

Speed

Posted speeds on TH 11 are primarily 55 miles per hour, with speeds of 30, 40, 45 and 50 miles per hour within the more urbanized areas. Speeds tend to drop in town due to the number of access locations, development along the corridor and a mix of users (e.g., pedestrians in downtown areas). **Table 10** shows posted speeds by segment. **Figures 37 - 40** show locations where the speed limit is less than 55 miles per hour.

MnDOT was directed to study posted speeds statewide and to make a determination if speeds could be raised. As part of the study, MnDOT is collecting data and making recommendations. On TH 11 posted speeds are expected to be increased to 60 miles per hour (in rural areas where speeds are currently 55 mph) in the future – likely in 2015. It should be noted that the 60 mile per hour speed is consistent with the travel speeds that were collected/observed as part of the travel time runs documented in the traffic memo dated July 23, 2015.

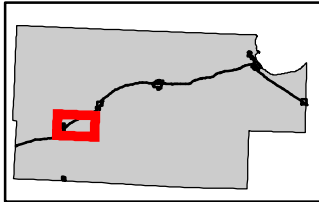
In addition to these posted speed limits, there is also an advisory speed of 45 miles per hour posted along the curve south of the Roseau Municipal Airport (in both westbound and eastbound travel directions).

Table 10 – Posted Speeds on TH 11

Community	TH 11 Segment Description	Posted Speed
Greenbush	From CR 104 to just east of Oakview Drive	55 miles per hour
Greenbush	From just east of Oakview Drive to intersection of TH 11 and TH 32	30 miles per hour
Greenbush	From intersection of TH 11 and TH 32 to a point approximately 0.2 miles east	40 miles per hour
Greenbush, Badger	From approximately 0.2 miles east of the TH 11 and TH 32 intersection to a point just west of CSAH 2 in Badger	55 miles per hour
Badger	From just west of the intersection with CSAH 2 to just north of the railroad tracks and the Swedish Cemetery (south of the northern junction of CSAH 3)	50 miles per hour
Badger to Roseau	From CSAH3 north of Badger to a point approximately 0.2 miles east of 380th/18th Avenues (just west of 15 th Ave NW) in Roseau	55 miles per hour
Roseau	From just west of 15th Avenue NW to just west of 7th Avenue NW	45 miles per hour
Roseau	From just west of 7th Avenue NW to just east of 11th Avenue NE	30 miles per hour
Roseau to Warroad	From 11th Avenue NE in Roseau to just west of TH 313/Cedar Avenue NW in Warroad	55 miles per hour
Warroad	From just west of TH 313/Cedar Avenue NW to between Gladys and Elk Streets	40 miles per hour
Warroad	From between Gladys and Elk Streets to Warroad City Limits just south of the intersection with CSAH 5	30 miles per hour
Warroad to Roosevelt	From Warroad City Limits just south of the intersection with CSAH 5 to the Roseau-Lake of the Woods County Line in Roosevelt	55 miles per hour



Figure 37
Speed Limits Less Than 55 mph
Greenbush



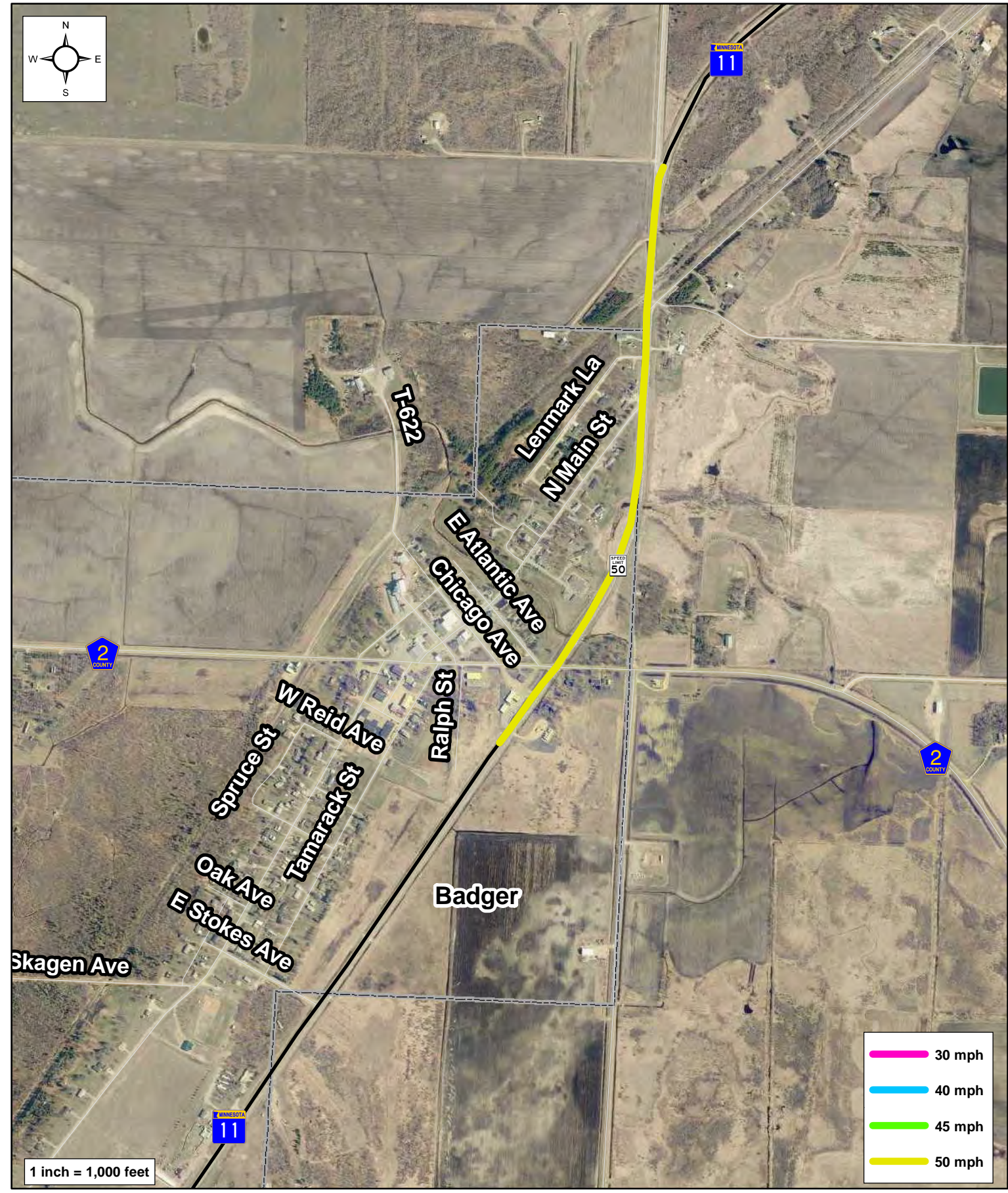
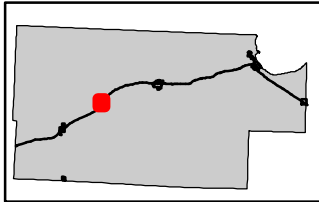


Figure 38
Speed Limits Less Than 55 mph
Badger



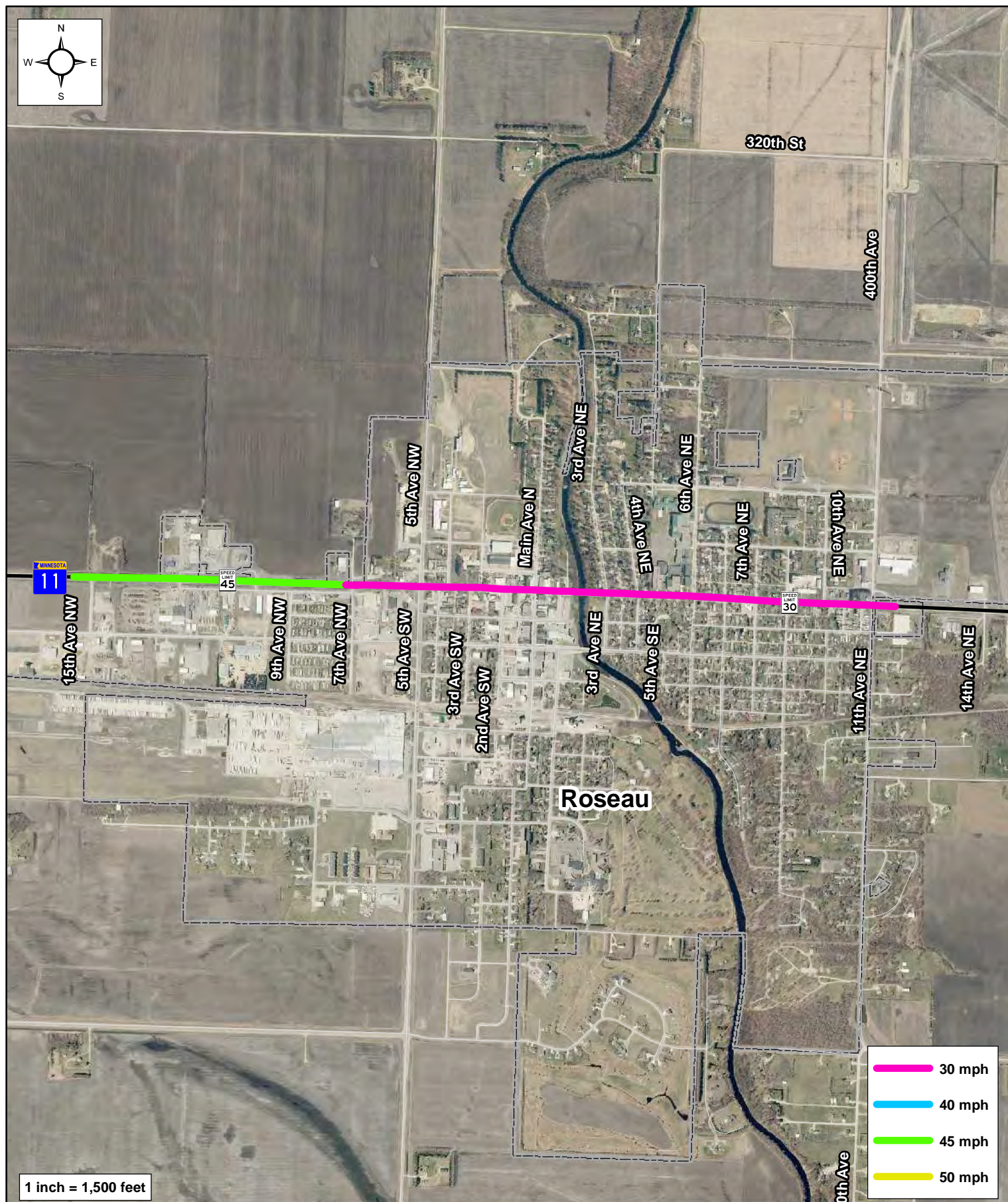


Figure 39
Speed Limits Less Than 55 mph
Roseau



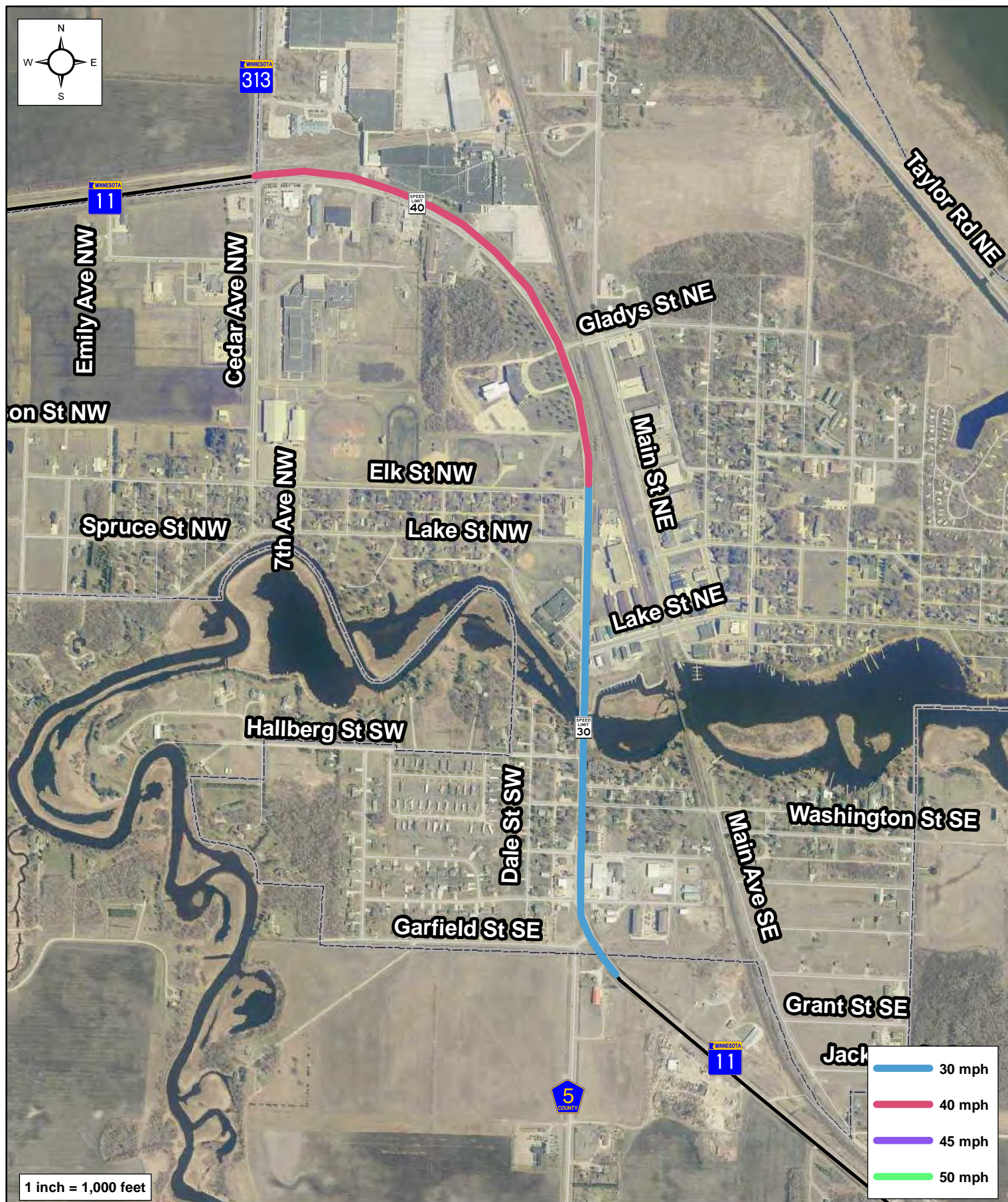


Figure 40
Speed Limits Less Than 55 mph
Warroad



Passing Zones

Passing is permitted on much of TH 11 due to its generally flat terrain and gentle curves that enable drivers to see oncoming traffic. There are a total of 33 “No Passing Zones” within the corridor. Seven of the zones apply to traffic in both directions (**Table 11**), 11 of the zones apply just to traffic travelling eastbound (**Table 12**) and 15 apply just to traffic travelling westbound (**Table 13**). **Figures 41 – 46** show “No Passing Zones” on the TH 11 corridor.

Table 11 – No Passing Zones for Traffic in Both Directions

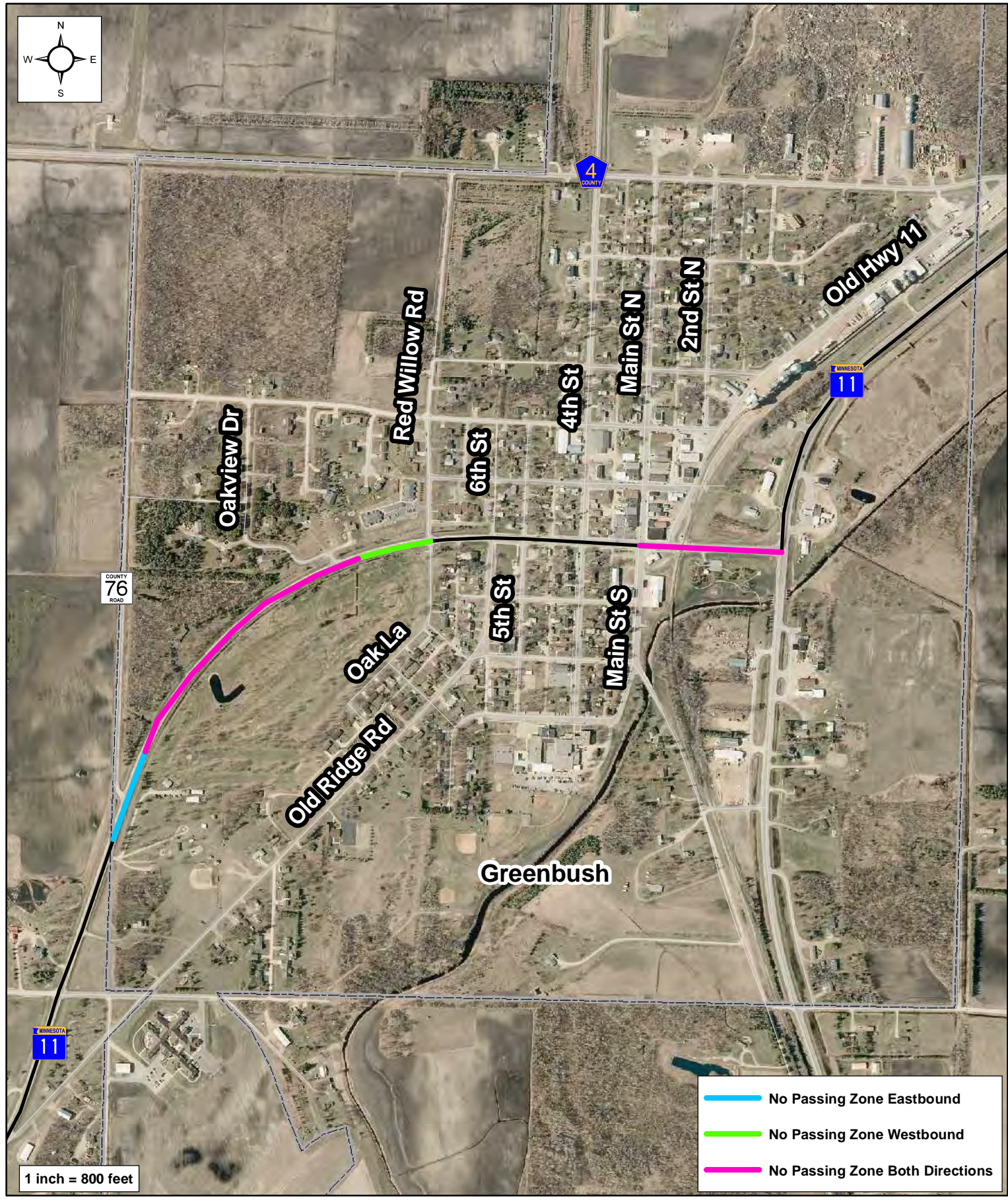
General Area	Intersection/Location From	Intersection/Location To	Distance
Greenbush	Approximately 700 feet north of CR 76	250 feet east/ north of Oakview Drive	1,590 feet
Greenbush	Main Street	TH 32/TH 11 intersection	800 feet
Badger	North side of railroad crossing	980 feet north of the CSAH 3 north junction split	1,710 feet
Roseau	890 feet west of 380th/18th Avenues	15th Avenue NW	2,250 feet
Roseau	15th Avenue NW	500 feet west of 14th Avenue NE (3-lane section)	1.9 miles
Warroad	560th Avenue	350th Street	150 feet
Warroad	330 feet east of Emily Avenue NW	280 feet south of CR74/Lake Street NE (south junction) (3-lane section)	1.22 miles

Table 12 – No Passing Zones for Traffic Travelling Eastbound

General Area	Intersection/Location From	Intersection/Location To	Distance
Greenbush	Approximately 275 feet south of CR 76	Approximately 700 feet north of CR 76 (northbound in this location)	975 feet
Badger	Approximately 690 feet south of CSAH 2	CSAH 2	690 feet
Badger	Approximately 240 feet south of Lenmark Lane	South side of railroad tracks (northbound in this location)	740 feet
Roseau	1,445 feet west of 380th/18th Avenues	900 feet west of 380th/18th Avenues	545 feet
Roseau	520 feet west of 420th Avenue	730 feet east of 420th Avenue (former railroad crossing)	1,250 feet
Warroad	550 feet west of 550th Avenue	550th Avenue	550 feet
Warroad	450 feet west of 560th Avenue	560th Avenue	450 feet
Warroad	460 feet east of Lakewood Circle	980 feet east of Lakewood Circle	520 feet
Warroad	640 feet west of 570th Avenue	570th Avenue	640 feet
Warroad	530 feet west of CSAH 35/580th Avenue	CSAH 35/580th Avenue	530 feet
Roosevelt	700 feet west of Roseau County Border (CR 17/Rocky Point Rd NW/Krull Trail NW)	100 feet west of Roseau County Border (CR 17/Rocky Point Rd NW/Krull Trail NW)	600 feet

Table 13 – No Passing Zones for Traffic Travelling Westbound

General Area	Intersection/Location From	Intersection/Location To	Distance
Greenbush	75 feet west of Stephen Avenue West	250 feet east/north of Oakview Drive	680 feet
Badger	Approximately 830 feet to east/north of CSAH 2	CSAH 2	830 feet
Badger	Approximately 1,580 feet north of the CSAH 3 north junction split	980 feet northeast of the CSAH 3 north junction split (north/eastbound in this location)	600 feet
Roseau	120 feet west of 14th Avenue NE	450 feet of 14th Avenue NE	330 feet
Roseau	730 feet west of 420th Avenue (former railroad crossing)	910 feet to the east (910 feet east of the former railroad crossing)	910 feet
Salol	560 feet east/north of CSAH 9	CSAH 9	560 feet
Salol	560 feet east/north of Main Street	Main Street	560 feet
Salol	400 feet east/north of the eastern entrance into the Timberline mobile home park	Middle entrance of the Timberline mobile home park	1,350 feet
Salol	530 feet east/north of 510th Avenue	510th Avenue	530 feet
Salol	390 feet east/north of the entrance to the Woodland Trailer Park (1,180 feet east of 520th Avenue)	Entrance to the Woodland Trailer Park (790 feet east of 520th Avenue)	390 feet
Warroad	520 feet east of 550th Avenue	550th Avenue	520 feet
Warroad	460 feet east of 350th Street	350th Street	460 feet
Warroad	1,780 feet east of Lakewood Circle	1,110 feet east of Lakewood Circle	670 feet
Warroad	570th Avenue	700 feet east of 570th Avenue	700 feet
Warroad	500 feet east of CSAH 35/580th Avenue	CSAH 35/580th Avenue	500 feet



**Figure 41 - No Passing Zones
Greenbush**

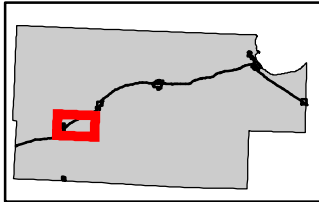
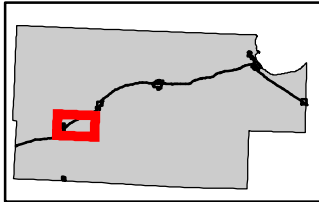
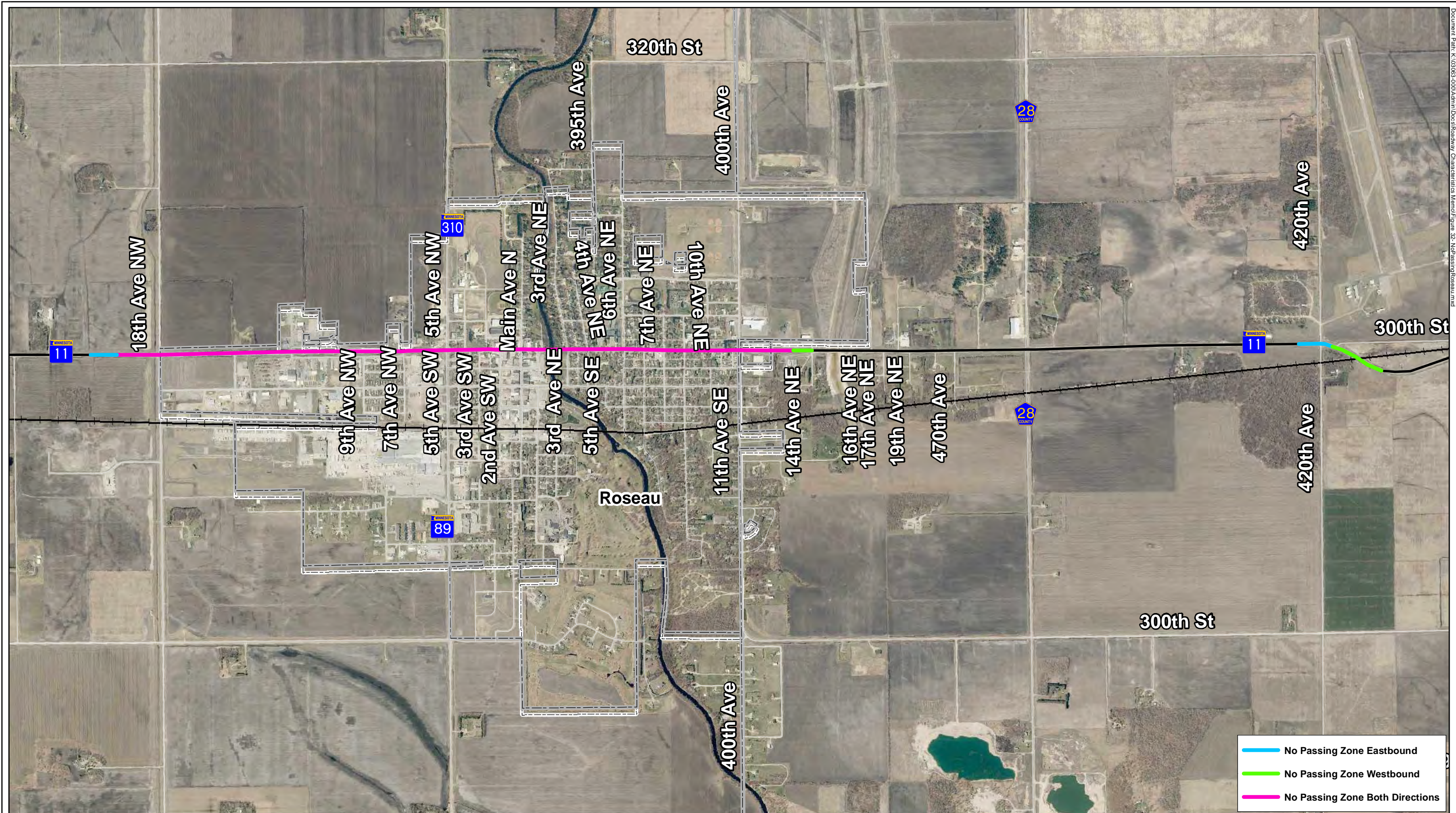




Figure 42 - No Passing Zones
Badger





1 inch = 1,600 feet

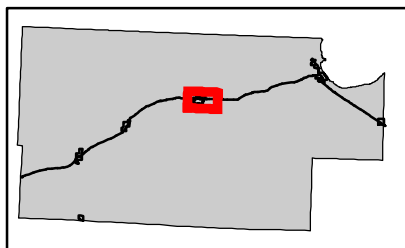
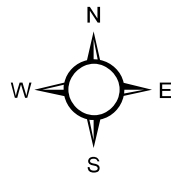


Figure 43 - No Passing Zones Roseau



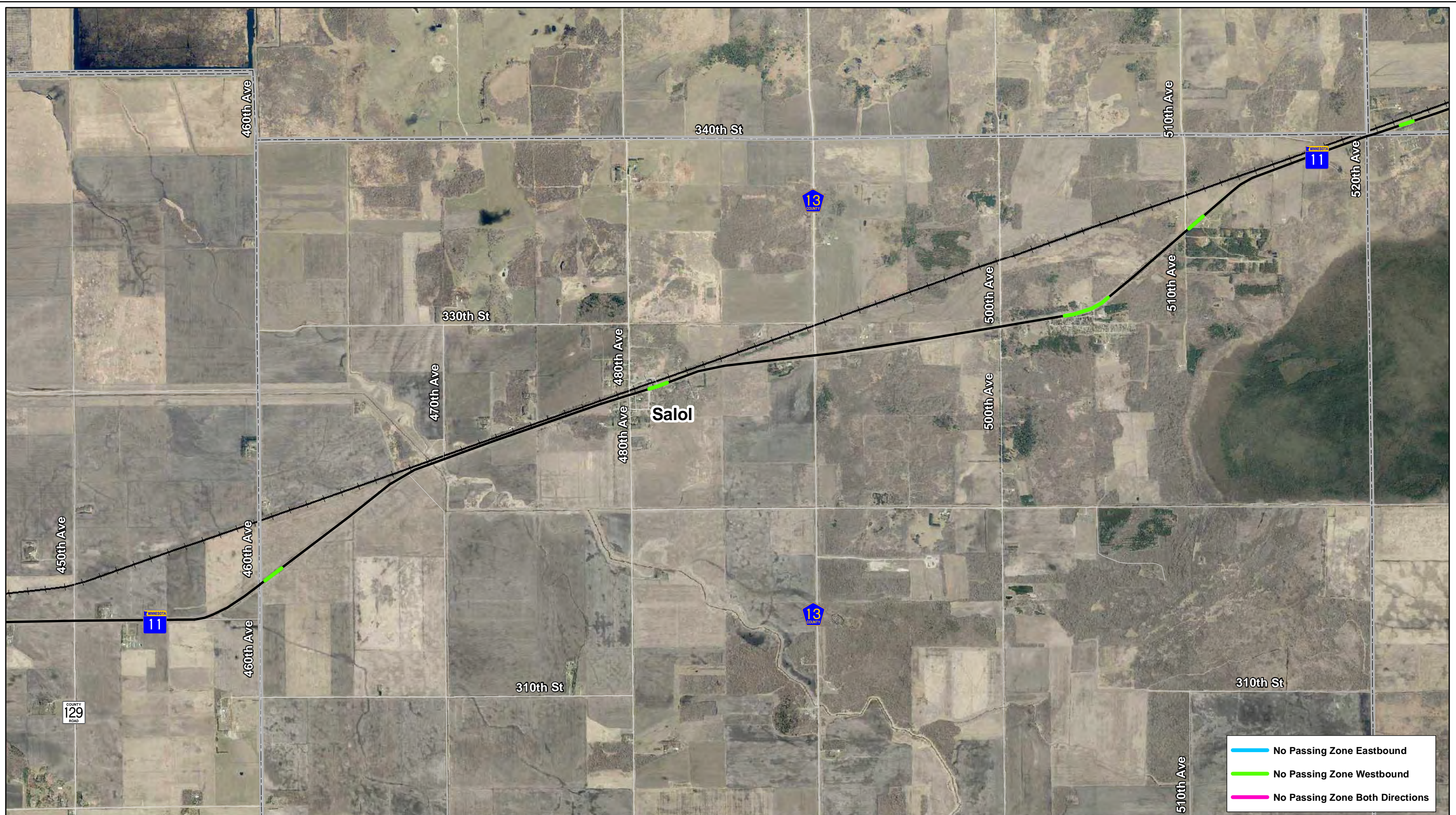


Figure 44 - No Passing Zones Salol

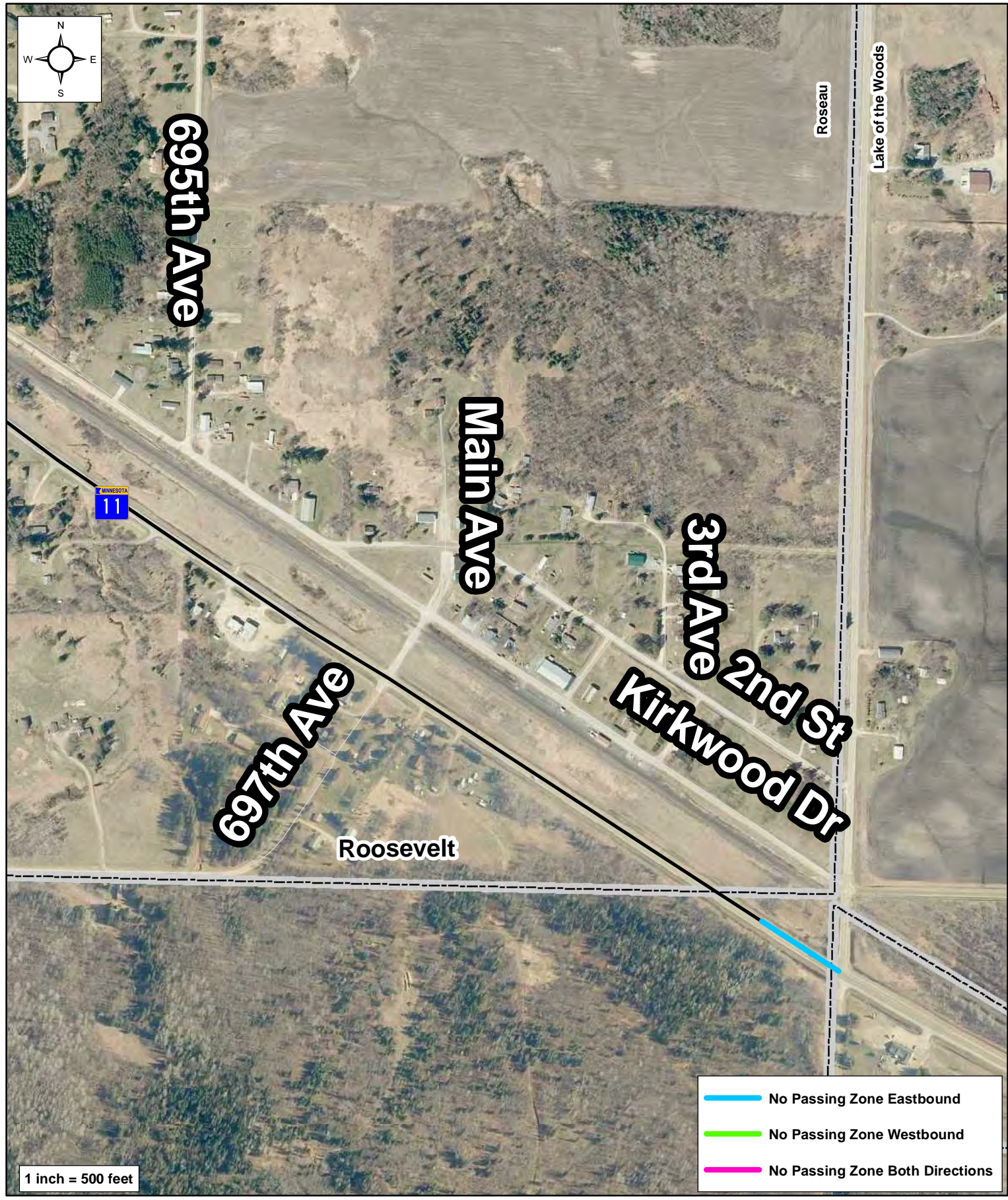




1 inch = 1,600 feet

Figure 45 - No Passing Zones
Warroad





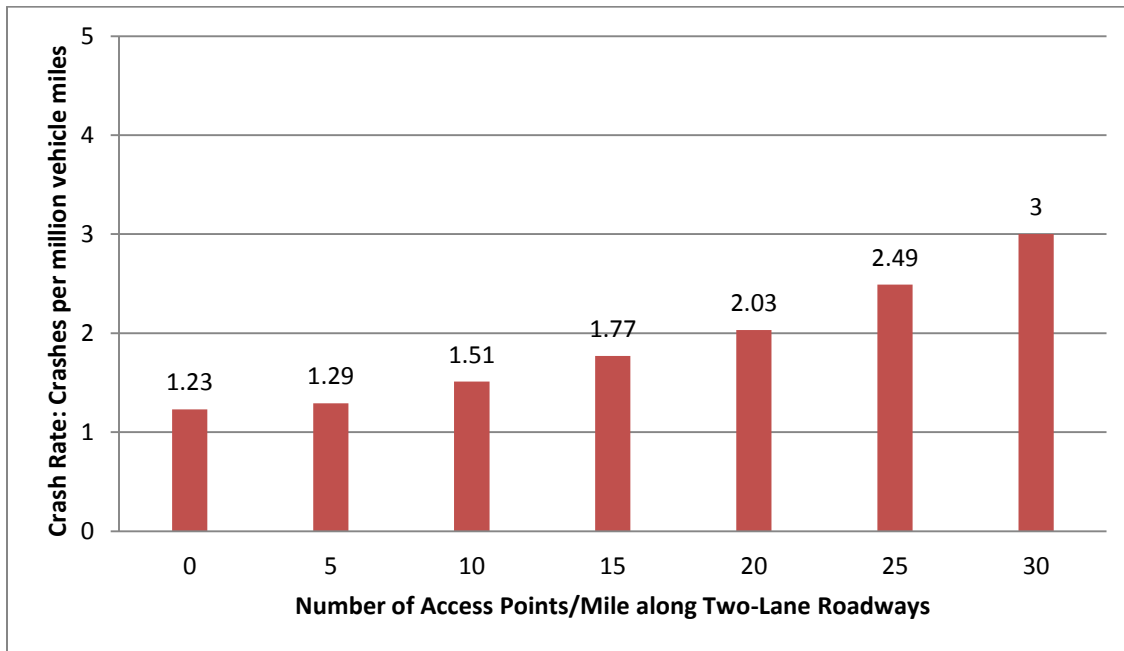
**Figure 46 - No Passing Zones
Roosevelt**



Access

The amount and location of access can have a tremendous impact on how a corridor functions and operates in terms of safety and mobility. The more access that is on the corridor, the more likely it is that a crash will occur and that there will be congestion. This is especially true for two-lane roadways. As shown in **Chart 1**, crash rates increase substantially as access points reach 30 within a mile.

Chart 1 – Amount of Access and Crash Rate Relationship



On principal arterial routes, as previously documented, access is to be secondary to mobility in terms of the purpose of the roadway. On these facilities, access management is critical for safe and efficient operations. As traffic volumes and speeds increase, it is necessary to space other roadways and driveways effectively to reduce the potential for conflicts between mainline traffic and vehicles entering/exiting driveways and cross streets. Access management promotes efficient operations and improves safety by reducing conflicts and crash exposure. For this reason, many transportation agencies, including MnDOT, have established access management guidelines to promote safety and efficient operations.

MnDOT Access Guidelines for TH 11

MnDOT has developed a set of standards that identify appropriate spacing distances for roadways based on functional classification. There are also specific guidelines for special highway classifications including interregional corridors and high priority regional corridors. TH 11 has been designated by MnDOT as both a principal arterial as well as a high priority regional corridor. This puts the roadway into Category 3 of the MnDOT corridors. Each of the categories developed by MnDOT assigns full access locations and secondary (right-in/out or three quarter) access locations by the amount of development in the area.

Table 14 shows the recommended full and partial access locations by development intensity for Category 3 roadways that are not freeway facilities.

Table 14 – MnDOT Regional Corridor (Category 3) Access Management Guidelines

Access Sub-category	Land Use or Facility Type	Typical Functional Classification	Typical Posted Speed	Primary Full-Movement Intersection Spacing	Secondary Intersection Spacing
3A	Rural	Arterial	45–65 mph	1 mile	½ mile
3B	Urban/Urbanizing	Arterial	40–45 mph	½ mile	¼ mile
3C	Urban Core	Arterial	30–40 mph	300–660 feet, dependent on block length	

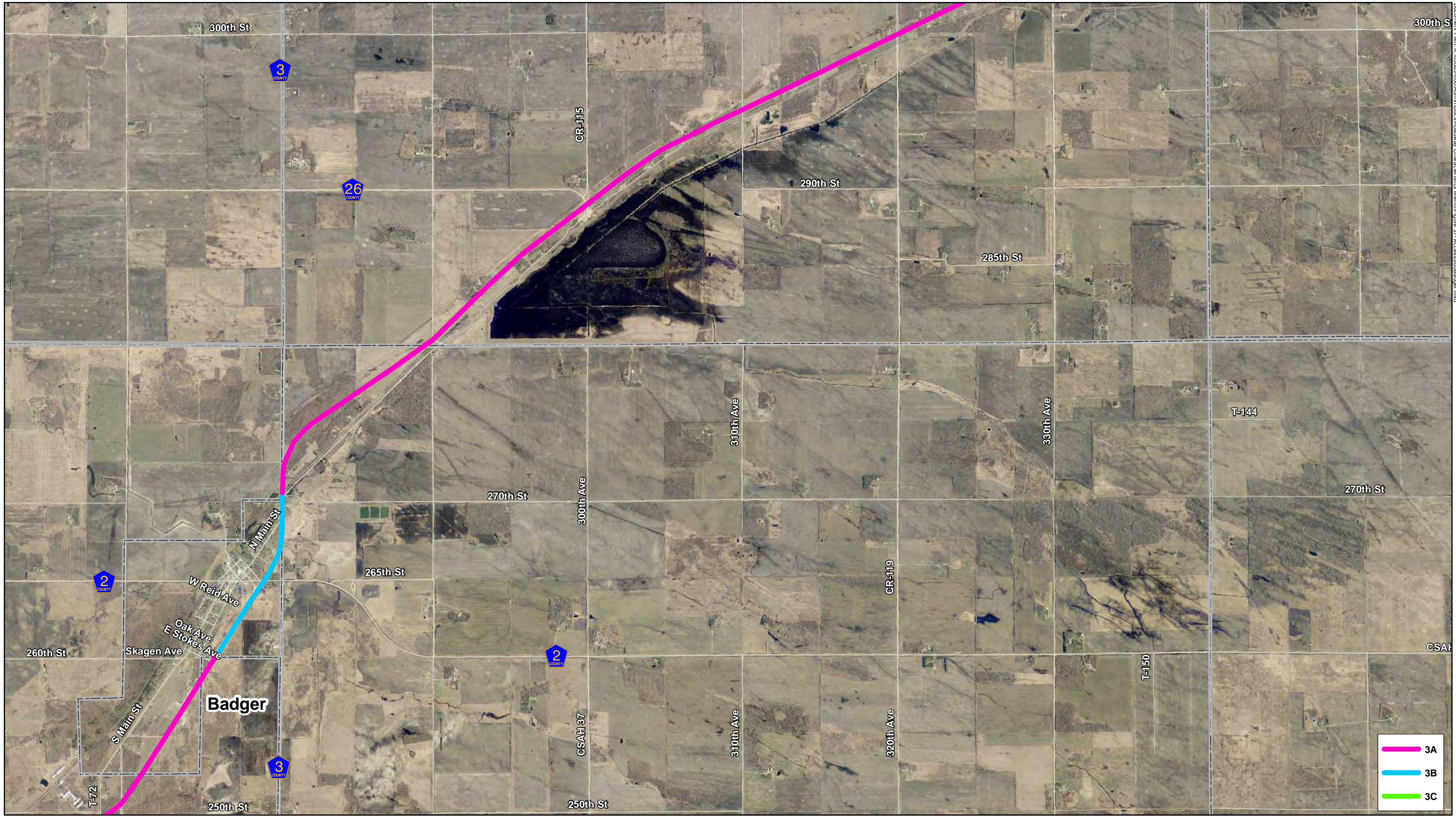
Source: Adapted from MnDOT Access Management Manual, Figures 2.1 and 3.1.

Based on the subcategories listed in Table 14, MnDOT District 2 assigned specific subcategories to individual segments of TH 11. Specifically, there are 13 segments in Roseau County (12 of which are within the study area). Five of these segments are assigned to Category 3A (rural), five are assigned to Category 3B (urban/urbanizing), and three are assigned to Category 3C (urban core). **Table 15** lists the access subcategory by segment for the study limits. **Figures 47 - 52** show the various subcategories on a map.

Table 15 – Access Subcategory Assignments for TH 11

Segment	Segment Beginning	Segment End	Length (miles)	Access Category Assignment
*1	Western Roseau County Border	Western Limits of Greenbush	9.8	3A
2	Western Limits of Greenbush	6th Street in Greenbush	0.6	3B
3	6th Street in Greenbush	1st Street in Greenbush	0.2	3C
4	1st Street in Greenbush	Eastern Limits of Greenbush	0.6	3B
5	Eastern Limits of Greenbush	East Stokes Avenue in Badger	8.8	3A
6	East Stokes Avenue in Badger	Eastern Limits of Badger	1.2	3B
7	Eastern Limits of Badger	375th Avenue	10.8	3A
8	375th Avenue	TH 89/TH 310	1.5	3B
9	TH 89/TH 310	CSAH 28	2.0	3C
10	CSAH 28	Western Limits of Warroad/TH 313	18.9	3A
11	Western Limits of Warroad/TH 313	Gladys Avenue	0.5	3B
12	Gladys Avenue	Southern Limits of Warroad	0.9	3C
13	Southern Limits of Warroad	Eastern Roseau County Border	12.4	3A

*Outside study area



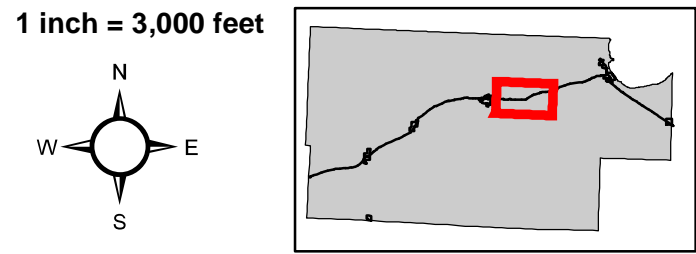
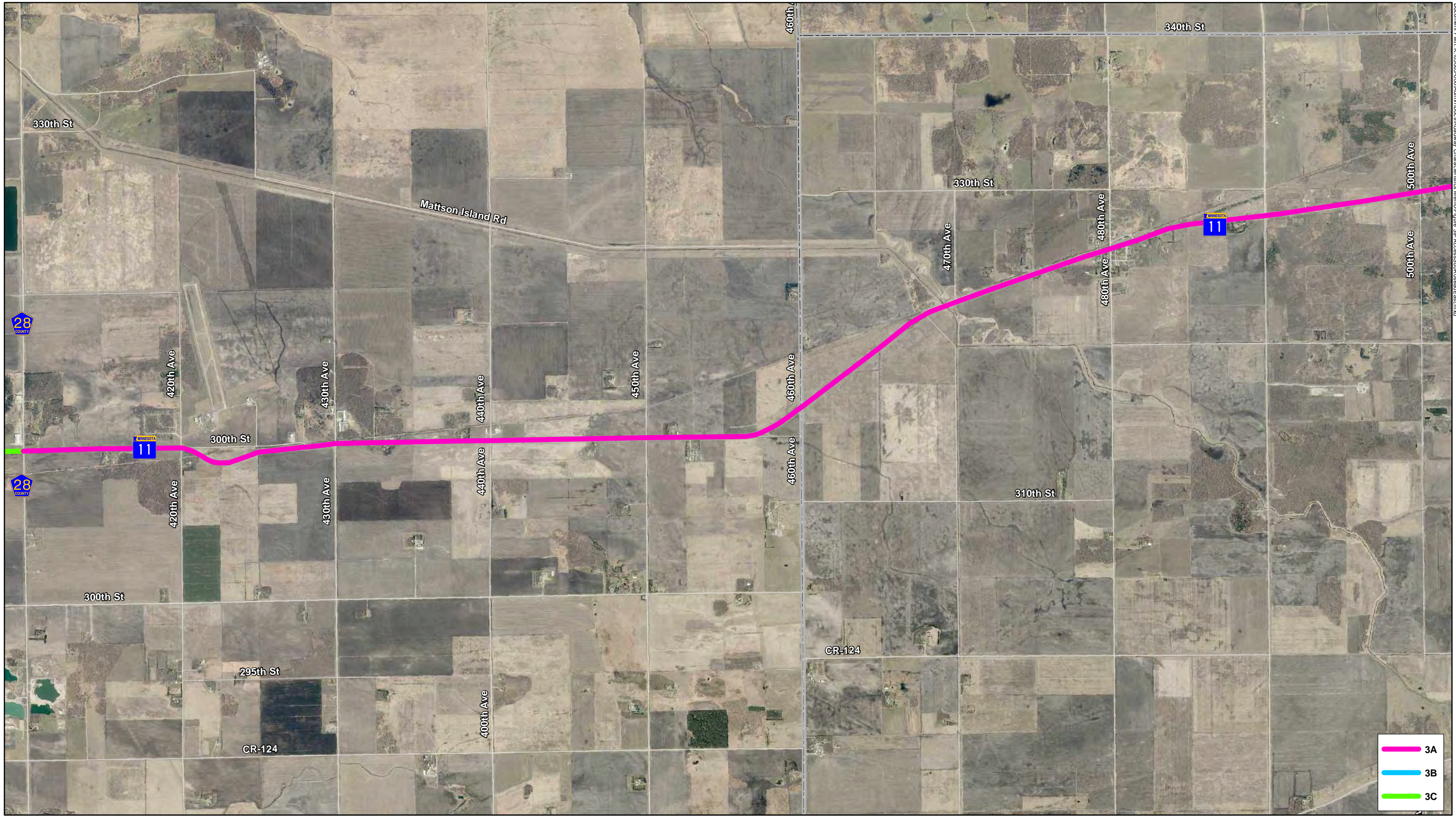
1 inch = 3,000 feet





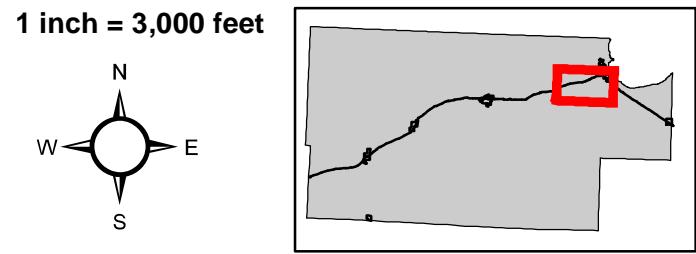
**Figure 48 - Access Subcategories
Badger**





**Figure 50 - Access Subcategories
East of Roseau**





**Figure 51 - Access Subcategories
Warroad**



TH 11 Existing Roadway Conditions

In addition to guidelines for public streets, MnDOT's Access Management Manual also includes policies pertaining to private driveways along trunk highways. MnDOT has divided driveways into three types:

- Access Type 1 – Single Family or Field Access
- Access Type 2 – Low-Volume Driveway (<100 Trips/Day)
- Access Type 3 – High-Volume Driveway (>100 Trips/Day)

Table 16 describes the driveway access points that are allowed by subcategory.

Table 16 - MnDOT Driveway Allowances for Regional Corridors by Subcategory

Access Sub-category	Land Use or Facility Type	Driveway Allowance
3A	Rural	<ul style="list-style-type: none"> ▪ If a property has access rights but no reasonably convenient and suitable alternative access is available, a driveway is permitted. ▪ The driveway should be located and designed to minimize impacts to safety and operations. ▪ All driveways (Types 1 - 3) should be spaced in accordance with Table 17.
3B	Urban / Urbanizing	<ul style="list-style-type: none"> ▪ If a property retains access rights but no reasonably convenient and suitable alternative is available, a driveway is permitted. ▪ MnDOT prefers to permit public street connections rather than driveways. MnDOT should work with local agencies to encourage development of a supporting road system to serve the property. ▪ Type 3 driveways should be spaced in accordance with Table 17. ▪ Driveways should be permitted as interim where a future supporting road system is anticipated.
3C	Urban Core	<ul style="list-style-type: none"> ▪ If a property has access rights but no reasonably convenient and suitable alternative access is available, a driveway is permitted. ▪ Spacing will vary based on reasonableness of use and driveway expectancy.

Adapted from MnDOT Access Management Manual, Figure 3.12.

Table 17 - Spacing between Adjacent Driveways

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

(1) Based on Stopping Sight Distance described in the AASHTO Green Book 2001 and the MnDOT Road Design Manual; uses posted speed instead of the design speed.

(2) Values shown in this table may be superseded to avoid the functional area of adjacent intersections and driveways, or to accommodate turn lanes for the proposed access.

(3) Spacing between adjacent driveways is based on a level roadway without any curvature. Additional distance may be needed in areas with curves.

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

*District 2 strives for a minimum of 300 feet between entrances in high speed (55+ miles per hour)

Adapted from MnDOT Access Management Manual, Figure 3.27.

Existing Access by Segment – Consistency with MnDOT Guidelines

This section of the document identifies the different access types by segment and provides a general observation regarding consistency with MnDOT spacing guidelines as they relate to public street intersections and driveways. The analysis does not include measuring the distance in between driveways, but rather notes if there may be some opportunities to consolidate access in some locations.

Table 18 identifies access by driveway type and street location. Because TH 11 is not a divided facility (no center median that is channelized), and all of the public streets connecting to TH 11 are full access themselves (no pork chop islands or other restrictions) all of the public street access to and from the corridor is currently “full movement.” Therefore “secondary” access locations are not included in Table 18. Please note –Segment 1 of the TH 11 corridor is not included because it is outside the study limits.

Table 18 – Access by Type by Segment

Segment	Public Street	Driveway Type 1: Residential or Field	Driveway Type 2: Low Volume	Driveway Type 3: High Volume	Total Access / Access Points Per Mile
1	Not Included				
2	4	1	2	0	7 access points 11.7 per mile
3	4	2	6	0	12 access points 60 per mile
4	1	1	5	2	9 access points 15 per mile
5	11	55	8	0	74 access points 8.4 points per mile
6	3	6	1	2	12 access points 10 points per mile
7	16	82	11	0	109 access points 10.1 points per mile
*8	6	6	1	4	17 access points 11.3 points per mile
*9	25	28	20	1	74 access points 37 points per mile
10	30	121	11	6	168 access points 8.9 points per mile
*11	1	0	7	7	15 access points 30 points per mile
*12	9	2	9	7	27 access points 30 points per mile
13	16	45	12	0	73 access points 5.9 points per mile
Totals	126	349	93	29	597 access points 10.2 points per mile

*Segment is a three-lane section or is at least partially a three-lane section

As can be seen from Table 18, and noted in the summaries below, most of the segments in the corridor do not meet MnDOT guidelines for public streets or driveways (multiple driveways per parcel, access to another roadway is available, etc.). However, there are a number of driveways with access to the

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corridor that presently do not have any other alternatives. Unless these driveways are in an urbanizing area, there is generally little opportunity to find alternate access.

The summaries that follow highlight some of the main characteristics for each segment and include notations on areas where access is especially concentrated. Following the summary are **Figures 53 - 67** which show all of the corridor access points.

Segment 1 Summary – Western Roseau County Border to Western Limits of Greenbush

Not analyzed – outside of study limits.

Segment 2 Summary – Western Limits of Greenbush to 6th Street in Greenbush

This segment of TH 11 is 0.6 miles long and located in the western portion of the City of Greenbush. For access management purposes, it is categorized as 3B and has seven access points, including:

- Four public streets
- One residential driveway
- Two low volume driveways

Only one of the streets is consistent with MnDOT guidelines in this section, although the distance between Oakview Drive and CR 76 is approximately four tenths of a mile, close to the recommended spacing of a half mile. The residential driveway in this segment does not have another roadway in which it can access, so that driveway is consistent with guidelines. The two low volume driveways in this segment are two alleyways. Given the roadway network within the community, there could be potential to close off access to TH 11.

Segment 3 Summary – 6th Street in Greenbush to 1st Street in Greenbush

Segment 3 is 0.2 miles long and represents the shortest segment analyzed. It lies within the central portion of the City of Greenbush and accordingly, it has been assigned access management category 3C. This segment has 12 access points, including:

- Four public streets
- Two residential driveways
- Six low volume driveways

Two of the four streets are consistent with MnDOT's spacing guidelines. The two residential driveways could be served off of other access locations; however, it would require reorienting garages in both cases and moving an overhead utility pole in one location. The low volume driveways are primarily alleys. Three of them serve residential areas and given the supporting roadway network could have their connection to TH 11 severed. The alley that serves a more commercial focus would be more challenging to remove as an access to TH 11. The two commercial driveways do not have a better connection on an alternate route.

Segment 4 Summary – 1st Street in Greenbush to Eastern Limits of Greenbush

This segment of TH 11 is 0.6 miles long and is located in the eastern portion of the City of Greenbush. For access management purposes, it is categorized as 3B and has nine access points, including:

- One public street

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- One field access
- Five low volume driveways
- Two high volume driveways

None of the public street access locations meet the required half-mile spacing. The intersection with TH 32 is approximately 700 feet east of 1st Street. The field access does not have any options other than TH 11 in which to connect. The driveways also do not have any alternative connections, and one of the high volume driveways is a shared driveway between a gas station and a liquor store.

Segment 5 Summary – Eastern Limits of Greenbush to East Stokes Avenue in Badger

Segment 5 is categorized as access management category 3A and lies in a largely rural area between the Cities of Greenbush and Badger, and includes the southern portion of the City of Badger. There are a total of 74 access points in this 8.8-mile segment, including:

- 11 public streets;
- 55 residential or field access driveways
- Eight low volume driveways

Four of the public streets in Segment 5 meet MnDOT guidelines for a category 3A roadway. A majority of the remaining public streets are spaced closer to 3,000 feet apart. A number of the residential and field access locations within portions of this segment are for properties that are located between TH 11 and the railroad, which does not allow for alternate access. Most of the driveways in this area are spaced far enough apart, that a frontage road may not be a practical alternative in which multiple driveways could share one or two entrances. There are a couple of areas where this could be investigated as part of the alternatives development process.

Segment 6 Summary –East Stokes Avenue in Badger to Eastern Limits of Badger

This 1.2-mile segment of TH11 crosses the northern portion of the City of Badger. It has been assigned access management category 3B and has 12 access points, including:

- Three public streets
- Six residential or field accesses
- One low volume driveway
- Two high volume driveway

CSAH 2 meets MnDOT spacing guidelines and North Main Street is close to meeting the guidelines, it is about 300 feet short of a half mile. The third street, Lenmark, is not consistent with the guidelines it is only 370 feet east of North Main Street.

One of the driveways is a former county facility that only serves one residential area. This access to TH 11 could be removed, with the property owner accessing TH 11 via CSAH 2. Additionally, one of the high volume driveways could be removed from the corridor as it has two other access points that tie into TH 11. Other driveways in the corridor are limited in terms of alternate access, except for one, which would require reconfiguring the driveway or switching the garage around.

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Segment 7 Summary – Eastern Limits of Badger to 375th Avenue

Segment 7 is a predominantly rural portion of TH 11. It extends 10.8 miles from the City of Badger to 375th Avenue, approximately a half a mile west of the western city limits of Roseau. This segment is categorized as 3A and includes a total of 109 access points, including:

- 16 public streets
- 82 residential or field driveways
- 11 low volume driveways

A majority of the public street intersections do not meet MnDOT's spacing guidelines; only five of them achieve the guidelines. These include the two trunk highway intersections at TH 308 and TH 89 and those located in the segment between 340th Avenue and 370th Avenue. There are a few locations where it may be possible to consolidate some of the residential and field access locations. Areas that should be further investigated as part of the alternatives development process include the segments between

- 310th Avenue and TH 308
- TH 308 and TH 89
- 333rd Avenue and 340th Avenue
- 350th Avenue to 360th Avenue

Segment 8 Summary – 375th Avenue to TH 89/TH 310

This segment of TH 11 is 1.5 miles long and is located predominantly in the western portion of the City of Roseau. For access management purposes, it is categorized as 3B and has 17 access points, including:

- Six public streets
- Six residential or field access points
- One low volume driveway
- Four high volume driveways

The majority of this segment does not meet the half-mile spacing for public streets. Only the spacing between the westernmost intersections with 375th Avenue and 18th Avenue NW in Roseau meets the guideline. Several field access driveways are also located adjacent to these two intersections. In the eastern portion of this segment (just west of the intersection with TH 89/TH 310), there are multiple non-residential driveways in close proximity to one another. There may be an opportunity to reduce a couple of access points in this area.

Most of this section is a three-lane facility. There is a frontage road for the western end of the segment that helps to minimize private driveways on TH 11 in this area. There are opportunities to extend the frontage road on both sides of the corridor as redevelopment occurs.

Segment 9 Summary – TH 89/TH 310 to CSAH 28

Segment 9 is 2.0 miles long and extends east through the central portion of the City of Roseau and beyond the fully urbanized area. It has been assigned access management category 3C and has 74 access points, which include:

- 25 public streets

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- 28 residential driveways and field access locations
- 10 low volume driveways
- One high volume driveway

MnDOT guidelines are met for a number of public street intersections – this is especially true east of the Roseau River crossing in the more residential areas. Blocks are more uniformly spaced in this area. West of the area, public street spacing is not as consistent with guidelines, although two of them do meet the guidelines. The blocks west of the river are not uniform and most of them are T-intersections, so they do not line up with the street on the opposite side of TH 11.

There are a few alleys with access onto TH 11 between 3rd and 4th Avenues that could have their access to TH 11 removed, but it would likely require redevelopment. Most of the residential driveways with direct access to TH 11 do not have any alternate options – redevelopment would need to occur in order to reduce driveways in most of this segment.

The section of Segment 9 east of 11th Avenue transitions from the urban core. In this portion of the segment some of the driveways share an access point or are on a short frontage road. There are limited opportunities for additional driveway consolidation in this area.

Segment 10 Summary – CSAH 28 to Western Limits of Warroad/TH 313

Segment 10 is the longest segment that was analyzed—it is 18.9 miles long and is categorized as access management category 3A. It extends from east of Roseau, through the community of Salol, ending at the western limits of the City of Warroad. In addition to being the longest study segment, it also had the most access points—a total of 168. These include:

- 30 public streets
- 121 residential and field accesses
- 11 low volume driveways
- Six high volume driveways

Eleven of the 30 public streets met the spacing guidelines, with another one within 500 feet of the mile spacing. The remaining public street accesses were inconsistent with MnDOT guidelines. Many of these were clustered around the areas west of Warroad and near some of the manufactured home communities. The same is true for a number of the residential driveways. There are limited opportunities to consolidate access within this segment without building frontage roads or potentially impacting properties. There are a few located near Salol that have the potential to be removed as well as some other more random locations.

Segment 11 Summary – Western Limits of Warroad/TH 313 to Gladys Avenue

This segment of TH 11 is 0.5 miles long and is located in the northern portion of the City of Warroad. It is a three-lane section in this location. For access management purposes, it is categorized as 3B and has 15 access points. Access is categorized as follows:

- One public street
- Seven low volume driveways
- Seven high volume driveways

TH 11 Existing Roadway Conditions

The public street access is consistent with MnDOT guidelines. Driveways closer to TH 313 do have some opportunities for access off of a backage road, but those are fairly limited.

Segment 12 Summary – Gladys Avenue to Southern Limits of Warroad

Segment 12 extends through the central portion of the City of Warroad, and has been categorized as 3C. This segment is 0.9 miles long and has a total of 27 access points, which include:

- Nine public streets
- Two residential/field access points
- Nine low volume driveways
- Seven high volume driveways

Most of this segment meets the 300-foot minimum MnDOT standard for public street spacing. Riverview and Washington are the only two streets that do not meet the guidelines.

Portions of the corridor are a three-lane facility north of the Warroad River, with the area south of the river being a two-lane facility. There are some opportunities for access consolidation, but they are fairly limited in this urbanized area.

Segment 13 Summary – Southern Limits of Warroad to Eastern Roseau County Border

The easternmost segment of TH 11 is 12.4 miles long and connects Warroad with the Lake of the Woods County border. For access management purposes, it is categorized as 3A and has 61 access points, including:

- 16 public streets;
- 45 residential/field access points
- 12 low volume driveways

About half (seven) of the public street accesses meet the mile spacing established by MnDOT for this segment. There are no areas of particularly closely-clustered driveways/field entrances in this segment. There are limited opportunities to modify most driveways – there are some near Roosevelt and a few interspersed throughout the remainder of the corridor.

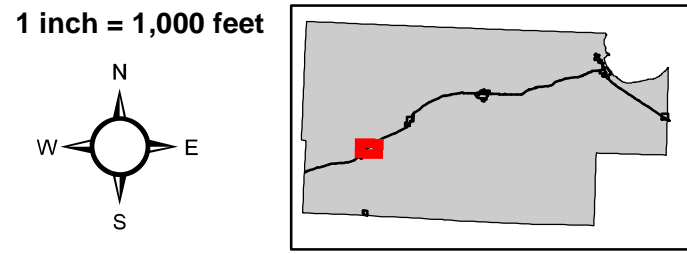
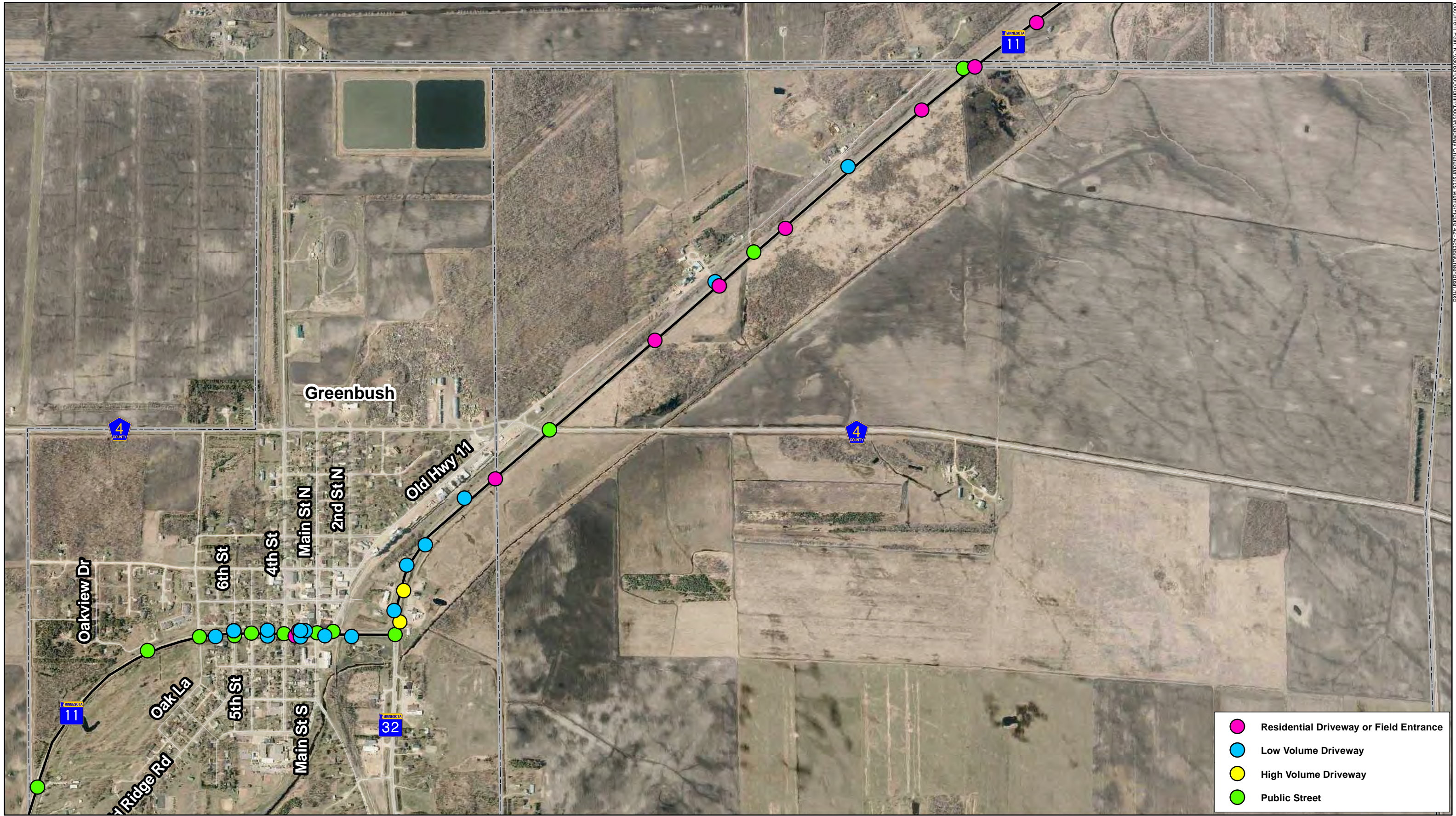


Figure 53 - Access Points
Greenbush



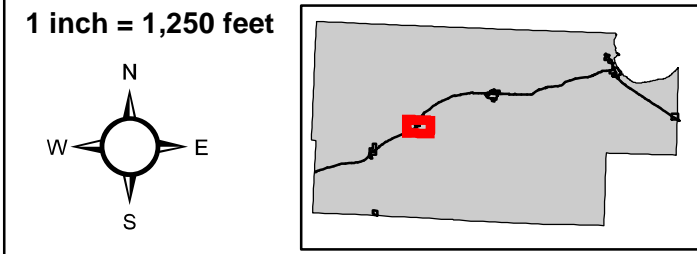
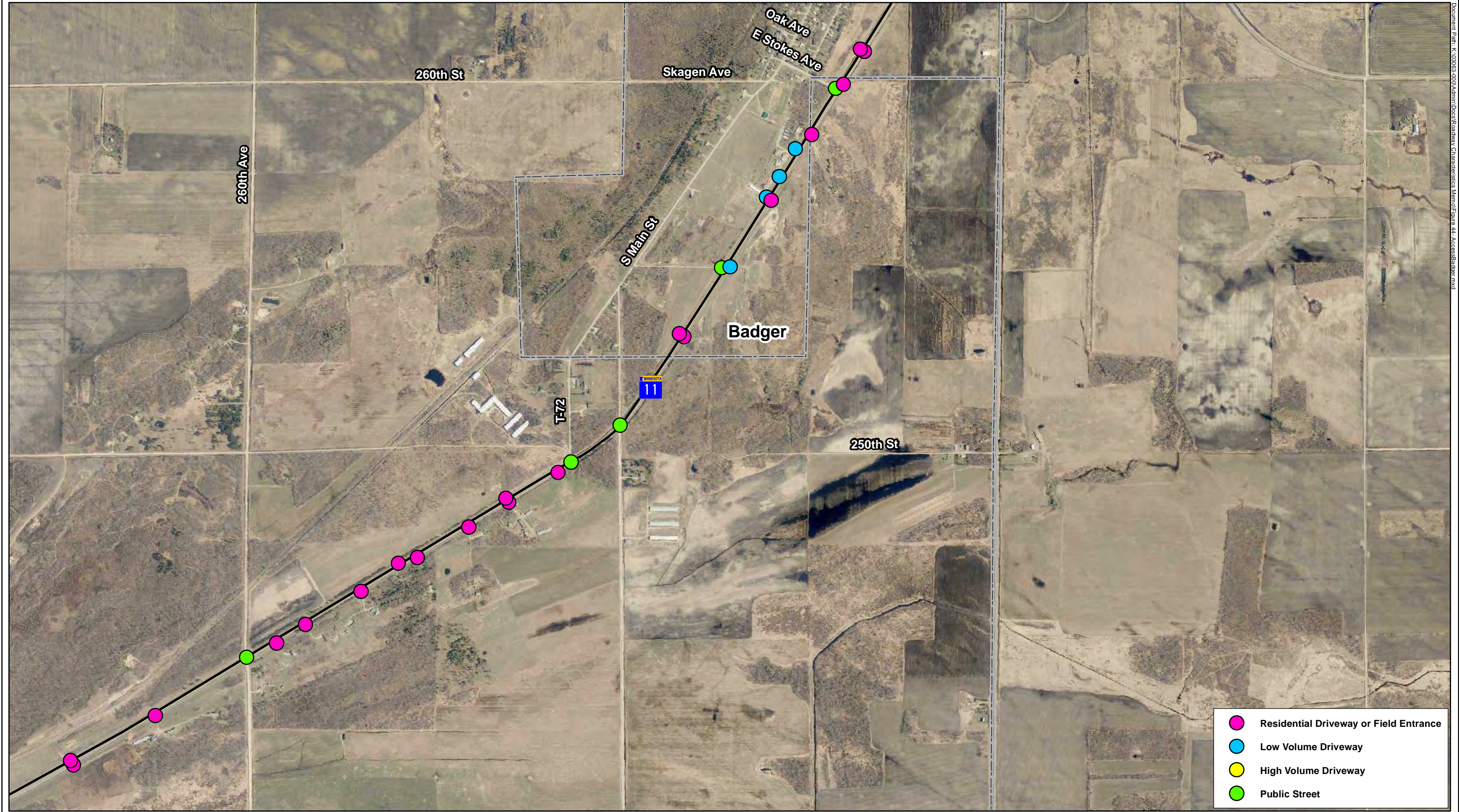


- Residential Driveway or Field Entrance
- Low Volume Driveway
- High Volume Driveway
- Public Street

1 inch = 1,250 feet

**Figure 54 - Access Points
Greenbush East**





**Figure 55 - Access Points
Badger South**



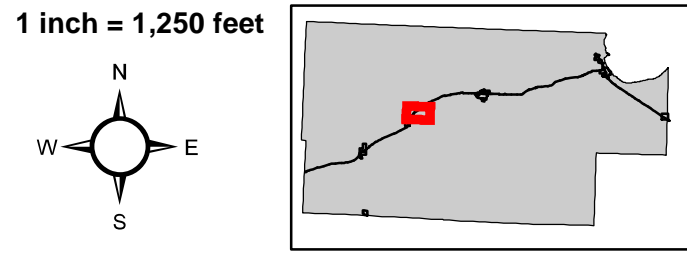
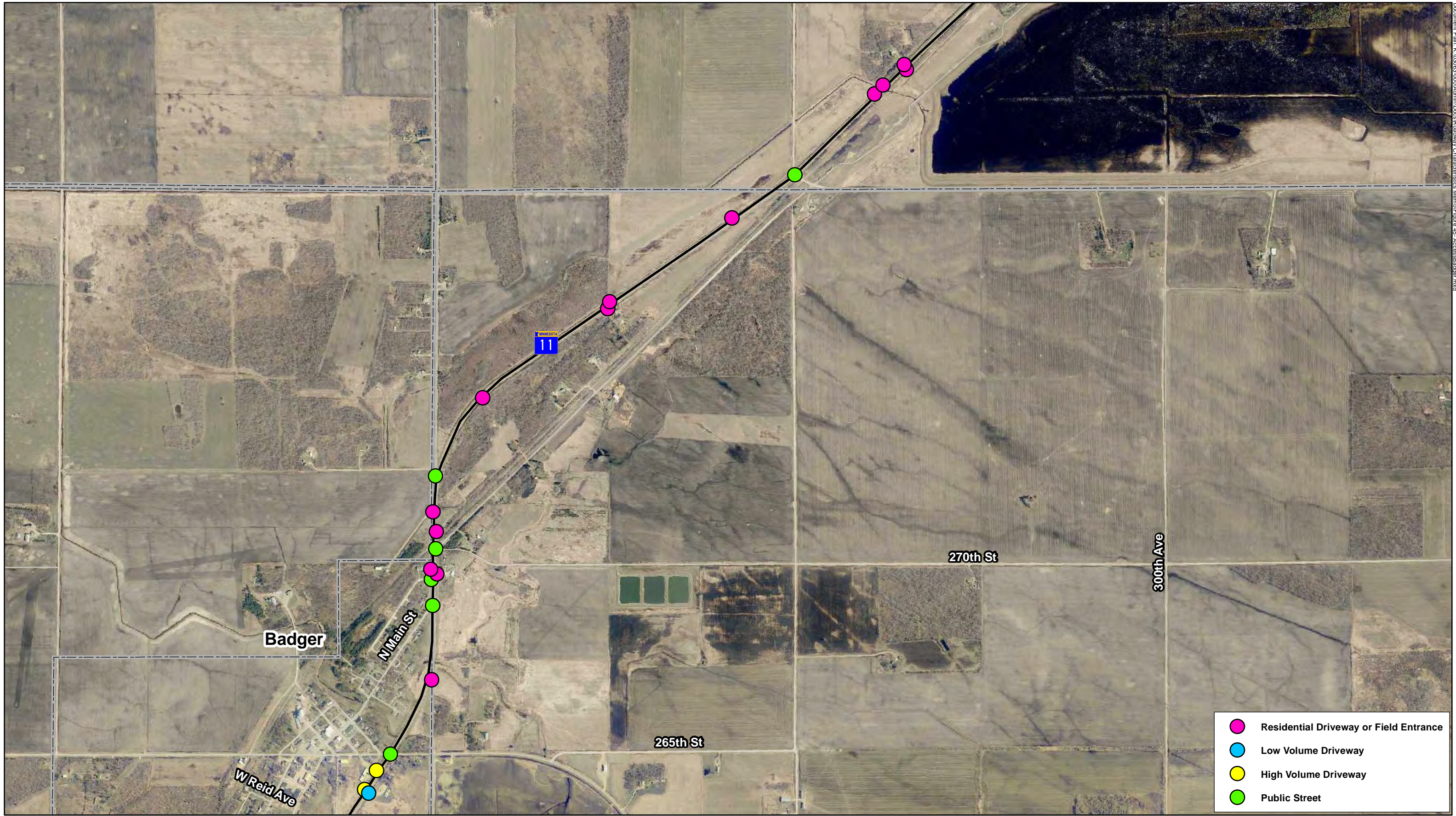


Figure 56 - Access Points
Badger North





1 inch = 1,250 feet

**Figure 57 - Access Points
TH 308**





Figure 58 - Access Points
East of TH 308



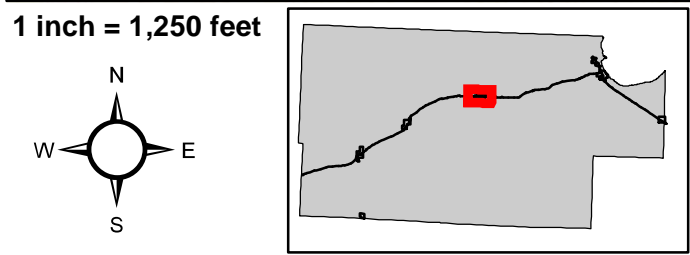
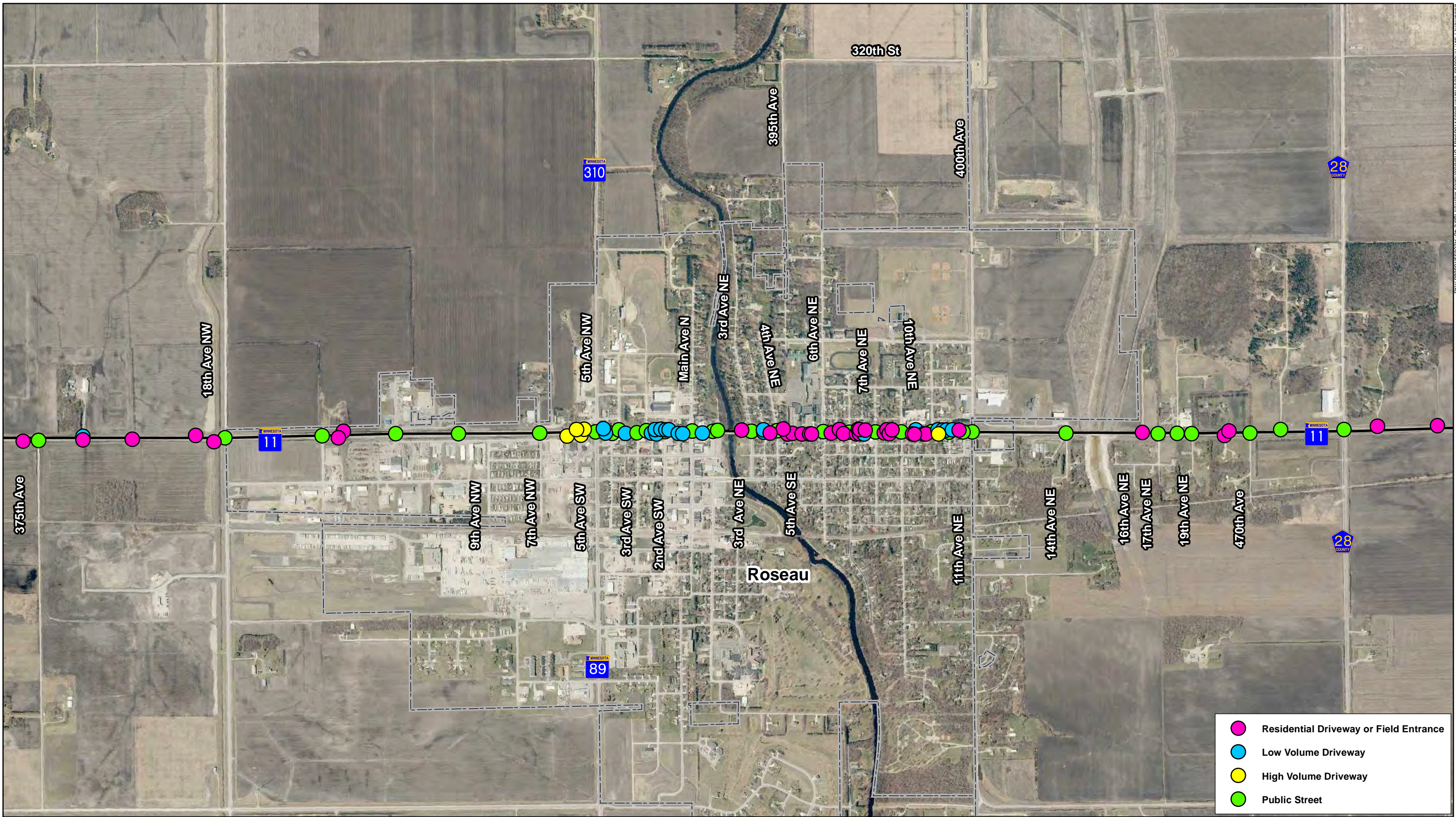
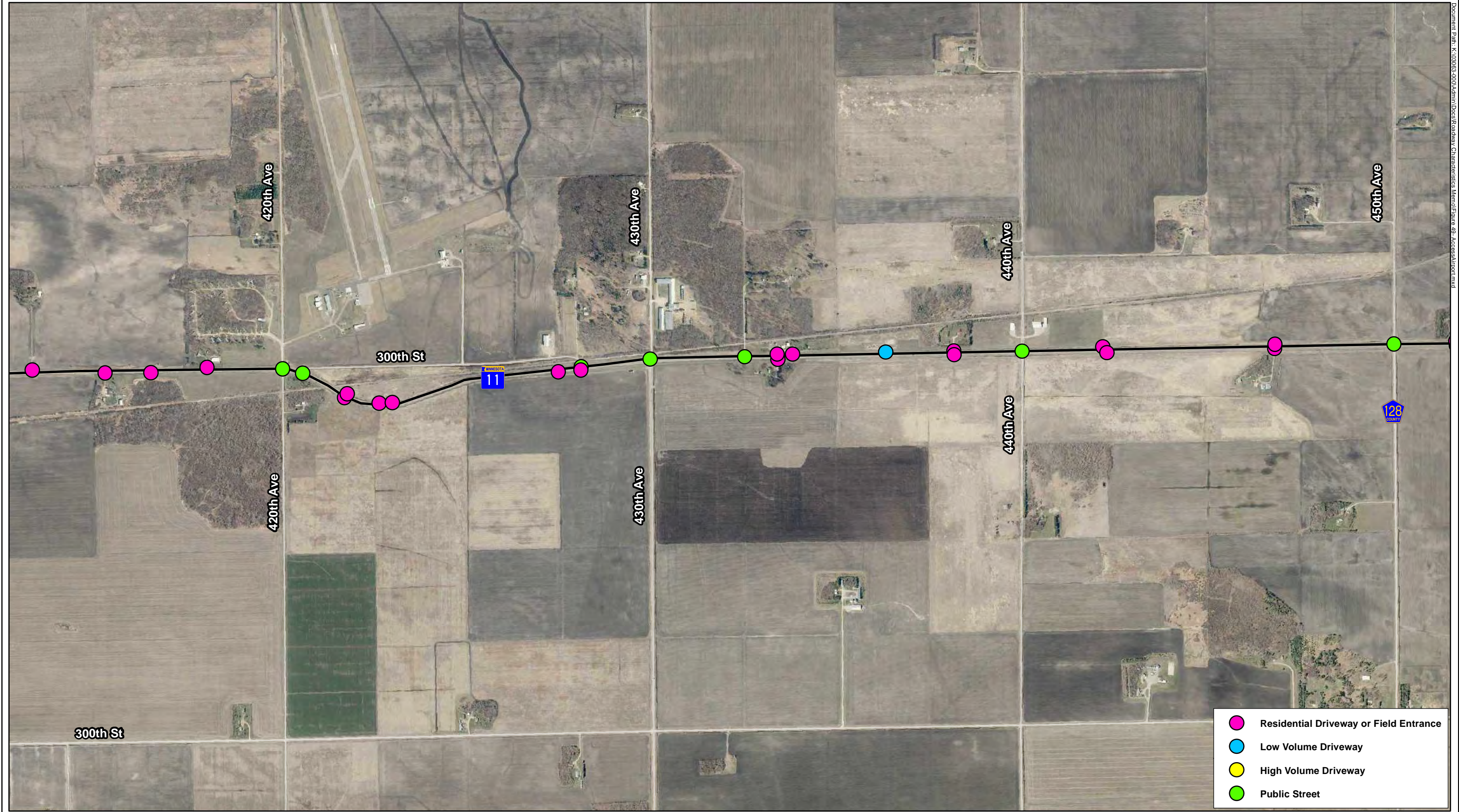


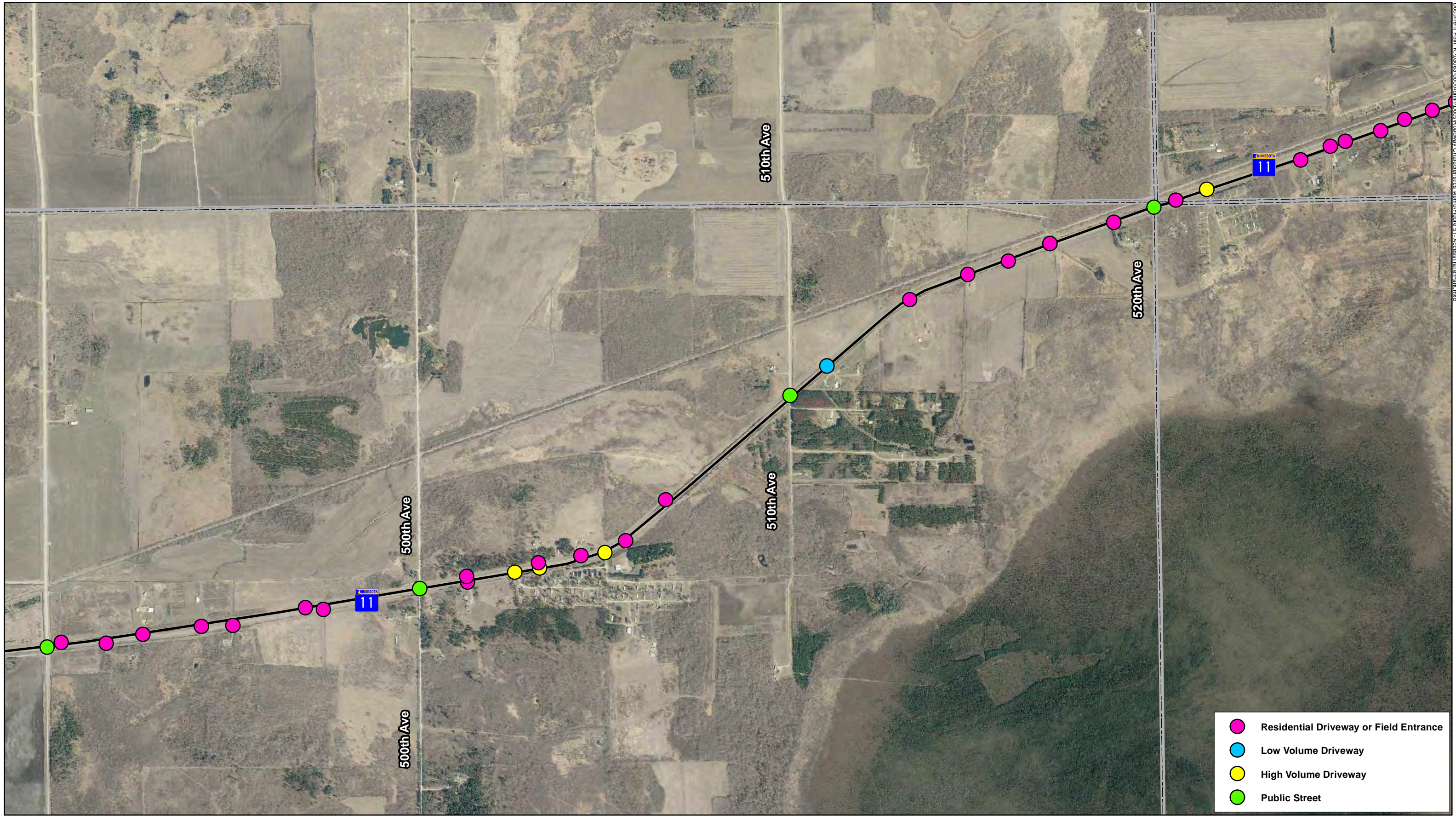
Figure 59 - Access Points
Roseau





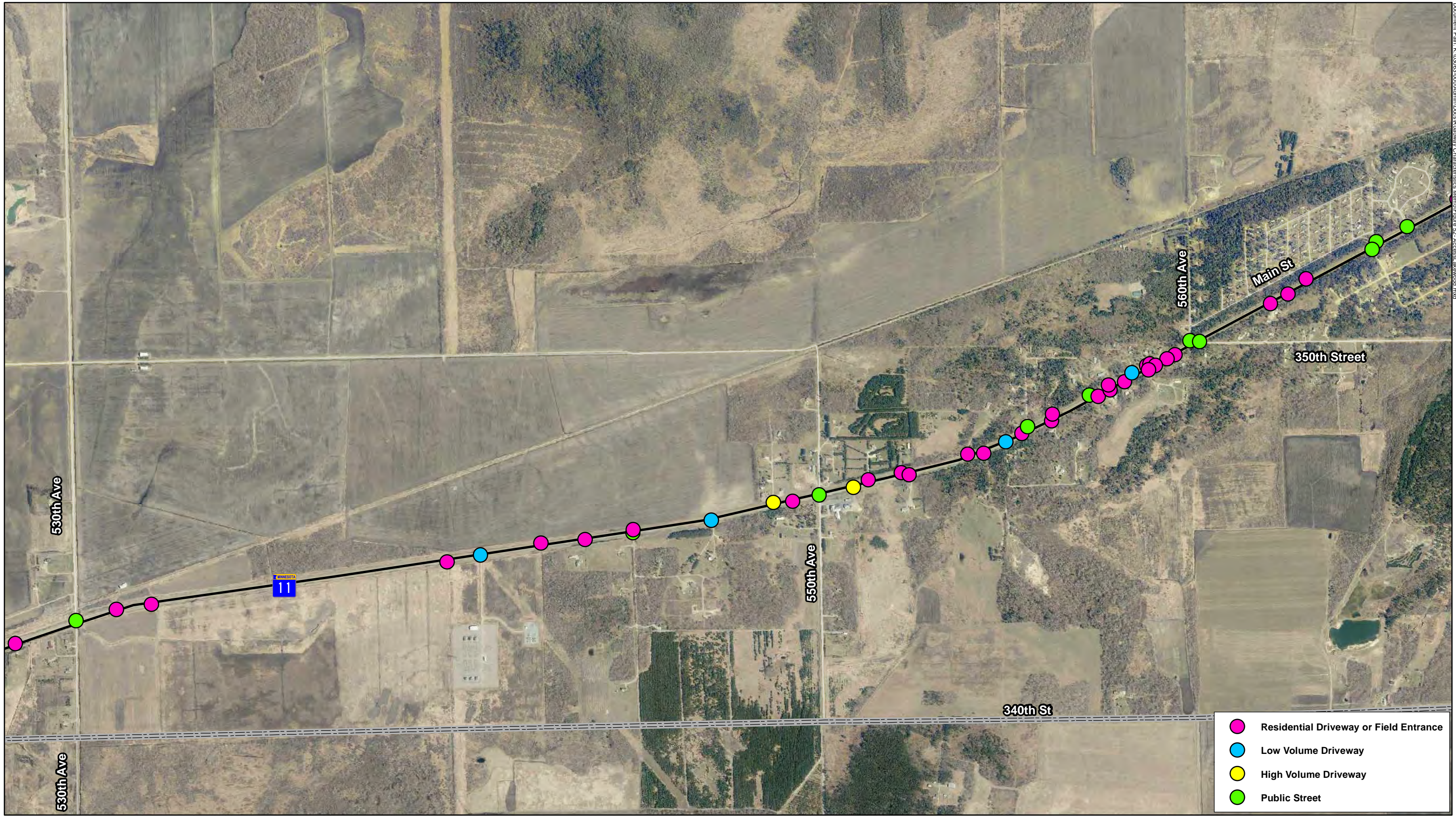
**Figure 60 - Access Points
Roseau Airport**





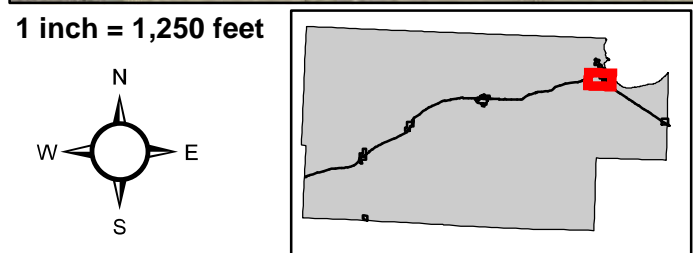
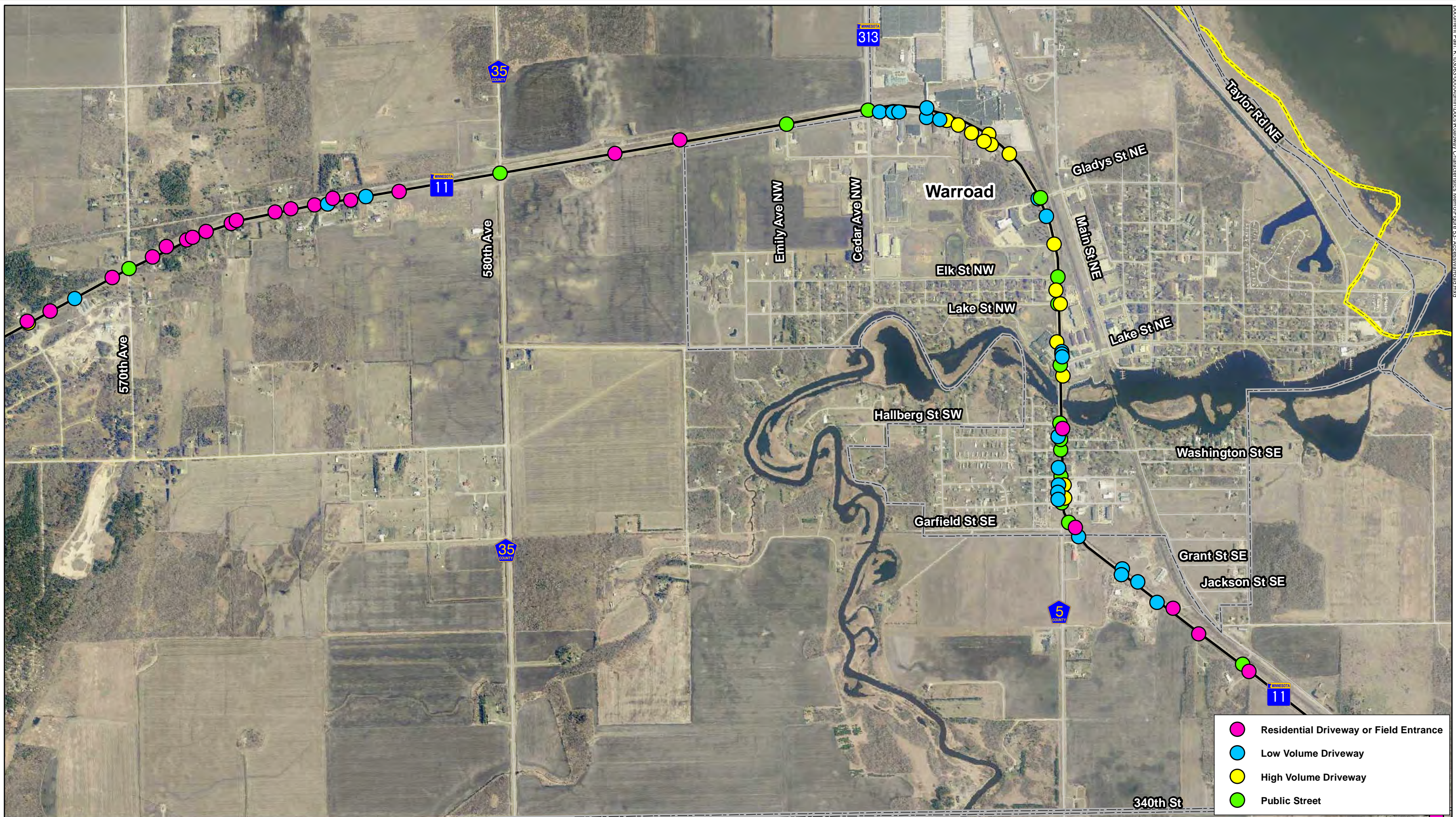
**Figure 62 - Access Points
510th Avenue Area**





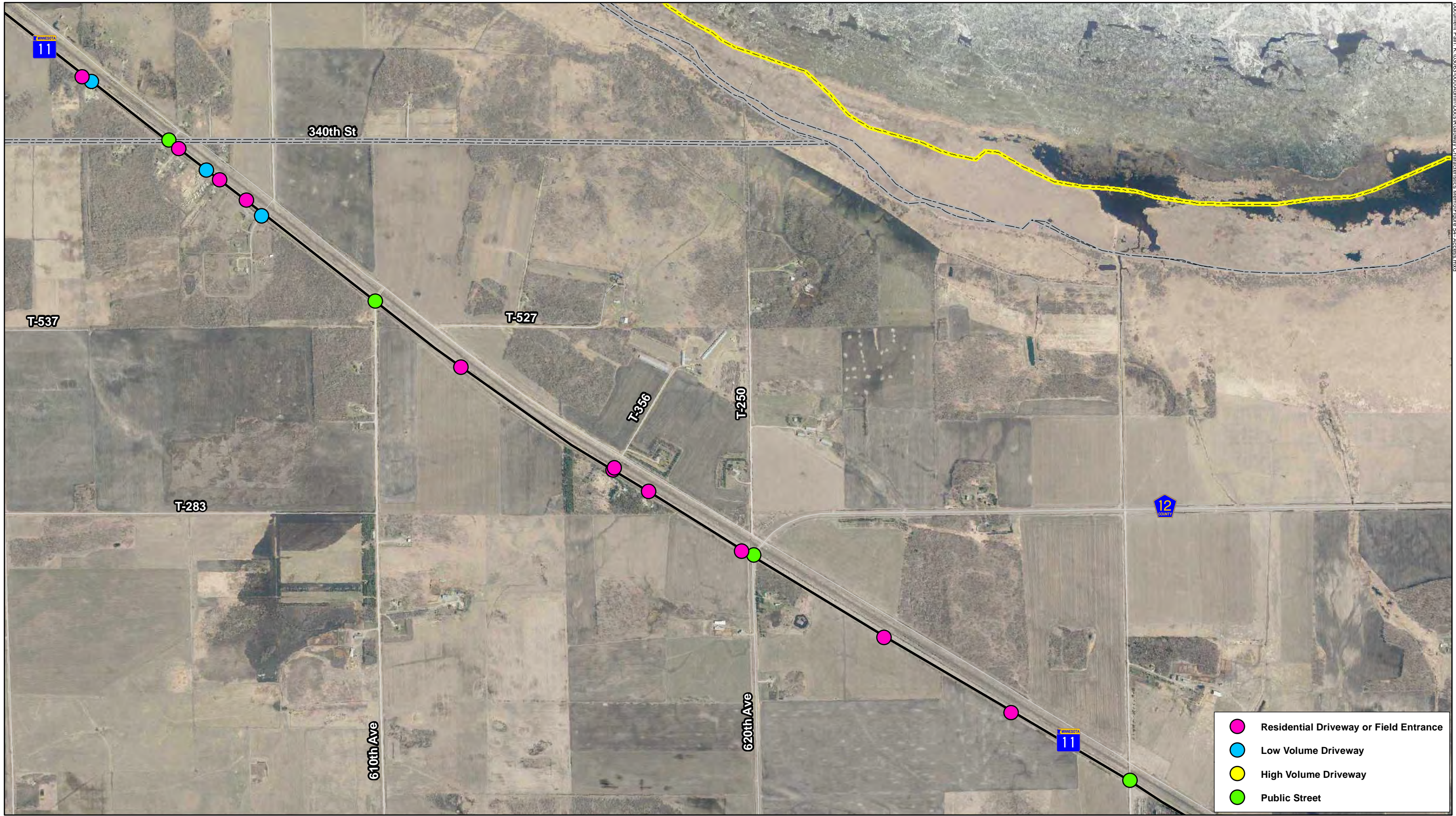
**Figure 63 - Access Points
Lakewood Area**





**Figure 64 - Access Points
Warroad**





**Figure 65 - Access Points
South/East of Warroad**





**Figure 66 - Access Points
645th Avenue Area**



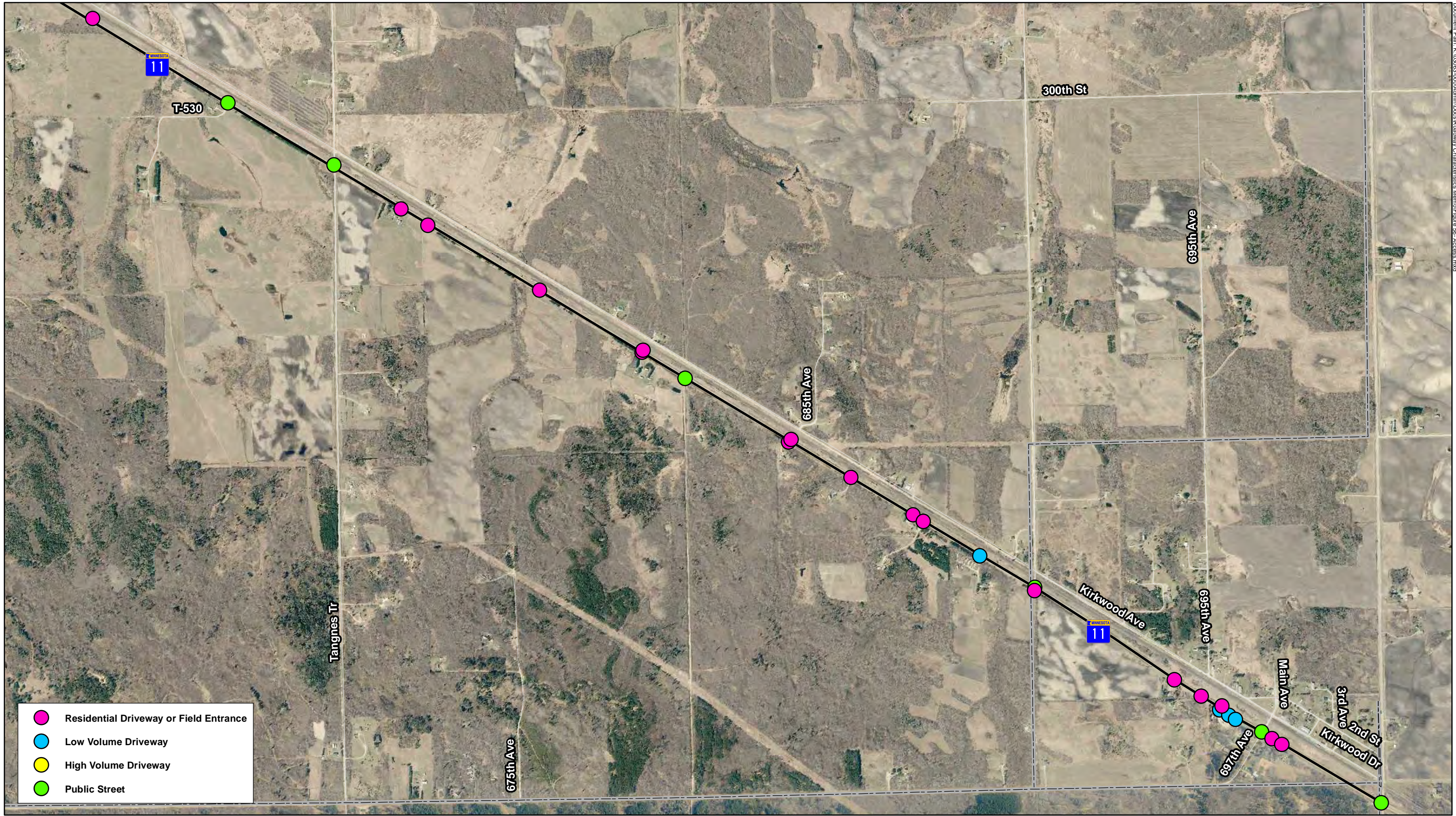


Figure 67 - Access Points
Roosevelt

