

Dakota County Transportation Department Roadway Guidance Signing

Background

There are three types of permanent traffic signs. Regulatory (stop, do not enter, and speed limit) signs are signs that direct specific requirements for driving and are essential for operating the roadway. Regulatory signs have the highest importance and take priority in terms of visibility and sign placement on the roadway. Warning signs (yellow signs such as stop ahead, curve, cross road) are essential to advising of hazards along the roadway that are not apparent to the motorist. Guidance signs (route markers and green street name type) are beneficial in providing motorists general information regarding upcoming intersections and other important facilities.

Regulatory and warning sign practice and guidance is set forth in the Minnesota Manual on Uniform Traffic Control Devices (MnMUTCD). The County uses the MnMUTCD to determine the need and placement of signs on the system; however, this manual does not provide specific criteria for managing a signing program for guidance signs. The intent of this guideline is to detail the specifics regarding guidance signing within the County. This document explains the various guidance sign types and identifies the practice, criteria, and considerations for placement of signs on the County highway system. Discussion of each element of the guidance sign program is included with guidelines for installation considerations, sign design, and maintenance practices.

Intersection Street Name Signing

Street name signs are installed and maintained at all public intersections with County highways.

Installation/placement: Street name signs are typically placed in a corner at the intersection. Signs on each side of the roadway are installed at wide (multi-lane or divided highway) intersections. Street name signs are 9" high, white on green, with Series C letters (6" uppercase/4 1/2" lowercase) on retro reflective wide-angle prismatic sheeting.



Intersection Street Name Sign

This standard sign is used throughout the County system. City logos on the street name sign will not be permitted due to consistency, sign-making abilities, and County maintenance responsibilities. The County installs street name signs for new intersections that are constructed by permit; fees/costs for the installation are to be paid by the permittee through the application/permit process.

Signal Mast Arm Signing

Street name signs are placed on the overhead mast arm at signalized intersections to provide better visibility at these higher volume locations. These signs are key to alerting motorists to the crossroad and are visible prior to crossing the intersection. Once the mast arm signing is in place, ground mounted street name signs may be removed.

Installation/placement: Signal mast arm signs are installed on the far right of each approach at signalized intersections. The signs are 24" tall, white on green with Series E-modified letters (8" uppercase/6" lowercase) on retro reflective wide-angle prismatic sheeting.



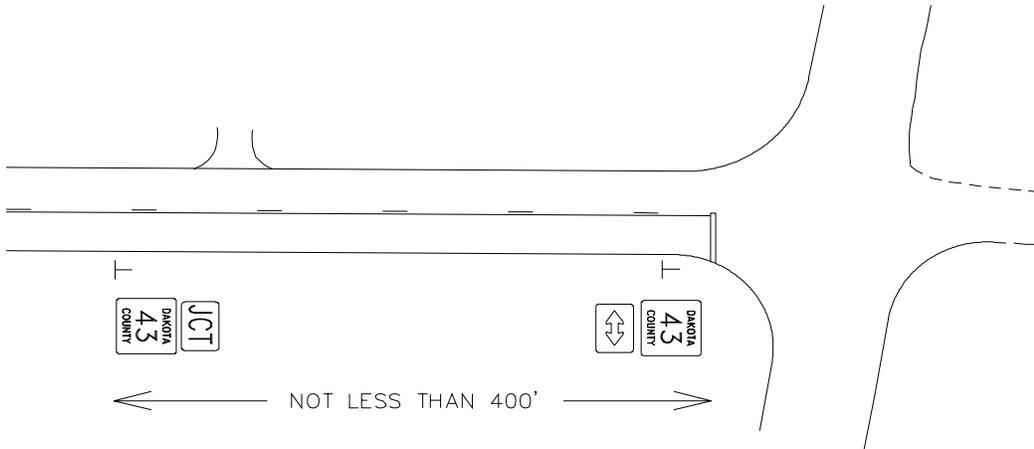
Mast Arm Street Name Sign

Highway Route Marker and Auxiliary Signing

County highways intersecting a state or county highway route are identified by a sign sequence of a route marker (highway number) with an auxiliary junction plaque followed by a second route marker sign with a directional arrow plaque in advance of the intersection.

Installation/placement: Route marker signs with junction and directional sign plaques are installed in advance of highway designation intersections in conformance with MnMUTCD standards (Sect. 2D 10-30). Installation of the sign sequence on the right side of the highway is standard. Additional left-side signs will be used along divided highways where it is beneficial to provide further guidance. The signs are 24 x 24" standard M1-X4 (square black on white) signs or M1-6 (pentagon – white and yellow on blue) with corresponding junction and directional plaques (per MnMUTCD Sect. 2D.11) on retro reflective wide-angle prismatic sheeting. The pentagon-shaped County route marker denotes major highways that serve the highest level need in Dakota County by connecting multiple cities, extending through the entire county, and/or providing key connections to the state/interstate highway network. These pentagon signs are currently used on County State Aid Highway 5, 23, 26, 31, 32, 42, 46, 47, 50, 56, and 86.

Signs will be allowed only on specific designated major highways; these major highways



M1-X4



M1-6

Street Name Signs in Advance of Intersections

Advance street name signs with directional arrows are placed prior to intersections to alert motorists of the upcoming cross road. The sign is intended to assist the motorist in preparing for action at the upcoming intersection. The signs are similar to route-marking signs that provide guidance at truck or county highway intersections by providing motorists with the specific name of the route at main intersections along high speed major county highways.



Advanced Street Name Sign

Criteria for Signing: This signing provides advance notice of an approaching intersection along major high speed county roads. The signing would be for key intersections that serve to connect the county highway system with the city or town street network. The signs can assist motorists by allowing easier identification of the side road for preparing to turn. Aspects of the county highway and the intersecting roadway are both considerations for installation.

Highways must have a principal or county minor arterial function as identified in the Dakota County Comprehensive Transportation Policy Plan. County highways with a collector road designation will not be eligible for advanced street name signs:

**Advanced Street Name Signing Criteria
By Functional Classification of the County Highway**

Principal Arterials	County Minor Arterials	Collector Roads
Most full access public road intersections. (See exception criteria below.)	Selected public road intersections will be signed per the criteria below.	No intersections will have advanced signs.

Principal Arterial Advance Signing Criteria: Principal arterials connect metropolitan centers to major business areas. Since the primary purpose of the principal arterial is mobility, access is limited. The roadways that connect to the highway are intended to be public roads serving a collector function or greater. Public road intersections will qualify for advance signing with the following exceptions:

- 1) Minor public street connections that serve a very limited function (cul-de-sacs, right in/out only or other short roadway connections).
- 2) For segments with more than one roadway leading into an area (roadways closer than one-quarter mile apart), only one road (main connection) for the area may be selected.
- 3) Intersections with Trunk or County Highways will typically not receive advance street name signs because they are denoted by advanced route-marking signs. However, a location may receive advance street name signing in select locations if the street name is determined to have regional significance provided signing will not diminish the effectiveness of State or County highway advance signing.

County Minor Arterial Advance Signing Criteria: County minor arterial roadways primarily serve traffic throughout the County. Installation of advance street name signs are typically installed along multi-lane divided highway or high-speed rural highways with a daily traffic volume exceeding 1000 vehicles and with a speed limit of 50 MPH or greater. The same conditions as stated under principal arterials will apply. Additionally, the following intersecting street eligibility criteria must be met:

Highways within suburban area factors:

- Intersecting roadway serves to connect to other highway routes and the local city street system (typically intersecting street will be a MSAS route).
- Locations with all-way stops will not typically be considered for advance signing. At all way stops, intersection signing will be places at both near corners of the main line to provide intersection crossing recognition.

- Roadway with a high generator directly off the main highway that serves motorists unfamiliar with the area. High generators include high schools, industrial parks (large trucking operation), churches, business districts, regional parks or community facilities located along a side road within one-half mile of County highway intersections.
- Eligible locations will be a half-mile or further apart to ensure guidance signing provides information without overwhelming the regulatory and other warning signing along the highway.

Highways within Township (rural) areas factors:

- Roadways serve to connect to other highways with the town road system.
- For a segment with more than one roadway leading into an area, only the main road for the area would be selected. Preferably, a full intersection would be selected over T-intersections to provide guidance to the major access for the area.
- Eligible locations will be located 1 mile apart or further.

Sign Placement Consideration: Adequate spacing of all signs is necessary to ensure that sign clutter does not diminish the visibility and message. While the criteria above may be met, the ability to install a sign without blocking other key motorists' information will also be taken into consideration. Closely spaced intersections or lack of right of way width for sign placement may not allow for advanced signing for a particular roadway. In areas with closely spaced intersections, motorists may see the directional sign and inadvertently be misdirected onto the wrong roadway. Location and placement of all signing is dependant on space, right-of-way availability and other signing. These issues can result in the inability to install a sign although qualifying criteria is met.

Installation / Placement: Advanced street name signs are installed in advance of the intersection at a location based on highway speed and other signing needs. Signs are white on green with Series E modified letters (8" upper case / 6" lower case) on retro reflective wide-angle prismatic sheeting (where there are space limitations, 6" upper case/ 4.5" lower case letters can be used). Sign size will generally be 30-36" high by 54-132" wide. This lettering size should be visible to drivers in various weather/lighting conditions. These signs supplement current mast arm and intersection street signing programs.

Signs will typically be placed on the right side of the roadway at the start of the taper in areas with turn lanes and in accordance with the MUTCD warning sign charts for other segments. Signing in the median in addition or in place of right side signing will be evaluated on a case-by-case basis.

The municipality may be consulted to help determine the appropriate intersection to sign when a choice must be made between two or more intersections accessing the area.

City Destination Signing

In rural areas, cities are typically isolated from each other and are often located off local or lower classification county highways. It may be desirable to supply the road user information concerning the destination in addition to the guidance provided from route marker and advanced street name signs. Guidance to specific cities off a highway route is done by means of Destination Signs (per the MnMUTCD).

Criteria for Signing:

Signs will be allowed only on specific designated major highways; these major highways serve the highest level need in Dakota County by connecting multiple cities, extending through the entire county, and/or providing key connections to the state/interstate highway network. For the rural area of Dakota County for which city destination signing may be permitted, this applies to County Highway 23, 47, and 86.

In addition, all the following criteria must be met:

- Signing is permitted from the major county highway to a lower county highway or local road. Signing will not be permitted from the major county highway to another major county highway or directing to the trunk highway system.
- City must be located in an isolated rural area (this signing is not intended for cities that share borders with other cities).
- City must be located directly off the highway qualifying for signs and be no further than 6 miles from the qualifying highway where the sign would be placed. Trailblazing from the destination sign on the major highway to other highways or local routes will not be permitted.
- City will be permitted only one sign in each direction from the qualifying highway.

Installation/placement: Destination signs are typically 24” high white on green Series E modified letters (8” upper case/ 6” lower case) on retro reflective wide-angle prismatic sheeting.

Destination signs are placed following any junction or advance route assemblies. Because the destination sign is of lesser importance than the Junction, Advance Route assemblies, the Destination sign may not be able to be accommodated where sign spacing is critical. Due to spacing, if destination sign is at a location with a county highway, advanced street name signs may be eliminated to accommodate the city Destination Sign. A judgment will be made by the County to determine which message (Street Name or Destination) will provide better overall guidance to the motorist.



Destination Sign

Traffic Generator Signing

The street name and directional guidance signing is the primary traffic signing to help direct unfamiliar motorists to destinations along the County highway system. However, signing for a specific regional attraction or facility that generates significant volume of motorists unfamiliar with the local area can be beneficial. Guide and information signs are intended to provide notice to motorists unfamiliar with the area to better facilitate travel and turn maneuvers to the destination. Highway signing is not intended to be an advertising medium. The County will review each request to determine if permitting this signing would be the appropriate method to aid traffic on the County system traveling to a specific facility.



Traffic Generator Sign



Criteria for Signing: This signing type is meant for traffic generators that are major regional attractions or facilities that draw motorists from beyond the local community. They are significant for the cultural, historical, or recreational experience and public appeal of the generator. Predominantly retail, business, or manufacturing centers are not normally eligible for guide signing. In addition, either the following criteria 1 or criteria 2 (parts a through e) must be met to qualify for consideration for traffic generator signing:

- 1) Facilities that qualify for white on green or brown on green (depending on facility) signing on the state and inter-state system under generator sign criteria in the MnDOT traffic engineering manual that require supplemental signing on the County system to identify the route to the generator. **OR**
- 2) Facilities that generally attract non-local persons or groups unfamiliar with the location of the generator. Information regarding the generator will be used to determine the benefit of signing to the motorists including the following:
 - a) Public or private but open to the general public and provide a historical, cultural, or recreational experience. Retail, business or manufacturing centers are not eligible uses.
 - b) Generates approximately 250 vehicles daily (measured based on site information and traffic generation tools).
 - c) Open a minimum of five days a week, during normal business hours (typically eight hours per day).
 - d) Open at least six months of the year. (Signing indicating seasonal operation may be required.)
 - e) Generators with access directly on the County system are not eligible unless the access/facility signing for the generator is poorly visible to motorists on the highway and on-site changes cannot be reasonably made to allow the generator's on-site signs to be more visible.

Examples of eligible and ineligible signs: Note: Sign criteria must be met.

Typically Eligible
 Regional Park
 Technical College
 Public Golf Course (not driving ranges/miniature golf)
 Zoos

Typically Ineligible
 City Park
 School/Church
 Industrial Park
 Retail Shops/Private Businesses

Sign locations practice and requirements: The County will approve the number, location and wording for signing. When the generator meets signing criteria, the following explains the basis outline for generator sign installation:

- Signs are placed on the nearest County highway at the intersection closest to the facilities entrance in each direction.
- Signs are allowed from higher classification roads onto lower classification roads, but not from lower to higher classifications (i.e., signs are not permitted on the County system directing traffic to the interstate or state highway to reach a traffic generator.)
- For major regional facilities generating daily traffic over 2000 vehicles at least 30 days in the year, additional signing on higher classification County routes may be placed in addition to signing on the nearest County route to the facility provided the higher class route is within 2.5 miles of the facility and the higher classification County route serves as a major connection to reach the facility.
- Generators that qualify for signs but are not located directly along the roadway will need additional directional signs installed along the local streets to further direct traffic from the highway through the local street system. Coordination between the generator and local authority must be resolved prior to County signing request.
- Location and placement of all signing is dependent upon available space.

Generator Logos and Plaques on Signs: The use of logos to help better identify the generator may be allowed for state/county/city/township owned facilities that qualify for generator signing provided the County Traffic Engineer approves the proposed sign layout design/location. The intent is to allow the guidance sign to be recognized by the motorist traveling to the attraction. Wording or commercial advertising symbols/products will not be allowed. The message and design may not simulate any traffic control device. General information signs (I Series, per the MMUTCD -- library, recycling center, etc.) or recreational and cultural interest area signs (Section H of the MnMUTCD) may be used when the facility meets criteria for sign installation. Separate logo signs will typically be 24" – size B not to exceed 36" – size B dependant on symbol and location/speed of highway.

Installation/Placement: Traffic generator signs are installed in advance of the facility or intersection leading to the generator. The signs are white letters/symbols on green background or white letters/symbols on brown background in accordance with MnMUTCD guidance. The letters will typically be Series E modified letter (6" upper case /4.5" lower case) on retro reflective wide-angle prismatic sheeting. Colored symbols will not be allowed for generator signing.

Review Process and Cost Responsibility: The entire sign proposal including symbol and lettering layout are reviewed and approved by the County Traffic Engineer. Upon review and approval, generator signs are manufactured at no cost to the County. The County will review the locations to ensure that each sign does not obstruct or diminish the effectiveness of the other area signing and that adequate space is available to accommodate the guidance sign. The County installs the signs. Since generator signs aid road users traveling to a specific facility and signs are installed at the generator's request, the requestor pays for all sign costs including installation, maintenance, and repositioning existing signs.

Community Recognition Signs

Incorporated cities/townships often request to have a sign placed along the highway at the city/township limit to advise motorists that they are entering this community. These signs can be permitted within the right of way provided the signs meet the following conditions:

- 1) Sign conveys city name and may contain city logo provided it is legible for the highway speed.
- 2) Standard signs are located at the city limit on main County routes.
- 3) Sign may utilize city logo and can have a maximum of three colors. (See Installation/Placement below.)
- 4) No advertising will be permitted.

Installation/Placement

The standard recognition signs will be white, blue, green or black text on green or white background with Series E modified lettering (6" Upper case / 4.5" lowercase) on retro reflective wide-angle prismatic sheeting. A city logo may utilize up to three standard sign colors. Red may typically not be permitted because of its status as a main regulatory sign color. Symbols and design may not simulate any traffic control device. Decorative monument signs may be selected by a community in place of the standard signs. Monument-type signs will only be allowed on the highway right of way if they can be placed outside the clear zone. The sign should be kept to a design that will meet the intent of recognizing the community while not distracting motorists from the main regulatory signs and features of the road.



Community Recognition Sign (standard sign – left and monument sign – right)

Review Process and Cost Responsibility: The County Engineer reviews and approves the entire sign proposal including symbol and lettering layout. The County reviews locations to ensure each sign does not obstruct or diminish the effectiveness of the other area signing and that adequate space is available to accommodate the community sign. Upon review approval, community signs are prepared at no cost to the County. The County will install standard recognition signs. The County provides a permit for the installation of monument signs. The requestor pays for sign costs including installation, maintenance, and repositioning of existing signs.

n:\traffic\directional highway signing