

City of Elko New Market

2030 Transportation Plan – June 19, 2009

Appendix A

2008 Elko New Market Comprehensive Plan

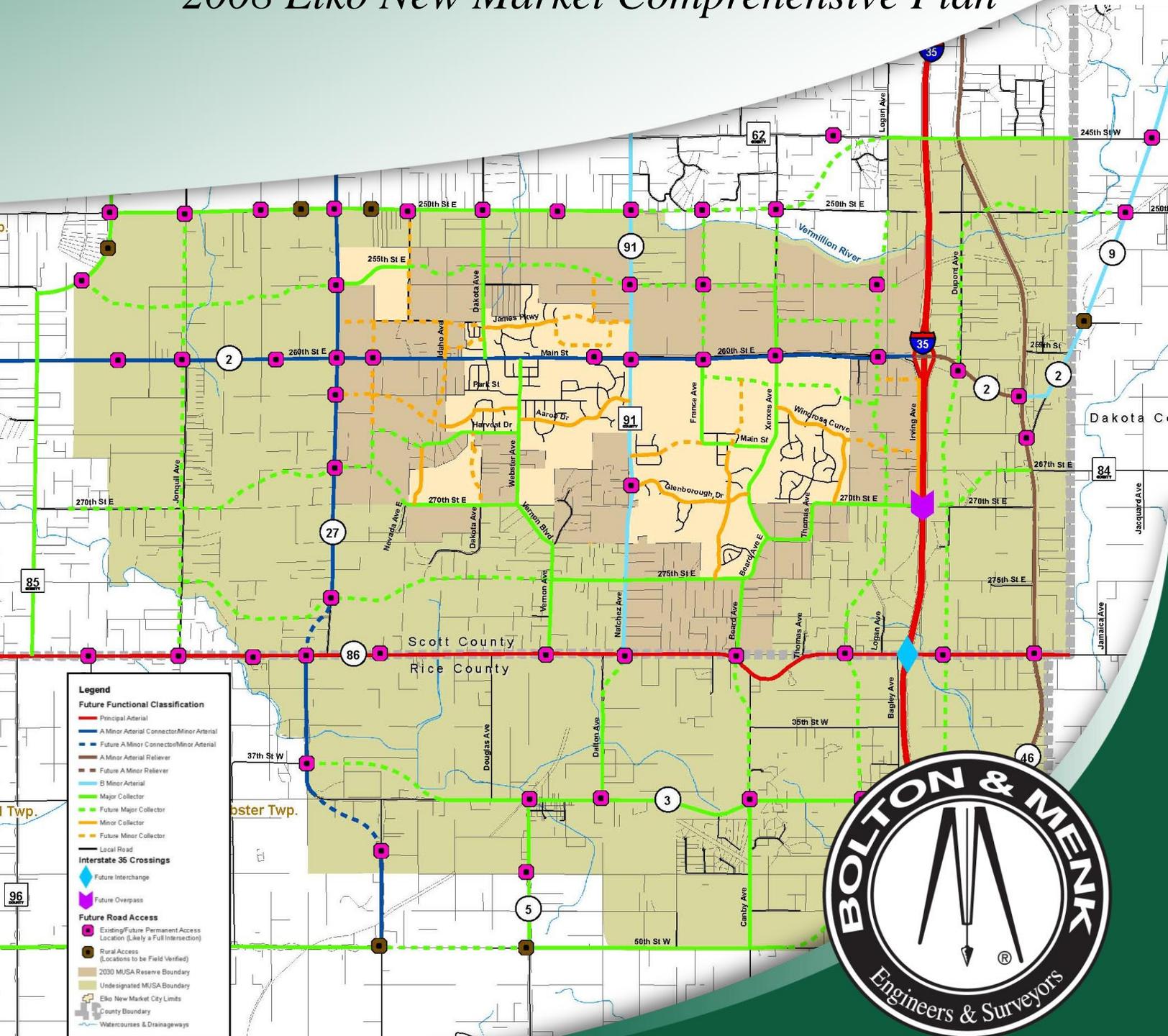


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I. PURPOSE OF THE TRANSPORTATION PLAN

The purpose of this Transportation Plan is to provide guidance to the City of Elko New Market, as well as existing and future landowners in preparing for future growth and development. As such, whether an existing roadway is proposed for upgrading or a land use change is proposed on a property, this Plan provides the framework for decisions regarding the nature of roadway infrastructure improvements necessary to achieve safety, adequate access, mobility, and performance of the existing and future roadway system. This Plan includes established local policies, standards, and guidelines to implement the future roadway network vision that is coordinated with respect to county, regional, and state plans in such a way that the transportation system enhances quality economic and residential development within the City of Elko New Market.

The Transportation Plan provides the rationale for future road needs and projects, but it also identifies the transportation related issues associated with growth that must be addressed as development proposals move forward. The interrelationships between the existing and needed transportation systems in accommodating growth, along with natural resources, have played a major role in shaping land use designations within the Study Area.

The Land Use Plan identified in Chapter V was developed based on the premise of maximizing the interrelationships of varying land uses. This has been accomplished through providing mixed use opportunities, through the Residential Mixed Use and Town Center Land Use designations that are located throughout the community. Another example of this is the interconnection of residential areas with non-residential areas through Major Collector roadways and trail systems.

This Plan is also intended to maintain system efficiency and maximize the public investment in the roadway system by:

- Offering the option for people to work where they live,
- Developing the ability for people to utilize different means to move about the community,
- Preserving roadway capacity and safety by developing an integrated roadway system that minimizes conflicts and ensures that roads are planned for and designed consistent with the functions the public needs them to serve. This may mean that local trips are accommodated without having to access the Arterial system. In addition to preserving capacity and safety on the Arterial roadways, this type of roadway system development also has the potential to reduce the amount and length of vehicle trips.

II. TRANSPORTATION SYSTEM PRINCIPLES AND STANDARDS

The transportation system principles and standards included in this Plan create the foundation for developing the transportation system, evaluating its effectiveness, determining future system needs, and implementing strategies to fulfill the goals and objectives identified.

A. FUNCTIONAL CLASSIFICATION

It is recognized that individual roads and streets do not operate independently in any major way. Most travel involves movement through a network of roadways. It becomes necessary to determine how this travel can be channelized within the network in a logical and efficient manner. Functional classification defines the nature of this channelization process by defining the part that any particular road or street should play in serving the flow of trips through a roadway network. Functional classification is the process by which streets and highways are grouped into classes according to the character of service they are intended to provide. Functional classification involves determining what functions each roadway should perform prior to determining its design features, such as street widths, speed, and intersection control.

The functional classification system typically consists of four major classes of roadways: Principal Arterials, Minor Arterials, Major Collectors, and Minor Collectors. The existing roadways are described below and illustrated in Figure 2.1 – Existing Roadway Functional Classification.

PRINCIPAL ARTERIALS

Roadways of this classification typically connect large urban areas to other large urban areas or they connect metro centers to regional business concentrations via a continuous roadway without stub connections. They are designed to accommodate the longest trips. Their emphasis is focused on mobility rather than access, and as such private access should not be allowed. They connect only with other Principal Arterials, interstate freeways, and select Minor Arterials and Collector Streets. Principal Arterials are responsible for accommodating thru-trips, as well as trips beginning or ending outside of the Elko New Market area.

Interstate (I) 35 is the only principal arterial in Elko New Market. I-35 stretches from Laredo, Texas, on the U.S.-Mexico border to Duluth, Minnesota.

MINOR ARTERIALS

Roadways of this classification typically link urban areas and rural Principal Arterials to larger towns and other major traffic generators capable of attracting trips over similarly long distances. Minor Arterials service medium length trips, and their emphasis is on mobility as opposed to access in urban areas. They connect with Principal Arterials, other Minor Arterials, and Collector Streets. Connections to Local Streets should be avoided if possible, and private access should not be allowed. Minor Arterials are responsible for accommodating thru-trips, as well as trips beginning or ending outside the Elko New Market area. Minor Arterial roadways are typically spaced approximately 1 – 2 miles apart in developing communities similar to Elko New Market.

In the Twin Cities Metropolitan Area, there is a further breakdown of Minor Arterial roadways to establish federal funding priorities, “A-Minor” and “B-Minor.” The A Minor Arterial classifications include Relievers, Expanders, Connectors, and Augmenters. As defined by the Twin Cities Metropolitan Council, Relievers provide ‘open up’ capacity for traffic on Metropolitan Highway Principal Arterials. Augmenters supplement the Principal Arterials within the Beltway. Expanders provide connection between developing areas outside the beltway, and connect Principal Arterials. Connectors provide links between rural town centers in the urban reserve and rural area. Figure 2.1 distinguishes between the types of Minor Arterial corridors.

Within the Elko New Market area County State Aid Highway (CSAH) 2, CSAH 86, CSAH 27, and Dakota County CSAH 9 are identified as Minor Arterials. CSAH 2 is an east/west route providing connectivity across southern Scott County between Dakota County CSAH 9 on the east and Scott County CSAH 11 on the west. CSAH 2 is the only interchange access to I-35 in Scott County.

CSAH 86 is an east/west route along the Scott County and Rice/Le Sueur County borders providing connectivity between the interregional corridors of Trunk Highway (TH) 52 in Dakota County and TH 169 west of the City of New Prague.

CSAH 27 is also a north-south corridor providing an alternative route for traffic to I-35. It currently begins at CSAH 86 and terminates at CSAH 16 in Savage. Rice County’s 2025 Transportation Plan includes a long-term vision for the corridor providing connectivity though west central Rice County to Steele County.

Dakota County CSAH 9 is an extension of CSAH 2. This route provides connectivity from Elko New Market to the northeast, terminating in Lakeville at CSAH 31 (Pilot Knob Road).

MAJOR COLLECTORS

Roadways of this classification typically link neighborhoods together within a city or they link neighborhoods to business concentrations. In highly urban areas, they also provide connectivity between major traffic generators. A trip length of less than 5 miles is most common for Major Collector roadways. A balance between mobility and access is desired. Major Collector street connections are predominately to Minor Arterials, but they can be connected to any of the other four roadway functional classes. Local access to Major Collectors should be provided via public streets and individual property access should be avoided. Major Collector streets are predominantly responsible for providing circulation within a city such as Elko New Market, and are typically spaced approximately ½ to 1 mile apart in urbanizing areas. According to the Metropolitan Council, CSAH 91 and CSAH 80 are classified as Major Collectors. Xerxes Avenue and Zane Avenue (Webster Avenue) are examples of Major Collector streets in Elko New Market.

MINOR COLLECTOR STREETS

Roadways of this classification typically include city streets and rural township roadways, which facilitate the collection of local traffic and convey it to Major Collectors and Minor Arterials. Minor Collector streets serve short trips at relatively low speeds. Their emphasis is focused on access rather than mobility. Minor Collectors are responsible for providing connections between neighborhoods and the Major Collector/Minor Arterial roadways. These roadways should be designed to discourage short-cut trips through the neighborhood by creating jogs in the roadway (i.e. not direct, through routes). CSAH 62 and France Avenue are functionally classified as a Minor Collector roadway in the Elko New Market area. City roadways such as Glenborough Drive and James Parkway currently function as Minor Collector streets in Elko New Market.

LOCAL STREETS

Roadways of this classification typically include city streets and rural township roadways, which facilitate the collection of local traffic and convey it to collectors and Minor Arterials. Their emphasis is to provide direct property access.

B. ROADWAY CAPACITY

Capacities of roadway systems vary based on the roadway's functional classification. From the Metropolitan Council Local Planning Handbook, roadway capacity per lane for divided arterials is 700 to 1,000 vehicles per hour and 600 to 900 vehicles per hour for undivided arterials. These values tend to be around 10% of the daily physical roadway capacity.

PRINCIPAL AND MINOR ARTERIALS

Based on the capacities noted above, a two lane arterial roadway has a daily capacity of 12,000 to 18,000 vehicles per day, a four-lane divided arterial street has a daily capacity of 28,000 to 40,000 vehicles per day, and a four-lane freeway has a daily capacity of approximately 70,000 vehicles per day. The variability in capacities are directly related to many roadway characteristics including access spacing, traffic control, adjacent land uses, as well as traffic flow characteristics, such as percentage of trucks and number of turning vehicles. Therefore, it is important that the peak hour conditions are reviewed to determine the actual volume-to-capacity on roadway segments with average daily traffic volumes approaching these capacity values.

MAJOR COLLECTORS AND MINOR COLLECTOR STREETS

Major Collector and Minor Collector streets have physical capacities similar to those of a two-lane arterial street; however the acceptable level of traffic on a residential street is typically significantly less than the street's physical capacity. The acceptable level of traffic volumes on Major Collectors and Minor Collector streets vary based on housing densities and setbacks, locations of parks and schools, and overall resident perceptions. Typically, traffic levels on Major Collector streets in residential/educational areas are acceptable when they are at or below 50% of the roadway's physical capacity, resulting in an acceptable capacity of 6,000 to 9,000 vehicles per day. Acceptable traffic levels on Minor Collector streets are considerably less. Typically, a daily traffic volume of 1,000 to 1,500 vehicles per day is acceptable on Minor Collector streets in residential areas.

Table 2.1 – Roadway Types and Capacities, identifies various roadway types and the estimated daily capacities that the given roadway can accommodate.

TABLE 2.1 – ROADWAY TYPES AND CAPACITY

Roadway Type	Daily Capacities
Gravel Roadway	Up to 500
Minor Collector Street	Up to 1,000
Urban 2-Lane	7,500 – 12,000
Urban 3-Lane or 2-Lane Divided	12,000 – 18,000
Urban 4-Lane Undivided	Up to 20,000
Urban 4-Lane Divided	28,000 to 40,000
4-Lane Freeway	Up to 70,000

The capacity of a gravel road is physically greater than 500 vehicles per day, but based on studies conducted by Minnesota counties, it has been determined that an average daily traffic (ADT) over 500 justifies paving the roadway. This is justified due to the maintenance costs of keeping a gravel road in working condition when ADT is over 500, and balancing this against the pavement costs, pavement life, and maintenance costs of a paved roadway with the same volumes.

The capacity of a transportation facility reflects its ability to accommodate a moving stream of people or vehicles. It is a measure of a supply side of transportation facilities. Level of Service (LOS) is a measure of the quality of flow. The concept of LOS uses qualitative measures that characterize operational conditions with a traffic stream and their perception by motorists. Six LOS are defined for roadways. They are LOS A, B, C, D, E, and F. LOS A represents the best operating conditions and LOS F represents the worst. The LOS of a multilane roadway can be dictated by its volume-to-capacity (v/c) ratio. The LOS of a two-lane roadway is defined in terms of both percent time-spent-following and average travel speed. LOS F is determined when v/c ratio is over 1.00. The criteria for LOS and general v/c ratio for multilane highways and speed for two-lane highways are provided in Table 2.2 below:

TABLE 2.2 – HIGHWAY LEVEL OF SERVICE

Level of Service	Multilane v/c Ratio	Two-Lane Average Travel Speed (mph)
A	<0.28	>55
B	>0.28 – 0.45	>50-55
C	>0.45 – 0.65	>45-50
D	>0.65 – 0.86	>40-45
E	>0.86 – 1.00	≤40
F	> 1.00	v/c >1.00

For roadways in urban sections, the urban street class and average travel speed determine the LOS. This is generally similar to the LOS for two-lane highways but takes into account the free flow speed of the facility (average speed achieved with no other vehicles present on roadway) and the addition of traffic control. This criterion identified in Table 2.3 below:

TABLE 2.3 – URBAN STREET LEVEL OF SERVICE

Range of Free-Flow Speed (LOS)	Average Travel Speed (mph)			
	55 to 45	45 to 35	35 to 30	35 to 25
A	>42	>35	>30	>25
B	>34-42	>28-35	>24-30	>19-25
C	>27-34	>22-28	>18-24	>13-19
D	>21-27	>17-22	>14-18	>9-13
E	>16-21	>13-17	>10-14	>7-9
F	≤16	≤13	≤10	≤7

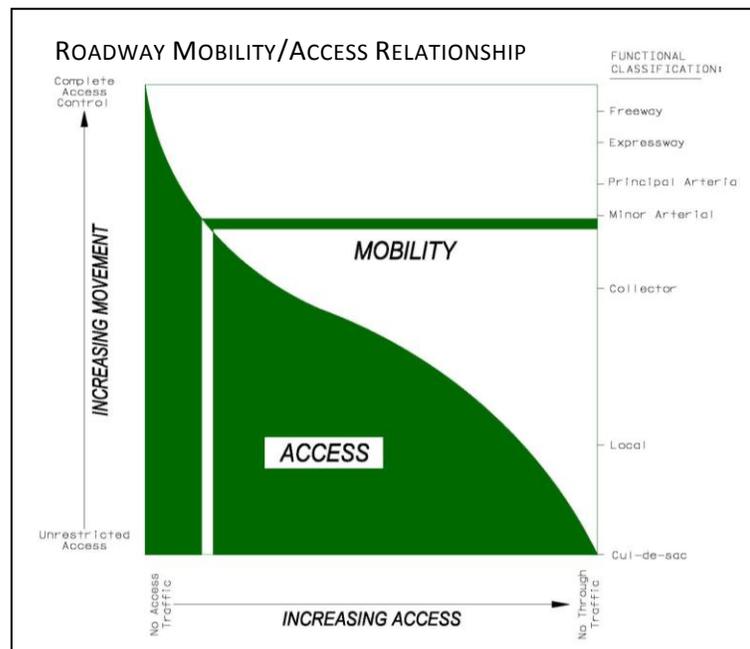
Generally, the City of Elko New Market should consider capacity improvements on roadways with a LOS D or worse and volume-to-capacity ratios over 0.75 during the peak hours.

C. ACCESS MANAGEMENT GUIDELINES

Access management guidelines are developed to maintain traffic flow on the network so each roadway can provide its functional duties, while providing adequate access for private properties to the transportation network. This harmonization of access and mobility is the keystone to effective access management.

Mobility, as defined for this Transportation Plan, is the ability to move people, goods, and services via a transportation system component from one place to another. The degree of mobility depends on a number of factors, including the ability of the roadway system to perform its functional duty, the capacity of the roadway, and the operational level of service on the roadway system.

Access, as applied to the roadway system in Elko New Market, is the relationship between local land use and the transportation system. There is an inverse relationship between the amount of access provided and the ability to move through-traffic on a roadway. As higher levels of access are provided, the ability to move traffic is reduced. The graphic below illustrates the relationship between access and mobility.



Each access location (i.e. driveway and/or intersection) creates a potential point of conflict between vehicles moving through an area and vehicles entering and exiting the roadway. These conflicts can result from the slowing effects of merging and weaving that takes place as vehicles accelerate from a stop turning onto the roadway, or deceleration to make a turn to leave the roadway. At signalized intersections, the potential for conflicts between vehicles is increased, because through-vehicles are required to stop at the signals. If the amount of traffic moving through an area on the roadway is high and/or the speed of traffic on the roadway is high, the number and nature of vehicle conflicts are also increased.

Accordingly, the safe speed of a road, the ability to move traffic on that road, and safe access to cross streets and properties adjacent to the roadway all diminish as the number of access points increase along a specific segment of roadway. Because of these effects, there must be a balance between the level of access provided and the desired function of the roadway.

In Elko New Market, access standards and spacing guidelines are recommended as a strategy to effectively manage existing ingress/egress onto City streets and to provide access controls for new development and redevelopment. The proposed access standards (driveway dimensions) are based on Minnesota Department of Transportation (Mn/DOT) State-Aid design standards. It should be noted that the City of Elko New Market has access authority for those roadways under their jurisdiction. Likewise, Scott County and Mn/DOT have access authority for roadways under their jurisdiction. To further the relationship of access and mobility throughout the Elko New Market area, the City supports managing access consistent with the roadway mobility and access relationship figure above and supports the access spacing guidelines of other roadway jurisdictions. Tables 2.4 and 2.5 below present the proposed access standards and access spacing for the Elko New Market roadway network based on the Recommended Future Roadway Functional Classification vision illustrated in Figure 4.1. Please refer to Scott County’s minimum access spacing guidelines identified in their current Transportation Plan.

TABLE 2.4 – ROADWAY ACCESS STANDARDS

Driveway Dimensions	Residential	Commercial or Industrial
Driveway Access Width	11' – 22' (16' desired)	16' – 32' (32' desired)
Minimum Distance Between Driveways	20'	20'
Minimum Corner Clearance from a Collector Street	60'	80' ⁽¹⁾

⁽¹⁾ At the discretion of the City Engineer, 80' minimum

TABLE 2.5 – ACCESS SPACING GUIDELINES FOR COLLECTOR ROADWAYS IN ELKO NEW MARKET ⁽¹⁾

Type of Access by Land Use Type	Major Collector	Minor Collector
Low & Medium Density Residential		
Private Access	Not Permitted ⁽²⁾	As Needed ⁽³⁾
Minimum Corner Clearance from a Collector Street	660'	300'
Commercial, Industrial or High Density Residential		
Private Access	Not Permitted ⁽²⁾	As Needed ⁽³⁾
Minimum Corner Clearance from a Collector Street	660'	660'

⁽¹⁾ These guidelines apply to City streets only. Scott County and Mn/DOT have access authority for roadways under their jurisdiction. Please refer to Scott County's minimum access spacing guidelines identified in their current Transportation Plan.

⁽²⁾ Access to Major Collectors is limited to public street access. Steps should be taken to redirect private accesses on Major Collectors to other local streets. New private access to Major Collectors is not permitted unless deemed necessary.

⁽³⁾ Private access to Minor Collectors is to be evaluated by other factors. Whenever possible, residential access should be directed to non-continuous streets rather than Minor Collector roadways. Commercial/Industrial properties are encouraged to provide common accesses with adjacent properties when access is located on the Minor Collector system. Cross-traffic between adjacent compatible properties is to be accommodated when feasible. A minimum spacing between accesses of 660' in commercial, industrial, or high density residential areas is encouraged for the development of turn lanes and driver decision reaction areas.

D. GEOMETRIC DESIGN STANDARDS

Geometric design standards are directly related to a roadway's functional classification and the amount of traffic that the roadway is designed to carry. For the City of Elko New Market, geometric design standards were developed based on Mn/DOT State-Aid standards. The proposed geometric design standards for Major and Minor Collector roadways are illustrated in Figures 2.2 and 2.3 respectively.

The Geometric Design Standards illustrated in Figures 2.2 and 2.3 were developed to achieve adequate capacity within the roadway network, as well as a level of acceptance by adjacent land uses. Each component identified in the typical sections is essential to a particular roadway's ability to perform its function in the roadway network.

COUNTY AND STATE ROADWAYS

In addition to these standards for City Collector roadways, the County Arterial and Collector roadways shall include components of the City's transportation system. For each of the County highways within Elko New Market, a 10' bituminous trail is recommended on both sides of the roadway to accommodate pedestrian, bicycle, and other non-motorized travel.

ROADWAY WIDTH

Roadway and travel lane widths are directly associated with a roadway's ability to carry vehicular traffic. On Major Collector roadways and Minor Collector streets, a 12' lane is required for each direction of travel. The 24' total travel width is needed to accommodate anticipated two-way traffic volumes without delay. In addition to the travel width, minimum shoulder/parking lane widths are also required to accommodate parked or stalled vehicles. Roadway widths not meeting the Geometric Design Standards will result in decreased performance of the particular roadway and additional travel demand on the adjacent roadway network components. For example, a sub-standard Major Collector roadway may result in additional travel demand on an adjacent Minor Collector street resulting in an overburden for adjacent landowners. Similarly, additional local circulation may result on an adjacent Minor Arterial resulting in reduced mobility for regional trips.

SIDEWALK/TRAIL

Sidewalks and/or trails are recommended to be adjacent to all Minor Collector, Major Collector, and Minor Arterial roadways within Elko New Market to accommodate pedestrian, bicycle, and other non-motorized travel in a safe and comfortable manner. These roadways are expected to carry a significant amount of vehicular traffic and separation of travel modes is necessary. At the discretion of the City, in commercial and industrial areas, the requirements for trails and sidewalks may vary to accommodate additional pedestrian and bicycle traffic to provide connectivity according to the Master Trail Plan.

Along Minor Arterials, a 10' bituminous trail is recommended on both sides of the roadway. Similar to the type of travel on the adjacent roadway, the trail will accommodate higher volume and longer pedestrian and bicycle trips. A 10' width would better accommodate two-way travel safely.

Along Major Collectors and Minor Collectors, an 8' bituminous trail and 6' concrete walk is recommended on either side of the roadway to accommodate local pedestrian and bicycle travel. The pedestrian facilities on both sides of the roadway allow for pedestrian travel within the corridor without introducing excessive crossing demand on Major Collectors. With the anticipated vehicular volumes of Minor Collector streets, pedestrians can safely cross the roadway, however, pedestrian travel along the roadway may become uncomfortable. The 6' concrete walk and 8' bituminous trail will accommodate pedestrian travel along the corridor as well as provide a safe, comfortable link between lower volume residential streets and the other pedestrian facilities within the community.

MEDIANS

Medians are recommended on several Major Collector roadways under the jurisdiction of the City. Medians on Major Collector roadways assist in accommodating significant vehicular volumes at acceptable travel speeds for adjacent land uses. While maintaining the travel lane widths required for traffic, the total pavement width is reduced, creating a more appealing and acceptable travel corridor. Trees and other landscaping can be included within medians on City Major Collector roadways, provided they do not compromise minimum clear zone requirements and do not interfere with traffic control devices. Medians also allow for more comfortable pedestrian crossings of Major Collector roadways by providing a safe haven for pedestrians to assess crossing opportunities one direction of vehicular travel at a time.

DESIGN SPEED

The design speed of a roadway is directly related to the roadway's function in the roadway system. The focus of Minor Arterial roadways is mobility; therefore these roadways should be designed to accommodate higher travel speeds. Likewise, Minor Collector roadways are more focused on accessibility and should be designed to accommodate lower travel speeds. The function of Major Collectors is balanced between mobility and accessibility; therefore these roadways should be designed accordingly. Table 2.6 below presents the recommended design speed for the Elko New Market roadway network:

TABLE 2.6 – ROADWAY DESIGN SPEED GUIDELINES

Functional Classification	Design Speed ⁽¹⁾
Minor Collector Street	30 mph
Major Collector Roadway	35 – 40 mph
Minor Arterial Roadway	45 – 55 mph

⁽¹⁾ At the discretion of the City Engineer for City roadways, with approval by the City Council

RIGHT-OF-WAY WIDTH

Right-of-way width is directly related to the roadway's width and its ability to carry vehicular and pedestrian traffic in a safe and efficient manner. The roadway right-of-way widths identified in Figures 2.2 and 2.3 are the minimum required for Major and Minor Collector streets, respectively. For Minor Collector streets in residential areas, a minimum right-of-way width of 80' is necessary for the added roadway width, as well as to provide added setback distance between the roadway and homes along the roadway. Right-of-way widths greater than 100' will be required on Major Collector roadways within commercial areas to accommodate the potential for higher traffic volumes and the need for additional lanes. All right-of-way requirements may be increased at the discretion of the City Engineer, with approval by the City Council. Please refer to Scott County's right-of-way requirements for county roads in their current Transportation Plan. The City should obtain identified local, county, and state right-of-way through the platting process to accommodate long-term roadway and sidewalk/trail needs.

ROAD STRIPING

Consistent with Part 3 of the Minnesota Manual of Uniform Traffic Control Devices, centerline markings are to be placed on roadways 16 feet or wider with the following characteristics:

- Paved collectors with a traveled width of 20 feet or more and an ADT of 4,000 vehicles per day or greater
- Paved two-way streets with three or more lanes for moving motor vehicle traffic
- Rural collectors that have a traveled width of 18 feet or more and an ADT of 3,000 vehicles per day or greater
- Other traveled ways where an engineering study indicates a need

Edge line markings are not to be placed where an engineering study or engineering judgment indicates that providing them is likely to decrease safety. They may be excluded based on engineering judgment, for reasons such as if the traveled way edges are delineated by curbs, parking, bicycle lanes, or other markings. They may be used where edge delineation is desirable to minimize unnecessary driving on paved shoulders or on refuge areas that have lesser structural pavement strength than the adjacent roadway. Edge line markings are to be placed on roadways with the following characteristics:

- Paved rural collectors with a traveled way of 20 feet or more in width and an ADT of 3,000 vehicles per day or greater
- At other paved streets where an engineering study indicates a need for edge line markings

E. ROADWAY JURISDICTION

Roadway jurisdiction directly relates to functional classification of roadways. Generally, roadways with higher mobility functions (such as arterials) should fall under the jurisdiction of a regional level of government. In recognizing these roadways serve greater areas resulting in longer trips and higher volumes, jurisdiction of Principal Arterial and Minor Arterial roadways should fall under the jurisdiction of the state and county, respectively. Similarly, roadways with more emphasis on local circulation and access (such as collectors) should fall under the jurisdiction of the local government unit. These roadways serve more localized areas and result in shorter trip lengths and lower volumes. Major Collector and Minor Collector roadways should fall under the jurisdiction of the City of Elko New Market. As roadway segments are considered for turn-back to the City, efforts will be taken to evaluate the roadway features for conformance to current standards, structural integrity, and safety. This effort will help the City develop short and long-range programs to assume the responsibilities of jurisdictional authority.

F. TRANSIT

It is recognized that various methods of travel impact the economic vitality of a city, county, or broader region. The term transit applies to all forms of sharing rides, regardless of whether the service is provided by a public or private operator, organization, or individual vehicle owner, or whether the ridesharing arrangements are formal or informal. Most transit rides, however, are provided by formal transit systems, at least during the morning and afternoon peak travel periods.

Based on the needs of a community, transit systems may be established to accommodate trips that are internal within the city (internal to internal), trips that begin in the city and end somewhere outside of the city (internal to external), and/or trips that begin outside of the city and end within the city (external to internal). An example of an internal to internal trip may be a trip that begins at a home in Elko New Market and ends at a place of employment such as the Elko Speedway. An internal to external trip may be a trip that begins at a home in Elko New Market and ends at the Scott County Government Center in Shakopee. A trip that begins at a home in Northfield and ends at the Eagle View Elementary School is an example of an external to internal trip.

Transit studies can evaluate current transit service performance and analyze the market to identify any unmet needs and to look for opportunities to enhance transit service. Generally, communities with dial-a-ride as an initial service explore the feasibility of providing a fixed route schedule to connect residents with businesses, schools, places to shop, and employment centers.

III. EXISTING TRANSPORTATION SYSTEM EVALUATION

The existing transportation system within the City of Elko New Market currently provides sufficient transportation service to the City. Development that has occurred since 2000 is in a curvilinear street pattern, and CSAH 2 and CSAH/CR 91 are relied upon for the movement of local traffic. As population and business attractions grow, increases in traffic volumes have the potential to negatively impact the CSAH 2 downtown area by reducing pedestrian mobility, increasing traffic congestion, and increasing parking problems. The City's ability to develop adequate Major Collector roadways is critical to maintain a satisfactory roadway system and preserve the downtown area of Elko New Market as a desirable commercial area.

A. SAFETY

CSAH 2 in the downtown New Market area presents challenges in operating this Minor Arterial safely and efficiently. The narrow corridor and closely spaced intersections typically results in higher accident rates and increased delay. Pedestrian travel characteristic in a downtown area will also become more hazardous as vehicular volumes continue to increase.

Due to the age of the roadways in the older developed areas, many of the existing roadways do not meet today's design standards for safety. Stopping sight distance and intersection sight distance are substandard at many locations on the county, city, and township roadways.

A planning-level analysis of the existing transportation system in Elko New Market was completed and included evaluating crash records for the types of accidents most commonly occurring and where accident trends may exist. In the five year time period from January 1, 2002 through December 31, 2006 there were 54 crashes on the roadways within the City of Elko New Market. The location with the highest accident frequency is at the intersections of CSAH 2 at CSAH 91/CR 91. This intersection has a crash rate that is triple the state average for similar intersections. Of the 54 crashes, 14 included injuries, 12 had possible injuries, and 28 involved property damage only. Rear end crashes represented 26% of the crashes, and 15% were right angle crashes. A crash analysis was also completed within the 2030 growth boundary. There were no intersections with high frequency crash rates.

B. CONTINUITY

The existing transportation system lacks Major Collector roadways within the City, resulting in an over reliance on the Minor Arterial roadways for local circulation and connectivity. The use of the Minor Arterials for local traffic is hazardous due to slower moving, weaving vehicles on the higher speed regional roadways impeding the highway's ability to provide regional mobility. The City's ability to develop adequate Major Collector roadways is critical to maintain a satisfactory roadway system in the Elko New Market area.

The lack of a CSAH 86 interchange at I-35 limits its ability to function as a Minor Arterial roadway and results in an over reliance on CSAH 2. Additionally, north-south roadway connectivity across the Scott County/Rice County boundary is inadequate. Currently, Scott CSAH 27 and Scott CSAH 91 intersect CSAH 86 at T-intersections along the county boundary. Rice CSAH 3 also intersects CSAH 86 at a T-intersection, located approximately 1/6 mile west of the CSAH 27 intersection. A plan currently under development by the counties will align Scott CSAH 27 and Rice CSAH 3. Rice CSAH 5, a north-south roadway connecting to TH 19, currently terminates at CSAH 3 in Webster, approximately 1 mile south of the CSAH 86/CSAH 91 intersection.

The existing CSAH 62 overpass of I-35 is underutilized due to the lack of east-west continuity. CSAH 62 provides west of CSAH 91 and east of CSAH 46. A more continuous east-west alignment will better utilize this crossing and reduce the over reliance on CSAH 2.

C. TRAFFIC VOLUMES

The existing traffic volumes within the area were collected from Mn/DOT and are represented in Figure 3.1 – Existing Average Daily Traffic Volumes & Levels of Congestion. Analysis of these volumes, together with the roadway segment capacity characteristics (i.e. segment design type and capacity) indicates that the system operates well roadways within Elko New Market. Two roadway segments within the Elko New Market area are currently operating at a periodically congested level (level of service C). These segments are I-35, from south of CSAH 86 to north of CR 62, and CSAH 2 from Zane Avenue (Webster Avenue) to CSAH 27. Additional data regarding segment design type and capacity is available within Appendix B.

Capacity improvements are recommended on any roadway with a future level of service of D, E, or F, as defined in the roadway capacity discussion within the Transportation System Principals and Standards section. Roadways identified above as near congested (having a volume to capacity ratio between 0.75 and 1) or congested (having a volume to capacity ratio greater than 1) are recommended to be monitored and programmed for capacity improvements when necessary. Roadways that are periodically congested (having a volume to capacity ratio between 0.5 and 0.75) are generally identified as providing an acceptable level of service.

D. JURISDICTION

France Avenue (previously CSAH 33) was recently transferred from Scott County to the City of Elko New Market. In the 2005 Southeast Scott County Comprehensive Plan, as well as the draft Scott County 2030 Comprehensive Plan Update, 250th Street from CR 87 to CSAH 27 is identified as a possible future county road. There are no other roadways identified for jurisdictional transfer in the Elko New Market area.

E. RELEVANT AREA TRANSPORTATION STUDIES

The Draft 2030 Scott County Comprehensive Plan Update and Rice County Transportation Plans provide direction relative to the development of the roadway system in and around the City of Elko New Market.

DRAFT 2030 SCOTT COUNTY COMPREHENSIVE PLAN UPDATE

The Draft Scott County Comprehensive Plan Update does not identify any capacity improvements in or around the Elko New Market area. The plan does identify that as southern Scott County experiences growth and development, expansion of the CSAH 2 interchange will be needed. It also states that the feasibility of a new interchange at CSAH 86 should be evaluated to provide a direct route between TH 169 and I-35 to avoid the constraints in downtown Elko New Market. Improving the continuity between CR 85 and CR 87, from CSAH 2 to CR 56 is also recognized.

RICE COUNTY TRANSPORTATION PLAN

The Rice County Transportation Plan recognizes the need to improve connectivity and continuity of routes with roadways in adjacent counties and illustrates them in a Countywide Roadway Continuity Corridor Vision figure. Routes envisioned for future study within the 2030 metropolitan municipal service area (MUSA) boundary or within the ultimate public utility service area include the following:

- Rice County CSAH 3 and CSAH 6 to Scott County CSAH 27. This route would provide connectivity through the lakes area of Rice County to Scott County CSAH 27 which extends north of CSAH 42, a Principal Arterial, in Savage. The plan also envisions long-term improvements to the south providing connectivity to Steele County CR 17 to US 14.
- Western I-35 frontage road. This route envisions a future corridor with Canby Avenue in Rice County to Beard Avenue in Scott County. Its purpose is to provide options to I-35 for the movement of local and regional traffic to reach planned commercial and industrial land uses at CSAH 86 and Scott County CSAH 2.

F. MULTIMODAL TRANSPORTATION OPPORTUNITIES

It is recognized that various methods of travel impact the economic vitality of a city, county, or broader region.

TRANSIT SERVICE

Elko New Market is currently outside of the transit taxing district. The Scott County Transit currently provides dial-a-ride service throughout the county. According to the Scott County Transit, “Dial-A-Ride” service is a reservation-only, shared ride transit service. Door-to-door assistance is available and buses are all wheelchair lift-equipped. Scott County Transit integrates with the Dial-A-Ride services of the surrounding communities to travel anywhere in the seven county metro area. Rides are reserved on a first-call, first-served basis up to 3 days in advance. The City currently does not have a regular-scheduled public transit alternative at this time.

The closest regular route transit services along I-35 are provided by Metro Transit and the Minnesota Valley Transit Authority (MVTA). According to the Dakota County Draft Transit Plan, the MVTA operates peak express service to downtown Minneapolis and downtown St. Paul, local service, and reverse commute services. The closest MVTA full service transit hub is located at TH 13 in Burnsville.

AVIATION PLANS/FACILITIES

The only aviation facility within Elko New Market is a personal use landing strip located between Dupont Avenue and CSAH 46, north of CSAH 2. The City is outside of the “Airport Influence Area,” with Air Lake Airport in Lakeville being the closest Metropolitan Airport identified in the Metropolitan Council’s Transportation Policy Plan. However, the City is required to include standards for airspace protection in its Comprehensive Plan and local controls.

SIDEWALKS AND TRAILS

Section II–D recommends for each of the County highways within Elko New Market a 10’ bituminous trail on both sides of the roadway to accommodate pedestrian, bicycle, and other non-motorized travel. The Draft 2030 Elko New Market Park & Trail Plan includes a park and trail inventory, goals and policies, and plan for future facilities. This vision coincides with the trails identified in this plan.

The Metropolitan Council identifies a regional park search area in southwest Dakota County. Scott County’s draft 2030 Comprehensive Plan Update includes a Regional and County Trail System illustrated below. A proposed trail is located along CSAH 2 between the future regional park in southwest Dakota County to the Blakeley Bluffs regional park search area in southwest Scott County. A trail is also identified near CR 85 to connect the future trail on CSAH 2 and the future Doyle-Kennefick Regional Park. At this time, these trail corridors do not have a regional status. It is anticipated that Scott County will seek regional status of these trail corridors during the next Regional Parks Policy Plan update process.

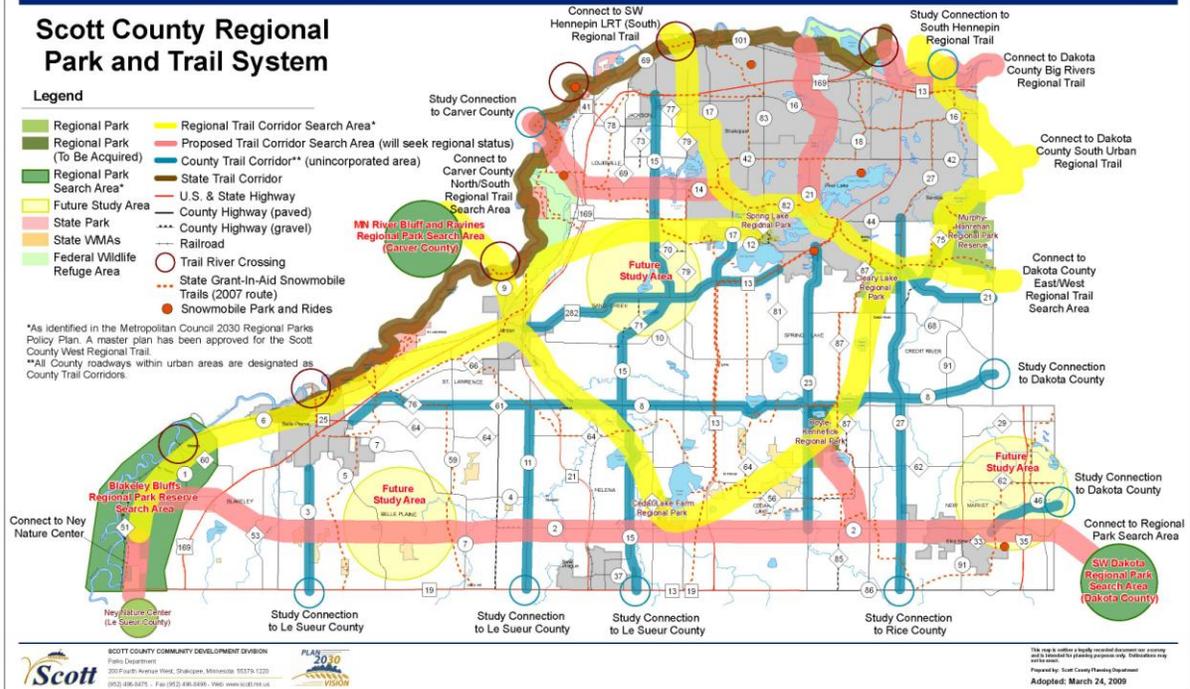
Scott County 2030 Comprehensive Plan Update

Scott County Regional Park and Trail System

Legend

- Regional Park
- Regional Park (To Be Acquired)
- Regional Park Search Area*
- Future Study Area
- State Park
- State WMAs
- Federal Wildlife Refuge Area
- Regional Trail Corridor Search Area*
- Proposed Trail Corridor Search Area (will seek regional status)
- County Trail Corridor** (unincorporated area)
- State Trail Corridor
- U.S. & State Highway
- County Highway (paved)
- County Highway (gravel)
- Railroad
- Trail River Crossing
- State Grant-In-Aid Snowmobile Trails (2007 route)
- Snowmobile Park and Rides

*As identified in the Metropolitan Council 2030 Regional Parks Policy Plan. A master plan has been approved for the Scott County West Regional Trail.
 **All County roadways within urban areas are designated as County Trail Corridors.



SCOTT COUNTY COMMUNITY DEVELOPMENT DIVISION
 Parks Department
 200 Fourth Avenue West, Shakopee, Minnesota 55379-1220
 (952) 496-3471 • Fax (952) 496-8499 • Web: www.scotcountymn.us



This map is neither a legally binding document nor a warranty and is intended for planning purposes only. Distortions may exist.
 Prepared by: Scott County Planning Department
 Adopted: March 24, 2009

IV. FUTURE TRANSPORTATION SYSTEM

The transportation system in the Elko New Market area is in a rural to urban transition in response to the rapid growth experienced since 2000 and the anticipated growth for this area. As growth continues to occur, it will be important for the City to develop a roadway system that is efficient and consistent with the transportation system principles and standards outlined in Section II.

A. FUTURE ROADWAY CORRIDORS

Figure 11 – Southeast Scott County Ultimate Land Use Plan (Ultimate Land Use Plan) of the Comprehensive Plan illustrates the planned future land uses within an ultimate public utility service area boundary. A supporting future road network has been developed in consideration of long-term growth in the area and is illustrated in Figure 4.1 – Recommended Future Roadway Functional Classification. This network was developed in consideration of the long-term land use vision for the area, the draft Scott County 2030 Comprehensive Plan Update, and the various plans outlined in Section III–D.

A suitable arterial-collector system to accommodate future development and traffic patterns is necessary in the growing community of Elko New Market. The existing county and state highways have historically provided much of the local circulation and connectivity; however these roadways will not be capable of meeting both the future local and regional travel demands. A city collector system consisting of Major Collector roadways and Minor Collector streets is needed to provide acceptable local circulation and access to developing areas, as well as to enable the Principal Arterial and Minor Arterial roadways to serve longer, regional travel. It is not anticipated that all of the proposed collector streets will be constructed by 2030; rather, collector streets should be constructed as development occurs. Additional studies will be necessary to determine specific roadway alignments and intersection spacing. An example of an area needing further study by the City of Elko New Market, Scott County, Rice County, Mn/DOT and other adjacent jurisdictions is the intersection/potential interchange at CSAH 86 and I-35.

The roadway corridors identified are conceptual, based on network needs, and should be used as a guide for development of the City's roadway system. In most cases, the actual roadway alignments are flexible to meet the needs of future development, at the discretion of the City Engineer. New or re-designated roadways necessary to support the land uses identified in Figure 11 – Ultimate Land Use Plan and future traffic growth are mentioned below. The following describes the long-term roadway network vision recommended for new Major Collector roadway corridors within the ultimate public utility service area boundary:

NEW EAST-WEST MAJOR COLLECTOR ROADWAYS

250th Street – The development of this corridor across the northern limits of the future urban development area will play a critical role in the Elko New Market transportation system. With the potential relocation of the CR 62/I-35 overpass to this alignment, this corridor will provide critical local circulation and will relieve the local travel demand on CSAH 2. With the utilization of the existing Scott County Road 56 and Dakota County Road 80 alignments, this corridor has the potential to provide sub-regional circulation between western Dakota County and southeastern Scott County without reliance on the arterial roadways.

255th Street – Like the 250th Street corridor, this Major Collector will play an important role in conveying local traffic to business concentrations and the arterial roadways. It will connect developing residential areas in Elko New Market to commercial nodes without reliance on CSAH 2.

258th Street – This Major Collector roadway will serve as an access roadway for the commercial area north of CSAH 2 and east of Xerxes Avenue. This relatively short Major Collector will provide essential east-west travel and access within the future retail commercial area and will eliminate the need for direct property access on CSAH 2.

262nd Street – Similar to the 258th Street corridor, this Major Collector will serve as an access roadway for the commercial area south of CSAH 2 and east of France Avenue. This relatively short Major Collector will provide essential east-west travel and access within the future retail commercial area and will eliminate the need for direct property access on CSAH 2.

275th/270th Street – This Major Collector roadway across the southern portion of the future urban area will play a critical role in the Elko New Market transportation system. This corridor is essential in providing local circulation and connectivity without reliance on the arterial roadways. With the recommended I-35 crossing and extension to Dakota County Road 84, this corridor has the potential to provide sub-regional circulation between western Dakota County and southeastern Scott County without reliance on the arterial roadways. This east-west Major Collector roadway will serve as a local reliever to CSAH 86, particularly as CSAH 86 becomes more utilized with an I-35 interchange.

NEW NORTH-SOUTH MAJOR COLLECTOR ROADWAYS

Jonquil Avenue – This Major Collector roadway will collect future residential traffic and provide important local circulation and continuity without relying on CSAH 27. This route will distribute traffic to the arterial roadways of CSAH 2, 86, and 27.

France Avenue – This Major Collector roadway currently links the downtown Elko area and Elko Speedway with CSAH 2. The extension of this corridor north of CSAH 2 will establish local connectivity to future residential areas and these commercial/service areas.

Xerxes Avenue – This Major Collector roadway currently serves, and will continue to serve as the backbone of the City’s Collector roadway system. With continued upgrades to this roadway, it will provide an essential continuous north-south connection.

Logan Avenue – This future Major Collector roadway will provide an essential continuous north-south link along the west side of I-35 through the commercial/industrial nodes at CSAH 2 and CSAH 86. The development of this corridor is critical in establishing local connectivity between existing and future residential areas with the future commercial/service nodes without reliance on the arterial roadways.

Dupont Avenue – Similar to the future Logan Avenue corridor, the Dupont Avenue corridor will provide an essential continuous north-south link along the east side of I-35 through the commercial/industrial nodes at CSAH 2 and CSAH 86.

MINOR COLLECTORS

Astute land use planning and subdivision plat review are key to ensuring an adequate local roadway network is developed and future local street traffic issues are avoided. Minor Collector streets are designed to carry traffic to higher-level roadways. They typically do not carry trips through an area; rather they connect non-continuous local streets and provide individual property access.

One of the primary issues facing developing communities around the Twin Cities Metropolitan area is a perception of excess traffic on “local” streets. The physical ability of these streets to carry traffic typically far exceeds the acceptable traffic levels for those property owners along the street. Minor Collector streets in residential areas must be identified during the preliminary platting process and design measures taken to provide acceptable conditions for the future owners of the adjacent lots. As a rule of thumb, one Minor Collector street connection to a Major Collector roadway is needed for each 100 housing units. For example, a developing area with a capacity of 400 homes should have at least four Minor Collector connections to the Major Collector network. If evenly distributed, these connections will ensure the Minor Collector streets will not be required to carry an unacceptable level of traffic. These Minor Collector streets should be continuous through multiple developments, but not necessarily continuous between Major Collectors. Direct, continuous Minor Collectors that connect between Major Collectors should be carefully considered, as they are often used as short cuts for travelers and tend to result in traffic volume levels unacceptable to the affected neighborhoods.

B. FORECASTED TRAFFIC VOLUMES

Average annual daily traffic volumes were forecasted for Major Collector, Minor Arterial, and Principal Arterial roadways based on the future land use vision identified in Figure 10 - 2030 Undesignated MUSA Reserve Ultimate Land Use Plan of the Comprehensive Plan. These future traffic volumes are illustrated in Figure 4.2 – 2030 Forecasted Average Daily Traffic Volumes. Existing traffic volumes were obtained from Mn/DOT, and assumed traffic growth rates were also factored.

Household, population, and employment projections were developed for the geographic area identified as within the 2030 undesignated metropolitan urban service area (MUSA) reserve boundary and were based on the land use assumptions (i.e. dwelling units, persons per household, and employees per net acre) provided for in the Comprehensive Plan. The 2030 socioeconomic allocations by transportation analysis zone are provided in Appendix A.

Figure 4.2 – 2030 Forecasted Average Daily Traffic Volumes identifies the average annual daily traffic volumes forecasted for Major Collector, Minor Arterial, and Principal Arterial roadways. This information will serve as the basis for the City of Elko New Market to make decisions on roadway design features to accommodate long-term planned growth.

C. ROADWAY SAFETY & CAPACITY NEEDS

The forecasted average annual daily travel demands approach or exceed daily capacities on several corridors, as well as some gravel roads located on the periphery of the 2030 undesignated MUSA reserve boundary. Generally, the recommended Geometric Design Standards and associated right-of-way width requirements illustrated in Section II–D (Geometric Design Standards) will provide sufficient capacity to accommodate the forecasted traffic volumes on the City’s roadways. Table 2.1 – Roadway Types and Capacities identifies various roadway types and the daily capacities that the given roadway can accommodate.

Roadway characteristics and forecasted peak hour traffic volumes were reviewed to anticipate the level of traffic congestion anticipated on various roadway segments in 2030. Figure 4.3 – 2030 Peak Hour Levels of Congestion displays the existing roadway segments where capacity improvements will be needed to accommodate the future traffic volumes identified in Figure 4.2. Appendix B further describes historical and 2030 traffic volumes and capacities.

Given the employment and residential characteristics of the Elko New Market area and this part of the region, several County roadways are anticipated to have a highly directional flow of traffic during the morning and evening peak travel periods. For example, morning traffic is anticipated to head north towards the Twin Cities Metropolitan Area to places of employment, and evening traffic south back to the Elko New Market area. As a result, roadway and intersection capacity improvements may be necessary to address peak hour levels of congestion, even though daily traffic volumes appear to be within an acceptable range for a given roadway type. Additionally,

unless at a controlled intersection, it can be expected that drivers may have a difficult time accessing a particular roadway during the peak travel periods. The development of the future roadway network illustrated in Figure 4.1 is necessary to provide alternatives to the routes recommended for capacity improvements.

Capacity improvements are recommended on any roadway with a future level of service of D, E, or F, as defined in Section II–B. Roadways identified on Figure 4.3 as near congested (having a volume to capacity ratio between 0.75 and 1) or congested (having a volume to capacity ratio greater than 1) are recommended to be monitored and programmed for capacity improvements when necessary. Roadways that are periodically congested (having a volume to capacity ratio between 0.5 and 0.75) are generally identified as providing an acceptable level of service. Corridors and associated strategies recommended for capacity improvements are summarized for each roadway identified below with a volume to capacity ratio over 0.5.

STATE ROADWAYS

Based on current travel trends, congestion on I-35 is anticipated to increase. By approximately 2030, I-35 is anticipated to be congested north of CSAH 2, with traffic volumes nearly doubling 2006 volumes to approximately 71,000 vehicles per day. South of CSAH 2, I-35 is anticipated to be near congested. The I-35 southbound ramp to CSAH 2 and the CSAH 2 to I-35 northbound ramps are forecasted to be congested. The existing interchange also contributes to forecasted congestion on CSAH 2 due to the lack of capacity associated with the ramps and 2-lane bridge.

COUNTY ROADWAYS

Several County roadways are forecasted to be periodically congested, near congested, or congested during the peak travel hours as development increases and travelers seek alternative routes to access I-35 or avoid it entirely. The City will need to work with Scott County to preserve right-of-way, review and monitor traffic volumes and intersection operations, obtain additional right-of-way, as well as stage and fund improvement strategies that will become necessary as development occurs.

Following is an overview of the levels of congestion forecasted for County roadways

- CSAH/CR 91 - Between CSAH 86 and Glenborough Drive this roadway segment is anticipated to be periodically congested. Between Glenborough Drive and Aaron Drive, as well as north of CR 62, the segments are forecasted to be near congested. The segment between Aaron Drive and CR 62 is expected to be congested with volumes increasing from 1,600 in 2006 to approximately 13,700 in 2030. South of Glenborough Drive, the roadway is anticipated to approach the upper limits of capacity for a 2-lane rural roadway in an urban environment. To accommodate anticipated regional growth and growth anticipated in the City of Elko New Market, CSAH 91 should be considered for expansion to improve the mobility and safety of the corridor. A 2-lane urban road section between CSAH

86 and Glenborough Drive, a 3-lane road between Glenborough Drive and Aaron Drive, and a 4-lane divided road between Aaron Drive and CR 62 are anticipated to be needed. North of CR 62, the 2-lane rural section with turn and bypass lanes at intersections should be adequate. Controlled intersections will likely be necessary at CSAH 2, 250th Street, and 255th Street.

- CSAH 46 – This roadway is anticipated to be periodically congested between CSAH 86 and CSAH 2, and near congested north of CR 62. Intersection improvements are anticipated to be necessary at CSAH 2 to accommodate increased traffic.
- CR 62 – Between CSAH 91 and Xerxes Avenue, the roadway is anticipated to be periodically congested. Between Xerxes Avenue and CSAH 46, is anticipated to be near congested with volumes increasing from 940 in 2006 to 5,500 to 6,200 by 2030. Specific improvements are not recommended for this corridor.
- CSAH 2 – Recent and planned improvements between I-35 and Idaho Avenue will generally provide adequate mobility for existing and planned growth within the Elko New Market area. Limitations associated with the interchange and 2-lane bridge reduce mobility on CSAH 2 east of Xerxes Avenue. In the historic downtown of New Market, there are other constraints that limit CSAH 2's mobility. As opportunities unfold to provide off-street parking or areas in the downtown are considered for redevelopment, careful consideration should be given to re-orientate access away from CSAH 2. Following are specific segment level of congestion descriptions.
 - Periodically Congested – from approximately 1/3 mile west of Texas Avenue to Zane Avenue (Webster Avenue); between Theresa Marie Drive and 1/3 mile east of Xerxes Avenue
 - Near Congested – between Zane Avenue (Webster Avenue) and Theresa Marie Drive; between 1/3 mile east of Xerxes Avenue and the future Major Collector located ¼ mile west of the southbound I-35 ramps (approximately Logan Avenue), between the I-35 northbound ramps and CSAH 46
 - Congested – between the future Major Collector located ¼ mile west of the southbound I-35 ramps (approximately Logan Avenue) and the I-35 northbound ramps

Controlled intersections will likely be necessary at Webster Street, CSAH 91, and Xerxes Avenue.

- CSAH 86 – This corridor will become increasingly important in providing regional mobility as growth occurs to the south and an interchange is eventually constructed with I-35. In the planning horizon of this plan, the corridor is

anticipated to be periodically congested between Rice County CSAH 3 and Vernon Avenue, between CSAH 91 and Bagley Avenue, and east of CSAH 46. Between Bagley Avenue and CSAH 46, the corridor is anticipated to be congested given the highly directional nature of the traffic flow. Specific improvements are not recommended for this corridor.

LOCAL ROADWAYS

Zane Avenue (Webster Avenue), between CSAH 2 and Harvest Drive, and Xerxes Avenue, between CSAH 2 and Main Street, are roadway segments anticipated to be periodically congested. This level of congestion is a result of these roads' roles in collecting traffic and distributing it to CSAH 2.

The future north-south Major Collector located approximately ¼ mile west of the CSAH 2 southbound interchange ramps (Logan Avenue alignment) is anticipated to be periodically congested. This is due to the amount of traffic generated by commercial land uses in the area, as well as the corridor's connectivity to residential areas.

Aaron Drive is anticipated to experience traffic volumes of approximately 2,500 vehicles per day. This volume of traffic may result in challenges in managing the expectations of land owners' along the road with direct driveway access. These traffic volumes are due to congestion on CSAH 2 in downtown New Market and the lack of alternative east-west routes south of 2 and west of CSAH 91.

Several gravel roadway corridors located outside of the City's urban growth boundary are projected to have high traffic volumes. Although the roads could handle the traffic, consistent maintenance would be required to keep them in working condition. Studies indicate that as volumes exceed 500 ADT, it becomes cost effective to pave the roadway. Since these corridors are not anticipated to be within the City's jurisdiction, it is recommended that during annexation discussions or prior to preliminary plat approval that the City work with the township and developer to upgrade and improve the corridor through a joint agreement with the developer, township, and City. The horizontal and vertical alignments of each corridor should be reviewed prior to paving, as motorists drive paved roadways more aggressively than gravel roadways, and higher travel speeds should be accounted for in the design. Tight, horizontal curves and limited sight distance over hills, which may have not been a problem with a gravel surface, can often result in immediate crash problems when the roadway is paved. Roadways identified for potential surfacing include

- 250th Street (between CSAH 46 and the Scott/Dakota County line)
- Vernon Boulevard (between Zane Avenue/Webster Avenue and 275th Street)
- 275th Street (between Vernon Avenue and CSAH 91)
- Dakota Avenue (between the 2030 MUSA Reserve Boundary and 250th Street)

- Xerxes Avenue (between the 2030 MUSA Reserve Boundary and CR 62).
- 250th Street (west of CSAH 91) is also anticipated to have high volumes. Additional details about this corridor are described in Section E.

INTERSECTIONS

Existing and proposed intersection locations may have inadequate sight distances. Sight lines at these locations may be obstructed due to horizontal and/or vertical curvature of the roadways, as well as other roadside obstructions. As future intersections are established or new land use developments route additional traffic to existing intersections, an engineering study will be required to determine the appropriate measures needed to achieve adequate intersection sight distances. These may include reconstruction of a portion of the existing through roadway, relocating the intersection, or other means to remove the sight obstruction. To accommodate necessary turn lanes, additional right-of-way may be required at the intersection.

Figure 4.3 identifies several potential locations that may require an intersection control evaluation. The intersection control evaluation will identify the traffic control option (e.g. all way stop, roundabout, possible signalization) and capacity improvements (e.g. turn lanes) necessary to accommodate the traffic volumes in a safe and efficient manner. Intersections along CSAH 2, CSAH 91, CSAH 46, and CR 62 should be designed to properly handle the anticipated traffic through the use of turn lanes and/or alternate traffic control (e.g. all way stop, roundabout, possible signalization) at all intersections and limiting Minor Collector access along the roadway as consistent with the standards in Section II. Direct driveway access should not be allowed. Access management, as outlined in Section II–C, will be an important tool in maintaining mobility on these roadways. Right-of-way should be acquired as properties in the area develop or redevelop.

D. MULTIMODAL

It is important for the community to plan for the ability to accommodate multimodal activities (i.e. transit, pedestrian, and bicycle) on all non-local roadways to provide other opportunities to move about the City and beyond.

TRANSIT SERVICE

Traffic volumes and levels of congestion are going to result in decreased mobility through and near the City, especially on I-35. To assist in managing travel demand on the corridor, the City should consider a park-and-ride location close to I-35 to help foster new car/van pools. As identified in the Draft Dakota County Transit Plan (2007), the I-35 corridor was studied by Mn/DOT to explore the feasibility of providing I-35W Bus Rapid Transit (BRT) service between downtown Minneapolis and Lakeville. Recommendations of the study included:

- Buses should operate at posted speeds in a shared BRT/high occupancy vehicle (HOV) lane
- On-line stations should be developed at Lake Street, 46th Street and in the vicinity of I-494
- A mix of express, station-to-station and local service should be provided
- The BRT/HOV lane should be completed to downtown Minneapolis
- The existing bus fleet should be utilized
- New service to Lakeville including a park-and-ride lot just north of County Road 50 should be established.

The Draft Dakota County Transit Plan (2007) further states that the Transportation's Urban Partnership Agreement (UPA) program will be providing funding to improve traffic flow on I-35W between downtown Minneapolis and the southern suburbs. Funding from the UPA will provide the following benefits to the I-35W BRT Corridor with anticipated completion by 2010

- Priced dynamic shoulder lanes, similar to the I-394 MnPASS, on I-35W from 46th Street to downtown Minneapolis
- Addition of a High Occupancy Toll (HOT) lane in the Crosstown reconstruction project from 66th Street to 46th Street
- Conversion of the High Occupancy Vehicle (HOV) lane to High Occupancy Toll (HOT) lane on I-35W from 66th Street to Burnsville Parkway
- Construction of additional park-and-ride lots along the I-35W corridor north and south of Minneapolis
- Construction of additional dedicated bus lanes in downtown Minneapolis
- Partnerships with major employers along the I-35W corridor to promote flex-time and telecommuting programs
- Use of additional Intelligent Transportation Systems technology

While the above noted improvements will assist with maintaining mobility on I-35, the City should continue to work with Scott County Transit to determine long term needs for additional service and opportunities to integrate with services provided in other cities and adjacent counties.

In addition to these recommendations, it is important for the community to plan for the ability to accommodate multimodal activities (i.e. transit, pedestrian, and bicycle) on all non-Local roadways to provide other opportunities to move about the city and beyond.

The typical sections for Minor and Major Collectors listed in Section II–D – Geometric Design Standards and Figures 2.3 and 2.4 include construction requirements for these off-street opportunities.

The City should consider reviewing pedestrian facilities and school routings to determine their adequacy as traffic conditions change. Sidewalks and trails, providing pedestrians a route to future controlled intersections, should be incorporated into road projects and land developments to safely accommodate pedestrian and traffic growth in the City.

AVIATION PLANS/FACILITIES

As noted in the discussion of the existing transportation system, the City of Elko New Market is required to include standards for airspace protection in its Comprehensive Plan and local controls.

Federal Regulation Title 14, Part 77 establishes standards and notification requirements for objects affecting navigable airspace. This notification serves as the basis for evaluating the effect of the construction or alteration on operating procedures, determining the potential hazardous effect of the proposed construction on air navigation, identifying mitigation measures to enhance safe air navigation, and charting of new objects. Notification allows the Federal Aviation Administration (FAA) to identify potential aeronautical hazards in advance, thus preventing or minimizing the adverse impacts to the safe and efficient use of navigable airspace.

Title 14, Part 77.13 requires any person/organization who intends to sponsor any of the following construction or alterations to notify the Administrator of the FAA when:

- Any construction or alteration exceeding 200 feet above ground level;
- Any construction or alteration:
 - Within 20,000 feet of a public use or military airport which exceeds a 100:1 surface from any point on the runway of each airport with at least one runway more than 3,200 feet
 - Within 10,000 feet of a public use or military airport which exceeds 50:1 surface from any point on the runway of each airport with its longest runway no more than 3,200 feet
 - Within 5,000 feet of a public use heliport which exceeds a 25:1 surface;
- Any highway, railroad or other traverse way whose prescribed adjusted height would exceed that above noted standards;
- When requested by FAA; and,
- Any construction or alteration located on a public use airport or heliport regardless of height or location.

Persons/organizations intending to sponsor construction/alterations which require notification to the FAA under Title 14, Part 77.13 shall notify the FAA using FAA form 7460–1 as may be amended.

The City's Zoning Ordinance should be amended to require persons/organizations intending to sponsor construction/alterations which require notification to the FAA under Title 14, Part 77.13 to notify the FAA using FAA form 7460-1 as may be amended.

BIKEWAYS, SIDEWALKS AND TRAILS

The City of Elko New Market's 2030 Park & Trail Plan discusses future bikeway, sidewalk and trail locations. Future shoulder, bikeway, sidewalk, and trail locations are also discussed in the geometric design standards section of this appendix, to be pursued along or adjacent to most collector roadways. For each of the County highways within Elko New Market, roadway shoulders, in addition to trails and/or sidewalks, are recommended on both sides of the roadway to accommodate pedestrian, bicycle, and other non-motorized travel.

The City will review pedestrian facilities and school routings to determine their adequacy as traffic conditions change. Shoulders, bikeways, sidewalks and trails will be integrated with the roadway system to provide routes for non-motorized traffic to access existing and future controlled intersections. Non-motorized facilities are to be incorporated into road projects and land redevelopments to safely accommodate pedestrians and bicycles with vehicle traffic in the City, as the City grows.

E. FUTURE STUDY AREAS

Several areas were identified within the Southeast Scott County Comprehensive Plan Update (2005) as needing additional attention. These study areas correspond to the locations illustrated on Figure 4.4 – Future Study Areas. Studies may include completing a detailed analysis to determine appropriate courses of action such as: providing alternative access to an area, realigning a segment of roadway, addressing land use/transportation conflicts, etc. Studies should be initiated prior to development approval in an area.

1. I-35/CSAH 2 interchange study – a preliminary interchange design to meet forecasted needs should be identified prior to development adjacent to the existing interchange.
2. CSAH 86 Principal Arterial Corridor Preservation Study – this study is intended to evaluate the long range right-of-way preservation needs for a future interchange at I-35/CSAH 86 to replace the existing overpass. The study is also envisioned to coordinate north/south road connectivity between Scott and Rice Counties prior to reconstruction of CSAH 86 or development occurring in the area near CSAH 91/Dalton Avenue, Beard Avenue/Canby Avenue, and the future north-south Major Collector located west of I-35/CSAH 86.
3. I-35 and 270th Street future overpass – encourage future study, official map, and collector road connection to CSAH 46.

4. Downtown New Market – future traffic volumes will impact viability of pedestrian traffic, parking, etc.; lane widening could impact existing buildings. A plan for the downtown should be developed.
5. CR 62 and 250th Street at CSAH 91 continuity – determine if a connection between the two intersections can be made. The Draft Scott County 2030 Comprehensive Plan Update notes that 250th Street is identified as a possible future County road terminating at CSAH 91. The CR 62 overpass of I-35, together with 250th Street, could serve as a continuous east-west roadway across Cedar Lake and New Market Townships and the City of Elko New Market.

V. GOALS & IMPLEMENTATION

The following goals and strategies outline the City of Elko New Market's plan for ensuring adequate infrastructure is available to support the growth anticipated within the urban growth boundary, as well as potential funding sources for completing necessary improvements.

A. GOALS

The transportation goals and implementation strategies identified have been developed to meet the needs of the land uses associated with the build-out of the urban growth boundary.

1. Comprehensive Transportation Planning – Approach transportation in a comprehensive manner by giving attention to all modes and related facilities through linking transit and land use and by combining or concentrating various land use activities to reduce the need for transportation facilities.
2. Transportation System – Create/provide a safe, cost effective, and efficient transportation system that is adequate for vehicular, pedestrian, bicycle, and truck transportation for the movement of people and goods and services in the community.
3. Arterial Roadway Crossings – The City should promote safe pedestrian crossings of arterial roadways.
4. Transportation & Economic Development – Create or encourage a transportation system that contributes to the economic vitality of the community by connecting people to work, shopping, and other activity generators/attractions and supports growth of commercial and industrial uses.
5. Regional Transportation Planning – Cooperate on a regional level in planning and development of a transportation system (i.e. I-35 Solutions Alliance and other potential organizations), including coordination among multiple jurisdictions, public and private transit providers and agencies at all government levels, while serving the functional needs of all.
6. Regionally-Focused Land Use and Transportation Planning – Consider cooperating with the Scott County Association for Leadership and Efficiency (SCALE) Transportation Task Force to establish and institutionalize a regionally-focused land use and transportation planning process that will ensure the preservation and effective management of both “green infrastructure” (parks, greenways, planned rural areas) and “gray infrastructure” (highways, bridges).
7. Regional Traffic Management – Work on a local, state, and regional level to reduce traffic congestion and safety concerns on transportation corridors.

8. I-35 Improvements – Work with agencies and organizations to study capacity needs and possible alternatives to improve transportation mobility on I-35 for the benefit of area residents and businesses.
9. Connections to I-35 – Improve connections to I-35 by reestablishing the study and eventually constructing an interchange at I-35 and CSAH 86.
10. Collector Streets – The location of collector streets promotes orderly development. As development plans are presented to the City, future collector streets should be designed to provide continuity and prudent access to other collector streets and arterials and adhere to the recommended access management guidelines and locations identified in Figure 4.1 – Recommended Future Roadway Functional Classification.
11. Local Streets – Local streets should be laid out to permit efficient plat layout while being compatible with the area’s topography, adjacent roadways, municipal utility plans and environmental constraints.
12. Transportation Improvement & Expansion – Improve and expand the existing transportation system as necessary to meet current and future transportation needs.
13. Maintain Existing Infrastructure – Preserve and maintain the existing transportation infrastructure to protect the significant investment, to increase its efficiency, and delay the need for improvement or expansion by use of a Capital Improvement Plan.
14. Municipal Services – As the street system continues to expand, street maintenance such as snowplowing, grading rural roadways, dust coating, routine maintenance, etc. will become increasingly important issues. Additional street construction will either increase contracted labor expenses or necessitate an expansion of the City’s services provided by the municipal public works department. Prior to approving proposed subdivisions, consideration should be given to the City’s ability to provide municipal services, facilities and equipment for snowplowing, street grading, minor street repair, dust-coating, etc. on either a contracted or staff basis.
15. Transit/Alternative Modes of Transportation – To diminish/prevent congestion, the City should encourage alternate and/or integrated transportation methods that are less dependent on motor vehicles. The City could promote and encourage walking and biking as alternate transportation methods. The City should strive to provide park and ride facilities near I-35 as a means of encouraging car-pooling and ride sharing. As the population ages and diversifies, bus service will become an important amenity in the community and should be further studied with Scott County Transit. Special attention should be given to improving pedestrian access, movement and crossings to provide both convenience and safety.
16. County Capital Improvement Plan – The City should continue to work with the County elected and appointed officials to include County Road reconstruction projects on the

County's Capital Improvement Plan to address needed reconstruction and potential trails along the roadways when improved.

17. Regional Transportation Funding – Pursue a balanced approach to financing transportation and other community needs at the local level based on current availability of services and facilities and maintenance of existing infrastructure.
18. Roadway Project Coordination – Continue to coordinate future road construction and reconstruction projects with all utility service providers and Scott County to ensure efficient repair/replacement and avoid duplicate costs.
19. Capital Improvement Plan – Develop a Capital Improvement Plan that contains elements for new construction and reconstruction of the roadway system, with scheduled maintenance included in annual budgets. Street maintenance should include routine patching, crack filling, and storm sewer cleaning. Implement a schedule for roadway maintenance and reconstruction (e.g. complete reconstruction or mill/overlay every 15 to 20 years), street widening/realignment, etc.
20. Zoning and Subdivision Ordinance Update – Update the Zoning and Subdivision Ordinances consistent with the Transportation Plan.
21. Right-of-Way Dedication – Require right-of-way dedication along state, county, and local roads to meet future capacity needs.
22. Development Driven Improvements – Work with developers to construct needed improvements prior to development.
23. Non-Development Driven Improvements – Non-development driven improvements should be prioritized and programmed in the Capital Improvement Program.
24. Minor Collector Review – review concept plans for plat and development proposals to evaluate the distribution of Minor Collector roadways so as to not overburden local streets.
25. Assessment Policy – Develop an assessment policy for Major Collector and Minor Arterial roadways to establish expectations and ensure consistent application.
26. Developer Agreements – Utilize developer agreements as a tool to ensure improvements are constructed as agreed upon in the platting or development process.
27. Traffic Impact Study Policy – Establish a policy outlining when a traffic impact study should be conducted, including acceptable information to be contained within the study.
28. Gravel Roadway Improvements – When traffic from a proposed urban development may exceed 500 ADT will work with the developer and township to identify a strategy to upgrade and improve the gravel corridor through a joint agreement with the developer, township, and City.

B. STRATEGIES

Various strategies can be utilized to ensure proper transportation improvements are made to provide and protect the infrastructure investment. Astute land use planning and subdivision plat review are key to ensuring the long-term roadway network vision is developed and future traffic issues are avoided. To accomplish this, each development proposal (e.g. redevelopment of a single parcel, plat review, change of use, expansion of a business or operation, etc.) should be evaluated for consistency with the following policies/standards:

1. Work with property owners and developers to remove and/or relocate existing driveway and field approaches off non-local roads.
2. Provide road and trail connectivity between adjacent parcels.
3. Review/require access spacing that is consistent with the transportation plan.
4. Connect residential and non-residential areas.
5. Review developments for the accommodation of transit opportunities as part of the development review process.
6. Require turn and bypass lanes on non-local roads impacted by new development, including those that are not immediately adjacent.
7. Require off-site improvements, including those in other jurisdictions, where the existing transportation network will be directly impacted by new development, including where the development is not immediately adjacent. This could include but is not limited to paving roads, repairing surfaces, fixing sub-standard drainage, improving sight distances, etc.
8. Require the dedication of rights-of-way for all required future transportation improvements identified in the transportation plan including trails, roads, bridges, transit facilities, drainage, utilities, and any other related improvement requiring use of a corridor/location.
9. Require the equitable participation in the construction of collector and arterial roads.
10. Review probable neighborhood traffic patterns, areas where excessive speed is possible, and the potential for pedestrian conflicts.
11. Require all local roads to be constructed to property lines, or the corresponding amounts of money be escrowed, where stub streets are proposed to adjacent properties, but are not immediately warranted.

12. Require fees, construction participation, and/or cost participation proportionately to future required infrastructure such as overpasses, interchanges, and other Local/County responsibilities as afforded by law and justifiable.
13. Require traffic impact studies, including the analysis of intersections to determine the need for and contribution to intersection improvements.

C. IMPROVEMENTS

In addition to the review of specific development driven improvements, short-term and mid to long-term improvements have been identified for capital improvement planning (CIP) purposes as follows:

SHORT-TERM IMPROVEMENTS (2008 – 2013 YEARS)

It is recommended that the City of Elko New Market, together with Mn/DOT and Scott County, complete a preliminary design for the expansion of the ramps and bridge associated with the I-35/CSAH 2 interchange. This would include analysis for future use in an Interchange Modification Request. A planning level cost estimate in 2008 dollars for a study is estimated at \$100,000.

As traffic volumes increase to levels forecasted, it is recommended that the City of Elko New Market and Scott County initiate capacity and intersection control needs studies for the intersections identified in Figure 4.3 to determine safety, capacity, and traffic control needs. A planning level cost estimate in 2008 dollars for a study is estimated at \$5,000 to \$10,000 per intersection.

It is recommended that the City of Elko New Market conduct a study to estimate funding contributions to complete identified improvements. This information could be used for capital improvement planning or assigning a development's proportionate fair share of roadway infrastructure improvement costs through an annexation agreement and/or development agreement. A planning level cost estimate in 2008 dollars for this study is estimated at \$10,000.

MID TO LONG-TERM IMPROVEMENTS (2014 – 2030)

It is recommended that the City of Elko New Market and Scott County work together to initiate corridor preservation study to determine an alignment option for further planning, preservation, and environmental analysis for a continuous route between CR 62 and 250th Street. A planning level cost estimate in 2008 dollars for a study of this magnitude may cost in the range of \$30,000 to \$50,000, with potential funding partnerships between the developers, city and county.

As development approaches gravel roadways adjacent to the urban growth boundary, the City of Elko New Market should work with the adjacent townships to measure traffic volumes and develop a strategy for the upgrading of the roadway when necessary. A planning level cost estimate in 2008 dollars for collecting and reviewing the traffic counts on each corridor is estimated at \$500 annually.

Intersections not evaluated in 2008–2013 should be programmed for capacity and intersection control needs studies to determine safety, capacity, and traffic control needs as traffic volumes increase to levels forecasted. A planning level cost estimate in 2008 dollars for a study is estimated at \$5,000 to \$10,000 per intersection.

Appendix C – Estimation of Project Costs identifies anticipated costs for future roadway and intersection infrastructure improvements for corridors functionally classified as a Major Collector or higher. The estimates were developed using Mn/DOT’s LWD Planning Cost Estimate approach. These planning level estimates also include local contributions towards Scott County highway projects based on their current cost participation policy dated July 1985. This information may be used by the City for potential CIP purposes.

D. POTENTIAL TRANSPORTATION FUNDING SOURCES

There are a number of various funding mechanisms available to support transportation projects these include the following:

FEDERAL FUNDING

Elko New Market may apply for federal funds for highways through the Surface Transportation Program of the Federal Highway Trust Fund, through Mn/DOT’s Area Transportation Partnership (ATP). Solicitation occurs approximately every two years, with federal funding covering 80% of a project’s cost. Types of projects funded include highway reconstruction, safety projects, trails which are part of projects, transit and park-and-ride projects.

MSAS SYSTEM

The State of Minnesota, through the gas tax and license fees, collects funds to be used to construct and maintain the State’s transportation system. Most of the funds collected are distributed for use on the State’s Trunk Highway (TH) system, the County State Aid Highway (CSAH) system and the Municipal State Aid Street (MSAS) system. Of the funds available they are distributed 62% TH, 29% CSAH and 9% MSAS. When Elko New Market achieves a population above 5,000 it will be eligible to receive a portion of the MSAS funding. As the City nears a population of 5,000, it should begin the planning process to identify the route(s) to be designated and evaluate the special assessment policy to determine whether revisions for state aid routes are warranted.

MN/DOT COOPERATIVE FUNDS

The State of Minnesota has funds available to assist with cooperative projects that increase safety and mobility. Solicitations are due in October each year for construction the following year.

MN DEPARTMENT OF NATURAL RESOURCES GRANTS

Various federal and state grants are available for the development or reconstruction of trails. Typically grants require a 50% match and illustration that the trail is not only of local importance but also of regional significance. Grant programs through the DNR for trail projects include the Federal Recreational Trail Grant Program, Regional Trail Grant Program, Outdoor Recreation Grant Program, and Local Trail Connections Program.

COLLECTOR AND LOCAL STREETS

Developers may be required to fund the entire cost of Minor and Major Collector Roadways, as well as local streets as a part of their development fees.

VI. TRAFFIC FORECAST MODELING

The following describes the general approach to traffic forecasting efforts and resulting outputs for this Transportation Plan. Developers will use the traffic volume forecast data to include in the individual development traffic study.

A. MODEL USED

The Twin Cities Regional Model was used. The Existing Model is year 2000. The Future Model is year 2030. The demographics, metropolitan highway system, and metropolitan transit system are consistent with current Regional Transportation Policy Plan adopted by the Metropolitan Council

B. MODELS

The Existing Model provides the basis of the roadway connections and existing capacity, speed, and functional class. The Future Model uses the existing model parameters to set-up a no-build scenario. New roadways are added to provide additional connections throughout the city. Planned improvements are also included for existing roadways. These improvements and new roadways provide for the anticipated future roadway network to handle the citywide growth.

C. MODEL METHODOLOGY

The general approach to forecasting the traffic volumes consisted of the following:

- Utilize the Twin Cities regional travel demand model and model parameters, maintained by Metropolitan Council, as the primary instrument for forecasting the volumes.
- Collect year 2000 and current year traffic count data and basic roadway attribute information in the study area for the purpose of validating the regional model, run for the base year (2000).
- Collect year 2000 census data from the U.S. Census Bureau.
- Determine Traffic Analysis Zones based on roadways, land use data, and land features.
- Split regional model Traffic Analysis Zones into smaller zones for basis of projections.
- Add additional county and other major local roadways to the roadway network in the regional model.

- Apply the regional model for the base year and validate its projections against the observed traffic count information; make appropriate adjustments as necessary to reach an acceptable validation.
- Apply the regional model for the forecast year (2030), taking into account the adjustments made to the 2000 model run, to generate the projected volumes.
- Analyze traffic patterns that ultimately comprise the elements themselves, through a series of special selected link analyses; use this information as a basis for adjusting the forecasted volumes if determined to be necessary.
- Prepare the final set of forecast volumes.

D. DETAILS

Additional details concerning the methodology follow:

Regional Model – The regional model provides a systematic procedure for forecasting volumes, taking into account the projected changes in regional land use/socioeconomic data and the regional transportation network. The regional model was obtained from Metropolitan Council for 2000 and 2030 conditions.

Historical and Current Year Traffic Count Data – Traffic count data in the study area was collected from the Minnesota Department of Transportation (Mn/DOT) and recent traffic studies in the area. This included A.M. and P.M. peak hour, as well as average daily traffic volumes.

Current Roadway Attribute Information – The regional model highway network was reviewed in detail for conformity to current conditions. A thorough check of roadway functional classification, speed, number of through lanes, and roadway capacity was completed. Several roadways were added to the network to assist in the future network analysis. These roadways were populated with the appropriate attributes based on regional model documentation, so as to be consistent with the regional model parameters.

Census Data – Year 2000 census data was collected from the U.S. Census Bureau. This data includes population and households by census block.

Employment Data – Employment figures were obtained from the City of Elko New Market to identify trip attractions within the City.

Traffic Analysis Zones (TAZs) – Based on the census blocks, land use, roadway network, and land features (including railroads, waterways, and bluffs), zones were identified for traffic to enter and exit from the roadway network. These zones include both traffic productions and attractions. These zones were split from the regional model traffic analysis zones, which cover a much larger area and were broken apart to allow for additional roadway traffic volume projections, which would not have been available in the base regional model. These zones and their relevant information were added to the regional model.

Socioeconomic Data – Land Use data for year 2030 was received from the land use consultant. The projected population, households, and employment data was aggregated into the TAZs.

Base Model Validation – The 2000 model was validated using many resources, including: 2000 traffic count data, Scott County Transportation Plan, aerial photos, and field observations. The assigned volumes from the 2000 regional model were then compared to the 2000 traffic counts. Adjustments were made to centroid locations and additional centroid connectors were added to help smooth volumes along individual roadways and more closely match ground counts. Additionally, because of the “regional” nature of the regional model, roadways are categorized into a select number of functional classifications. Thus, roadways that have minor differences may have the same functional classification. Some roadways in the study area were refined to reflect these minor differences. Specifically, local gravel roadways were defined as minor collectors but were adjusted with a lower capacity and speed than a typical paved minor collector.

Future Model Forecasts – The 2030 model was updated to include the existing roadways and the additional TAZ’s as used in the 2000 model. Future roadways within the urban growth boundary were added and centroid connectors were adjusted as required to connect with the newly proposed roadways. Additionally, functional classifications, speed, and capacities were adjusted based on the expected future roadway attributes.

Review of Forecasts – The traffic forecasts were reviewed for reasonableness. As with any travel demand model, it would be inappropriate to rely solely on direct model output for design volumes. The modeled volumes were reviewed and adjusted based on existing and historic travel patterns and also through some additional selected link analysis of model output. A series of selected link assignments were performed and the model estimated volumes were adjusted to more accurately reflect future traffic patterns within the study area. The checks for reasonableness of the projected volumes follow the procedures as outlined in the Mn/DOT Metro: Model Output Checks for Reasonableness and Post Processing Adjustments (Revised 5 January, 2006). These include:

- Peak Hour Percentage of Daily Traffic: The peak hour percentages of daily traffic produced by the model for the forecast year were compared to existing/observed peak hour percentages within the project limits and on other routes nearby with the same functional classification.
- Directional Split of Peak Hour Traffic: The directional splits of peak hour traffic forecasts produced by the model for the forecast year were compared to existing/observed directional splits within the project limits and on other routes nearby with the same functional classification.
- Capacity of Road Segments Beyond Limits of Project: Peak hour traffic forecast volumes assigned to road segments beyond the limits of the study area were reviewed to determine if the projected growth from the area affects the capacities of those road segments. On roadways outside of the study area with volume to capacity ratios over 1.00, the model results were compared to the regional model results from Met Council and Mn/DOT.

The capacities of feeder roadways were not exceeded near the study area, except on I-35 and CSAH 91, north of CSAH 2. Both roadways provide an important connection north to the twin cities metro area and are expected to be severely congested during the peak hours. This would extend the congestion currently being seen on I-35 further to the south. Due to the congestion on I-35, CSAH 91 is being used as an alternative route for traffic to head to the north. If I-35 were expanded, the reliance on CSAH 91 would be expected to decrease.

- Daily Traffic Growth Factors: The daily traffic forecasts from the model on the state roadways were compared with the last 20 years record of daily volumes and with the regional model results from Met Council and Mn/DOT. The projections are consistent with the general expectation that the model should yield forecast values which are lower than those based on an extrapolation of the last 20 years of increases in daily traffic.

E. POST PROCESSING

The post-processing of the projected volumes follow some of the procedures as outlined in the Mn/DOT Metro: Model Output Checks for Reasonableness and Post Processing Adjustments (Revised 5 January, 2006). The post processing includes:

- Traffic forecast volumes were rounded to the closest 10 if less than 1,000 or to the nearest 100 if more than 1,000.
- All products depicting the forecast numbers (maps, tables, layouts, etc.) contain a very visible caution that the forecast numbers depicted have a likely confidence range of plus or minus 15 percent.
- Traffic smoothing and corridor diversion adjustments were accomplished using the procedures described in Chapter 9 of NCHRP Report 365, "Travel Estimation Techniques for Urban Planning".

APPENDIX A - 2030 Transportation Analysis Zone Breakdown
City of Elko New Market 2030 Transportation Plan

Within Land Use Boundary

TAZ	Population	Households	Retail	Non-Retail	Employment
1037-A	20,800	8,000	589	661	1,250

Outside of Land Use Boundary

TAZ	Population	Households	Retail	Non-Retail	Employment
1037-B	5,700	1,952	24	376	400

Appendix B: Existing and Forecasted Traffic Volumes and Capacity Analysis
Major Collectors and Above
City of Elko-New Market

SYS	NUM	ROADWAY SEGMENT	Existing Characteristics					Historical Traffic							Forecasted Traffic												
			Functional Class	Lanes	Left Turn Lanes or Metered?	Roadway Type	Posted Speed	2000 ADT	2001 ADT	2002 ADT	2003 ADT	2004 ADT	2005 ADT	2006 ADT	Annual Growth	Existing D-Factor	Existing K-Factor	Directional Capacity	2005-6 V/C Ratio	Proposed Functional Class	Lanes	Left Turn Lanes or Metered?	Roadway Type	2030 ADT	Annual Growth	Forecasted D-Factor	Forecasted K-Factor
I	35	North of CR 62	PA	4	no	Freeway	70	39,000		40,000		46,000	42,000	1.24%	0.503	0.087	3500	0.53	PA	4	no	Freeway	71,000	2.21%	0.589	0.092	1.10
		CR 62 to 250th St. E	PA	4	no	Freeway	70	39,000		40,000		46,000	42,000	1.24%	0.503	0.087	3500	0.53	PA	4	no	Freeway	71,000	2.21%	0.589	0.092	1.10
		250th St. E to CSAH 2 Ramps	PA	4	no	Freeway	70	39,000		40,000		46,000	42,000	1.24%	0.515	0.088	3500	0.55	PA	4	no	Freeway	71,000	2.21%	0.589	0.092	1.10
		CSAH 2 Ramps to CSAH 86	PA	4	no	Freeway	70	34,500		36,500		39,000	40,000	2.50%	0.515	0.088	3500	0.52	PA	4	no	Freeway	57,000	1.49%	0.532	0.088	0.76
		South of CSAH 86	PA	4	no	Freeway	70	34,500		36,500		39,000	40,000	2.50%	0.515	0.088	3500	0.52	PA	4	no	Freeway	57,000	1.49%	0.532	0.088	0.76
I	35 Ramps	SB Exit to CSAH 2	PA	1	no	Ramp								-	-	-	1450	-	PA	1	no	Ramp	13,300	NA	1.000	0.152	1.39
		CSAH 2 to SB On-Ramp	PA	1	no	Ramp								-	-	-	1450	-	PA	1	no	Ramp	6,100	NA	1.000	0.127	0.53
		NB Exit to CSAH 2	PA	1	no	Ramp								-	-	-	1450	-	PA	1	no	Ramp	5,900	NA	1.000	0.122	0.50
		CSAH 2 to NB On-Ramp	PA	1	no	Ramp								-	-	-	1450	-	PA	1	no	Ramp	12,800	NA	1.000	0.145	1.28
CSAH	2	CSAH 9 to CSAH 46	B-MiA	2	no	Undivided	55	1,800		2,100	2,400	2,350		5.48%	0.532	0.116	935	0.15	B-MiA	2	no	Undivided	4,800	2.90%	0.554	0.124	0.37
		CSAH 46 to I-35	B-MiA	2	no	Undivided	55	4,100		4,200	4,650	4,850		3.42%	0.565	0.125	935	0.37	A-MiA-R	2	no	Undivided	11,900	3.66%	0.513	0.122	0.83
		I-35 Ramps to I-35 Ramps	B-MiA	2	no	Undivided	55							-	-	-	935	-	A-MiA-R	2	no	Undivided	20,800	NA	0.702	0.099	1.61
		I-35 to Logan Ave.	A-MiA-C	4	yes	Divided	55	6,700		5,800	7,650	9,000		6.08%	0.599	0.143	1900	0.41	A-MiA-C	4	yes	Divided	31,900	5.19%	0.651	0.118	1.22
		Logan Ave. to West Frontage Road	A-MiA-C	4	yes	Divided	55	6,700		5,800	7,650	9,000		6.08%	0.598	0.144	1900	0.41	A-MiA-C	4	yes	Divided	26,200	4.37%	0.602	0.105	0.83
		West Frontage Road to Xerxes Ave.	A-MiA-C	4	yes	Divided	55	6,700		5,800	7,650	9,000		6.08%	0.578	0.145	1900	0.40	A-MiA-C	4	yes	Divided	25,900	4.32%	0.602	0.105	0.82
		Xerxes Ave. to Beard Ave.	A-MiA-C	4	yes	Divided	55	5,400		5,800	7,650	7,600		7.07%	0.577	0.145	1900	0.33	A-MiA-C	4	yes	Divided	24,600	4.81%	0.596	0.105	0.77
		Beard Ave. to France Ave.	A-MiA-C	4	yes	Divided	55	5,400		5,800	7,650	7,600		7.07%	0.576	0.145	1900	0.33	A-MiA-C	4	yes	Divided	22,400	4.42%	0.594	0.108	0.72
		France Ave. to CSAH 91/Natchez Ave.	A-MiA-C	4	yes	Divided	55	5,400		5,800	7,650	7,600		7.07%	0.576	0.147	1900	0.34	A-MiA-C	4	yes	Divided	21,800	4.31%	0.595	0.111	0.72
		CSAH 91/Natchez Ave. to Webster Ave.	A-MiA-C	2	no	Undivided	30	3,000		3,100	4,575	5,400		12.47%	0.582	0.154	990	0.49	A-MiA-C	2	yes	Undivided	8,800	1.97%	0.606	0.129	0.83
		Webster Ave. to Dakota Ave.	A-MiA-C	2	no	Undivided	30	3,000		3,100	4,575	5,400		12.47%	0.590	0.162	825	0.63	A-MiA-C	2	yes	Undivided	7,200	1.16%	0.580	0.126	0.63
		Dakota Ave. to CSAH 27/Texas Ave.	A-MiA-C	2	no	Undivided	55	3,000		3,100	4,575	5,400		12.47%	0.596	0.167	990	0.54	A-MiA-C	2	yes	Undivided	7,800	1.48%	0.596	0.126	0.59
		West of CSAH 27/Texas Ave.	A-MiA-C	2	no	Undivided	55	3,000		3,100	3,375	5,400		12.47%	0.586	0.166	990	0.53	A-MiA-C	2	no	Undivided	4,600	-0.64%	0.585	0.174	0.52
CSAH	27 (Texas Ave.)	North of 250th St. E	A-MiA-C	2	no	Undivided	55	1,250		2,100	2,350	2,300		12.97%	0.541	0.170	990	0.21	A-MiA-C	2	no	Undivided	6,600	4.31%	0.576	0.116	0.49
		250th St. E to 255th St. E	A-MiA-C	2	no	Undivided	55	1,250		2,100	2,350	2,300		12.97%	0.506	0.177	990	0.21	A-MiA-C	2	no	Undivided	5,100	3.24%	0.580	0.146	0.48
		255th St. E to CSAH 2	A-MiA-C	2	no	Undivided	55	1,250		2,100	2,350	2,300		12.97%	0.506	0.177	990	0.21	A-MiA-C	2	no	Undivided	5,200	3.32%	0.578	0.146	0.49
		CSAH 2 to Harvest Dr.	A-MiA-C	2	no	Undivided	55	880		1,300	1,350	1,450		10.50%	0.600	0.146	990	0.13	A-MiA-C	2	no	Undivided	3,700	3.82%	0.524	0.165	0.36
		Harvest Dr. to 270th St. E	A-MiA-C	2	no	Undivided	55	880		1,300	1,350	1,450		10.50%	0.600	0.146	990	0.13	A-MiA-C	2	no	Undivided	3,000	2.95%	0.512	0.177	0.31
		270th St. E to CSAH 86	A-MiA-C	2	no	Undivided	55	880		1,300	1,350	1,450		10.50%	0.600	0.146	990	0.13	A-MiA-C	2	no	Undivided	2,700	2.52%	0.530	0.183	0.29
CSAH	46 (Pillsbury Ave.)	North of CR 62/245th St. E	A-MiA-R	2	no	Undivided	55	2,600		3,000		2,800		1.49%	0.721	0.094	990	0.19	A-MiA-R	2	no	Undivided	6,500	3.43%	0.703	0.167	0.84
		CR 62/245th St. E to 250th St. E	A-MiA-R	2	no	Undivided	55	1,650		1,800	3,775	1,800		1.76%	0.597	0.125	990	0.14	A-MiA-R	2	no	Undivided	3,800	3.03%	0.577	0.159	0.39
		250th St. E to CSAH 2	A-MiA-R	2	no	Undivided	55	1,650		1,800	3,775	1,800		1.76%	0.603	0.148	990	0.16	A-MiA-R	2	no	Undivided	2,700	1.64%	0.677	0.208	0.42
		CSAH 2 to CSAH 9	B-MiA	2	no	Undivided	55	3,550		3,700	4,350	3,850		1.64%	0.597	0.122	990	0.28	B-MiA	2	no	Undivided	7,800	2.86%	0.700	0.093	0.56
		CSAH 9 to CSAH 86	B-MiA	2	no	Undivided	55	3,550		3,700	4,350	3,850		1.64%	0.578	0.122	990	0.27	B-MiA	2	no	Undivided	9,100	3.50%	0.562	0.125	0.71
		South of CSAH 86	B-MiA	2	no	Undivided	55	1,950				2,100		1.49%	0.559	0.116	990	0.14	B-MiA	2	no	Undivided	3,200	1.70%	0.579	0.124	0.26
CSAH	86 (280th E, 30th W)	East of CSAH 46	A-MiA-C	2	no	Undivided	55	2,600		2,850	3,100	3,300		4.88%	0.595	0.146	990	0.29	A-MiA-C	2	no	Undivided	6,800	2.93%	0.585	0.166	0.74
		CSAH 46 to Bagley Ave.	A-MiA-C	2	no	Undivided	55	1,600		1,900	2,000	2,300		7.53%	0.582	0.156	990	0.21	A-MiA-C	2	no	Undivided	7,300	4.73%	0.767	0.161	1.01
		Bagley Ave. to Beard Ave.	A-MiA-C	2	no	Undivided	55	1,200		1,500	1,750	2,050		11.30%	0.573	0.152	990	0.18	A-MiA-C	2	no	Undivided	5,800	4.25%	0.749	0.148	0.71
		Beard Ave. to CR 91/Natchez Ave.	A-MiA-C	2	no	Undivided	55	1,200		1,500	1,750	2,050		11.30%	0.569	0.156	990	0.18	A-MiA-C	2	no	Undivided	5,600	4.10%	0.743	0.146	0.67
		CR 91/Natchez Ave. to Vernon Ave.	A-MiA-C	2	no	Undivided	55	2,700		3,000	3,825	4,350		10.01%	0.534	0.139	990	0.33	A-MiA-C	2	no	Undivided	5,100	0.64%	0.579	0.150	0.49
		Vernon Ave. to CSAH 27/Texas Ave.	A-MiA-C	2	no	Undivided	55	2,700		3,000	3,825	4,350		10.01%	0.533	0.139	990	0.33	A-MiA-C	2	no	Undivided	5,200	0.72%	0.597	0.155	0.54
		West of CSAH 27/Texas Ave.	A-MiA-C	2	no	Undivided	55	3,000		3,200	4,400	4,550		8.69%	0.542	0.129	990	0.32	A-MiA-C	2	no	Undivided	4,900	0.30%	0.575	0.144	0.45
CSAH	91 (Natchez Ave.)	North of CR 62/245th St. E	MC	2	no	Undivided	55	640		1,000	1,750	1,450		17.77%	0.659	0.145	660	0.21	B-MiA	2	no	Undivided	8,200	7.18%	0.521	0.121	0.58
		CR 62/245th St. E to 250th St. E	MC	2	no	Undivided	55	640		1,000	1,750	1,450		17.77%	0.651	0.128	660	0.18	B-MiA	2	no	Undivided	10,300	8.16%	0.659	0.098	0.74
		250th St. E to 255th St. E	MC	2	no	Undivided	55	640		1,000	1,750	1,450		17.77%	0.599	0.130	660	0.17	B-MiA	2	no	Undivided	9,700	7.90%	0.533	0.120	0.69
		255th St. E to CSAH 2	MC	2	no	Undivided	55	640		1,000	1,750	1,450		17.77%	0.599	0.130	660	0.17	B-MiA	2	no	Undivided	13,700	9.40%	0.542	0.102	0.85
CR	91 (Natchez Ave.)	CSAH 2 to Aaron Dr.	MC	2	no	Undivided	55	1,950		3,500	3,050	4,050		15.74%	0.525	0.124	605	0.44	B-MiA								

Appendix C: Estimation of Project Costs

Roadways Functionally Classified as Major Collectors and Above & Intersection Improvements
City of Elko-New Market

Roadway/Intersection	Segment		Level Of Improvement	Length Miles	Total Estimated Cost
	From	To			
255th Street	Existing 255th St	Dakota Ave	2 Lane Urban with Turn Lanes	0.6	\$1,980,000
	Dakota Ave	CSAH 91	2 Lane Urban with Turn Lanes	1.1	\$3,300,000
Intersection	255th St	CSAH 91	Signal System		\$198,000
	CSAH 91	France Ave	2 Lane Urban with Turn Lanes	0.5	\$1,716,000
	France Ave	Xerxes Ave	2 Lane Urban with Turn Lanes	0.5	\$1,716,000
	Xerxes Ave	Logan Ave	2 Lane Urban with Turn Lanes	0.5	\$1,716,000
Segment Total					\$10,626,000
James Pkwy	Xerxes Ave	Logan Ave	2 Lane Urban with Turn Lanes	0.8	\$2,508,000
Segment Total					\$2,508,000
Unknown St	France Ave	Xerxes Ave	2 Lane Urban with Turn Lanes	0.5	\$1,914,000
	Xerxes Ave	Logan Ave	2 Lane Urban with Turn Lanes	0.7	\$2,442,000
Segment Total					\$4,356,000
Dakota Ave	Existing Dakota Ave	250th St	2 Lane Urban with Turn Lanes	0.65	\$2,112,000
Segment Total					\$2,112,000
Unknown Ave	270th St	Harvest Dr	2 Lane Urban with Turn Lanes	0.5	\$1,716,000
Segment Total					\$1,716,000
270th St	CSAH 27	Nevada Ave	2 Lane Urban with Turn Lanes	0.6	\$1,980,000
	Nevada Ave	Webster Ave	2 Lane Urban with Turn Lanes	0.75	\$2,376,000
Segment Total					\$4,356,000
Logan Ave	270th St	CSAH 2	2 Lane Urban with Turn Lanes	1	\$3,234,000
	CSAH 2	255th St.	2 Lane Urban with Turn Lanes	0.6	\$2,376,000
Segment Total					\$5,610,000
Main St	Beard Ave	Xerxes Ave	2 Lane Urban with Turn Lanes	0.25	\$858,000
Segment Total					\$858,000
275th St	CSAH 91	.5 MI EAST	2 Lane Urban with Turn Lanes	0.5	\$1,518,000
Segment Total					\$1,518,000
273rd St/270th St	Beard Ave	Logan Ave	2 Lane Urban with Turn Lanes	1	\$3,036,000
	Logan	I-35	2 Lane Urban with Turn Lanes	0.25	\$858,000
Segment Total					\$3,894,000
Beard Ave	CSAH 86	275th St	2 Lane Urban with Turn Lanes	0.5	\$1,716,000
Segment Total					\$1,716,000
France Ave	CSAH 2	255th St	2 Lane Urban with Turn Lanes	0.5	\$1,716,000
	255th St	.1 MI South 250th St	2 Lane Urban with Turn Lanes	0.4	\$1,254,000
Segment Total					\$2,970,000
Intersection	Xerxes Ave	CSAH 2	Signal System		\$198,000
Xerxes Ave	CSAH 2	255th St	2 Lane Urban with Turn Lanes	0.5	\$1,914,000
	255th St	.2 MI South 250th St	2 Lane Urban with Turn Lanes	0.3	\$990,000

Segment Total					\$3,102,000
Intersection	CSAH 2	Webster Ave	Signal System		\$198,000
Intersection	CSAH 2	Logan Ave	Signal System		\$198,000
Segment Total					\$396,000
CSAH 27	.25 MI S 270th St	CSAH 2	Sidewalks, C&G, Storm, and Utilities	1	\$696,960
	CSAH 2	.25 MI N 255th St	Sidewalks, C&G, Storm, and Utilities	0.75	\$522,720
Segment Total					\$1,219,680
280th St	CSAH 91	Beard Ave	Sidewalks, C&G, Storm, and Utilities	0.75	\$522,720
Segment Total					\$522,720
CSAH 91	280th St	275th St	Sidewalks, C&G, Storm, and Utilities	0.5	\$348,480
	275th St	Glenborough Dr	Sidewalks, C&G, Storm, and Utilities	0.6	\$418,176
Intersection	CSAH 91	Glenborough Dr	Roundabout		\$396,000
	Glenborough Dr	Aaron Dr	Sidewalks, C&G, Storm, and Utilities	0.6	\$418,176
	Aaron Dr	CSAH 2	Sidewalks, C&G, Storm, and Utilities	0.25	\$174,240
	CSAH 2	255th St	Sidewalks, C&G, Storm, and Utilities	0.5	\$348,480
	255th St	.25 MI South 250th St	Sidewalks, C&G, Storm, and Utilities	0.25	\$174,240
Segment Total					\$2,277,792
Total All Segments					\$48,538,512

Cost Estimating Assumptions:

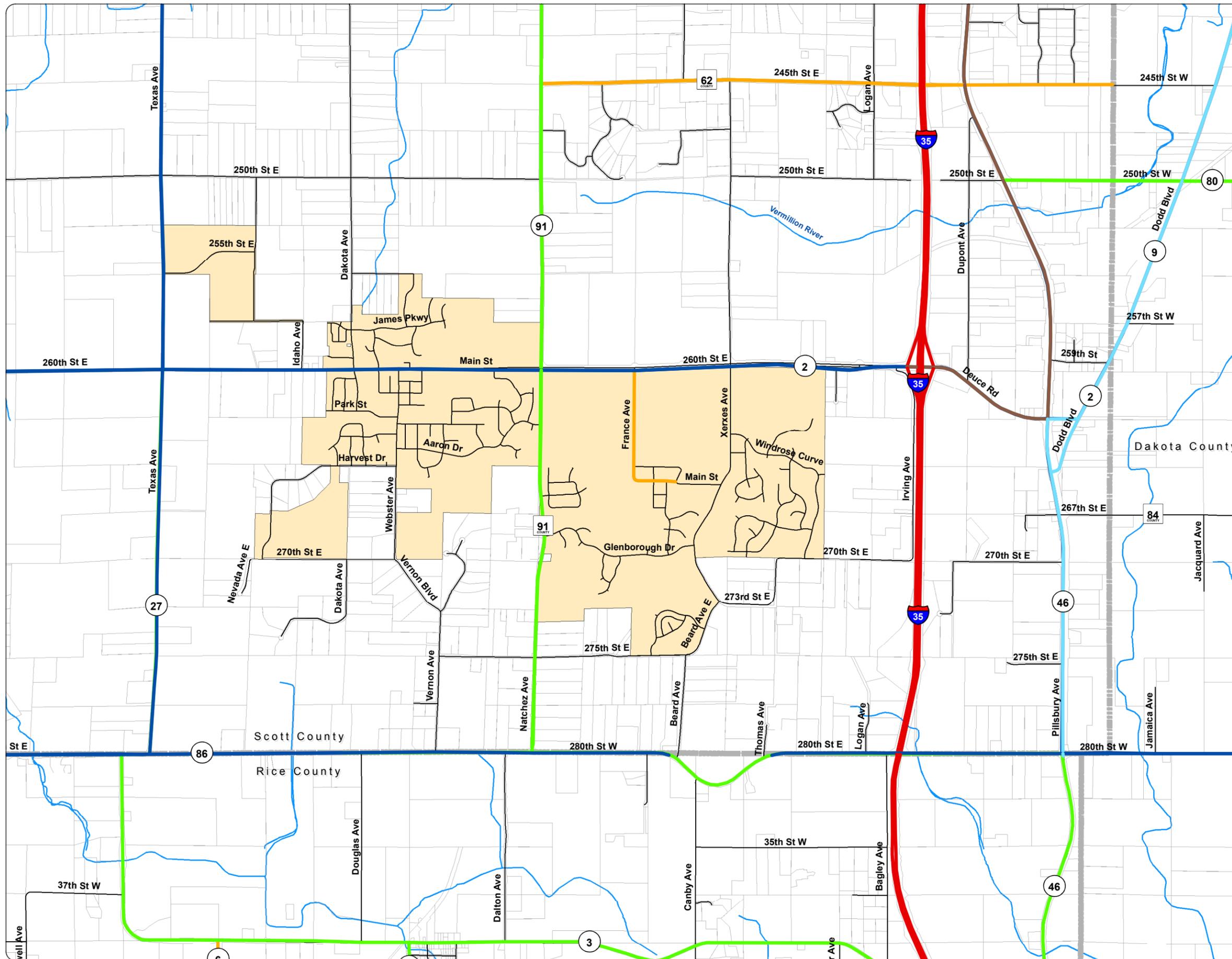
1. Right and left turn lanes were added on Major Collectors at intersections with other roadways of the same or higher functional classification. (Right turn lane = \$25,000, Left turn lane = \$125,000)
2. Existing gravel roadways planned as future Major Collectors have been upgraded to 2-lane urban roadways.
3. The City cost share for signal systems and roundabouts is based on number of legs. (e.g. A county road intersecting a city street has a total four legs. Two legs are city streets, so the City cost share is 50% of the total cost.)
4. The cost of a 2-lane urban street is estimated at \$2,000,000 per mile for 2008 for a planning level cost estimate.
5. The City cost share of a County road project is estimated at \$100 per linear foot. This cost includes sidewalks on both sides, curb and gutter, sanitary and watermain, a portion of the storm sewer cost, and parking lanes. (Scott County Highway Department, Policies for Cost Participation With Municipalities, State of Minnesota and Other Agencies, July, 1985)

SYS	Roadway		Existing Characteristics					Historical Traffic								Forecasted Traffic											
	NUM	ROADWAY SEGMENT	Functional Class	Lanes	Left Turn Lanes or Metered?	Roadway Type	Posted Speed	2000 ADT	2001 ADT	2002 ADT	2003 ADT	2004 ADT	2005 ADT	2006 ADT	Annual Growth	Existing D-Factor	Existing K-Factor	Directional Capacity	2005-6 V/C Ratio	Proposed Functional Class	Lanes	Left Turn Lanes or Metered?	Roadway Type	2030 ADT	Annual Growth	Forecasted D-Factor	Forecasted K-Factor
	245th St. E	CSAH 46 to Logan Ave.	MiC	2	no	Undivided	55							-	-	-	660	-	MiC	2	no	Undivided	6,200	NA	0.672	0.144	1.00
		Logan Ave. to Xerxes Ave.	MiC	2	no	Undivided	55							-	-	-	660	-	MiC	2	no	Undivided	5,500	NA	0.666	0.144	0.88
		Xerxes Ave. to CSAH 91/Natchez Ave.	MiC	2	no	Undivided	55							-	-	-	660	-	MiC	2	no	Undivided	4,200	NA	0.620	0.162	0.71
	250th St. E	CSAH 91/Natchez Ave. to Dakota Ave.	Local	2	no	Undivided								-	-	-	303	-	MiC	2	no	Undivided	5,800	NA	0.590	0.126	0.71
		Dakota Ave. to CSAH 27/Texas Ave.	Local	2	no	Undivided								-	-	-	303	-	MiC	2	no	Undivided	4,700	NA	0.593	0.120	0.56
		West of CSAH 27/Texas Ave.	Local	2	no	Undivided								-	-	-	303	-	MiC	2	no	Undivided	2,800	NA	0.600	0.150	0.41
	255th St. E	Logan Ave. to Xerxes Ave.	New	2	no	Undivided								-	-	-	-	-	MC	2	no	Undivided	630	NA	0.739	0.260	0.22
		Xerxes Ave. to France Ave.	New	2	no	Undivided								-	-	-	-	-	MC	2	no	Undivided	660	NA	0.754	0.234	0.21
		France Ave. to CSAH 91/Natchez Ave.	New	2	no	Undivided								-	-	-	-	-	MC	2	no	Undivided	810	NA	0.694	0.213	0.22
		CSAH 91/Natchez Ave. to Dakota Ave.	New	2	no	Undivided								-	-	-	-	-	MC	2	no	Undivided	1,700	NA	0.527	0.142	0.24
		Dakota Ave. to CSAH 27/Texas Ave.	New	2	no	Undivided							350	-	-	-	-	-	MC	2	no	Undivided	1,500	6.25%	0.622	0.145	0.25
	257th St. E	Logan Ave. to Xerxes Ave.	New	2	no	Undivided								-	-	-	-	-	MC	2	no	Undivided	340	NA	0.766	0.237	0.12
	263rd St. E	Logan Ave. to Xerxes Ave.	New	2	no	Undivided								-	-	-	-	-	MC	2	no	Undivided	2,900	NA	0.685	0.113	0.45
		Xerxes Ave. to CR 33/France Ave.	New	2	no	Undivided								-	-	-	-	-	MC	2	no	Undivided	1,500	NA	0.560	0.129	0.22
	270th St. E	Logan Ave. to Beard Ave.	New	2	no	Undivided								-	-	-	-	-	MC	2	no	Undivided	1,800	NA	0.707	0.166	0.37
	275th St. E	Beard Ave. to CR 91/Natchez Ave.	Local	2	no	Undivided								-	-	-	303	-	MC	2	no	Undivided	890	NA	0.694	0.190	0.20
		CR 91/Natchez Ave. to Vernon Ave.	Local	2	no	Undivided								-	-	-	303	-	MC	2	no	Undivided	1,000	NA	0.678	0.147	0.17

PA: Principal Arterial
A-MiA-R: A - Minor Arterial Reliever
A-MiA-C: A - Minor Arterial Connector
B-MiA: B - Minor Arterial
MC: Major Collector
MiC: Minor Collector
Local: Local Collector (Existing Gravel or Paved Road, or Unknown Designation)
New: New Roadway that Currently Does Not Exist

**ELKO NEW MARKET
2030 TRANSPORTATION PLAN
EXISTING ROADWAY
FUNCTIONAL CLASSIFICATION**

FIGURE 2.1
2008



Legend

Existing Functional Classification

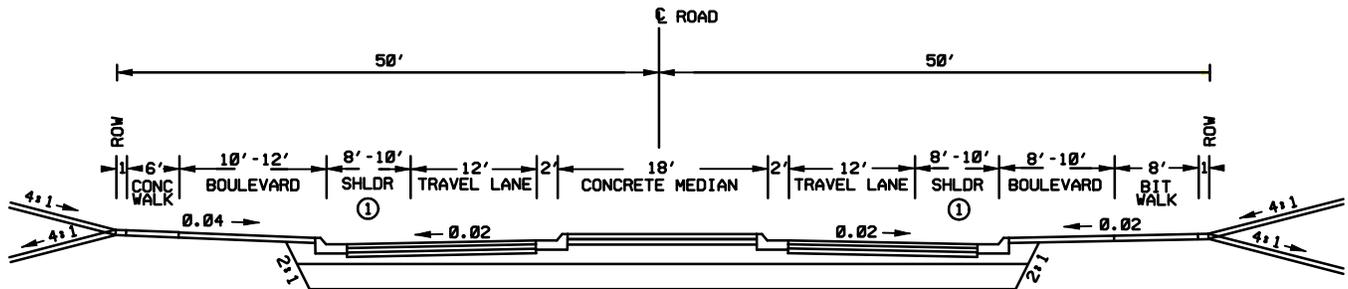
- Principal Arterial
- A Minor Arterial-Connector
- A Minor Arterial-Reliever
- B Minor Arterial
- Major Collector
- Minor Collector
- Local Roads
- + Elko New Market City Limits
- County Boundary
- ~ Watercourse Or Drainageway

Source:
Functional Classification - Metropolitan Council and The Lawrence Group (TLG) Date: 10-5-2007

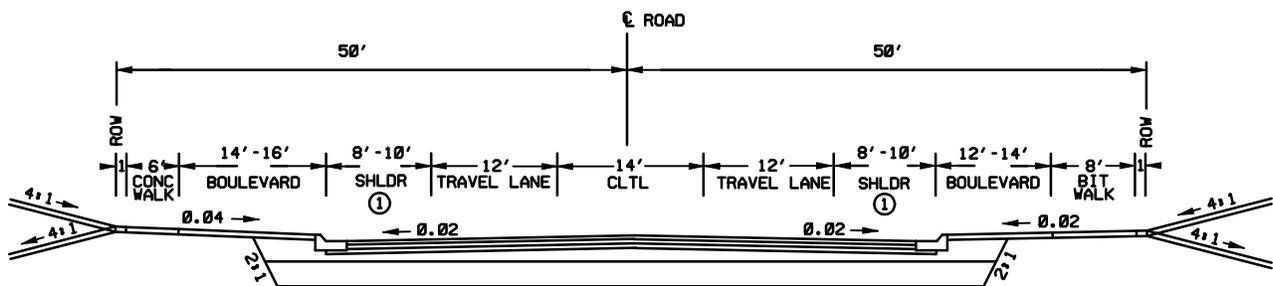


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TYPICAL SECTION OF MAJOR COLLECTOR WITH MEDIAN



TYPICAL SECTION OF MAJOR COLLECTOR



① 10' WHEN PARKING PERMITTED

1. Design standards for Minor Arterials shall be under the jurisdiction of Mn/Dot and Scott County.
2. Additional ROW will be needed at intersections to accommodate turn lanes, at the discretion of the City Engineer.

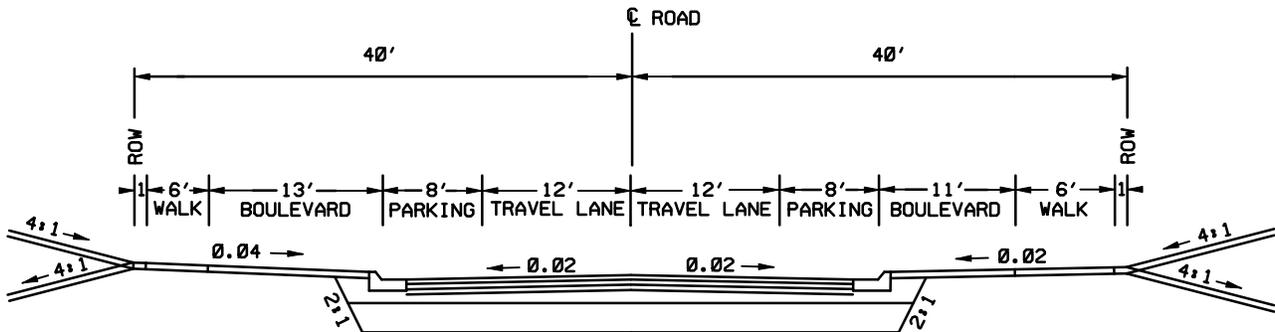
FIGURE 2.2

GEOMETRIC DESIGN STANDARDS FOR MAJOR COLLECTORS



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TYPICAL SECTION OF MINOR COLLECTOR WITH PARKING



TYPICAL SECTION OF MINOR COLLECTOR WITHOUT PARKING

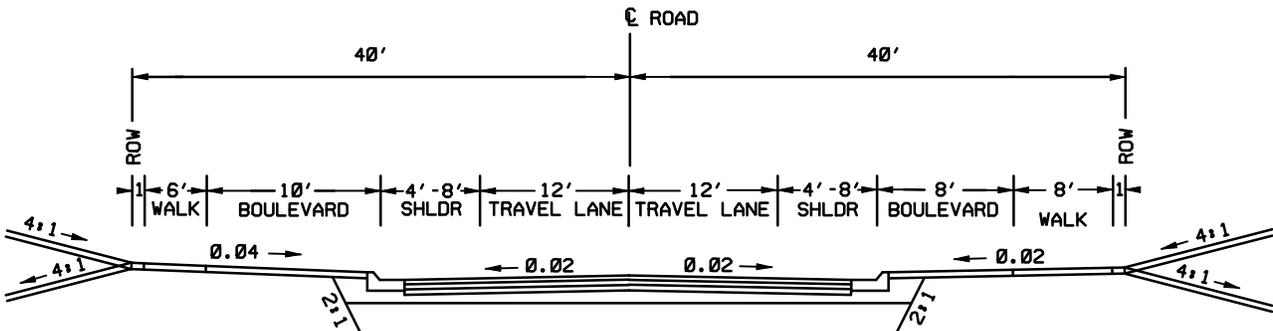


FIGURE 2.3

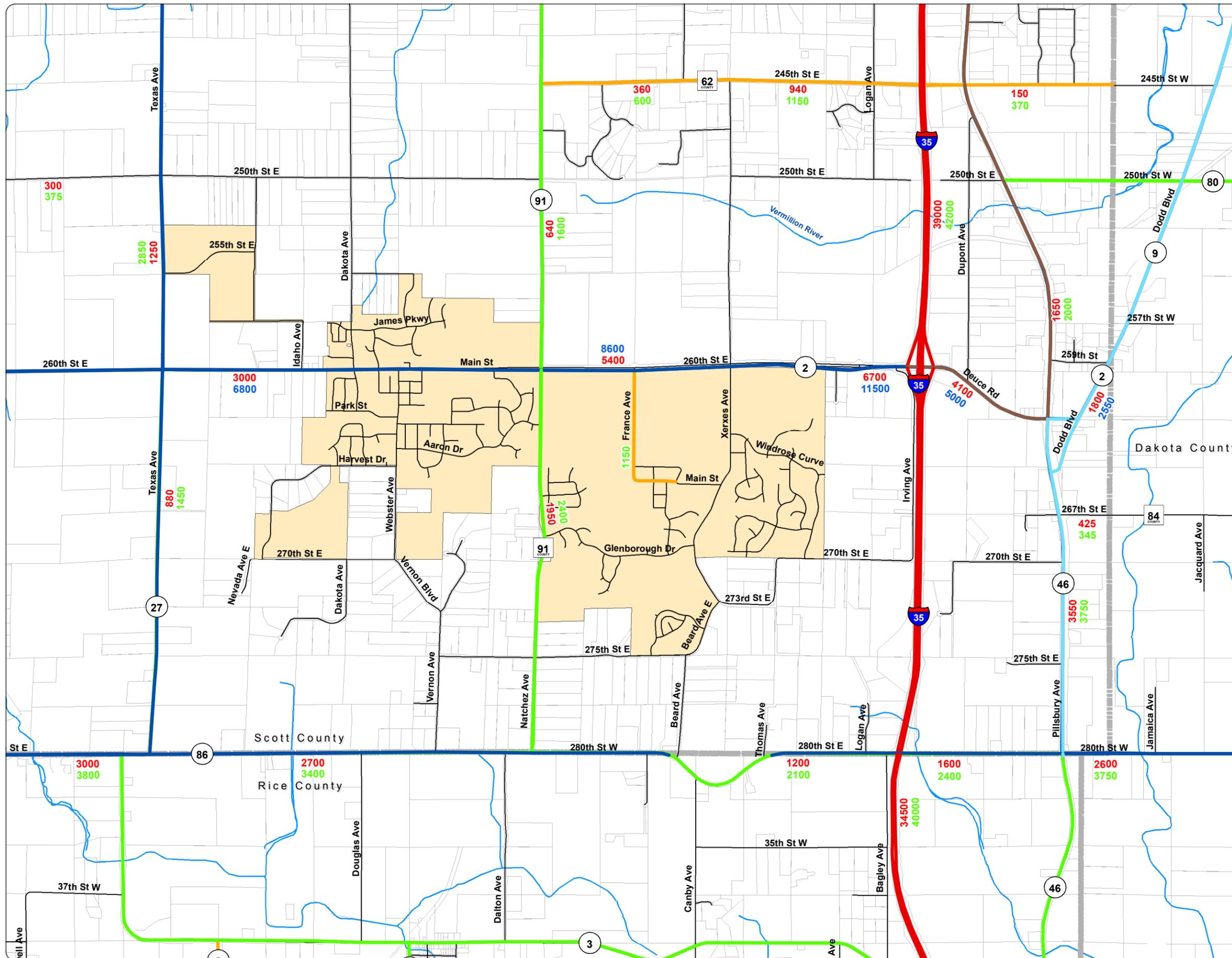
GEOMETRIC DESIGN STANDARDS FOR LOCAL COLLECTORS



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**ELKO NEW MARKET
2030 TRANSPORTATION PLAN
EXISTING AVERAGE DAILY
TRAFFIC VOLUMES**

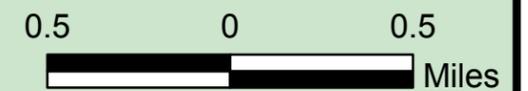
FIGURE 3.1
2008



Legend

- Traffic Volumes (Average Daily)**
- XXXX 2000 Average Daily Traffic Volumes
 - XXXX 2006 Average Daily Traffic Volumes
 - XXXX 2007 Average Daily Traffic Volumes
- Existing Functional Classification**
- Principal Arterial
 - A Minor Arterial-Connector
 - A Minor Arterial-Reliever
 - B Minor Arterial
 - Major Collector
 - Minor Collector
 - Local Roads
- Other Symbols:**
- Elko New Market City Limits
 - County Boundary
 - Watercourse Or Drainageway

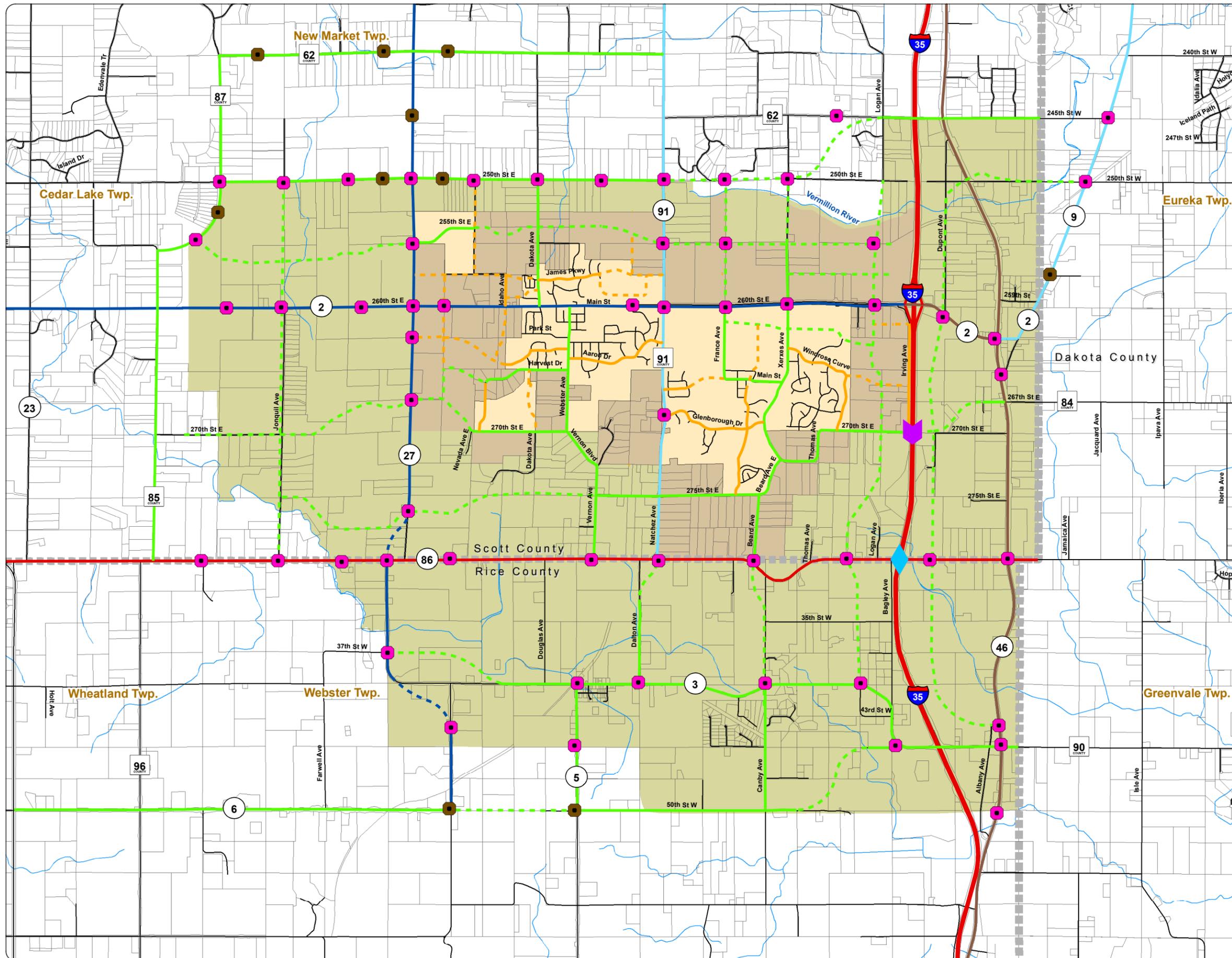
Source:
Functional Classification - Metropolitan Council and The Lawrence Group (TLG) Date: 10-5-2007



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**ELKO NEW MARKET
2030 TRANSPORTATION PLAN
RECOMMENDED FUTURE ROADWAY
FUNCTIONAL CLASSIFICATION**

FIGURE 4.1
2008



Legend

Future Functional Classification

- Principal Arterial
- A Minor Arterial Connector/Minor Arterial
- Future A Minor Connector/Minor Arterial
- A Minor Arterial Reliever
- Future A Minor Reliever
- B Minor Arterial
- Major Collector
- Future Major Collector
- Minor Collector
- Future Minor Collector
- Local Road

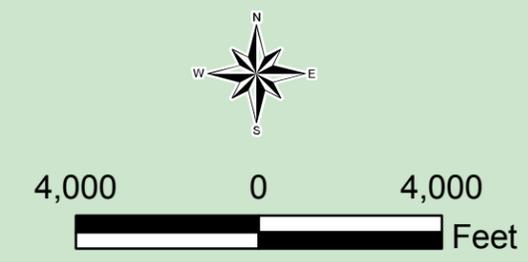
Interstate 35 Crossings

- Future Interchange
- Future Overpass

Future Road Access

- Existing/Future Permanent Access Location (Likely a Full Intersection)
- Rural Access (Locations to be Field Verified)
- 2030 MUSA Reserve Boundary
- Undesignated MUSA Boundary
- Elko New Market City Limits
- County Boundary
- Watercourses & Drainageways

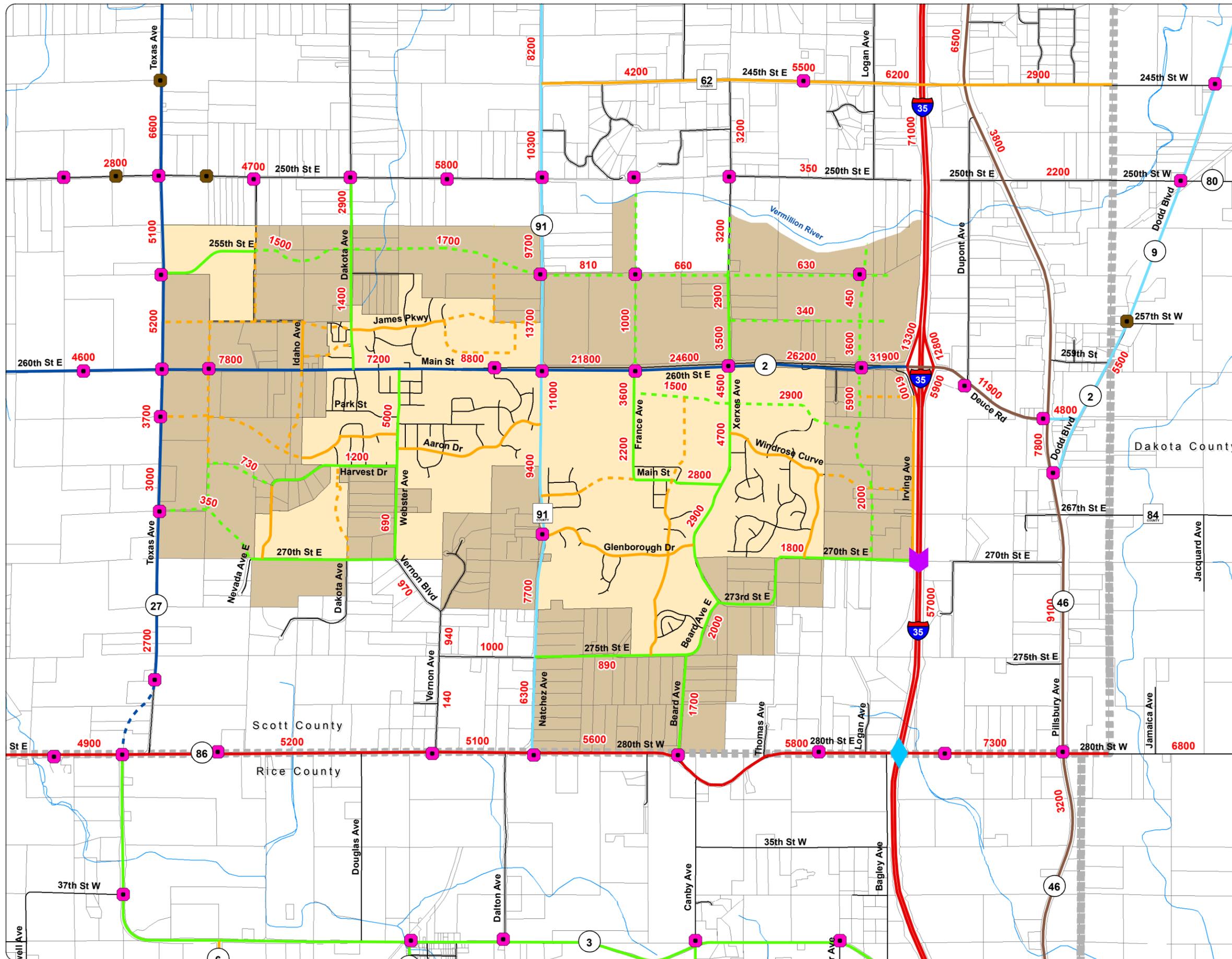
Note: The corridor alignments identified are conceptual to illustrate general connectivity and continuity needs to serve post 2030 growth. It is understood that environmental, feasibility, and traffic studies are necessary for each corridor identified, and that these studies may require coordination with Scott County, Mn/DOT, and adjacent townships. Actual alignments may vary. Future Road Accesses with Scott County roads were field reviewed by Scott County through the Southeast Scott County Comprehensive Plan Update (April 2005).



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**ELKO NEW MARKET
2030 TRANSPORTATION PLAN
2030 FORECASTED AVERAGE
DAILY TRAFFIC VOLUMES**

FIGURE 4.2
2008



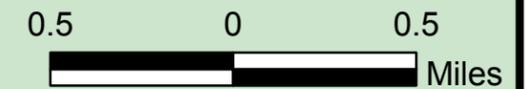
Legend

- xxxx 2030 Average Daily Traffic Volumes
- Future Functional Classification**
 - Future A Minor Connector/Minor Arterial
 - Future Major Collector
 - Future Minor Collector
- Existing Functional Classification**
 - Principal Arterial
 - A Minor Arterial Connector/Minor Arterial
 - A Minor Arterial Reliever
 - B Minor Arterial
 - Major Collector
 - Minor Collector
 - Local Road
- Interstate 35 Crossings**
 - Future Interchange
 - Future Overpass
- Future Road Access**
 - Permanent Access
 - Rural Access
- 2030 MUSA Reserve Boundary
- Parcels
- Elko New Market City Limits
- Township Boundaries
- County Boundary
- Watercourses & Drainageways

Notes:
Traffic volumes rounded as follows:
<1000, Nearest 10
>1000, Nearest 100

Forecast numbers depicted have a confidence range of plus or minus 15%.

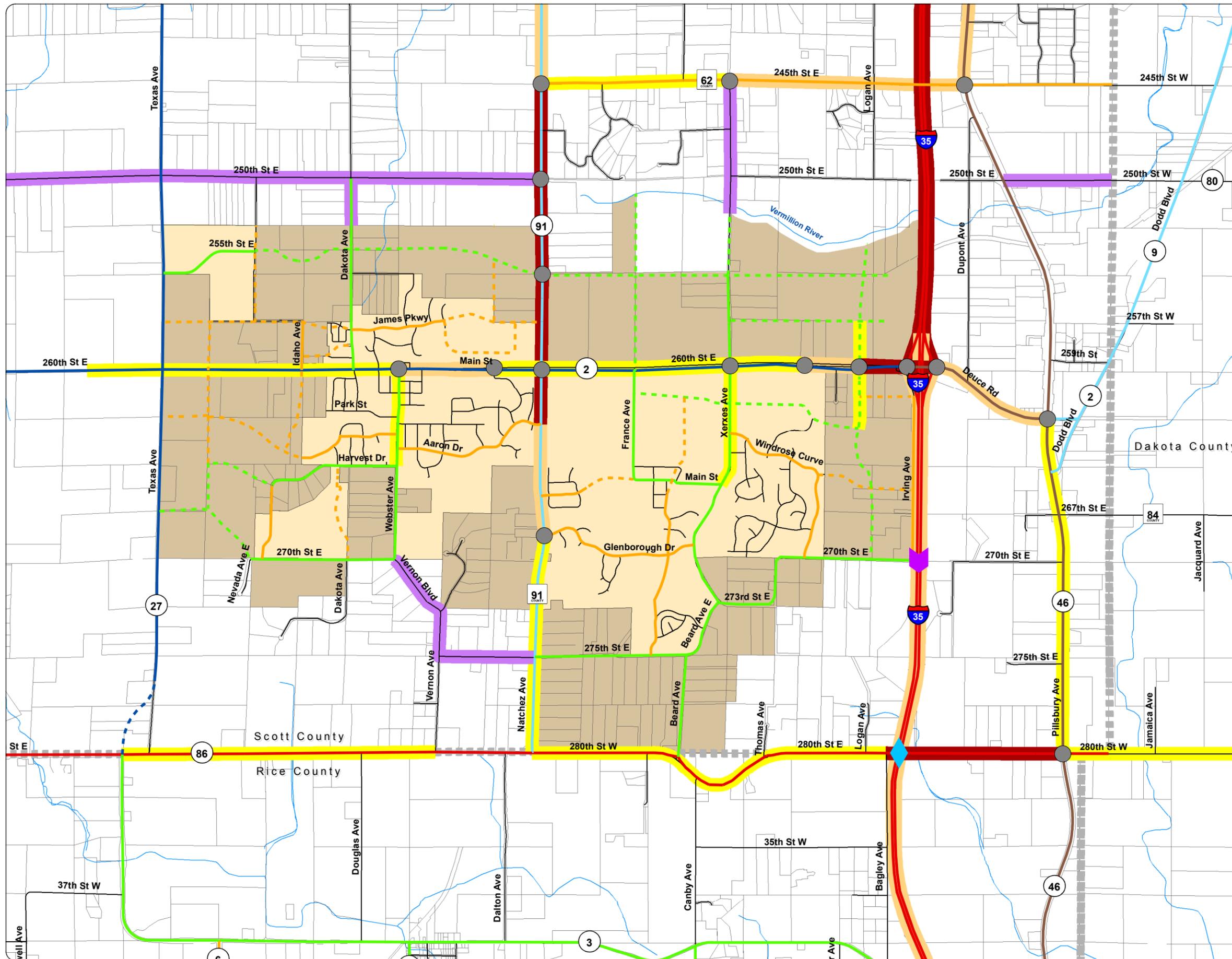
Forecasts follow procedures as documented in the Twin City Travel Demand Forecasts Prepared for Mn/DOT Metro: Model and Parameters for Adjustments to Model Inputs (Revised January 5, 2006).



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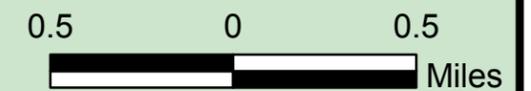
ELKO NEW MARKET 2030 TRANSPORTATION PLAN 2030 MAXIMUM PEAK HOUR LEVELS OF CONGESTION

FIGURE 4.3
2008



- Legend**
- Levels Of Congestion**
- Periodically Congested V/C=0.50 - 0.75
 - Near Congested V/C=0.75 - 1.00
 - Congested V/C>1.00 (With 2-Lane Road)
 - Gravel Maintenance Threshold Exceeded > 500 ADT
- Potential Intersection Control Evaluation**
- Potential Intersection Control Evaluation
- Existing Functional Classification**
- Principal Arterial
 - A Minor Arterial Connector/Minor Arterial
 - A Minor Arterial-Reliever
 - B Minor Arterial
 - Major Collector
 - Minor Collector
 - Local Road
- Future Functional Classification**
- Future A Minor Connector/Minor Arterial
 - Future Major Collector
 - Future Minor Collector
- Interstate 35 Crossings**
- Future Interchange
 - Future Overpass
- Other Features**
- 2030 MUSA Reserve Boundary
 - Parcels
 - Elko New Market City Limits
 - Township Boundaries
 - County Boundary
 - Watercourses & Drainageways

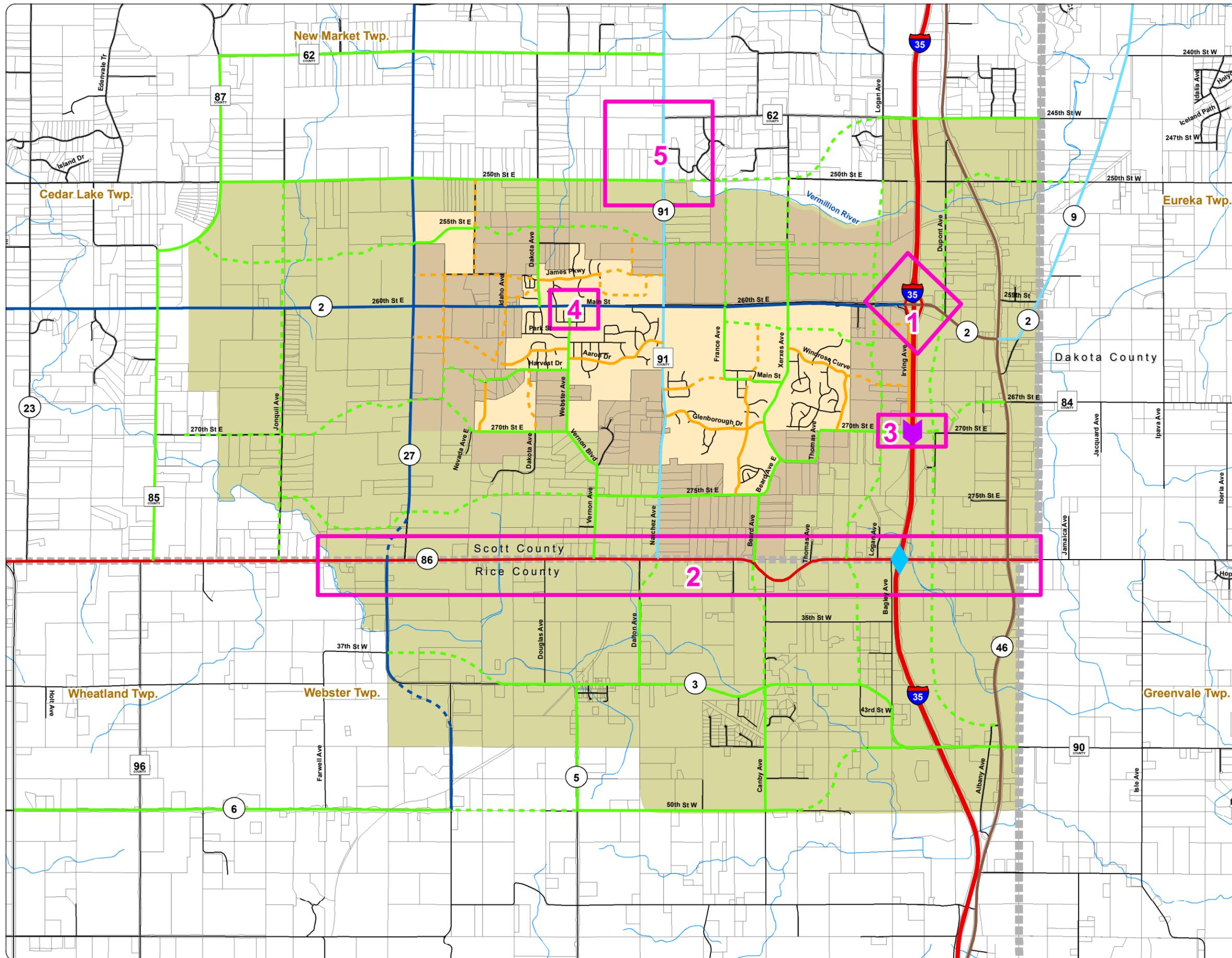
Note: The corridor alignments identified are conceptual to illustrate general connectivity and continuity needs to serve post 2030 growth. It is understood that environmental, feasibility, and traffic studies are necessary for each corridor identified, and that these studies may require coordination with Scott County, Mn/DOT, and adjacent townships. Actual alignments may vary.



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ELKO NEW MARKET 2030 TRANSPORTATION PLAN FUTURE STUDY AREAS

FIGURE 4.4
2008



Legend

Future Functional Classification

- Principal Arterial
- A Minor Arterial Connector/Minor Arterial
- Future A Minor Connector/Minor Arterial
- A Minor Arterial Reliever
- Future A Minor Reliever
- B Minor Arterial
- Major Collector
- Future Major Collector
- Minor Collector
- Future Minor Collector
- Local Road

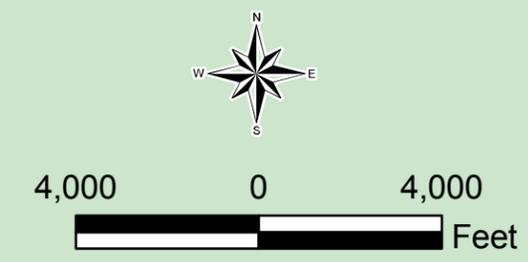
Interstate 35 Crossings

- Future Interchange
- Future Overpass

Future Study Area

- 2030 MUSA Reserve Boundary
- Undesignated MUSA Boundary
- Elko New Market City Limits
- County Boundary
- Watercourses & Drainageways

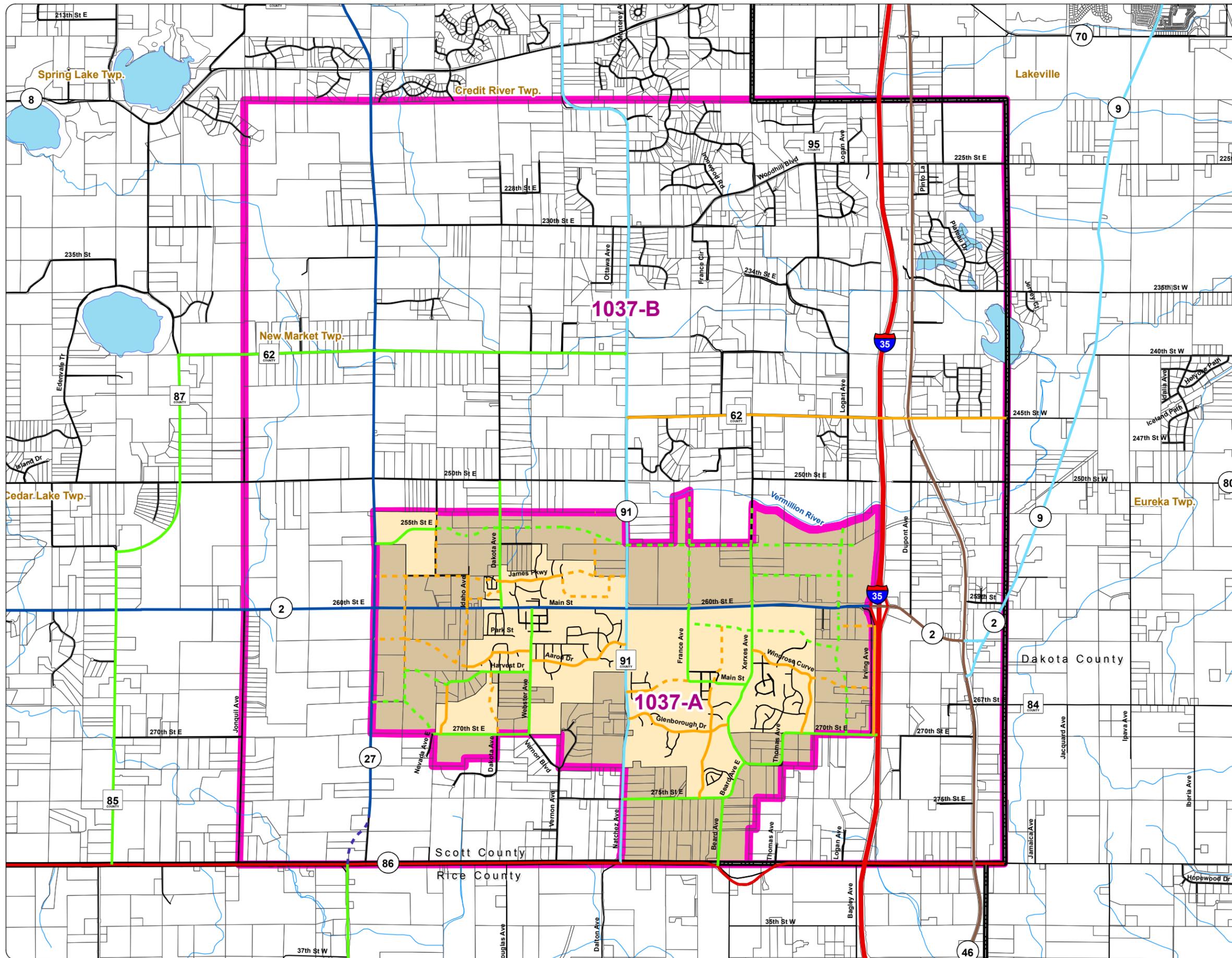
Note: The corridor alignments identified are conceptual to illustrate general connectivity and continuity needs to serve post 2030 growth. It is understood that environmental, feasibility, and traffic studies are necessary for each corridor identified, and that these studies may require coordination with Scott County, Mn/DOT, and adjacent townships. Actual alignments may vary. Future Road Accesses with Scott County roads were field reviewed by Scott County through the Southeast Scott County Comprehensive Plan Update (April 2005).



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**ELKO NEW MARKET
2030 TRANSPORTATION PLAN
TRANSPORTATION ANALYSIS ZONES**

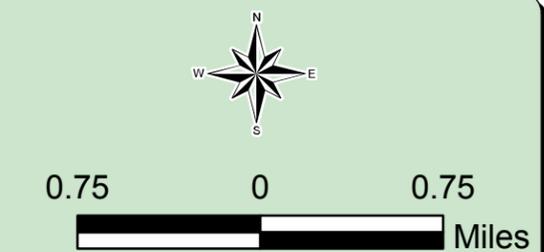
FIGURE 6.1
2008



Legend

- Outer TAZ Boundaries
- Future Functional Classification**
 - Future A Minor Connector/Minor Arterial
 - Future Major Collector
 - Future Minor Collector
- Existing Functional Classification**
 - Principal Arterial
 - A Minor Arterial Connector/Minor Arterial
 - A Minor Arterial Reliever
 - B Minor Arterial
 - Major Collector
 - Minor Collector
 - 2030 MUSA Reserve Boundary
 - Elko New Market City Limits
 - County Boundary
 - Lakes
 - Streams
 - Local Roads

Source:
Base Data - Scott County, Rice County, Dakota County, MnDNR
Existing Functional Classification-MnDOT Date: 10-19-2007



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