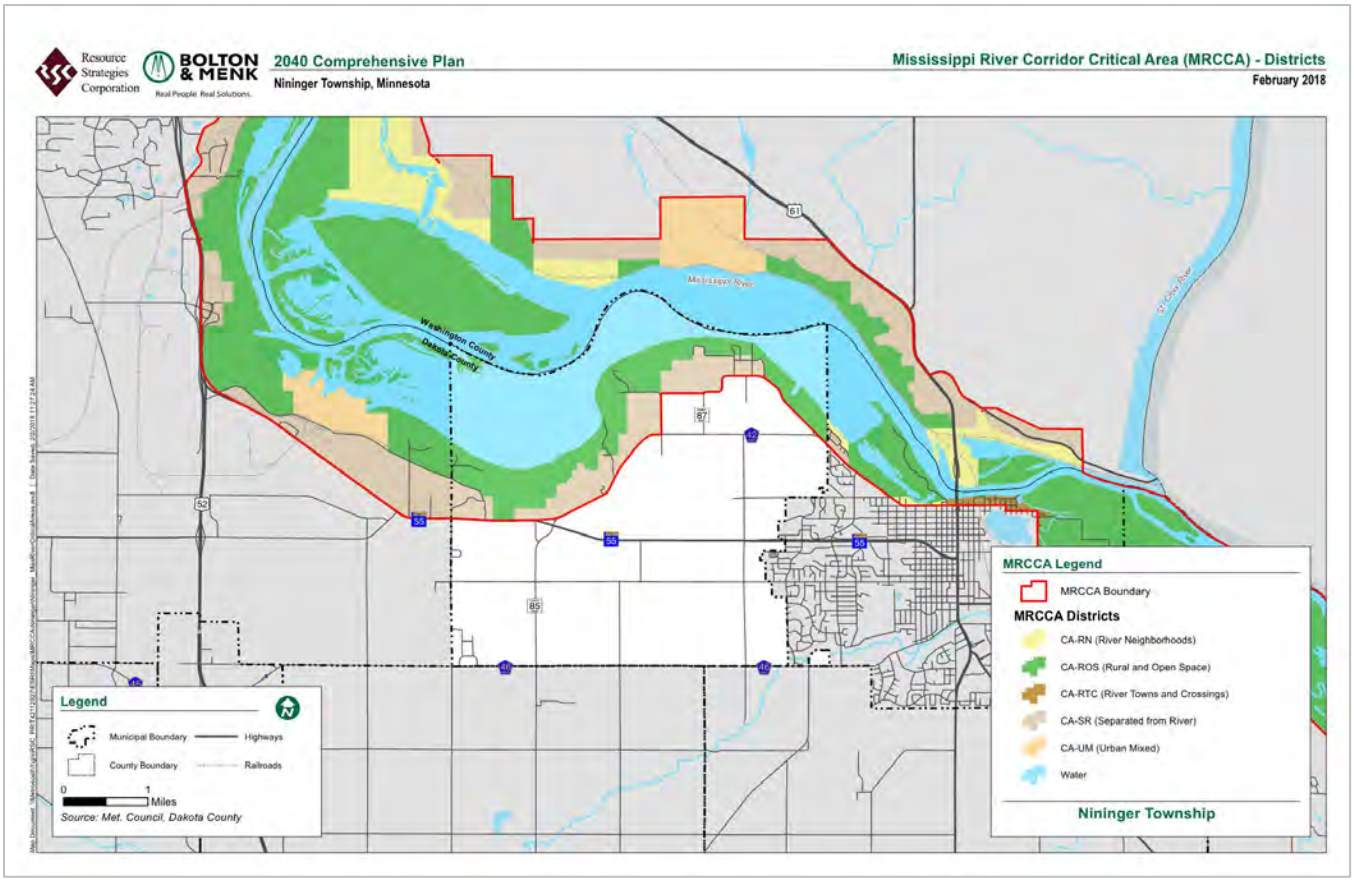
The separated from river district (CA-SR) is characterized by its physical and visual distance from the Mississippi River. The district includes land separated from the river by distance, topography, development, or a transportation corridor. The land in this district is not readily visible from the Mississippi River. The CA-SR district provides flexibility in managing

development without negatively affecting the key resources and features of the river corridor. Minimizing negative impacts to primary conservation areas and minimizing erosion and flow of untreated storm water into the Mississippi River are priorities in the district.

Future land uses in the Critical Areas fit the purpose and goals of the MRCCA districts, and no conflicts have been identified.

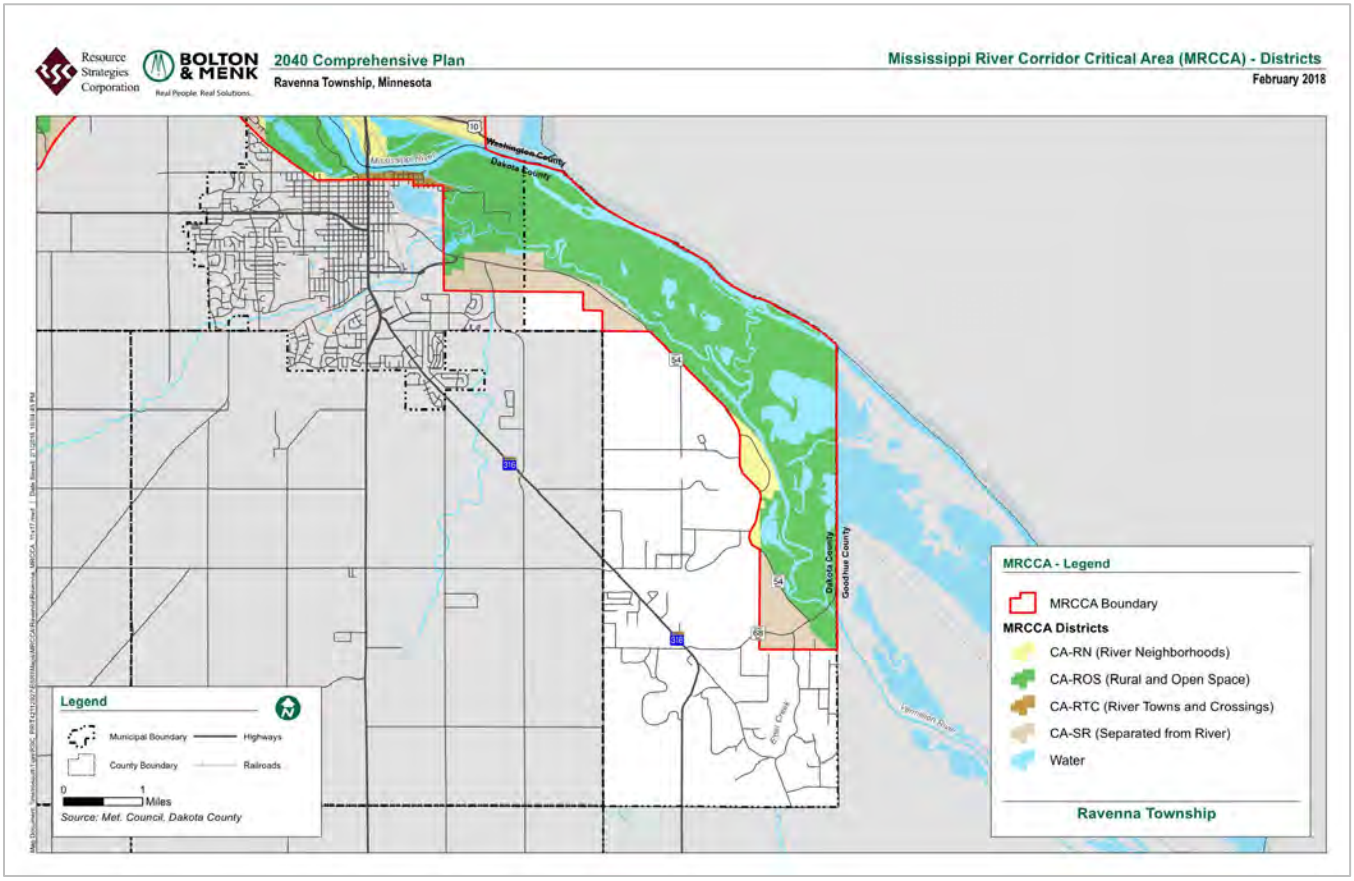
The following figures show the areas in the Mississippi River Critical Areas and the respective districts.

Nininger Township



Nininger Township. Dakota County owns a significant amount of land surrounding the Mississippi River and is dedicated as Spring Lake Park. Other areas are privately owned and have been developed at low densities consistent with the rural and open space district

Ravenna Township

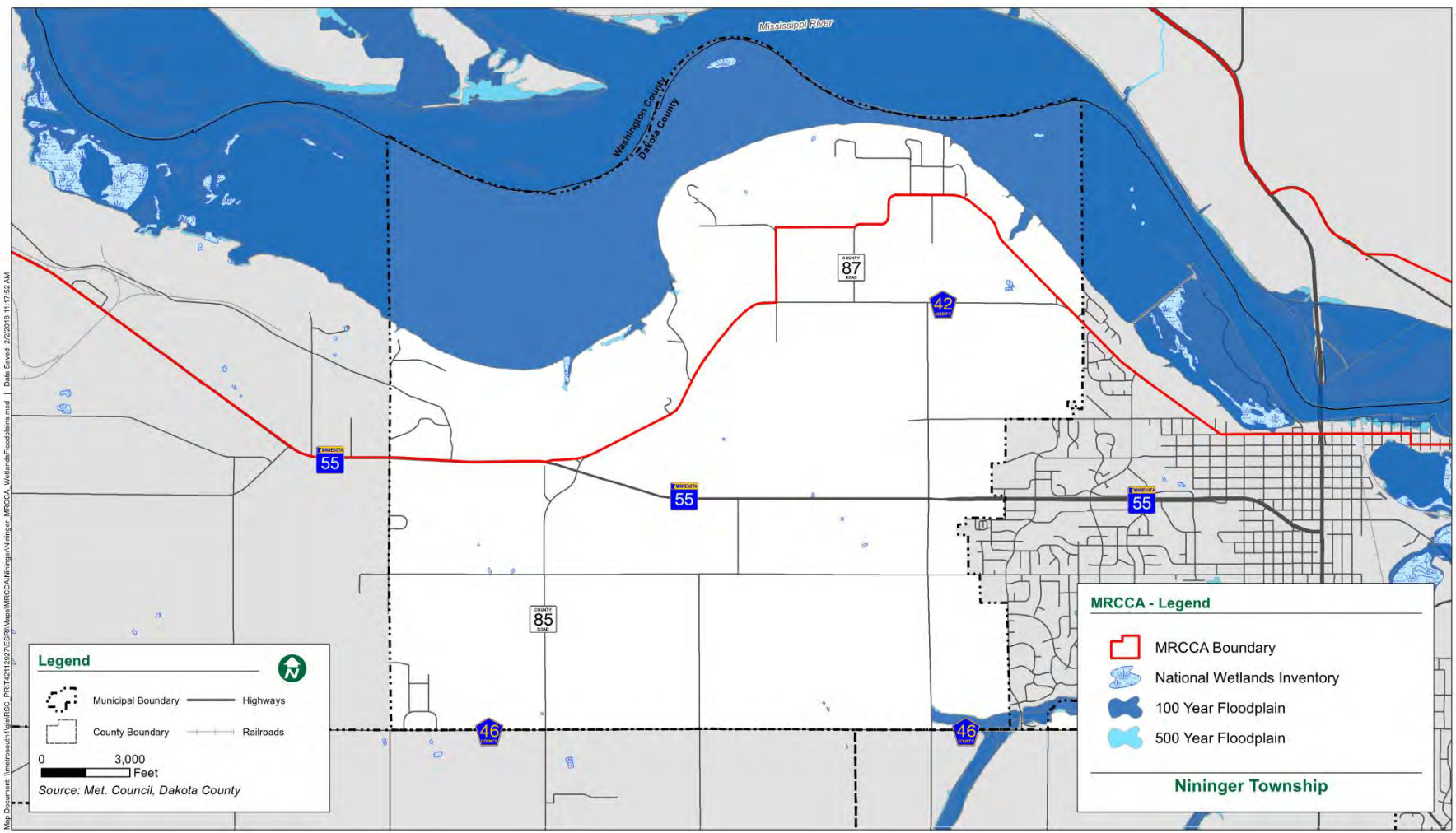


Ravenna Township. Much of the area in the immediate area surrounding the Mississippi River is designated Wildlife Management Area and owned by the DNR. Because of this, the area is free from development pressure and will be preserved for continued open, scenic and natural characteristics and ecological function. Other areas are developed with residential land uses managed to protect the character of the MRCCA.

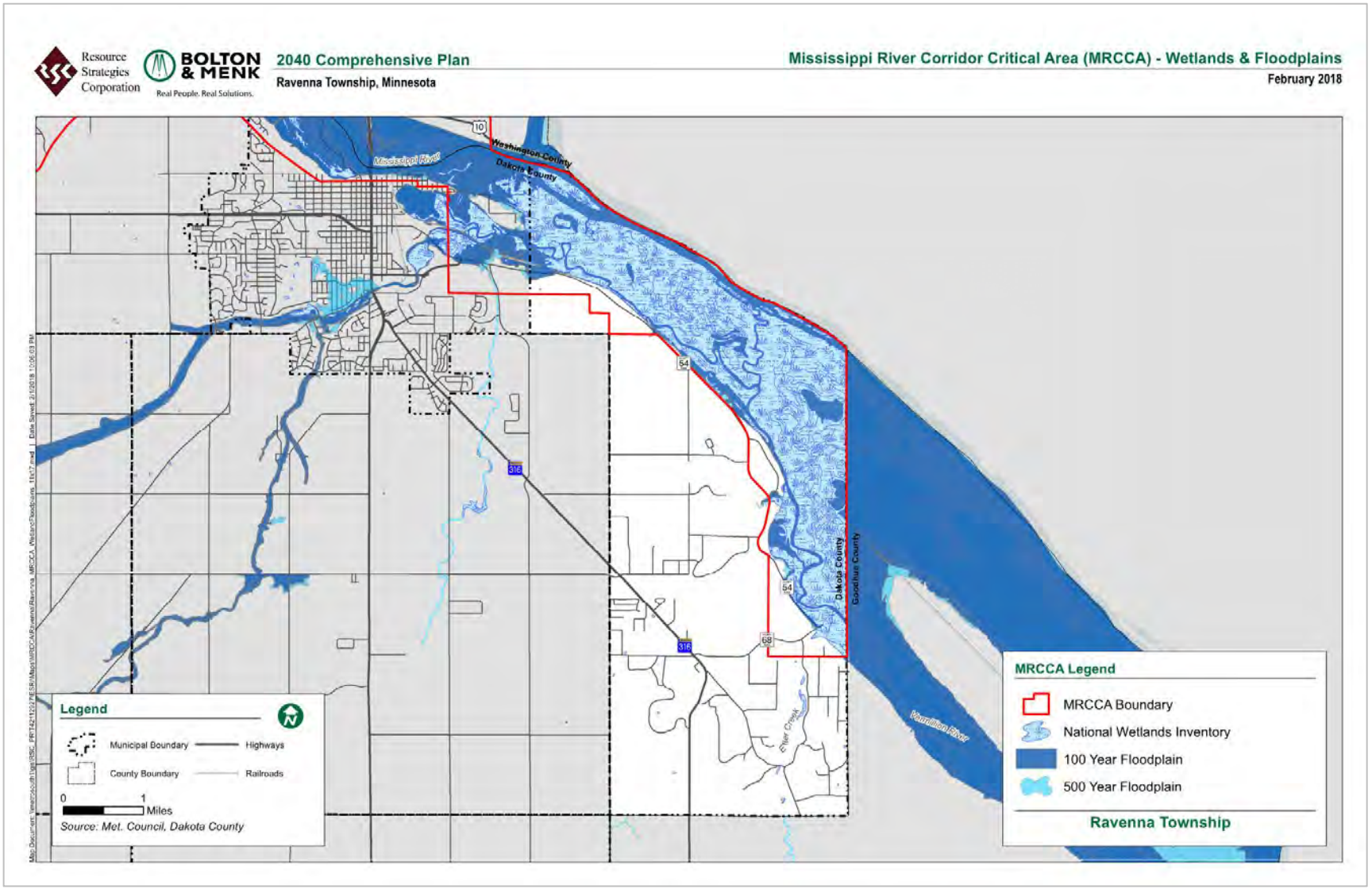
III. Primary Conservation Areas

Primary Conservation Areas (PCAs) are defined in the MRCCA rules (6106.0050, Subp. 53) as key resources and features, including shore impact zones (SIZ), bluff impact zones (BIZ), floodplains, wetlands, gorges, areas of confluence with tributaries, natural drainage routes, unstable soils and bedrock, native plant communities, cultural and historic properties, significant existing vegetative stands, tree canopies and "other resources" identified in local government MRCCA plans and shown in the following figures.

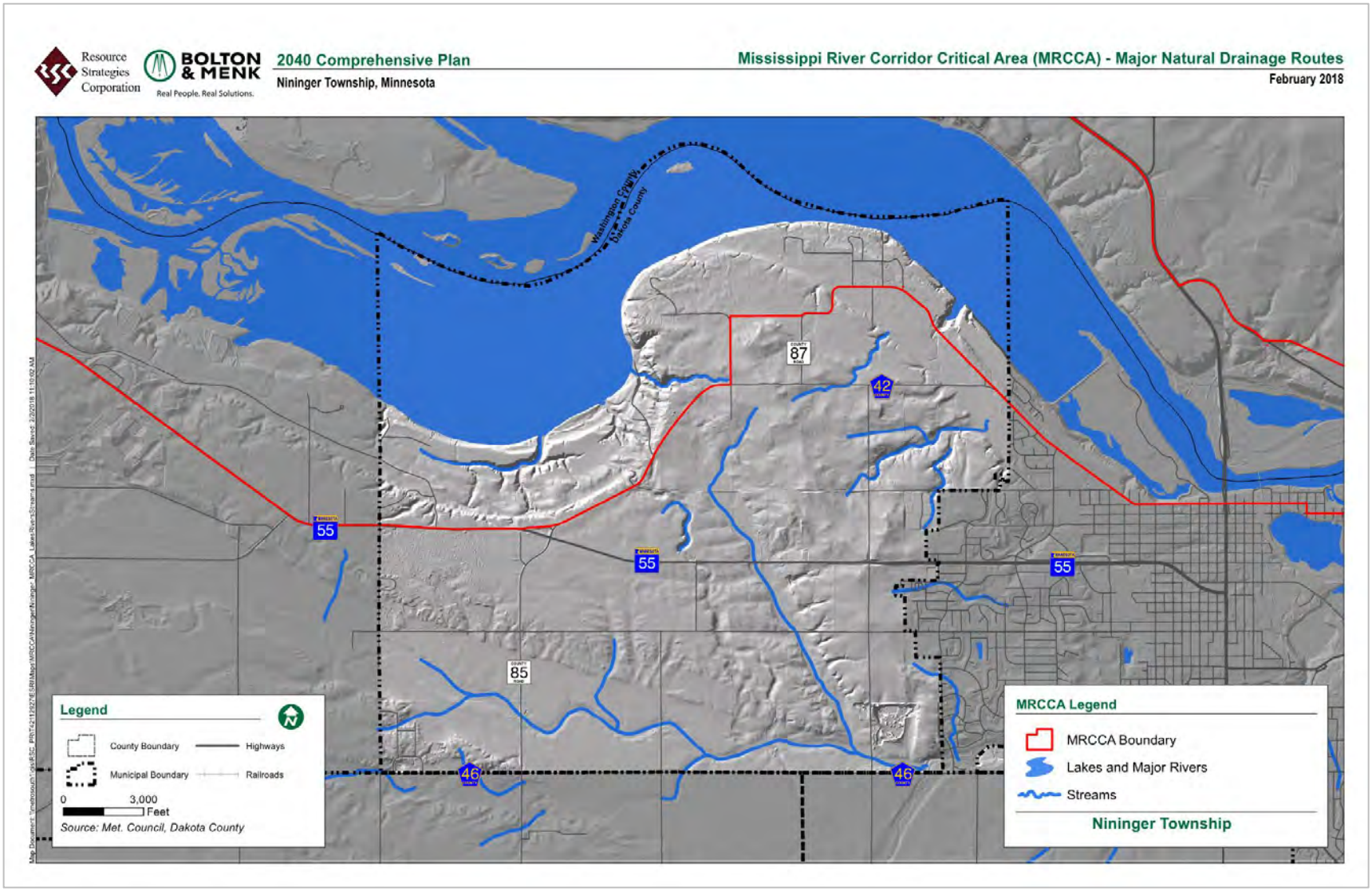
Nininger Township MRCCA Wetlands and Floodplains



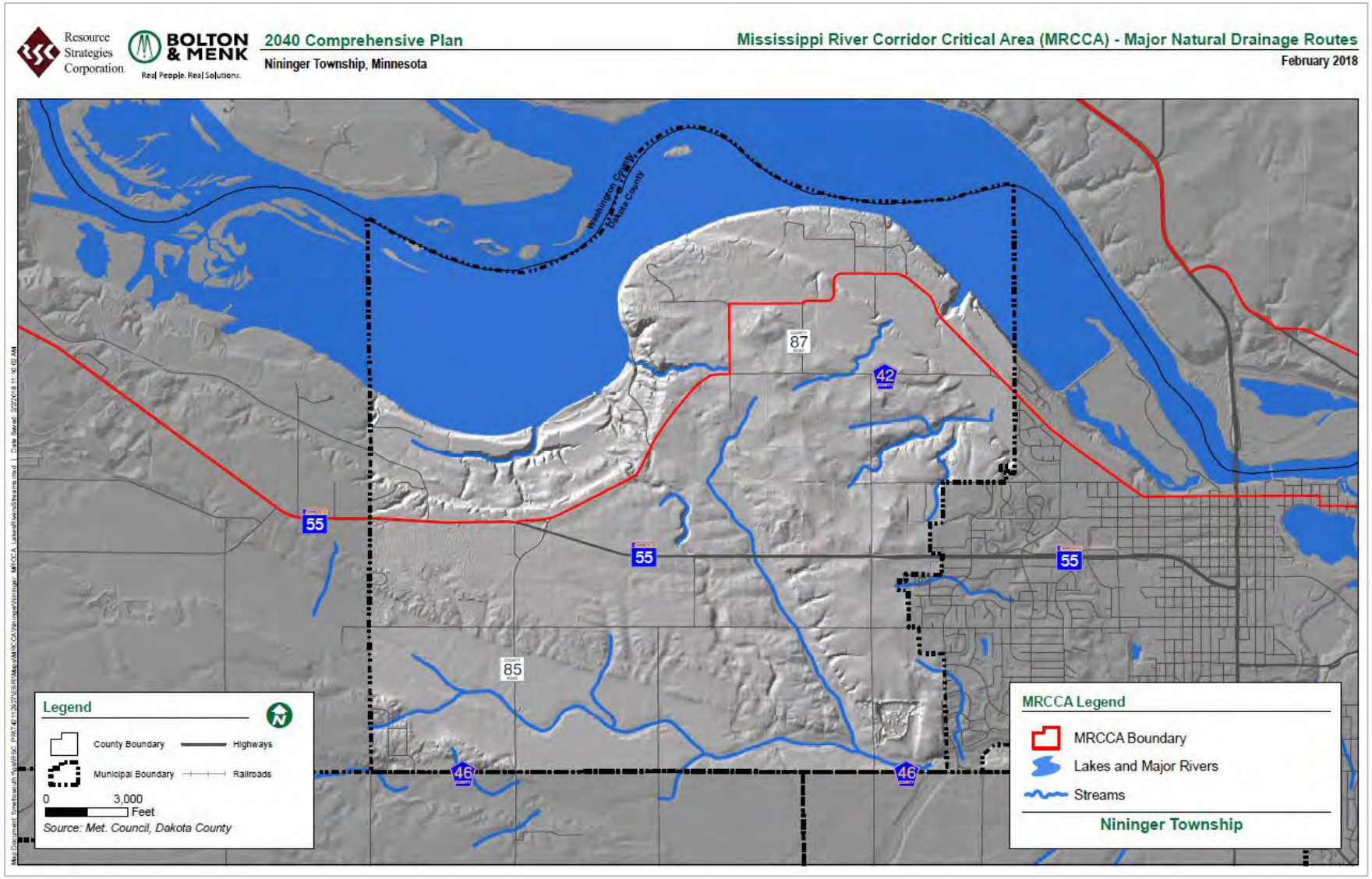
Ravenna Township MRCCA Wetlands and Floodplains



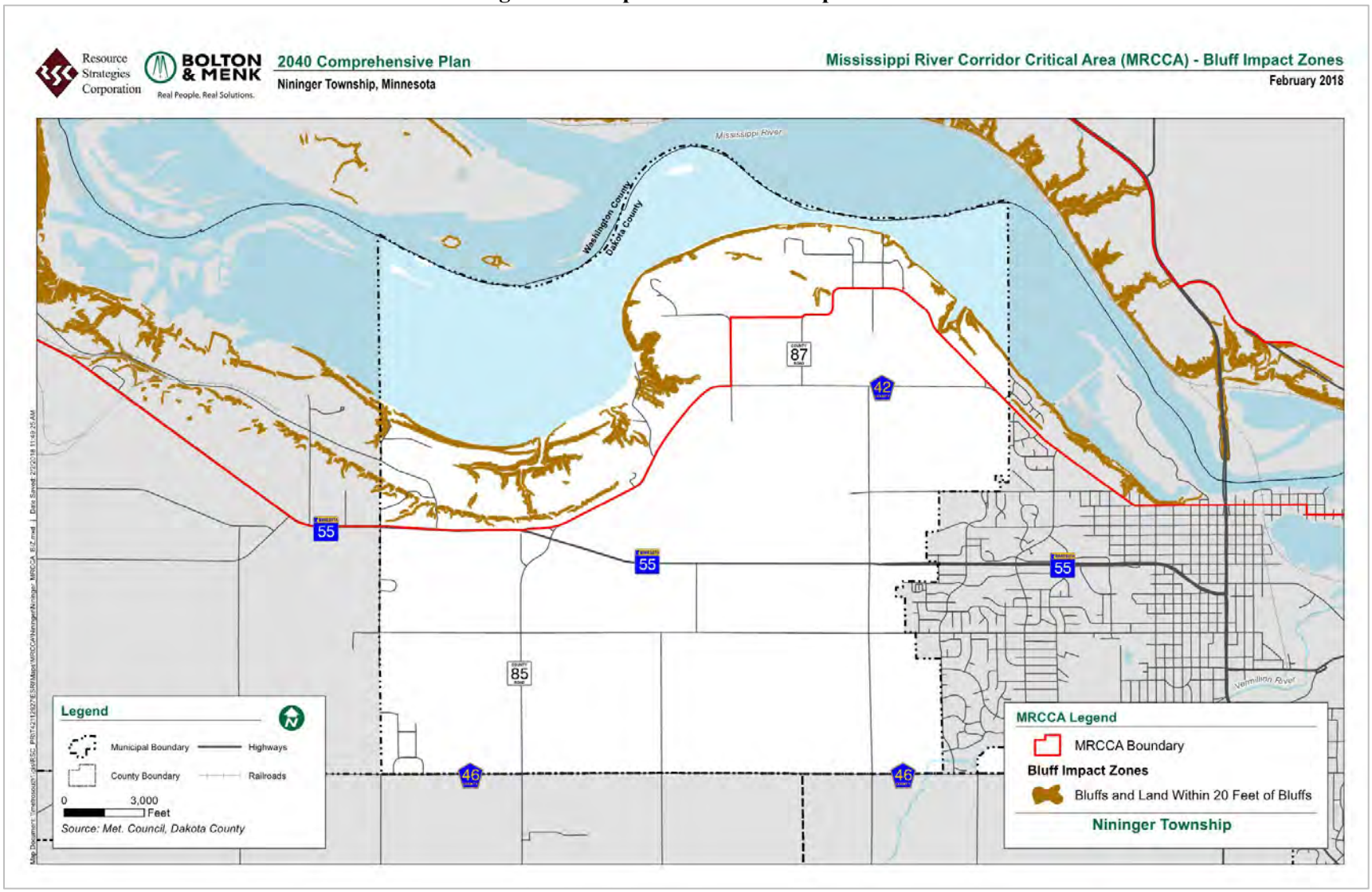
Nininger Township MRCCA Major Drainage Routes



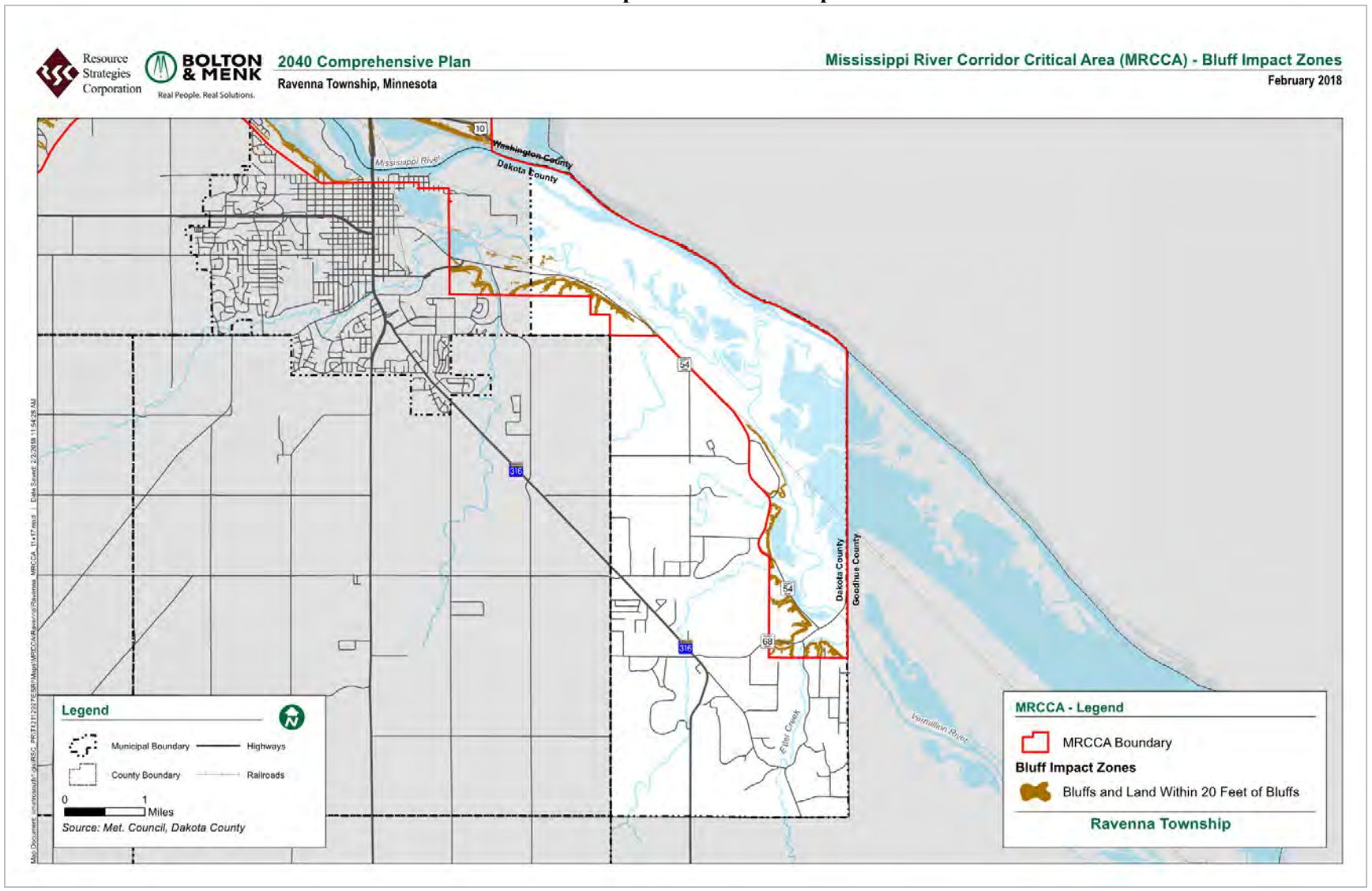
Ravenna Township MRCCA Major Drainage Routes



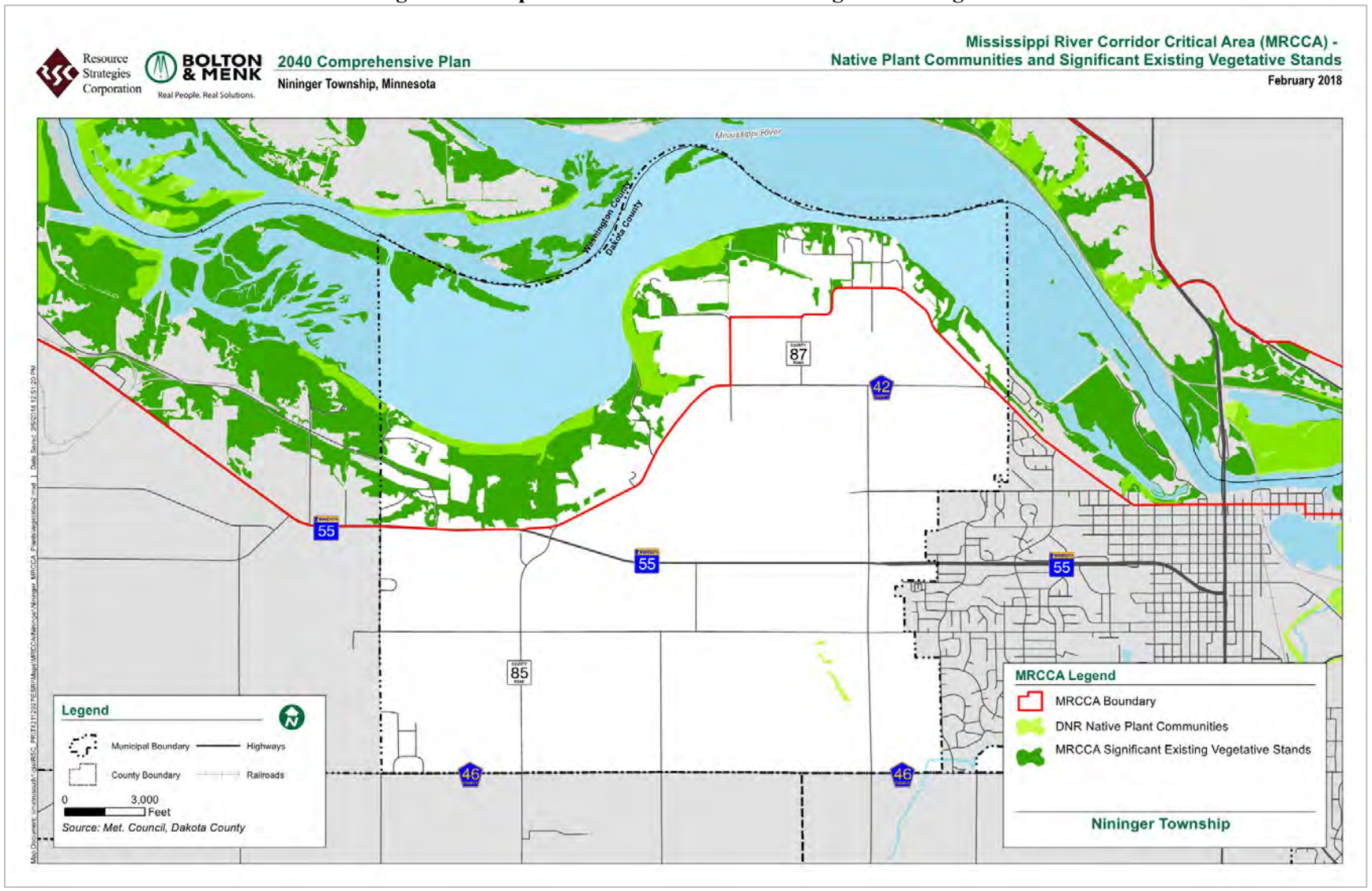
Nininger Township MRCCA Bluff Impact Zones



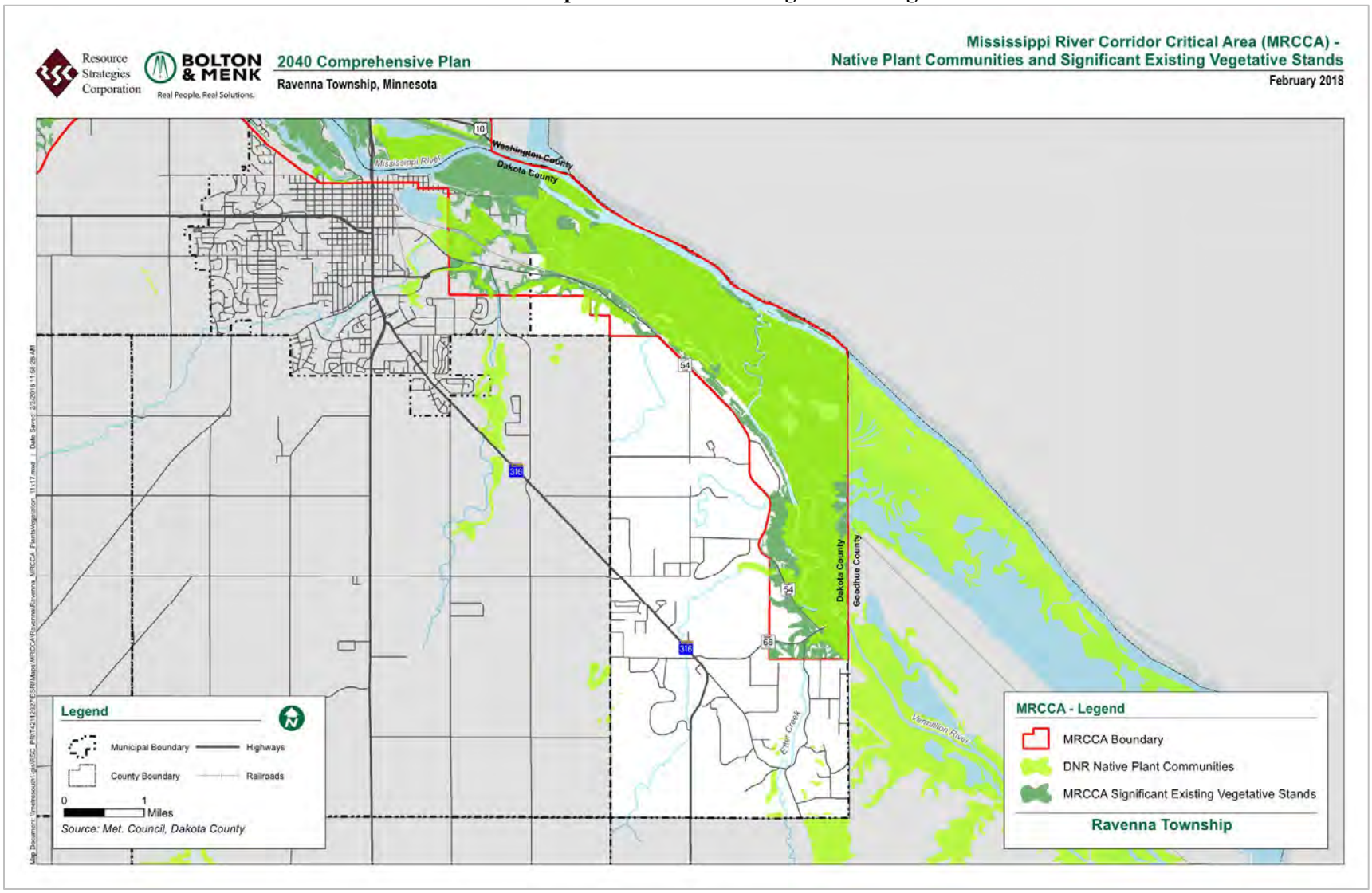
Ravenna Township MRCCA Bluff Impact Zones



Nininger Township MRCCA Native Plants and Significant Vegetation



Ravenna Township Native Plants and Significant Vegetation



Ravenna and Nininger Township protect and minimize impacts to Primary Conservation Areas from public and private development and land use activities such as landscape maintenance, river use, walking/hiking, etc. This is achieved by implementing design standards such as conservation design, transfer of development density, or other zoning and site design techniques that achieve better protections or restoration of Primary Conservation Areas. Permanent protection measures such as public acquisition, conservation easement, or deed restrictions have also been utilized to protect and ensure long-term protection.

The features of the Primary Conservation Areas are described below:

Shore impact zones (SIZs). SIZs apply to the Mississippi and all of its backwaters, as well as to its four key tributaries, including the Crow, Rum, Minnesota, and Vermillion rivers. The shore impact zone is half of the required structure setback from the river and fifty feet for agricultural land uses. Restricting impacts to the SIZ's is important to preserve the valued area in the immediate vicinity of the Mississippi river and its backwaters.

Wetlands, Floodplains, and Areas of Confluence with key Tributaries. The area of confluence with key tributaries is the general floodplain area at the confluences of the Mississippi with the Crow, Rum, Minnesota, and Vermillion rivers. The confluence is outside both Ravenna and Nininger Township. A wetland is a land area that is saturated with water, either permanently or seasonally, such that it takes on the characteristics of a distinct ecosystem. The primary factor that distinguishes wetlands from other land forms or water bodies is the characteristic vegetation of aquatic plants, adapted to the unique hydric soil. A floodplain is an area of land adjacent to a stream or river which experiences flooding during periods of high discharge.

Natural Drainage Routes. Natural Drainage routes identify major river and stream centerlines and identify natural drainage routes.

Bluff Impact Zones (BIZs) includes a bluff (slopes over 18%) and land located within 20 feet from the top of a bluff. The figure identifies the bluff impact zone including the buffer area.

Native Plant Communities and Significant Existing Vegetative Stands. Native plant communities are mapped by the Minnesota Biological Survey (MBS) and identifies sites that are 5 acres or greater and meet the criteria established by the MBS to qualify as a native plant community.

The plant communities identified are significant because they are largely intact, connected and contain the original native plant community. Much of this vegetation includes an overstory or tree canopy that contributes to the scenic value of the MRCCA and provides significant ecological value, an asset to water quality and offers scenic value. Ecologically, this vegetation provides species diversity, habitat for endangered and threatened plants, and a continuous corridor where plants and animals can naturally spread and disperse. These vegetation areas serve as living remnants of the original native communities that existed in the corridor.

Cultural and Historic Properties. There are no National Register of Historic Places sites or landmarks within the MRCCA areas of Ravenna or Nininger Township. Nothing has been determined as eligible for national historic status nor are there any sites identified as having local cultural or historical significance.

Unstable Soils and Bedrock. There are no known areas of bedrock or unstable soils within the MRCCA areas of Ravenna or Nininger Township.

IV. Public River Corridor Views

The Mississippi River Corridor contains some of the most iconic and cherished scenic vistas in Minnesota and is one of the reasons the corridor was designated a critical area. Public River Corridor Views (PRCVs) is a term defined in rules and used as a means to protect scenic views. Local governments need to identify scenic resources through the planning process and then protect those identified views through ordinance requirements and ordinance administration.

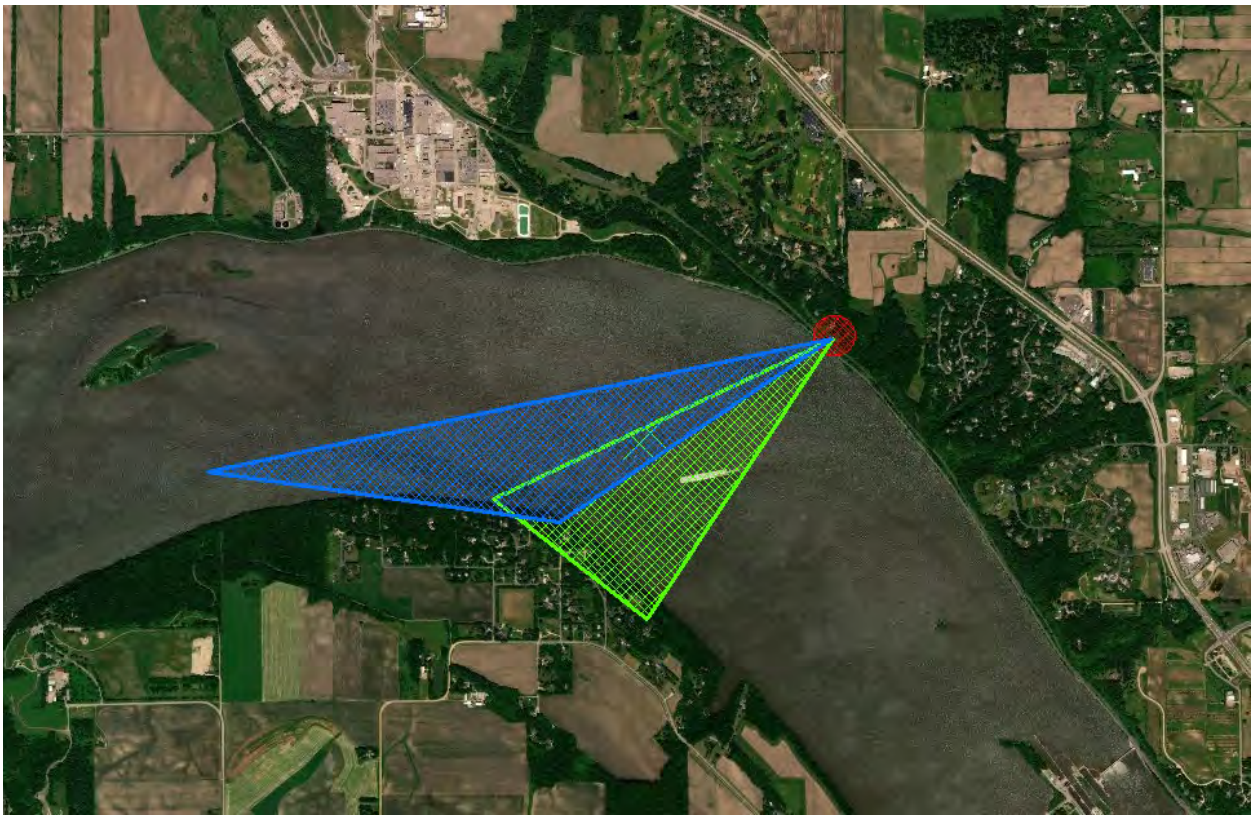
Public River Corridor Views protect and minimize impacts from public and private development activities, vegetation management activities (landscape maintenance). Variances, CUP's and building permits must evaluate any possible negative impact to the Public River Corridor Views. This may include maps, plans, visual impact assessment and other materials that identifies and describes Public River Corridor Views and evaluates development impacts. Any structure including public and private facilities, trails, and viewing areas, signs and kiosks and wireless communication towers must evaluate and minimize impacts on Public River Corridor Views. Platting of lots and subdivision permit applications must ensure that vegetative clearing is the minimum necessary and designed to blend with the natural terrain.

Metropolitan Council guidance instructs jurisdictions to identify specific public river corridor views, map, describe and document the view toward the bluff of the opposite shore. Since Ravenna Township has Wisconsin land on the opposite shore and are not subject to Metropolitan council rules, no public river corridor views are included as part of this plan. Nininger Township has the jurisdictions of Cottage Grove and Denmark Township having views of Nininger Township Mississippi River Critical Area. These jurisdictions have been consulted to consider and help document valued public river corridor views. The opposite side of the Mississippi River from Nininger Township is the River Oaks Park, an important area providing valuable views of the river and bluff land with a tree canopy for much of its length. The photographs below illustrate the public river corridor view. The general location and direction from which the photos were taken is identified in the following aerial map.

Green – Direction of view in following image

Blue – Direction of View in following image

Photograph Credit: Friends of the Mississippi.



Photograph Credit: Friends of the Mississippi

Changes that could impact views include clear cutting of trees which would have a negative impact scenic views and may expose urban development.

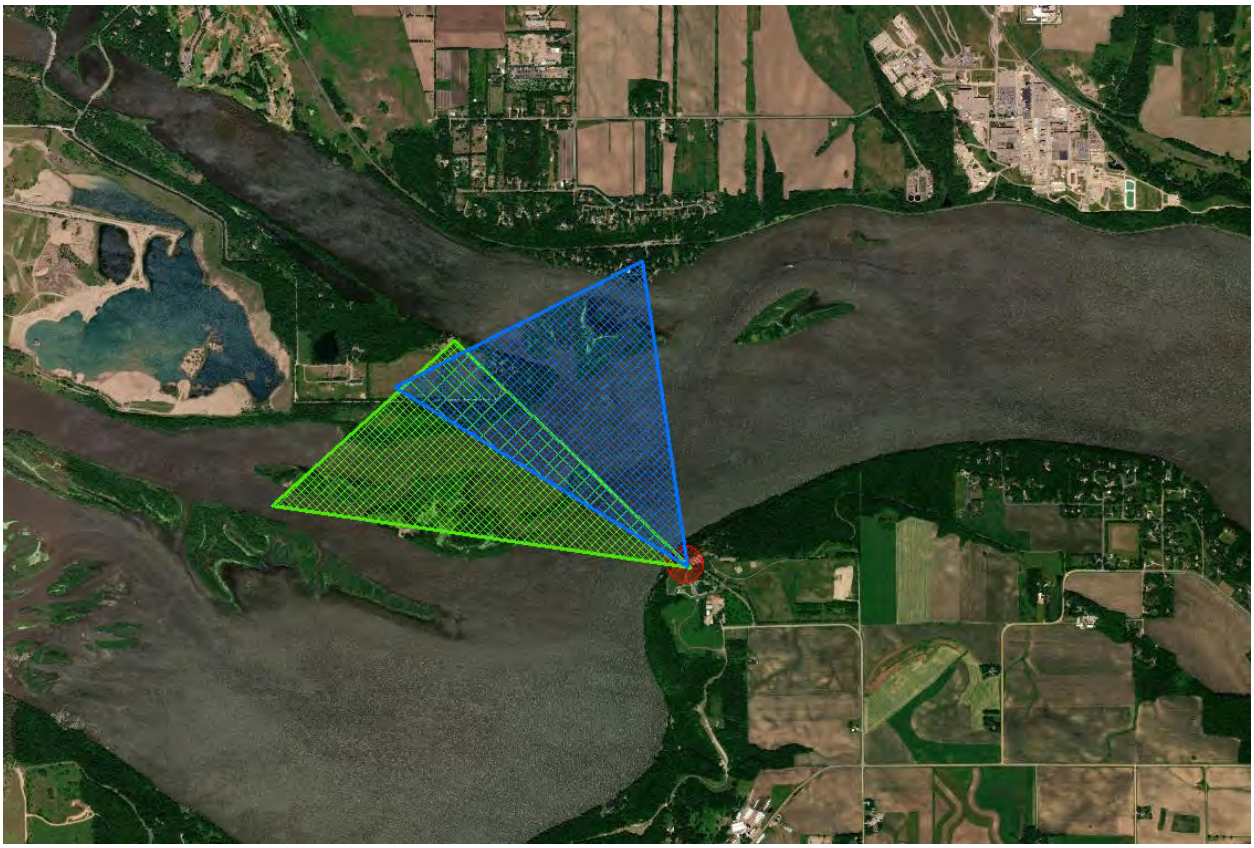
As required, the views toward the river from public parkland and/or public overlooks are illustrated in the photographs below. Schaar's Bluff in Nininger Township provides valuable scenic views of the Mississippi River and the Bluffs on the other side of the river. Scenic views from Schaar's bluff have been identified as follows:

Green – Direction of view in following image

Blue – Direction of View in following image

Photograph Credit: Friends of the Mississippi.

The location and general direction from which the photographs were taken is shown in the following exhibit.



The view plan component focuses on views of bluffs on the opposite shore, from the OHWL on the Nininger side of the river. Additional valuable public views have been identified from a boat launch on the Nininger Township side of the river. The identified location is at Schaars Bluff from the coordinates 44°45'16.4"N 92°58'22.2"W towards Cottage Grove. The high elevation of the bluffs on the other side of the river, easy public access and the view of valuable undeveloped environmental property of Grey Cloud Island make the view very valuable. Any development or clear cutting of trees would negatively impact the view.

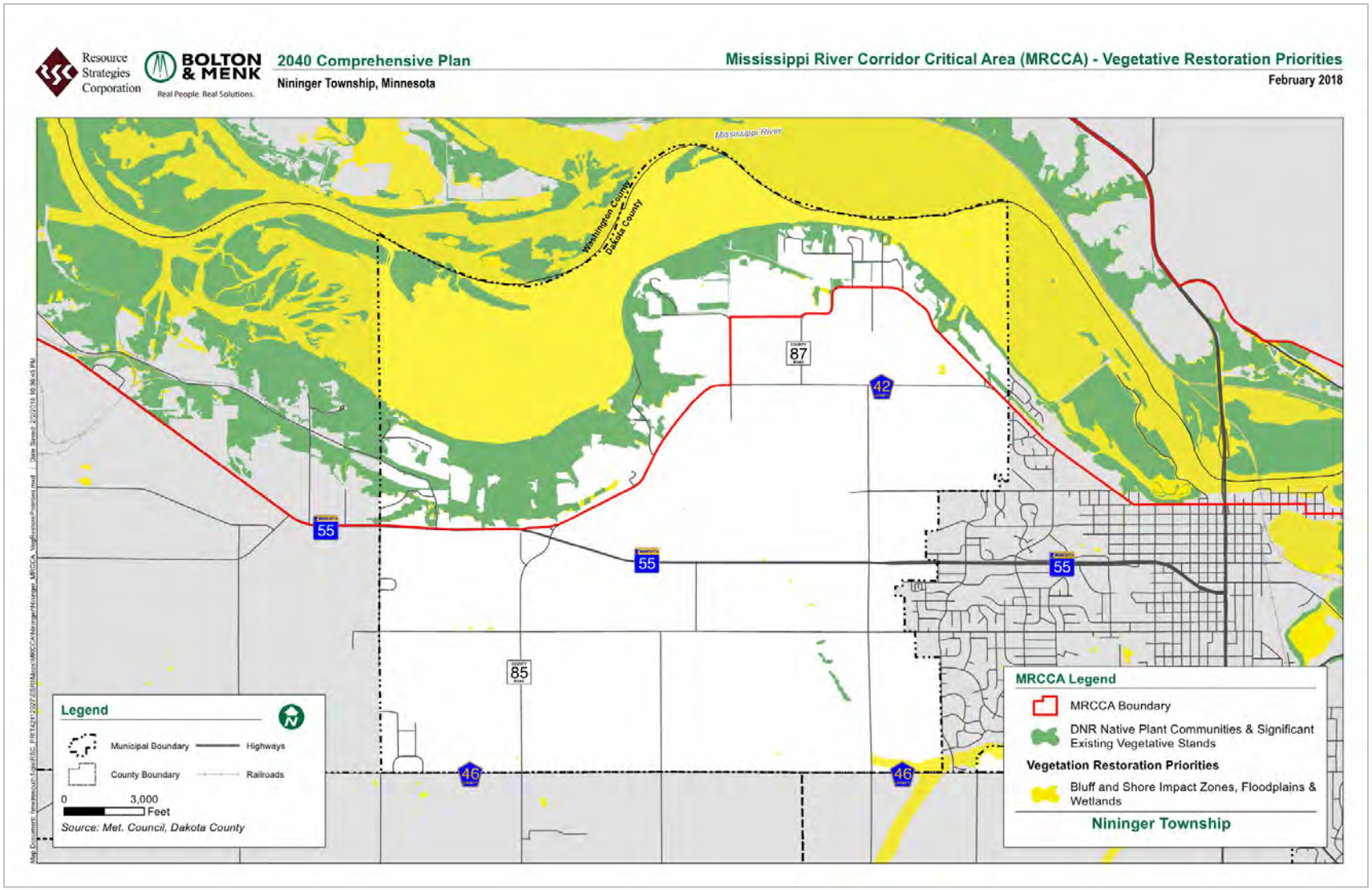
Photograph Credit: Friends of the Mississippi.

V. Restoration priorities

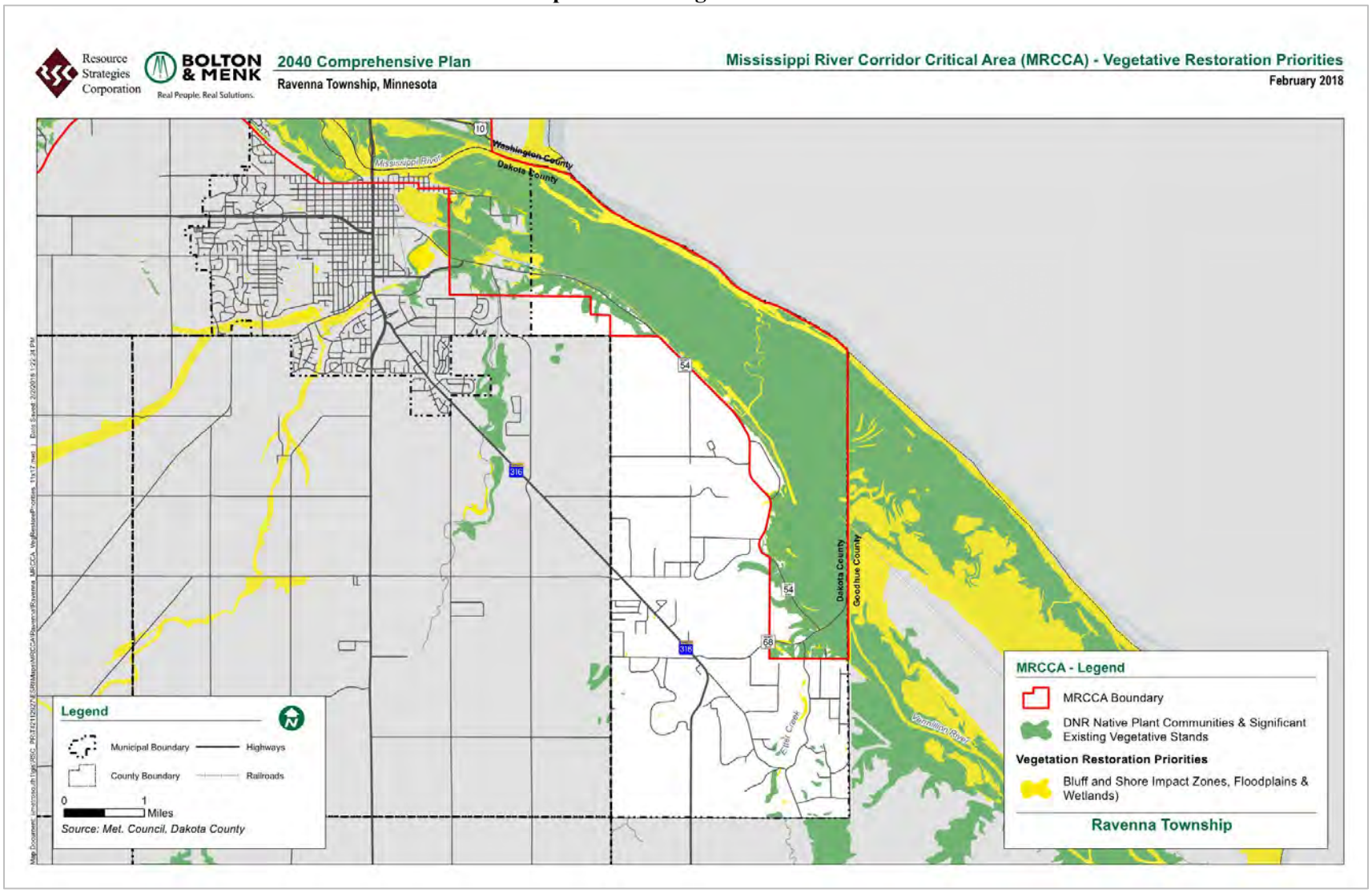
Sensitive areas like bluff impact zones, shore impact zones, floodplains and wetlands are important for vegetation restoration. Restoration measures are often needed to maintain resource integrity and water quality. Development and redevelopment activities represent opportunities to restore natural vegetation, prevent erosion and stabilize slopes. This plan has not identified areas that are priorities for restoration of natural vegetation and erosion prevention, bank and slope stabilization, or other restoration activity. Continuous efforts and plan updates will be undertaken if there are ever identified any areas of concern.

The following figures show areas of significant vegetative stands and vegetation restoration priorities.

Nininger Township MRCCA Vegetative Restoration Priorities



Ravenna Township MRCCA Vegetation Restoration Priorities



VI. Open Space and Recreational Facilities

Township policy encourages the creation, connection, and maintenance of open space and recreation facilities and identify potential public access points and trail locations. Open space and recreational facilities, such as parks, trails, scenic overlooks, natural areas, islands, and wildlife areas add to the quality of a community and increase opportunities for the public to access the river.

Ravenna and Nininger Townships, as part of their long-range planning, encourage creation, connection, and maintenance of open space, recreational facilities and public access to the river. Both Ravenna and Nininger Township have areas identified as River Neighborhood District (CA-SR); Metropolitan Council policy encourages jurisdictions to encourage connection of these districts to existing and planned parks and trails. Ordinance requirements and performance standards are designed to achieve these objectives, maintain a high level of aesthetics, and maintain compatible land use in the area.

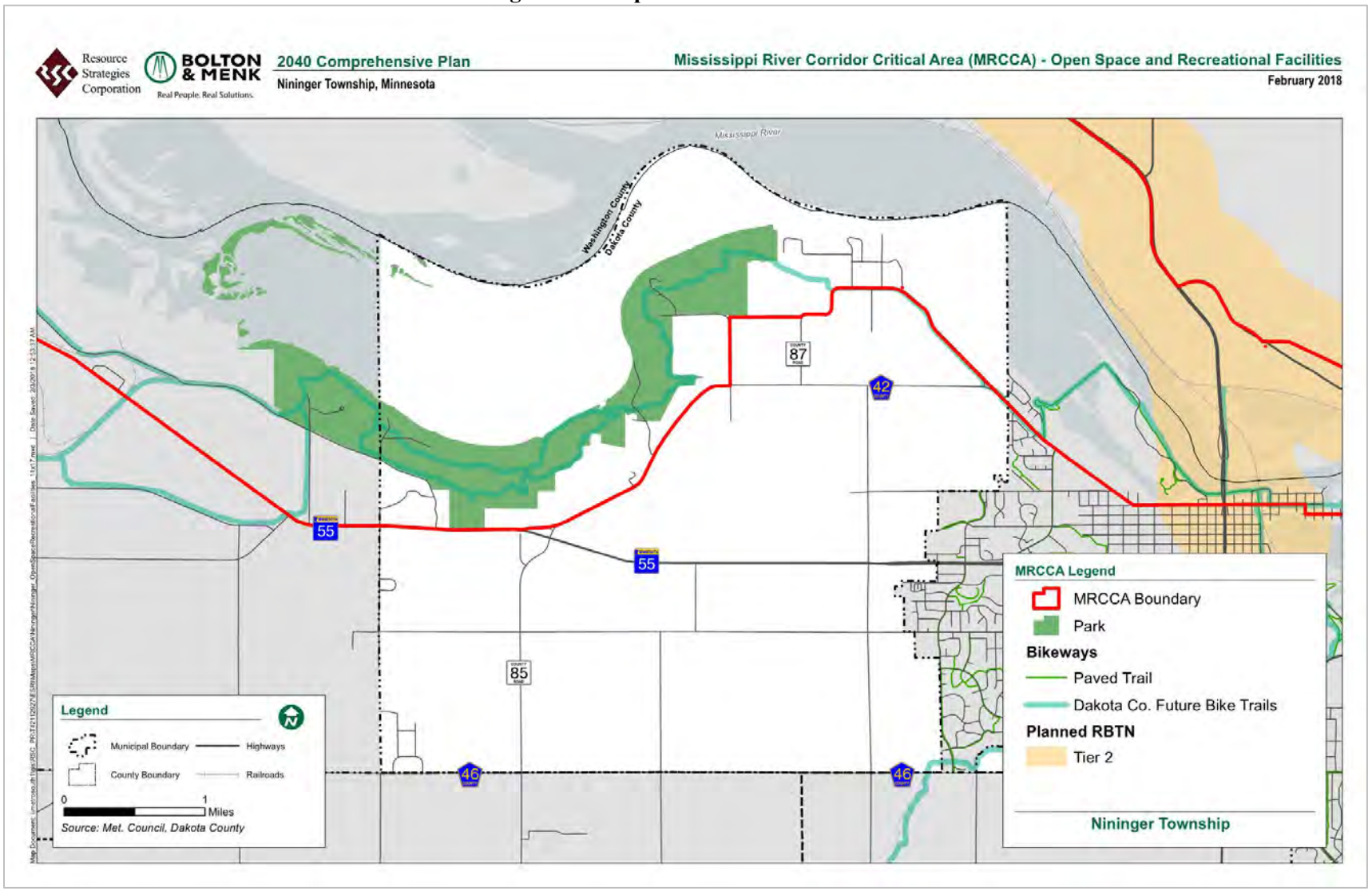
Regional Parks: Spring Lake Park, located in Nininger Township and within the Mississippi River Corridor Critical Area, is identified in the Metropolitan Council park plan as a 'park reserves'. Park reserves, like regional parks, are expected to provide for a diversity of outdoor recreational activities. The major feature that distinguishes the park reserve from a regional park is that the park reserve is also intended to provide, protect, and manage representative areas of the original major landscape types in the metropolitan area and enable appreciation and enjoyment of the natural resources that influenced the region's development.

Regional Trails: Regional trail corridors are intended to provide for recreational travel along pathways throughout the metropolitan area. They are selected to traverse areas of scenic appeal and/or historical, architectural and developmental interest while assuring that the trail will have no adverse effect on the natural resource base. Regional trails are selected to pass through or provide connections between components in the Regional Parks System and perform the important function of providing places for parking, comfort facilities and safe water supplies.

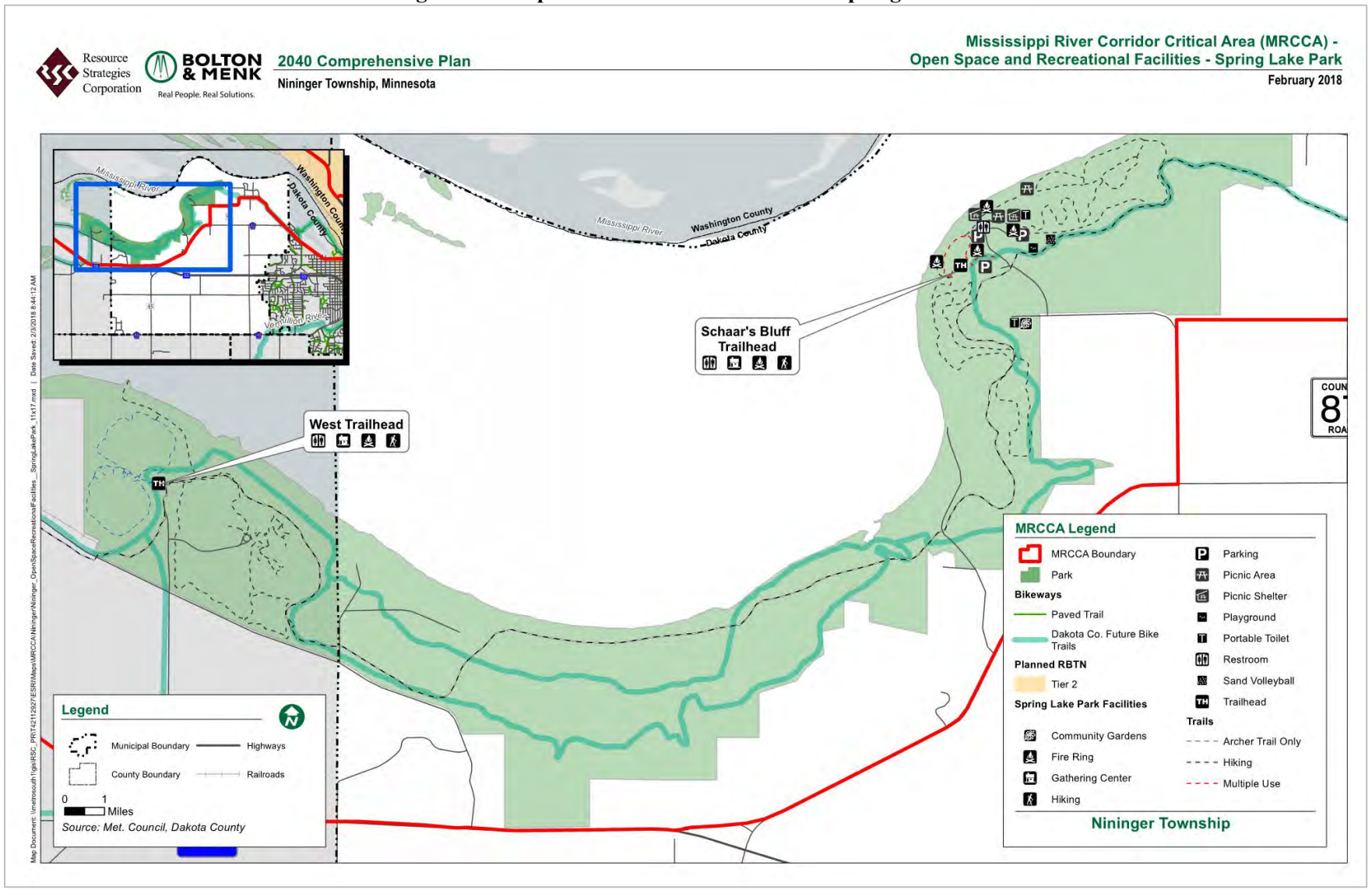
The Mississippi River Regional Trail provides 25 miles of public trail access from Hastings to South St. Paul, including through Nininger Township and the Mississippi River Critical Area. Regional plans have identified a regional trail search corridor along the Mississippi River and within Ravenna Township.

The following maps identify the parks and trials within the MRCCA in Nininger Township and Ravenna Township.

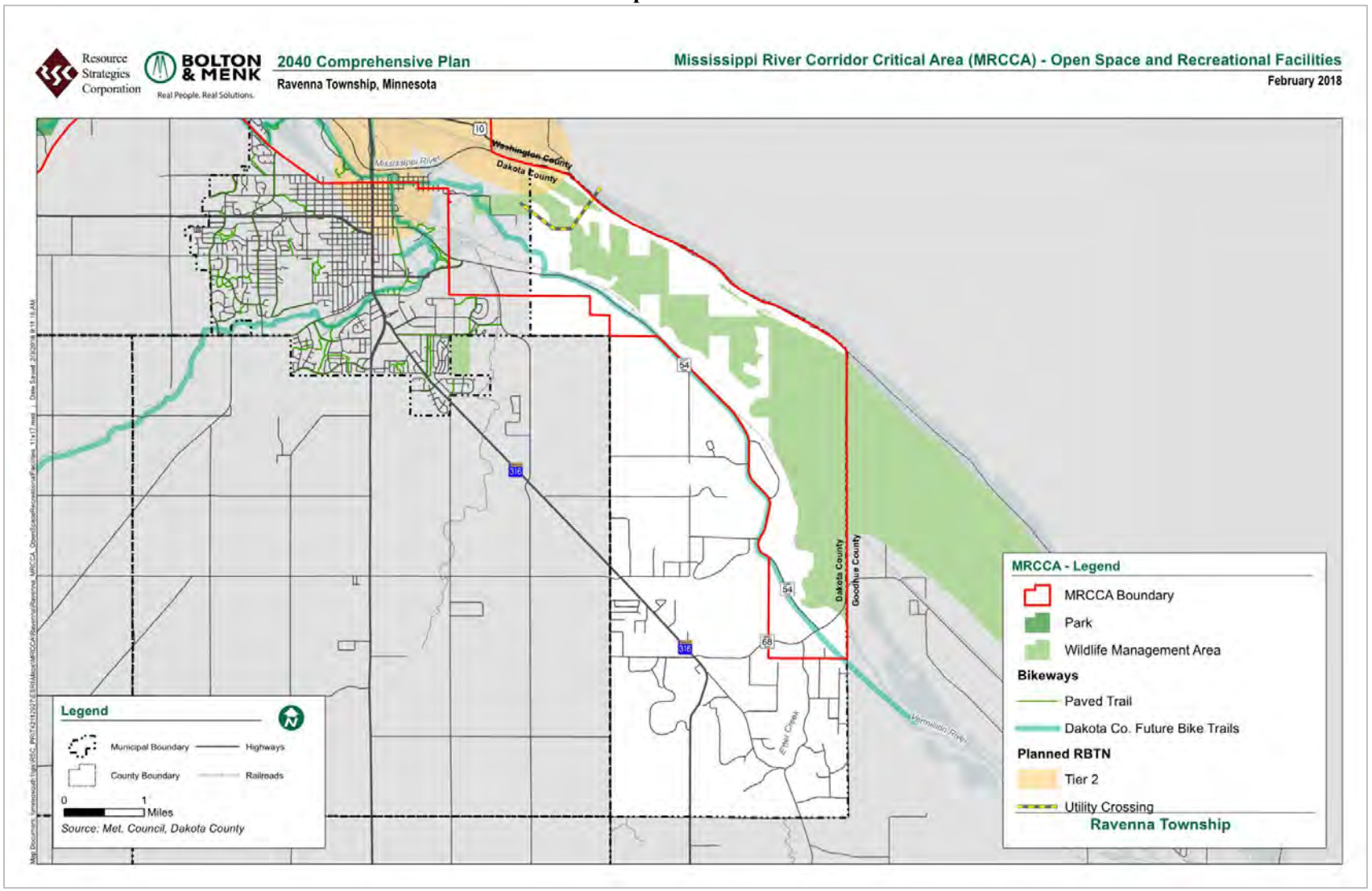
Nininger Township MRCCA Parks and Trails



Nininger Township MRCCA Parks and Trails – Spring Lake Park



Ravenna Township MRCCA Parks and Trails



VII. Transportation and utilities

Public transportation facilities and public utilities plans provide public infrastructure in a manner consistent with Chapter 6106. Public transportation facilities are defined as all transportation facilities provided by federal, state, or local government and dedicated to public use, such as roadways, transit facilities, railroads, and bikeways. Public utilities are defined as electric power facilities, essential services, and transmissions services. Electric power facilities, essential services, and transmission services are further defined in the rules. Transportation and utilities can have negative impacts on scenic views, habitat and soil erosion. Development of these facilities must be conducted in a manner that minimizes impacts. Development of public transportation facilities and public utilities should describe methods for minimizing impacts to the corridor's resources. Exhibits of existing and future public transportation facilities and Regional Bicycle Transportation Network (RBTN) alignments can be found in the transportation chapter. No planned transportation facilities will impact the MRCCA district. A tier 2 Regional Bicycle Transportation Network alignment can be found in close proximity to Nininger Township.

Utility Infrastructure: There is one utility line crossing in Ravenna Township crossing the Mississippi River, as indicated in the Open Space and Recreational Facilities figure. Ravenna and Nininger Township recognizes that there is a need for various utility transmission and communication facilities to serve the State and the metropolitan area. There is a desire to minimize the impact of these facilities on existing and future residents. Specific regulations will be developed in its Zoning Ordinance related to the siting of utility lines and telecommunication towers in the area and will encourage the use of existing river crossings for any proposed facilities. There are no planned additional utility crossings in either township. There are no existing or planned power generating facilities in the Critical Areas of the MRCCA. No facilities are allowed in this area.

VIII. Surface water uses

Surface water uses such as barge fleeting, recreational boating, and commercial riverboat tours uses may cause surface water use conflicts. Where these uses exist, local governments should address them through policies to minimize conflicts.

The Mississippi River is a "working river" and important to the economy of the Twin Cities metropolitan area and the Midwest. An assembly of barges travel the Mississippi River and complete loading and unloading activities at barge terminals. Fleeting areas (barge parking areas) are necessary for staging of large and difficult to maneuver barges while loading and unloading occurs. Just west of Nininger Township is CF Industries which includes two barge terminals. There are no terminals located in either Ravenna or Nininger Township. There are no identified barge fleeting areas in the areas that surround Ravenna or Nininger Township. There are no identified surface water conflicts with barge, recreational or commercial riverboat activities.

IX. Water-Oriented Uses

MRCCA communities provide for existing and future commercial and industrial uses that require water access, including but not limited to barge terminals and recreational marinas. Water-oriented uses, such as barge terminals and recreational marinas, provide economic benefits as well as external impacts (traffic, hours of operation, noise, water surface use). There are two boat access points in Ravenna Township providing boat access to the Vermillion River and secondarily to the Mississippi River. Nininger Township has one public boat access directly to the Mississippi River. Riverfront development should address how external impacts are being managed and to minimize land use conflicts. Township policies provide design standards and river and bluff setbacks for facilities associated with "public recreational use" and "river-dependent use." Rules define "river-dependent use" as use of land for commercial, industrial, or utility purposes, where access to and use of a public water feature is an integral part of the normal conduct of business and where the use is dependent on shoreline facilities. "Shoreline facilities" are facilities that require a location adjoining public waters for ingress and egress, loading and unloading, etc. No commercial or industrial business utilizes the Mississippi River as part of its integral business operations.

X. Goals and Policies

The land within the Critical Area is primarily undeveloped and contains considerable opportunity to preserve natural habitats and other resources. Issues that the Townships have identified within the Corridor are similar to those identified in the public workshops, discussed in the previous section of this Plan. Specifically, the Township will address the following issues within the Corridor:

- Regulation and restrictions on commercial uses;
- Conservation of the natural area that consists of floodplain for the Mississippi and Vermillion Rivers;
- Preservation of site views and standards for siting of utility structures;
- Establish rural residential densities consistent with Metropolitan Council policies;
- Address environmental issues related to the Corridor, including groundwater and surface water pollution.
- Identify and coordinate trail corridor locations in cooperation with Dakota County and DNR.
- Provide access to the River Corridor to enable recreational opportunities.
- A majority of the Corridor is either undevelopable or has been developed in primarily rural residential densities.

In order to achieve the objectives identified for the corridor, the following goals and policies have been identified for the area. Following the completion of the Mississippi River Corridor Critical Area (MCRRA) plan, Ravenna and Nininger Township will review ordinance standards to look for opportunities to achieve these objectives.

MISSISSIPPI RIVER CORRIDOR GOALS

It is the goal of Ravenna Township to:

- Preserve and enhance the natural aesthetic value of the Mississippi River Critical Area in Ravenna Township.
- Protect environmentally sensitive areas within the designated Critical Area
- Conserve and protect scenic, historic, cultural, natural and scientific values in the district.
- Assure consistency of Township plans and regulations with Critical Area requirements and policies of the Mississippi River Corridor Critical Area.

MISSISSIPPI RIVER CORRIDOR POLICIES

It is the policy of Ravenna and Nininger Township to:

- Enforce specific requirements for the designated Critical Area in Ravenna and Nininger Township in Township ordinances, including:
  - Guide land use/development consistent with the management purposes of each district.
  - Setbacks of structures from the normal high-water mark shall be at least 200 feet.
  - The Shoreland Impact Zone is generally restrictive of roads, driveways, public recreational facilities, and cell phone towers.
  - The Bluff Impact Zone is generally restrictive of structures, impervious, roads, driveways, trails, viewing areas, decks, patios and cell phone towers.
  - Setbacks of structures from blufflines shall be at least 40 feet.
  - Clearcutting of vegetation will be prohibited on islands, public recreation lands, on bluff faces and slopes, within 200 feet of the normal high-water Mark, and within 40 feet landward of bluffs.

  - Clearcutting of vegetation within the SIZ, BIZ, within 50 feet of wetlands or natural drainage ways, native plant communities, and significant vegetative strands is not allowed except by permit and the minimum impact for development is only allowed per 6106.0180
  - Conditions shall be attached to permits to minimize vegetative removal, soil exposure, assure steep slopes are stabilized, and vegetative restoration occurs
  - Mining or mineral extraction operation will not be allowed in the SIZ, BIZ and will require appropriate screening from the Mississippi River.
  - Mining operations proposed in an area requiring more than 20 acres will be required to receive approval of the appropriate State agencies, consistent with Critical Area procedures for review and approval.
- Notify DNR when the following may be proposed in the Critical Area:
  - Any development requiring discretionary action or a public hearing
  - Development on slopes greater than 12 percent
  - Removal of five or more contiguous acres of vegetative cover
  - Alteration of more than 50 linear feet of riverbank
  - Grading or filling of 20 or more acres of land
  - Withdrawal or discharge of river water.
  - Any Metropolitan Council action or review
  - Any rezoning, variance, ordinance amendment or conditional use permit
  - Activities that change the course, current or cross-section of a protected water below the ordinary high water level or appropriation and use of waters of the State.
- Variances, CUPs and all building permits in Ravenna and Nininger Township will require submission of relevant project information to evaluate how proposed development complies with MRCCA plans and ordinances and will evaluate negative impacts to Primary Conservation Areas and require mitigation when appropriate.
- Variances, CUPs and subdivisions of property will seek opportunities to restore vegetation in priority areas.
- Vegetative cutting will be restricted in order to protect bluffs, slopes, views and floodplain forests.
- Make restoration of removed Native Plant Communities and natural vegetation in riparian areas a high priority during development.
- Prohibit commercial, industrial or institutional uses in the designated River Corridor.
- Protect PCAs (shore impact zones, wetlands, floodplains, areas of confluence with key tributaries, natural drainage routes, bluff impact zones, native plant communities, significant existing vegetative stands, cultural and historic properties, and unstable soils and bedrock) and minimize impact to PCAs from public and private development and land use activities (landscape maintenance, river use, walking/hiking, etc.).
- Support mitigation of impacts to PCAs through subdivisions/PUDs, variances, CUPs, and other permits.
- Support alternative design standards that protect the LGU's identified PCAs, such as conservation design, transfer of development density, or other zoning and site design techniques that achieve better protections or restoration of primary conservation areas.
- Make permanent protection measures (such as public acquisition, conservation easement, deed restrictions, etc.) that protect PCAs a high priority.
- Review of developments within the River Corridor will consider the impact of views and insure buffering from the River through revegetation plans and screening.
- Placement of overhead transmission lines should take into consideration the impact on views and the appearance of the structures as much as practicable.
- Protect and minimize impacts to PRCVs from public and private development activities.

- Protect and minimize impacts to PRCVs from public and private vegetation management activities.
- Protect PRCVs located within the community and identified by other communities (adjacent or across the river).
- Cleared portions of rights-of-way for proposed transmission lines should be minimized.
- Existing rights-of-way for transmission lines and other utility lines should be used to the greatest extent possible, and river crossings for utility lines should be minimized.
- Routes for transmission lines should avoid areas of steep slopes, scenic intrusions into streams and valleys, wetlands, soils susceptible to erosion and other unstable soils, open space recreation areas, and forests by running along the fringe of wooded areas.
- Advertising signs are prohibited from visibility from the River, and procedures for removal of non-conforming general advertising signs will be developed.
- Support maintenance of the nine-foot navigation channel of the Mississippi River, including siting of dredge spoil use areas, to insure continued safe and economical navigation of the River.
- New roads shall not be constructed within 200 feet of the normal high water mark or 100 feet of a bluffline.
- Insure that riverbanks and bluffs remain in their natural state, and support maintaining the natural cover of bluffs to protect natural views from the Mississippi River.
- Encourage the State and Dakota County to incorporate scenic road design concepts into road construction projects.
- Review of site plans for developments that impact Public River Corridor Views will be conducted by the Township and will consider the impact of views and insure buffering from the River through revegetation plans, screening, landscaping and prevention of runoff.
- Strongly encourage the placement of underground utilities, when feasible.
- Develop and implement an education and outreach strategy to get the word out to property owners about restoration priorities identified in this plan and what it means to them if a restoration priority area exists on their property.
- Work with DNR and Gores Wildlife Management Area to identify opportunities for access from a regional trail corridor to the River.
- Establish a Conservation District to protect environmental and cultural resources, to protect floodplain forests, habitats, islands and open space and to retain the archaeological and cultural heritage of the area. Support uses that are consistent with maintaining or enhancing the natural state of the area and which have minimal impact on the natural environment in the designated “Conservation District” identified in the Township’s Growth Management Plan.
- Protect native and existing vegetation during the development process, and require restoration if any is removed by development. Priorities for restoration shall include stabilization of erodible soils, riparian buffers and bluffs or steep slopes visible from the river.
- Seek opportunities to restore vegetation to protect and enhance PRCVs identified in this plan.
- Seek opportunities to restore vegetation in restoration priority areas identified in this plan through the CUP, variance, vegetation permit and subdivision/PUD processes.
- Sustain and enhance ecological functions (habitat value) during vegetation restorations.
- Evaluate proposed development sites for erosion prevention and bank and slope stabilization issues and require restoration as part of the development process.
- Encourage creation, connection, and maintenance of open space, recreational facilities, including public access to the river.

- Identify and encourage connection of CA-SR district land to existing and planned parks and trails for LGUs with developable land in CA-SR districts. (Not applicable in communities with no CA-SR district.)
- Encourage that land dedication requirements be used to acquire land suitable for public river access.
- Minimize impacts to PCAs and PRCVs from solar and wind generation facilities, public transportation facilities and public utilities.
- Recognize the Mississippi River as a "working river" that is important to the economy of the Twin Cities metropolitan area and the Midwest.
- Minimize potential conflict of water surface uses. Ravenna and Nininger Townships are not regulating surface water use under Chapter 86B.
- Seek to balance commercial and recreational surface water uses.
- Acknowledge existing and future water-oriented uses and provide for their protection. If none, please state so.
- Minimize potential conflict of water-oriented uses with other land uses.

MISSISSIPPI RIVER CORRIDOR IMPLEMENTATION ACTIONS

Following the completion of the MRCCA plan, Ravenna and Nininger Township will:

- Amend existing or adopt new MRCCA ordinance overlay district compliant with the goals and policies of the MRCCA Plan and Minnesota Rules, part 6106.0070, Subp. 5 – Content of Ordinances.
- Amend zoning map to reflect new MRCCA districts.
- Ensure that information on the location of PCAs is readily available to property owners to understand how PCA-relevant ordinance requirements, such as vegetation management and land alteration permits, apply to their property for project planning and permitting.
- Establish procedures and criteria for processing applications with potential impacts to PCAs, including:
  - identifying the information that must be submitted and how it will be evaluated,
  - determining appropriate mitigation procedures/methods for variances and CUPs,
  - establishing evaluation criteria for protecting PCAs when a development site contains multiple types of PCAs and the total area of PCAs exceed the required set aside percentages.
  - developing administrative procedures for integrating DNR and local permitting of riprap, walls and other hard armoring.
- Ensure that information on the location of PRCVs is readily available to property owners to understand how PRCV-relevant ordinance requirements, such as vegetation management and land alteration permits, apply to their property for project planning and permitting.
- Establish procedures for processing applications with potential impacts to PRCVs, including:
  - identifying the information that must be submitted and how it will be evaluated, and
  - determining appropriate mitigation procedures/methods for variances and CUPs.
- Actively communicate with other communities to protect views other communities have identified in LGU that are valuable, and vice versa.
- Ensure that information on the location of natural vegetation restoration priorities is readily available to property owners to understand how relevant ordinance requirements apply to their property for project planning and permitting.

- Establish a vegetation permitting process that includes permit review procedures to ensure consideration of restoration priorities identified in this plan in permit issuance, as well as standard conditions requiring vegetation restoration for those priority areas.
- Establish process for evaluating priorities for natural vegetation restoration, erosion prevention and bank and slope stabilization, or other restoration priorities identified in this plan in CUP, variances and subdivision/PUD processes.
- Include facilities in the capital improvement program for parks and open space facilities (if relevant).
- Develop a system for reviewing, tracking, and monitoring open space required as part of the subdivision process.
- Include transportation facilities in the capital improvement program, if applicable, identify which facilities, or portions of facilities, are in the MRCCA.
- Incorporate specific design and placement conditions into local permits for solar and wind generation facilities and essential and transmission services (if allowed or within the community's permitting authority) that minimize impacts to PCAs and PRCVs.
- Adopt surface water regulations authorized under Minn. Statute, Chapter 86B (MR 6110.3000 – 6110.3800).
- Provide for water-oriented uses in the ordinance (if applicable).

Appendix G: Adjacent and Affected Jurisdiction Comments and Responses

Dakota County Rural Collaborative Comprehensive Plan Comment Tracker

Land Use

Incomplete Comments

Number	Plan Comment Applies to	Comment	From	Response
1.1	Full Collaborative, Vermillion, New Trier, Miesville, Randolph, Coates	Pg 25: Update reference to the “Dakota County Farmland & Natural Area Program” to Dakota County Land Conservation Program," because the program name has changed since the last comp plan.	Dakota County	Thank you for the correction; the text has been updated.
1.2	Full Collaborative	On pp. 23-24, Tables 11 and Table 12 should be specific for the "stand alone" plans of Empire Township and the City of Vermillion as staged development and redevelopment applies to growth in the communities with wastewater services. Staging of rural development is not needed.	Met Council	We have added tables specific for Empire Township and the City of Vermillion, given their different requirements.
1.3	Full Collaborative	The Plan is incomplete for MRCCA. The Plan has been forwarded on to Minnesota Department of Natural Resources (MDNR) staff for their separate completeness review of the MRCCA element. Council staff will send our comments on this element will be sent directly to the Collaborative under separate cover.	Met Council/ MnDNR	We have received comments about the MRCCA from MnDNR staff and will incorporate their comments into this section/appendix.
1.4	Empire Twp, Vermillion	To meet Emerging Suburban/Rural Center community designation requirements, the stand-alone Plan needs to plan for an average net density of at least 3 units/acre.	Met Council	Thank you for your comment. We have modified tables to clearly show 3 unit/acre minimum densities in sewered portions of the communities.
	Advisory Comment			
Number	Plan Comment Applies to	Comment	From	Response
1.1	Full Collaborative	Consider updating maps on pg 17 and pg 3-34, to show County Park Conservation areas. County staff will provide a map to show County Park Conservation areas	Dakota County	Thank you for your comment. Your recommendation has been taken under advisement.

Natural Resources/Special Resources/Resilience

Incomplete Comments

Number	Plan Comment Applies to	Comment	From	Response
1.2	Full Collaborative, ~~Empire~~, ~~Vermillion~~, New Trier, ~~Miesville~~, Randolph, Coates	Solar map inadequate. The individual Solar Suitability Analysis Map for each of the 16 communities should be included in Appendix B for the Plan to be considered complete and consistent for the required Solar Access Protection and Development component of the Plan.	Met Council	The map for the Full Collaborative was obtained through the Metropolitan Council website. Individual community maps will be included as appendices for individual community plans.

Advisory Comment

Number	Plan Comment Applies to	Comment	From	Response
1.1	Full Collaborative, Empire Twp	Dakota County is working on land protection and management through its Land Conservation Program, and supports this goal [Enviro resources goals, pg 4] and the concept of working together with the Rural Collaborative communities on natural resource protection and management.	Dakota County	Thank you for your comment and support of Rural Collaborative goals.
1.2	Full Collaborative, Empire, Vermillion, New Trier, Miesville, Randolph, Coates	Pg 4. Consider adding protection of wildlife and rare native species to the environmental goal of protecting natural habitat qualities and biodiversity of the area.	MnDNR	Thank you for your comment. Your recommendation has been taken under advisement.
1.3	Full Collaborative, Empire Twp, Vermillion, New Trier, Miesville, Randolph	Recommend adding goals and strategies to address how rare species and plant communities will be protected.	MnDNR	Thank you for your comment. Your recommendation has been taken under advisement.
1.4	Full Collaborative, Empire Twp, Vermillion, New Trier, Miesville, Randolph	Recommend inclusion of maps of MBS Sites of Outstanding or High Biodiversity Significance and DNR plant communities with conservation status ranks of S1, S2, or S3 along with a list of the types of native plants documented within the Collaborative Area.	MnDNR	Thank you for your comment. Your recommendation has been taken under advisement.
1.5	Full Collaborative, Empire Twp, Vermillion, New Trier, Miesville, Randolph	Encourages Collaborative communities to list NHIS rare features and state-listed species found within the collaborative area.	MnDNR	Thank you for your comment. Your recommendation has been taken under advisement.

1.6	Full Collaborative, Empire Twp, Vermillion, New Trier, Miesville, Randolph	Pg. 5 Grasslands could be added to the list of areas called out in the policy to "enforce provisions in local ordinances that provide for and promote the protection of regionally and locally important natural areas"	MnDNR	Thank you for your comment. Your recommendation has been taken under advisement.
	Full Collaborative, Empire, Vermillion, New Trier, Miesville, Randolph, Coates	Consider including a community forestry component to help address the threats of emerald ash borer and oak wilt.	MnDNR	Thank you for your comment. Your recommendation has been taken under advisement.
1.3	Full Collaborative, Empire, Vermillion, New Trier, Miesville, Randolph	Council staff recommend enrolling in and/or utilizing the following cost-free programs and resources, which are designed to provide planning, technical, and policy assistance to local Minnesota governments, as additional "solar implementation strategies" in your Plan: • U.S. Dept of Energy's SolSmart Program - Solar Permitting, Zoning, & Development • MN GreenStep Cities Program - Sustainability Best Practices • Xcel Energy's Partners in Energy Program - Energy Action Plan Development	Met Council	Thank you for your comment. Your recommendation has been taken under advisement.

Housing

Incomplete Comments

Number	Plan Comment Applies to	Comment	From	Response
1.1	Full Collaborative	The narrative analysis of existing housing needs must address the components of the existing housing assessment. For example, the lack of any publicly subsidized housing and the number of households that are housing cost burdened are not discussed in the context of housing needs nor are they identified as housing needs in Table 17.	Met Council	In response to your comment, we have added a few sentences about housing affordability in section B and expanded the housing tools detailed in Table 17 that may be considered to support housing development.
1.2	Full Collaborative	Inconsistency in text: Table 14 reflects a total of 914 households experiencing housing cost burden while Table 15 provides a total of 1,304 households experiencing housing cost burden.	Met Council	Table 14 cost burden data is from the Met Council, Table 15 is from 2015 ACS estimates, yielding two different totals. Since table 15 is not required, and may create confusion about current housing conditions in the Rural Collaborative, the table will be deleted.

1.3	Full Collaborative	Inconsistency in text: The tools noted in Table 17 to address housing needs do not include what circumstances and what timing, if applicable, in which they would be deployed. The final document should indicate if Collaborative communities intend to develop an ADU ordinance and provide a timeline when that will occur.	Met Council	Inserted following text on pg 31: *The following tools will be considered by Dakota County Rural Collaborative Communities on a case-by-case basis, as development occurs.*
1.4	Full Collaborative	The final document needs to describe how Collaborative cities and townships will implement the tools mentioned in the text; specific information on how they will administer, apply, refer, or advocate for such programs is needed.	Met Council	We have inserted the following text: *The following tools will be considered by Dakota County Rural Collaborative Communities on a case-by-case basis, as development occurs.*
	Empire Twp	To be consistent with Council policy, the Plan needs to consider all widely accepted tools to address Empire's housing needs. Many widely used tools are not included in the Housing Implementation plan, including: • Housing Bonds • Tax Abatement and Tax Increment Financing • Minnesota Housing's Consolidated RFP, which includes applications for tax credits, preservation of naturally occurring affordable housing, and single family home programs. • Livable Communities Act programs. to which Empire Township could consider becoming a participant. • Dakota County CDA's Housing Opportunities Enhancement Program (HOPE) • Effective referrals • Fair Housing policy (see additional information in the advisory comments) • Rental licensing & inspections • Support for the creation of a Community Land Trust model in Dakota County	Met Council	We have expanded the housing tools detailed in Table 17 that may be considered to support housing development.
1.5	Full Collaborative, Empire Twp	Other tools noted elsewhere, such as PUDs to allow higher densities, do not include the circumstances in which Empire Township would consider its use. This will need to be addressed specifically in the "stand alone" plans that will be submitted. Tools described to address housing needs do not consider Empire Township's allocation within the bands of affordability. Empire Township's allocation is identified within the three levels of affordability, and tools should therefore be addressed within the levels of affordability as well.	Met Council	We have expanded the housing tools detailed in Table 17 that may be considered to support housing development. We have also included the following text: *The following tools will be considered by Dakota County Rural Collaborative Communities on a case-by-case basis, as development occurs. Collaborative Communities do not consider tax increment financing (TIF) for housing development.*

1.4	Full Collaborative	Include a map of owner occupied housing values with a differentiation between those affordable to households earning 80% of AMI or below and those that are not. These maps are available in the Local Planning Handbook within each individual community's Community Page.	Met Council	We included this in Appendix C.
Advisory Comment				
Number	Plan Comment Applies to	Comment	From	Response
1.1	Empire Twp	Local Fair Housing policies do not mean that cities should or can manage or administer Fair Housing complaints. A local fair housing policy rather ensures the city is aware of fair housing requirements with regard to housing decisions and provides sufficient resources to educate and refer residents who feel their fair housing rights have been violated (this can be as simple as having links to resources on the City's website). Met Council will require a local Fair Housing policy as a requirement to draw upon Livable Communities Act (LCA) awards beginning in 2019.	Met Council	Thank you for your comment. Your recommendation has been taken under advisement.

Parks and Trails

Incomplete Comments

Number	Plan Comment Applies to	Comment	From	Response
1.1	Empire Twp	Page 28 - Parks and Trails, Regional Trails: first paragraph refers to regional trail segments in Empire Township that are part of the Vermillion River Greenway and the "Mississippi River Regional Trail Greenway." The latter should be identified as the Vermillion Highlands Regional Greenway.	Dakota County	Thank you for the correction. The text has been updated.
Advisory Comment				
Number	Plan Comment Applies to	Comment	From	Response
1.1	Full Collaborative	Page 34: County supports and recommends continued work on connected trails to regional systems and collaboration with the Dakota for a Greenway system	Washington County	Thank you for your comment. Your recommendation has been taken under advisement.
1.2	Full Collaborative	Pages 35-36: Consideration for notes or references to park and trail access that is ADA compliant and/or consider future adaptive playground equipment	Washington County	Thank you for your comment. Your recommendation has been taken under advisement.
1.3	Full Collaborative, Empire,	Could include snowmobile trail inventories to raise awareness of this recreation option; many of these trails are state supported & connect to a larger network.	MnDNR	Thank you for your comment. Your recommendation has been taken under advisement.

	Vermillion, New Trier, Miesville, Randolph, Coates			
1.4	Full Collaborative	Pg 25. SNAs (Hastings Sand Coulee and Chimney Rock) and trout streams are an appropriate addition to the inventory list.	MnDNR	Thank you for your comment. Your recommendation has been taken under advisement.
1.5	Full Collaborative	Cannon River is a State Water trail managed for canoeing and kayaking and is a Wild and Scenic River	MnDNR	Thank you for your comment. Your recommendation has been taken under advisement.

Transportation

Incomplete Comments

Number	Plan Comment Applies to	Comment	From	Response
1.1	Full Collaborative, Empire Twp	The Metropolitan Council's Functional Classification map identifies the following roadways that are not shown in the Rural Collaborative Plan. Please consider adding the following roads to the Plan's functional classification map: • 190th Street, between TH 3 and Biscayne Avenue, as a future A-Minor Expander roadway in Empire. • Biscayne Avenue, between 190th Street and CSAH 66, as a future A-Minor Expander roadway in Empire.	Dakota County	Our future functional class map shows 190th Street as a Minor Connector. However, the road label has hidden the road; we will edit the map to make this road segment clearer. We will update our future functional class map to show Biscayne Ave as a Minor Connector.
1.2	Full Collaborative, Empire Twp	Dakota County identifies several future county highways within Empire, Nininger, Marshan, and Greenvale Townships based on existing plans and studies. Please consider adding these future County highways to the Rural Collaborative Plan: • Diamond Path (new road between CSAH 46 & 178th) • Hastings Area Roadway System Study identifies a future CSAH 47 alignment on Jacob Ave, between CSAH 47 and TH 55, in Marshan and Nininger Townships • *Northwest Northfield Highway Corridor Study* identifies a new alignment of CSAH 23, between CR 96 and TH 19, in Greenvale Township	Dakota County	CSAH 47/Jacob Ave alignment: We will add roadway to our map. Diamond Path: This roadway is shown on map but cannot tell due to symbology /layer order. We will edit the map to ensure this is visible. The future roads identified in the UMore study are included in our future functional class map. We will review the *Northwest Northfield Highway Corridor Study.*

1.3	Full Collaborative, Empire Twp, Coates	The turnback list includes several road segments that have already been turned back. Please remove the following jurisdictional transfers: • CR 53 N/ Alverno Ave: 1 mile in Castle Rock Township • CR 79/ Blaine Ave: 1 mile in Empire Township • CR 80/ 250th Ave W/ Biscayne Ave: 2 miles in Castle Rock Township • CR 87 / Lock Blvd: 2.2 mile in Nininger Township, to CR 42 intersection • CR 51/ 255th Street W/ Biscayne Ave: 2 miles in Castle Rock Township The list is missing a transfer from the 2012 plan: CR 81 alignment south of Coates in Empire & Vermillion Townships (dependent on new alignment per *Rosemount/UMore/Empire Area Transportation System Study).*	Dakota County	Thank you for your comment. We have updated the turnback table to reflect these updates. The CR 81 turnback is included in the table.
1.4	Full Collaborative	The final submittal must identify policies and ordinances that protect regional airspace from obstructions. Include how communities will notify the FAA of proposed structures.	Met Council	Thank you for your comment. We have inserted text identifying notification requirements.
1.5	Full Collaborative	The Transportation Analysis Zone forecasts in Table 22 are inconsistent with total forecast for Dakota County Rural Collaborative communities. The total for individual TAZ forecasts in Table 22 exceeds forecasts for Dakota County Rural Collaborative communities (shown in the table referenced above). It appears the table includes forecasts for the total area of each TAZ, including areas that fall outside Dakota County Rural Collaborative communities. For completeness, the TAZ forecasts in Table 22 should just include portions of TAZs that are inside the Dakota County Rural Collaborative, and these TAZ forecasts should add up to the total 16 community forecasts used elsewhere in the Plan.	Met Council	We obtained updated data from the Metropolitan Council that divided TAZ by community. We will update the plan with this break-down and ensure they add up to the community forecasts used throughout the plan.
1.6	Full Collaborative	Maps should show streets classified by the community as major and minor collectors and local streets. Changes to classifications should follow criteria found in Appendix D of the 2040 Transportation Policy Plan (TPP). The Plan should also include a map or table highlighting differences between the community map and the regional functional classification map, so the regional map can be updated.	Met Council	Most of the roads within Rural Collaborative Communities are under Dakota County jurisdiction. There are no known changes to functional classification; any changes will be included in the Dakota County Transportation Plan update.
1.7	Full Collaborative	The Plan needs to include a map of current traffic volumes including heavy commercial volumes including both ADT and HCAADT; current traffic volumes are mapped on Figure 5, but HCAADT not included.	Met Council	We include HCAADT in the freight, rail, and commercial corridors figure (Figure 16).
1.8	Full Collaborative	The Plan needs to identify future rights-of-way that need to be preserved. This is not specifically called out, though perhaps implied under "Proposed New and Extended Roads." If there is more information to share about right-of-way preservation, please include it in the Plan.	Met Council	Most of the roads within Rural Collaborative Communities are under Dakota County jurisdiction. Additional information about new and expanded county roads will be included in the

				Dakota County Transportation Plan update.
1.9	Full Collaborative	The Plan needs to include and incorporate access management guidelines from MNDOT or those of Dakota County.	Met Council	This in included in Appendix D.
1.10	Full Collaborative	The Plan needs to show planned trails (as shown in Figure 4 of Parks and Trails chapter) within and connecting to the RBTN Tier 2 corridor along the east edge of Empire Township (shown in Figure 15 of bike/ped chapter).	Met Council	After deliberation, planned greenways and bikeways are shown on two different maps for clarity, as there are several planned trails and bikeways in the Rural Collaborative Area. Detailing all trails on one figure were very messy and confusing to read, making a combined map unusable.
1.11	Full Collaborative	The Plan should describe planned trails as they relate to RBTN under section F.2. on page 70 of Transportation section.	Met Council	Added the following sentence: *Planned greenways (Lake Marion Greenway and an unnamed north/south greenway) loosely align with Tier 2 RBTN search corridors near and in Empire Township.*
1.12	Full Collaborative, Randolph	The Plan needs to identify railways, barge facilities, and truck or intermodal freight terminals within Collaborative, and identify other important nodes that may generate freight movement, such as industrial parks.	Met Council	Added the following text in response to comment: *Given the rural character of the Dakota County Collaborative communities, there is little freight generated within the Collaborative. Based on future land use plans, there is the potential for freight generation in a small industrially planned area in the City of Randolph and Randolph Township. This area, shown in the Future Land Use Map in the Land Use Chapter of this plan, is located off of a branch of the Canadian Pacific Railway and County Roads 86 and 94.*
1.13	Full Collaborative	Identify any local roadway issues or problem areas for goods movement, such as weight-restricted roads or bridges, bridges with insufficient height or width clearances, locations with unprotected road crossings of active rail lines, or intersections with inadequate turning radii.	Met Council	Most of the roads within Rural Collaborative Communities are under Dakota County jurisdiction. Any issues with roads, bridges, or freight movement will be noted in the updated of the Dakota County Transportation Plan.

Advisory Comment				
Number	Plan Comment Applies to	Comment	From	Response
1.1	Full Collaborative, Coates, Empire	Please consider adding the following expansions to the "Existing and Anticipated Number of Travel Lanes" Map: • Planned CSAH 23, between CR 96 and Northfield, should be shown as a planned four lane highway in Greenvale Township. • CSAH 46, between Lakeville and Biscayne Ave, should be shown as a planned six lane highway in Empire • CSAH 46, between Biscayne Ave & **TH** 52, should be shown as a planned four lane highway in Empire Township and Coates. • Planned 190th Street (CR 64), between TH 3 and Biscayne Ave, should be shown as a planned four lane highway in Empire Township. • Planned CR 73, between CSAH 46 and CSAH 66 (including portions of Biscayne Ave), should be shown as a planned four lane highway in Empire Township.	Dakota County	Thank you for your comment. Your recommendation has been taken under advisement.
1.2	Full Collaborative	Page 40: County supports and recommends further evaluation of traffic crashes on designated roadways.	Washington County	Thank you for your comment. Your recommendation has been taken under advisement.
1.3	Full Collaborative	Page 70: County supports and recommends continued work with Dakota County on the Bike and Pedestrian plan.	Washington County	Thank you for your comment. Your recommendation has been taken under advisement.
1.4	Full Collaborative	Page 70 - Non-Motorized Transportation Plan. Please consider including the following text: The *Dakota County Draft 2040 Comprehensive Plan* identifies planned bicycle supportive shoulders along County Roads. Shoulder width to support bicycles will be determined based on MnDOT State Aid guidance.	Dakota County	Thank you for your comment. Your recommendation has been taken under advisement.
1.5	Full Collaborative, Empire, Vermillion, New Trier, Miesville, Randolph	Consider consulting DNR's Best Practices for protection of species for mitigation practices when developing design and construction plans for new roads near the Vermillion Wildlife Management Area.	MnDNR	Thank you for your comment. Your recommendation has been taken under advisement.
1.6	Full Collaborative	Regarding seaplane use on surface waters as designated & regulated by MnDOT, both Nininger & Ravenna Townships are on the Mississippi. If not, seaplane use occurs near those Townships, then the plan should state that fact.	Met Council	Thank you for your comment. Your recommendation has been taken under advisement.

1.7	Full Collaborative	The term "B-Minor Arterials" (pages 43 and 66) is no longer used and should be replaced with "Other Arterials."	Met Council	Thank you for your comment. Your recommendation has been taken under advisement.
1.8	Full Collaborative	On page 66, rather than "Metropolitan Council," please consider substituting the text "Transportation Advisory Board" (or Metropolitan Council's Transportation Advisory Board).	Met Council	Thank you for your comment. Your recommendation has been taken under advisement.
1.4	Full Collaborative	Consider mapping and describing existing on and off-road biking facilities and any sidewalks.	Met Council	Thank you for your comment. Your recommendation has been taken under advisement.

Wastewater

Incomplete Comments

Number	Plan Comment Applies to	Comment	From	Response
1.1	Full Collaborative, New Trier, Randolph	Section VI.A.2: it should be noted that Dakota County regulates individual septic systems in communities that have turned back permitting to the County (City of Randolph, Waterford Twp., etc.), while other communities regulate locally. Please note that Dakota County now has septic inspection responsibility under Ordinance No 113 in Randolph and Waterford Townships and the Cities of New Trier and Randolph.	VRWJPO; Dakota County	We have added a sentence in Section VI.A.2 that reflects this fact. *Dakota County maintains authority for permitting and inspections within shoreland and floodplain areas, as well as regulates individual septic systems in communities that have turned back permitting to Dakota County (Randolph and Waterford Townships and the Cities of New Trier and Randolph).*
1.2	Full Collaborative, Empire, Vermillion, New Trier, Miesville, Randolph, Coates	Discuss with Dakota County Water Resources staff the language about "provisions in Dakota County Ordinance #132" being "more restrictive" than Minnesota Rules on septic systems because many of these provisions are in line with Minnesota Rules. Several items are incorrectly identified in the Rural Collaborative Plan as being more restrictive in Dakota County Ordinance No. 113 than in Minnesota Rules Chapter 7080. Please consider revising the following requirements, which are not more restrictive in County Ordinance No. 113:	VRWJPO; Dakota County	Ordinance 113 has been amended in early 2018. Need to amend or delete sentence. We removed the outdated paragraph stating the Dakota County ordinance was more restrictive than the State Rule. We have also amended the text

		Requirements to submit "as-built" records by local installers: submittal of as-built records by installers is not specifically listed as a requirement in ordinance except for the tax assessment program. **Prohibiting repair or modification of cesspools, seepages pits, and dry wells into septic tanks:** Cesspools, seepage pits, and drywells are prohibited in MN Rule 7080. Minnesota rule requires that septic tanks be water-tight, and these types of tanks, by definition, are not watertight. **Requiring a State-Licensed inspector:** This is a State requirement, not a more restrictive County requirement. The Plan states, "Dakota County is currently working with area building officials to review amendments needed to Ordinance #113 and to develop a local model ordinance that will incorporate new provisions of MPCA Rules Chapters 7080-7083" This may be out of date, since the ordinance has already been updated.		to read like the comments/corrections received.
1.3	Full Collaborative	Subsurface Sewage Policies: The second bullet refers to "alternative systems" allowed under MN Rules 7080-7083. Current Rules refer to non-standard systems rather than "alternative systems". Suggested change: Please consider modifying language about alternative systems, to note that MN Rules 7080 and Dakota County Ordinance No. 113 will only allow non-standard system types, generally types II through V, under special circumstances.	Dakota County	Thank you for your comment. We have edited the text to read "alternative and non-standard" and "under special circumstances."
1.3	Full Collaborative	Need to map SSTS within the Collaborative area, including the location of non-conforming systems or systems with problems.	Met Council	We have reached out to Dakota County Staff and have received "pumped" and "not pumped" reports for each Collaborative Community in 2018. The map provided in this chapter notes recorded and reported SSTS; not all SSTS in the Collaborative area may be represented by these data/this figure. "Systems with problems" only include systems pumped in 2018 that were recorded as leaking or experiencing drainage.
Advisory Comment				
Number	Plan Comment Applies to	Comment	From	Response

1.1	Full Collaborative	Plan refers to a "joint management program" and identifies a range of included services. Please clarify that the County and townships have a Joint Powers Agreement for the pump maintenance program, while inspection, record keeping, and repair or replacement of imminent threats are the responsibilities of the township and township septic inspector, and design and construction are the responsibilities of the licensed septic professional doing work	Dakota County	Text and bullets on pg 7 have been amended to reflect these responsibilities.
1.2	Full Collaborative	The Table 5 Forecasted Collaborative Population, Housing, & Employment estimate for 2015 households of 5225 on page 12 does not compare well with the Table 28 Sewer Allocation Forecasts section data on page 75 for the similar (arithmetically extrapolated) 2015 "Unsewered" household figure of 6713 (6546 + 6880/2). These data would indicate that the estimated number of SSTS serving households and businesses within the Collaborative would be expected to potentially be several hundred systems more than the estimated 5000, indicated in the text on page 75.	Met Council	Table 28 does not contain extrapolated 2015 data. The "Municipal Sewered" and "Unsewered" totals for each category and decade in Table have been updated to reflect the City of Vermillion's sewer data. The totals for population, households, and employment in Table 28 in each decade sum to the forecast totals in Table 5. The population, households, and employment for each community in each forecast year was obtained from each Community Page, as well as the sewer allocations for each decade/category.
1.3	Full Collaborative	State terminology has changed and the term "pumper" has been replaced by "maintainer" and there is a new license category called "service provider." (Similar language is also on pages 75-76.) Suggested changes: consider rewording to say inspectors, designers, installers, maintainers, and service providers must hold a valid license for the work they are performing.	Dakota County	Thank you for your comment. The noted term and category have been included.
1.4	Full Collaborative	Pg 7 - The first bullet refers to updating local ordinances for compliance with MN Rules 7080 - 7083. Suggested change: In addition to MN Rules, please also include a reference to County Ordinance 113.	Dakota County	Thank you for your comment. Your recommendation has been taken under advisement.

Surface Water

Incomplete Comments

Number	Plan Comment Applies to	Comment	From	Response
1.1	Full Collaborative	"Adoption by reference" should be explicitly stated in the Comprehensive Plan, and the Vermillion River Watershed Management Plan should be provided as an appendix or referenced with a hyperlink.	VRWJPO	Thank you for your comment. This is stated both in Chapter VI, Section B2 and Chapter VII, Section AI. A hyperlink to the Vermillion River Watershed Management Plan in Chapter VI, Section B2
	Full Collaborative, Empire Twp, Vermillion, Coates	Section VI.B.2: It should be noted that in adopting the Vermillion River Watershed Management Plan by reference, communities are agreeing to submit proposed plans to the VRWJPO for review and comment if plans include the following attributes: • Variances from local ordinances that affect surface water or impact surface water/groundwater interactions o Diversions o Intercommunity flows (to or from) o Project site size of 40 acres or more o Activities directly adjacent to the Vermillion River, its tributaries, a lake, or a protected water.	VRWJPO	Thank you for your comment. The text has been added.
1.2	Full Collaborative, Empire Twp, Vermillion, Coates	Section VI.B.2: The way local communities implement watershed Standards should be referenced in this section. The plan should note the "Water Resources Management Ordinance" is implemented by Dakota County Rural Collaborative communities to ensure that watershed standards are properly addressed.	VRWJPO	Thank you for your comment. The noted text/clarification has been added in section VI.B.3.
1.3	Full Collaborative	Section VI.B.2: "Water Resources Management Ordinance" was last updated in 2010 and will be updated within six months of adoption of the Comprehensive Plan to bring it into agreement with the more recent watershed plan revision.	VRWJPO	Thank you for your comment. The noted text/clarification has been added in section VI.B.2.
1.4	Full Collaborative	Section VI.B.3: Below the description of the VRWJPO Standards, the plan should note the current arrangement for implementation of the Standards. All rural collaborative communities currently implement the Standards through their own local ordinances. The Water Resources Management Ordinance (2010 Update) for the Dakota County Rural Collaborative is the controlling ordinance for local implementation of the Standards and will be updated to meet the VRWJPO Standards. If a local community is not implementing the ordinance or chooses to relinquish regulatory control, the VRWJPO will implement a permitting program and its Rules in the affected area of the community.	VRWJPO	Thank you for your comment. The noted text has been added.

1.5	Full Collaborative	Table 32: The VRWJPO Watershed Restoration and Protection Strategies (WRAPS) and Total Maximum Daily Load (TMDL) documents were completed in 2015, but the date at the top of the table says "as of 2012". Please verify that the impaired waters list is up-to-date with the WRAPS and TMDL documents and edit the table date if necessary.	VRWJPO	Thank you for your comment. Your recommendation has been taken under advisement.
1.6	Full Collaborative, Empire Twp, Vermillion, Coates	Section VI.B.4: Any references to "VRWMO" should be changed to Vermillion River Watershed Joint Powers Organization or VRWJPO.	VRWJPO	Thank you for your comment. The correction has been made.
1.7	Full Collaborative, New Trier, Miesville, Randolph	Insert paragraph under "Water Resource Related Agreements" about the Cannon River One Watershed, One Plan efforts. *Recommended text in comments, saved in drive*	NCRWMO	Thank you for your comment. The paragraph has been added.
1.8	Full Collaborative, New Trier, Miesville, Randolph	In NCRWMO section, include that the implementation of the 2013 plan will require LGUs to adopt & enforce a number of existence ordinances if they have not already done so. Member LGUs will also be required to comply with & report their actions to complete and enforce the policies of the watershed plan. See NCRWMO 2013 Plan, section 6.5.	NCRWMO	Thank you for your comment. The Sentence has been added.
1.9	Full Collaborative, New Trier, Miesville, Randolph	Add sentence after second sentence in first paragraph of North Cannon section *The NCRWMO may adopt the Comprehensive Watershed Management Plan when it is complete and approved by BWSR. Goals intend to stay the same regardless of which Plan is referenced.*	NCRWMO	Thank you for your comment. The Sentence has been added.
1.10	Full Collaborative	Resolution from communities that municipality has adopted the local watershed management plan by reference.	Met Council	Thank you for your comment. We will include copies of these resolutions.
Advisory Comment				
Number	Plan Comment Applies to	Comment	From	Response
1.1	Full Collaborative, Empire Twp, Vermillion	Section VI.B.3: A summary of the environmental and physical descriptions of the Vermillion River Watershed (and the North Cannon watershed) included in the watershed management plan should be included in this section. It is acceptable to the VRWJPO to adopt the plan by reference, but a description of the portions of the watershed that are located in the communities of the rural collaborative should be included here (e.g., the Vermillion River enters Empire Township just upstream of the connection of North Creek to the main channel).	VRWJPO	Thank you for your comment. Your recommendation has been taken under advisement.

1.2	Full Collaborative	Section VI.B.4: There is an item related to groundwater consumption and nitrate among the issues in the study area. Like the Vermillion River Watershed Management Plan, the groundwater consumption/supply issue should be listed as a separate issue as groundwater quality/elevated nitrate levels in drinking water sources.	VRWJPO	Thank you for your comment. Your recommendation has been taken under advisement.
1.3	Full Collaborative	Section VI.B.4: It is acceptable to the VRWJPO to adopt the plan by reference, and the issues selected and listed in the plan are good. Similar to the physical descriptions section, the collaborative should add some specificity in the form of examples of water bodies or subwatersheds that are experiencing the identified problem. The "declining water quality and increased sedimentation in Lake Byllesby" item demonstrates a good level of specificity.	VRWJPO	Thank you for your comment. Your recommendation has been taken under advisement.
1.4	Full Collaborative	Section VI.B.5: Under section VI, "Implementation Plan", the plan should reference the implementation plan in section 7 of the Vermillion River Watershed Management Plan. Specifically, the text should reference the subwatershed-level analysis of the VRWJPO implementation plan and where the local community's subwatersheds fall in the priority list. As noted in the plan, the communities do not have capital improvement plans for stormwater/water resources, so this statement can just generally address how the communities will participate in and/or support cost-share and monitoring projects.	VRWJPO	Thank you for your comment. The following sentences have been added. *In adopting the Vermillion River Watershed Plan by reference, Collaborative communities also adopt the implementation plan and will participate in and/or support projects located within their jurisdiction (see section 7 of the Vermillion River Watershed Management Plan). This implementation plan performed a subwatershed-level analysis to identify priorities and projects on a more local level.*
1.5	Full Collaborative	Highly recommended that (erosion and sediment) ordinance be updated to use and require minimal impact design standards and the use of Atlas 14 in place of Technical Paper 40 for designing stormwater practices and systems.	VRWJPO	Thank you for your comment. Your recommendation has been taken under advisement.
1.1	Full Collaborative	Section VI.B.3: Figure 17 (and Figure 18) referenced by this section do not have labels for the lakes identified in the text and in subsequent tables (e.g., Spring Lake and Lake Byllesby).	VRWJPO	Thank you for your comment. The figures have been updated.
1.5	Full Collaborative	Pg. 5 Trout streams could be added to the list of areas called out in the policy to "enforce provisions in local ordinances that provide for and promote the protection of regionally and locally important natural areas"	MnDNR	Thank you for your comment. Your recommendation has been taken under advisement.
1.2	Full Collaborative	There is more up-to-date information for trout stream designations.	MnDNR	Thank you for your comment. This information has been taken under consideration.

	Empire Twp	Section VI.B.4: If there are specific reaches of trout stream on the Vermillion River or other high priority resources in the Township, some additional detail could be provided in this section.	MnDNR	Thank you for your comment. Your recommendation has been taken under advisement.
	Vermillion, Coates	The City does not have capital improvement plans for stormwater/water resources, but a statement generally noting how the city will participate in and/or support cost-share projects and monitoring could be added.	VRWJPO	Thank you for your comment. Your recommendation has been taken under advisement.
1.6	Full Collaborative	The Plan incorporates the draft LWMP as a free-standing chapter in the body of the document, consistent with the Council's standard suggestion for Plan content. If completed at the time the Collaborative submits its formal Plan, the Collaborative must provide the final LWMP in the document, incorporating any recommended revisions from the Council and watershed organization reviews of the draft LWMP. If available at the time the formal Plan is submitted, we also request that the Collaborative provide to the Council the dates the watershed organizations approved the LWMP, and the date the Collaborative adopted the final LWMP.	Met Council	Thank you for your comment. We will provide the final LWMP if completed when we submit the formal comprehensive plan. Other adoptions will not be available when we submit the formal comprehensive plan.

Water Supply

Incomplete Comments

Number	Plan Comment Applies to	Comment	From	Response
1.1	Full Collaborative	Paragraph 1 on pg 83 says County Ordinance 114 applies to all wells in the County. It does not apply to community wells. (Suggest adding “except community wells” after second sentence.	Dakota County	Thank you for your comment. The noted text has been added.
1.2	Full Collaborative	State Statute 1031 allows construction of water-supply wells on land that is owned or leased by the individual and is used by the individual for farming or agricultural purposes or as an individual's place of abode. Suggested change to paragraph 2: add "except as allowed by state statute or code." At end of second sentence	Dakota County	Thank you for your comment. The noted text has been added.
1.3	Full Collaborative	Suggested change to paragraph 2, third sentence: "Annual Maintenance Permits are required for all environmental wells (monitoring, remedial, or product recovery) and dewatering wells that have been in use for fourteen months or longer and unused wells." To make sentence technically correct.	Dakota County	Thank you for your comment. The noted text has been added.
1.4	Full Collaborative	The Plan states that well testing results for coliform bacteria and nitrate-nitrogen content for new wells must be approved by the County Environmental Resources Department. While the Ordinance establishes	Dakota County	Thank you for your comment. The noted text has been added.

		acceptable standards for new or reconstructed wells, the County does not approve test results. Suggested change to paragraph 3: "Water tests results from new or reconstructed wells must meet the Acceptance Standards established in the Ordinance."		
1.5	Full Collaborative, Empire, New Trier, Randolph, and Vermillion	The Plan acknowledges that Empire Township and the cities of New Trier, Randolph, and Vermillion will submit local water supply plans through the MN ORN Permitting and Reporting System (MPARS). However, none of these plans have yet been received by Metropolitan Council for review. The final document must include those water supply plans.	Met Council	Thank you for your comment. Empire Township and the Cities of Randolph and Vermillion have completed their local water supply plans. These plans have (or soon will be) submitted to the MPARS system and will be included in the final documents.
Advisory Comment				
Number	Plan Comment Applies to	Comment	From	Response
1.1	Full Collaborative	Figure 19 illustrates the location of groundwater observation wells but does not include the organization responsible for the wells, and no well identification information is included. Please provide additional information.	Met Council	Thank you for your comment. Your recommendation has been taken under advisement.
1.2	Full Collaborative	Figure 20 illustrates areas designated as Drinking Water Supply Management Areas. However, the preliminary CPU does not discuss how these areas are used to inform how goals will be achieved or policies implemented. Please provide additional context about how this information will be used by communities to shape policy implementation.	Met Council	Thank you for your comment. Your recommendation has been taken under advisement.

Forecasts

Incomplete Comments				
Number	Plan Comment Applies to	Comment	From	Response
Advisory Comment				
Number	Plan Comment Applies to	Comment	From	Response
1.1	Full Collaborative	Plan needs to include a table with individual household forecasts for each of the 16 communities within the collaborative. Plan provides these tables for population and employment forecasts, but not for households.	Met Council	These forecasts are included in the Housing Chapter as part of the "Projected Needs" section instead of the Land Use Chapter.

1.2	Full Collaborative	The total 2040 employment forecast in Table 5 is shown as 3,660. The total 2040 employment forecast for the 16 communities is slightly higher at 3,670 jobs.	Met Council	Thank you for the correction; the text has been updated.
1.3	Full Collaborative	Table 7 shows projected 2040 employment for each of the communities. The individual employment forecasts are correct, but the subtotal at the bottom is incorrectly shown as 2,890. The correct subtotal is 3,670.	Met Council	Thank you for the correction; the text has been updated.

Implementation

Incomplete Comments

Number	Plan Comment Applies to	Comment	From	Response
1.1	Full Collaborative	Page 87, Paragraph 5 states the Collaborative Communities are responsible for septic inspections. The third sentence could be modified to reflect that Dakota County now has septic inspection responsibility in the Township of Randolph, the Township of Waterford, the City of New Trier, and the City of Randolph.	Dakota County	Thank you for your comment. The noted text has been added.
1.2	Full Collaborative	Last sentence indicates that Dakota County is amending the ordinance. The ordinance was amended in 2008.	Dakota County	Thank you for the correction; the text has been updated.
1.3	Full Collaborative	Define a timeline detailing when actions will be taken to implement plan elements.	Met Council	This is included in Chapter VII, Section A3. *These changes will begin review and consideration nine months after the official adoption of the 2040 Comprehensive Plan update.*
1.4	Full Collaborative	The Plan needs to include a Capital Improvement Program (CIP) for transportation. Please provide the sequence and timing for any local public investments.	Met Council	Most of the roads within Rural Collaborative Communities are under Dakota County jurisdiction. Additional information about funding for county roads, including the CIP, will be included in the Dakota County Transportation Plan update.
1.5	Full Collaborative	Include a schedule for the preparation, adoption, and implementation of needed changes to official controls.	Met Council	This is included in Chapter VII, Section A3. *These changes will begin review and consideration nine months after the official adoption of the 2040 Comprehensive Plan update.*

Advisory Comment

Number	Plan Comment Applies to	Comment	From	Response

1.1	Full Collaborative	Page 8 & Implementation Section VII: These sections mention opportunities for feedback, but could elaborate on the number and type of community responses and if the outcomes of citizen engagement is reflective of the overall community.	Washington County	Thank you for your comment. Your recommendation has been taken under advisement.

General/Other Comments

Number	Plan Comment Applies to	Comment	From	Response
1.1	Full Collaborative	Public Facility Policies & Goals: Please consider adding a goal statement to support that public facilities/parks provide the opportunity to recycle in their operations, consistent with Minn. Stat. §llSA.151 and the adopted Dakota County Solid Waste Master Plan.	Dakota County	Thank you for your comment. Your recommendation has been taken under advisement.
1.2	Full Collaborative	MRCCA Section IV. Public River Corridor Views Plan states that, "The opposite side of the Mississippi River from Nininger Township is the Point Douglas Regional Trail, an important public trail for the area providing valuable views of the river and bluff land with a tree canopy for much of its length. The identified public river corridor view is identified with photographs within this Collaborative Plan." **Please note that no photographs were included in the plan.**	MnDNR	Thank you for your comment. Photos will be included for Nininger Township, taken by Friends of the Mississippi River.
1.3	Full Collaborative	Appendix D of the Empire Township Individual Plan plan will be a Surface Water Management Plan according to the index, so there is somewhat of an understanding that more detail will be available in that plan as well (e.g., maps of stormwater basins, storm sewer, etc.). **Will there be a surface water management plan for the Rural Collaborative as well?**	VRWJPO	Thank you for your question. No, there will not be surface water plans for the Rural Collaborative. The Collaborative communities have adopted the Vermillion River Watershed Plan and/or the North Cannon River Watershed Plan by reference.
1.4	Full Collaborative	No Comment	Scott County	
1.5	Full Collaborative	No Comment	Cannon Falls Township	
1.6	Full Collaborative	No Comment	MnDOT	
1.7	Full Collaborative	No Comment	City of Hampton	
1.8	Full Collaborative	No Comment	ISD 196	
1.9	Full Collaborative	No Comment	City of Cannon Falls	

Appendix H: Resolutions

RESOLUTION NO. 2019-08

Castle Rock Township
Dakota County, Minnesota

A RESOLUTION ADOPTING THE 2040 DAKOTA COUNTY RURAL COLLABORATIVE COMPREHENSIVE PLAN UPDATE, A COMPILATION OF POLICY STATEMENTS, GOALS, STANDARDS, AND MAPS FOR GUIDING THE OVERALL DEVELOPMENT AND REDEVELOPMENT OF THE LOCAL GOVERNMENTAL UNITS

WHEREAS, Minnesota Statutes section 473.864 requires each local governmental unit to review and, if necessary, amend its entire comprehensive plan and its fiscal devices and official controls at least once every ten years to ensure its comprehensive plan conforms to metropolitan system plans and ensure its fiscal devices and official controls do not conflict with the comprehensive plan or permit activities that conflict with metropolitan system plans; and

WHEREAS, Minnesota Statutes sections 473.858 and 473.864 require local governmental units to complete their "decennial" reviews by December 31, 2018; and

WHEREAS, the Town Board of Castle Rock Township authorized the review and update of its Comprehensive Plan; and

WHEREAS, the proposed Dakota County Rural Collaborative 2040 Comprehensive Plan is a planning tool intended to guide the future growth and development of Castle Rock Township in a manner that conforms with metropolitan system plans and complies with the Metropolitan Land Planning Act and other applicable planning statutes; and

WHEREAS, the proposed Dakota County Rural Collaborative 2040 Comprehensive Plan reflect a community planning process conducted in the years 2016 through 2018 involving elected officials, appointed officials, the public at large, developers, and other stakeholders; and

WHEREAS, pursuant to Minnesota Statutes section 473.858, the proposed 2040 Comprehensive Plan was submitted to adjacent governmental units and affected special districts and school districts for review and comment on April 30, 2018, and the statutory six-month review and comment period has elapsed; and

WHEREAS, the Town Board of Castle Rock Township has considered the proposed 2040 Comprehensive Plan and all public comments; and

WHEREAS, on April 9, 2018, Castle Rock Township conducted a public hearing on the proposed 2040 Comprehensive Plan; and

WHEREAS, the Town Board of Castle Rock Township approved Resolution 2018-07 authorizing the proposed 2040 Comprehensive Plan to be submitted to the Metropolitan Council for review; and

WHEREAS, at its regular meeting on August 28, 2019, the Metropolitan Council completed its review of the proposed 2040 Comprehensive Plan and found that the Plan meets the requirements of the Metropolitan Land Planning Act; conforms to the metropolitan system plans for transportation (including aviation), water resources, and parks; is consistent with

Thrive MSP 2040; and is compatible with the plans of adjacent jurisdictions and affected special districts and school districts; and

WHEREAS, the 2040 proposed Comprehensive Plan includes all revisions made during the review process and responds to additional advisory comments that are part of the Metropolitan Council's actions authorizing Castle Rock Township to place its proposed 2040 Comprehensive Plan into effect.

NOW THERE, BE IT RESOLVED BY THE TOWN BOARD OF CASTLE ROCK TOWNSHIP, MINNESOTA, that the Dakota County Rural Collaborative 2040 Comprehensive Plan is adopted and is effective as of the date of this resolution.

BE IT FURTHER RESOLVED that, pursuant to sections 473.864 and 473.865 of the Metropolitan Land Planning Act, Castle Rock Township will: (1) review its fiscal devices and official controls; (2) if necessary, amend its fiscal devices and official controls to ensure they do not conflict with the 2040 Comprehensive Plan or permit activity in conflict with metropolitan system plans; and (3) submit amendments to fiscal devices or official controls to the Metropolitan Council for "information purposes."

Approved and adopted by the Town Board of Castle Rock Township this 14th day of October, 2019.

Kelly Elvestad, Town Board Chair

Attest:

Barbara M. Lang, Clerk

RESOLUTION NO. #2019-03

Douglas Township
Dakota County, Minnesota

A RESOLUTION ADOPTING THE 2040 DAKOTA COUNTY RURAL COLLABORATIVE COMPREHENSIVE PLAN UPDATE, A COMPILATION OF POLICY STATEMENTS, GOALS, STANDARDS, AND MAPS FOR GUIDING THE OVERALL DEVELOPMENT AND REDEVELOPMENT OF THE LOCAL GOVERNMENTAL UNITS

WHEREAS, Minnesota Statutes section 473.864 requires each local governmental unit to review and, if necessary, amend its entire comprehensive plan and its fiscal devices and official controls at least once every ten years to ensure its comprehensive plan conforms to metropolitan system plans and ensure its fiscal devices and official controls do not conflict with the comprehensive plan or permit activities that conflict with metropolitan system plans; and

WHEREAS, Minnesota Statutes sections 473.858 and 473.864 require local governmental units to complete their "decennial" reviews by December 31, 2018; and

WHEREAS, the Town Board of Douglas Township authorized the review and update of its Comprehensive Plan; and

WHEREAS, the proposed Dakota County Rural Collaborative 2040 Comprehensive Plan is a planning tool intended to guide the future growth and development of Douglas Township in a manner that conforms with metropolitan system plans and complies with the Metropolitan Land Planning Act and other applicable planning statutes; and

WHEREAS, the proposed Dakota County Rural Collaborative 2040 Comprehensive Plan reflect a community planning process conducted in the years 2016 through 2018 involving elected officials, appointed officials, the public at large, developers, and other stakeholders; and

WHEREAS, pursuant to Minnesota Statutes section 473.858, the proposed 2040 Comprehensive Plan was submitted to adjacent governmental units and affected special districts and school districts for review and comment on April 30, 2018, and the statutory six-month review and comment period has elapsed; and

WHEREAS, the Town Board of Douglas Township has considered the proposed 2040 Comprehensive Plan and all public comments; and

WHEREAS, on April 2, 2018, Douglas Township conducted a public hearing on the proposed 2040 Comprehensive Plan; and

WHEREAS, the Town Board of Douglas Township approved Resolution 2018-01 authorizing the proposed 2040 Comprehensive Plan to be submitted to the Metropolitan Council for review; and

WHEREAS, at its regular meeting on August 28, 2019, the Metropolitan Council completed its review of the proposed 2040 Comprehensive Plan and found that the Plan meets the requirements of the Metropolitan Land Planning Act; conforms to the metropolitan system plans for transportation (including aviation), water resources, and parks; is consistent with

Thrive MSP 2040; and is compatible with the plans of adjacent jurisdictions and affected special districts and school districts; and

WHEREAS, the 2040 proposed Comprehensive Plan includes all revisions made during the review process and responds to additional advisory comments that are part of the Metropolitan Council's actions authorizing Douglas Township to place its proposed 2040 Comprehensive Plan into effect.

NOW THERE, BE IT RESOLVED BY THE TOWN BOARD OF DOUGLAS TOWNSHIP, MINNESOTA, that the Dakota County Rural Collaborative 2040 Comprehensive Plan is adopted and is effective as of the date of this resolution.

BE IT FURTHER RESOLVED that, pursuant to sections 473.864 and 473.865 of the Metropolitan Land Planning Act, Douglas Township will: (1) review its fiscal devices and official controls; (2) if necessary, amend its fiscal devices and official controls to ensure they do not conflict with the 2040 Comprehensive Plan or permit activity in conflict with metropolitan system plans; and (3) submit amendments to fiscal devices or official controls to the Metropolitan Council for "information purposes."

Approved and adopted by the Town Board of Douglas Township this 7 day of Oct, 2019.

Town Board Chair

Attest:

Clerk

RESOLUTION NO. 2019-3

Greenvale Township
Dakota County, Minnesota

A RESOLUTION ADOPTING THE 2040 DAKOTA COUNTY RURAL COLLABORATIVE COMPREHENSIVE PLAN UPDATE, A COMPILATION OF POLICY STATEMENTS, GOALS, STANDARDS, AND MAPS FOR GUIDING THE OVERALL DEVELOPMENT AND REDEVELOPMENT OF THE LOCAL GOVERNMENTAL UNITS

WHEREAS, Minnesota Statutes section 473.864 requires each local governmental unit to review and, if necessary, amend its entire comprehensive plan and its fiscal devices and official controls at least once every ten years to ensure its comprehensive plan conforms to metropolitan system plans and ensure its fiscal devices and official controls do not conflict with the comprehensive plan or permit activities that conflict with metropolitan system plans; and

WHEREAS, Minnesota Statutes sections 473.858 and 473.864 require local governmental units to complete their "decennial" reviews by December 31, 2018; and

WHEREAS, the Town Board of Greenvale Township authorized the review and update of its Comprehensive Plan; and

WHEREAS, the proposed Dakota County Rural Collaborative 2040 Comprehensive Plan is a planning tool intended to guide the future growth and development of Greenvale Township in a manner that conforms with metropolitan system plans and complies with the Metropolitan Land Planning Act and other applicable planning statutes; and

WHEREAS, the proposed Dakota County Rural Collaborative 2040 Comprehensive Plan reflect a community planning process conducted in the years 2016 through 2018 involving elected officials, appointed officials, the public at large, developers, and other stakeholders; and

WHEREAS, pursuant to Minnesota Statutes section 473.858, the proposed 2040 Comprehensive Plan was submitted to adjacent governmental units and affected special districts and school districts for review and comment on April 30, 2018, and the statutory six-month review and comment period has elapsed; and

WHEREAS, the Town Board of Greenvale Township has considered the proposed 2040 Comprehensive Plan and all public comments; and

WHEREAS, on April 17, 2018, Greenvale Township conducted a public hearing on the proposed 2040 Comprehensive Plan; and

WHEREAS, the Town Board of Greenvale Township approved Resolution 2018-02 authorizing the proposed 2040 Comprehensive Plan to be submitted to the Metropolitan Council for review; and

WHEREAS, at its regular meeting on August 28, 2019, the Metropolitan Council completed its review of the proposed 2040 Comprehensive Plan and found that the Plan meets the requirements of the Metropolitan Land Planning Act; conforms to the metropolitan system plans for transportation (including aviation), water resources, and parks; is consistent with

Thrive MSP 2040; and is compatible with the plans of adjacent jurisdictions and affected special districts and school districts; and

WHEREAS, the 2040 proposed Comprehensive Plan includes all revisions made during the review process and responds to additional advisory comments that are part of the Metropolitan Council's actions authorizing Greenvale Township to place its proposed 2040 Comprehensive Plan into effect.

NOW THERE, BE IT RESOLVED BY THE TOWN BOARD OF GREENVALE TOWNSHIP, MINNESOTA, that the Dakota County Rural Collaborative 2040 Comprehensive Plan is adopted and is effective as of the date of this resolution.

BE IT FURTHER RESOLVED that, pursuant to sections 473.864 and 473.865 of the Metropolitan Land Planning Act, Greenvale Township will: (1) review its fiscal devices and official controls; (2) if necessary, amend its fiscal devices and official controls to ensure they do not conflict with the 2040 Comprehensive Plan or permit activity in conflict with metropolitan system plans; and (3) submit amendments to fiscal devices or official controls to the Metropolitan Council for "information purposes."

Approved and adopted by the Town Board of Greenvale Township this 19 day of September 2019.

Town Board Chair

Attest:

Clerk

September 19, 2019
Jacqueline A. Atkins

JACQUELINE A. ATKINS
NOTARY PUBLIC - MINNESOTA
My Commission Expires Jan. 31, 2020

RESOLUTION NO. 2019-06

Hampton Township
Dakota County, Minnesota

A RESOLUTION ADOPTING THE 2040 HAMPTON TOWNSHIP COMPREHENSIVE PLAN

WHEREAS, the Town Board of Hampton Township authorized the review and update of its Comprehensive Plan as a part of the 16-community Dakota County Rural Collaborative 2040 Comprehensive Plan Update; and

WHEREAS, the proposed Dakota County Rural Collaborative 2040 Comprehensive Plan reflect a community planning process conducted in the years 2016 through 2018 involving elected officials, appointed officials, the public at large, developers, and other stakeholders; and

WHEREAS, pursuant to Minnesota Statutes section 473.858, the proposed 2040 Comprehensive Plan was submitted to adjacent governmental units and affected special districts and school districts for review and comment on April 30, 2018, and the statutory six-month review and comment period has elapsed; and

WHEREAS, the Town Board of Hampton Township has considered the proposed 2040 Comprehensive Plan and all public comments; and

WHEREAS, on April 17, 2018, Hampton Township conducted a public hearing on the proposed 2040 Comprehensive Plan; and

WHEREAS, the Town Board of Hampton Township approved Resolution 2018-01 authorizing the proposed 2040 Comprehensive Plan to be submitted to the Metropolitan Council for review; and

WHEREAS, at its regular meeting on August 28, 2019, the Metropolitan Council completed its review of the proposed 2040 Comprehensive Plan and found that the Plan meets the requirements of the Metropolitan Land Planning Act; conforms to the metropolitan system plans for transportation (including aviation), water resources, and parks; is consistent with *Thrive MSP 2040*; and is compatible with the plans of adjacent jurisdictions and affected special districts and school districts; and

WHEREAS, the 2040 proposed Comprehensive Plan includes all revisions made during the review process and responds to additional advisory comments that are part of the Metropolitan Council's actions authorizing Hampton Township to place its proposed 2040 Comprehensive Plan into effect.

NOW THERE, BE IT RESOLVED BY THE TOWN BOARD OF HAMPTON TOWNSHIP, MINNESOTA, that the portion of the Dakota County Rural Collaborative 2040 Comprehensive Plan dated June 2019 that pertains to Hampton Township is adopted as the 2040 Hampton Township Comprehensive Plan and is effective as of the date of this resolution.

Approved and adopted by the Town Board of Hampton Township this 15 day of October 2019.

Town Board Chair

Attest:

Clerk

RESOLUTION NO. _____

Marshan Township
Dakota County, Minnesota

A RESOLUTION ADOPTING THE 2040 DAKOTA COUNTY RURAL COLLABORATIVE COMPREHENSIVE PLAN UPDATE, A COMPILATION OF POLICY STATEMENTS, GOALS, STANDARDS, AND MAPS FOR GUIDING THE OVERALL DEVELOPMENT AND REDEVELOPMENT OF THE LOCAL GOVERNMENTAL UNITS

WHEREAS, Minnesota Statutes section 473.864 requires each local governmental unit to review and, if necessary, amend its entire comprehensive plan and its fiscal devices and official controls at least once every ten years to ensure its comprehensive plan conforms to metropolitan system plans and ensure its fiscal devices and official controls do not conflict with the comprehensive plan or permit activities that conflict with metropolitan system plans; and

WHEREAS, Minnesota Statutes sections 473.858 and 473.864 require local governmental units to complete their "decennial" reviews by December 31, 2018; and

WHEREAS, the Town Board of Marshan Township authorized the review and update of its Comprehensive Plan; and

WHEREAS, the proposed Dakota County Rural Collaborative 2040 Comprehensive Plan is a planning tool intended to guide the future growth and development of Marshan Township in a manner that conforms with metropolitan system plans and complies with the Metropolitan Land Planning Act and other applicable planning statutes; and

WHEREAS, the proposed Dakota County Rural Collaborative 2040 Comprehensive Plan reflect a community planning process conducted in the years 2016 through 2018 involving elected officials, appointed officials, the public at large, developers, and other stakeholders; and

WHEREAS, pursuant to Minnesota Statutes section 473.858, the proposed 2040 Comprehensive Plan was submitted to adjacent governmental units and affected special districts and school districts for review and comment on April 30, 2018, and the statutory six-month review and comment period has elapsed; and

WHEREAS, the Town Board of Marshan Township has considered the proposed 2040 Comprehensive Plan and all public comments; and

WHEREAS, on April 15, 2018, Marshan Township conducted a public hearing on the proposed 2040 Comprehensive Plan; and

WHEREAS, the Town Board of Marshan Township approved Resolution 2018-07 authorizing the proposed 2040 Comprehensive Plan to be submitted to the Metropolitan Council for review; and

WHEREAS, at its regular meeting on August 28, 2019, the Metropolitan Council completed its review of the proposed 2040 Comprehensive Plan and found that the Plan meets the requirements of the Metropolitan Land Planning Act; conforms to the metropolitan system plans for transportation (including aviation), water resources, and parks; is consistent with

Thrive MSP 2040; and is compatible with the plans of adjacent jurisdictions and affected special districts and school districts; and

WHEREAS, the 2040 proposed Comprehensive Plan includes all revisions made during the review process and responds to additional advisory comments that are part of the Metropolitan Council's actions authorizing Marshan Township to place its proposed 2040 Comprehensive Plan into effect.

NOW THERE, BE IT RESOLVED BY THE TOWN BOARD OF MARSHAN TOWNSHIP, MINNESOTA, that the Dakota County Rural Collaborative 2040 Comprehensive Plan is adopted and is effective as of the date of this resolution.

BE IT FURTHER RESOLVED that, pursuant to sections 473.864 and 473.865 of the Metropolitan Land Planning Act, Marshan Township will: (1) review its fiscal devices and official controls; (2) if necessary, amend its fiscal devices and official controls to ensure they do not conflict with the 2040 Comprehensive Plan or permit activity in conflict with metropolitan system plans; and (3) submit amendments to fiscal devices or official controls to the Metropolitan Council for "information purposes."

Approved and adopted by the Town Board of Marshan Township this 17th day of Sept, 2019.

Jerry Bauer
Town Board Chair

Attest:

Marjory J Snyder
Clerk

RESOLUTION NO. 19-02

Nininger Township
Dakota County, Minnesota

A RESOLUTION ADOPTING THE 2040 DAKOTA COUNTY RURAL COLLABORATIVE COMPREHENSIVE PLAN UPDATE, A COMPILATION OF POLICY STATEMENTS, GOALS, STANDARDS, AND MAPS FOR GUIDING THE OVERALL DEVELOPMENT AND REDEVELOPMENT OF THE LOCAL GOVERNMENTAL UNITS

WHEREAS, Minnesota Statutes section 473.864 requires each local governmental unit to review and, if necessary, amend its entire comprehensive plan and its fiscal devices and official controls at least once every ten years to ensure its comprehensive plan conforms to metropolitan system plans and ensure its fiscal devices and official controls do not conflict with the comprehensive plan or permit activities that conflict with metropolitan system plans; and

WHEREAS, Minnesota Statutes sections 473.858 and 473.864 require local governmental units to complete their "decennial" reviews by December 31, 2018; and

WHEREAS, the Town Board of Nininger Township authorized the review and update of its Comprehensive Plan; and

WHEREAS, the proposed Dakota County Rural Collaborative 2040 Comprehensive Plan is a planning tool intended to guide the future growth and development of Nininger Township in a manner that conforms with metropolitan system plans and complies with the Metropolitan Land Planning Act and other applicable planning statutes; and

WHEREAS, the proposed Dakota County Rural Collaborative 2040 Comprehensive Plan reflect a community planning process conducted in the years 2016 through 2018 involving elected officials, appointed officials, the public at large, developers, and other stakeholders; and

WHEREAS, pursuant to Minnesota Statutes section 473.858, the proposed 2040 Comprehensive Plan was submitted to adjacent governmental units and affected special districts and school districts for review and comment on April 30, 2018, and the statutory six-month review and comment period has elapsed; and

WHEREAS, the Town Board of Nininger Township has considered the proposed 2040 Comprehensive Plan and all public comments; and

WHEREAS, on April 2, 2018, Nininger Township conducted a public hearing on the proposed 2040 Comprehensive Plan; and

WHEREAS, the Town Board of Nininger Township approved Resolution 02-2018 authorizing the proposed 2040 Comprehensive Plan to be submitted to the Metropolitan Council for review; and

WHEREAS, at its regular meeting on August 28, 2019, the Metropolitan Council completed its review of the proposed 2040 Comprehensive Plan and found that the Plan meets the requirements of the Metropolitan Land Planning Act; conforms to the metropolitan system plans for transportation (including aviation), water resources, and parks; is consistent with

Thrive MSP 2040; and is compatible with the plans of adjacent jurisdictions and affected special districts and school districts; and

WHEREAS, the proposed 2040 Comprehensive Plan includes and incorporated the Mississippi River Critical Corridor Area (MRCCA) Plan for Nininger Township; and

WHEREAS, the 2040 proposed Comprehensive Plan includes all revisions made during the review process and responds to additional advisory comments that are part of the Metropolitan Council's actions authorizing Nininger Township to place its proposed 2040 Comprehensive Plan into effect.

NOW THERE, BE IT RESOLVED BY THE TOWN BOARD OF NININGER TOWNSHIP, MINNESOTA, that the Dakota County Rural Collaborative 2040 Comprehensive Plan, including the MRCCA, is adopted and is effective as of the date of this resolution.

BE IT FURTHER RESOLVED that, pursuant to sections 473.864 and 473.865 of the Metropolitan Land Planning Act, Nininger Township will: (1) review its fiscal devices and official controls; (2) if necessary, amend its fiscal devices and official controls to ensure they do not conflict with the 2040 Comprehensive Plan or permit activity in conflict with metropolitan system plans; (3) submit amendments to fiscal devices or official controls to the Metropolitan Council for "information purposes;" and (4) submit a copy of the final plan, including the MRCCA, to the Department of Natural Resources and the National Park Service.

Approved and adopted by the Town Board of Nininger Township this 17th day of Sept., 2019.

Robert Patty
Town Board Chair

Attest:

Clerk

RESOLUTION NO. _____

Randolph Township Township
Dakota County, Minnesota

A RESOLUTION ADOPTING THE 2040 DAKOTA COUNTY RURAL COLLABORATIVE COMPREHENSIVE PLAN UPDATE, A COMPILATION OF POLICY STATEMENTS, GOALS, STANDARDS, AND MAPS FOR GUIDING THE OVERALL DEVELOPMENT AND REDEVELOPMENT OF THE LOCAL GOVERNMENTAL UNITS

WHEREAS, Minnesota Statutes section 473.864 requires each local governmental unit to review and, if necessary, amend its entire comprehensive plan and its fiscal devices and official controls at least once every ten years to ensure its comprehensive plan conforms to metropolitan system plans and ensure its fiscal devices and official controls do not conflict with the comprehensive plan or permit activities that conflict with metropolitan system plans; and

WHEREAS, Minnesota Statutes sections 473.858 and 473.864 require local governmental units to complete their "decennial" reviews by December 31, 2018; and

WHEREAS, the Town Board of Randolph Township Township authorized the review and update of its Comprehensive Plan; and

WHEREAS, the proposed Dakota County Rural Collaborative 2040 Comprehensive Plan is a planning tool intended to guide the future growth and development of Randolph Township Township in a manner that conforms with metropolitan system plans and complies with the Metropolitan Land Planning Act and other applicable planning statutes; and

WHEREAS, the proposed Dakota County Rural Collaborative 2040 Comprehensive Plan reflect a community planning process conducted in the years 2016 through 2018 involving elected officials, appointed officials, the public at large, developers, and other stakeholders; and

WHEREAS, pursuant to Minnesota Statutes section 473.858, the proposed 2040 Comprehensive Plan was submitted to adjacent governmental units and affected special districts and school districts for review and comment on April 30, 2018, and the statutory six-month review and comment period has elapsed; and

WHEREAS, the Town Board of Randolph Township Township has considered the proposed 2040 Comprehensive Plan and all public comments; and

WHEREAS, on April 9, 2018, Randolph Township Township conducted a public hearing on the proposed 2040 Comprehensive Plan; and

WHEREAS, the Town Board of Randolph Township Township approved Resolution 2018-07 authorizing the proposed 2040 Comprehensive Plan to be submitted to the Metropolitan Council for review; and

WHEREAS, at its regular meeting on August 28, 2019, the Metropolitan Council completed its review of the proposed 2040 Comprehensive Plan and found that the Plan meets the requirements of the Metropolitan Land Planning Act; conforms to the metropolitan system plans for transportation (including aviation), water resources, and parks; is consistent with *Thrive MSP 2040*; and is compatible with the plans of adjacent jurisdictions and affected special districts and school districts; and

WHEREAS, the 2040 proposed Comprehensive Plan includes all revisions made during the review process and responds to additional advisory comments that are part of the Metropolitan Council's actions authorizing Randolph Township Township to place its proposed 2040 Comprehensive Plan into effect.

NOW THERE, BE IT RESOLVED BY THE TOWN BOARD OF RANDOLPH TOWNSHIP TOWNSHIP, MINNESOTA, that the Dakota County Rural Collaborative 2040 Comprehensive Plan is adopted and is effective as of the date of this resolution.

BE IT FURTHER RESOLVED that, pursuant to sections

473.864 and 473.865 of the Metropolitan Land Planning Act, Randolph Township Township will: (1) review its fiscal devices and official controls; (2) if necessary, amend its fiscal devices and official controls to ensure they do not conflict with the 2040 Comprehensive Plan or permit activity in conflict with metropolitan system plans; and (3) submit amendments to fiscal devices or official controls to the Metropolitan Council for "information purposes."

Approved and adopted by the Town Board of Randolph Township Township this 17th day of September, 2019.

Don Marthaler

Town Board Chair

Attest:

Brenda Taylor

Clerk

BRENDA TAYLOR
Clerk, Randolph Twnshp., Dakota Co., MN
Notarial Officer (ex-officio notary public)
My term is indeterminate

RESOLUTION NO. 2019-04

Ravenna Township
Dakota County, Minnesota

A RESOLUTION ADOPTING THE 2040 DAKOTA COUNTY RURAL COLLABORATIVE COMPREHENSIVE PLAN UPDATE, A COMPILATION OF POLICY STATEMENTS, GOALS, STANDARDS, AND MAPS FOR GUIDING THE OVERALL DEVELOPMENT AND REDEVELOPMENT OF THE LOCAL GOVERNMENTAL UNITS

WHEREAS, Minnesota Statutes section 473.864 requires each local governmental unit to review and, if necessary, amend its entire comprehensive plan and its fiscal devices and official controls at least once every ten years to ensure its comprehensive plan conforms to metropolitan system plans and ensure its fiscal devices and official controls do not conflict with the comprehensive plan or permit activities that conflict with metropolitan system plans; and

WHEREAS, Minnesota Statutes sections 473.858 and 473.864 require local governmental units to complete their "decennial" reviews by December 31, 2018; and

WHEREAS, the Town Board of Ravenna Township authorized the review and update of its Comprehensive Plan; and

WHEREAS, the proposed Dakota County Rural Collaborative 2040 Comprehensive Plan is a planning tool intended to guide the future growth and development of Ravenna Township in a manner that conforms with metropolitan system plans and complies with the Metropolitan Land Planning Act and other applicable planning statutes; and

WHEREAS, the proposed Dakota County Rural Collaborative 2040 Comprehensive Plan reflect a community planning process conducted in the years 2016 through 2018 involving elected officials, appointed officials, the public at large, developers, and other stakeholders; and

WHEREAS, pursuant to Minnesota Statutes section 473.858, the proposed 2040 Comprehensive Plan was submitted to adjacent governmental units and affected special districts and school districts for review and comment on April 30, 2018, and the statutory six-month review and comment period has elapsed; and

WHEREAS, the Town Board of Ravenna Township has considered the proposed 2040 Comprehensive Plan and all public comments; and

WHEREAS, on February 22, 2018, Ravenna Township conducted a public hearing on the proposed 2040 Comprehensive Plan; and

WHEREAS, the Town Board of Ravenna Township approved Resolution 2018-02 authorizing the proposed 2040 Comprehensive Plan to be submitted to the Metropolitan Council for review; and

WHEREAS, at its regular meeting on August 28, 2019, the Metropolitan Council completed its review of the proposed 2040 Comprehensive Plan and found that the Plan meets the requirements of the Metropolitan Land Planning Act; conforms to the metropolitan system plans for transportation (including aviation), water resources, and parks; is consistent with

Thrive MSP 2040; and is compatible with the plans of adjacent jurisdictions and affected special districts and school districts; and

WHEREAS, the proposed 2040 Comprehensive Plan includes and incorporated the Mississippi River Critical Corridor Area (MRCCA) Plan for Ravenna Township; and

WHEREAS, the 2040 proposed Comprehensive Plan includes all revisions made during the review process and responds to additional advisory comments that are part of the Metropolitan Council's actions authorizing Ravenna Township to place its proposed 2040 Comprehensive Plan into effect.

NOW THERE, BE IT RESOLVED BY THE TOWN BOARD OF RAVENNA TOWNSHIP, MINNESOTA, that the Dakota County Rural Collaborative 2040 Comprehensive Plan, including the MRCCA, is adopted and is effective as of the date of this resolution.

BE IT FURTHER RESOLVED that, pursuant to sections 473.864 and 473.865 of the Metropolitan Land Planning Act, Ravenna Township will: (1) review its fiscal devices and official controls; (2) if necessary, amend its fiscal devices and official controls to ensure they do not conflict with the 2040 Comprehensive Plan or permit activity in conflict with metropolitan system plans; (3) submit amendments to fiscal devices or official controls to the Metropolitan Council for "information purposes;" and (4) submit a copy of the final plan, including the MRCCA, to the Department of Natural Resources and the National Park Service.

Upon being put to a vote, the following supervisors voted in favor of said Resolution:

Paul Curtis: X Carl Reuter: X Brian Riches: X

The following supervisors voted in opposition to said Resolution:

Paul Curtis: _____ Carl Reuter: _____ Brian Riches: _____

Approved and adopted by the Town Board of Ravenna Township this 12th day of September, 2019.

Attest:

Caroline Spurgeon
Clerk/Treasurer

Ravenna Township,
Dakota County, Minnesota

By: _____
Paul Curtis, Town Board Supervisor

By: _____
Carl Reuter, Town Board Supervisor

By: _____
Brian Riches, Town Board Supervisor

CAROLINE ANN SPURGEON
Notary Public-Minnesota
My Commission Expires Jan 31, 2024

RESOLUTION NO. 2019-09-17

Vermillion Township
Dakota County, Minnesota

A RESOLUTION ADOPTING THE 2040 DAKOTA COUNTY RURAL COLLABORATIVE COMPREHENSIVE PLAN UPDATE, A COMPILATION OF POLICY STATEMENTS, GOALS, STANDARDS, AND MAPS FOR GUIDING THE OVERALL DEVELOPMENT AND REDEVELOPMENT OF THE LOCAL GOVERNMENTAL UNITS

WHEREAS, Minnesota Statutes section 473.864 requires each local governmental unit to review and, if necessary, amend its entire comprehensive plan and its fiscal devices and official controls at least once every ten years to ensure its comprehensive plan conforms to metropolitan system plans and ensure its fiscal devices and official controls do not conflict with the comprehensive plan or permit activities that conflict with metropolitan system plans; and

WHEREAS, Minnesota Statutes sections 473.858 and 473.864 require local governmental units to complete their "decennial" reviews by December 31, 2018; and

WHEREAS, the Town Board of Vermillion Township authorized the review and update of its Comprehensive Plan; and

WHEREAS, the proposed Dakota County Rural Collaborative 2040 Comprehensive Plan is a planning tool intended to guide the future growth and development of Vermillion Township in a manner that conforms with metropolitan system plans and complies with the Metropolitan Land Planning Act and other applicable planning statutes; and

WHEREAS, the proposed Dakota County Rural Collaborative 2040 Comprehensive Plan reflects a community planning process conducted in the years 2016 through 2018 involving elected officials, appointed officials, the public at large, developers, and other stakeholders; and

WHEREAS, pursuant to Minnesota Statutes section 473.858, the proposed 2040 Comprehensive Plan was submitted to adjacent governmental units and affected special districts and school districts for review and comment on April 30, 2018, and the statutory six-month review and comment period has elapsed; and

WHEREAS, the Town Board of Vermillion Township has considered the proposed 2040 Comprehensive Plan and all public comments; and

WHEREAS, on April 17, 2018, Vermillion Township conducted a public hearing on the proposed 2040 Comprehensive Plan; and

WHEREAS, the Town Board of Vermillion Township approved a resolution authorizing the proposed 2040 Comprehensive Plan to be submitted to the Metropolitan Council for review; and

WHEREAS, at its regular meeting on August 28, 2019, the Metropolitan Council completed its review of the proposed 2040 Comprehensive Plan and found that the Plan meets the requirements of the Metropolitan Land Planning Act; conforms to the metropolitan system plans for transportation (including aviation), water resources, and parks; is consistent with

Thrive MSP 2040; and is compatible with the plans of adjacent jurisdictions and affected special districts and school districts; and

WHEREAS, the 2040 proposed Comprehensive Plan includes all revisions made during the review process and responds to additional advisory comments that are part of the Metropolitan Council's actions authorizing Vermillion Township to place its proposed 2040 Comprehensive Plan into effect.

NOW THERE, BE IT RESOLVED BY THE TOWN BOARD OF VERMILLION TOWNSHIP, MINNESOTA, that the Dakota County Rural Collaborative 2040 Comprehensive Plan is adopted and is effective as of the date of this resolution.

BE IT FURTHER RESOLVED that, pursuant to sections 473.864 and 473.865 of the Metropolitan Land Planning Act, Vermillion Township will: (1) review its fiscal devices and official controls; (2) if necessary, amend its fiscal devices and official controls to ensure they do not conflict with the 2040 Comprehensive Plan or permit activity in conflict with metropolitan system plans; and (3) submit amendments to fiscal devices or official controls to the Metropolitan Council for "information purposes."

Approved and adopted by the Town Board of Vermillion Township this 17 day of September 2019.

Town Board Chair

Attest:

Clerk

WATERFORD TOWNSHIP

"where the path from the past and the future meets"

RESOLUTION 2019 – 09
ADOPTING 2040 DAKOTA COUNTY RURAL COLLABORATIVE COMPREHENSIVE PLAN UPDATE, A COMPILATION OF POLICY STATEMENTS, GOALS, STANDARDS, AND MAPS FOR GUIDING THE OVERALL DEVELOPMENT AND REDEVELOPMENT OF THE LOCAL GOVERNMENTAL UNITS

WHEREAS, Minnesota Statutes section 473.864 requires each local governmental unit to review and, if necessary, amend its entire comprehensive plan and its fiscal devices and official controls at least once every ten years to ensure its comprehensive plan conforms to metropolitan system plans and ensure its fiscal devices and official controls do not conflict with the comprehensive plan or permit activities that conflict with metropolitan system plans; and

WHEREAS, Minnesota Statutes sections 473.858 and 473.864 require local governmental units to complete their "decennial" reviews by December 31, 2018; and

WHEREAS, the Town Board of Waterford Township authorized the review and update of its Comprehensive Plan; and

WHEREAS, the proposed Dakota County Rural Collaborative 2040 Comprehensive Plan is a planning tool intended to guide the future growth and development of Waterford Township in a manner that conforms with metropolitan system plans and complies with the Metropolitan Land Planning Act and other applicable planning statutes; and

WHEREAS, the proposed Dakota County Rural Collaborative 2040 Comprehensive Plan reflect a community planning process conducted in the years 2016 through 2018 involving elected officials, appointed officials, the public at large, developers, and other stakeholders; and

WHEREAS, pursuant to Minnesota Statutes section 473.858, the proposed 2040 Comprehensive Plan was submitted to adjacent governmental units and affected special districts and school districts for review and comment on April 30, 2018, and the statutory six-month review and comment period has elapsed; and

WHEREAS, the Town Board of Waterford Township has considered the proposed 2040 Comprehensive Plan and all public comments; and

WHEREAS, on April 9, 2018, Waterford Township conducted a public hearing on the proposed 2040 Comprehensive Plan; and

WHEREAS, the Town Board of Waterford Township approved Resolution 2018-06 authorizing the proposed 2040 Comprehensive Plan to be submitted to the Metropolitan Council for review; and

WHEREAS, at its regular meeting on August 28, 2019, the Metropolitan Council completed its review of the proposed 2040 Comprehensive Plan and found that the Plan meets the requirements of the Metropolitan Land Planning Act; conforms to the metropolitan system plans for transportation (including aviation), water resources, and parks; is consistent with *Thrive MSP 2040*; and is compatible with the plans of adjacent jurisdictions and affected special districts and school districts; and

WHEREAS, the 2040 proposed Comprehensive Plan includes all revisions made during the review process and responds to additional advisory comments that are part of the Metropolitan Council's actions authorizing Waterford Township to place its proposed 2040 Comprehensive Plan into effect.

WATERFORD TOWNSHIP

"where the path from the past and the future meets"

RESOLUTION 2019 – 09
ADOPTING 2040 DAKOTA COUNTY RURAL COLLABORATIVE COMPREHENSIVE PLAN UPDATE, A COMPILATION OF POLICY STATEMENTS, GOALS, STANDARDS, AND MAPS FOR GUIDING THE OVERALL DEVELOPMENT AND REDEVELOPMENT OF THE LOCAL GOVERNMENTAL UNITS

NOW THERE, BE IT RESOLVED BY THE TOWN BOARD OF WATERFORD TOWNSHIP, MINNESOTA, that the Dakota County Rural Collaborative 2040 Comprehensive Plan is adopted and is effective as of the date of this resolution.

BE IT FURTHER RESOLVED that, pursuant to sections 473.864 and 473.865 of the Metropolitan Land Planning Act, Waterford Township will: (1) review its fiscal devices and official controls; (2) if necessary, amend its fiscal devices and official controls to ensure they do not conflict with the 2040 Comprehensive Plan or permit activity in conflict with metropolitan system plans; and (3) submit amendments to fiscal devices or official controls to the Metropolitan Council for "information purposes."

Approved and adopted by the Town Board of Waterford Township this 14th day of October, 2019.

ATTEST:

Town Clerk – Elizabeth Wheeler

ATTEST:

Liz Messner

Chairperson/Supervisor – Liz Messner

WEBSITE: waterfordtownshipmn.org **EMAIL:** waterfordtownship@gmail.com
3847 321ST St. W. – P.O. Box 531 - Northfield, MN 55057
PHONE: 651-346-8467 (leave a message – clerk will return your call)

Appendix I: LWMP Resolutions

North Cannon River Watershed District

RESOLUTION NO. 2018-06

Castle Rock Township
Dakota County, Minnesota

A RESOLUTION ADOPTING THE NORTH CANNON RIVER WATERSHED MANAGEMENT ORGANIZATION WATERSHED MANAGEMENT PLAN AS THE LOCAL WATER MANAGEMENT PLAN WITHIN THE NORTH CANNON RIVER WATERSHED

WHEREAS, the North Cannon River Watershed Management Organization (NCRWMO) was created in 1983 by joint powers to manage surface waters within the North Cannon River watershed, and

WHEREAS, the NCRWMO consists of eight townships and three rural cities covering approximately 150 square miles in southern Dakota County, and

WHEREAS, the NCRWMO adopted watershed management plans in 1988 and 2003 to govern land use activities and establish goals, policies, and standards for the protection of water resources and fish and wildlife habitat, and

WHEREAS, the NCRWMO adopted a third generation watershed management plan in August 2013, and

WHEREAS, Minnesota Statutes require local communities in the seven county metropolitan area, retaining permitting authority for water management activities, to adopt local watershed management plans, and

WHEREAS, the NCRWMO has determined that member communities may adopt the 2013 NCRWMO Watershed Management Plan as the local water management plan.

NOW, THEREFORE, BE IT RESOLVED, the Board of Supervisors of Castle Rock Township hereby adopts the 2013 NCRWMO Watershed Management Plan by reference as the local water management plan for the Township within the North Cannon River Watershed.

Adopted this 9th day of April, 2018.

Sandra J. Weber
Board Chair

ATTEST:

Barbara M. Lang
Clerk

RESOLUTION NO. 18-02

Douglas Township
Dakota County, Minnesota

A RESOLUTION ADOPTING THE NORTH CANNON RIVER WATERSHED MANAGEMENT ORGANIZATION WATERSHED MANAGEMENT PLAN AS THE LOCAL WATER MANAGEMENT PLAN WITHIN THE NORTH CANNON RIVER WATERSHED

WHEREAS, the North Cannon River Watershed Management Organization (NCRWMO) was created in 1983 by joint powers to manage surface waters within the North Cannon River watershed, and

WHEREAS, the NCRWMO consists of eight townships and three rural cities covering approximately 150 square miles in southern Dakota County, and

WHEREAS, the NCRWMO adopted watershed management plans in 1988 and 2003 to govern land use activities and establish goals, policies, and standards for the protection of water resources and fish and wildlife habitat, and

WHEREAS, the NCRWMO adopted a third generation watershed management plan in August 2013, and

WHEREAS, Minnesota Statutes require local communities in the seven county metropolitan area, retaining permitting authority for water management activities, to adopt local watershed management plans, and

WHEREAS, the NCRWMO has determined that member communities may adopt the 2013 NCRWMO Watershed Management Plan as the local water management plan.

NOW, THEREFORE, BE IT RESOLVED, the Board of Supervisors of Douglas Township hereby adopts the 2013 NCRWMO Watershed Management Plan by reference as the local water management plan for the Township within the North Cannon River Watershed.

Adopted this 2 day of April, 2018.

Jeffrey Read
Board Chair

ATTEST:

Peggy Varien
Clerk

RESOLUTION NO. 2018-01

Greenvale Township
Dakota County, Minnesota

A RESOLUTION ADOPTING THE NORTH CANNON RIVER WATERSHED MANAGEMENT ORGANIZATION WATERSHED MANAGEMENT PLAN AS THE LOCAL WATER MANAGEMENT PLAN WITHIN THE NORTH CANNON RIVER WATERSHED

WHEREAS, the North Cannon River Watershed Management Organization (NCRWMO) was created in 1983 by joint powers to manage surface waters within the North Cannon River watershed, and

WHEREAS, the NCRWMO consists of eight townships and three rural cities covering approximately 150 square miles in southern Dakota County, and

WHEREAS, the NCRWMO adopted watershed management plans in 1988 and 2003 to govern land use activities and establish goals, policies, and standards for the protection of water resources and fish and wildlife habitat, and

WHEREAS, the NCRWMO adopted a third generation watershed management plan in August 2013, and

WHEREAS, Minnesota Statutes require local communities in the seven county metropolitan area, retaining permitting authority for water management activities, to adopt local watershed management plans, and

WHEREAS, the NCRWMO has determined that member communities may adopt the 2013 NCRWMO Watershed Management Plan as the local water management plan.

NOW, THEREFORE, BE IT RESOLVED, the Board of Supervisors of Greenvale Township hereby adopts the 2013 NCRWMO Watershed Management Plan by reference as the local water management plan for the Township within the North Cannon River Watershed.

Adopted this 17 day of April, 2018.

Gregory Longer
Board Chair

ATTEST:

Clerk

RESOLUTION NO. 2018-3

Hampton Township
Dakota County, Minnesota

A RESOLUTION ADOPTING THE NORTH CANNON RIVER WATERSHED MANAGEMENT ORGANIZATION WATERSHED MANAGEMENT PLAN AS THE LOCAL WATER MANAGEMENT PLAN WITHIN THE NORTH CANNON RIVER WATERSHED

WHEREAS, the North Cannon River Watershed Management Organization (NCRWMO) was created in 1983 by joint powers to manage surface waters within the North Cannon River watershed, and

WHEREAS, the NCRWMO consists of eight townships and three rural cities covering approximately 150 square miles in southern Dakota County, and

WHEREAS, the NCRWMO adopted watershed management plans in 1988 and 2003 to govern land use activities and establish goals, policies, and standards for the protection of water resources and fish and wildlife habitat, and

WHEREAS, the NCRWMO adopted a third generation watershed management plan in August 2013, and

WHEREAS, Minnesota Statutes require local communities in the seven county metropolitan area, retaining permitting authority for water management activities, to adopt local watershed management plans, and

WHEREAS, the NCRWMO has determined that member communities may adopt the 2013 NCRWMO Watershed Management Plan as the local water management plan.

NOW, THEREFORE, BE IT RESOLVED, the Board of Supervisors of Hampton Township hereby adopts the 2013 NCRWMO Watershed Management Plan by reference as the local water management plan for that portion of the Township within the North Cannon River Watershed.

Adopted this 17 day of April, 2018.

Board Chair

ATTEST:

Molly K. Weber

Clerk

RESOLUTION NO. 2018-3

Marshan Township
Dakota County, Minnesota

A RESOLUTION ADOPTING
THE VERMILLION RIVER WATERSHED
JOINT POWERS ORGANIZATION
WATERSHED MANAGEMENT PLAN
AS THE LOCAL WATER MANAGEMENT PLAN
WITHIN THE VERMILLION RIVER WATERSHED

WHEREAS, the Vermillion River Watershed Joint Powers Organization (VRWJPO) was created in 2002 by joint powers to manage surface waters within the Vermillion River watershed, and

WHEREAS, the VRWJPO consists of ten townships and 10 cities covering approximately 335 square miles in Scott and Dakota counties, and

WHEREAS, the VRWJPO adopted a watershed management plan in 2005 to govern land use activities and establish goals, policies, and standards for the protection of water resources and fish and wildlife habitat, and

WHEREAS, the VRWJPO adopted a second generation watershed management plan in June 2016, and

WHEREAS, Minnesota Statutes require local communities in the seven county metropolitan area, retaining permitting authority for water management activities, to adopt local watershed management plans, and

WHEREAS, the VRWJPO has determined that the Dakota County Rural Collaborative member communities may adopt the 2016 VRWJPO Watershed Management Plan as the local water management plan.

NOW, THEREFORE, BE IT RESOLVED, the Board of Supervisors of Marshan Township hereby adopts the 2016 VRWJPO Watershed Management Plan by reference as the local water management plan for the Township within the Vermillion River Watershed.

Adopted this 15th day of May, 2018.

Jerry Bauer
Board Chair

ATTEST:

Marjory J Snyder
Clerk

Sent to Dean

RESOLUTION NO. 2018-1

City of Miesville
Dakota County, Minnesota

A RESOLUTION ADOPTING THE NORTH CANNON RIVER WATERSHED MANAGEMENT ORGANIZATION WATERSHED MANAGEMENT PLAN AS THE LOCAL WATER MANAGEMENT PLAN WITHIN THE NORTH CANNON RIVER WATERSHED

WHEREAS, the North Cannon River Watershed Management Organization (NCRWMO) was created in 1983 by joint powers to manage surface waters within the North Cannon River watershed, and

WHEREAS, the NCRWMO consists of eight townships and three rural cities covering approximately 150 square miles in southern Dakota County, and

WHEREAS, the NCRWMO adopted watershed management plans in 1988 and 2003 to govern land use activities and establish goals, policies, and standards for the protection of water resources and fish and wildlife habitat, and

WHEREAS, the NCRWMO adopted a third generation watershed management plan in August 2013, and

WHEREAS, Minnesota Statutes require local communities in the seven county metropolitan area, retaining permitting authority for water management activities, to adopt local watershed management plans, and

WHEREAS, the NCRWMO has determined that member communities may adopt the 2013 NCRWMO Watershed Management Plan as the local water management plan.

NOW, THEREFORE, BE IT RESOLVED, the City Council of the City of Miesville hereby adopts the 2013 NCRWMO Watershed Management Plan by reference as the local water management plan for the City within the North Cannon River Watershed.

Adopted this 10th day of April, 2018.

Mayor

ATTEST:

Clerk

RESOLUTION NO. ___2018-05_____

City of New Trier
Dakota County, Minnesota

A RESOLUTION ADOPTING THE NORTH CANNON RIVER WATERSHED MANAGEMENT ORGANIZATION WATERSHED MANAGEMENT PLAN AS THE LOCAL WATER MANAGEMENT PLAN WITHIN THE NORTH CANNON RIVER WATERSHED

WHEREAS, the North Cannon River Watershed Management Organization (NCRWMO) was created in 1983 by joint powers to manage surface waters within the North Cannon River watershed, and

WHEREAS, the NCRWMO consists of eight townships and three rural cities covering approximately 150 square miles in southern Dakota County, and

WHEREAS, the NCRWMO adopted watershed management plans in 1988 and 2003 to govern land use activities and establish goals, policies, and standards for the protection of water resources and fish and wildlife habitat, and

WHEREAS, the NCRWMO adopted a third generation watershed management plan in August 2013, and

WHEREAS, Minnesota Statutes require local communities in the seven county metropolitan area, retaining permitting authority for water management activities, to adopt local watershed management plans, and

WHEREAS, the NCRWMO has determined that member communities may adopt the 2013 NCRWMO Watershed Management Plan as the local water management plan.

NOW, THEREFORE, BE IT RESOLVED, the City Council of the City of New Trier hereby adopts the 2013 NCRWMO Watershed Management Plan by reference as the local water management plan for the City within the North Cannon River Watershed.

BE IT FURTHER RESOLVED, the City Council of the City of New Trier adopts the NCRWMO Model Stormwater Ordinance, dated November, 2005, for implementation of the 2013 stormwater management plan.

Adopted this 9th day of April, 2018.

Mayor

ATTEST:

Clerk

RESOLUTION NO. 18-04

City of Randolph
Dakota County, Minnesota

A RESOLUTION ADOPTING THE NORTH CANNON RIVER WATERSHED MANAGEMENT ORGANIZATION WATERSHED MANAGEMENT PLAN AS THE LOCAL WATER MANAGEMENT PLAN WITHIN THE NORTH CANNON RIVER WATERSHED

WHEREAS, the North Cannon River Watershed Management Organization (NCRWMO) was created in 1983 by joint powers to manage surface waters within the North Cannon River watershed, and

WHEREAS, the NCRWMO consists of eight townships and three rural cities covering approximately 150 square miles in southern Dakota County, and

WHEREAS, the NCRWMO adopted watershed management plans in 1988 and 2003 to govern land use activities and establish goals, policies, and standards for the protection of water resources and fish and wildlife habitat, and

WHEREAS, the NCRWMO adopted a third generation watershed management plan in August 2013, and

WHEREAS, Minnesota Statutes require local communities in the seven county metropolitan area, retaining permitting authority for water management activities, to adopt local watershed management plans, and

WHEREAS, the NCRWMO has determined that member communities may adopt the 2013 NCRWMO Watershed Management Plan as the local water management plan.

NOW, THEREFORE, BE IT RESOLVED, the City Council of the City of Randolph hereby adopts the 2013 NCRWMO Watershed Management Plan by reference as the local water management plan for the City within the North Cannon River Watershed.

BE IT FURTHER RESOLVED, the City Council of the City of Randolph adopts the NCRWMO Model Stormwater Ordinance, dated November, 2005, for implementation of the 2013 stormwater management plan.

Adopted this 11th day of April, 2018.

Mayor

ATTEST:

Clerk

RESOLUTION NO. _____

Randolph Township
Dakota County, Minnesota

A RESOLUTION ADOPTING THE NORTH CANNON RIVER WATERSHED MANAGEMENT ORGANIZATION WATERSHED MANAGEMENT PLAN AS THE LOCAL WATER MANAGEMENT PLAN WITHIN THE NORTH CANNON RIVER WATERSHED

WHEREAS, the North Cannon River Watershed Management Organization (NCRWMO) was created in 1983 by joint powers to manage surface waters within the North Cannon River watershed, and

WHEREAS, the NCRWMO consists of eight townships and three rural cities covering approximately 150 square miles in southern Dakota County, and

WHEREAS, the NCRWMO adopted watershed management plans in 1988 and 2003 to govern land use activities and establish goals, policies, and standards for the protection of water resources and fish and wildlife habitat, and

WHEREAS, the NCRWMO adopted a third generation watershed management plan in August 2013, and

WHEREAS, Minnesota Statutes require local communities in the seven county metropolitan area, retaining permitting authority for water management activities, to adopt local watershed management plans, and

WHEREAS, the NCRWMO has determined that member communities may adopt the 2013 NCRWMO Watershed Management Plan as the local water management plan.

NOW, THEREFORE, BE IT RESOLVED, the Board of Supervisors of Randolph Township hereby adopts the 2013 NCRWMO Watershed Management Plan by reference as the local water management plan for the Township within the North Cannon River Watershed.

Adopted this 17th day of April, 2018.

Don Manthei
Board Chair

ATTEST:

Brenda Z
Clerk

BRENDA TAYLOR
Clerk, Randolph Twnshp., Dakota Co., MN
Notarial Officer (ex-officio notary public)
My term is indeterminate

WATERFORD TOWNSHIP

DAKOTA COUNTY, MINNESOTA

RESOLUTION R2018-07 – NORTH CANNON RIVER WATERSHED

MANAGEMENT ORGANIZATION WATERSHED MANAGEMENT PLAN

WHEREAS, the North Cannon River Watershed Management Organization (NCRWMO) was created in 1983 by joint powers to manage surface waters within the North Cannon River watershed, and

WHEREAS, the NCRWMO consists of eight townships and three rural cities covering approximately 150 square miles in southern Dakota County, and

WHEREAS, the NCRWMO adopted watershed management plans in 1988 and 2003 to govern land use activities and establish goals, policies, and standards for the protection of water resources and fish and wildlife habitat, and

WHEREAS, the NCRWMO adopted a third-generation watershed management plan in August 2013, and

WHEREAS, Minnesota Statutes require local communities in the seven-county metropolitan area, retaining permitting authority for water management activities, to adopt local watershed management plans, and

WHEREAS, the NCRWMO has determined that member communities may adopt the 2013 NCRWMO Watershed Management Plan as the local water management plan.

NOW, THEREFORE, BE IT RESOLVED, the Board of Supervisors of Waterford Township hereby adopts the 2013 NCRWMO Watershed Management Plan by reference as the local water management plan for the Township within the North Cannon River Watershed.

Adopted this 9th day of April 2018.

Larry Odegard

Waterford Township Chairperson

ATTEST:

Waterford Township Clerk

Vermillion River Watershed Joint Powers Association

RESOLUTION NO. 2018-05

Castle Rock Township
Dakota County, Minnesota

A RESOLUTION ADOPTING THE VERMILLION RIVER WATERSHED JOINT POWERS ORGANIZATION WATERSHED MANAGEMENT PLAN AS THE LOCAL WATER MANAGEMENT PLAN WITHIN THE VERMILLION RIVER WATERSHED

WHEREAS, the Vermillion River Watershed Joint Powers Organization (VRWJPO) was created in 2002 by joint powers to manage surface waters within the Vermillion River watershed, and

WHEREAS, the VRWJPO consists of ten townships and 10 cities covering approximately 335 square miles in Scott and Dakota counties, and

WHEREAS, the VRWJPO adopted a watershed management plan in 2005 to govern land use activities and establish goals, policies, and standards for the protection of water resources and fish and wildlife habitat, and

WHEREAS, the VRWJPO adopted a second generation watershed management plan in June 2016, and

WHEREAS, Minnesota Statutes require local communities in the seven county metropolitan area, retaining permitting authority for water management activities, to adopt local watershed management plans, and

WHEREAS, the VRWJPO has determined that the Dakota County Rural Collaborative member communities may adopt the 2016 VRWJPO Watershed Management Plan as the local water management plan.

NOW, THEREFORE, BE IT RESOLVED, the Board of Supervisors of Castle Rock Township hereby adopts the 2016 VRWJPO Watershed Management Plan by reference as the local water management plan for the Township within the Vermillion River Watershed.

Adopted this 9th day of April, 2018.

Sandra L Weber
Board Chair

ATTEST:

Barbara M. Lang
Clerk

RESOLUTION NO. 2018-1

City of Coates
Dakota County, Minnesota

A RESOLUTION ADOPTING
THE VERMILLION RIVER WATERSHED
JOINT POWERS ORGANIZATION
WATERSHED MANAGEMENT PLAN
AS THE LOCAL WATER MANAGEMENT PLAN
WITHIN THE VERMILLION RIVER WATERSHED

WHEREAS, the Vermillion River Watershed Joint Powers Organization (VRWJPO) was created in 2002 by joint powers to manage surface waters within the Vermillion River watershed, and

WHEREAS, the VRWJPO consists of ten townships and 10 cities covering approximately 335 square miles in Scott and Dakota counties, and

WHEREAS, the VRWJPO adopted a watershed management plan in 2005 to govern land use activities and establish goals, policies, and standards for the protection of water resources and fish and wildlife habitat, and

WHEREAS, the VRWJPO adopted a second generation watershed management plan in June 2016, and

WHEREAS, Minnesota Statutes require local communities in the seven county metropolitan area, retaining permitting authority for water management activities, to adopt local watershed management plans, and

WHEREAS, the VRWJPO has determined that the Dakota County Rural Collaborative member communities may adopt the 2016 VRWJPO Watershed Management Plan as the local water management plan.

NOW, THEREFORE, BE IT RESOLVED, the City Council of the City of Coates hereby adopts the 2016 VRWJPO Watershed Management Plan by reference as the local water management plan for the City within the Vermillion River Watershed.

Adopted this 16th day of April, 2018.

Mayor

ATTEST:

Clerk

RESOLUTION NO. 18-03

Douglas Township
Dakota County, Minnesota

A RESOLUTION ADOPTING
THE VERMILLION RIVER WATERSHED
JOINT POWERS ORGANIZATION
WATERSHED MANAGEMENT PLAN
AS THE LOCAL WATER MANAGEMENT PLAN
WITHIN THE VERMILLION RIVER WATERSHED

WHEREAS, the Vermillion River Watershed Joint Powers Organization (VRWJPO) was created in 2002 by joint powers to manage surface waters within the Vermillion River watershed, and

WHEREAS, the VRWJPO consists of ten townships and 10 cities covering approximately 335 square miles in Scott and Dakota counties, and

WHEREAS, the VRWJPO adopted a watershed management plan in 2005 to govern land use activities and establish goals, policies, and standards for the protection of water resources and fish and wildlife habitat, and

WHEREAS, the VRWJPO adopted a second generation watershed management plan in June 2016, and

WHEREAS, Minnesota Statutes require local communities in the seven county metropolitan area, retaining permitting authority for water management activities, to adopt local watershed management plans, and

WHEREAS, the VRWJPO has determined that the Dakota County Rural Collaborative member communities may adopt the 2016 VRWJPO Watershed Management Plan as the local water management plan.

NOW, THEREFORE, BE IT RESOLVED, the Board of Supervisors of Douglas Township hereby adopts the 2016 VRWJPO Watershed Management Plan by reference as the local water management plan for the Township within the Vermillion River Watershed.

Adopted this 2 day of April, 2018.

Jeffrey Reed
Board Chair

ATTEST:

Peggy Varien
Clerk

RESOLUTION NO. 2018-01

Empire Township
Dakota County, Minnesota

A RESOLUTION ADOPTING
THE VERMILLION RIVER WATERSHED
JOINT POWERS ORGANIZATION
WATERSHED MANAGEMENT PLAN
AS THE LOCAL WATER MANAGEMENT PLAN
WITHIN THE VERMILLION RIVER WATERSHED

WHEREAS, the Vermillion River Watershed Joint Powers Organization (VRWJPO) was created in 2002 by joint powers to manage surface waters within the Vermillion River watershed, and

WHEREAS, the VRWJPO consists of ten townships and 10 cities covering approximately 335 square miles in Scott and Dakota counties, and

WHEREAS, the VRWJPO adopted a watershed management plan in 2005 to govern land use activities and establish goals, policies, and standards for the protection of water resources and fish and wildlife habitat, and

WHEREAS, the VRWJPO adopted a second generation watershed management plan in June 2016, and

WHEREAS, Minnesota Statutes require local communities in the seven county metropolitan area, retaining permitting authority for water management activities, to adopt local watershed management plans, and

WHEREAS, the VRWJPO has determined that the Dakota County Rural Collaborative member communities may adopt the 2016 VRWJPO Watershed Management Plan as the local water management plan.

NOW, THEREFORE, BE IT RESOLVED, the Board of Supervisors of Empire Township hereby adopts the 2016 VRWJPO Watershed Management Plan by reference as the local water management plan for the Township within the Vermillion River Watershed.

Adopted this 24 day of April, 2018.

Terry J. Holmes
Board Chair

ATTEST:
Kathleen B. Kuppen
Clerk

RESOLUTION NO. 2018-2

Hampton Township
Dakota County, Minnesota

A RESOLUTION ADOPTING
THE VERMILLION RIVER WATERSHED
JOINT POWERS ORGANIZATION
WATERSHED MANAGEMENT PLAN
AS THE LOCAL WATER MANAGEMENT PLAN
WITHIN THE VERMILLION RIVER WATERSHED

WHEREAS, the Vermillion River Watershed Joint Powers Organization (VRWJPO) was created in 2002 by joint powers to manage surface waters within the Vermillion River watershed, and

WHEREAS, the VRWJPO consists of ten townships and 10 cities covering approximately 335 square miles in Scott and Dakota counties, and

WHEREAS, the VRWJPO adopted a watershed management plan in 2005 to govern land use activities and establish goals, policies, and standards for the protection of water resources and fish and wildlife habitat, and

WHEREAS, the VRWJPO adopted a second generation watershed management plan in June 2016, and

WHEREAS, Minnesota Statutes require local communities in the seven county metropolitan area, retaining permitting authority for water management activities, to adopt local watershed management plans, and

WHEREAS, the VRWJPO has determined that the Dakota County Rural Collaborative member communities may adopt the 2016 VRWJPO Watershed Management Plan as the local water management plan.

NOW, THEREFORE, BE IT RESOLVED, the Board of Supervisors of Hampton Township hereby adopts the 2016 VRWJPO Watershed Management Plan by reference as the local water management plan for that portion of the Township within the Vermillion River Watershed.

Adopted this 17 day of April, 2018.

Board Chair

ATTEST:

Clerk

RESOLUTION NO. 01-2018

Nininger Township
Dakota County, Minnesota

A RESOLUTION ADOPTING
THE VERMILLION RIVER WATERSHED
JOINT POWERS ORGANIZATION
WATERSHED MANAGEMENT PLAN
AS THE LOCAL WATER MANAGEMENT PLAN
WITHIN THE VERMILLION RIVER WATERSHED

WHEREAS, the Vermillion River Watershed Joint Powers Organization (VRWJPO) was created in 2002 by joint powers to manage surface waters within the Vermillion River watershed, and

WHEREAS, the VRWJPO consists of ten townships and 10 cities covering approximately 335 square miles in Scott and Dakota counties, and

WHEREAS, the VRWJPO adopted a watershed management plan in 2005 to govern land use activities and establish goals, policies, and standards for the protection of water resources and fish and wildlife habitat, and

WHEREAS, the VRWJPO adopted a second generation watershed management plan in June 2016, and

WHEREAS, Minnesota Statutes require local communities in the seven county metropolitan area, retaining permitting authority for water management activities, to adopt local watershed management plans, and

WHEREAS, the VRWJPO has determined that the Dakota County Rural Collaborative member communities may adopt the 2016 VRWJPO Watershed Management Plan as the local water management plan.

NOW, THEREFORE, BE IT RESOLVED, the Board of Supervisors of Nininger Township hereby adopts the 2016 VRWJPO Watershed Management Plan by reference as the local water management plan for the Township within the Vermillion River Watershed.

Adopted this 17th day of April, 2018.

Robert Rotty
Board Chair

ATTEST:

Judith Knupick
Clerk

RESOLUTION NO. 2018-03

Ravenna Township
Dakota County, Minnesota

**A RESOLUTION ADOPTING
THE VERMILLION RIVER WATERSHED
JOINT POWERS ORGANIZATION
WATERSHED MANAGEMENT PLAN
AS THE LOCAL WATER MANAGEMENT PLAN
WITHIN THE VERMILLION RIVER WATERSHED**

WHEREAS, the Vermillion River Watershed Joint Powers Organization (VRWJPO) was created in 2002 by joint powers to manage surface waters within the Vermillion River watershed, and

WHEREAS, the VRWJPO consists of ten townships and 10 cities covering approximately 335 square miles in Scott and Dakota counties, and

WHEREAS, the VRWJPO adopted a watershed management plan in 2005 to govern land use activities and establish goals, policies, and standards for the protection of water resources and fish and wildlife habitat, and

WHEREAS, the VRWJPO adopted a second generation watershed management plan in June 2016, and

WHEREAS, Minnesota Statutes require local communities in the seven county metropolitan area, retaining permitting authority for water management activities, to adopt local watershed management plans, and

WHEREAS, the VRWJPO has determined that the Dakota County Rural Collaborative member communities may adopt the 2016 VRWJPO Watershed Management Plan as the local water management plan.

NOW, THEREFORE, BE IT RESOLVED, the Board of Supervisors of Ravenna Township hereby adopts the 2016 VRWJPO Watershed Management Plan by reference as the local water management plan for the Township within the Vermillion River Watershed.

Upon being put to a vote, the following supervisors voted in favor of said Resolution:
Carl Reuter: X Brian Riches: X Mike Waxon: X

The following supervisors voted in opposition to said Resolution:
Carl Reuter: _____ Brian Riches: _____ Mike Waxon: _____

WHEREUPON, the Chairperson declared the Resolution to be duly passed and adopted this 12th day of April 2018.

Attest:

Ravenna Township,
Dakota County, Minnesota

CAROLINE ANN SPURGEON
Notary Public
Minnesota
My Comm. Expires
Jan 31, 2019

By: _____
Carl Reuter, Town Board Supervisor

By: _____
Brian Riches, Town Board Supervisor

By: _____
Mike Waxon, Town Board Supervisor

_____
Caroline Spurgeon
Clerk/Treasurer

RESOLUTION NO. 2018-06

City of Vermillion
Dakota County, Minnesota

**A RESOLUTION ADOPTING
THE VERMILLION RIVER WATERSHED
JOINT POWERS ORGANIZATION
WATERSHED MANAGEMENT PLAN
AS THE LOCAL WATER MANAGEMENT PLAN
WITHIN THE VERMILLION RIVER WATERSHED**

WHEREAS, the Vermillion River Watershed Joint Powers Organization (VRWJPO) was created in 2002 by joint powers to manage surface waters within the Vermillion River watershed, and

WHEREAS, the VRWJPO consists of ten townships and 10 cities covering approximately 335 square miles in Scott and Dakota counties, and

WHEREAS, the VRWJPO adopted a watershed management plan in 2005 to govern land use activities and establish goals, policies, and standards for the protection of water resources and fish and wildlife habitat, and

WHEREAS, the VRWJPO adopted a second generation watershed management plan in June 2016, and

WHEREAS, Minnesota Statutes require local communities in the seven county metropolitan area, retaining permitting authority for water management activities, to adopt local watershed management plans, and

WHEREAS, the VRWJPO has determined that the Dakota County Rural Collaborative member communities may adopt the 2016 VRWJPO Watershed Management Plan as the local water management plan.

NOW, THEREFORE, BE IT RESOLVED, the City Council of the City of Vermillion hereby adopts the 2016 VRWJPO Watershed Management Plan by reference as the local water management plan for the City within the Vermillion River Watershed.

Adopted this 3rd day of April, 2018.

Mayor

ATTEST:

Clerk

RESOLUTION NO. _____

Vermillion Township
Dakota County, Minnesota

**A RESOLUTION ADOPTING
THE VERMILLION RIVER WATERSHED
JOINT POWERS ORGANIZATION
WATERSHED MANAGEMENT PLAN
AS THE LOCAL WATER MANAGEMENT PLAN
WITHIN THE VERMILLION RIVER WATERSHED**

WHEREAS, the Vermillion River Watershed Joint Powers Organization (VRWJPO) was created in 2002 by joint powers to manage surface waters within the Vermillion River watershed, and

WHEREAS, the VRWJPO consists of ten townships and 10 cities covering approximately 335 square miles in Scott and Dakota counties, and

WHEREAS, the VRWJPO adopted a watershed management plan in 2005 to govern land use activities and establish goals, policies, and standards for the protection of water resources and fish and wildlife habitat, and

WHEREAS, the VRWJPO adopted a second generation watershed management plan in June 2016, and

WHEREAS, Minnesota Statutes require local communities in the seven county metropolitan area, retaining permitting authority for water management activities, to adopt local watershed management plans, and

WHEREAS, the VRWJPO has determined that the Dakota County Rural Collaborative member communities may adopt the 2016 VRWJPO Watershed Management Plan as the local water management plan.

NOW, THEREFORE, BE IT RESOLVED, the Board of Supervisors of Vermillion Township hereby adopts the 2016 VRWJPO Watershed Management Plan by reference as the local water management plan for the Township within the Vermillion River Watershed.

Adopted this 17th day of April, 2018.

Board Chair

ATTEST:

Clerk