

Independent Crossing Closure Projects

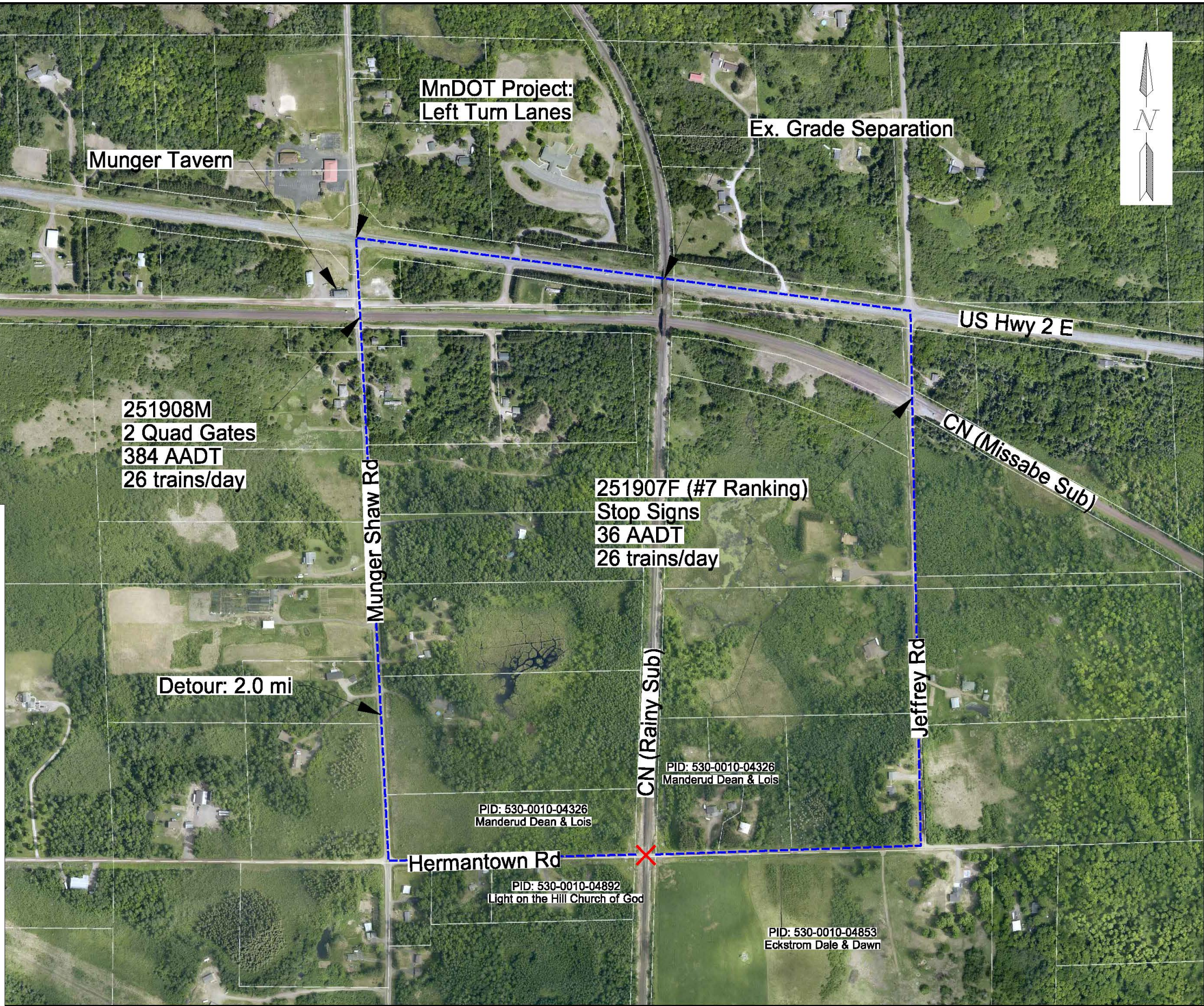


| | |
|------------------------|-----------------------|
| Street | Hermantown Rd (CR846) |
| Crossing ID | 260087J |
| Highway AADT | 5 |
| Highway Speed | 55 |
| Train Volumes | 11 |
| Train Speed | 60 |
| Warning Device | StopSign |
| Max Detour (min) | 2.57 |
| Hours of Delay | 0.21 |
| 10-Year Crashes | 0 |
| Max Detour Score | 9 |
| Blocked Crossing Score | 2.75 |
| Crash Score | 0 |
| Highway AADT Score | 9 |
| Crossing Density Score | 7 |
| Hours of Delay Score | 10 |

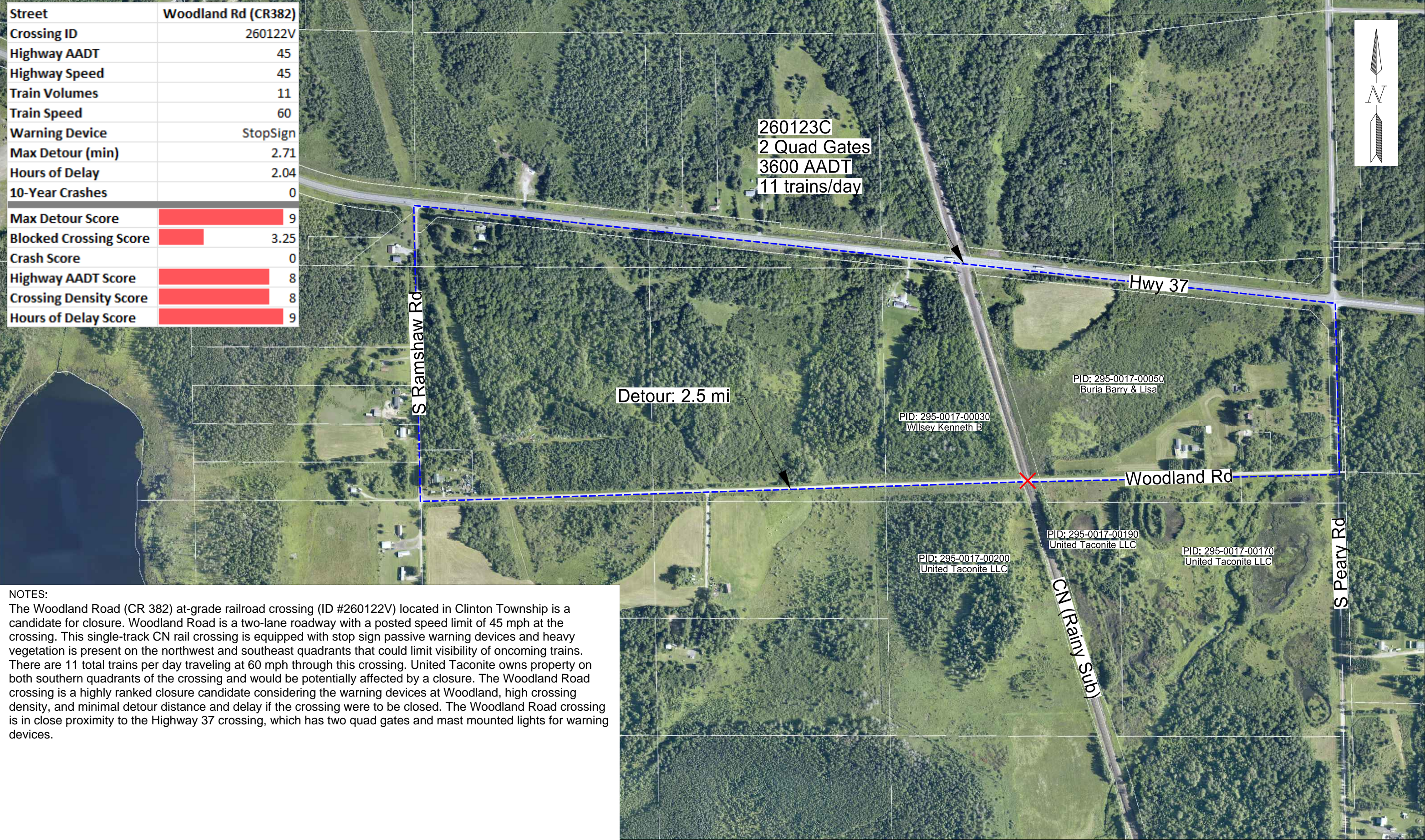
NOTES:
 The Hermantown Road (CR 846) at-grade railroad crossing (ID #260087J) located in Solway Township is a candidate for closure. Hermantown Road is a two-lane roadway with shoulders and ditches and a posted speed limit of 55 mph at the crossing. This single-track CN rail crossing is equipped with stop sign passive warning devices and heavy vegetation is present on the northwest, northeast, and southwest quadrants that could limit visibility of oncoming trains. There are 11 total trains per day traveling at 60 mph through this crossing. Dean and Lois Manderud own property on both northern quadrants of the crossing at Hermantown Road with their homestead located on the northeast quadrant and would be potentially affected by a closure. There is also a church located adjacent to the crossing on the southeast quadrant. The Hermantown Road crossing is a highly ranked closure candidate considering the minimal detour as well as low highway AADT's and hours of delay if the crossing were to be closed.

The Jeffrey Road crossing located northeast of the Hermantown Road crossing is also a strong candidate for closure and there have been discussions of a paired approach to improve safety at both crossings. The Jeffrey Road crossing is a skewed crossing of a two-lane roadway with stop sign passive warning devices, 26 total trains per day, and 36 cars per day.

Both crossings are in close proximity to US highway 2, which has a grade separated crossing of the Rainy Subdivision line. A future MnDOT project is programmed for left turn lanes at Munger Shaw Road and US 2, near the popular Munger Tavern.



| | |
|------------------------|---------------------|
| Street | Woodland Rd (CR382) |
| Crossing ID | 260122V |
| Highway AADT | 45 |
| Highway Speed | 45 |
| Train Volumes | 11 |
| Train Speed | 60 |
| Warning Device | StopSign |
| Max Detour (min) | 2.71 |
| Hours of Delay | 2.04 |
| 10-Year Crashes | 0 |
| Max Detour Score | 9 |
| Blocked Crossing Score | 3.25 |
| Crash Score | 0 |
| Highway AADT Score | 8 |
| Crossing Density Score | 8 |
| Hours of Delay Score | 9 |



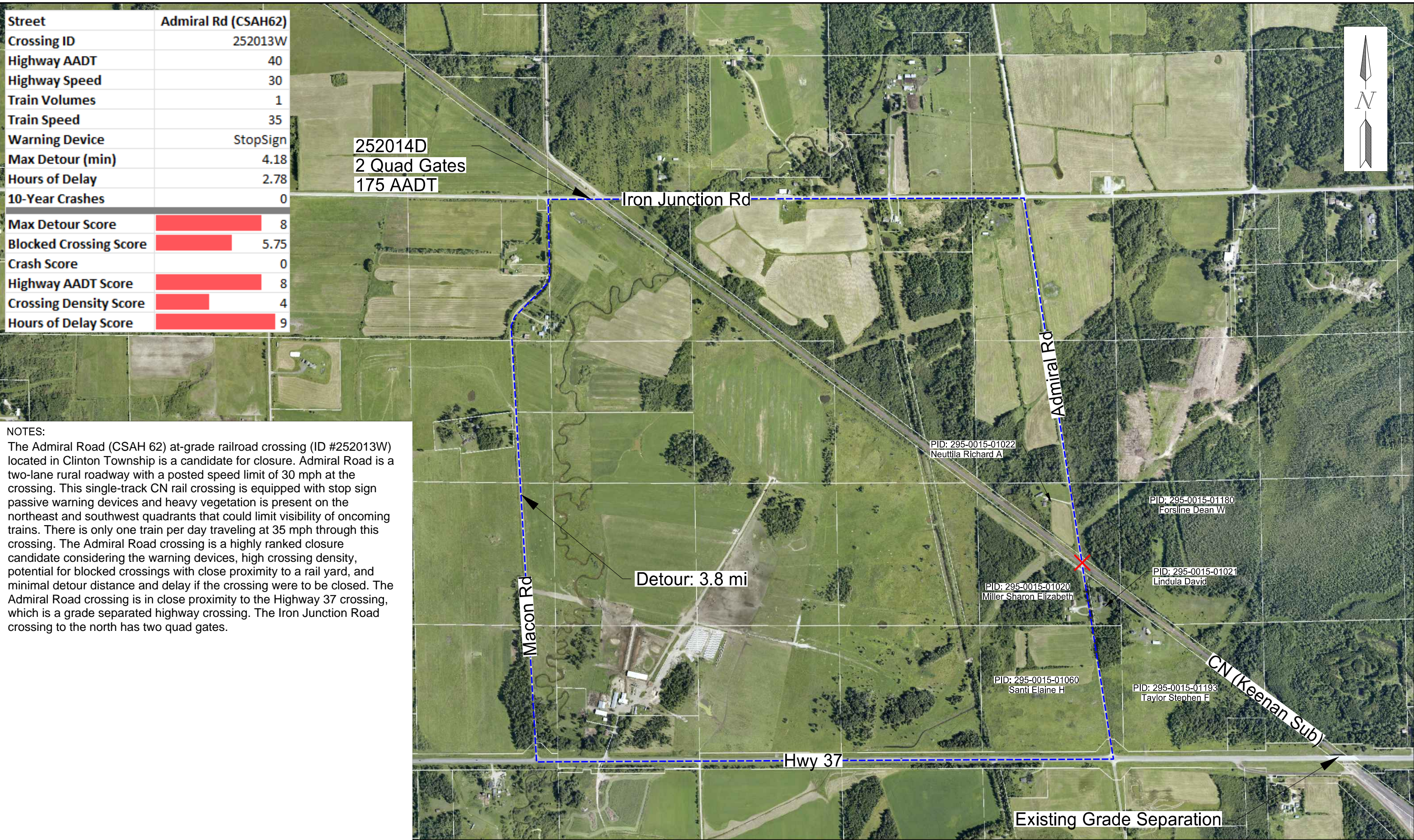
NOTES:
 The Woodland Road (CR 382) at-grade railroad crossing (ID #260122V) located in Clinton Township is a candidate for closure. Woodland Road is a two-lane roadway with a posted speed limit of 45 mph at the crossing. This single-track CN rail crossing is equipped with stop sign passive warning devices and heavy vegetation is present on the northwest and southeast quadrants that could limit visibility of oncoming trains. There are 11 total trains per day traveling at 60 mph through this crossing. United Taconite owns property on both southern quadrants of the crossing and would be potentially affected by a closure. The Woodland Road crossing is a highly ranked closure candidate considering the warning devices at Woodland, high crossing density, and minimal detour distance and delay if the crossing were to be closed. The Woodland Road crossing is in close proximity to the Highway 37 crossing, which has two quad gates and mast mounted lights for warning devices.

| | |
|------------------------|---------------------|
| Street | Admiral Rd (CSAH62) |
| Crossing ID | 252013W |
| Highway AADT | 40 |
| Highway Speed | 30 |
| Train Volumes | 1 |
| Train Speed | 35 |
| Warning Device | StopSign |
| Max Detour (min) | 4.18 |
| Hours of Delay | 2.78 |
| 10-Year Crashes | 0 |
| Max Detour Score | 8 |
| Blocked Crossing Score | 5.75 |
| Crash Score | 0 |
| Highway AADT Score | 8 |
| Crossing Density Score | 4 |
| Hours of Delay Score | 9 |

252014D
2 Quad Gates
175 AADT



NOTES:
The Admiral Road (CSAH 62) at-grade railroad crossing (ID #252013W) located in Clinton Township is a candidate for closure. Admiral Road is a two-lane rural roadway with a posted speed limit of 30 mph at the crossing. This single-track CN rail crossing is equipped with stop sign passive warning devices and heavy vegetation is present on the northeast and southwest quadrants that could limit visibility of oncoming trains. There is only one train per day traveling at 35 mph through this crossing. The Admiral Road crossing is a highly ranked closure candidate considering the warning devices, high crossing density, potential for blocked crossings with close proximity to a rail yard, and minimal detour distance and delay if the crossing were to be closed. The Admiral Road crossing is in close proximity to the Highway 37 crossing, which is a grade separated highway crossing. The Iron Junction Road crossing to the north has two quad gates.



| | |
|------------------------|-----------------|
| Street | Kolu Rd (CR207) |
| Crossing ID | 061248D |
| Highway AADT | 5 |
| Highway Speed | 30 |
| Train Volumes | 4 |
| Train Speed | 50 |
| Warning Device | Crossbuck |
| Max Detour (min) | 3.23 |
| Hours of Delay | 0.27 |
| 10-Year Crashes | 0 |
| Max Detour Score | 8 |
| Blocked Crossing Score | 1.5 |
| Crash Score | 0 |
| Highway AADT Score | 9 |
| Crossing Density Score | 6 |
| Hours of Delay Score | 10 |

NOTES:

The Kolu Road (CR 207) at-grade railroad crossing (ID #061248D) located in McDavitt Township is a candidate for closure. Kolu Road is a two-lane rural roadway with a posted speed limit of 30 mph at the crossing. This single-track BNSF rail crossing is equipped with yield sign and crossbuck passive warning devices and heavy vegetation is present at this skewed crossing that could limit visibility of oncoming trains. There are four trains per day traveling at 50 mph through this crossing. The Admiral Road crossing is a highly ranked closure candidate considering the skew, passive warning devices, minimal adjacent property impacts, and minimal delay if the crossing were to be closed. Admiral Road is in close proximity to the Kolu Road crossing. The Sax Road crossing to the south has yield signs for warning devices at the crossing.



Kolu Rd: Crossing ID# 061248D

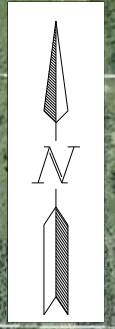
Potential Closure Option

Sax, MN

14857
01/23/2023

061247W
Yield Signs
46 AADT

| | | |
|------------------------|---|------|
| Street | Saint Vincent Rd (CR260) | |
| Crossing ID | 097753A | |
| Highway AADT | 75 | |
| Highway Speed | 30 | |
| Train Volumes | 4 | |
| Train Speed | 50 | |
| Warning Device | StopSign | |
| Max Detour (min) | 3.66 | |
| Hours of Delay | 4.57 | |
| 10-Year Crashes | 0 | |
| Max Detour Score | <div style="width: 100%; height: 10px; background-color: red;"></div> | 8 |
| Blocked Crossing Score | <div style="width: 20%; height: 10px; background-color: red;"></div> | 1.75 |
| Crash Score | 0 | |
| Highway AADT Score | <div style="width: 90%; height: 10px; background-color: red;"></div> | 7 |
| Crossing Density Score | <div style="width: 60%; height: 10px; background-color: red;"></div> | 5 |
| Hours of Delay Score | <div style="width: 100%; height: 10px; background-color: red;"></div> | 9 |



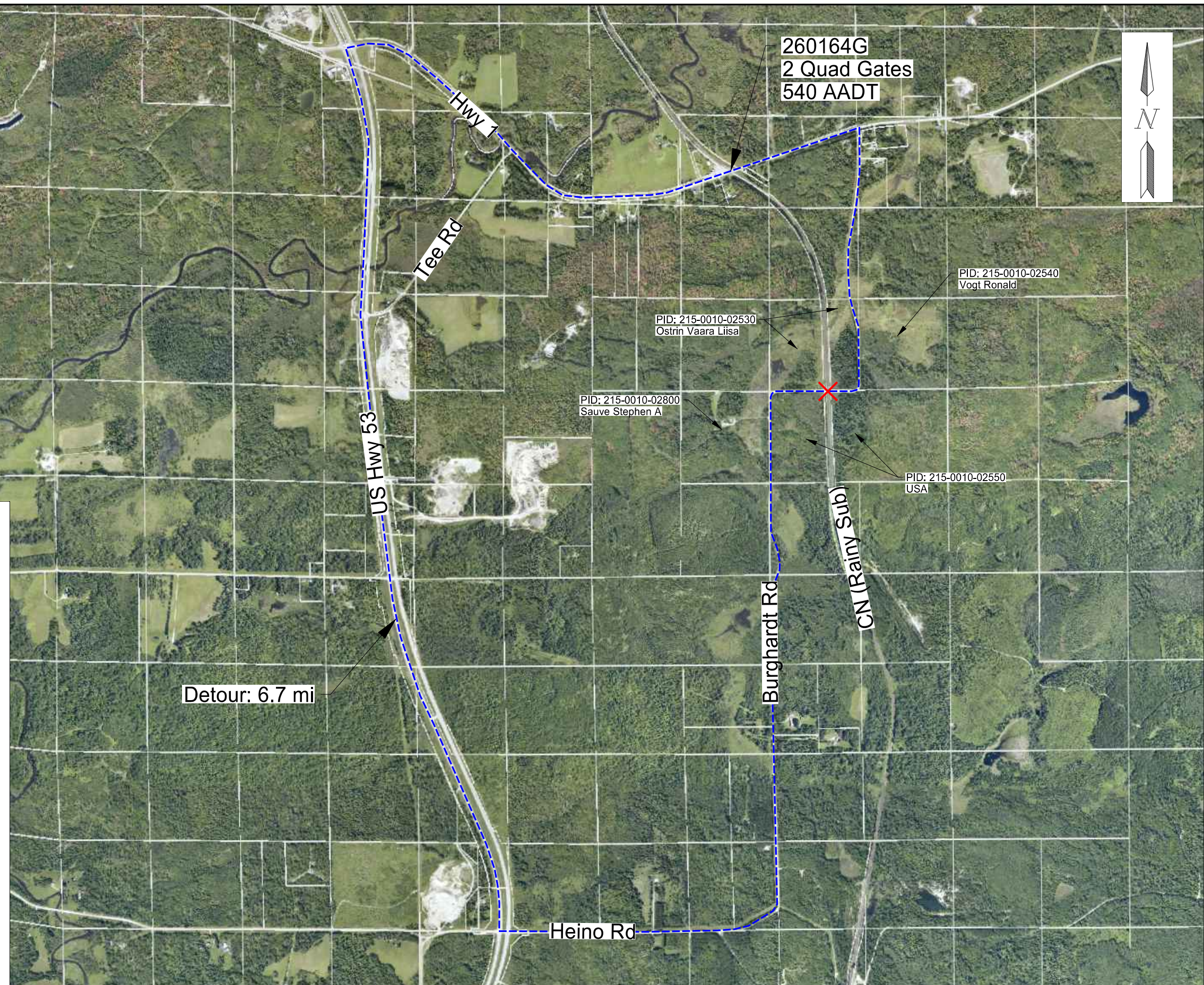
NOTES:
 The Saint Vincent Road (CR 260) at-grade railroad crossing (ID #097753A) located in Floodwood Township is a candidate for closure. Saint Vincent Road is a two-lane crossing with a posted speed limit of 30 mph at the crossing. This single-track BNSF rail crossing is equipped with stop sign passive warning devices. There are four trains per day traveling at 50 mph through this crossing. Dillon Baumann owns property on both sides of the crossing and would be potentially affected by a closure. The Saint Vincent Road crossing is a highly ranked closure candidate considering the minimal delay and detour if the crossing were to be closed. There are some additional considerations like the impacts to traffic on US 2 and the changes to private property access on the east side of the railroad tracks.



| | |
|------------------------|----------------------|
| Street | Burghardt Rd (CR430) |
| Crossing ID | 260162T |
| Highway AADT | 5 |
| Highway Speed | 15 |
| Train Volumes | 15 |
| Train Speed | 60 |
| Warning Device | StopSign |
| Max Detour (min) | 8.16 |
| Hours of Delay | 0.68 |
| 10-Year Crashes | 0 |
| Max Detour Score | 6 |
| Blocked Crossing Score | 3 |
| Crash Score | 0 |
| Highway AADT Score | 9 |
| Crossing Density Score | 5 |
| Hours of Delay Score | 10 |

NOTES:

The Burghardt Road (CR 430) at-grade railroad crossing (ID #260162T) located in Angora Township is a candidate for closure. Burghardt Road is a gravel roadway with a posted speed limit of 15 mph at the crossing. This single-track CN rail crossing is equipped with stop sign passive warning devices and heavy vegetation is present that could limit visibility of oncoming trains. There are 15 total trains per day traveling at 60 mph through this crossing. Lisa Ostrin Vaara owns property on both northern quadrants of the crossing and would be potentially affected by a closure. The Burghardt Road crossing is a candidate, and there are additional considerations of longer detour and property ownership if the crossing were to be closed. The Burghardt Road crossing is in close proximity to US Highway 1, which is the closest nearby crossing with two quad gates for warning devices. Additionally, there are several programmed projects on US 1 including J-turn project and considerations for grade separation.



| Street | Seville Rd (CR694) |
|-------------------------------|--------------------|
| Crossing ID | 260092F |
| Highway AADT | 217 |
| Highway Speed | 55 |
| Train Volumes | 11 |
| Train Speed | 60 |
| Warning Device | StopSign |
| Max Detour (min) | 120.00 |
| Hours of Delay | 434.00 |
| 10-Year Crashes | 0 |
| Max Detour Score | 1 |
| Blocked Crossing Score | 2.5 |
| Crash Score | 0 |
| Highway AADT Score | 5 |
| Crossing Density Score | 1 |
| Hours of Delay Score | 1 |

NOTES:
 The Seville Road (CR 694) at-grade railroad crossing (ID #260092F) located in Grant Lake Township/Solway Township is a candidate for closure. Seville Road is a two-lane roadway with shoulders and ditches and a posted speed limit of 55 mph at the crossing. This single-track CN rail crossing is equipped with stop sign passive warning devices and heavy vegetation is present that could limit visibility of oncoming trains. There are 11 total trains per day traveling at 60 mph through this crossing. John Prouty owns property on both northern quadrants of the crossing and would be potentially affected by a closure. There is a gravel mine located adjacent to the crossing on the southwest quadrant. There are lights and gates being installed at this crossing and a left turn project programmed at the intersection of highway 194 and Canosia Road in 2023.



Independent Grade Separation Projects



| | |
|------------------------------|-----------------------|
| Street | S Main St W (CSAH100) |
| Crossing ID | 252305T |
| Highway AADT | 5,100 |
| Highway Speed | 30 |
| Train Volumes | 12 |
| Train Speed | 35 |
| Warning Device | Gates |
| Max Detour (min) | 30 |
| Hours of Delay | 2,560 |
| 10-Year Crashes | 0 |
| Exposure Index Score | 10 |
| Highway AADT Score | 10 |
| Blocked Crossing Score | 4 |
| Crash Score | 0 |
| Max Detour Score | 7 |
| Commercial Development Score | 9 |

NOTES:

The Main Street (CSAH 100) at-grade railroad crossing (ID #252305T) located in the City of Aurora is a candidate for grade separation. Main Street is a two-lane roadway with curb and gutter and a posted speed limit of 30 mph at the crossing. There is also a pedestrian, bicycle and ATV trail that crosses the tracks at this location. This single-track CN rail crossing has two quad gate active warning devices. There are 12 total trains per day traveling at 35 mph through this crossing. The City of Aurora owns a portion of the adjacent property and impacts are unknown as the alignment of CSAH 100 is subject to change and may complicate a connection to Central Avenue. The Main Street crossing is a highly ranked grade separation candidate considering the exposure index and commercial development scores.

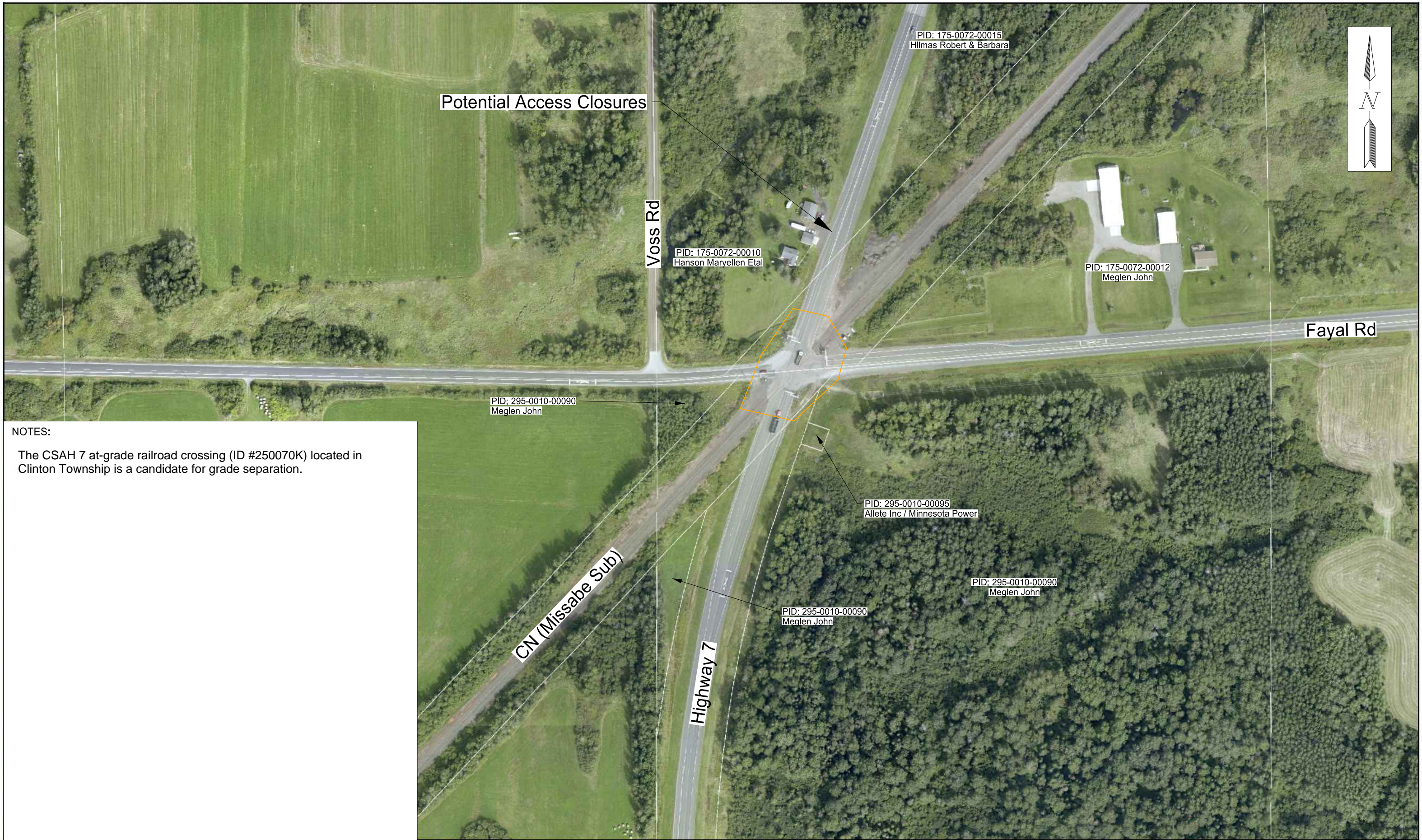


| | |
|------------------------------|---------------------|
| Street | Canosia Rd (CSAH98) |
| Crossing ID | 251909U |
| Highway AADT | 1,650 |
| Highway Speed | 55 |
| Train Volumes | 16 |
| Train Speed | 42 |
| Warning Device | Gates |
| Max Detour (min) | 5 |
| Hours of Delay | 150 |
| 10-Year Crashes | 0 |
| Exposure Index Score | 10 |
| Highway AADT Score | 9 |
| Blocked Crossing Score | 4 |
| Crash Score | 0 |
| Max Detour Score | 4 |
| Commercial Development Score | 6 |

NOTES:

The Canosia Road (CSAH 98) at-grade railroad crossing (ID #251909U) located in Soloway Township is a candidate for grade separation. Canosia Road is a two-lane roadway with a posted speed limit of 55 mph at the crossing. This single-track CN rail crossing has two quad gate active warning devices. There are 16 total trains per day traveling at 42 mph through this crossing. There are potential access closures and impacts on the northwest, northeast, and southwest quadrants of the crossing. The County recently completed a project at the intersection of Old Highway 2 and Canosia Road and are considering the most effective alternatives to connect Canosia Road to Old Highway 2 if a grade separation project were constructed. The Canosia Road crossing is a highly ranked grade separation candidate considering the exposure index, highway AADT, and commercial development scores.





Potential Access Closures

PID: 175-0072-00015
Hilmas Robert & Barbara

PID: 175-0072-00010
Hanson Maryellen Etal

PID: 175-0072-00012
Meglen John

Fayal Rd

PID: 295-0010-00090
Meglen John

PID: 295-0010-00095
Allete Inc / Minnesota Power

PID: 295-0010-00090
Meglen John

PID: 295-0010-00090
Meglen John

CN (Missabe Sub)

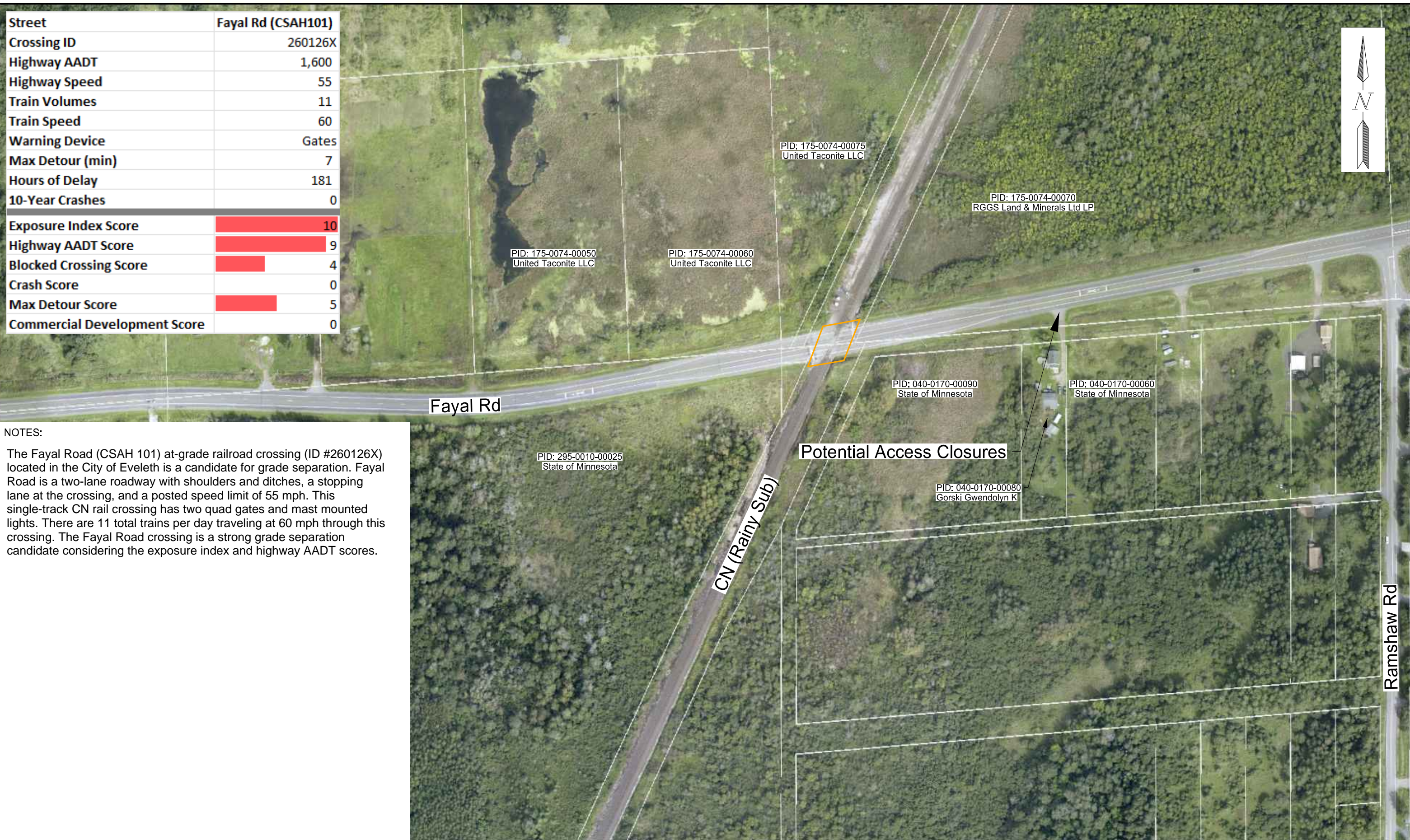
Highway 7

NOTES:
The CSAH 7 at-grade railroad crossing (ID #250070K) located in Clinton Township is a candidate for grade separation.

| Street | Fayal Rd (CSAH101) |
|------------------------------|--------------------|
| Crossing ID | 260126X |
| Highway AADT | 1,600 |
| Highway Speed | 55 |
| Train Volumes | 11 |
| Train Speed | 60 |
| Warning Device | Gates |
| Max Detour (min) | 7 |
| Hours of Delay | 181 |
| 10-Year Crashes | 0 |
| Exposure Index Score | 10 |
| Highway AADT Score | 9 |
| Blocked Crossing Score | 4 |
| Crash Score | 0 |
| Max Detour Score | 5 |
| Commercial Development Score | 0 |

NOTES:

The Fayal Road (CSAH 101) at-grade railroad crossing (ID #260126X) located in the City of Eveleth is a candidate for grade separation. Fayal Road is a two-lane roadway with shoulders and ditches, a stopping lane at the crossing, and a posted speed limit of 55 mph. This single-track CN rail crossing has two quad gates and mast mounted lights. There are 11 total trains per day traveling at 60 mph through this crossing. The Fayal Road crossing is a strong grade separation candidate considering the exposure index and highway AADT scores.



Fayal Rd: Crossing ID# 260126X

Potential Grade Separation Option
Eveleth, MN

| | |
|------------------------------|--------------------|
| Street | Sparta Rd (CSAH97) |
| Crossing ID | 252001C |
| Highway AADT | 1,500 |
| Highway Speed | 55 |
| Train Volumes | 12 |
| Train Speed | 35 |
| Warning Device | Gates |
| Max Detour (min) | 11 |
| Hours of Delay | 271 |
| 10-Year Crashes | 0 |
| Exposure Index Score | 10 |
| Highway AADT Score | 9 |
| Blocked Crossing Score | 3 |
| Crash Score | 0 |
| Max Detour Score | 6 |
| Commercial Development Score | 0 |

NOTES:

The Sparta Road (CSAH 97) at-grade railroad crossing (ID #252001C) located in the City of Gilbert is a candidate for grade separation. Sparta Road is a two-lane roadway with a posted speed limit of 55 mph at the crossing. This single-track CN rail crossing has two quad gate active warning devices. There are 12 total trains per day traveling at 35 mph through this crossing. There are potential access closures and impacts on the northwest, southwest, and southeast quadrants of the crossing. The Sparta Road crossing is a strong grade separation candidate considering the exposure index, highway AADT, and blocked crossing scores.



Sparta Rd: Crossing ID# 252001C

Potential Grade Separation Option

Eveleth, MN

14857
01/23/2023

Combination Closure Projects



| | |
|------------------------|--------------------|
| Street | Burnett Rd (CR867) |
| Crossing ID | 251930A |
| Highway AADT | 65 |
| Highway Speed | 40 |
| Train Volumes | 16 |
| Train Speed | 35 |
| Warning Device | StopSign |
| Max Detour (min) | 8.85 |
| Hours of Delay | 9.58 |
| 10-Year Crashes | 0 |
| Max Detour Score | 6 |
| Blocked Crossing Score | 2.5 |
| Crash Score | 0 |
| Highway AADT Score | 7 |
| Crossing Density Score | 6 |
| Hours of Delay Score | 8 |

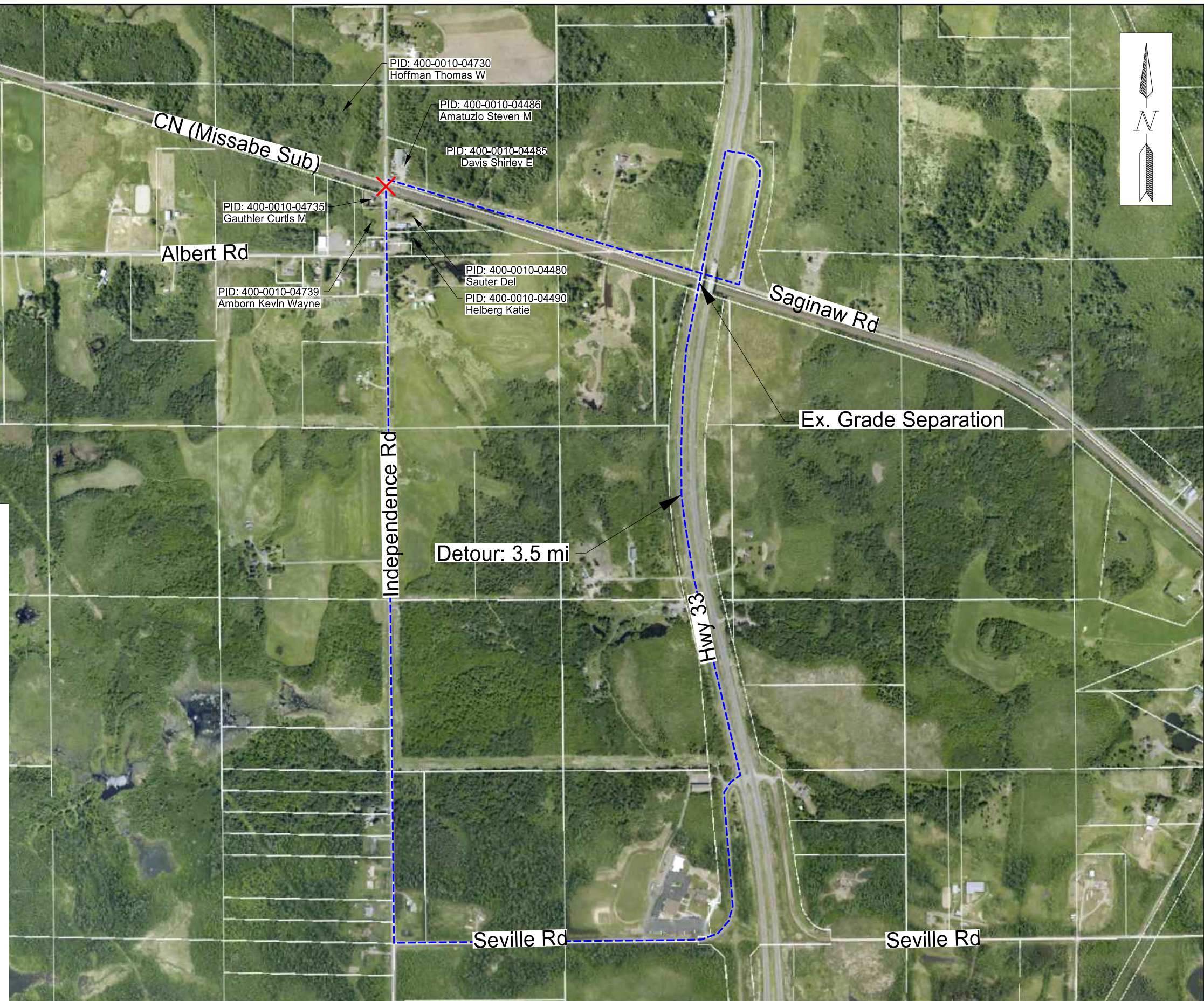
NOTES:
 The Burnett Road (CR 867) at-grade railroad crossing (ID #251930A) and the Centerline Road (CR 694) at-grade railroad crossing (ID #251928Y) located in Industrial Township are strong candidates for combined crossing closures. Burnett Road is a two-lane roadway with a posted speed limit of 40 mph at the crossing. The Burnett Road crossing is equipped with stop sign passive warning devices and heavy vegetation is present that could limit visibility of oncoming trains. The crossing is situated close to Highway 7, creating stopping storage concerns and the topography of the crossing sometimes leads to trucks being hung up on the tracks. The state of Minnesota owns property adjacent to the tracks at this crossing. Centerline Road is a two-lane roadway with a posted speed limit of 20 mph at the crossing. The Centerline Road crossing is equipped with stop sign passive warning devices and heavy vegetation is present that could limit visibility of oncoming trains. There are 16 total trains per day traveling at 30 mph through both single-track CN rail crossings. There are additional considerations of property ownership if the crossings were to be closed. The Centerline Road crossing is also in close proximity to US Highway 7, creating stopping distance and storage issues at the crossing. The combined Burnett Road and Centerline Road crossing closures are a highly ranked candidate considering the crossing density score, hours of delay and detour scores.



| Street | Independence RD (CR874) |
|------------------------|-------------------------|
| Crossing ID | 251923P |
| Highway AADT | 265 |
| Highway Speed | 55 |
| Train Volumes | 16 |
| Train Speed | 35 |
| Warning Device | Gates |
| Max Detour (min) | 3.27 |
| Hours of Delay | 14.43 |
| 10-Year Crashes | 0 |
| Max Detour Score | 8 |
| Blocked Crossing Score | 2.5 |
| Crash Score | 0 |
| Highway AADT Score | 5 |
| Crossing Density Score | 3 |
| Hours of Delay Score | 7 |

NOTES:

The Independence Road (CR 874) at-grade railroad crossing (ID #251923P), Vibert Road (CR 875) at-grade railroad crossing (ID #251920U), and the Seville Road (CR 873) at-grade railroad crossing (ID #251917L) located in Industrial and Brevator Townships are strong candidates for combined crossing closures. Independence Road is a two-lane roadway with a posted speed limit of 55 mph at the crossing. The Independence Road crossing is equipped with two quad gate active warning devices and is situated close to CR 694 in the northeast quadrant which creates stopping distance and storage issues. Vibert Road is a two-lane roadway with a posted speed limit of 30 mph at the crossing. The Vibert Road crossing is equipped with stop sign passive warning devices and heavy vegetation is present that could limit visibility of oncoming trains. Seville Road is a two-lane roadway with a posted speed limit of 40 mph at the crossing. The Seville Road crossing is equipped with two quad gates. The crossing is situated close to Saginaw Road, creating stopping storage concerns. There are 16 total trains per day traveling at 35 mph through both single-track CN rail crossings. There are additional considerations of property ownership if the crossings were to be closed. The combined Independence Road, Vibert Road, and Seville Road crossing closures are a highly ranked candidate considering the crossing density score, hours of delay and detour scores.



| Street | Vibert Rd (CR875) |
|-------------------------------|-------------------|
| Crossing ID | 251920U |
| Highway AADT | 111 |
| Highway Speed | 30 |
| Train Volumes | 16 |
| Train Speed | 35 |
| Warning Device | StopSign |
| Max Detour (min) | 2.98 |
| Hours of Delay | 5.51 |
| 10-Year Crashes | 0 |
| Max Detour Score | 9 |
| Blocked Crossing Score | 2.5 |
| Crash Score | 0 |
| Highway AADT Score | 6 |
| Crossing Density Score | 5 |
| Hours of Delay Score | 9 |

| Street | Seville Rd (CR873) |
|-------------------------------|--------------------|
| Crossing ID | 251917L |
| Highway AADT | 116 |
| Highway Speed | 40 |
| Train Volumes | 16 |
| Train Speed | 35 |
| Warning Device | Gates |
| Max Detour (min) | 2.98 |
| Hours of Delay | 5.76 |
| 10-Year Crashes | 0 |
| Max Detour Score | 9 |
| Blocked Crossing Score | 2.5 |
| Crash Score | 0 |
| Highway AADT Score | 6 |
| Crossing Density Score | 5 |
| Hours of Delay Score | 9 |

NOTES:

The Independence Road (CR 874) at-grade railroad crossing (ID #251923P), Vibert Road (CR 875) at-grade railroad crossing (ID #251920U), and the Seville Road (CR 873) at-grade railroad crossing (ID #251917L) located in Industrial and Brevator Townships are strong candidates for combined crossing closures. Independence Road is a two-lane roadway with a posted speed limit of 55 mph at the crossing. The Independence Road crossing is equipped with two quad gate active warning devices and is situated close to CR 694 in the northeast quadrant which creates stopping distance and storage issues. Vibert Road is a two-lane roadway with a posted speed limit of 30 mph at the crossing. The Vibert Road crossing is equipped with stop sign passive warning devices and heavy vegetation is present that could limit visibility of oncoming trains. Seville Road is a two-lane roadway with a posted speed limit of 40 mph at the crossing. The Seville Road crossing is equipped with two quad gates. The crossing is situated close to Saginaw Road, creating stopping storage concerns. There are 16 total trains per day traveling at 35 mph through both single-track CN rail crossings. There are additional considerations of property ownership if the crossings were to be closed. The combined Independence Road, Vibert Road, and Seville Road crossing closures are a highly ranked candidate considering the crossing density score, hours of delay and detour scores.



Vibert Rd: Crossing ID# 251920U & Seville Rd: Crossing ID# 251917L

Potential Closure Option
Saginaw, MN

Combination Closure & Grade Separation Projects



| | |
|------------------------|--------------------|
| Street | Allavus Rd (CR592) |
| Crossing ID | 252016S |
| Highway AADT | 50 |
| Highway Speed | 50 |
| Train Volumes | 1 |
| Train Speed | 35 |
| Warning Device | StopSign |
| Max Detour (min) | 3.19 |
| Hours of Delay | 2.66 |
| 10-Year Crashes | 0 |
| Max Detour Score | 8 |
| Blocked Crossing Score | 5.25 |
| Crash Score | 0 |
| Highway AADT Score | 8 |
| Crossing Density Score | 8 |
| Hours of Delay Score | 9 |

NOTES:

The Allavus Road (CR 592) at-grade railroad crossing (ID #252016S) and the Spirit Lake Road/Fraser Road (CSAH 137) at-grade railroad crossing (ID #252015K) located in Cherry Township are strong candidates for a combined crossing closure and grade separation project. Allavus Road is a two-lane roadway with a posted speed limit of 50 mph at the crossing. The Allavus Road crossing is equipped with stop sign passive warning devices and is heavily skewed, which could limit visibility of oncoming trains. Spirit Lake Road/Fraser Road is a two-lane roadway with a posted speed limit of 20 mph at the crossing. The Spirit Lake Road/Fraser Road crossing is equipped with two quad gates as warning devices and heavy vegetation is present in the southwest quadrant that could limit visibility of oncoming trains. There is one train per day traveling at 35 mph through both single-track CN rail crossings. There are additional considerations of property ownership and roadway access if the crossings were to be closed or a grade separated roadway is constructed. The combined Allavus Road crossing closure and Spirit Lake Road/Fraser Road grade separation are highly ranked candidates considering the crossing density score, blocked crossing score, and hours of delay and detour scores.



Detour: 2.9 mi

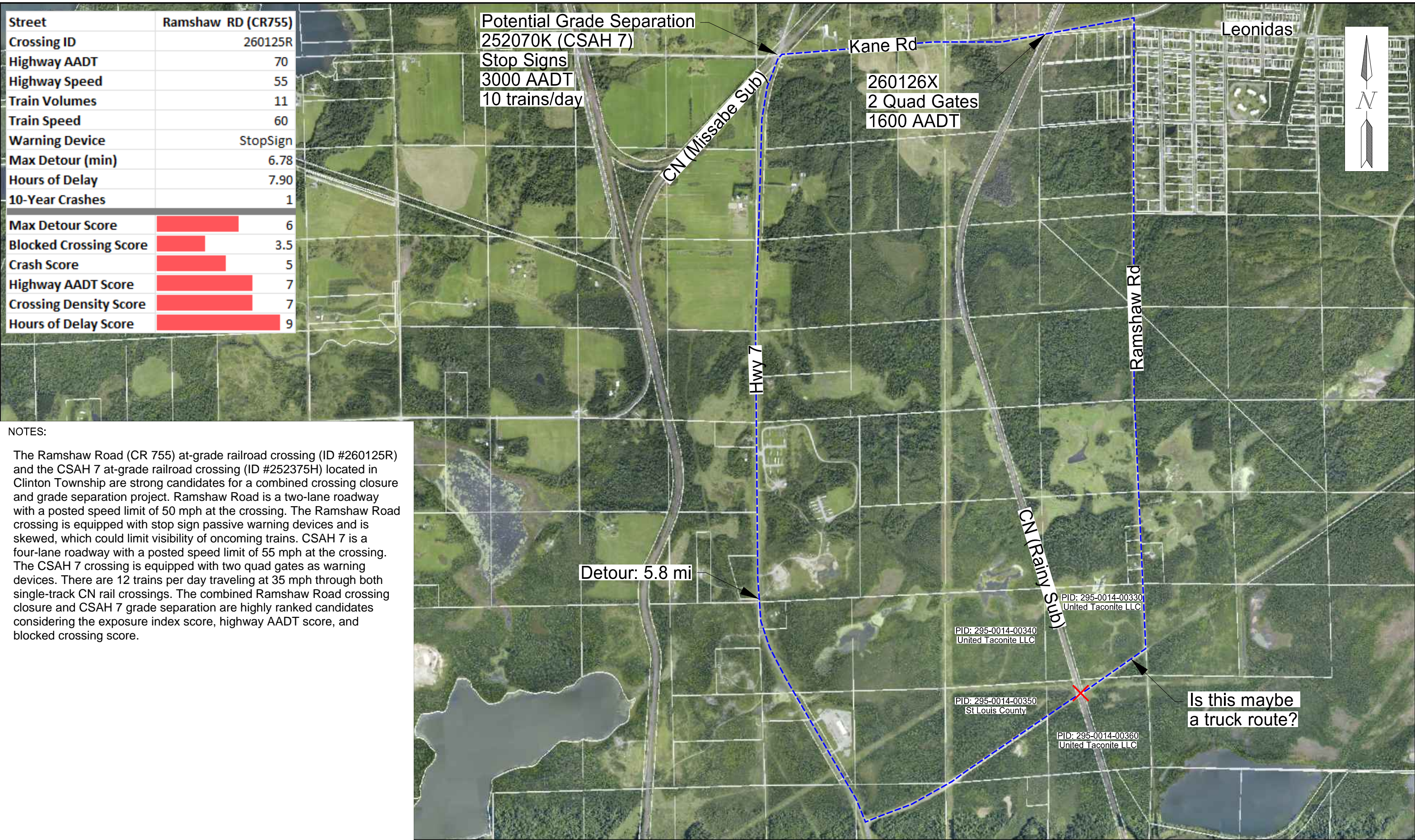


Allavus Rd: Crossing ID# 252016S

Potential Closure Option
Mountain Iron, MN

| | |
|------------------------|--------------------|
| Street | Ramshaw RD (CR755) |
| Crossing ID | 260125R |
| Highway AADT | 70 |
| Highway Speed | 55 |
| Train Volumes | 11 |
| Train Speed | 60 |
| Warning Device | StopSign |
| Max Detour (min) | 6.78 |
| Hours of Delay | 7.90 |
| 10-Year Crashes | 1 |
| Max Detour Score | 6 |
| Blocked Crossing Score | 3.5 |
| Crash Score | 5 |
| Highway AADT Score | 7 |
| Crossing Density Score | 7 |
| Hours of Delay Score | 9 |

NOTES:
 The Ramshaw Road (CR 755) at-grade railroad crossing (ID #260125R) and the CSAH 7 at-grade railroad crossing (ID #252375H) located in Clinton Township are strong candidates for a combined crossing closure and grade separation project. Ramshaw Road is a two-lane roadway with a posted speed limit of 50 mph at the crossing. The Ramshaw Road crossing is equipped with stop sign passive warning devices and is skewed, which could limit visibility of oncoming trains. CSAH 7 is a four-lane roadway with a posted speed limit of 55 mph at the crossing. The CSAH 7 crossing is equipped with two quad gates as warning devices. There are 12 trains per day traveling at 35 mph through both single-track CN rail crossings. The combined Ramshaw Road crossing closure and CSAH 7 grade separation are highly ranked candidates considering the exposure index score, highway AADT score, and blocked crossing score.



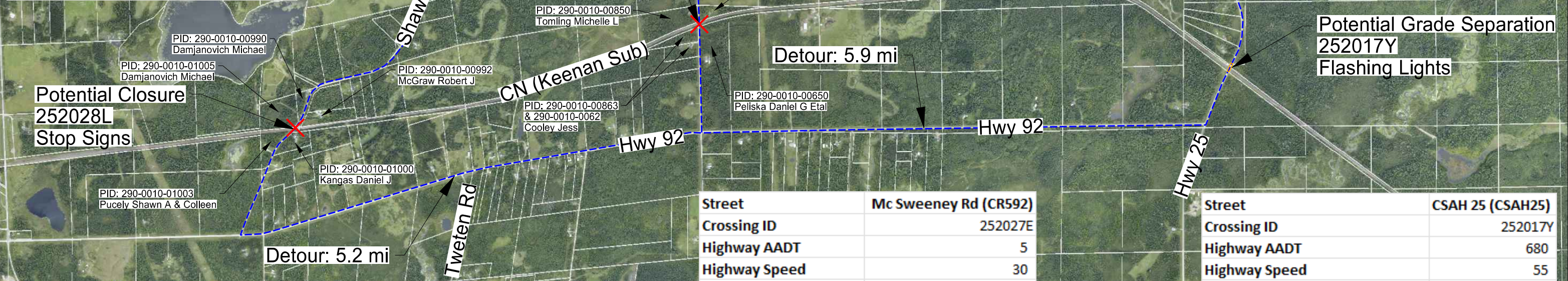
| Street | CSAH 7 (CSAH7) |
|------------------------------|----------------|
| Crossing ID | 252375H |
| Highway AADT | 2,110 |
| Highway Speed | 55 |
| Train Volumes | 12 |
| Train Speed | 35 |
| Warning Device | Gates |
| Max Detour (min) | 11 |
| Hours of Delay | 397 |
| 10-Year Crashes | 0 |
| Exposure Index Score | 10 |
| Highway AADT Score | 10 |
| Blocked Crossing Score | 4.25 |
| Crash Score | 0 |
| Max Detour Score | 6 |
| Commercial Development Score | 0 |

NOTES:

The Ramshaw Road (CR 755) at-grade railroad crossing (ID #260125R) and the CSAH 7 at-grade railroad crossing (ID #252375H) located in Clinton Township are strong candidates for a combined crossing closure and grade separation project. Ramshaw Road is a two-lane roadway with a posted speed limit of 50 mph at the crossing. The Ramshaw Road crossing is equipped with stop sign passive warning devices and is skewed, which could limit visibility of oncoming trains. CSAH 7 is a four-lane roadway with a posted speed limit of 55 mph at the crossing. The CSAH 7 crossing is equipped with two quad gates as warning devices. There are 12 trains per day traveling at 35 mph through both single-track CN rail crossings. The combined Ramshaw Road crossing closure and CSAH 7 grade separation are highly ranked candidates considering the exposure index score, highway AADT score, and blocked crossing score.



| | |
|------------------------|-----------------|
| Street | Shaw Rd (CR451) |
| Crossing ID | 252028L |
| Highway AADT | 5 |
| Highway Speed | 55 |
| Train Volumes | 1 |
| Train Speed | 35 |
| Warning Device | StopSign |
| Max Detour (min) | 5.66 |
| Hours of Delay | 0.47 |
| 10-Year Crashes | 0 |
| Max Detour Score | 7 |
| Blocked Crossing Score | 4.75 |
| Crash Score | 0 |
| Highway AADT Score | 9 |
| Crossing Density Score | 2 |
| Hours of Delay Score | 10 |



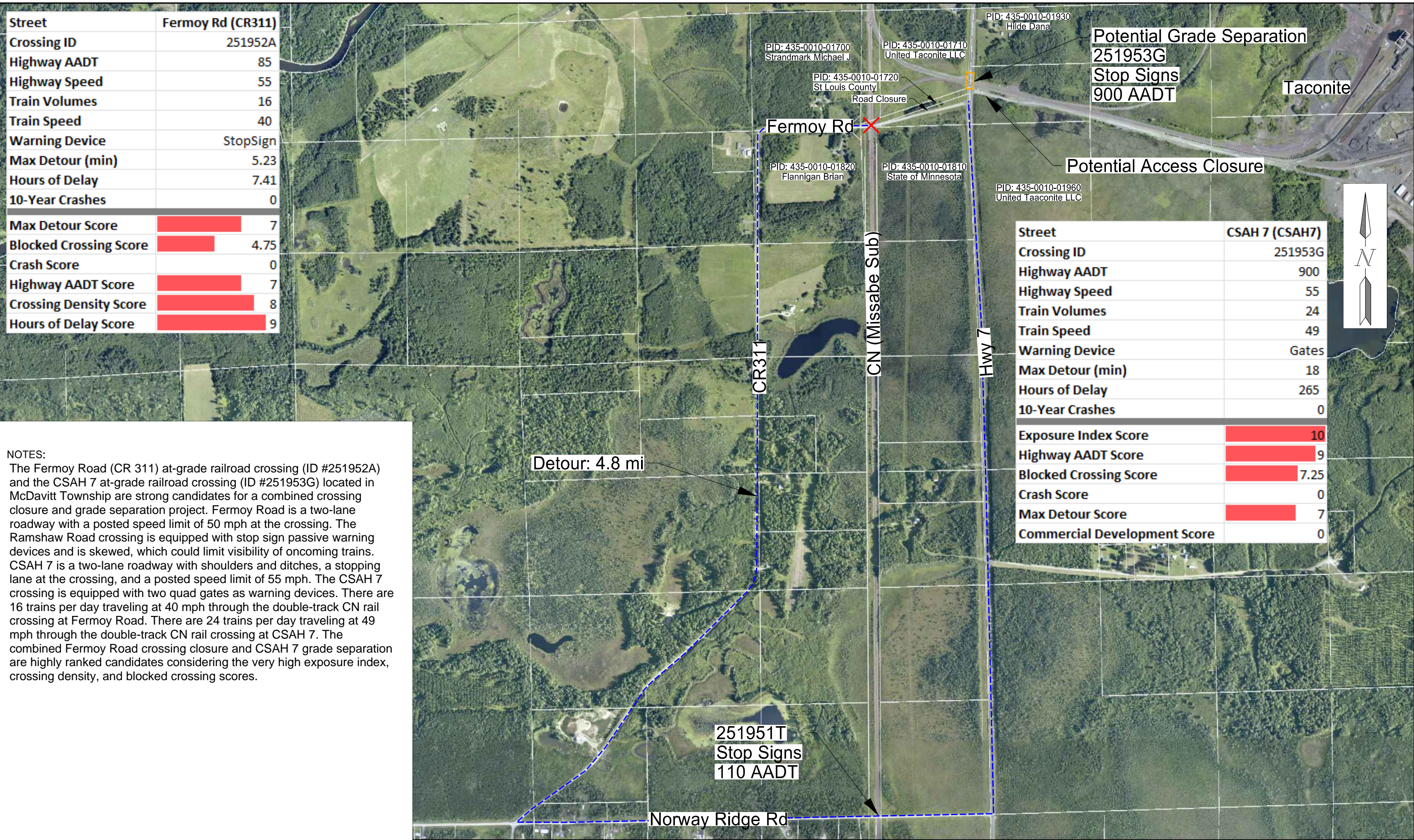
NOTES:
 The Shaw Road (CR 451) at-grade railroad crossing (ID #252028L), McSweeney Road (CR 592) at-grade railroad crossing (ID #252027E), and CSAH 25 at-grade railroad crossing (ID #252017Y) located in Cherry Township are strong candidates for a combined crossing closures and grade separation project. Shaw Road is a gravel roadway with a posted speed limit of 55 mph at the crossing. The Shaw Road crossing is equipped with stop sign passive warning devices and is skewed, which could contribute to limited visibility of oncoming trains. The crossing has a very low AADT and detour and delay impacts to regional trips would be minimized if the crossing was closed. McSweeney Road is a two-lane roadway with a posted speed limit of 30 mph at the crossing. The McSweeney Road crossing is equipped with stop sign passive warning devices and heavy vegetation is present that could limit visibility of oncoming trains. CSAH 25 is a two-lane roadway with a posted speed limit of 30 mph at the crossing. The CSAH 25 crossing is equipped with crossbucks flashing light warning devices and heavy vegetation is present that could limit visibility of oncoming trains. There is one train per day traveling at 35 mph through these three single-track CN rail crossings. Combining the closure of Shaw Road and McSweeney Road and grade separating CSAH 25 is a strong project candidate considering the overall delay reduced, crossing density score, and blocked crossing score.

| | |
|------------------------|-----------------------|
| Street | Mc Sweeney Rd (CR592) |
| Crossing ID | 252027E |
| Highway AADT | 5 |
| Highway Speed | 30 |
| Train Volumes | 1 |
| Train Speed | 35 |
| Warning Device | StopSign |
| Max Detour (min) | 5.66 |
| Hours of Delay | 0.47 |
| 10-Year Crashes | 0 |
| Max Detour Score | 7 |
| Blocked Crossing Score | 4.75 |
| Crash Score | 0 |
| Highway AADT Score | 9 |
| Crossing Density Score | 7 |
| Hours of Delay Score | 10 |

| | |
|------------------------------|------------------|
| Street | CSAH 25 (CSAH25) |
| Crossing ID | 252017Y |
| Highway AADT | 680 |
| Highway Speed | 55 |
| Train Volumes | 1 |
| Train Speed | 35 |
| Warning Device | FlashingOnly |
| Max Detour (min) | 6 |
| Hours of Delay | 72 |
| 10-Year Crashes | 0 |
| Exposure Index Score | 6 |
| Highway AADT Score | 7 |
| Blocked Crossing Score | 5 |
| Crash Score | 0 |
| Max Detour Score | 4 |
| Commercial Development Score | 0 |

| Street | Fermoy Rd (CR311) |
|------------------------|-------------------|
| Crossing ID | 251952A |
| Highway AADT | 85 |
| Highway Speed | 55 |
| Train Volumes | 16 |
| Train Speed | 40 |
| Warning Device | StopSign |
| Max Detour (min) | 5.23 |
| Hours of Delay | 7.41 |
| 10-Year Crashes | 0 |
| Max Detour Score | 7 |
| Blocked Crossing Score | 4.75 |
| Crash Score | 0 |
| Highway AADT Score | 7 |
| Crossing Density Score | 8 |
| Hours of Delay Score | 9 |

NOTES:
 The Fermoy Road (CR 311) at-grade railroad crossing (ID #251952A) and the CSAH 7 at-grade railroad crossing (ID #251953G) located in McDavitt Township are strong candidates for a combined crossing closure and grade separation project. Fermoy Road is a two-lane roadway with a posted speed limit of 50 mph at the crossing. The Ramshaw Road crossing is equipped with stop sign passive warning devices and is skewed, which could limit visibility of oncoming trains. CSAH 7 is a two-lane roadway with shoulders and ditches, a stopping lane at the crossing, and a posted speed limit of 55 mph. The CSAH 7 crossing is equipped with two quad gates as warning devices. There are 16 trains per day traveling at 40 mph through the double-track CN rail crossing at Fermoy Road. There are 24 trains per day traveling at 49 mph through the double-track CN rail crossing at CSAH 7. The combined Fermoy Road crossing closure and CSAH 7 grade separation are highly ranked candidates considering the very high exposure index, crossing density, and blocked crossing scores.



Potential Grade Separation
 251953G
 Stop Signs
 900 AADT

Potential Access Closure

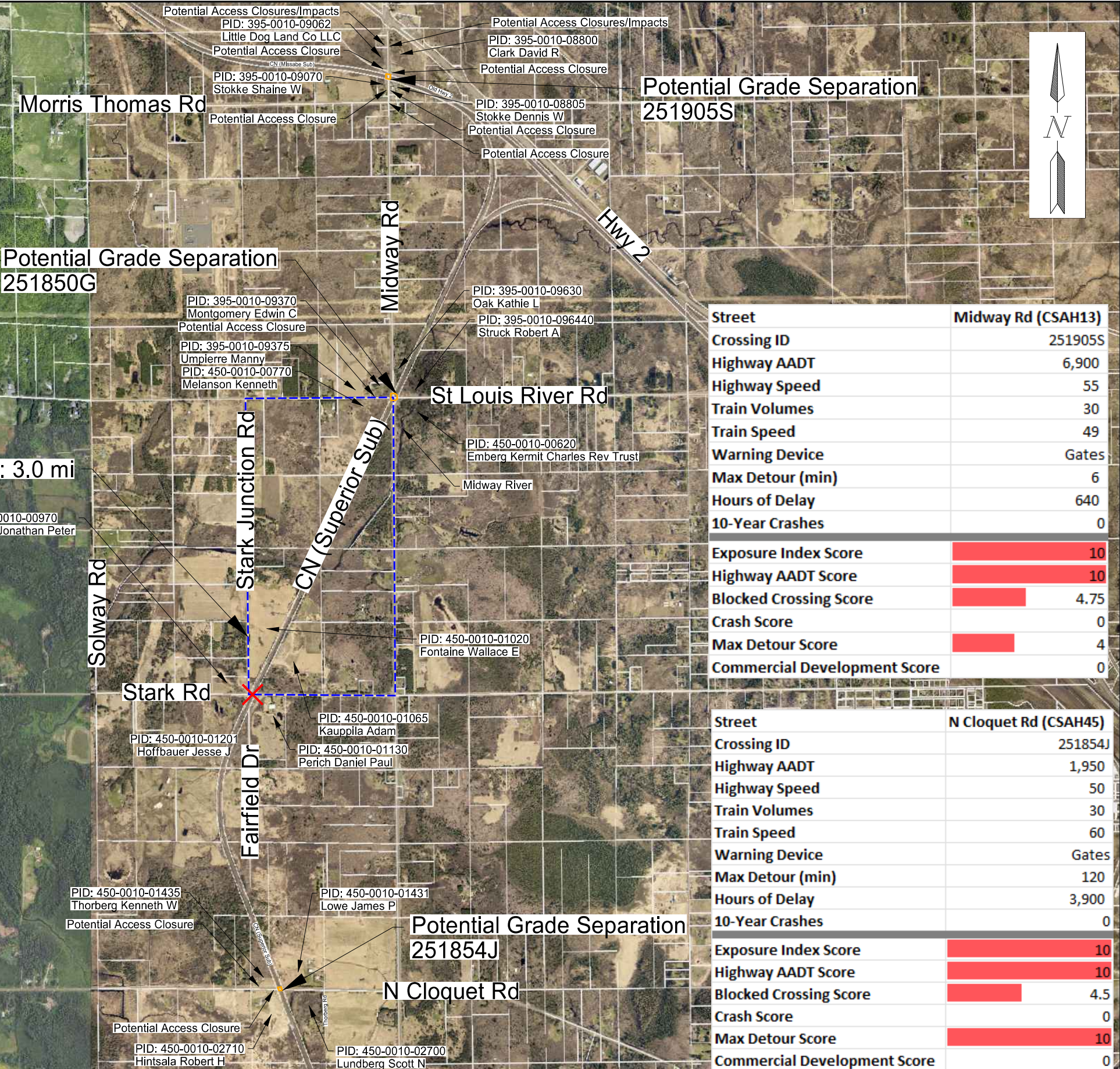
| Street | CSAH 7 (CSAH7) |
|------------------------------|----------------|
| Crossing ID | 251953G |
| Highway AADT | 900 |
| Highway Speed | 55 |
| Train Volumes | 24 |
| Train Speed | 49 |
| Warning Device | Gates |
| Max Detour (min) | 18 |
| Hours of Delay | 265 |
| 10-Year Crashes | 0 |
| Exposure Index Score | 10 |
| Highway AADT Score | 9 |
| Blocked Crossing Score | 7.25 |
| Crash Score | 0 |
| Max Detour Score | 7 |
| Commercial Development Score | 0 |

Detour: 4.8 mi

251951T
 Stop Signs
 110 AADT

Norway Ridge Rd

| Street | Stark Rd (CR894) | Street | Midway Rd (CSAH13) |
|-------------------------------|------------------|-------------------------------------|--------------------|
| Crossing ID | 251852V | Crossing ID | 251850G |
| Highway AADT | 363 | Highway AADT | 6,900 |
| Highway Speed | 55 | Highway Speed | 55 |
| Train Volumes | 30 | Train Volumes | 30 |
| Train Speed | 25 | Train Speed | 60 |
| Warning Device | Gates | Warning Device | Gates |
| Max Detour (min) | 3.33 | Max Detour (min) | 7 |
| Hours of Delay | 20.16 | Hours of Delay | 767 |
| 10-Year Crashes | 0 | 10-Year Crashes | 0 |
| Max Detour Score | 8 | Exposure Index Score | 10 |
| Blocked Crossing Score | 4.75 | Highway AADT Score | 10 |
| Crash Score | 0 | Blocked Crossing Score | 4.75 |
| Highway AADT Score | 5 | Crash Score | 0 |
| Crossing Density Score | 8 | Max Detour Score | 5 |
| Hours of Delay Score | 6 | Commercial Development Score | 0 |



Potential Grade Separation
251905S

Potential Grade Separation
251850G

| Street | Midway Rd (CSAH13) |
|------------------|--------------------|
| Crossing ID | 251905S |
| Highway AADT | 6,900 |
| Highway Speed | 55 |
| Train Volumes | 30 |
| Train Speed | 49 |
| Warning Device | Gates |
| Max Detour (min) | 6 |
| Hours of Delay | 640 |
| 10-Year Crashes | 0 |

| | |
|-------------------------------------|-------------|
| Exposure Index Score | 10 |
| Highway AADT Score | 10 |
| Blocked Crossing Score | 4.75 |
| Crash Score | 0 |
| Max Detour Score | 4 |
| Commercial Development Score | 0 |

| Street | N Cloquet Rd (CSAH45) |
|------------------|-----------------------|
| Crossing ID | 251854J |
| Highway AADT | 1,950 |
| Highway Speed | 50 |
| Train Volumes | 30 |
| Train Speed | 60 |
| Warning Device | Gates |
| Max Detour (min) | 120 |
| Hours of Delay | 3,900 |
| 10-Year Crashes | 0 |

| | |
|-------------------------------------|------------|
| Exposure Index Score | 10 |
| Highway AADT Score | 10 |
| Blocked Crossing Score | 4.5 |
| Crash Score | 0 |
| Max Detour Score | 10 |
| Commercial Development Score | 0 |

NOTES:
The Midway Road (CSAH 13) at-grade railroad crossing (ID #251905S), Midway Road (CSAH 13) at-grade railroad crossing (ID #251850G), Stark Road (CR 894) at-grade railroad crossing (ID #251852V), and North Cloquet Road (CSAH 45) at-grade railroad crossing (ID #251854J) located in the City of Hermantown and Midway Township are strong candidates for a project including a crossing closure and several grade separated crossing projects. The northernmost crossing on Midway Road is a two-lane roadway with high AADT's and a posted speed limit of 55 mph at the crossing. Train volumes at this crossing are at 30 trains per day, traveling about 49 mph on two separate tracks. The northern crossing on Midway Road is equipped with two quad gates and a convenience store is present in the southeast quadrant that could limit visibility of oncoming trains. The southern crossing on Midway Road is also a two-lane roadway with high AADT's and a posted speed limit of 55 mph at the crossing. The skew of the roadway as it crosses the tracks creates very unsafe vehicle operating conditions. Train volumes at this crossing are at 30 trains per day, traveling up to 60 mph on one set of tracks that is obstructed by dense vegetation. The southern crossing on Midway Road is equipped with two quad gates and is a heavily traveled truck route. Stark Road is a two-lane roadway with a posted speed limit of 55 mph at the crossing. The Stark Road crossing is equipped with two quad gate warning devices. North Cloquet Road is a two-lane roadway with a posted speed limit of 50 mph at the crossing and is equipped with two quad gates. Combining the closure of Stark Road with grade separation projects at two crossings on Midway Road and also North Cloquet Road is a very good project candidate considering the exposure index score, overall delay reduced, moderate crossing density score and max detour score, and blocked crossing score.

Detour: 3.0 mi

Potential Grade Separation
251854J



Stark Rd: Crossing ID# 251852V, N Cloquet Rd: Crossing ID# 251854J, Midway Rd: Crossing ID# 251850G, Midway Rd: Crossing ID# 251905S

Potential Combined Closure & Grade Separation Option
Proctor, MN

| | |
|------------------------------|---------------------|
| Street | Southern Dr (CR657) |
| Crossing ID | 260128L |
| Highway AADT | 1,050 |
| Highway Speed | 45 |
| Train Volumes | 15 |
| Train Speed | 60 |
| Warning Device | Gates |
| Max Detour (min) | 7 |
| Hours of Delay | 114 |
| 10-Year Crashes | 0 |
| Exposure Index Score | 10 |
| Highway AADT Score | 9 |
| Blocked Crossing Score | 4.5 |
| Crash Score | 0 |
| Max Detour Score | 4 |
| Commercial Development Score | 9 |

NOTES:

The Southern Drive (CR 657) at-grade railroad crossing (ID #260128L), Unity Drive (CR 592) at-grade railroad crossing (ID #260146J), and Old Highway 169 at-grade railroad crossing (ID #260149E) located in the City of Virginia are strong candidates for a combined crossing closure and grade separation project. Southern Drive is a two-lane roadway with a posted speed limit of 45 mph at the crossing and is equipped with two-quad gates. There are potential access closures and impacts on the southwest quadrant of the crossing. Unity Drive is a two-lane roadway with a posted speed limit of 30 mph at the crossing. The Unity Drive crossing is equipped with stop sign passive warning devices. Old Highway 169 is a two-lane roadway with a posted speed limit of 30 mph at the crossing. The Old Highway 169 crossing is equipped with crossbucks flashing light warning devices and heavy vegetation is present that could limit visibility of oncoming trains. There are 15 trains per day traveling at 60 mph through these three double-track CN rail crossings. Combining the closure of Unity Drive and Old Highway 169 and grade separating Southern Drive is a strong project candidate considering the exposure index, commercial development score, crossing density score, and blocked crossing score.

