

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.**

ADT: 6022  
ACCIDENT RATE: 4.25 CR INDEX: 2.13  
SEVERITY RATE: 7.77 FAR INDEX: 2.54

**COLLISION  
DIAGRAM**

CSAH 2 CORRIDOR FROM  
CSAH 1 TO CSAH 2/CSAH 102  
JAN 2018 TO SEPT 2023

Sheet   1   of   5   Sheets

**LIGHT**

L = LIGHT  
DN = DAWN  
DU = DUSK  
D = DARK  
X = UNKNOWN

**WEATHER**

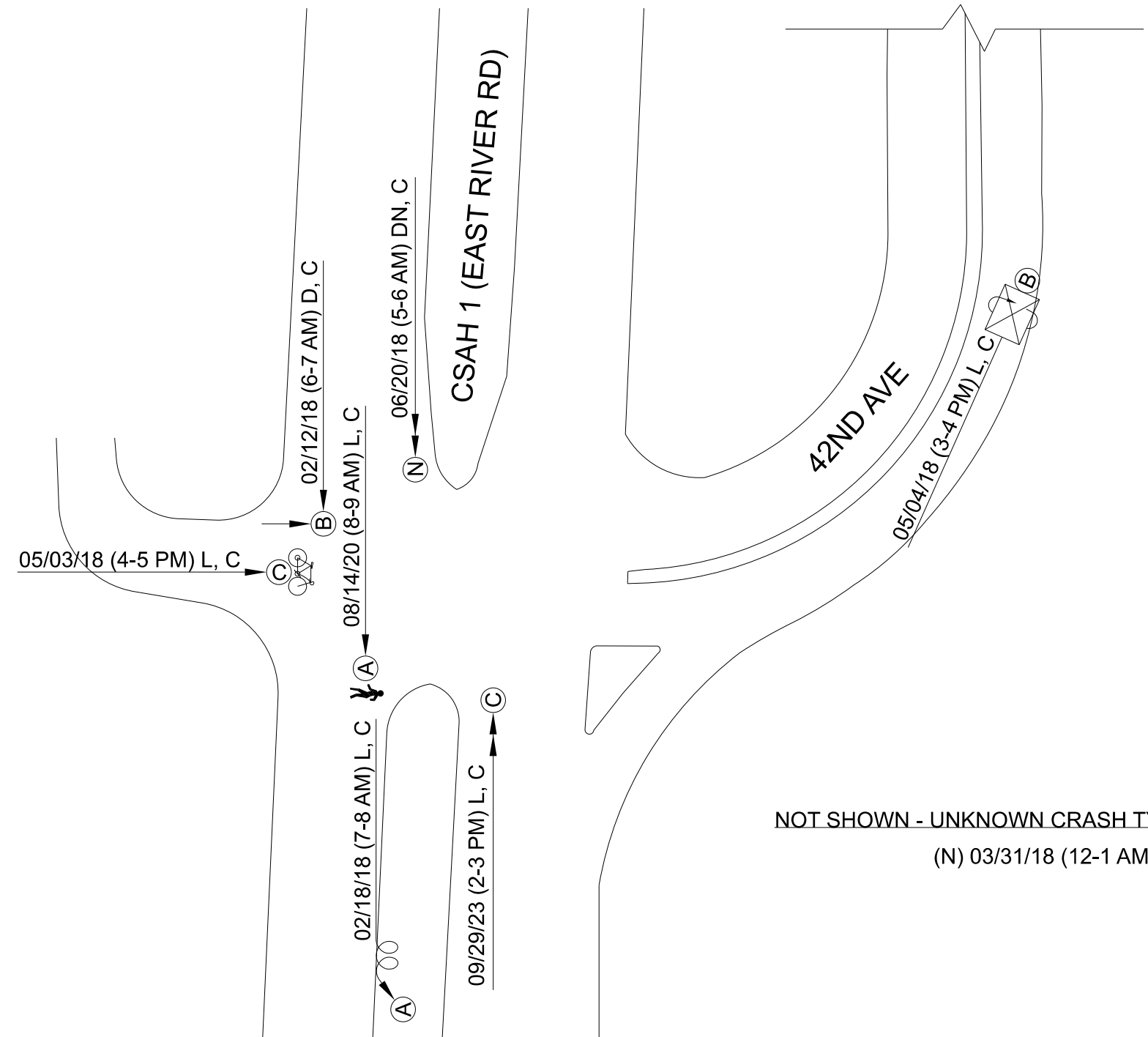
C = CLEAR  
CL = CLOUDY  
R = RAIN  
S = SNOW/SLEET  
X = OTHER/UNKNOWN

**SEVERITY CODE**

(N) PROPERTY DAMAGE  
(C) POSSIBLE INJURY  
(B) MINOR INJURY  
(A) SERIOUS INJURY  
(K) FATALITY



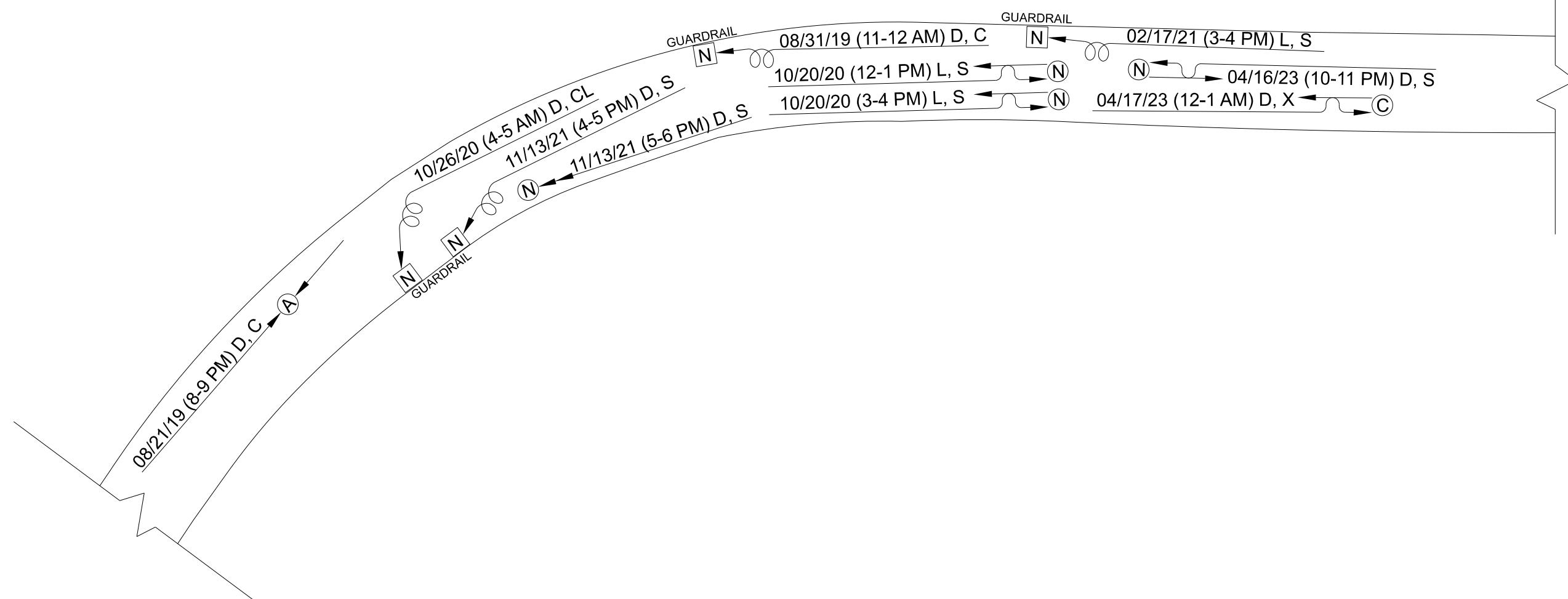
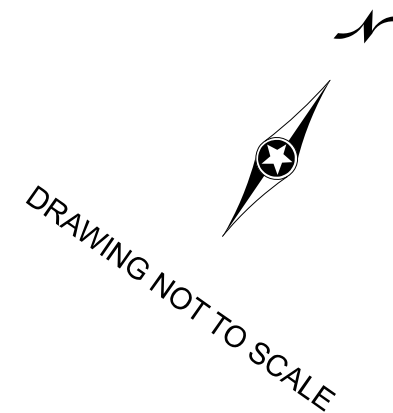
DRAWING NOT TO SCALE



ACCIDENT LOCATIONS ARE APPROXIMATE

INSET A

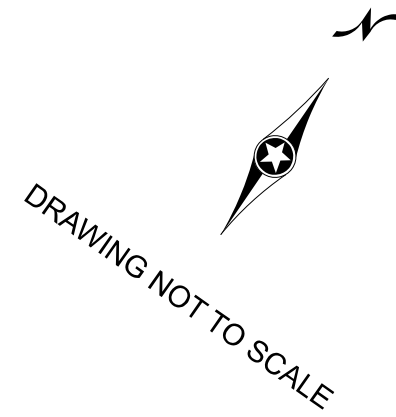
← DATE, TIME, LIGHT, WEATHER →			OVERTURN FIRE OR EXPLOSION MOVING VEHICLE REAR END BACKING VEHICLE COLLISION WITH FIXED OBJECT SIDE SWIPE SAME DIRECTION SIDE SWIPE OPPOSITE DIRECTION	PARKED VEHICLE MOTORCYCLE DEER PEDESTRIAN BICYCLE FIXED OBJECT RIGHT ANGLE VEHICLE OUT OF CONTROL LEFT TURN INTO ONCOMING TRAFFIC	ADT: 14652 ACCIDENT RATE: 0.28 CR INDEX: 0.28 SEVERITY RATE: 0.75 FAR INDEX: 1.38	
<b>LIGHT</b> L = LIGHT DN = DAWN DU = DUSK D = DARK X = UNKNOWN	<b>WEATHER</b> C = CLEAR CL = CLOUDY R = RAIN S = SNOW/SLEET X = OTHER/UNKNOWN	<b>SEVERITY CODE</b> (N) PROPERTY DAMAGE (C) POSSIBLE INJURY (B) MINOR INJURY (A) SERIOUS INJURY (K) FATALITY	<b>ANOKA COUNTY HIGHWAY DEPT.</b>		<b>COLLISION DIAGRAM</b>	CSAH 1 (EAST RIVER RD) @ CSAH 2 (42ND AVE) JAN 2018 TO SEPT 2023 Sheet <u>  2  </u> of <u>  5  </u> Sheets



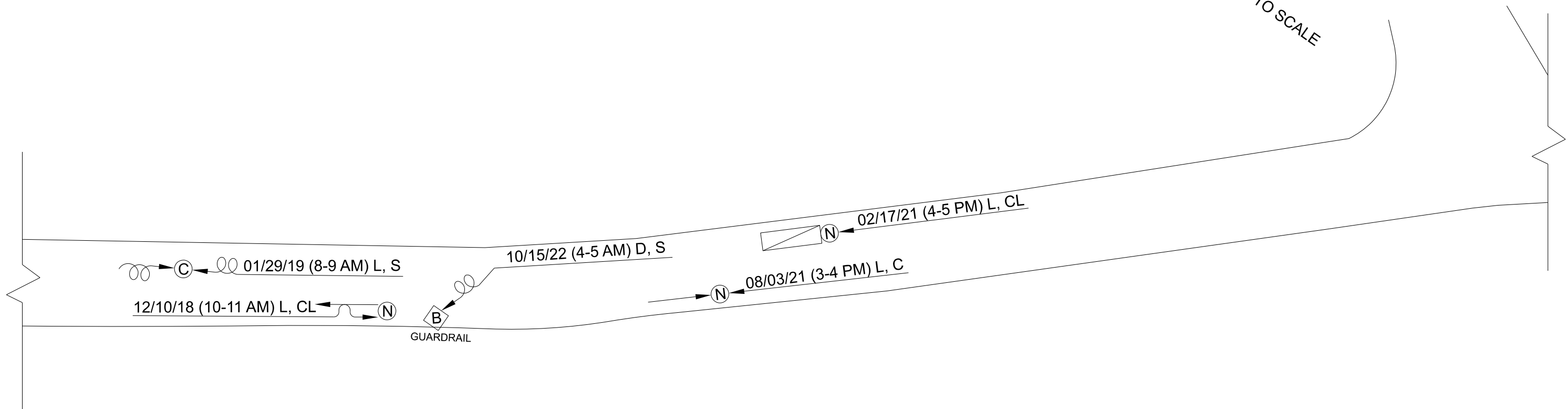
ACCIDENT LOCATIONS ARE APPROXIMATE

INSET B

← 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	ADT: 6022 ACCIDENT RATE: 4.25 CR INDEX: 2.13 SEVERITY RATE: 7.77 FAR INDEX: 2.54
<b>LIGHT</b>	<b>WEATHER</b>	<b>SEVERITY CODE</b>	<b>ANOKA COUNTY HIGHWAY DEPT.</b>		
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			
					Sheet <u>  3  </u> of <u>  5  </u> Sheets



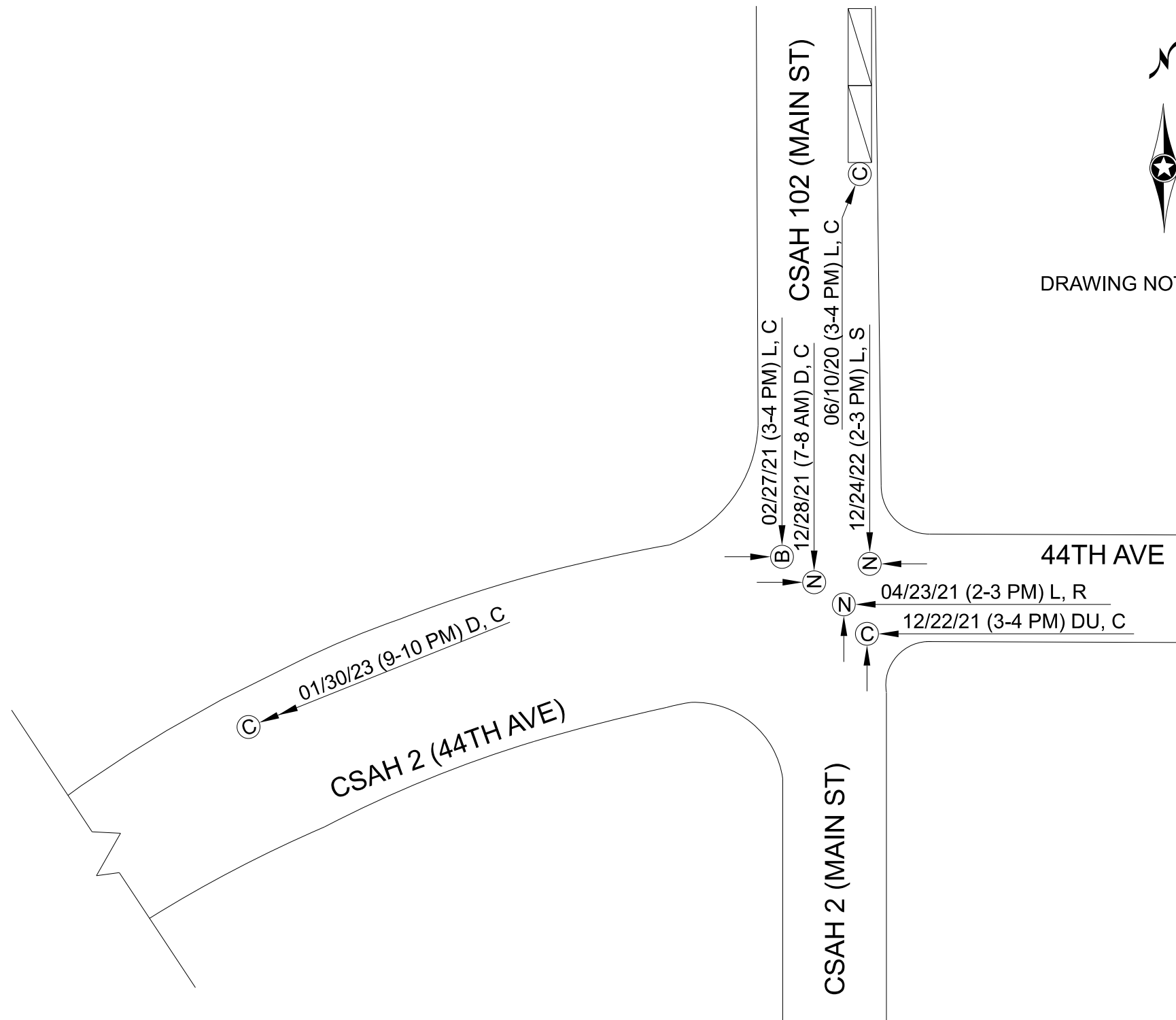
DRAWING NOT TO SCALE



ACCIDENT LOCATIONS ARE APPROXIMATE

INSET C

← 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	ADT: 6022 ACCIDENT RATE: 4.25 CR INDEX: 2.13 SEVERITY RATE: 7.77 FAR INDEX: 2.54
<b>LIGHT</b>	<b>WEATHER</b>	<b>SEVERITY CODE</b>	ANOKA COUNTY	<b>ANOKA COUNTY HIGHWAY DEPT.</b>	<b>COLLISION DIAGRAM</b>
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			
				Sheet <u>4</u> of <u>5</u> Sheets	



ACCIDENT LOCATIONS ARE APPROXIMATE

INSET D

← 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		ADT: 8228 ACCIDENT RATE: 0.49 CR INDEX: 0.70 SEVERITY RATE: 0.84 FAR INDEX: 0.00	
<b>LIGHT</b>	<b>WEATHER</b>	<b>SEVERITY CODE</b>	ANOKA COUNTY HIGHWAY DEPT.		<b>COLLISION DIAGRAM</b>		CSAH 2 (44TH AVE) @ CSAH 2/CSAH 102 (MAIN ST) JAN 2018 TO SEPT 2023	
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						

## ACCIDENT AND SEVERITY RATES FOR A CORRIDOR

Segment: **CSAH 2 from CSAH 1 to CSAH 2/CSAH 102**

Study Start Date:	<b>01/01/2018</b>	Miles =	0.540	
Study End Date:	<b>09/30/2023</b>			
Length of study in years:	<b>5.75</b>	Days =	2097.736	Weighted
Average ADT for Corridor:	<b>6022</b>	Total Accidents =	29	
Number of Fatal Accidents:	<b>0</b>	Total Fatal Accidents =	0	0
Number of "A" P.I. Accidents:	<b>3</b>	Total "A" Injury Accidents =	3	12
Number of "B" P.I. Accidents:	<b>4</b>	Total "B" Injury Accidents =	4	12
Number of "C" P.I. Accidents:	<b>7</b>	Total "C" Injury Accidents =	7	14
Number of Property Damage Accidents:	<b>15</b>	Total Property Damage Accidents =	15	15
		Sum of weighted accidents =		53
Accident Rate (AR) =	<b>4.25</b>			
Severity Rate (SR) =	<b>7.77</b>			

# Segment Safety Screening

Segment: CSAH 2 from CSAH 1 to CSAH 2/CSAH 102

*Statewide Averages based on 2018-2022 crashes*

Crashes by Crash Severity	
Fatal (K)	0
Incapacitating Injury (A)	3
Minor Injury (B)	4
Possible Injury (C)	7
Property Damage (PDO)	15
Total Crashes	29

Analysis Description	
Length	0.540 miles
VMT	5,937,933
Non-junction AND Junction Crashes	

*Annual crash cost per mile = \$1,679,630*

*Statewide comparison = Urban 2-Lane AADT 5000-7999*

Total Crash Rate (CR)	
Observed	4.884
Statewide Average	1.101
Critical Rate	2.290
<b>Critical Index</b>	<b>2.13</b>

Fatal & Serious Injury Crash Rate (FAR)	
Observed	50.523
Statewide Average	2.737
Critical Rate	19.860
<b>Critical Index</b>	<b>2.54</b>

*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 4.88 per MVMT; this is 2.1 times the critical rate. If crashes were reduced by 16 over five years (55%), the section would perform within normal range.*

*The observed fatal and serious injury crash rate for this period is 50.52 per 100 MVMT; this is 2.5 times the critical rate. This section may be a sustained severe crash location.*

## ACCIDENT AND SEVERITY RATES FOR AN INTERSECTION

Intersection:	CSAH 1 @ CSAH 2		
Study Start Date:	01/01/2018		
Study End Date:	09/30/2022		
Length of study in years:	4.75	Days = 1732.736	Weighted
Intersection ADT:	14652	Total Accidents = 7	
Number of Fatal Accidents:	0	Total Fatal Accidents = 0	0
Number of "A" P.I. Accidents:	2	Total "A" Injury Accidents = 2	8
Number of "B" P.I. Accidents:	2	Total "B" Injury Accidents = 2	6
Number of "C" P.I. Accidents:	2	Total "C" Injury Accidents = 2	4
Number of Property Damage Accidents:	1	Total Property Damage Accidents = 1	1
		Sum of weighted accidents =	19
Accident Rate (AR) =	0.28		
Severity Rate (SR) =	0.75		



# Intersection Safety Screening

Intersection: CSAH 1 @ CSAH 2

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*Statewide Averages based on 2018-2022 crashes*

Crashes by Crash Severity	
Fatal (K)	0
Serious Injury (A)	2
Minor Injury (B)	2
Possible Injury (C)	2
Property Damage (PDO)	1
<b>Total Crashes</b>	<b>7</b>

Intersection Characteristics	
Entering Volume	14,652
Environment	Urban
Lighting	Lit
Traffic Control	Signal

*Annual crash cost* = \$475,000

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

Total Crash Rate	
Observed	0.262
Statewide Average	0.548
Critical Rate	0.940
<b>Critical Index</b>	<b>0.28</b>

Fatal & Serious Injury Crash Rate	
Observed	7.475
Statewide Average	1.024
Critical Rate	5.400
<b>Critical Index</b>	<b>1.38</b>

*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 0.26 per MEV; this is 72% 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 7.48 per 100 MEV; this is 1.4 times the critical rate. This site may be a sustained severe crash location.*

## ACCIDENT AND SEVERITY RATES FOR AN INTERSECTION

Intersection:	CSAH 2 @ CSAH 2/CSAH 102		
Study Start Date:	01/01/2018		
Study End Date:	09/30/2022		
Length of study in years:	4.75	Days = 1732.736	Weighted
Intersection ADT:	8228	Total Accidents = 7	
Number of Fatal Accidents:	0	Total Fatal Accidents = 0	0
Number of "A" P.I. Accidents:	0	Total "A" Injury Accidents = 0	0
Number of "B" P.I. Accidents:	1	Total "B" Injury Accidents = 1	3
Number of "C" P.I. Accidents:	3	Total "C" Injury Accidents = 3	6
Number of Property Damage Accidents:	3	Total Property Damage Accidents = 3	3
		Sum of weighted accidents =	12
Accident Rate (AR) =	0.49		
Severity Rate (SR) =	0.84		

# Intersection Safety Screening

Intersection: CSAH 2 @ CSAH 2/CSAH 102

*Statewide Averages based on 2018-2022 crashes*

Crashes by Crash Severity	
Fatal (K)	0
Serious Injury (A)	0
Minor Injury (B)	1
Possible Injury (C)	3
Property Damage (PDO)	3
<b>Total Crashes</b>	<b>7</b>

Intersection Characteristics	
Entering Volume	8,228
Environment	Urban
Lighting	Lit
Traffic Control	All-way Stop

*Annual crash cost = \$137,000*

*Statewide comparison = All-way STOP*

Total Crash Rate	
Observed	0.466
Statewide Average	0.281
Critical Rate	0.670
<b>Critical Index</b>	<b>0.70</b>

Fatal & Serious Injury Crash Rate	
Observed	0.000
Statewide Average	0.233
Critical Rate	5.160
<b>Critical Index</b>	<b>0.00</b>

*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 0.47 per MEV; this is 30% below the critical rate. Based on similar statewide intersections, an additional 4 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.*