

TRANSPORTATION AND INFRASTRUCTURE TASK FORCE – OCTOBER 7, 2021

COMMUNICATIONS

Distributed OCTOBER 1, 2021

Item

C1. Presentation material.

1

Disclaimer Respecting External Communications

Communications are posted on the City's website pursuant to Procedure By-law Number 7-2011. The City of Vaughan is not responsible for the validity or accuracy of any facts and/or opinions contained in external Communications listed on printed agendas and/or agendas posted on the City's website.

Please note there may be further Communications.

GTA West Transportation Corridor Route Planning, Preliminary Design and EA Study – Stage 2

The City of Vaughan –
Transportation and Infrastructure Task Force

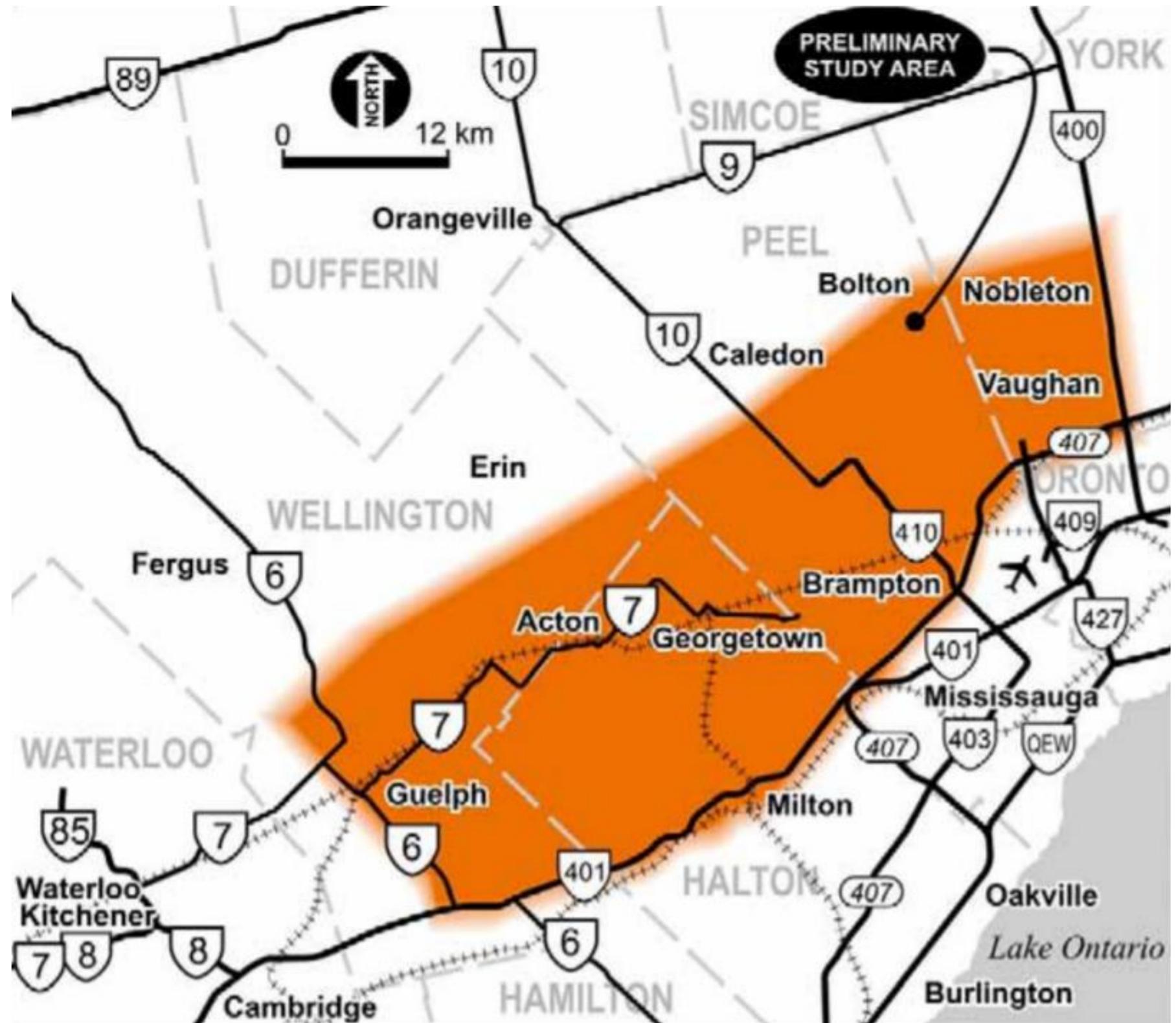
October 7, 2021

Agenda

- Overview of the GTA West Study
- Preferred Route and 2020 Focused Analysis Area (FAA)
- Preliminary Design Activities
- Consultation and Engagement
- Next Steps
- Open Discussion

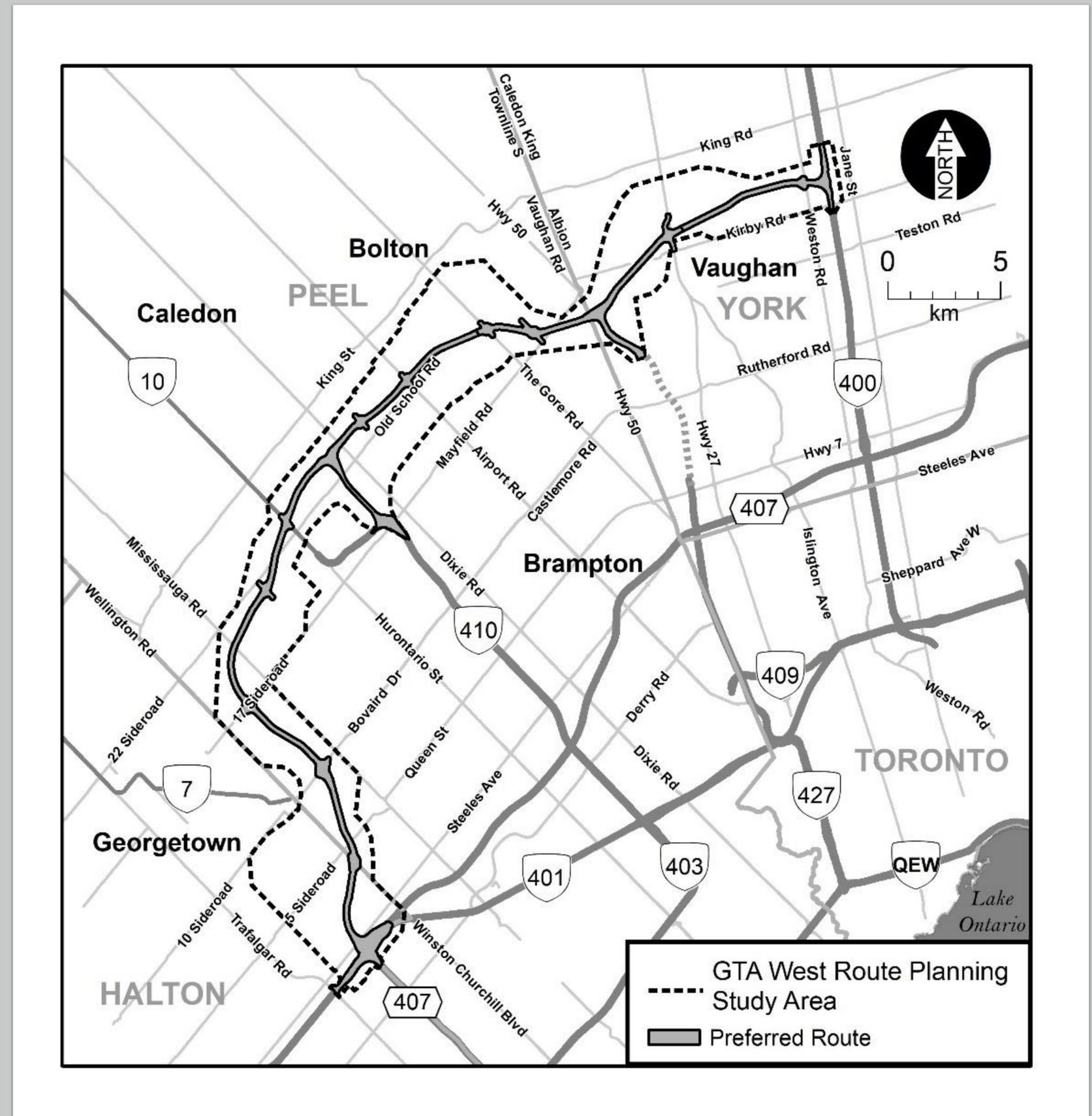
Study Overview

- Stage 1 (2008 – 2012) focused on long-term transportation problems and opportunities:
 - Optimizing the existing transportation and transit network and significantly investing in transit would not be enough.
 - GTA West Highway and Transit corridor is still required.



Study Overview

- Stage 2 focuses on a new highway and transit corridor:
 - Extending from Highway 401/407 ETR interchange areas in the west to Highway 400 in the east.
 - Includes a 400-series highway and transit corridor, potential goods movement priority features, and other potential features like electric vehicle charging stations at carpool lots.

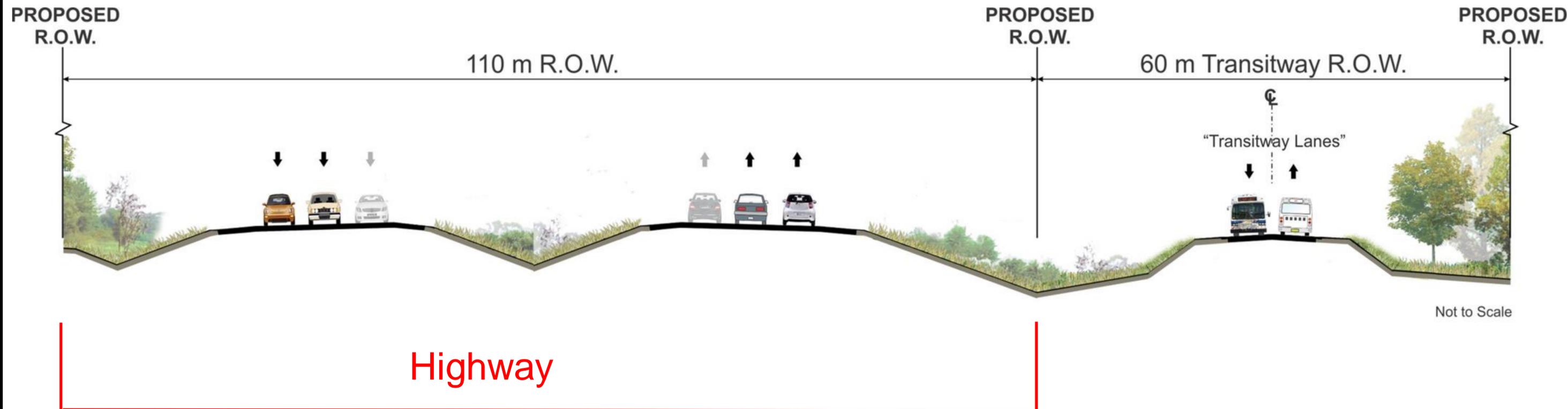


Planning *With* Vision, Planning *For* People

- The need for the GTA West Study remains and is strengthened by the GGH population and employment growth forecasts, reflecting more people and jobs by 2041 and beyond. By 2051, the population of the GGH is expected to grow to almost 15 million people, who will represent approximately 7 million jobs.
- Congestion already costs the GTA \$11 billion per year in lost productivity. Ontario needs new infrastructure to help move people and goods or the region will quickly become overwhelmed.
- Stage 1 modelled and projected traffic demand forecasts which showed that the GTA West corridor would have 300,000 vehicle trips per day by 2031.
 - The GTA West highway would save the people who use it up to 30 minutes each way.
- The use of 407ETR as an alternative to the GTA West highway is not a realistic option if we want to reduce congestion and keep goods moving. There will be a significant increase in highway usage in the next few decades given the expected population growth in the GGH and the 407ETR alone is not enough to meet this projected demand surge.

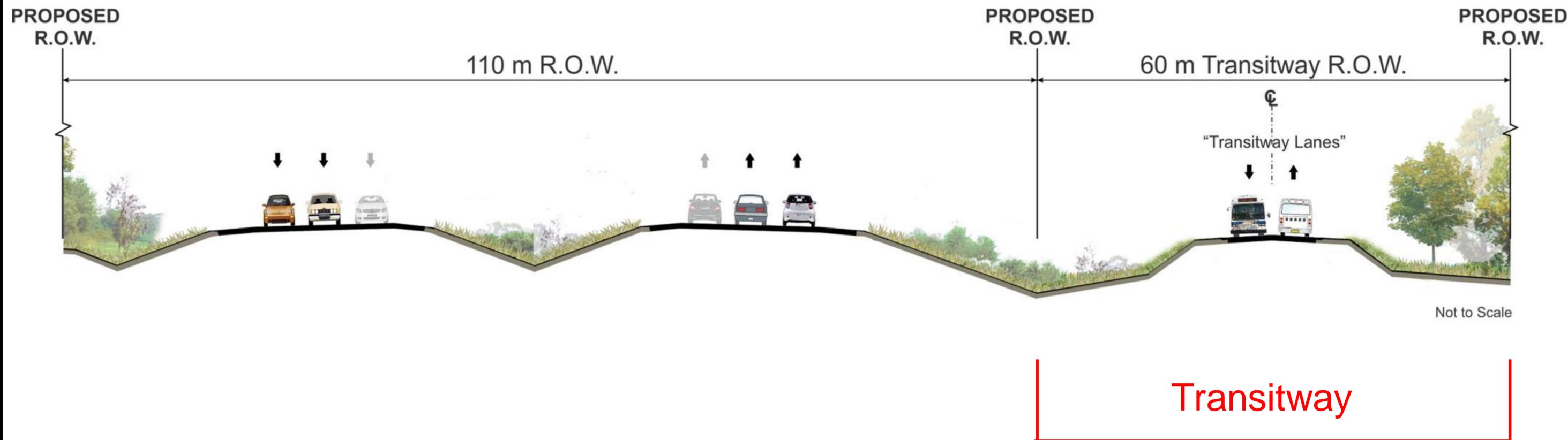
Federal Impact Assessment (IA)

- On May 3, 2021, the Federal Minister of Environment and Climate Change designated the GTA West Study under the Federal Impact Assessment Act (IAA).
 - We have started to develop an Initial Project Description (IPD).
 - Once submitted, the Agency will consult with the Indigenous communities and other stakeholders and prepare a Summary of Issues.
 - We will then prepare a Detailed Project Description (DPD).
 - After the DPD is submitted, the Agency must provide a decision regarding whether a Federal Impact Assessment is required.
- A designation of the GTA West project for a Federal IA does not replace the provincial Environmental Assessment (EA) process underway.
 - We will continue with our planned public and Indigenous community consultations and engagements.



New Highway Corridor

- The corridor will initially be designed as a 4- to 6-lane highway with a separate adjacent transit corridor.
- The total proposed right-of-way (ROW) will be 170m, of which the highway will be 110m.



New Transit Corridor

- The transit corridor will be 60m of the total ROW, run parallel to the GTA West highway and will:
 - Allow buses (and potentially in the future, light rail vehicles) to operate on express schedules.
 - Include stations at strategic locations and provide transit connections with buses onto major arterial roadways, Highway 401, 407ETR, Highway 410, Highway 427, and Highway 400.

Potential Goods Movement Priority Features



Truck Only Lanes

freightwaves.com



Intelligent Transportation Systems Features (variable message signs, real time traveler information)



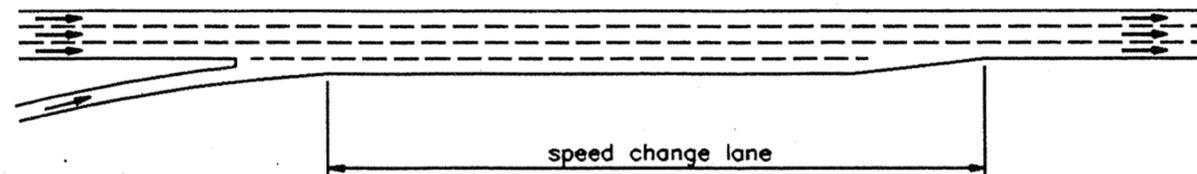
Truck Parking Facilities

hornlogistic.com



Enhanced Design to Accommodate Long Combination Vehicles

semanticscholar.org



Longer Speed Change Lanes



Enforcement Features (weight and inspection stations)

bristoltruckrentals.com

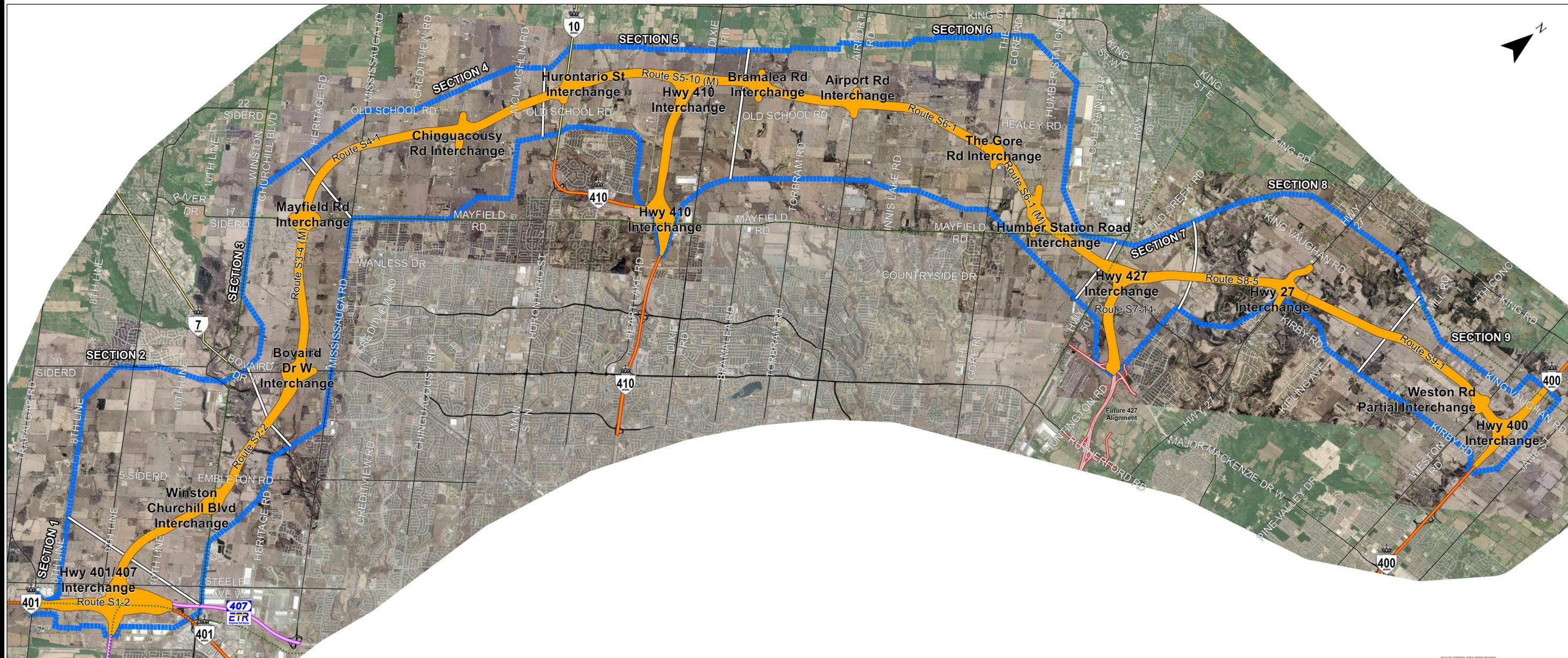
Future-Ready

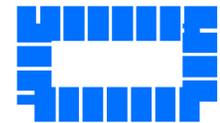
- Ontario is a leader in the connected and automated/autonomous vehicle technology space.
- The GTA West highway and transit corridor is future-ready by supporting infrastructure for a connected corridor:
 - Vehicle to Infrastructure (V2I) shares information in two directions.
 - Provisions for Road Side Units (RSUs) that provide the connectivity and sharing of the Basic Safety Message.
- Movement of goods through truck platooning is being considered.



CAV Readiness Plan, March 2020

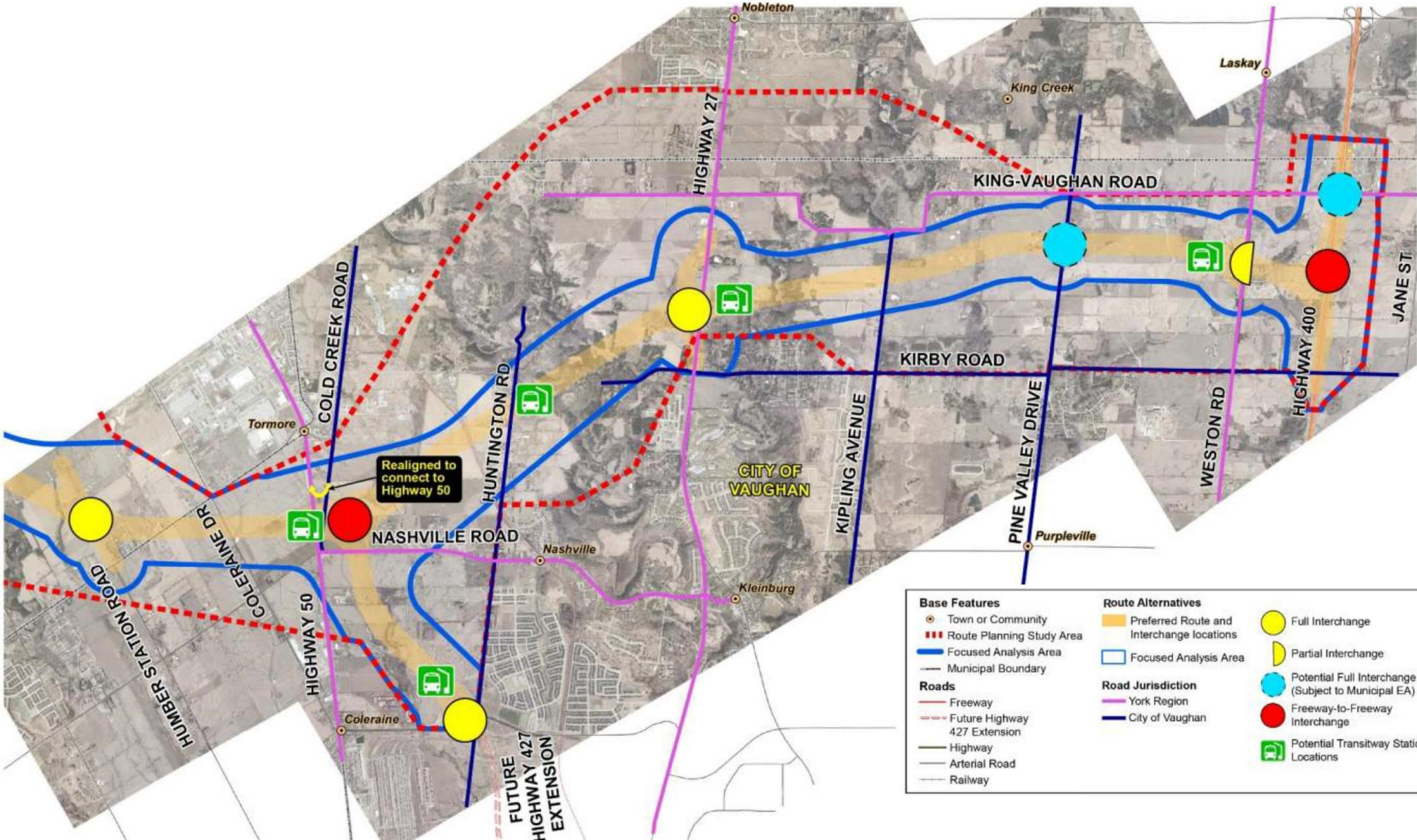
Preferred Route



 Route Planning Study Area

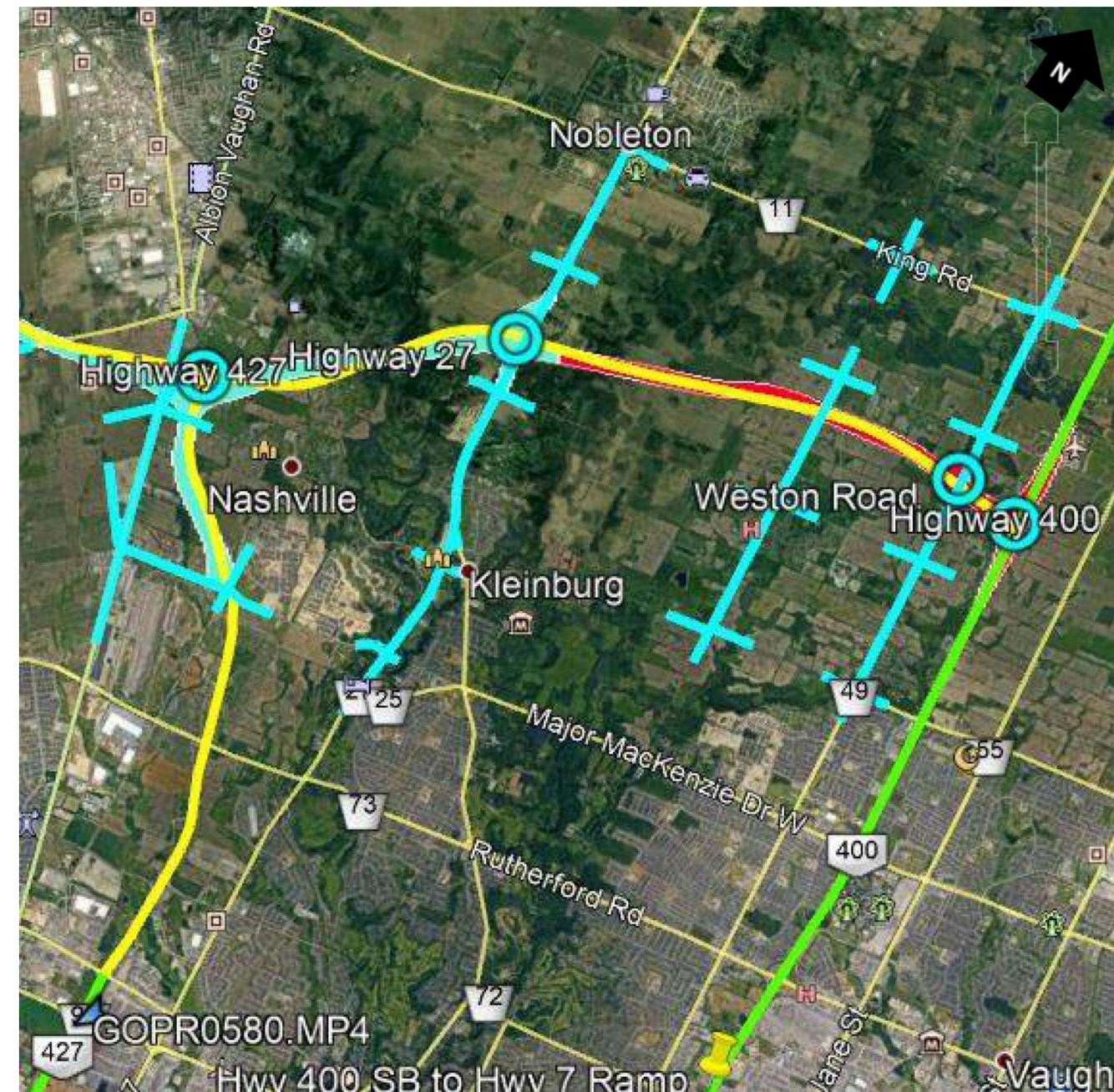
 Preferred Route and Interchange Locations

Integration of the GTA West Corridor

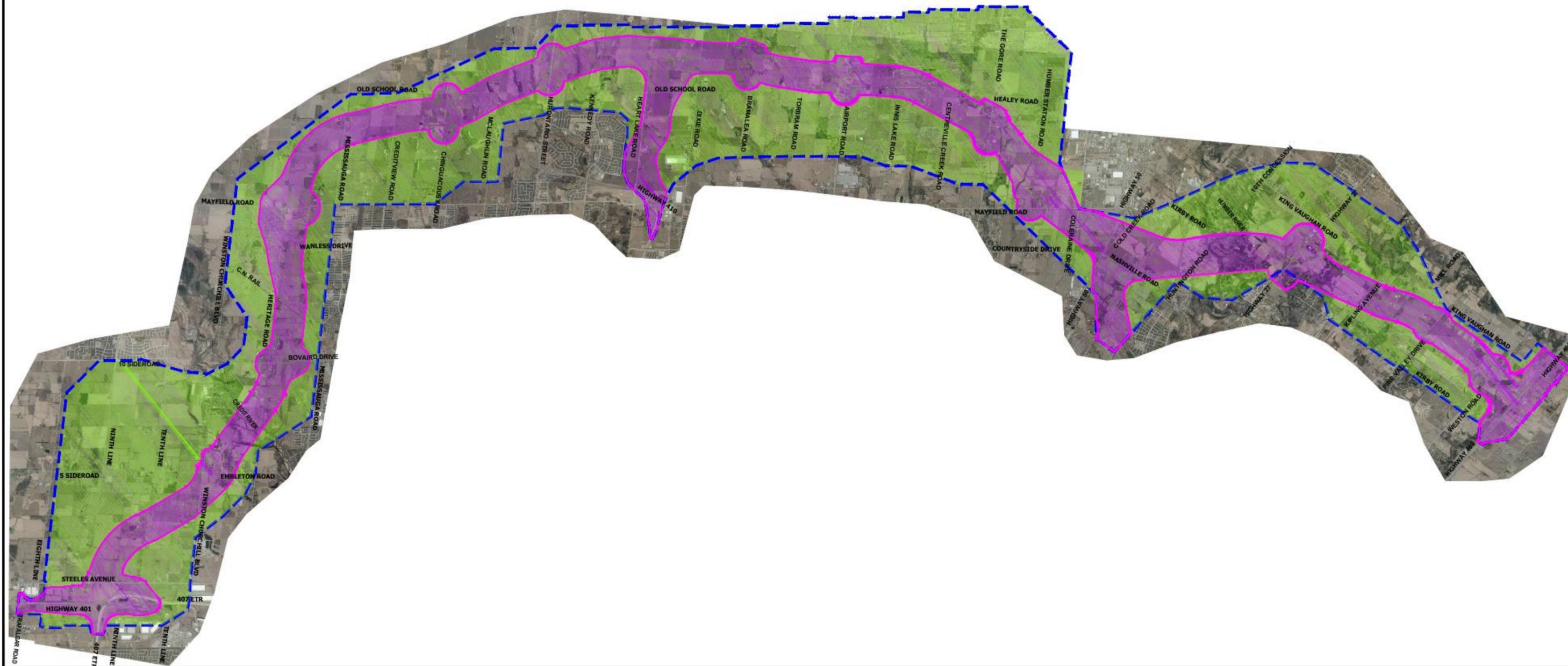


Traffic Engineering – Micro and Macro Modelling

- Base year model calibration completed.
- Future networks input requested.
- Initiated modeling of future scenarios (2031 and 2041 horizons).
- Networks:
 - Existing conditions: MTO GGHMV4.
 - Future networks: MTO GGHMV4, with updates based on municipal plans.
- Land use:
 - Existing conditions: 2016 Census.
 - 2031 Future conditions: Based on inputs from Region/Municipalities.
 - 2041 Future conditions: MTO GGHMV4.
- Microsimulation network includes connections to freeway and crossing roads with interchanges extended to next 1 or 2 intersections, as applicable.



2020 Focused Analysis Area (FAA)



- **Purple Area** is the 2020 FAA. Properties located in this area could be directly impacted by the multimodal transportation corridor, ancillary uses, or if refinements are made to the route during preliminary design.
- MTO has reduced interest in properties in the **Green Areas**.

Field Investigations

- Field investigations will inventory the natural, social, cultural and other infrastructure features in the study area.
- Permission to enter properties have been received from some owners to allow access to lands in order to obtain valuable field information that is helping to develop the preliminary design of the Preferred Route.

Discipline	Type of Field Investigation
Natural Environment	Fisheries (2020 - 2022), Wildlife (2020 - 2022), Wetlands (2020 - 2022), Vegetation (2020 - 2022)
Socio-Economic Environment	Land Use (2021), Agriculture (2021), Potentially Contaminated Sites (2021)
Cultural Environment	Archaeology (anticipated 2022), Built Heritage (2020 & 2021), Cultural Heritage Landscapes (2020 & 2021)
Engineering	Fluvial Geomorphology (2020 & 2021), Drainage (2021), Structural (2021), Foundations (2021), Pavement (2022), Electrical (2022), Erosion and Sediment Control (2021)

ENGINEERING INVESTIGATIONS

Preliminary design includes seamless coordination of technical, environmental and consultation disciplines, which work in parallel on various aspects of the Preferred Plan. When there is a modification or refinement in one discipline, there is often a need to make corresponding adjustments in other disciplines.

Advance traffic management systems (ATMS)

- Investigate and design feasible ATMS options (e.g. closed-circuit TV cameras, variable message signs, traffic data collection, etc.)

Highway and transitway

- Develop 3D model to confirm:
 - Roadway alignments and cross-sections
 - Grading and property requirements
 - Utility impacts
 - Integration with regional and local roads, transit services, and active transportation plans
 - Constructability and construction staging requirements

Traffic

- Modelling to understand traffic queues and delays
- Prepare preliminary traffic management plan

Electrical

- Evaluate illumination warrants
- Perform lighting calculations
- Evaluate lighting alternatives
- Prepare layouts for electrical equipment (lighting and traffic signals)

Foundations

- Drill boreholes to collect information about strength and other physical properties of underlying soils and rocks
- Prepare recommendations for foundations of bridges and culverts

Pavement

- Drill boreholes and pavement cores to collect information about subsurface conditions
- Provide pavement composition/thickness recommendations

Value engineering study

- Arrange for an independent review of the Preferred Plan
- Results will confirm approaches or recommend innovative solutions that increase benefits and reduce costs without compromising the functional and value objectives of the study

Risk assessment study

- Analyze project risks throughout the life cycle of the project
- Identify and track appropriate steps to eliminate or reduce risks to acceptable levels

Bridges

- Evaluate alternatives and develop designs considering aesthetics, navigational requirements, elimination/mitigation of in-water work, construction staging and sequencing, utility relocation, etc.

Drainage and hydrology

- Analysis and design to:
 - Ensure adequate drainage of the corridor
 - Ensure appropriate sizing of watercourse bridges/culverts
 - Confirm the type of erosion protection and stormwater management required

* The highway and transit corridor right-of-way is preliminary (alignment to be confirmed) .

ENVIRONMENTAL STUDIES

We are currently completing studies to establish baseline conditions, complete impact assessments and develop measures to avoid, minimize or mitigate potential effects in the following areas:

Landscape composition

- Examine existing landscape conditions
- Identify mitigation and enhancement treatments for significant vegetation, viewsheds, topography and landform

Contaminated property and waste management

- Identify, investigate and assess any properties/sites with high potential for potential environmental concern

Surface water and fluvial geomorphological

- Review existing conditions
- Identify measures to mitigate future erosion risk
- Identify stormwater management and watercourse impacts and mitigation

Groundwater

- Characterize hydrogeological conditions
- Identify potential groundwater impacts and mitigation

Built heritage and cultural heritage landscapes

- Map resources to identify areas and individual sites of particular significance and sensitivity

Noise

- Identify noise sensitive areas
- Conduct noise modelling analysis to determine impacts
- Determine need and type of noise mitigation

Air quality and greenhouse gas emissions

- Follow MTO's Environmental Guide for Assessing and Mitigating the Air Quality Impacts and Greenhouse Gas Emissions of Provincial Transportation Projects, as it relates to assessing and mitigating impact to air quality

Snow drift

- Calculate the amount of snow available to drift towards the highway using numerical modelling tools
- Identify potentially problematic areas for snow drifting onto the infrastructure
- Recommend mitigation for each potentially problematic area

Land use factors including agriculture

- Update land use information using field reviews, aerial photography, mapping and municipal information
- Undertake Agricultural Impact Assessment, or equivalent study
- Provide recommendations that minimize impact on agriculture and existing/proposed land uses

Archaeology

- Identify archaeological resources through background review and field studies
- Recommend mitigation measures or requirement of Stage 3 assessment as necessary

Terrestrial ecosystem

- Assess wildlife habitat, wetlands, and designated areas
- Complete plant inventories and conduct species at risk screening
- Inventory Greenbelt designated lands
- Consider measures to avoid, minimize or mitigate potential effects (including using the Greenbelt Guideline)

Fish and fish habitat

- Conduct aquatic habitat surveys
- Conduct species at risk screening
- Consider measures to avoid, minimize or mitigate potential effects

* The highway and transit corridor right-of-way is preliminary (alignment to be confirmed) .

Community Engagement Webinars (July and September 2021)

- To further meet the public's needs and address community questions, the GTA West Project Team hosted two Community Engagement Webinars where stakeholders were provided with the opportunity to understand more about the project and have their questions answered.
- A brief overview of the project was provided, followed by a question & answer period.
 - 457 stakeholders attended the event in July, 285 in September
 - 265 comments or questions were submitted through the Q&A box in July, 171 in September

Questions Asked at Community Engagement Webinars

Have you considered the 407ETR as an alternative to a new highway?

Is the corridor needed if more people will be working from home in the future?

Will the highway be tolled?

Have Indigenous communities been engaged? Would Indigenous artwork be incorporated along the highway?

How is agriculture being considered in this study?

Given there is a climate change emergency, why would you contemplate building a new highway?

What is the Ministry's position on the Brampton Heritage Heights Boulevard Concept?

Explain how air quality impacts are being considered in the study? How much lower would GHG emissions be if the highway wasn't built?

Will the Ministry agree to TRCA's Voluntary Project Review?

How can the government say it is protecting Greenbelt lands but then build a new highway?

Will any properties need to be expropriated and will the owners be given a fair deal?

How are you considering SAR? Have these species been observed and what mitigation measures are proposed?

Are there more visually pleasing ways to reduce noise than noise walls? Can you plant trees to stop noise and pollution?

What side of the highway will the transitway be on? What amenities are you considering?

Next Steps

<p>Fall 2021 – Early 2022</p>	<p>Further develop the draft Community Value Plan and preliminary design of the Preferred Route.</p> <p>Continue to meet with Indigenous Communities, municipal staff, Regional Municipal Councils.</p> <p>Public Information Centre is expected in late 2021.</p> <p>Develop the Initial Project Description and submit to the Impact Assessment Agency of Canada in early 2022.</p>
--------------------------------------	---

* **Schedule is subject to change**

Open Discussion

Thank you



CALL US

1-877-522-6916



EMAIL US

project_team@gta-west.com