



DRAWING NOT TO SCALE

INTERSECTION
ADT: 17698 (TMC 2322)
ACCIDENT RATE: 0.31 CR INDEX: 0.38
SEVERITY RATE: 0.62 FAR INDEX: 0.64

MATCHLINE 'A'

3/30/26 (6-7 AM) DN, C *
11/2/22 (6-7 AM) D, C

CSAH 9 (ROUND LAKE BLVD)

12/20/21 (9-10 PM) D, C

* NEAR 15974 ROUND LAKE BLVD

161ST AVE

CSAH 20 (161ST AVE)

MATCHLINE 'B'

7/19/22 (6-7 PM) L, C
7/1/24 (10-11 AM) L, C
10/6/23 (6-7 PM) DU, C
10/19/24 (3-4 PM) L, CL
11/16/24 (5-6 PM) D, C
5/29/26 (2-3 PM) L, C
2/5/24 (4-5 PM) L, C
1/3/22 (6-7 PM) D, C
8/10/22 (7-8 PM) DU, C
9/7/21 (2-3 PM) L, C
2/5/26 (5-6 AM) D, C

CORRIDOR - CSAH 20 TO CSAH 20
ADT: 16257 (TMC 2322 & 2574)
ACCIDENT RATE: 1.32 CR INDEX: 1.43
SEVERITY RATE: 2.58 FAR INDEX: 0.84

DATE, TIME, LIGHT, WEATHER			 OVERTURN  FIRE OR EXPLOSION  MOVING VEHICLE  REAR END  BACKING VEHICLE  COLLISION WITH FIXED OBJECT  SIDE SWIPE SAME DIRECTION  SIDE SWIPE OPPOSITE DIRECTION  PARKED VEHICLE  MOTORCYCLE  DEER  PEDESTRIAN  BICYCLE  FIXED OBJECT  RIGHT ANGLE  VEHICLE OUT OF CONTROL  LEFT TURN INTO ONCOMING TRAFFIC					
LIGHT	WEATHER	SEVERITY CODE						
L = LIGHT DN = DAWN DU = DUSK D = DARK X = UNKNOWN	C = CLEAR CL = CLOUDY R = RAIN S = SNOW/SLEET X = OTHER/UNKNOWN	(N) PROPERTY DAMAGE (C) POSSIBLE INJURY (B) MINOR INJURY (A) SERIOUS INJURY (K) FATALITY	 ANOKA COUNTY HIGHWAY DEPT.				COLLISION DIAGRAM	CSAH 9 (ROUND LAKE BLVD) FROM CSAH 20 (157TH AVE) TO 172ND AVE
							Sheet <u>2</u> of <u>6</u> Sheets	



DRAWING NOT TO SCALE

MATCHLINE 'B'

162ND LN

FIBER CABLES

Ⓝ

11/4/24 (6-7 AM) D, R

163RD LN

Ⓒ

4/24/26 (4-5 PM) L, C

CSAH 9 (ROUND LAKE BLVD)

164TH AVE

164TH LN

MATCHLINE 'C'

CORRIDOR - 162ND LN TO 172ND AVE
ADT: 16257 (TMC 2322)
ACCIDENT RATE: 0.62 CR INDEX: 0.69
SEVERITY RATE: 1.12 FAR INDEX: 0.51

DATE, TIME, LIGHT, WEATHER



OVERTURN



FIRE OR EXPLOSION



MOVING VEHICLE



REAR END



BACKING VEHICLE



COLLISION WITH FIXED OBJECT



SIDE SWIPE SAME DIRECTION



SIDE SWIPE OPPOSITE DIRECTION



PARKED VEHICLE



MOTORCYCLE



DEER



PEDESTRIAN



BICYCLE



FIXED OBJECT



RIGHT ANGLE



VEHICLE OUT OF CONTROL



LEFT TURN INTO ONCOMING TRAFFIC

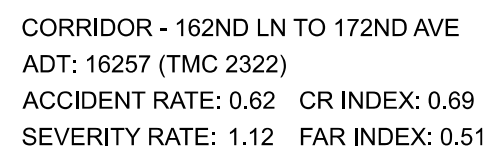


ANOKA COUNTY
HIGHWAY DEPT.

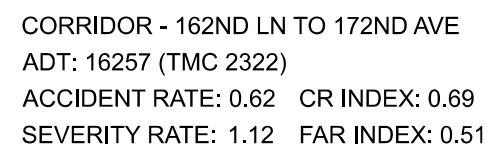
COLLISION
DIAGRAM

CSAH 9 (ROUND LAKE BLVD)
FROM CSAH 20 (157TH AVE)
TO 172ND AVE

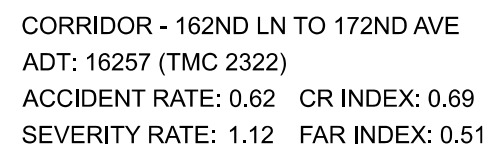
Sheet 3 of 6 Sheets



DATE, TIME, LIGHT, WEATHER			OVERTURN FIRE OR EXPLOSION MOVING VEHICLE REAR END BACKING VEHICLE COLLISION WITH FIXED OBJECT SIDE SWIPE SAME DIRECTION SIDE SWIPE OPPOSITE DIRECTION PARKED VEHICLE MOTORCYCLE DEER PEDESTRIAN BICYCLE FIXED OBJECT RIGHT ANGLE VEHICLE OUT OF CONTROL LEFT TURN INTO ONCOMING TRAFFIC					
LIGHT	WEATHER	SEVERITY CODE						
L = LIGHT DN = DAWN DU = DUSK D = DARK X = UNKNOWN	C = CLEAR CL = CLOUDY R = RAIN S = SNOW/SLEET X = OTHER/UNKNOWN	(N) PROPERTY DAMAGE (C) POSSIBLE INJURY (B) MINOR INJURY (A) SERIOUS INJURY (K) FATALITY						
			ANOKA COUNTY HIGHWAY DEPT.		COLLISION DIAGRAM			
					CSAH 9 (ROUND LAKE BLVD) FROM CSAH 20 (157TH AVE) TO 172ND AVE			
					Sheet 4 of 6 Sheets			



DATE, TIME, LIGHT, WEATHER			 OVERTURN  FIRE OR EXPLOSION  MOVING VEHICLE  REAR END  BACKING VEHICLE  COLLISION WITH FIXED OBJECT  SIDE SWIPE SAME DIRECTION  SIDE SWIPE OPPOSITE DIRECTION  PARKED VEHICLE  MOTORCYCLE  DEER  PEDESTRIAN  BICYCLE  FIXED OBJECT  RIGHT ANGLE  VEHICLE OUT OF CONTROL  LEFT TURN INTO ONCOMING TRAFFIC					
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			 ANOKA COUNTY ANOKA COUNTY HIGHWAY DEPT.		COLLISION DIAGRAM CSAH 9 (ROUND LAKE BLVD) FROM CSAH 20 (157TH AVE) TO 172ND AVE Sheet <u>5</u> of <u>6</u> Sheets			



DATE, TIME, LIGHT, WEATHER			OVERTURN FIRE OR EXPLOSION MOVING VEHICLE REAR END BACKING VEHICLE COLLISION WITH FIXED OBJECT SIDE SWIPE SAME DIRECTION SIDE SWIPE OPPOSITE DIRECTION PARKED VEHICLE MOTORCYCLE DEER PEDESTRIAN BICYCLE FIXED OBJECT RIGHT ANGLE VEHICLE OUT OF CONTROL LEFT TURN INTO ONCOMING TRAFFIC			ANOKA COUNTY HIGHWAY DEPT. COLLISION DIAGRAM CSAH 9 (ROUND LAKE BLVD) FROM CSAH 20 (157TH AVE) TO 172ND AVE Sheet <u>6</u> of <u>6</u> Sheets		
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ACCIDENT AND SEVERITY RATES FOR AN INTERSECTION

Intersection: CSAH 9 (ROUND LAKE BLVD) AT CSAH 20 (157TH AVE)

Study Start Date: 01/01/2021

Study End Date: 07/07/2026

Length of study in years: 5.52

Intersection ADT: 17706

Number of Fatal Accidents: 0

Number of "A" P.I. Accidents: 0

Number of "B" P.I. Accidents: 2

Number of "C" P.I. Accidents: 3

Number of Property Damage Accidents: 1

Days = 2013.583 Weighted

Total Accidents = 6

Total Fatal Accidents = 0 0

Total "A" Injury Accidents = 0 0

Total "B" Injury Accidents = 2 6

Total "C" Injury Accidents = 3 6

Total Property Damage Accidents = 1 1

Sum of weighted accidents = 13

Accident Rate (AR) = 0.17

Severity Rate (SR) = 0.36

Intersection Safety Screening

Intersection: CSAH 9 (ROUND LAKE BLVD) AT CSAH 20 (157TH AVE)

Statewide Averages based on 2018-2022 crashes

Crashes by Crash Severity	
Fatal (K)	0
Serious Injury (A)	0
Minor Injury (B)	2
Possible Injury (C)	3
Property Damage (PDO)	1
Total Crashes	6

Intersection Characteristics	
Entering Volume	17,706
Environment	Rural
Lighting	Lit
Traffic Control	Signal

Annual crash cost = \$181,000

Statewide comparison = Signal, Low Volume ($\leq 20K$)

Total Crash Rate	
Observed	0.186
Statewide Average	0.548
Critical Rate	0.900
Critical Index	0.21

Fatal & Serious Injury Crash Rate	
Observed	0.000
Statewide Average	1.024
Critical Rate	4.850
Critical Index	0.00

The observed crash rate is the number of crashes per million entering vehicles (MEV). The critical rate is a statistical comparison based on similar intersections statewide. An observed crash rate greater than the critical rate indicates that the intersection operates outside the expected, normal range. The critical index reports the magnitude of this difference (i.e. observed crash rate $\div$ critical crash rate).

The observed total crash rate for this period is 0.19 per MEV; this is 79% below the critical rate. Based on similar statewide intersections, an additional 24 crashes over the five years would indicate this intersection operates outside the normal range.

The observed fatal and serious injury crash rate for this period is 0.00 per 100 MEV; this is 100% below the critical rate. The intersection operates within the normal range.

ACCIDENT AND SEVERITY RATES FOR A CORRIDOR

Segment: CSAH 9 (ROUND LAKE BLVD) FROM CSAH 20 (157TH AVE) TO CSAH 20 (161ST AVE)

Study Start Date: 01/01/2021

Miles = 0.500

Study End Date: 07/07/2026

Length of study in years: 5.52

Days = 2013.583333

Weighted

Average ADT for Corridor: 15800

Total Accidents = 21

Number of Fatal Accidents: 0

Total Fatal Accidents = 0

0

Number of "A" P.I. Accidents: 1

Total "A" Injury Accidents = 1

4

Number of "B" P.I. Accidents: 7

Total "B" Injury Accidents = 7

21

Number of "C" P.I. Accidents: 3

Total "C" Injury Accidents = 3

6

Number of Property Damage Accidents: 10

Total Property Damage Accidents = 10

10

Sum of weighted accidents = 41

Accident Rate (AR) = 1.32

Severity Rate (SR) = 2.58

Segment Safety Screening

Segment: CSAH 9 (ROUND LAKE BLVD) FROM CSAH 20 (157TH AVE) TO 172ND AVE

Statewide Averages based on 2018-2022 crashes

Crashes by Crash Severity		Analysis Description	
Fatal (K)	0	Length	0.500 miles
Incapacitating Injury (A)	1	VMT	14,425,400
Minor Injury (B)	7	Non-junction AND Junction Crashes	
Possible Injury (C)	3		
Property Damage (PDO)	10		
Total Crashes	21		

Annual crash cost per mile = \$1,236,000

Statewide comparison = Rural 4-Lane Undivided

Total Crash Rate (CR)		Fatal & Serious Injury Crash Rate (FAR)	
Observed	1.456	Observed	6.932
Statewide Average	0.501	Statewide Average	1.176
Critical Rate	1.020	Critical Rate	8.300
Critical Index	1.43	Critical Index	0.84

The observed crash rate is the number of crashes per million vehicle miles traveled (MVMT). The critical rate is a statistical comparison based on similar trunk highways statewide. An observed crash rate greater than the critical rate indicates that the section operates outside the expected, normal range. The critical index reports the magnitude of this difference (i.e. observed crash rate ÷ critical crash rate).

The observed total crash rate for this period is 1.46 per MVMT; this is 1.4 times the critical rate. If crashes were reduced by 7 over five years (33%), the section would perform within normal range.

The observed fatal and serious injury crash rate for this period is 6.93 per 100 MVMT; this is 16% below the critical rate. The section operates within the normal range.

ACCIDENT AND SEVERITY RATES FOR AN INTERSECTION

Intersection: CSAH 9 @ CSAH 20 (161ST AVE)

Study Start Date: 01/01/2021

Study End Date: 07/07/2026

Length of study in years: 5.52

Intersection ADT: 17698

Number of Fatal Accidents: 0

Number of "A" P.I. Accidents: 1

Number of "B" P.I. Accidents: 4

Number of "C" P.I. Accidents: 0

Number of Property Damage Accidents: 6

Days = 2013.583 Weighted

Total Accidents = 11

Total Fatal Accidents = 0 0

Total "A" Injury Accidents = 1 4

Total "B" Injury Accidents = 4 12

Total "C" Injury Accidents = 0 0

Total Property Damage Accidents = 6 6

Sum of weighted accidents = 22

Accident Rate (AR) = 0.31

Severity Rate (SR) = 0.62

Intersection Safety Screening

Intersection: CSAH 9 @ CSAH 20 (161ST AVE)

Statewide Averages based on 2018-2022 crashes

Crashes by Crash Severity	
Fatal (K)	0
Serious Injury (A)	1
Minor Injury (B)	4
Possible Injury (C)	0
Property Damage (PDO)	6
Total Crashes	11

Intersection Characteristics	
Entering Volume	17,698
Environment	Rural
Lighting	Lit
Traffic Control	Signal

Annual crash cost = \$378,000

Statewide comparison = Signal, Low Volume (<=20K)

Total Crash Rate	
Observed	0.340
Statewide Average	0.548
Critical Rate	0.900
Critical Index	0.38

Fatal & Serious Injury Crash Rate	
Observed	3.094
Statewide Average	1.024
Critical Rate	4.850
Critical Index	0.64

The observed crash rate is the number of crashes per million entering vehicles (MEV). The critical rate is a statistical comparison based on similar intersections statewide. An observed crash rate greater than the critical rate indicates that the intersection operates outside the expected, normal range. The critical index reports the magnitude of this difference (i.e. observed crash rate ÷ critical crash rate).

The observed total crash rate for this period is 0.34 per MEV; this is 62% below the critical rate. Based on similar statewide intersections, an additional 19 crashes over the five years would indicate this intersection operates outside the normal range.

The observed fatal and serious injury crash rate for this period is 3.09 per 100 MEV; this is 36% below the critical rate. The intersection operates within the normal range.

ACCIDENT AND SEVERITY RATES FOR A CORRIDOR

Segment: CSAH 9 (ROUND LAKE BLVD) FROM 162ND LN TO 172ND AVE

Study Start Date: 01/01/2021

Miles = 1.200

Study End Date: 07/07/2026

Length of study in years: 5.52

Days = 2013.583333

Weighted

Average ADT for Corridor: 10000

Total Accidents = 15

Number of Fatal Accidents: 0

Total Fatal Accidents = 0

0

Number of "A" P.I. Accidents: 1

Total "A" Injury Accidents = 1

4

Number of "B" P.I. Accidents: 2

Total "B" Injury Accidents = 2

6

Number of "C" P.I. Accidents: 5

Total "C" Injury Accidents = 5

10

Number of Property Damage Accidents: 7

Total Property Damage Accidents = 7

7

Sum of weighted accidents = 27

Accident Rate (AR) = 0.62

Severity Rate (SR) = 1.12

Segment Safety Screening

Segment: CSAH 9 (ROUND LAKE BLVD) FROM 162ND LN TO 172ND AVE

Statewide Averages based on 2018-2022 crashes

Crashes by Crash Severity		Analysis Description	
Fatal (K)	0	Length	1.200 miles
Incapacitating Injury (A)	1	VMT	21,912,000
Minor Injury (B)	2	Non-junction AND Junction Crashes	
Possible Injury (C)	5		
Property Damage (PDO)	7		
Total Crashes	15		

Annual crash cost per mile = \$342,500

Statewide comparison = Rural 2-Lane AADT 8000+

Total Crash Rate (CR)		Fatal & Serious Injury Crash Rate (FAR)	
Observed	0.685	Observed	4.564
Statewide Average	0.560	Statewide Average	2.427
Critical Rate	0.990	Critical Rate	8.980
Critical Index	0.69	Critical Index	0.51

The observed crash rate is the number of crashes per million vehicle miles traveled (MVMT). The critical rate is a statistical comparison based on similar trunk highways statewide. An observed crash rate greater than the critical rate indicates that the section operates outside the expected, normal range. The critical index reports the magnitude of this difference (i.e. observed crash rate ÷ critical crash rate).

The observed total crash rate for this period is 0.69 per MVMT; this is 31% below the critical rate. Based on similar statewide segments, an additional 7 crashes over the five years would indicate this section operates outside the normal range.

The observed fatal and serious injury crash rate for this period is 4.56 per 100 MVMT; this is 49% below the critical rate. The section operates within the normal range.