

Using Border Crossing ITS during Extreme Events



Athena Hutchins
ITS NY • 10/28/21

Presentation Outline

- ▶ NITTEC Overview
- ▶ Impacts of Extreme Events on Border Crossing
 - ▶ COVID Traveler Restrictions
 - ▶ Reopening
 - ▶ Freight Slowdown
- ▶ Moving Forward
 - ▶ Hybrid Border Crossing Signs
 - ▶ ATCMTD Deployment



NITTEC Overview

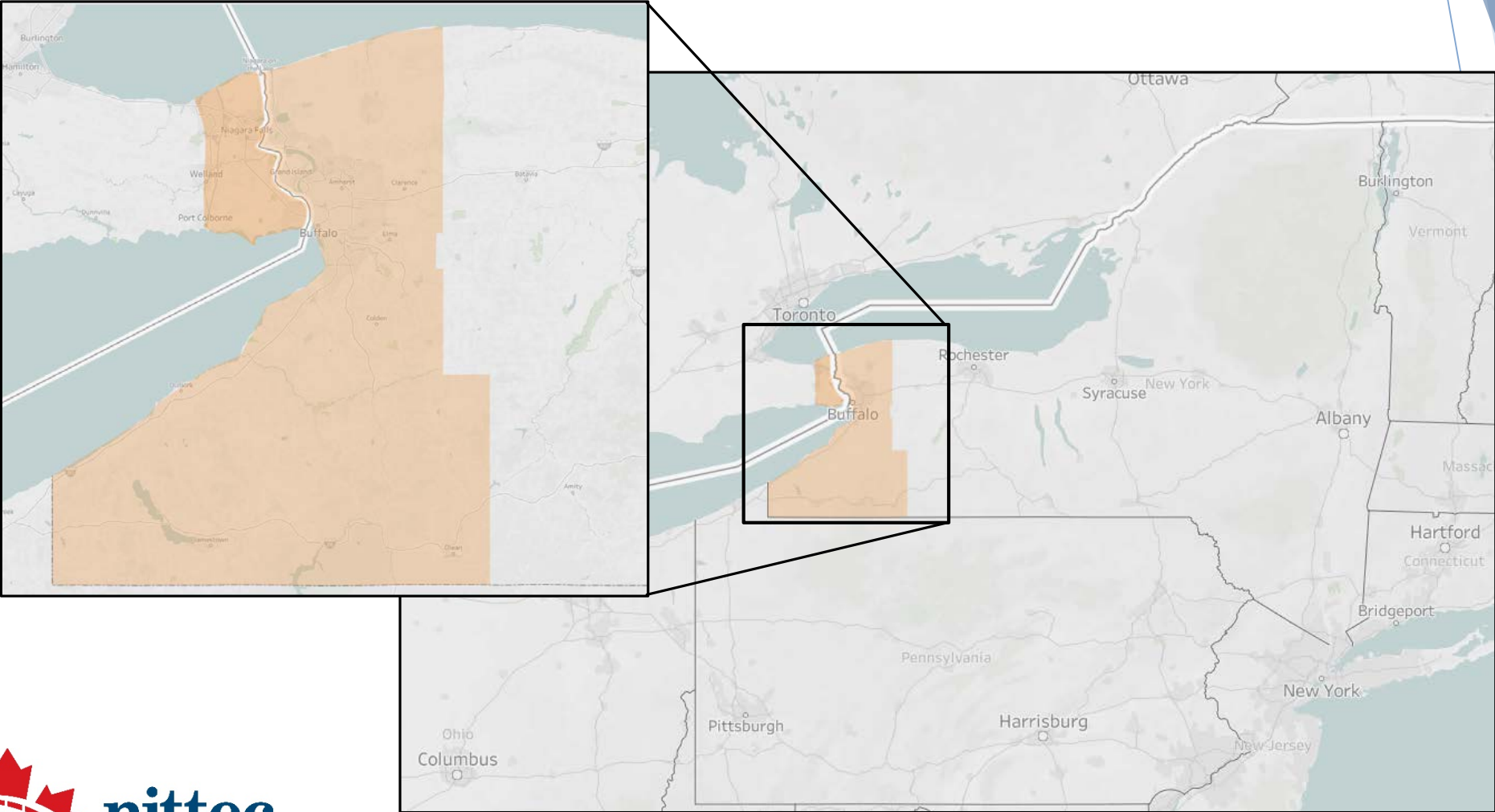


About NITTEC

- ▶ Niagara International Transportation Technology Coalition
- ▶ Bi-national Collaborative Organization including transportation stakeholders in Western new York and Southern Ontario
- ▶ NITTEC Mission: To improve mobility, reliability and safety on the regional bi-national multimodal transportation network through information sharing and coordinated management of operations.



NITTEC Region



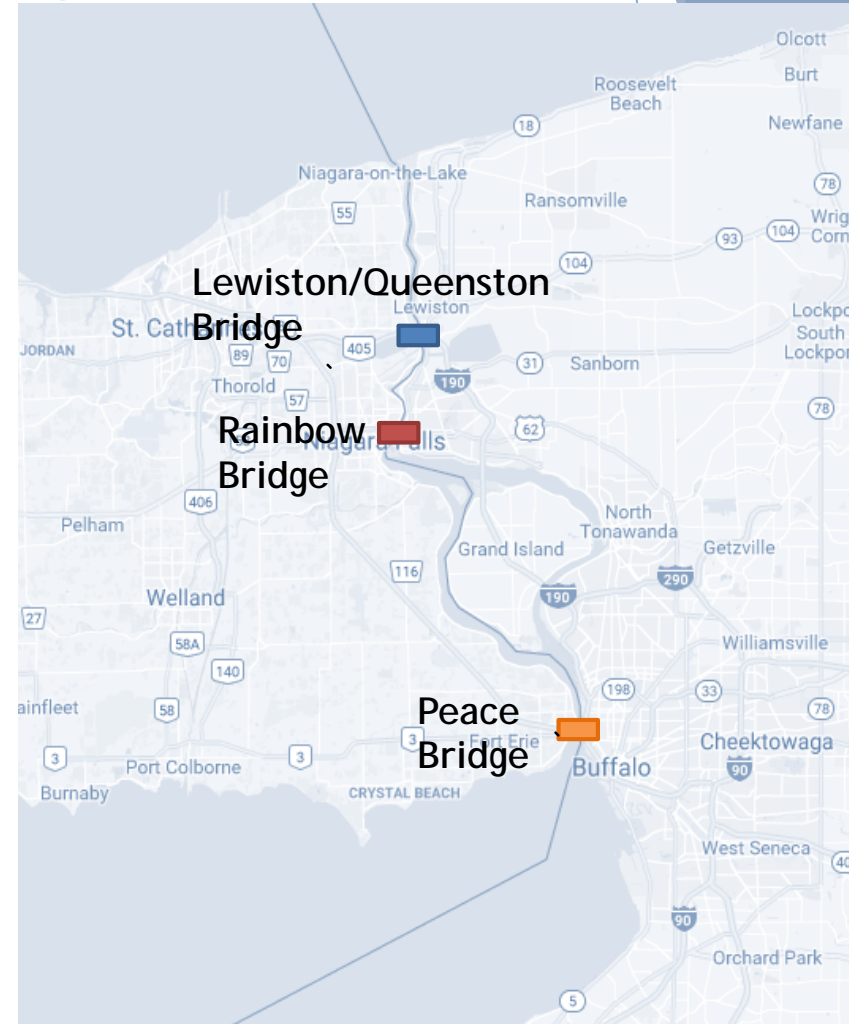
NITTEC Coalition

- ▶ Regional Collaboration and Leadership
 - ▶ Technology Deployment
 - ▶ Operations
 - ▶ Incident Management
 - ▶ Traveler & Traffic Information
- ▶ Multi-Agency Transportation Operations Coalition
 - ▶ 5 Policy Members, 9 General Members, 28 Affiliate Members
 - ▶ Only Bi-national Coalition of its kind in U.S. / Canada



Importance of Border Crossing Information

- ▶ Millions of passenger trips and hundreds of thousands of freight trips each year
- ▶ Limited border crossing options make delays especially costly
- ▶ Need to provide travelers with accurate, real-time information in advance of key decision points



Importance of Border Crossing Information

- ▶ Approximately 10 million passenger vehicles and 2 million freight vehicles annually
- ▶ Second highest volume trade route between the U.S. and Canada, with freight from all 48 continental states and 13 Canadian provinces passing through it



ITS at Border Crossings

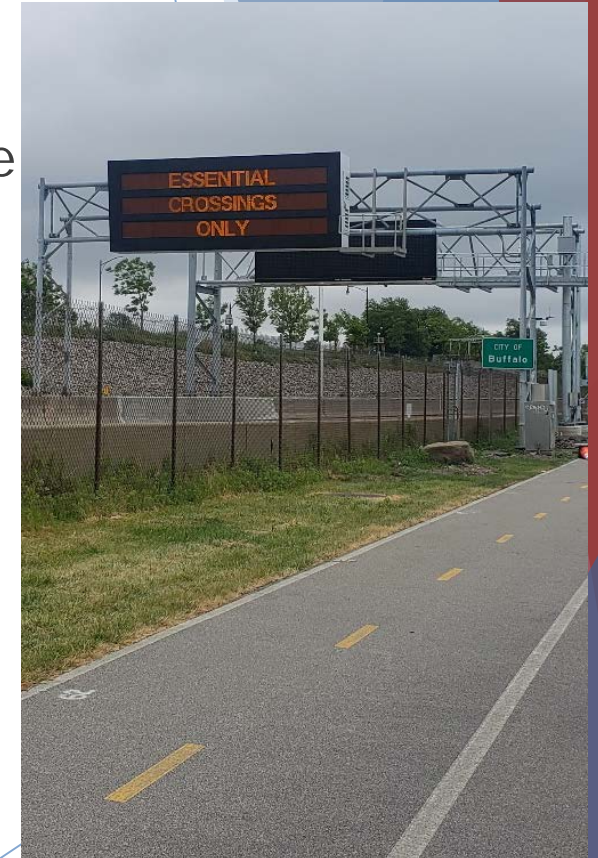
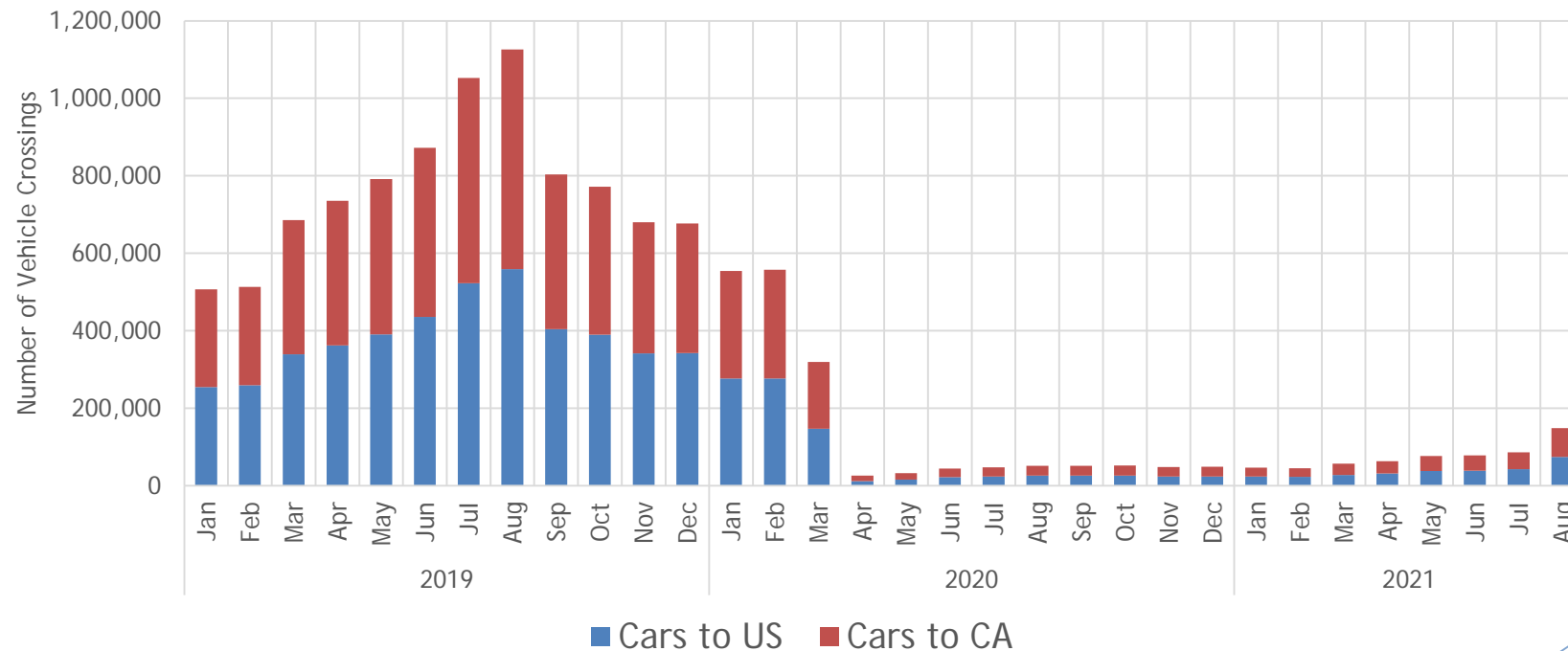
- ▶ Bluetooth Readers
- ▶ Wi-Fi Readers
- ▶ License Plate Readers



Impacts of Extreme Events on Border Crossing

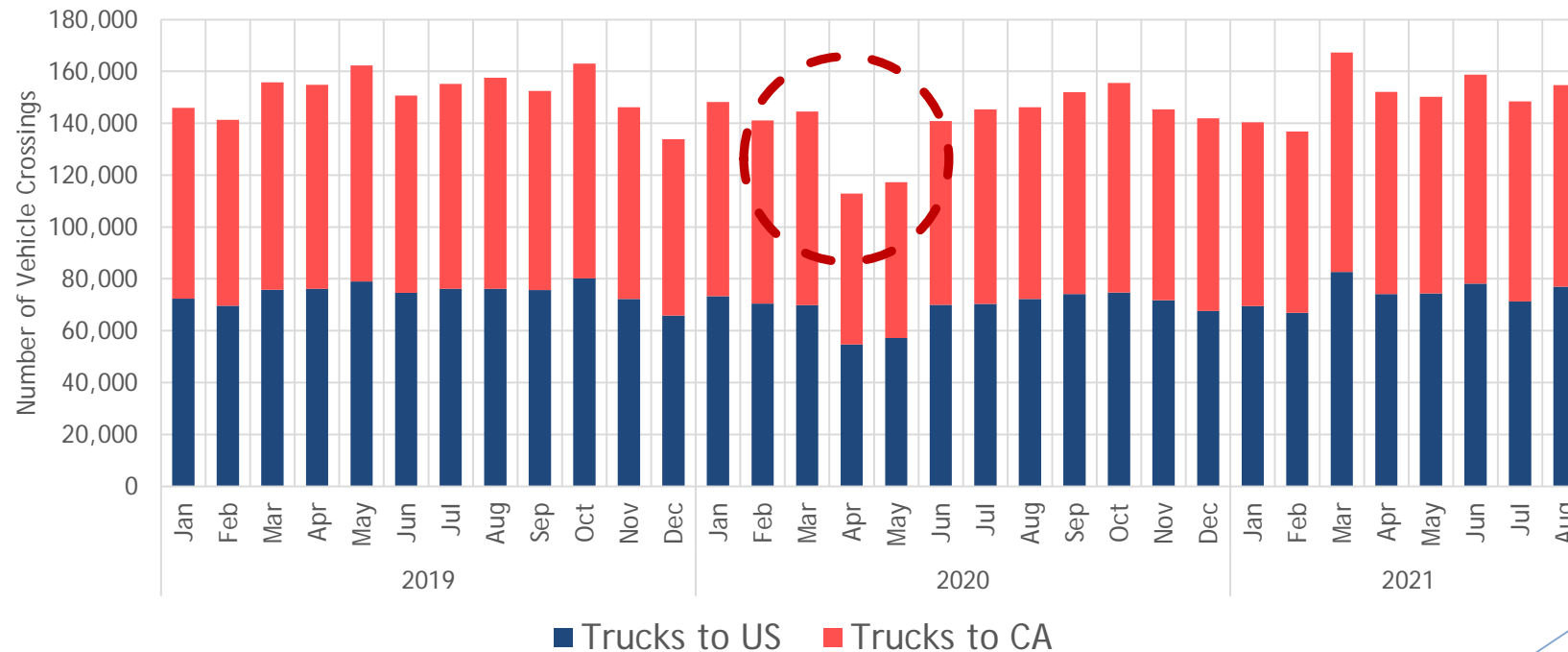
Border Restrictions in Place - March 20, 2020

- ▶ Travel between U.S. and Canada restricted to essential travel only
- ▶ Passenger Car travel down by **90-95%** for the duration of the closure



Border Restrictions in Place - Freight Impact

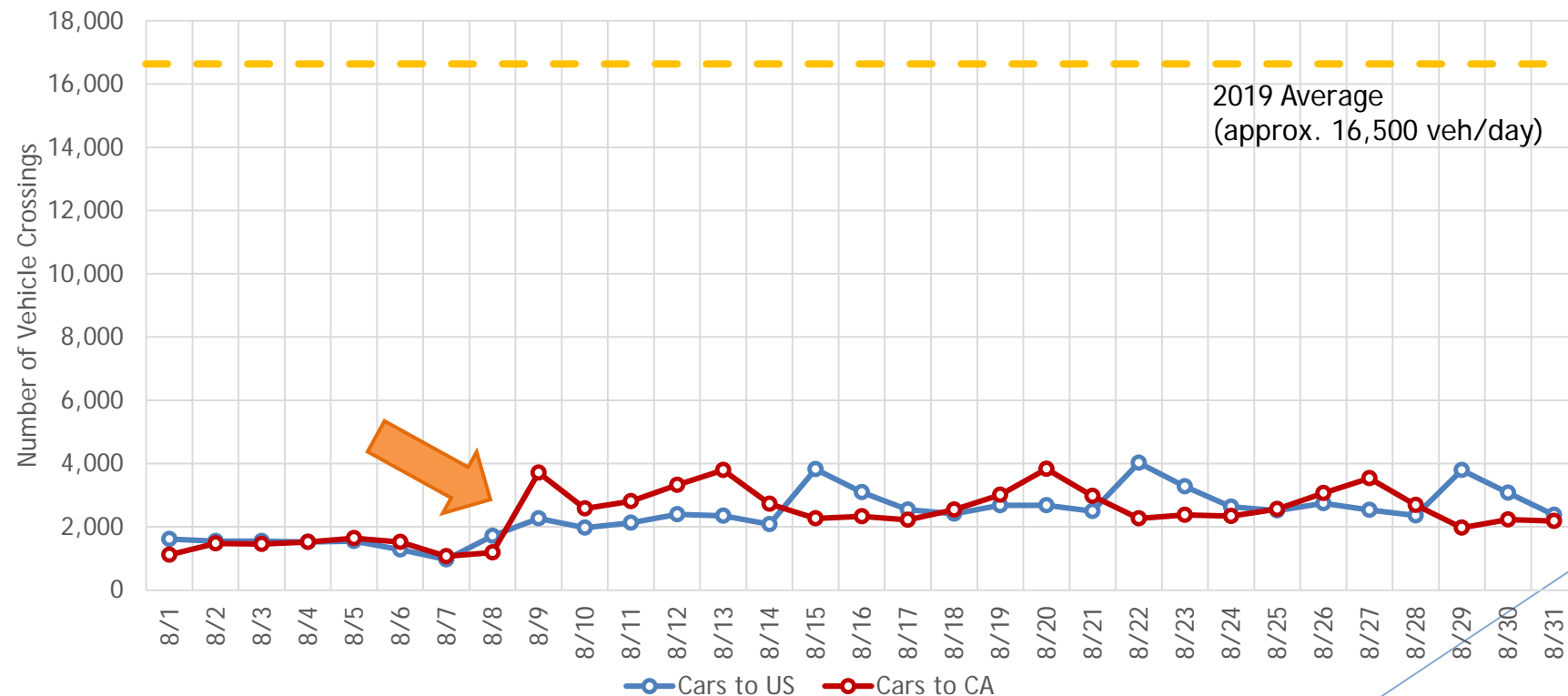
- ▶ Truck crossings down by **25-30%** for April and May of 2020 before recovering



Border Restrictions partially lifted

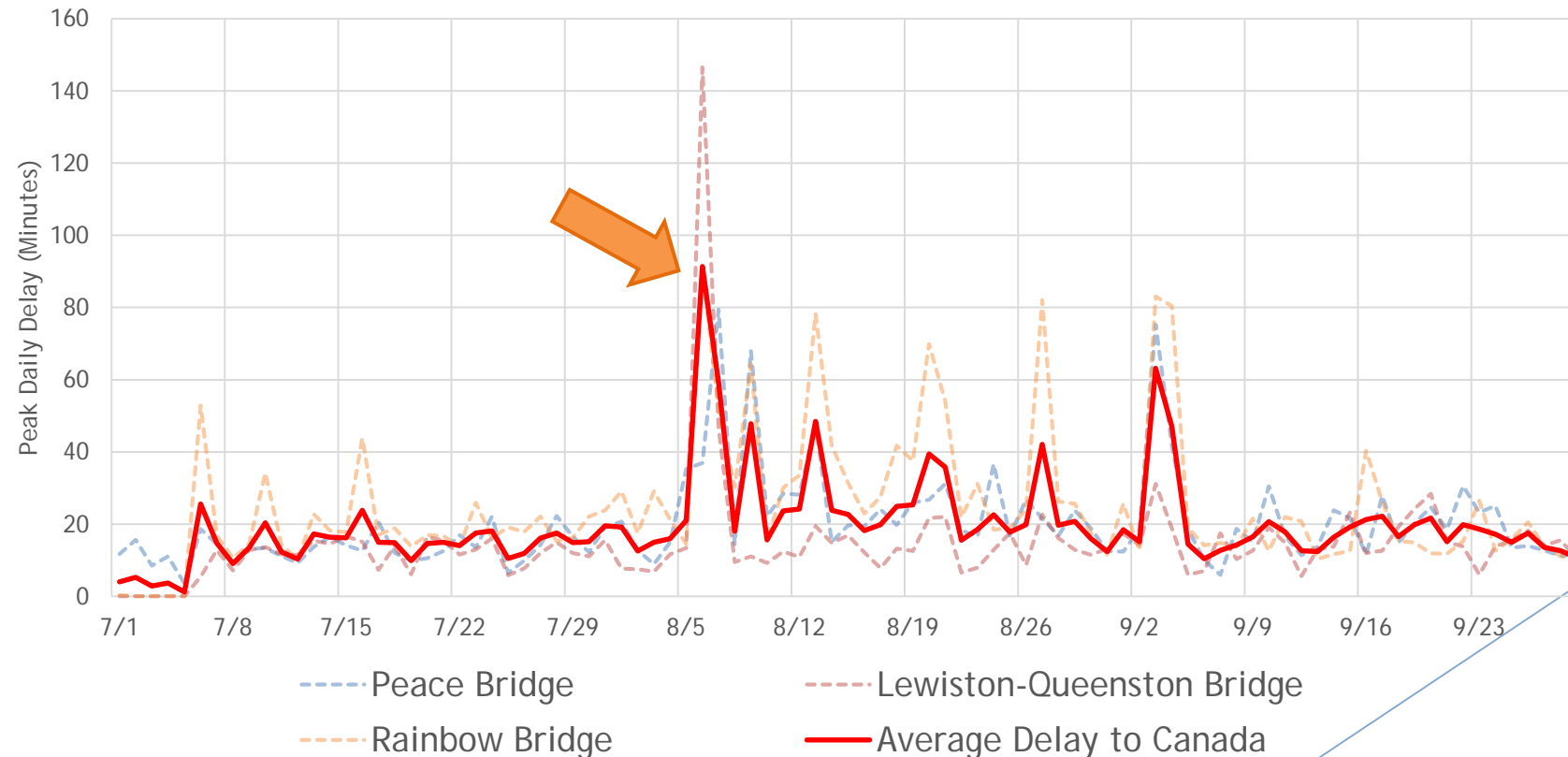
August 9, 2021

- ▶ Experienced immediate increase in demand
- ▶ Crossing volumes still down by approx. **85%** from Aug. 2019



Managing Border Delays

- ▶ Saw first significant passenger delays since March 2020 following restriction changes
- ▶ Monitoring data in real-time allows for adaptive response from Bridge, Customs, and Operations staff



Border Delay Traveler Information

NITTEC Website

The screenshot shows the NITTEC website interface. At the top, there is a navigation bar with links for Traffic Map, Cameras, Travel Advisories, Travel Resources, About Us, and MyNITTEC. Below this is a section for 'Dynamic Message Signs' with a sub-section for 'ACTIVE SIGNS'. The active signs are organized into two columns: SIGN PHASE 1 and SIGN PHASE 2. Each sign entry includes a location, a 511 logo, and a delay status in minutes. For example, 'I-290 West before Colvin Blvd.' shows 'BORDER CROSSING DELAYS IN MINUTES' for both phases. Below the active signs is a 'Border Crossing' section with a dropdown menu and a table showing delay times for different bridges and directions.

Location	Sign Phase 1	Sign Phase 2
I-290 West before Colvin Blvd. 290W Colvin updated 8/27/2021 3:31pm	BORDER CROSSING DELAYS IN MINUTES	PEACE BR 16 RAINBOW 40 LEW-QUEENS 10
Route 33 West before I-90 Interchange 33W I-90 updated 8/27/2021 3:31pm	BORDER CROSSING DELAYS IN MINUTES	PEACE BR 16 RAINBOW 40 LEW-QUEENS 10
I-90 East before Blasdell/Milestrip Rd. 90E Blasdell updated 8/27/2021 3:31pm	RAMP TO EXIT 55 CLOSED	USE ALTERNATE ROUTE
I-90 East between Ridge Rd. and Route 400 90E RTE 400 updated 8/27/2021 3:31pm	BORDER CROSSING DELAYS IN MINUTES	PEACE BR 16 RAINBOW 40 LEW-QUEENS 10
I-90 West before I-290 Interchange 90W I-290 updated 8/27/2021 3:31pm	BORDER DELAYS IN MINUTES	PEACE BR 16 RAINBOW 40 LEW-QNS 10

Direction	Peace Bridge	Rainbow Bridge	Lewiston/Queenston Bridge
Crossing Into U.S.A.	NO DELAY	17 min	NO DELAY
Crossing Into Canada	20 min	14 min	NO DELAY

Legend: 0 - 29 minutes (Green), 30 - 59 minutes (Yellow), 60+ minutes (Red)

NITTEC App

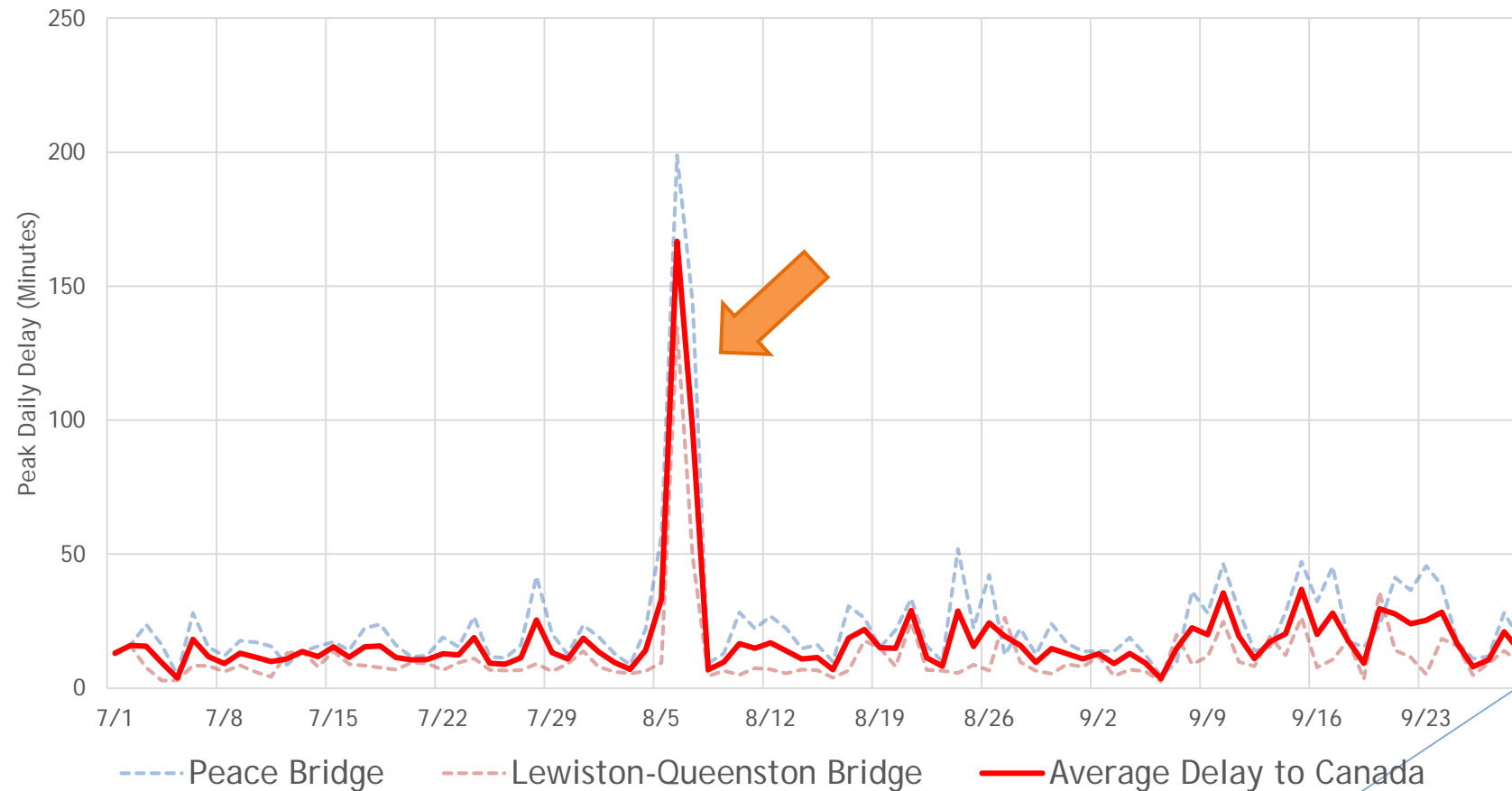
The screenshot shows the NITTEC mobile app interface. At the top, there is a navigation bar with links for CAMERAS, MAP, and MYNITTEC. Below this is a large banner for 'DON'T DRINK AND DRIVE IT'S THE LAW' with a 'SOBRIETY CHECKPOINT AHEAD' sign. Below the banner is a section for 'Incidents & Alerts' which states 'There are no significant Incidents / Alerts at this time.' Below this is a 'Border Crossing' section with a dropdown menu and a table showing delay times for different bridges and directions.

Direction	Peace Bridge	Rainbow Bridge	Lewiston/Queenston Bridge
Crossing Into U.S.A.	NO DELAY	17 min	NO DELAY
Crossing Into Canada	15 min	12 min	NO DELAY

Legend: 0 - 29 minutes (Green), 30 - 59 minutes (Yellow), 60+ minutes (Red)

Truck Delays

- ▶ A different type of extreme event: work slow down by customs staff on Friday August 6, 2021

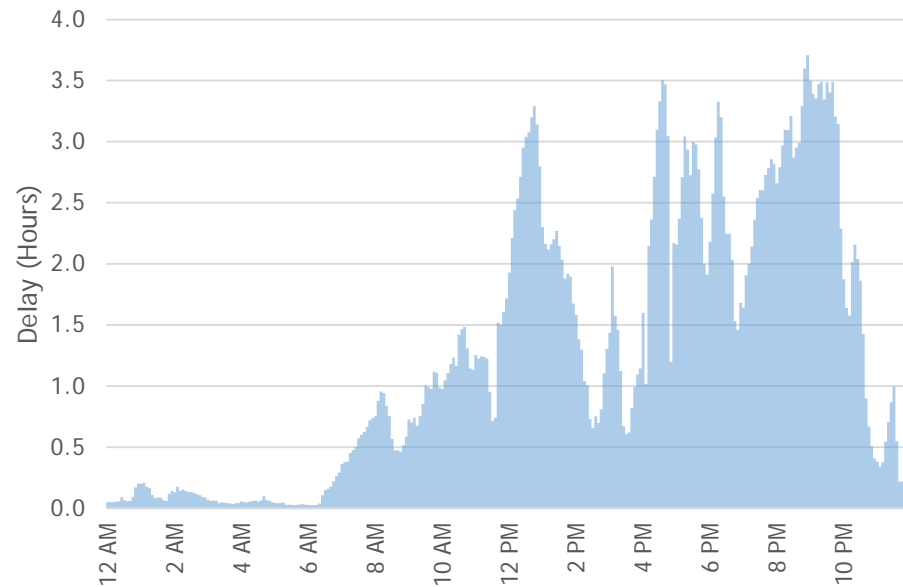


Truck Delays

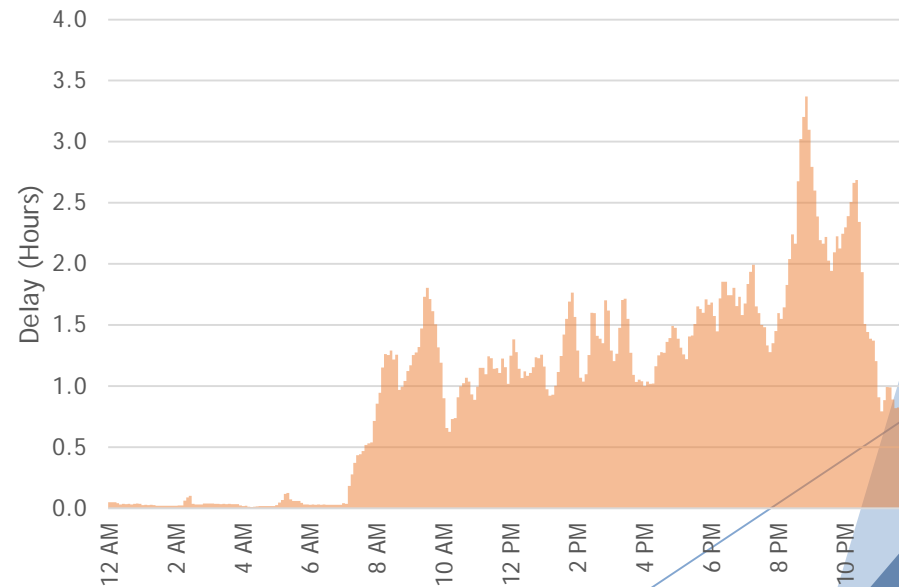
- ▶ Delays for trucks at both crossings reached between 3.5 to 4 hours
- ▶ Truck staging response plan initiated

Friday August 6, 2021

Peace Bridge - Canada Bound Truck Delays



Lewiston-Queenston Bridge - Canada Bound Truck Delays

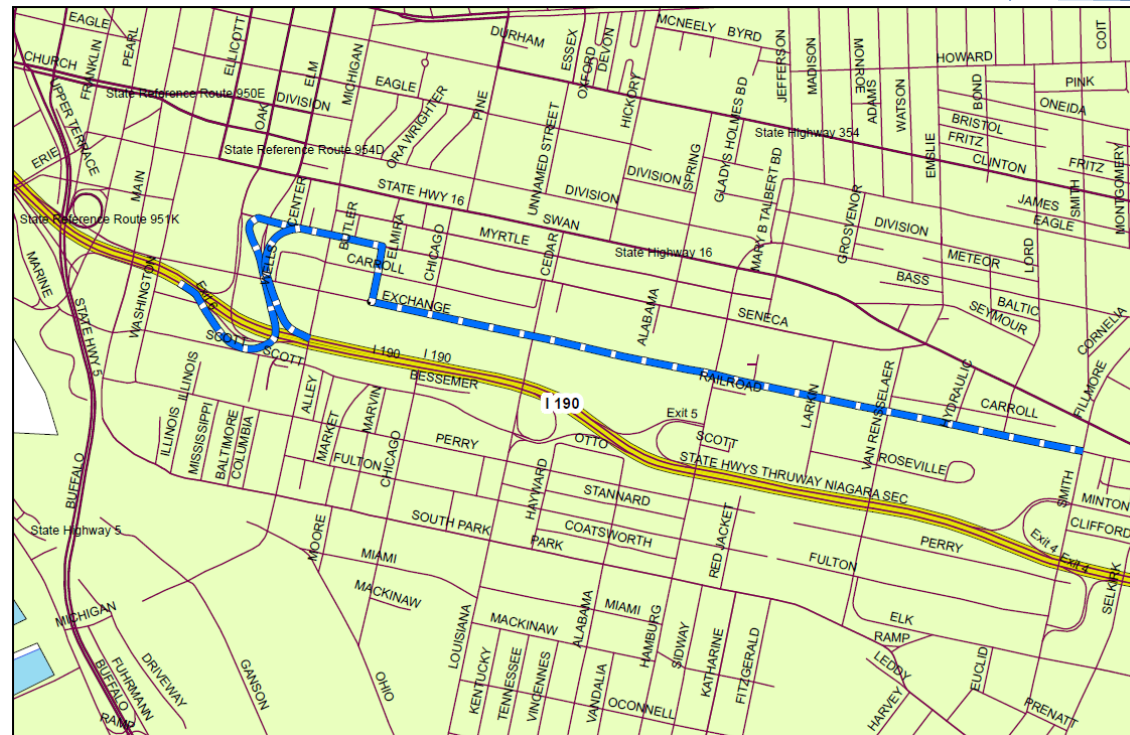
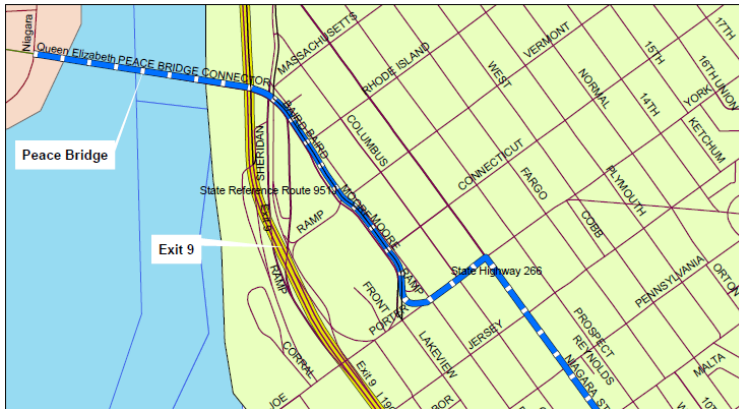


Border Crossing Response Plan

- ▶ Mission: to prevent queued traffic from forming on high-speed facilities such as Interstates and Freeways without serious disruption to the arterial street system.
- ▶ Requires real-time coordination between NYSTA, NYSDOT, MTO, State Police, City Police, Bridge Authorities, and Customs Agencies
- ▶ Includes plans for different scenarios, depending on delay location, severity, and number of crossings impacted

Truck Staging Response

- ▶ Personnel guided trucks out of the queue to staging area on Exchange Street
- ▶ Once delays subsided, trucks released back into the queue in small groups

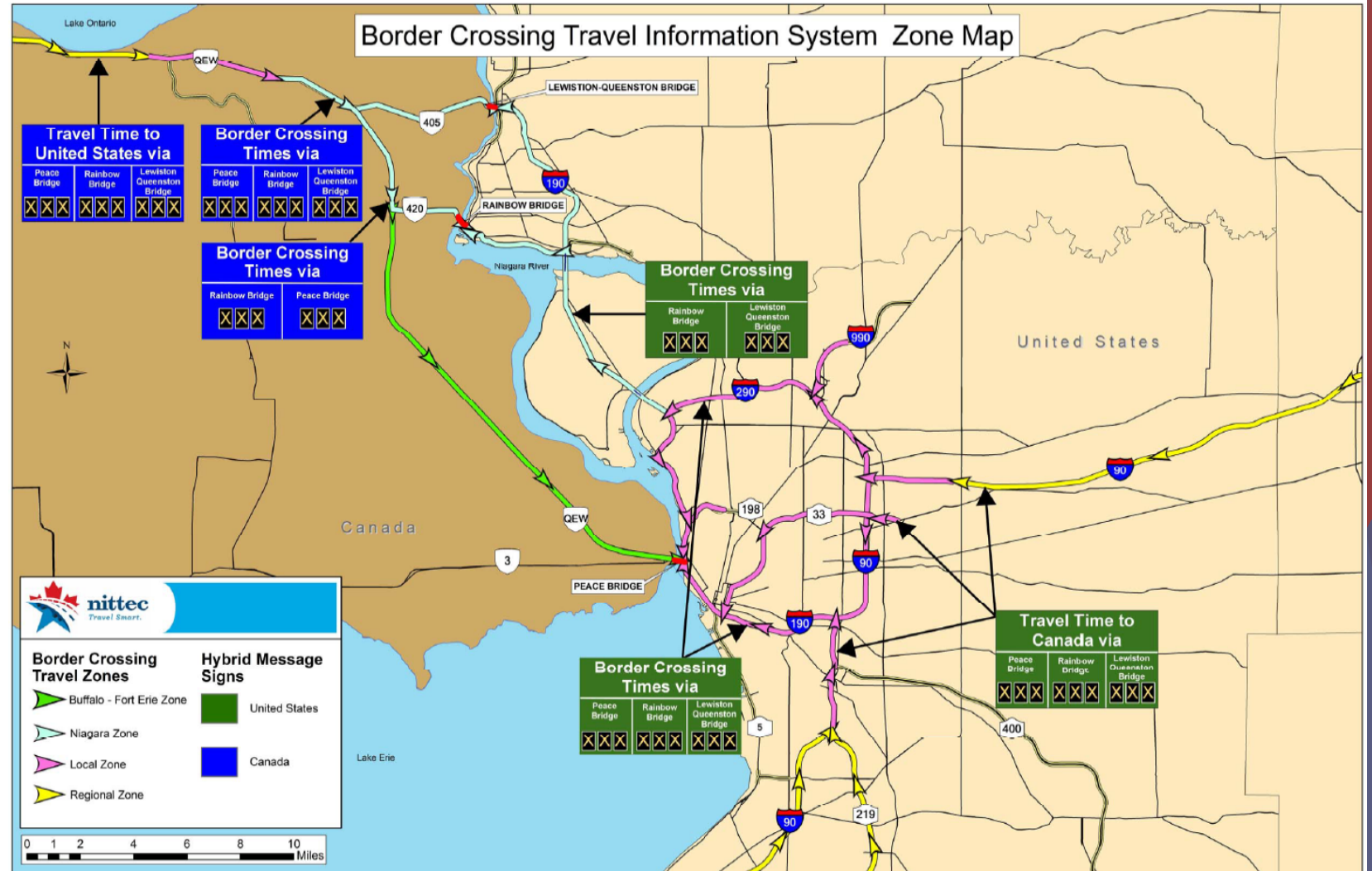


Moving Forward



Hybrid Message Signs

- ▶ Deployment of improved traveler information at key decision points
- ▶ Currently working with agencies on funding and installation solutions



Advanced Transportation and Congestion Management Technologies Deployment Grant

- ▶ Awarded to the region in 2016
- ▶ Multiple focus areas, including improved border crossing performance and commercial vehicle operations
- ▶ Development and deployment to begin next year



Questions

Contact Information

Athena Hutchins, P.E.
ahutchins@nittec.org

(716) 847-2450
www.nittec.org