



Solar Eclipse Preparation & Outcomes

Athena M. Hutchins, P.E.

Niagara International Transportation Technology Coalition

ITSNY - 2024

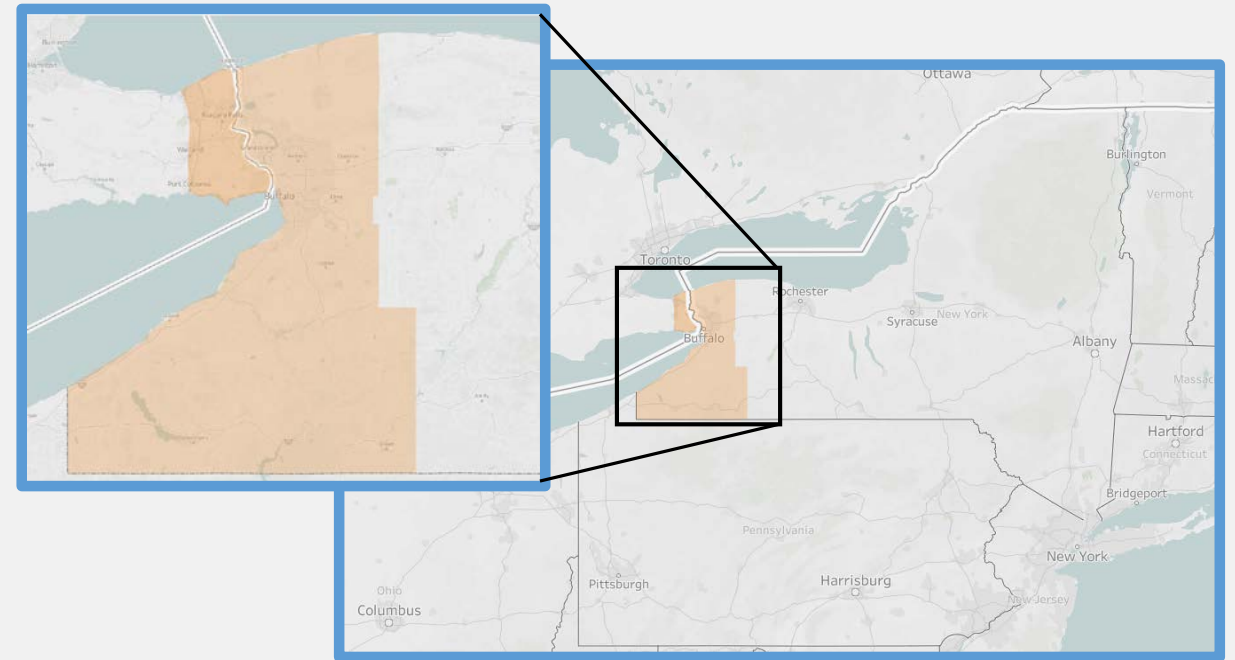


nittec
Travel Smart.

NITTEC

Mission: To improve mobility, reliability and safety on the regional bi-national multimodal transportation network through information sharing and coordinated management of operations.

- Established in 1995 with a Federal Mobility Grant
- Multi-Agency Transportation Operations Coalition
 - 5 Policy Members, 9 General Members, 30 Affiliate Members
 - ✓ Transportation Agencies
 - ✓ Public Safety and Border Enforcement
 - ✓ Emergency Services and Recovery
- Only Bi-national Coalition of its kind in U.S. / Canada



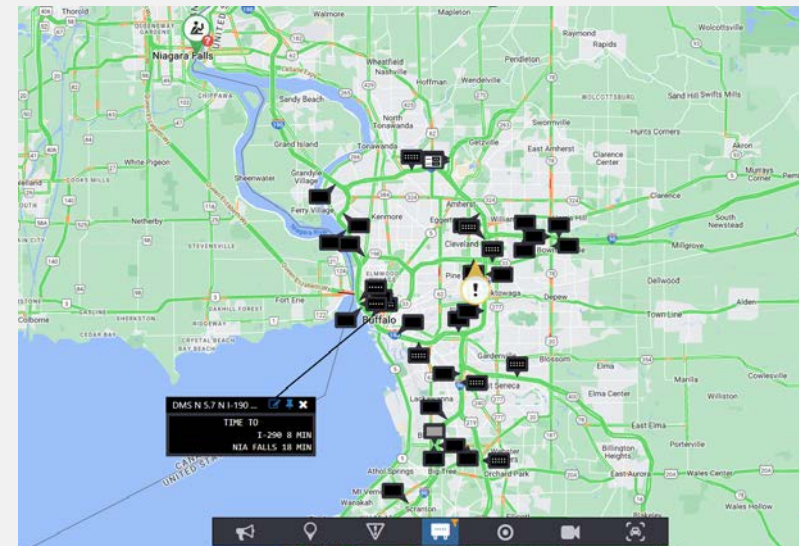
Regional Collaboration – Traffic Management

- Centralized 24/7 operations and traffic management services for bi-national region
- Information Clearinghouse
- Standardized Operations
- Multi-Agency Event Planning and Operations
- Multi-Agency ITS Deployment
- Regional Messaging Standards
- Traffic Management Plans



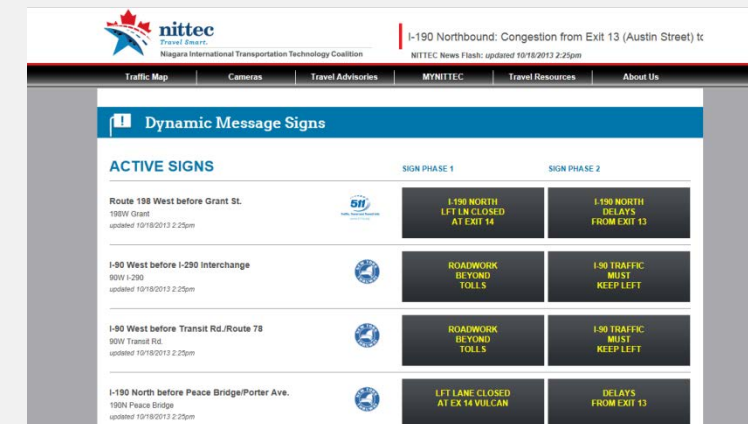
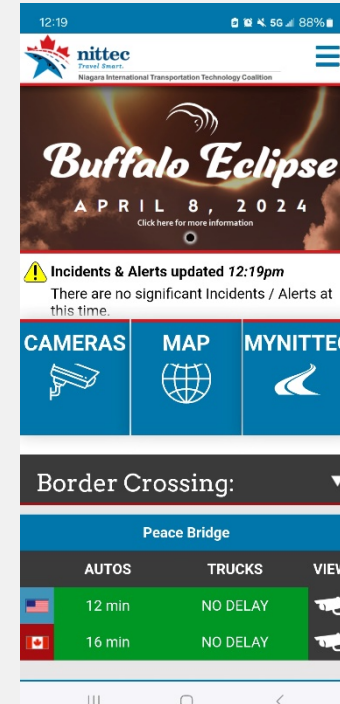
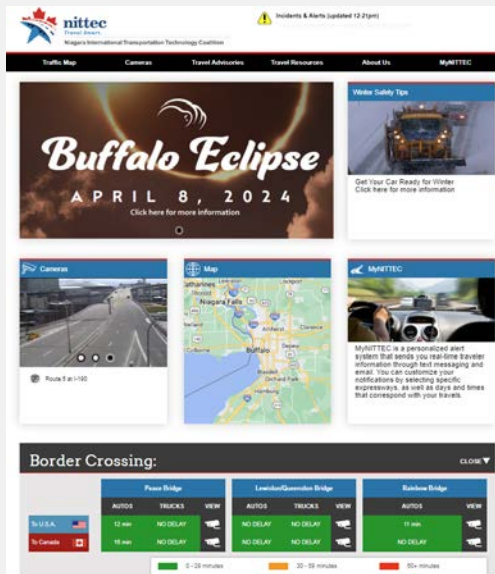
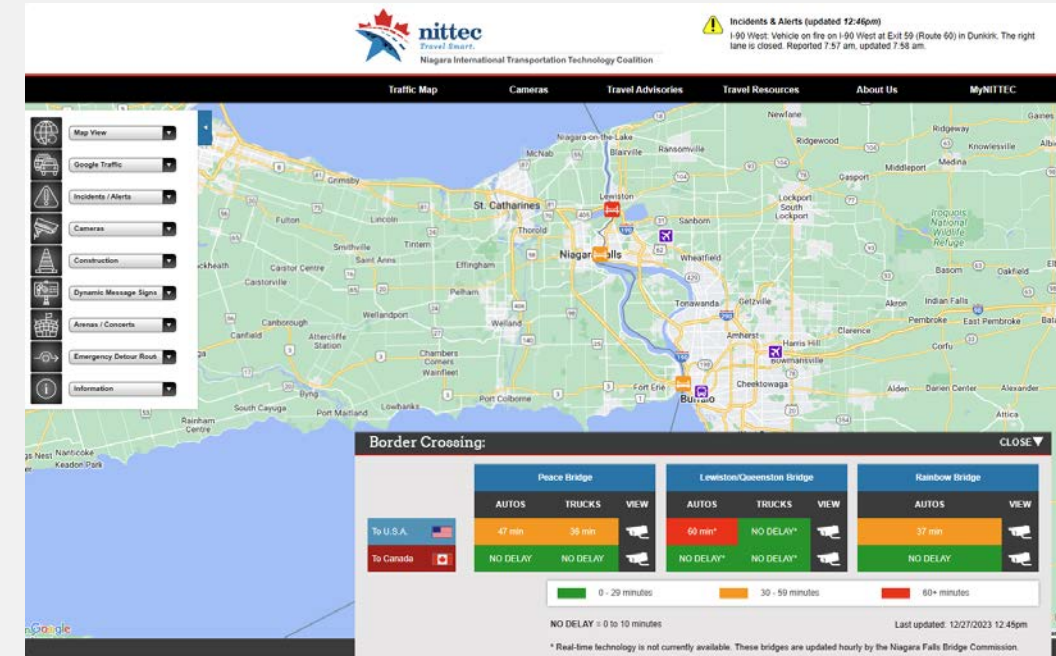
Regional Collaboration - ITS

- Multi-Agency ITS Elements in use at NITTEC
 - NYSDOT Region 5
 - NYSTA Buffalo Division
 - Peace Bridge Authority
 - Niagara Falls Bridge Commission
 - Ministry of Transportation Ontario
- Crossroads System - ATMS
 - Intelligent Freeway Traffic Management System
 - Monitors & Displays Highway Events & Incidents
 - Activates ITS Elements in Region



Traveler Information

- Dynamic Message Signs in US & CA
 - Incident Information
 - Safety Campaigns
 - Travel Times
- NITTEC Website
- NITTEC App
- MYNITTEC Subscriber System
- 511NY & 511on.ca

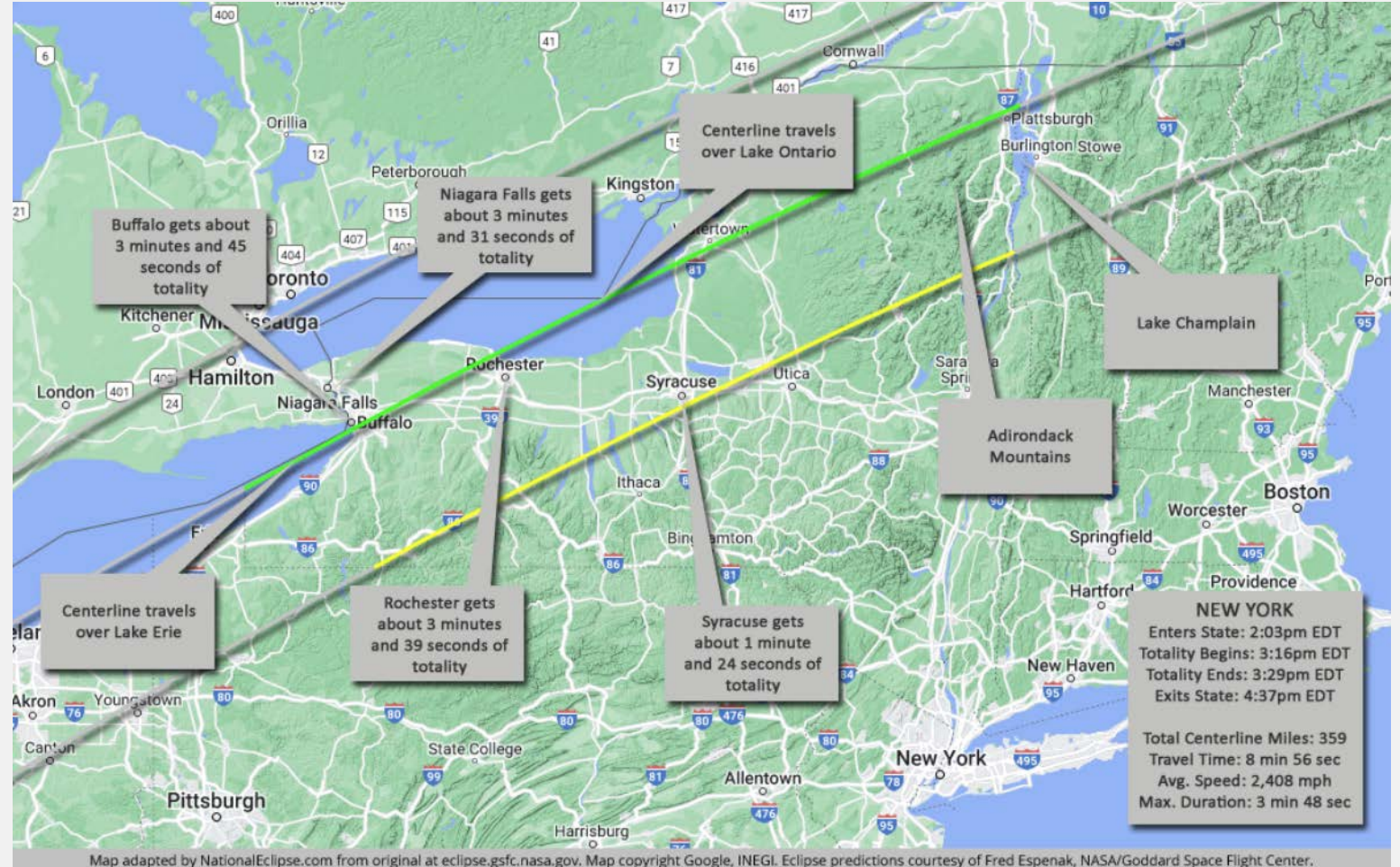


2024 Solar Eclipse Information



2024 Solar Eclipse Information

City	Totality Start	Duration
Chautauqua	3:17:23 PM	3 min 25 s
Buffalo	3:18:20 PM	3 min 45 s
Niagara Falls	3:18:21 PM	3 min 32 s
Rochester	3:20:09 PM	3 min 39 s
Auburn	3:22:20 PM	1 min 44 s
Watertown	3:22:34 PM	3 min 39 s
Fort Drum	3:22:48 PM	3 min 38 s
Alexandria Bay	3:22:53 PM	3 min 15 s
Syracuse	3:23:04 PM	1 min 24 s
Canton	3:23:52 PM	3 min 13 s
Old Forge	3:24:03 PM	2 min 48 s
Potsdam	3:24:08 PM	3 min 11 s
Tupper Lake	3:24:28 PM	3 min 30 s
Massena	3:24:40 PM	2 min 27 s
Saranac Lake	3:24:54 PM	3 min 29 s
Lake Placid	3:25:08 PM	3 min 21 s
Indian Lake	3:25:19 PM	2 min 02 s
Wilmington	3:25:19 PM	3 min 26 s
Plattsburgh	3:25:44 PM	3 min 33 s



Eclipse Preparation

- Initial Concerns
 - Estimated over 1 million visitors to the area
 - ✓ Buffalo in direct path of totality
 - ✓ Niagara Falls a highly desired location
 - Visitors arrival spread out over the proceeding weekend but many would depart simultaneously on Monday afternoon
 - Compounded by normal rush hour traffic
 - Traffic into Canada causing delays at international bridge crossings and backing up onto already congested highways
 - Cars stopping in-lane during totality (potential for crashes, adding to congestion)
 - Congestion impeding first responders and access to hospitals/emergency centers
 - High traffic on waterways for viewing
 - ✓ Need for emergency resources to address incidents (water will be cold)



Eclipse Preparation

- Meetings and coordination began over a year in advance
- Special NITTEC Joint Meeting in February 29, 2024
 - Border Crossing, Incident Management, and TOC members
 - National Weather Service Buffalo
- Coordination with New York State on Traffic Mitigation Plan
- Coordination with Ministry of Transportation, Ontario on Eclipse messaging plans



SOLAR ECLIPSE TRAFFIC MANAGEMENT PLAN MONDAY APRIL 8, 2024

Updated: 2/27/24

New York State Total Solar Eclipse Traffic Mitigation Plan for Monday, April 8, 2024



NATIONAL WEATHER SERVICE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

HOME FORECAST PAST WEATHER SAFETY INFORMATION EDUCATION NEWS SEARCH ABOUT

Local forecast by "City, ST" or ZIP code
Enter location Go
[Location Help](#)

News Headlines

- [Total Solar Eclipse Coming April 8, 2024!](#)
- [Sorriso Skywarn Spotter Training Schedule](#)
- [Are you #WeatherReady for Sorriso? Check out our latest weather safety graphics, videos, social media posts, and more](#)
- [NWS Buffalo Winter Weather Page](#)

April 8, 2024 Total Eclipse
[Weather.gov > Buffalo, NY > April 8, 2024 Total Eclipse](#)

Buffalo, NY
Weather Forecast Office

[Current Hazards](#) [Current Conditions](#) [Radar](#) [Forecasts](#) [Rivers and Lakes](#) [Climate and Past Weather](#) [Local Programs](#)

Overview

On Monday April 8, 2024 a total solar eclipse will cross North America. The eclipse will be seen across portions of Mexico, the central and eastern United States, and southeastern Canada. The path of totality will first enter the United States in Texas, then advance northeast across the Mississippi and Ohio Valleys and reach New York State during the mid-afternoon.

A solar eclipse occurs when the Moon passes between the Earth and the Sun at just the right time and orientation, with the Moon casting a shadow on a portion of the Earth's surface. Sometimes, the Moon only blocks part of the visible face of the Sun, which results in a partial solar eclipse. On more rare occasions, the Moon entirely blocks the face of the Sun and results in a total solar eclipse. Places in the path of totality, including most of Western and North Central NY, will experience several minutes of darkened sky similar to the twilight seen before sunrise or after sunset. If we have clear skies on the day of the eclipse, an incredible view of the Sun's corona will be seen during the few minutes of totality. The Sun's corona is normally not visible, except during a total solar eclipse. The corona is wispy, white streamers of plasma (charged gas) that radiate out from the surface of the sun.

Solar Eclipse

Image Courtesy of NASA

Eclipse Preparation

- List of large local events
- Developed Messaging Plans (Prior to Eclipse, Day of and During, Post Eclipse)
- Event Specific Messaging Plans

P-### located on Niagara Scenic Parkway westbound beyond I-190

SLOW	BE
TRAFFIC	PREPARED
AHEAD	TO STOP

P-### located on Niagara Scenic Parkway westbound before Adams Water Intakes

PARK	USE JOHN
ENTRANCE	DALY
CLOSED	EXIT

P-157 located on I-190 NB beyond Exit 19

DELAYS	USE
EXT 21 TO	ALT RTE
NIA FALL	EXIT 22

If severe delays exist at Exit 21 DMS on I-290 and I-190 will be activated

DELAYS TO	NIAGARA FALLS
NIAGARA FALLS	TRAFFIC
AT EXIT 21	USE EXIT 22

Messaging Prior to the Eclipse – Starting March 27, 2024

Dynamic Message Signs

SOLAR ECLIPSE	EXPECT
MONDAY 4/8	DELAYS

SOLAR ECLIPSE	EXPECT
MONDAY 4/8	SEVERE
	DELAYS

SOLAR ECLIPSE	ARRIVE EARLY
MONDAY 4/8	STAY LATE

Messaging Day of/During the Eclipse

Dynamic Message Signs

SOLAR	NO
ECLIPSE	STOPPING
TODAY	ON ROAD

SOLAR	EXPECT
ECLIPSE	DELAYS
TODAY	

SOLAR	EXPECT
ECLIPSE	SEVERE
TODAY	DELAYS

EMERGENCY	EXPECT
STOPPING	POLICE
ONLY	ENFORCEMENT

Eclipse Preparation

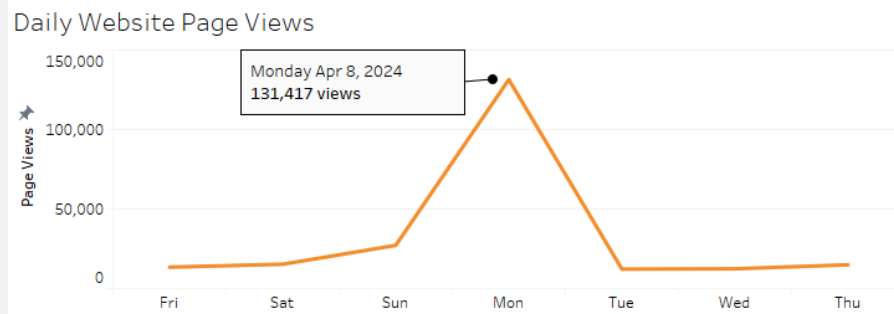
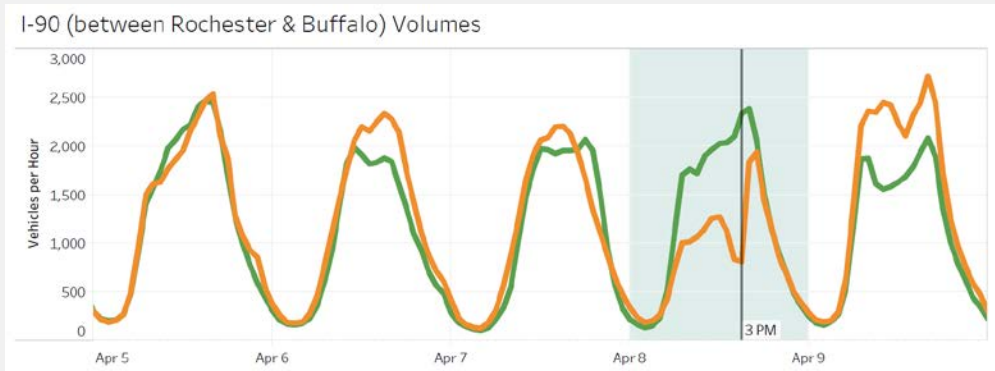
- Identified Detour Routes
- Pre-staging of tow trucks for quick clearance
- Extended / Expanded HELP Truck Coverage
- Construction/ Maintenance Lane Closure Restrictions
- Pre-staging State Assets (Transportation/Law Enforcement/Water Assets)
- Outreach to Ontario Trucking Association / Trucking Association of New York
- Joint Transportation Press Conferences



Niagara International Transportation Technology Coalition has been planning for a year on how to handle an expected influx of traffic because of the eclipse.

Eclipse Outcomes

- Cloudy weather dampened the impact on outside traffic
- Local traffic significantly decreased from normal
- Significant rise in NITTEC website hits and traffic volumes before and after April 8



Time Lapsed video <https://www.nittec.org/eclipse>



Lessons Learned

- Significant cloud cover in the region reduced the impact on the region; many travelers left the region to find areas with a clear sky.
- The significant preparation the entire region underwent was extremely valuable as a planning process.
- The communication framework established will continue to be used for events/incidents/weather
- Local residents listened to messaging campaign and stayed home.
- Border crossings between Canada and US did not experience delays until Tuesday April 9th.
- Significant increase in traffic volumes on Tuesday April 9th.
- Inclusion of more local law enforcement in planning for future events would be valuable.
- Shuttle services to key areas might have been valuable if traffic had reached expected volumes.

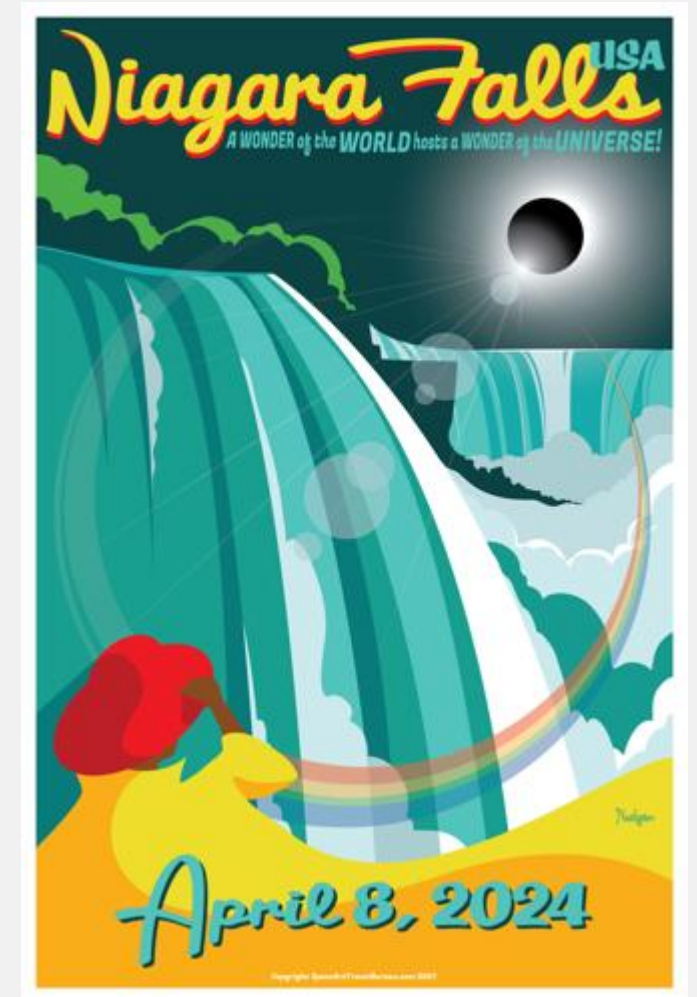


Questions

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www.nittec.org | www.nittec.ca



Understanding the Impacts of the 2024 Solar Eclipse on Traffic Operations



Joseph M. Bovenzi, AICP

ITS NY 31st Annual Meeting – Saratoga Springs, New York

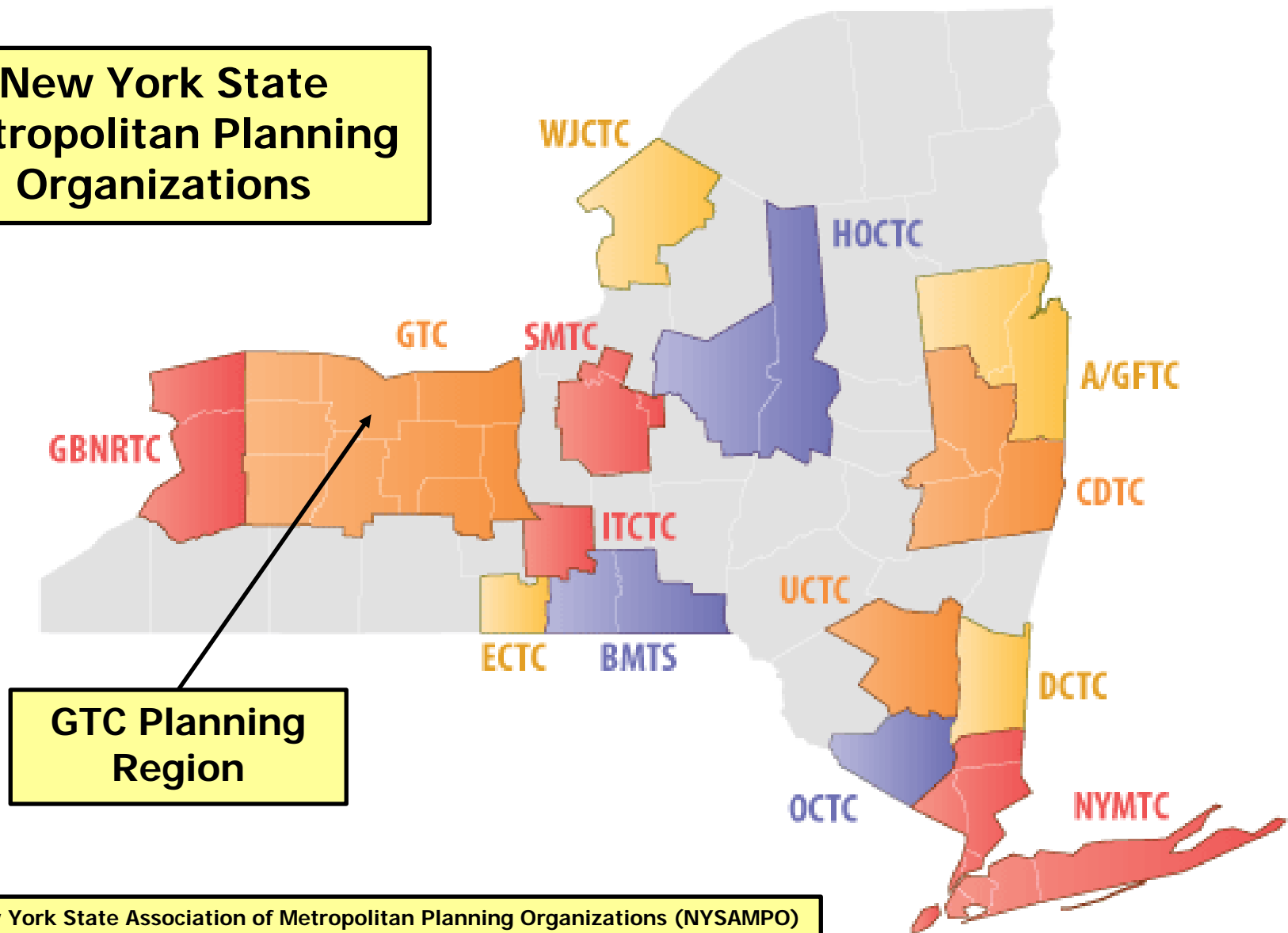
June 13, 2024

Presentation Outline

- Issues and Concerns
- Operations Planning
- Travel Impacts
- Results and Lessons Learned



New York State Metropolitan Planning Organizations



Source: New York State Association of Metropolitan Planning Organizations (NYSAMPO)

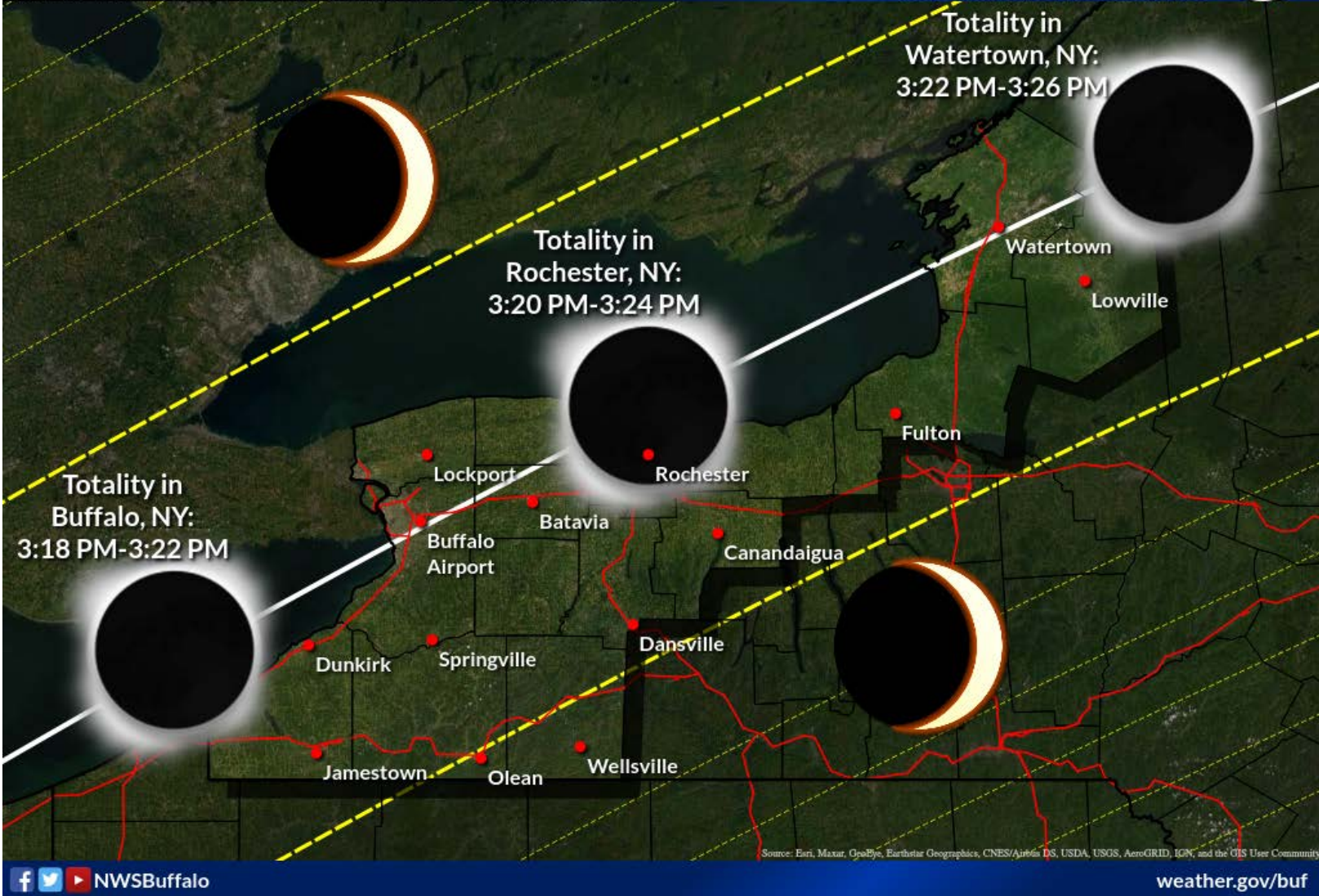
April 8, 2024 Total Eclipse

Path Of Totality Across Western and North Central New York

Weather Forecast Office

Buffalo, NY

Issued Mar 01, 2024 5:04 AM EST



f t NWSBuffalo

weather.gov/buf

Issues and Concerns:

- 300,000-500,000 visitors anticipated
- Heavy traffic congestion predicted
- Unsafe driver behavior
- Potential disruption to routine transportation and communications services
- Event venue coordination



Illinois 2017, Chicago Tribune

Operations Planning:

- Signal timing plans
- Dynamic Message Signs
- HELP Truck coordination
- Emergency Operations Center
- K-12 Schools closed; Colleges/Universities closed or held classes online
- Community preparation



Solar Eclipse Traffic Alerts for April 8th, 2024

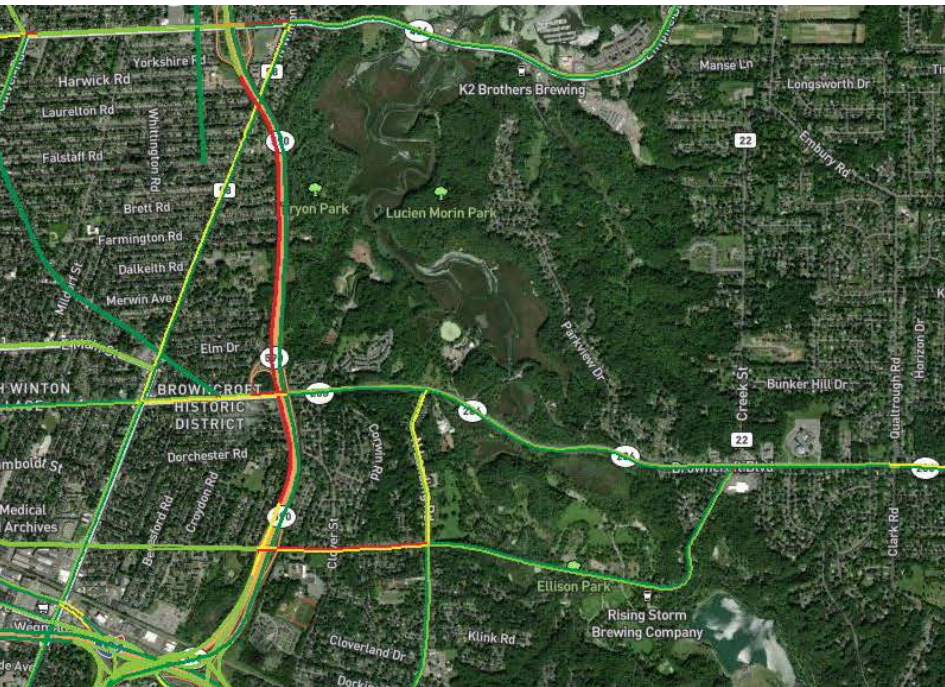
- The City Pier and Kershaw Park will be closed all day for vehicle traffic. Pedestrians are still permitted to enjoy the parks.
- Lakeshore Drive between Ellen Polimeni Blvd and Muar Street will close to all vehicle traffic from 12:00 PM to 5:00 PM for anticipated pedestrian activity.
- The traffic signals on Main Street (Route 332) will be changed to flash yellow for northbound and southbound vehicle traffic from 12:00 PM to 5:00 PM. The ability for eastbound and westbound traffic to cross Main Street in the Downtown area is expected to be limited.
- The traffic signals on Main Street (Route 332) at Ontario Street/West Avenue, Buffalo Street/Chapel Street, and North Street/County Road 28 will function as normal. Any local traffic traveling eastbound and westbound across Main Street are requested to use these intersections.

**NOTE: The volume of visitors to our area to witness the solar eclipse is unknown, but is expected to be large. The Police Department, Fire Department, and DPW workers will be on staff to address any necessary traffic congestion that may arise. Traffic patterns will resume back to normal as soon as possible. Please have patience during this event.*

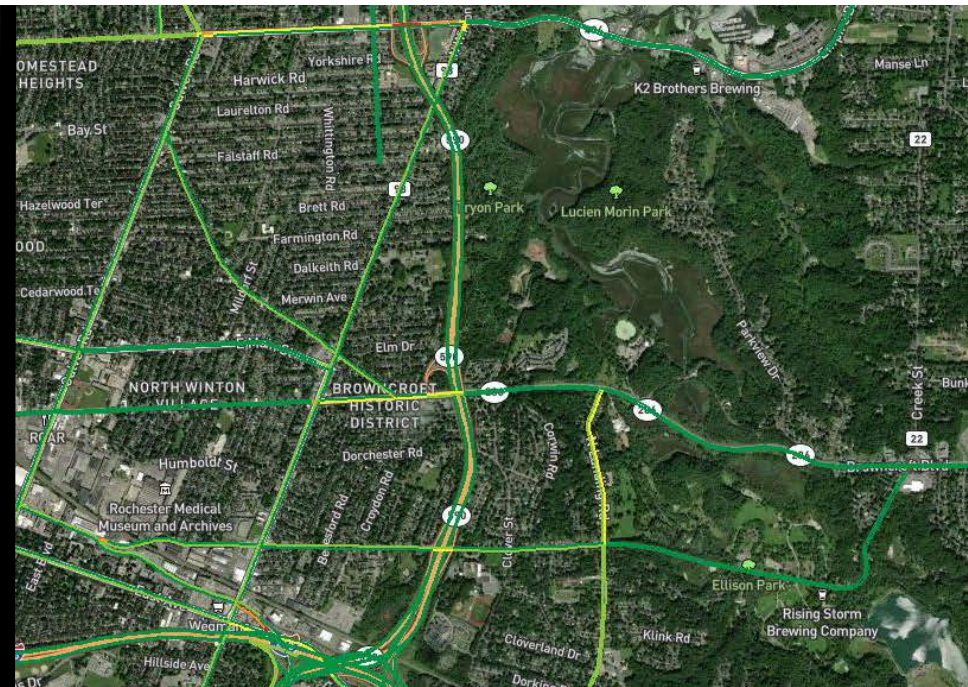


Travel Impacts: NYS Route 590

Travel Time Index (TTI)



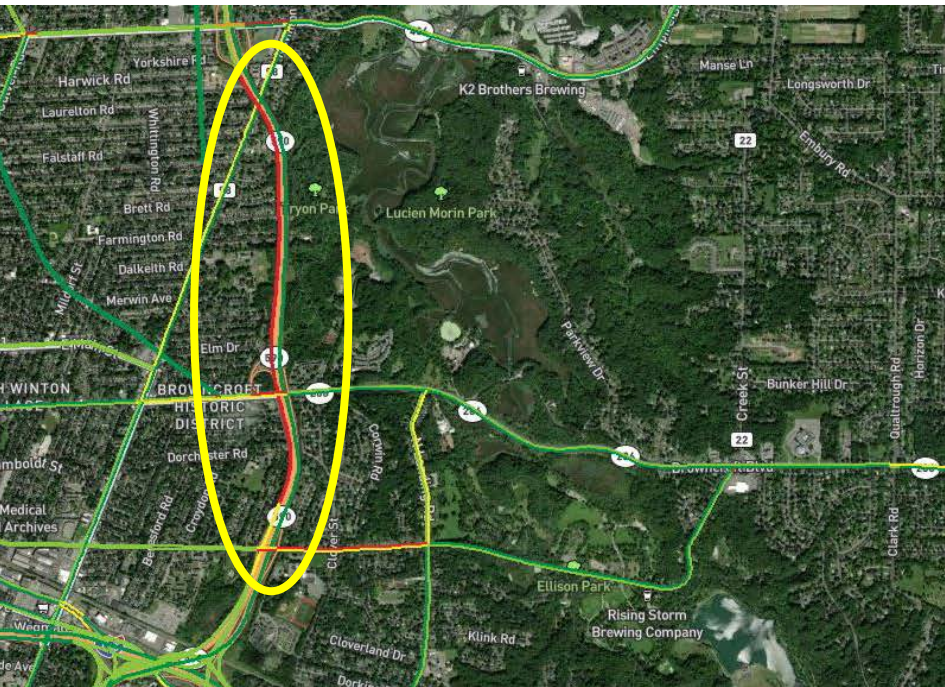
Monday, March 25, 2024
7:45 am



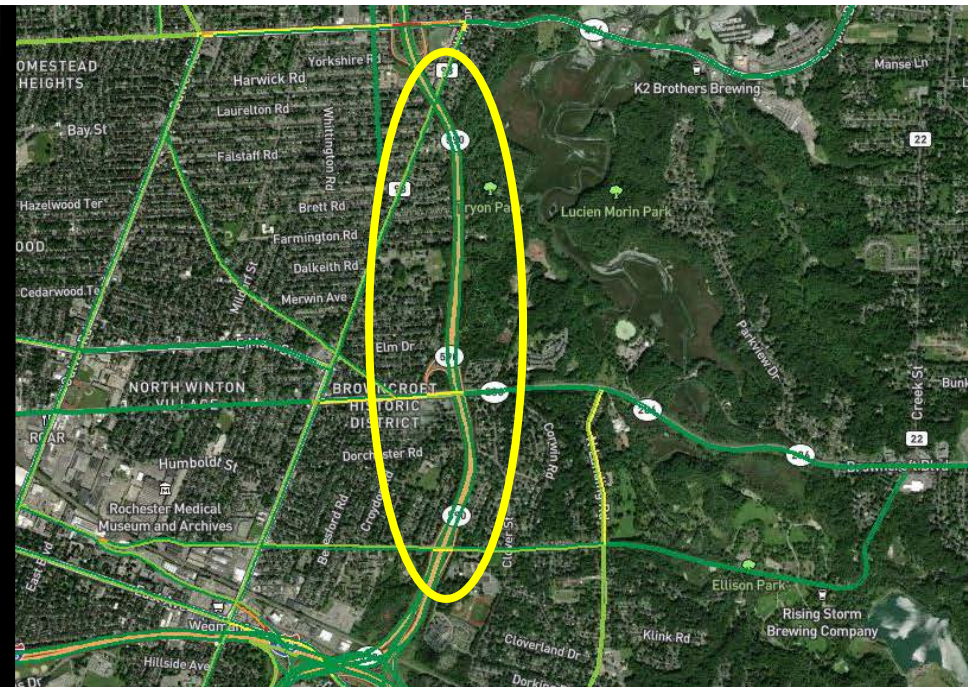
Monday, April 8, 2024
7:45 am

Travel Impacts: NYS Route 590

Travel Time Index (TTI)



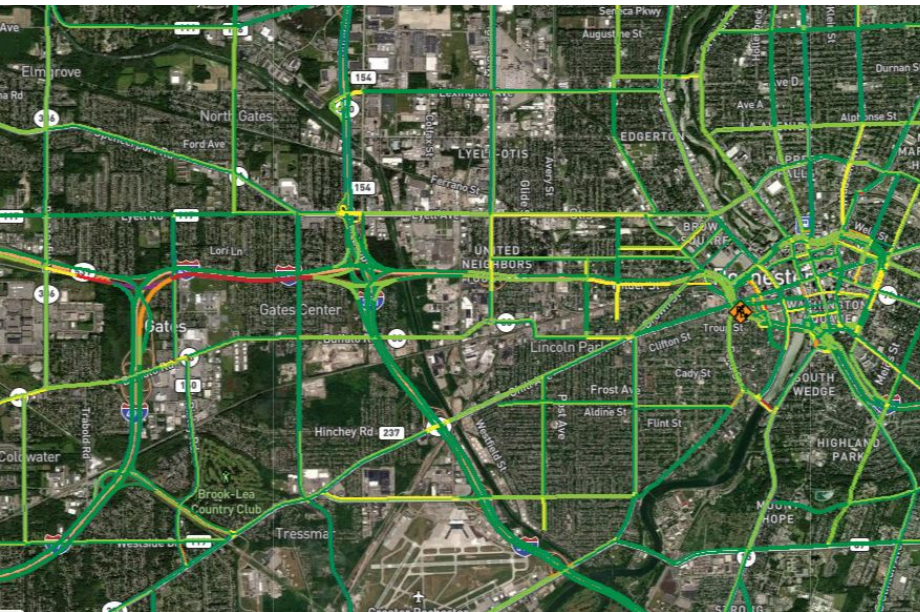
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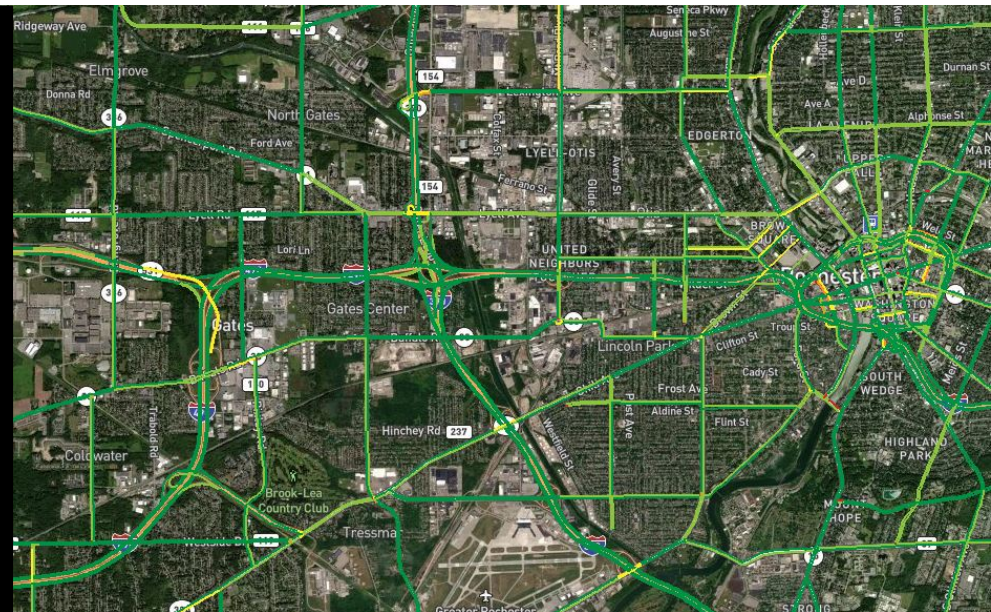
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7:45 am

Travel Impacts: I-490

Travel Time Index (TTI)



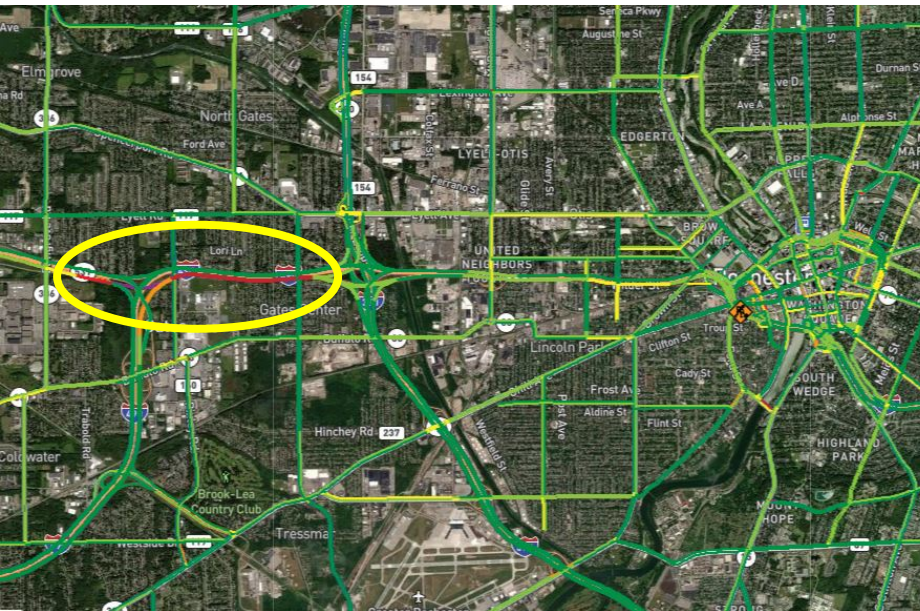
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7:30 am



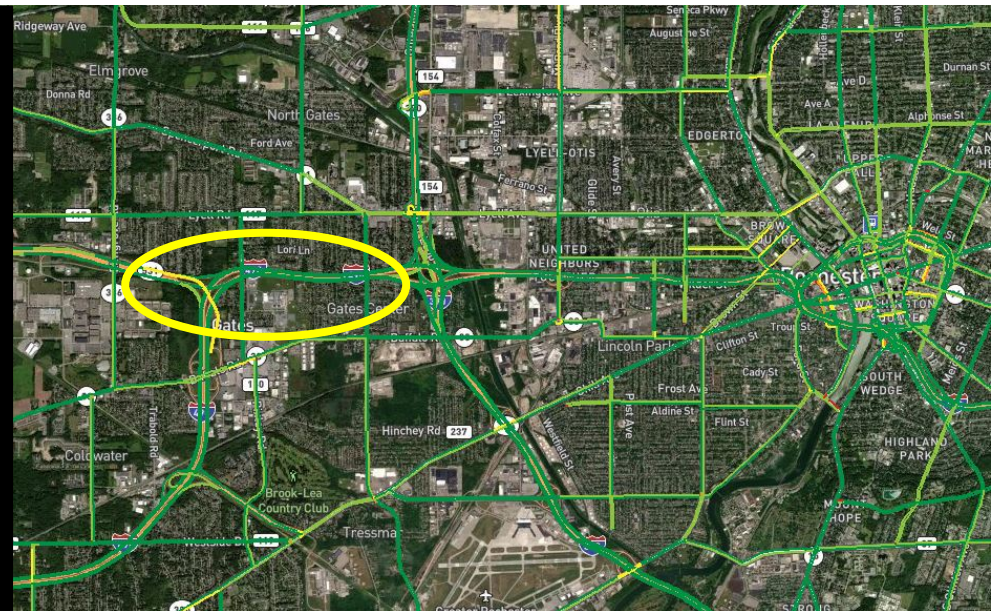
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Travel Impacts: I-490

Travel Time Index (TTI)

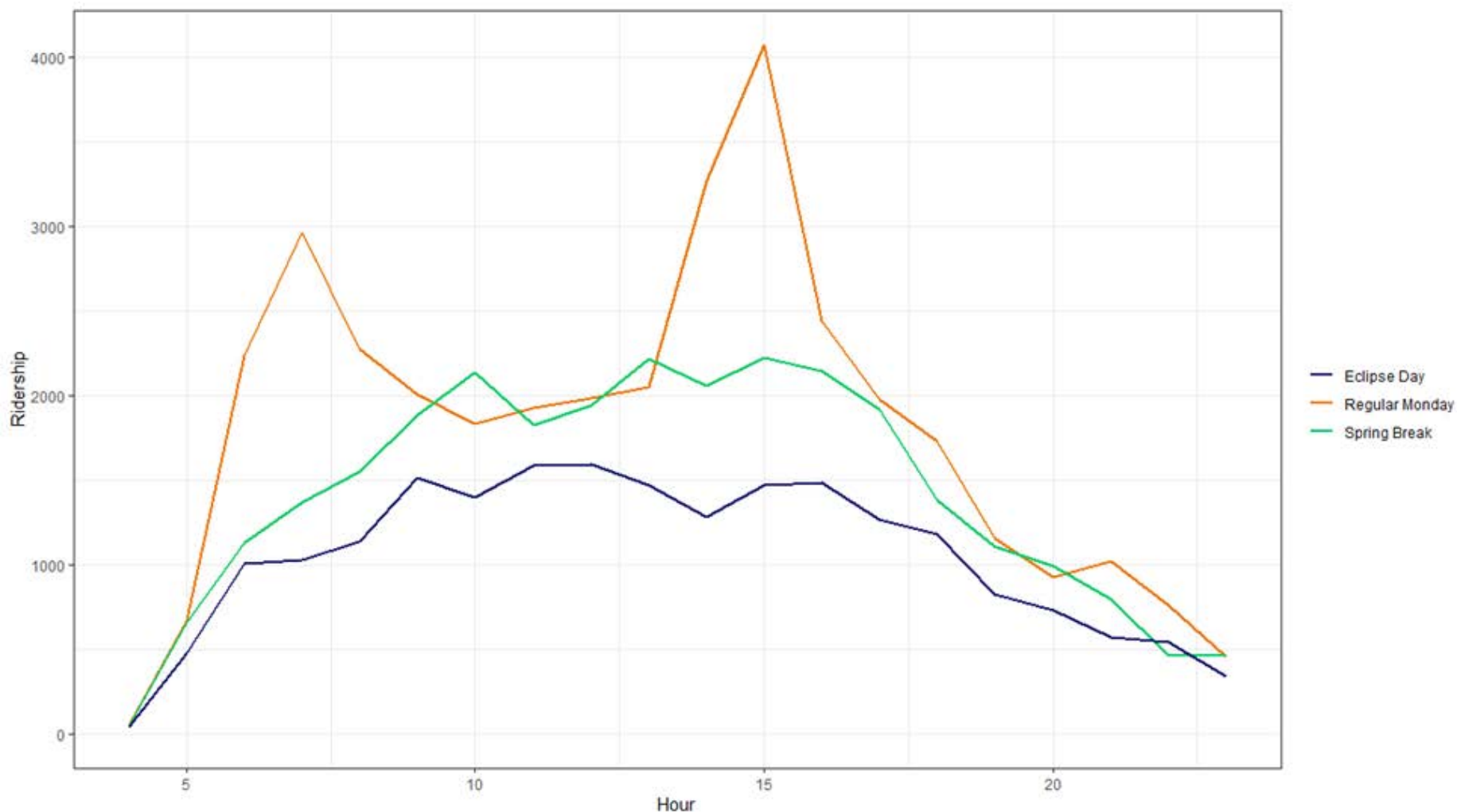


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7:30 am



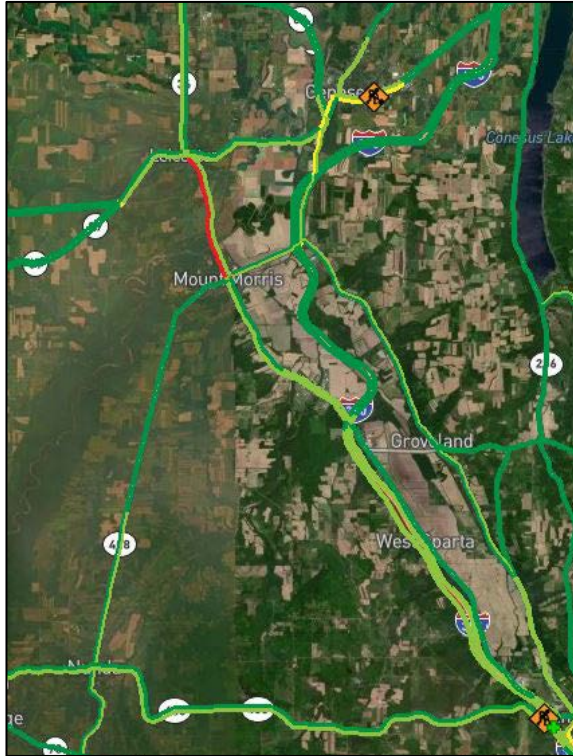
Monday, April 8, 2024
7:30 am

Travel Impacts: Transit Ridership Data

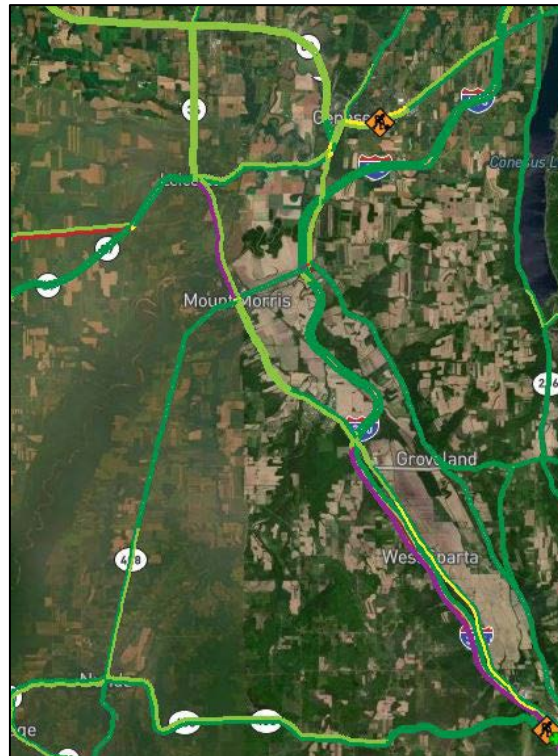


Travel Impacts: Event Venues

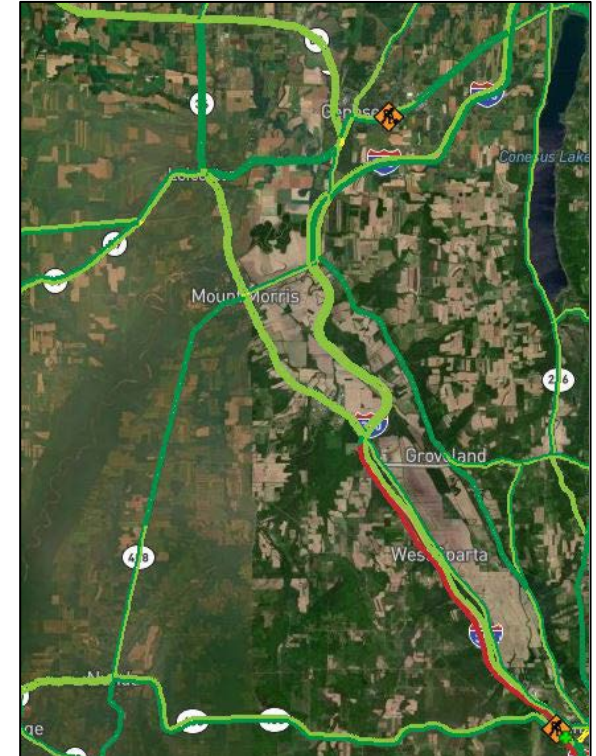
Letchworth State Park – April 8, 2024



4:00 pm



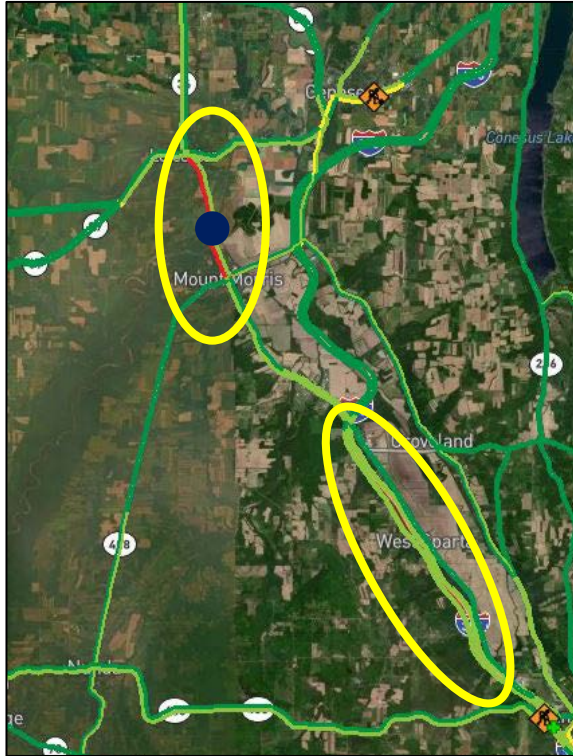
5:30 pm



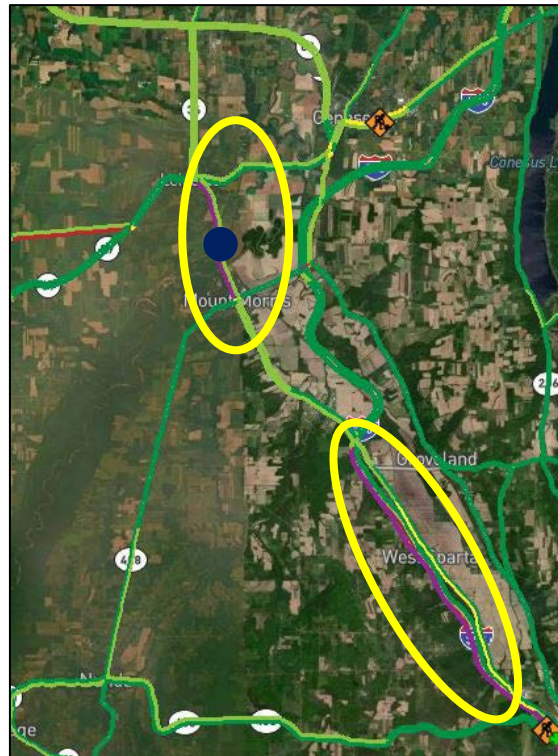
6:30 pm

Travel Impacts: Event Venues

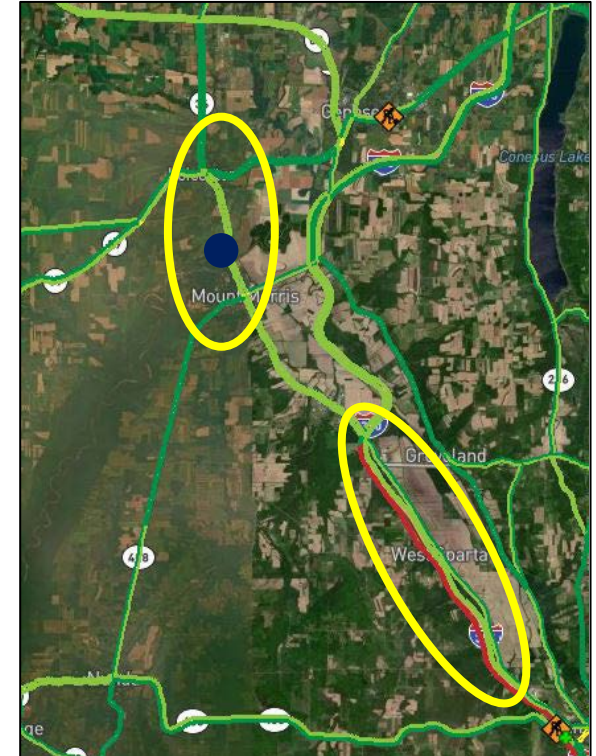
Letchworth State Park – April 8, 2024



4:00 pm



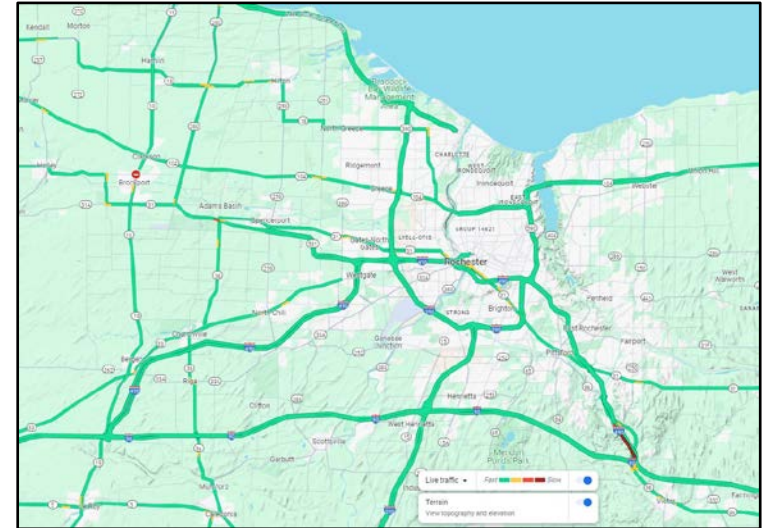
5:30 pm



6:30 pm

Results

- No reports of serious delay or incidents
- Light traffic conditions
- Reduced transit ridership
- Fewer planned GA flights
- Locals avoided travel
- Weather (cloudy conditions) encouraged travel to the northeast (Adirondacks, Vermont) and west (Ohio)



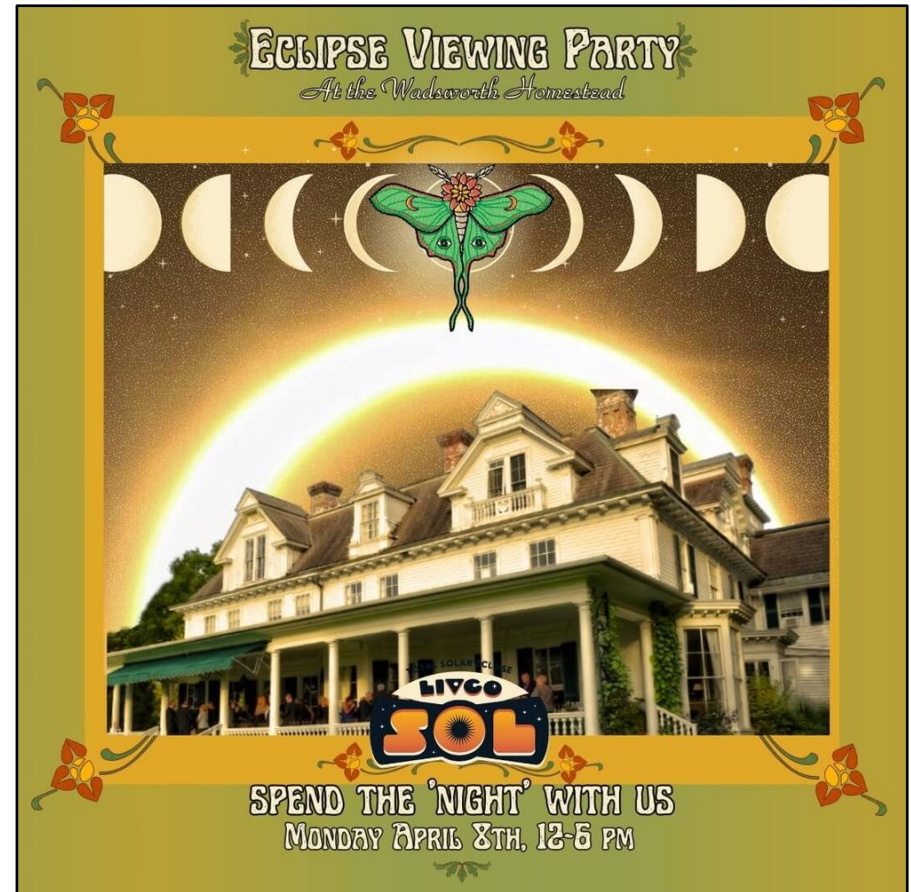
Google Traffic Screen Capture – 4:00 pm on April 8



Eclipse viewers at RMSC on April 8

Lessons Learned

- “Consistent and persistent” messaging
 - Arrive Early, Stay Late, Take Tuesday Too
- Minimize local travel
- Venue coordination
 - Shuttle service
 - Signal timing plans
- Weather-dependent



Advertisement for an Eclipse viewing party at the Wadsworth Homestead in Geneseo, NY



GENESEE TRANSPORTATION COUNCIL

50 West Main Street-Suite 5131

Rochester, NY 14614

www.gtcmpo.org

 @gtcmpo

The Metropolitan Planning Organization for the Genesee-Finger Lakes Region