

The logo for Castle Rock, featuring the word "CASTLE" in white, a stylized square icon with green and blue quadrants, and the word "ROCK" in white, all on a dark grey background.

CASTLE ROCK

# How Minnesota is Innovating 511

*Next-Gen Enhancements to Traveler Information*

2015 National Rural ITS Conference

# Increasing accuracy, reliability, and identifying outdated reports

Welcome, CARS Administrator! [ Administer Users ] [ Sign Out ]

## Winter Road Reporting

Selected Segments: Refresh Page Select All

Name/ID	Location	Conditions	Update Time
<input type="checkbox"/> Route: MN 95			
<input checked="" type="checkbox"/> #13-TP3SC0951	MN 95, between MN 23 (near Saint Cloud) and US 169 (near Princeton)	No conditions reported.	
<input type="checkbox"/> #3-TP3SC0952	MN 95, between Mille Lacs County Road 31 - County Road 102 (near Princeton) and Isanti County Road 2 (near Cambridge)	No conditions reported.	
<input type="checkbox"/> #4-TP3SC0953	MN 95, between MN 65 (near Cambridge) and Chisago County Road 13 (near North Branch)	No conditions reported.	
<input type="checkbox"/> TP9A95S1	MN 95, between Isanti County Road 48 and Chisago County Road 69 (near North Branch)	No conditions reported.	
<input type="checkbox"/> TP9A95S1	MN 95, between Chisago County Road 14 (near North Branch) and US 8 (Taylors Falls)		
<input type="checkbox"/> TP9B0952	MN 95, between US 8 (near Taylors Falls) and Washington County Road 51 (1 mile east of the Marine on Saint Croix area)		
<input type="checkbox"/> TP9K0951	MN 95, between Washington County Road 59 (1 mile east of the Marine on Saint Croix area) and MN 36 (Stillwater)		
<input type="checkbox"/> TP9K0951	MN 95, between MN 36 (Oak Park Heights) and MN 895A (Lakeland)		
<input type="checkbox"/> TP9N0951	MN 95, between I-94 (Woodbury) and US 61 (Cottage Grove)		

Change Conditions:

- None -  
Normal  
Partially Covered  
Completely Covered  
Travel Not Advised  
Closed  
- None -

Expires In  
Unchanged


Reset

Apply Changes

Conditions Unchanged

# winter reporting tools:

## Mobile App for real-time field reporting

 **Maple Grove** 0/5 admin






Summary

Segments






Conditions

Updated

Show State Map

	<div>1 Partially Covered Slush Blowing snow</div>	<div>2 Partially Covered Slush Blowing snow</div>	<div>3 Partially Covered Slush Blowing snow</div>	<div>4 Completely Cov... Ice</div>	<div>5 Com Ice</div>
	<div>5 TP5B4941</div>	<div>6 TP9K4941</div>	<div>7 TP9M4941</div>		
	<div>13 TP5B1691</div>	<div>14 #2-TP3SC1691</div>	<div>15 #3-TP3SC1692</div>	<div>16 #4-TP3SC1693</div>	<div>17 #21-T</div>
	<div>5 TP5B1011</div>				
	<div>1 TP5B6101</div>	<div>2 TP5F6101</div>			

# back-end performance/processor updates + color coded visual cues

< **Maple Grove**  5  17  5  1  13 5/5 admin

Normal	Frost	Wet
Partially Covered	Ice	Drifting snow
Completely Covered	Snow	Blowing snow
Travel Not Advised	Slush	White out
Closed	Mixed	Slippery
		Black ice

Clear conditions Update times Cancel entry Send changes



# public reporting: winter conditions

The screenshot shows the Minnesota Department of Transportation (MnDOT) website. The header includes the MnDOT logo, the text "Minnesota Department of Transportation", and a user profile "Dane's 511 (sign out)". Navigation tabs include "511 Info", "Winter Driving Info", "Truckers' Info", "Links", "Streamlined Version", "Google Maps", and "Contact MnDOT". A secondary navigation bar includes "Text Size A A A", "Text Only", and "Future Info: [calendar icon]".

The main content area is titled "Road Reports, Weather Warnings". On the left, under "Dane's Favorites", there is a section "My saved trips" with a list: "Home to Work". A dropdown menu is open for "Home to Work", showing options: "Post a driving report", "Edit this route", "Schedule alerts", "Delete this route", "My account settings", and "Change my password". An arrow points from the "Post a driving report" option to a modal window.

The modal window is titled "Post a driving report: Home to Work". It contains three columns of radio button options:

Was your drive:	Road is:	Is it?
<input type="radio"/> Clear	<input type="radio"/> Snowy	<input type="radio"/> Raining
<input type="radio"/> Patchy	<input type="radio"/> Icy	<input type="radio"/> Snowing
<input checked="" type="radio"/> Completely Covered	<input type="radio"/> Slushy	<input type="radio"/> Blowing snow
		<input type="radio"/> Dense fog
		<input type="radio"/> None of the above

Below the radio buttons is a text input field labeled "Tell us more" with the placeholder text "Strong wind? Fog? Blowing snow?".

The background of the website shows a map of Minneapolis with a blue route line. A "Legend" button is visible in the bottom right corner of the map area. The footer includes "Map data ©2015 Google", a scale bar for "2 km", and links for "Terms of Use" and "Report a map error".

# Side by side verification



DOT: road is “partially covered”  
Citizen: road is “completely covered”

# open comments & feedback on citizen reports

--- Citizen Report --- I-35: Snow.

Between Exit 256B: MN 194; 5th Avenue West and the end of I-35 (near Duluth). A driver reported snow on the roadway. It was snowing.

Posted by Gray Day Today at 6:09 PM

Gray Day: Be prepared for high winds.

Tell us more

Cancel

Done

+

-

-

W. Arrowhead Rd

90

194

90

53

Ave

35

rd Gnesen Rd

Hartley Park

University of Minnesota Duluth

E 9th St

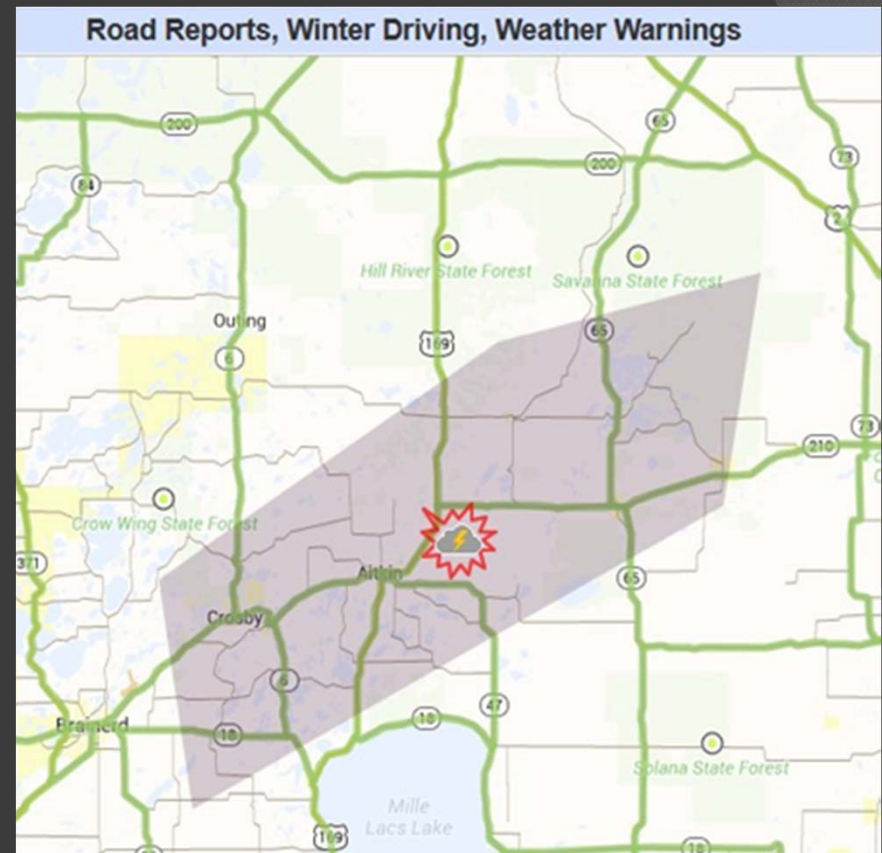
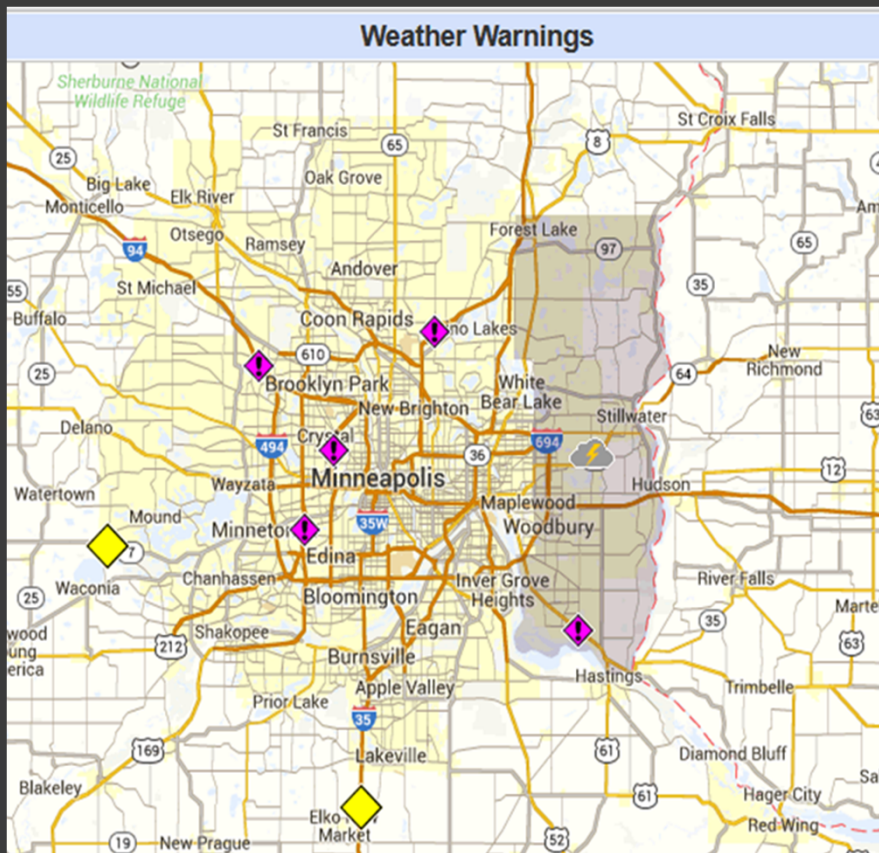
E 7th St

E 4th St

Duluth



# National Weather Service (NWS): automated alerts by area - county or zone





# mapped to roadway sections for 511



## MN 6: Tornado Warning.

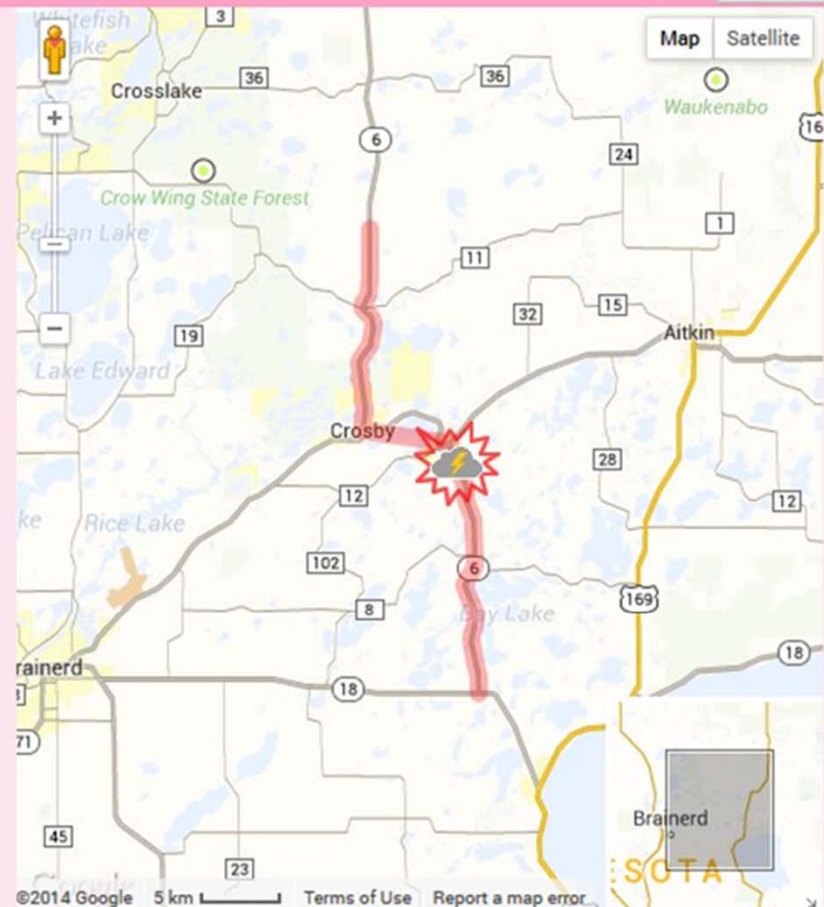
Between MN 18 (6 miles south of the Deerwood area) and Crow Wing County Road 36 (3 miles north of the Cuyuna area). A Tornado Warning is in effect. Until November 16.

*Comment:* Tornado Warning issued October 20 at 8:00AM PST expiring November 15 at 12:00AM PST by NWS Minneapolis

TORNADO WARNING NOW IN EFFECT... THE ADVISORY IS NOW IN EFFECT FOR THE COUNTIES MENTIONED. \* VISIBILITY: CONTINUES TO BE BELOW A QUARTER OF A MILE IN MANY AREAS...BUT WAS BEGINNING TO SLOWLY IMPROVE.

[Full NWS alert](#)

Last updated Today at 4:57 PM by [NWS](#)



# What do travelers have to say?: verifying accuracy and urgency

## US 12: Road closed.

Between Kandi-Meeker Road (Atwater) and MN 22 (near Litchfield). The road is closed. A detour is in operation. There is a width limit in effect. See map for detour(s). Until September 21.

*Comment:* Width limit of 11 ft. Detour: Hwy 12 east to Kandiyo County Road 2, north to Kandiyo County Road 28, east on Kandiyo County Road 28/Meeker County Road 16 to Hwy 22, south to Hwy 12

Last updated 07/16/2015 by [MnDOT](#)



I have something to say about this report

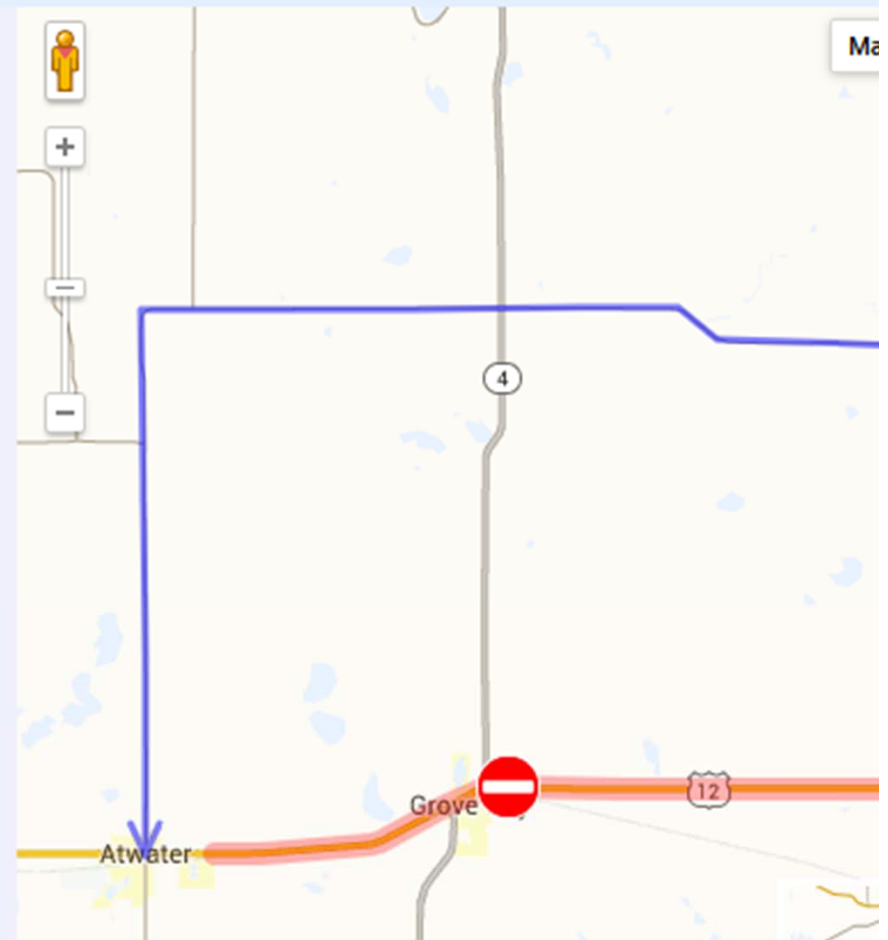
- ☐ The report is right (I saw it.)
- ☐ I think the report is wrong.

8

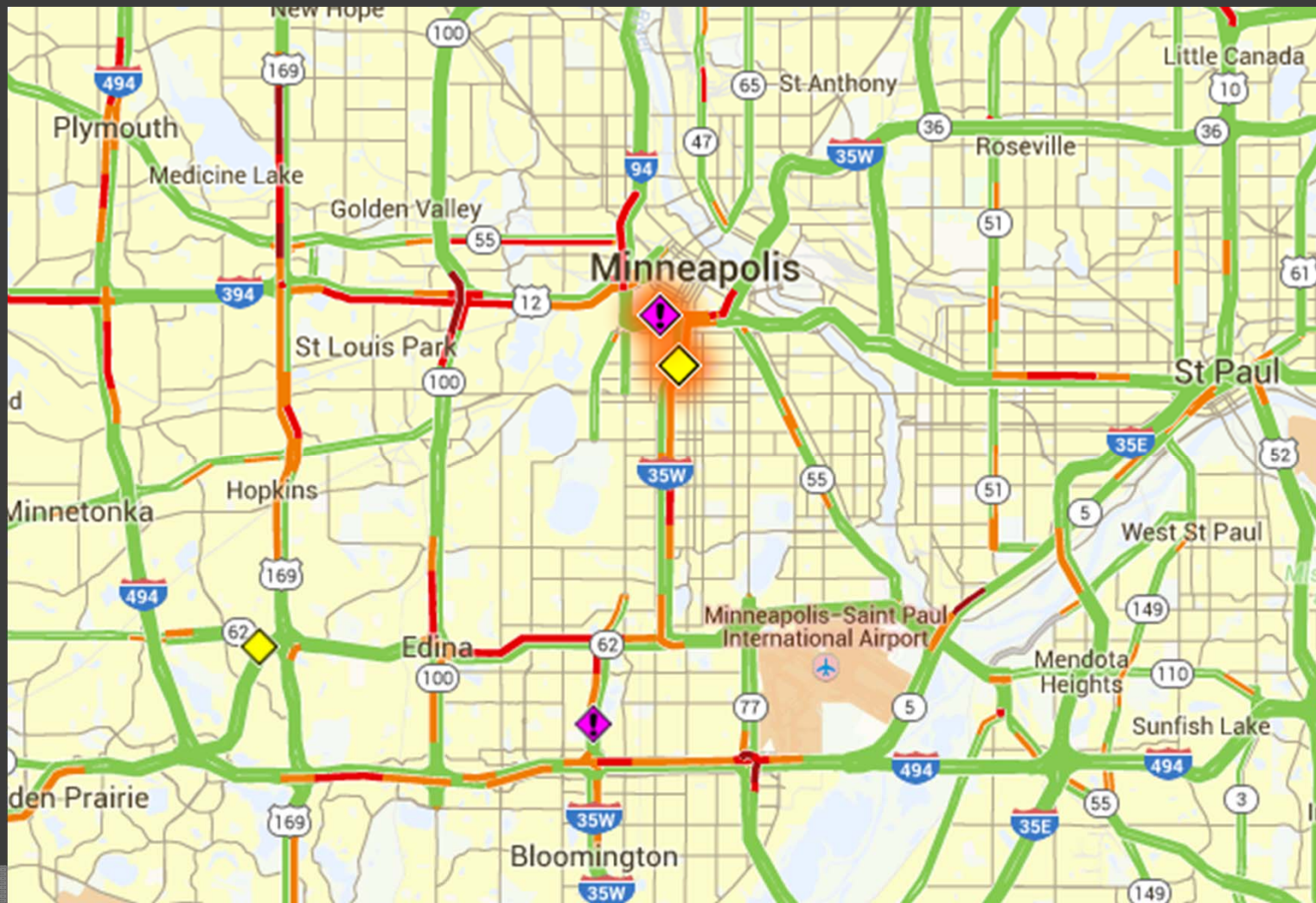
See what other travelers have said

7 travelers confirmed it

1 traveler said it wasn't there



# Visual map cues and dynamic priority updates for high-impact events





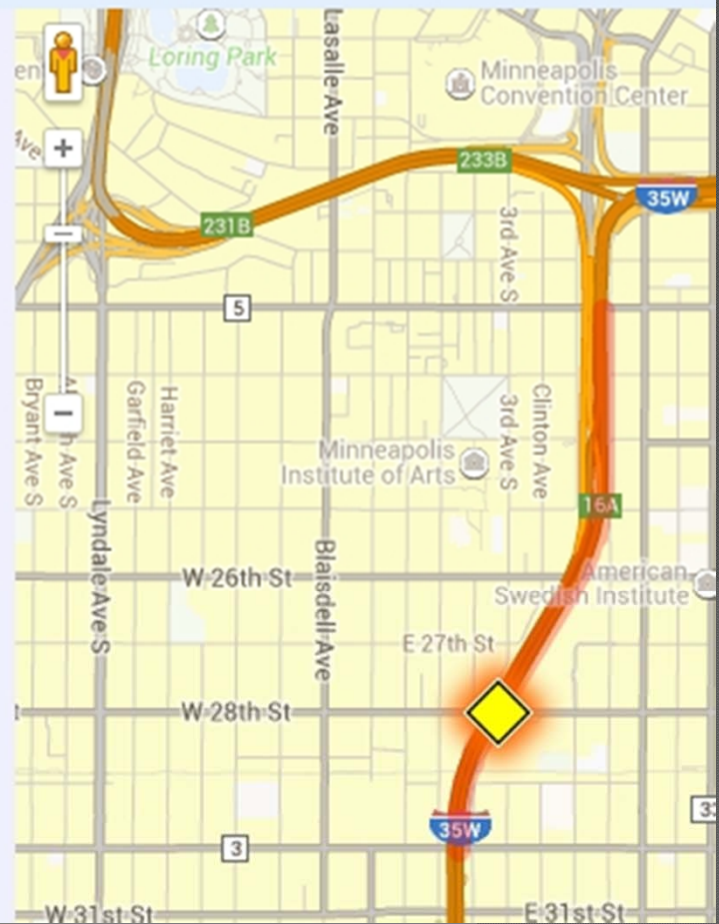
# delay time verification via Google-based Travel Times queries

## ♦ CURRENT DELAYS ON I-35W southbound: Left lane closed.

Google shows a 5 minute delay northbound, and a 7 minute delay southbound. Between Exit 16A: I-94 and Exit 15: Lake Street (near Minneapolis). The left lane is closed.

🕒 Last updated Today at 6:01 PM by [MnDOT](#)

💬 I have something to say about this report





# Drive time for a route:

“53 mins, including 7 mins of traffic delay”

The screenshot displays the Google Maps interface with a route calculated from Webber Park, Minneapolis, MN to the Minnesota Valley National Wildlife Refuge. The route is highlighted in red on the map, passing through Minneapolis and Edina. The left sidebar shows the route details, including the distance of 34.4 miles and a total drive time of 53 minutes, which includes a 7-minute traffic delay. The map on the right shows the surrounding area with various highways and landmarks.

**Q Pick a route**

A. Webber Park, Minneapolis, MN, U x

B. Minnesota Valley National Wildlife Refuge x

[Add destination](#)

**Webber Park to Minnesota Valley National Wildlife Refuge**

Drive 34.4 mi, 53 mins

**Including 7 mins of traffic delay**

[Show me more](#)

There are currently no alerts on this route

[Save this route](#)

Layers

Maple Grove

Minneapolis

Edina

Richfield

Bloomington

Eden Prairie

Shakopee

Savage

Burnsville

Wayzata

Minnetonka

Shoreline

Roseville

Highways: 494, 169, 100, 94, 35W, 394, 35E, 13, 77

# Logged internal analytics for reported delays

**Crash** ×

I-494 westbound at Exit 7: MN 100; Normandale Boulevard (near Edina). Look out for an accident.

**CARS-Delay Event Analytics**

Current Westbound Delay: 13 minutes  
Current Eastbound Delay: 3 minutes  
# of Checks: 2  
# of Delays: 2  
Delay rate: 100.0%

+




*Internal Comment: MSP CAD Event Details:  
UTM Coords: X 47233203, Y 496734025.  
County: Hennepin - A27.*

*Location: XSTREET1: WB 494 I TO SB 100 . XSTREET2: SB 100 HWY TO WB 494 .*

*Type Code: 1052 (PERSONAL INJURY CRASH).*


*Last updated today at 5:32PM by MSP*

Events List



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Eden-Prairie



# Thank you!

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