Highway 413 Transportation Corridor Route Planning, Preliminary Design and Environmental Assessment Project – Stage 2

Public Information Centre #4

October 3

6:00-8:00pm

We will begin shortly. This is a webinar platform, which allows you to see and hear the presenters. Within the Zoom platform, there is an option to submit questions to the Project Team which will be addressed at set points during the meeting or afterwards in follow-up communications.

Land Acknowledgement

Although there are people from across Ontario on this call, we would like to acknowledge that MTO's Central Region and specifically the Highway 413 Project is geographically located within an area that is rich in Indigenous history, and that there are many groups, that have resided in, and travelled through the region since time immemorial.

Due to the virtual nature of this presentation MTO encourages all attendees to learn about the Treaty and traditional territory in which their home and work location are situated.

Purpose of the PIC

- Brief overview of the Highway 413 Transportation Corridor Route Planning, Preliminary Design and Environmental Assessment Project (the Project)
- Provide an update on:
  - the Preliminary Design for the Highway and conceptual design for the Transitway
  - the provincial Environmental Assessment, ongoing environmental studies, investigations and recent fieldwork
  - the federal Impact Assessment process and Initial Project Description
- Address questions and receive feedback

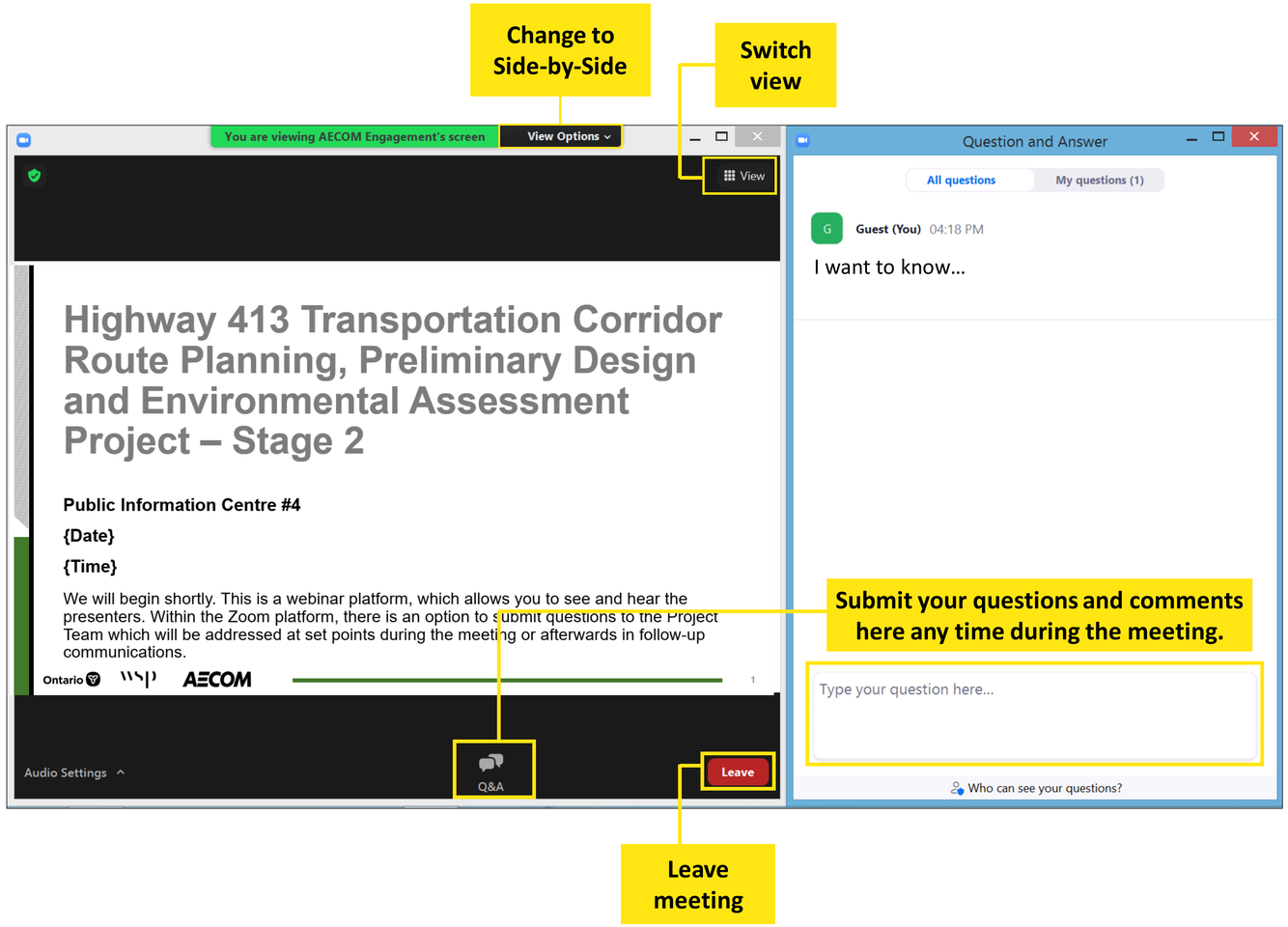
Virtual Meeting Details

You can control the features you see (video, speaker view or, full screen view, etc.).

To ask a question or provide a comment, please use the Q & A box.

This event is being recorded.

All questions submitted in the Q&A box that pertain to the EA or the Project will be documented and responded to during the meeting or in follow-up communications.



Presenter Introductions-

Curtis Beyer, MTO
Project Manager

Jonathan McGarry, MTO
Project Manager

Brenda Liegler, MTO
Manager, Major Planning and Innovations Office

Robert Vandenberg, MTO
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Principal Economist & Social Strategies Lead

Slavi Grozev, RWDI
Senior Engineer- Noise and Vibration

Rebecca Gray, AECOM
Project Archaeologist – Cultural Resources

Faiza Waheed, Intrinsik
Health Impact Assessment Lead | Environmental Health Scientist

Tara Bailey, RWDI
Senior Engineer – Air Quality

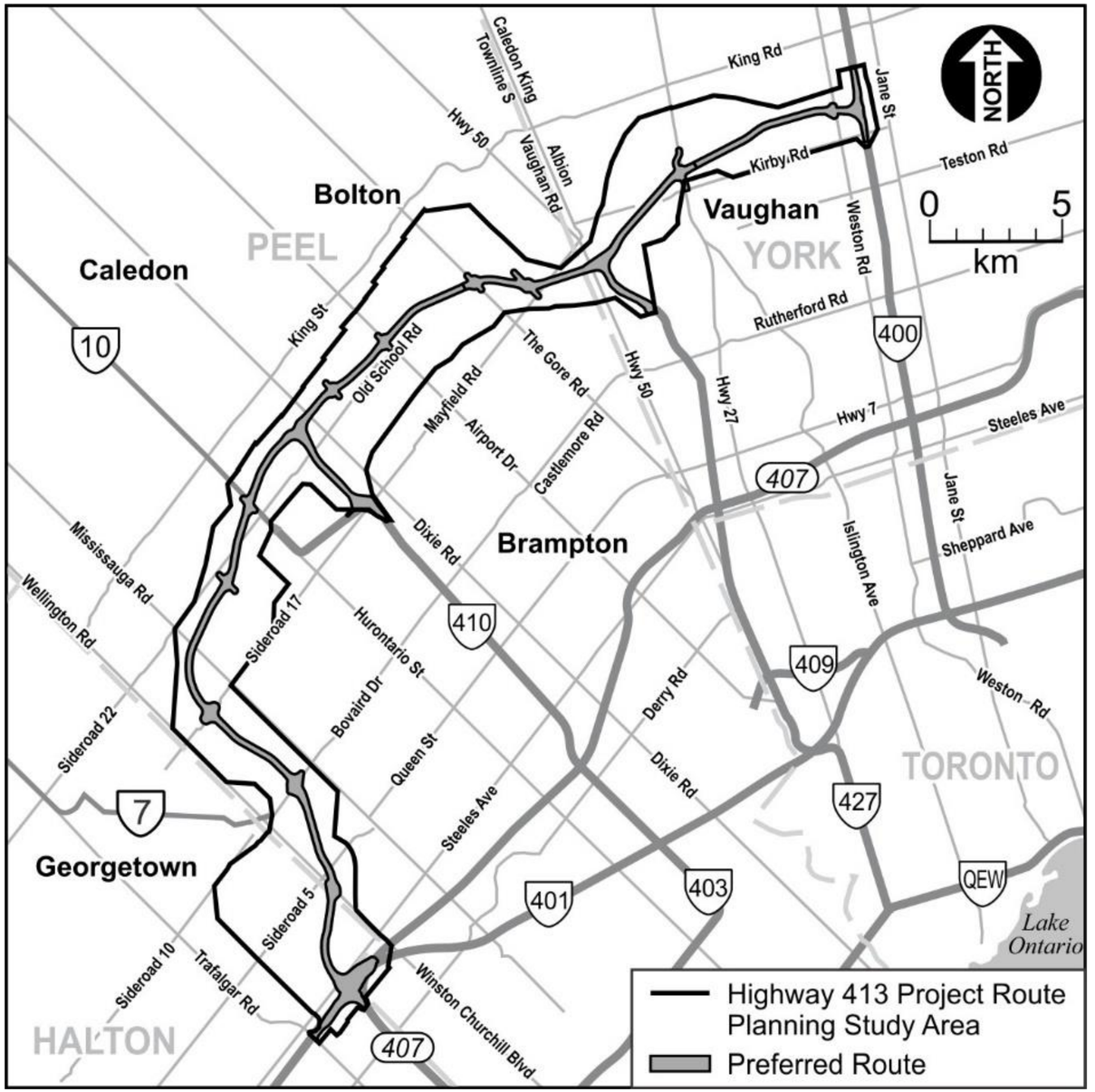
Project Overview

The proposed transportation corridor will feature a 52-kilometre (km) 400-series highway and lands protected for a future transitway. The Highway 413 Project also includes:

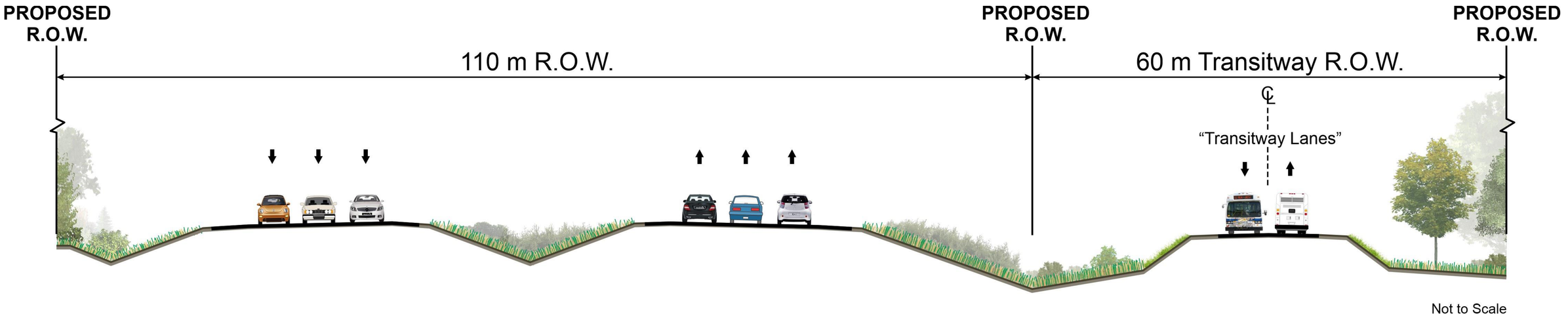
- A 4 km extension of Highway 410, and
- A 3 km extension of Highway 427.

Highway 413 will have:

- 11 interchanges at municipal roads
- goods movement priority features
- bridge infrastructure (including road, railway and watercourse crossings)
- stormwater management infrastructure
- static overhead and roadside signage, roadside safety and highway illumination infrastructure
- Advanced Traffic Management Systems
- maintenance yards and commercial vehicle inspection facilities
- carpool lots, where deemed appropriate



Typical Cross-Section



The corridor will initially be designed as a 6-lane highway with a posted speed limit of 110 km/hr, with the potential for expansion to 10 lanes.

The proposed right-of-way (R.O.W.) will be 170 m (110 m for the highway and 60 m for the transitway).

Lands will also be protected for a separate, adjacent transit corridor.

Rationale for Highway 413

15,000,000 by 2051

Greater Golden Horseshoe population growth

Effects of congestion

Importance of goods movement

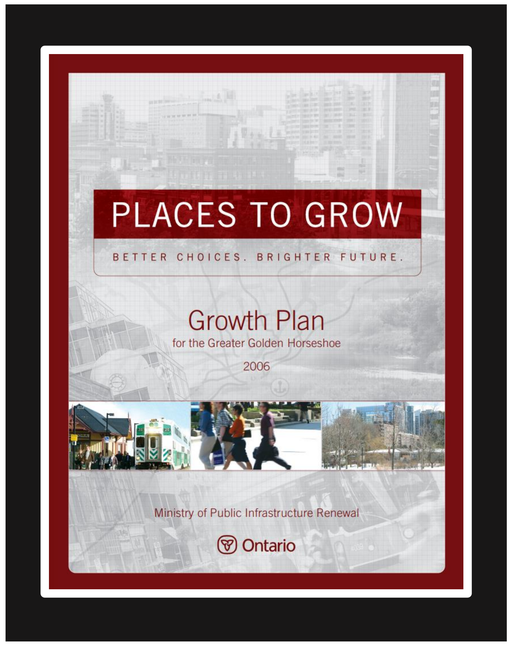
- The Greater Golden Horseshoe is one of the fastest-growing areas in North America, and its population is estimated to increase to nearly 15 million people by 2051.
- Congestion already costs the Greater Toronto & Hamilton Area an estimated $11 billion per year in lost productivity, adds to the costs of goods, and creates carbon emissions.
- Highway 413 helps alleviate traffic congestion by relieving North America's most congested corridor (Highway 401).
- Highway 413 will help alleviate traffic congestion and improve goods movement in the Greater Golden Horseshoe by providing strategic linkages across the Halton, Peel, and York regions.

Your Questions and Feedback

Top inquiries we have received in the last two weeks:

- What is the status of the Highway 413 Project, and when will construction begin / Highway open?
- Why not use Highway 407 as an alternative?
- What is being done to address concerns about the Greenbelt and farmlands?
- What is the status of the Focused Analysis Area?

Provincial Environmental Assessment – Stage 1



EA Terms of Reference
(2007-2008)

EA Stage 1
(2008-2012)

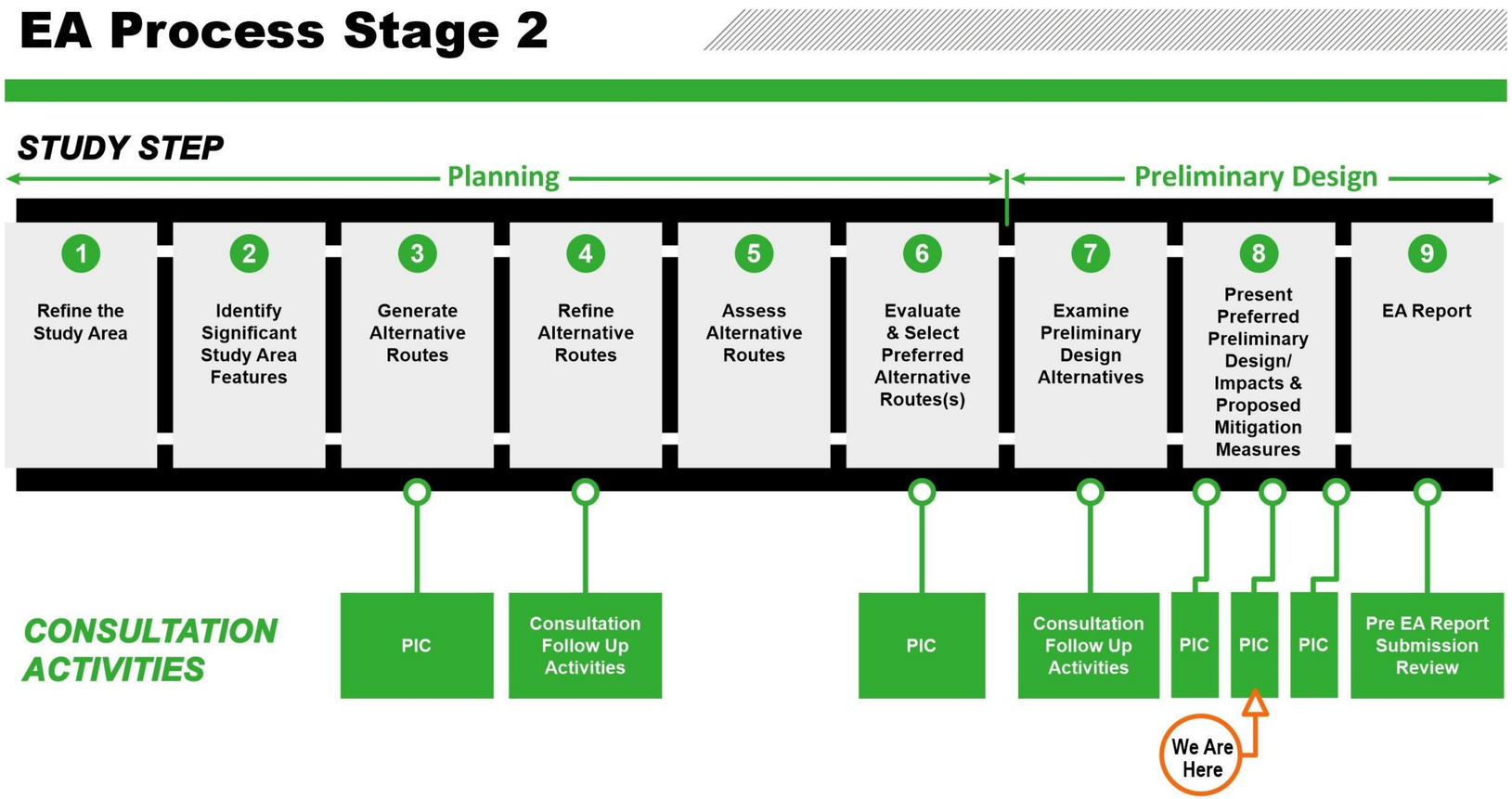
- Looked at broad Preliminary Study Area
- Considered all modes to address future transportation needs
- Modelling to determine future growth and transportation needs
- Assessed the ability of single modes to meet the needs, assuming only existing planned improvements

Transportation Development Strategy
(2012)

- Strategy was informed by Stage 1 findings and data
- Took a “building block” approach to assess the alternatives needed to address projected transportation demands
- Resulted in four key recommendations:

1. Optimize existing transportation network
2. Improve non-roadway transportation
3. Widen existing highways
4. New highway/transit transportation corridor

Provincial Environmental Assessment – Stage 2



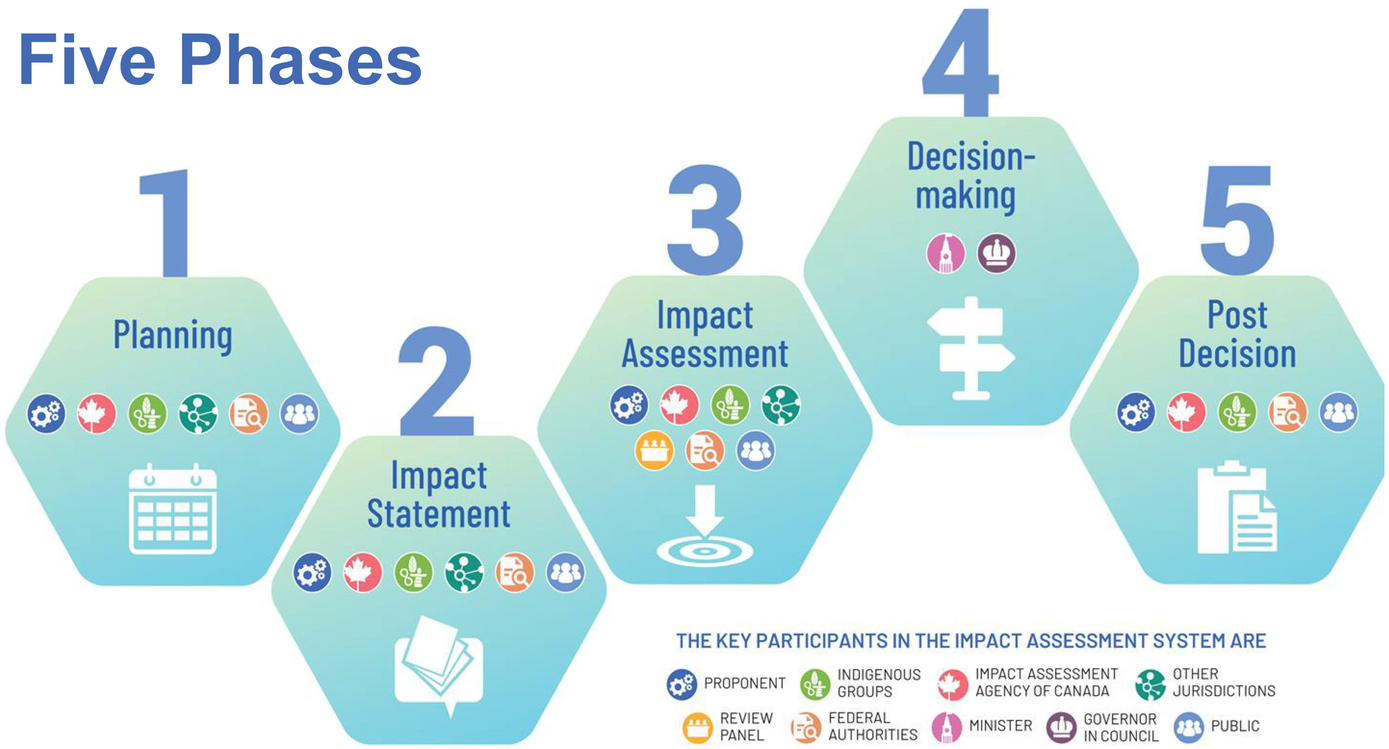
Following the completion of Stage 1 of the EA in 2012, Stage 2 of the Study, currently underway, is focused on the Planning and Preliminary Design of the recommended new transportation corridor.

Visit the project website to see an updated project timeline.

www.highway413.ca

Federal Impact Assessment

Five Phases



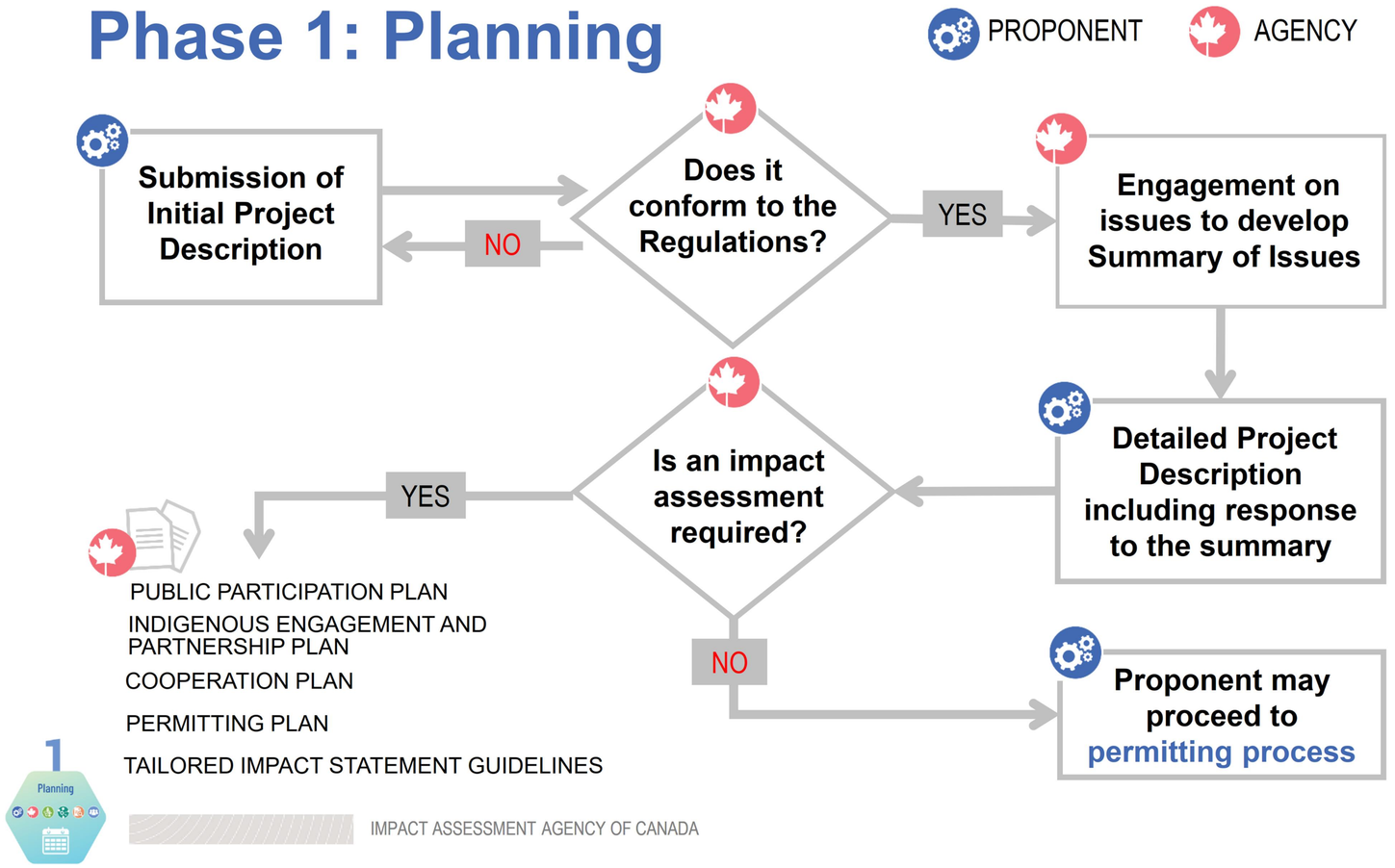
IMPACT ASSESSMENT AGENCY OF CANADA

On May 3, 2021, the Federal Minister of Environment and Climate Change designated the Highway 413 Project under the Federal Impact Assessment Act. A Federal Impact Assessment does not replace the Provincial Environmental Assessment underway. The two assessment processes can move forward in parallel.

The Impact Assessment process is comprised of five phases and begins with the submission of an Initial Project Description (IPD), which includes:

- the consultation and engagement undertaken to date,
- the rationale for the Project,
- potential alternatives,
- existing and future conditions,
- the studies being undertaken to inform the potential changes resulting from the Project.

Federal Impact Assessment: Planning Phase



The Ministry of Transportation plans to submit the IPD by the end of 2023.

The Impact Assessment Agency of Canada will then consult with the public, Indigenous communities and other stakeholders on the IPD and prepare a summary of issues, which the ministry then responds to through a Detailed Project Description.

The Impact Assessment Agency of Canada will consult with stakeholders on the IPD in early 2024.

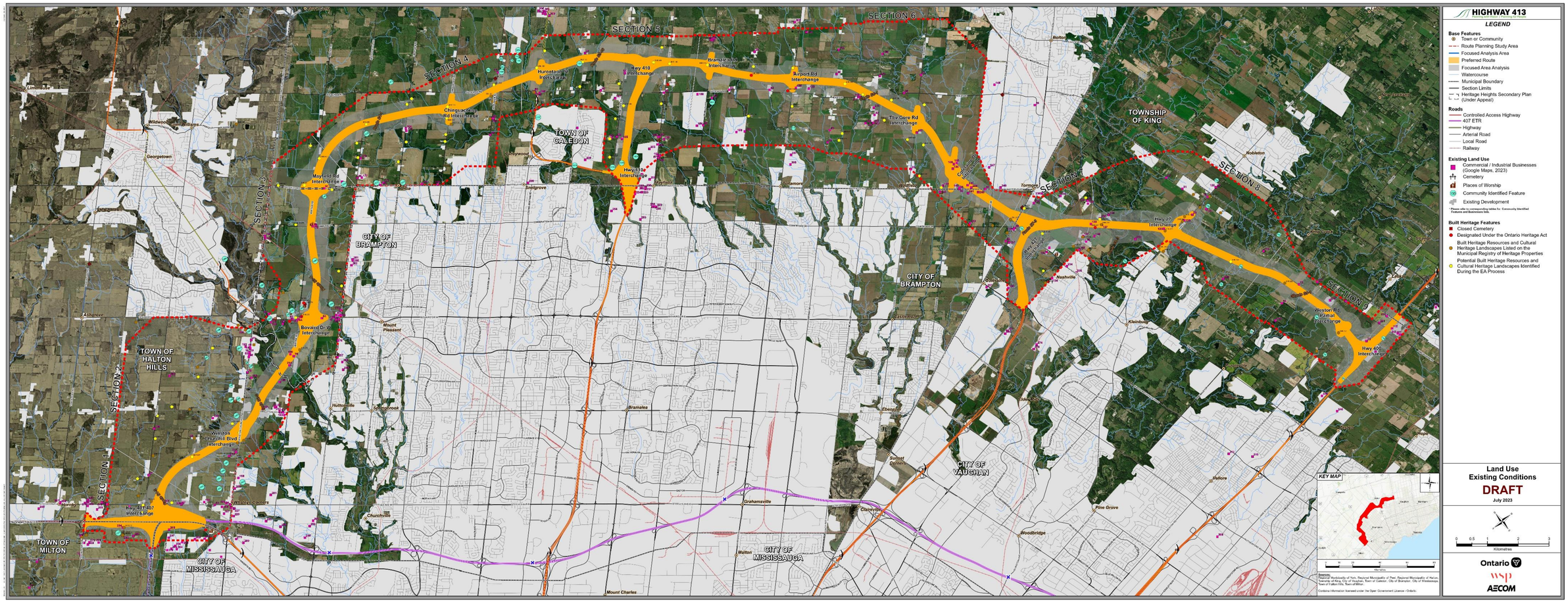
Poll Question

What percentage of land designated for Highway 413 is located within the Greenbelt?

- 0-10%
- 11-20%
- 21-40%
- 41-70%
- 71-100%

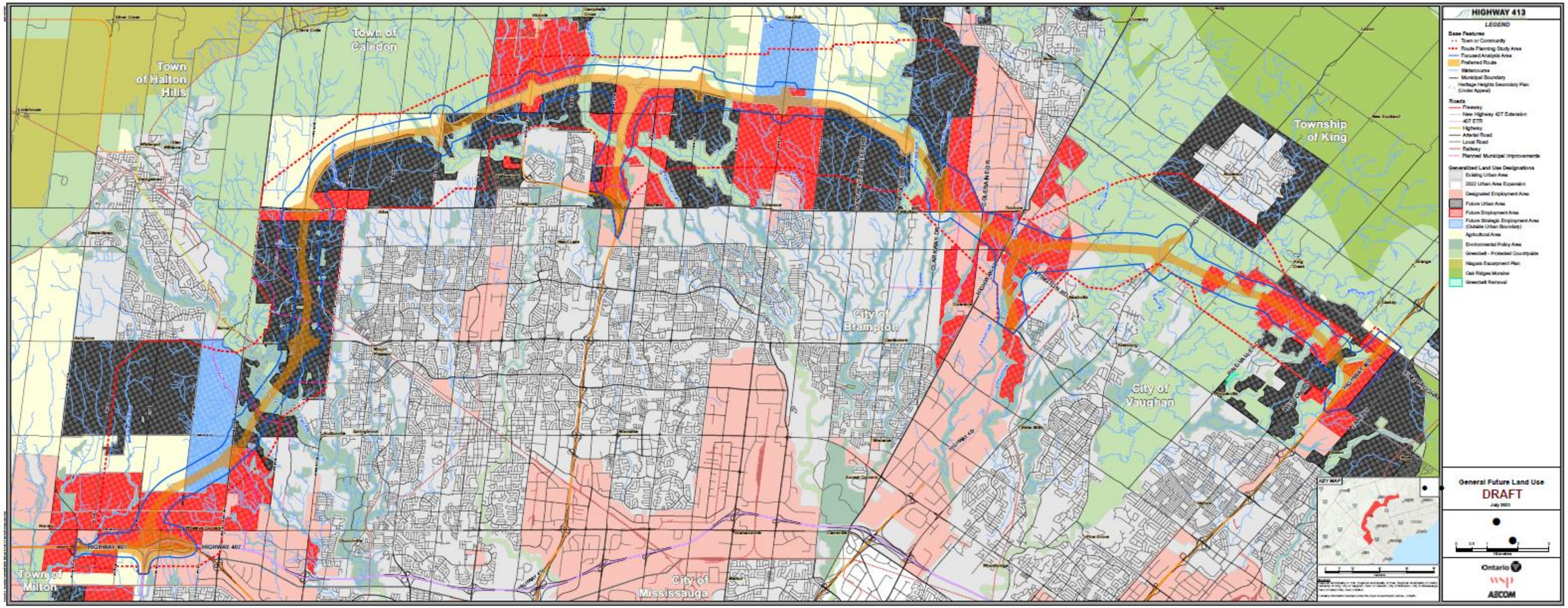
Existing Land Use

Areas with existing development are shaded in light grey and contain a wide array of land uses, including residential, commercial, industrial, and institutional lands.

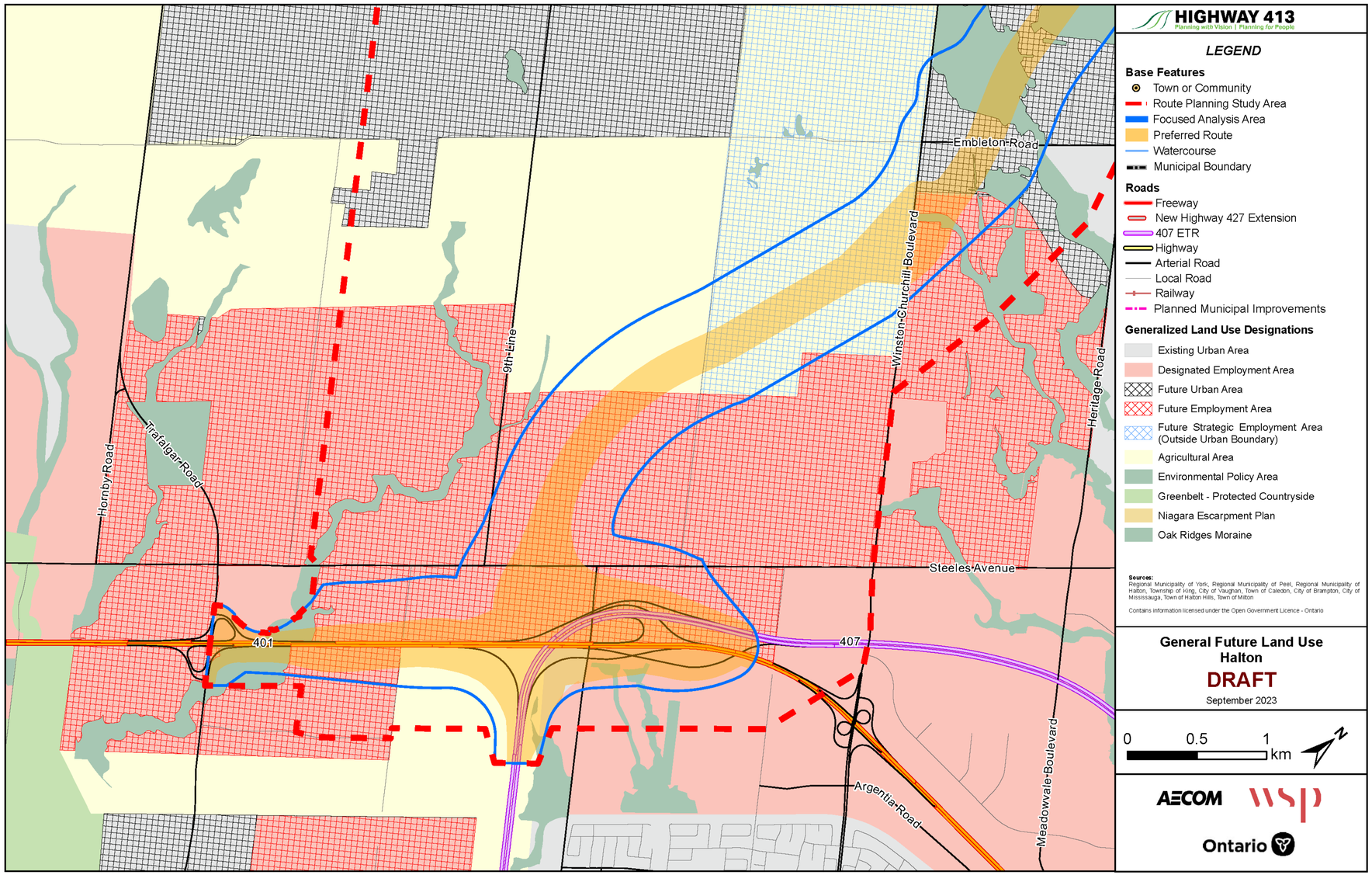


Future Land Use

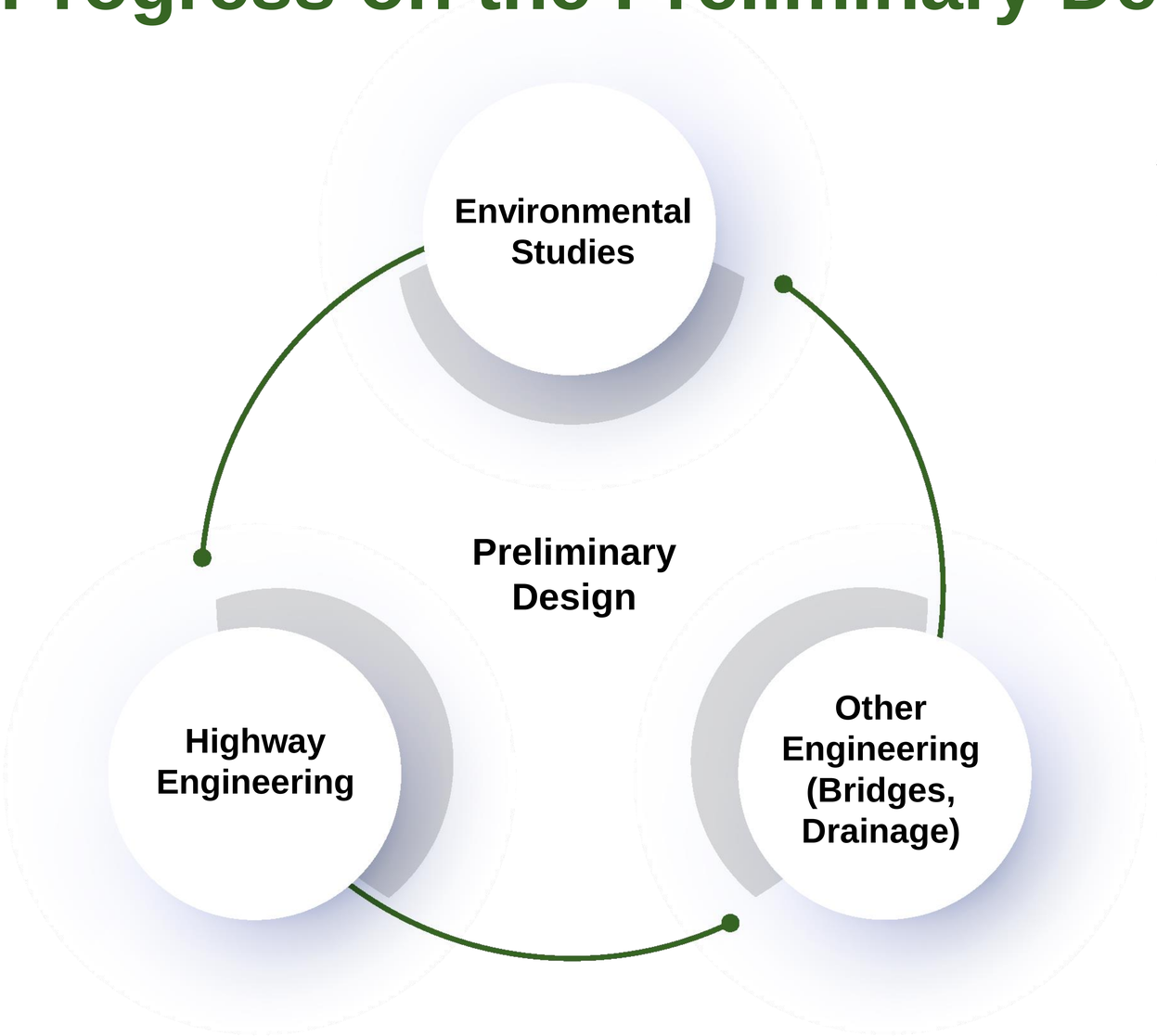
Based on the Regional Official Plans, this map represents the existing and future land uses. The areas in light and dark pink represent designated and future employment areas. The areas in dark gray represent future urban areas. Between 2021 and 2051, the population of Halton Region is anticipated to grow by approximately 84%, Peel Region by 57% and York Region by 72%.



Regional Future Land Use – Halton Region



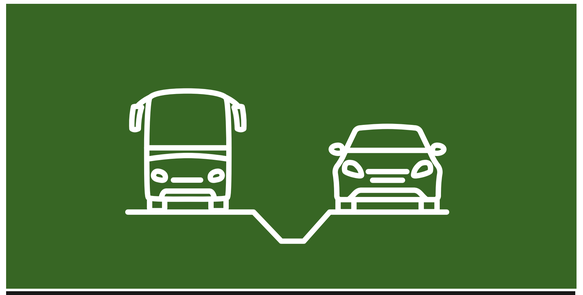
Progress on the Preliminary Design



As of Fall 2023, the project has reached 50% Preliminary Design: The highway alignment is mainly set, and most interchanges have been designed (subject to further refinements).

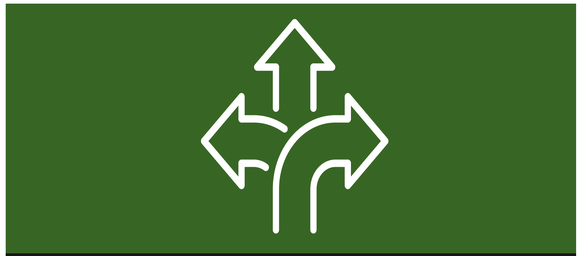
There is an iterative design process and ongoing communication between Technical Teams (Environmental, Structural, Highway), to adjust the horizontal and vertical alignment of the highway for design constraints (e.g. utility conflicts) and to minimize environmental impacts.

Progress on the Preliminary Design



Conceptual design of the Transitway

- The Preliminary Design includes planning for a transitway at a conceptual design level of detail to protect a parallel corridor of transitway land for future implementation.
- The transitway will be subject to a separate environmental assessment process.



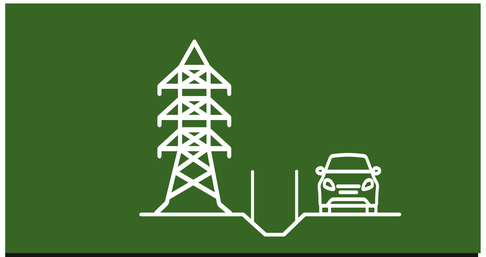
Highway Interchanges

- Interchange configurations are based on existing conditions and constraints like geometrics, property impacts, environmental features, traffic operations, safety, and cost.
- A Parclo A-4 design has been chosen at most interchanges along the proposed route, providing optimal access between municipal roads and highways.

Progress on the Preliminary Design

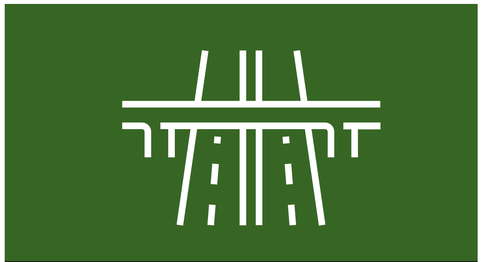
Projected Traffic Volumes

- Approximately 255,000 vehicles per day are expected to travel Highway 413 in 2041.
- Anticipated large truck volumes are projected to fall within the 20-30% range, consistent with the activity expected in a Goods Movement Corridor.



Existing or planned utilities

- Reviewing impacts and coordinating with utility companies.
- Discussions include mitigation and/or relocation planning and commitments for further consultation in future project stages.



Bridge Design

- Bridge design can help to minimize effects on the natural environment.
- Effects can be mitigated by selecting bridge type, alternative materials and construction techniques.

Bridge Design Evaluation

Bridge types and span arrangements are being evaluated based on:

1. Impact on the Natural Environment
2. Impact on Land Use / Socio-Economic Environment
3. Impact on the Cultural Environment
4. Impact on Transportation
5. Impact on Structural Sustainability
6. Constructability, Durability, Aesthetics, and Resilience to Climate Change
7. Cost

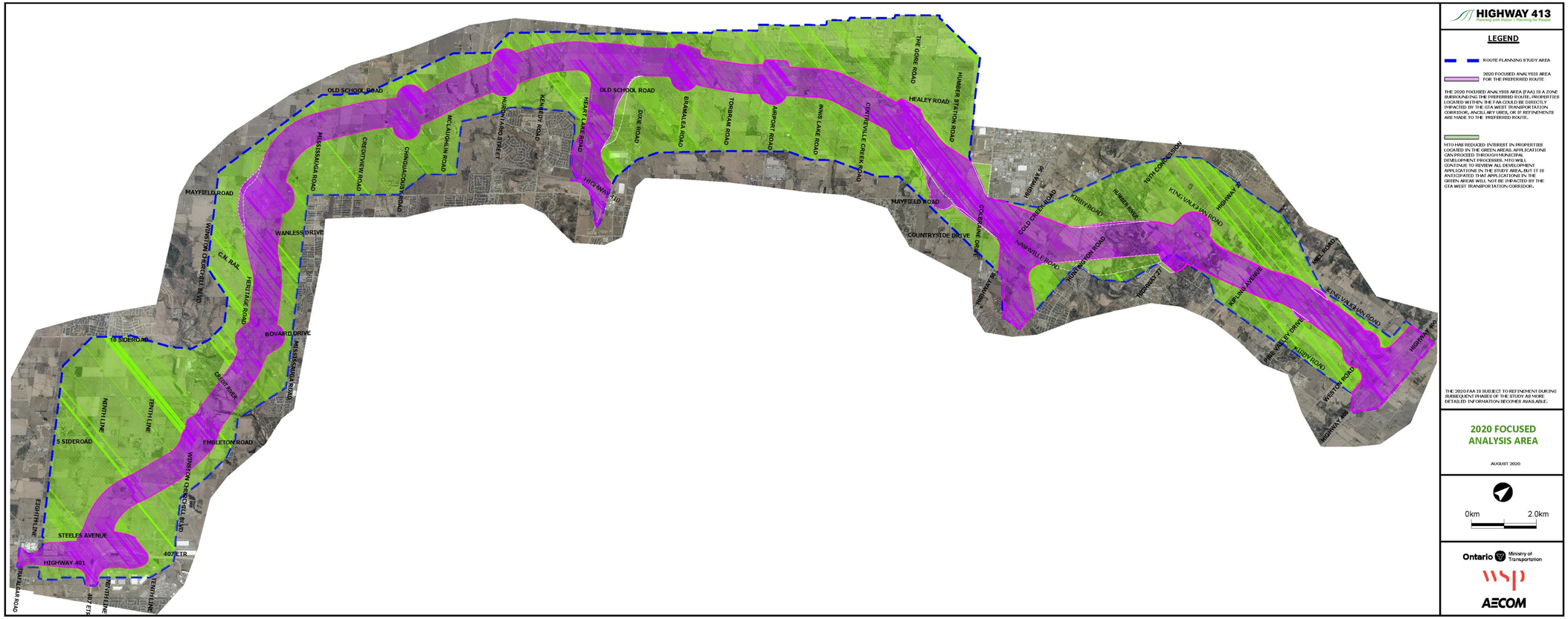
The following agencies have been engaged to help select the preferred bridge type at major river crossings:

- Ministry of the Environment, Conservation and Parks
- Department of Fisheries and Oceans
- Credit Valley Conservation
- Toronto and Region Conservation Authority

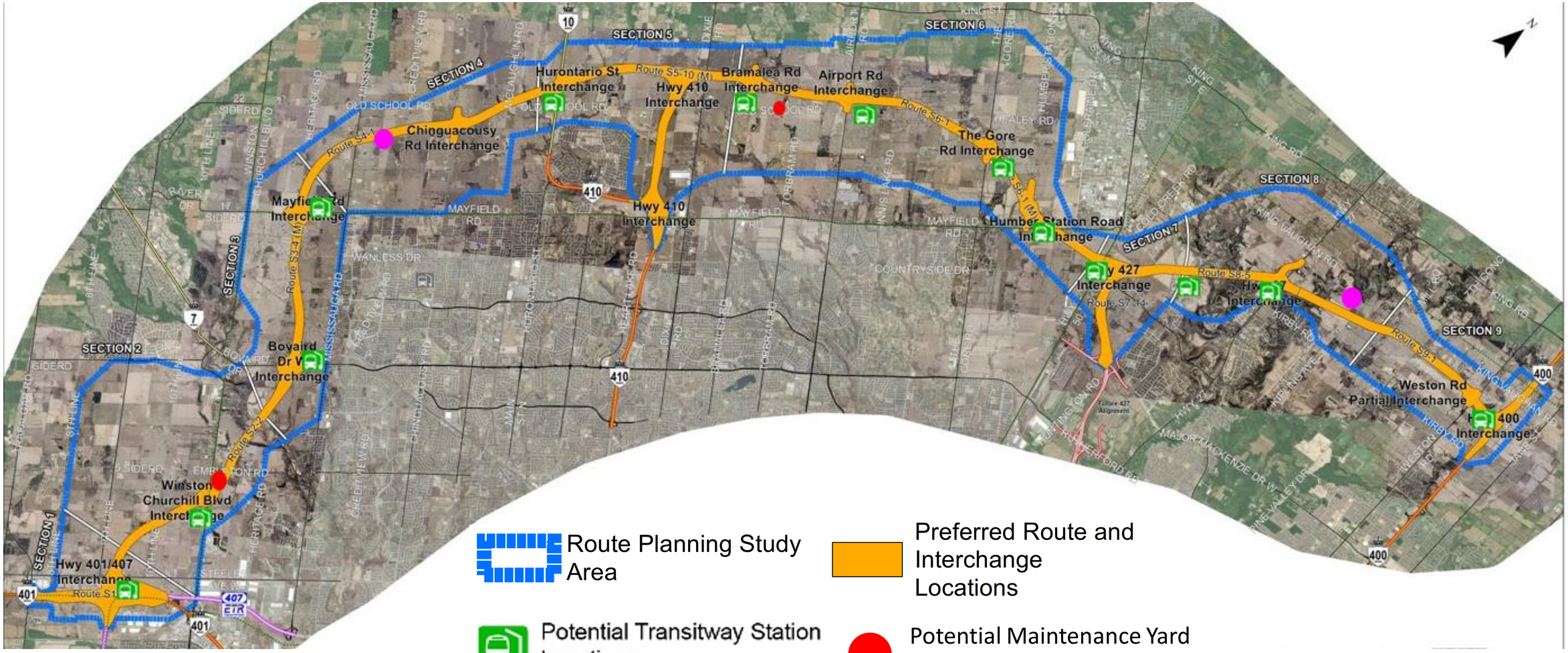
More information about bridge designs will be shared as part of a future PIC.

Development in the Focused Analysis Area

The 2020 Focused Analysis Area (shown in purple) surrounds the Preliminary Design and defines which properties continue to be within an area of interest. Development applications for properties in the green-shaded area can proceed through normal municipal processes.



Preliminary Design Update: Corridor Overview



Interactive Map

We are in the process of developing an interactive map on the Project website.

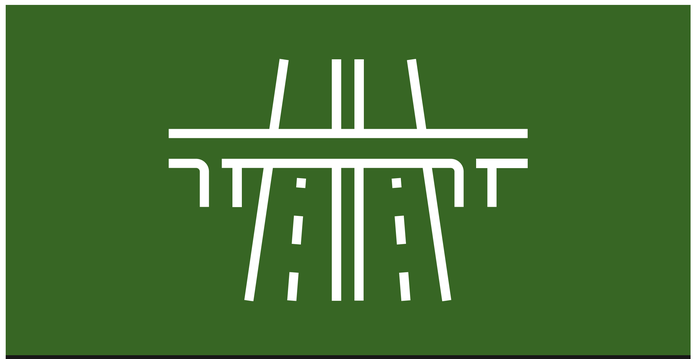
The interactive map is based on the 50% Preliminary Design and is subject to change based on the findings of the environmental assessment and impact assessment process.

Using the interactive map, you can view the proposed route and zoom in on locations near your home, work, or other places of interest. Here's a sneak preview

LIVE DEMO

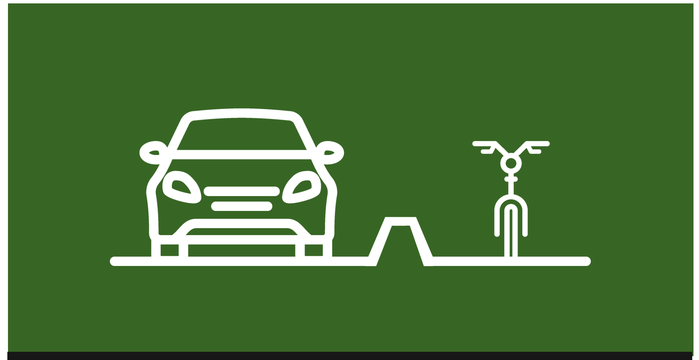
Next Steps on the Preliminary Design

Engagement with municipalities and conservation authorities is continuing, and their feedback helps the Project Team to:



Coordinate plans for road and valley crossings

Minimize effects of the highway and enhance the benefits



Integrate active transportation at interchanges and crossing roads

Input from discussions with Indigenous communities, stakeholders and the public also helps refine the project's design.

Poll Question

Which part of the design is of most interest to you?

(Can choose up to 3)

- Highway Alignment
- Bridges
- Interchanges
- Engineering Materials
- Active Transportation (sidewalks / multi-use paths)
- Traffic Volumes

Design Question & Answer Period

Environment Study Updates

- Fish & Fish Habitat
- Terrestrial Ecosystem
- Surface and Groundwater
- Noise
- Agriculture
- Contaminated property & waste
- Built heritage & cultural heritage landscapes
- Archaeology
- Landscape
- Surface Water and Fluvial Geomorphology
- Human Health
- Climate Change
- Species-at-Risk
- Cumulative Effects
- Air Quality and Greenhouse Gas (GHGs) Emissions
- Navigable Waterways

Natural Environment Studies

Route Selection

Identification of key aquatic and terrestrial ecosystem features and Species at Risk habitats for avoidance and protection.

Preferred Route

Detailed environmental investigations are continuing to inform the design and federal Impact Assessment processes to avoid and minimize impacts to those identified features and habitats.

Field Investigation Program

Field Investigations:

- Collect information about existing environmental conditions such as natural and built environment, cultural heritage, archaeological, and agricultural conditions in the study area.
- Findings from fieldwork are used to determine the potential effects and develop measures to avoid and/or mitigate adverse effects.

Community Field Liaisons

Indigenous communities are interested in understanding the findings of the field studies being done for the Project. Community members participate as Community Field Liaisons (CFLs) to facilitate this understanding and ensure Indigenous communities are involved as fieldwork progresses.

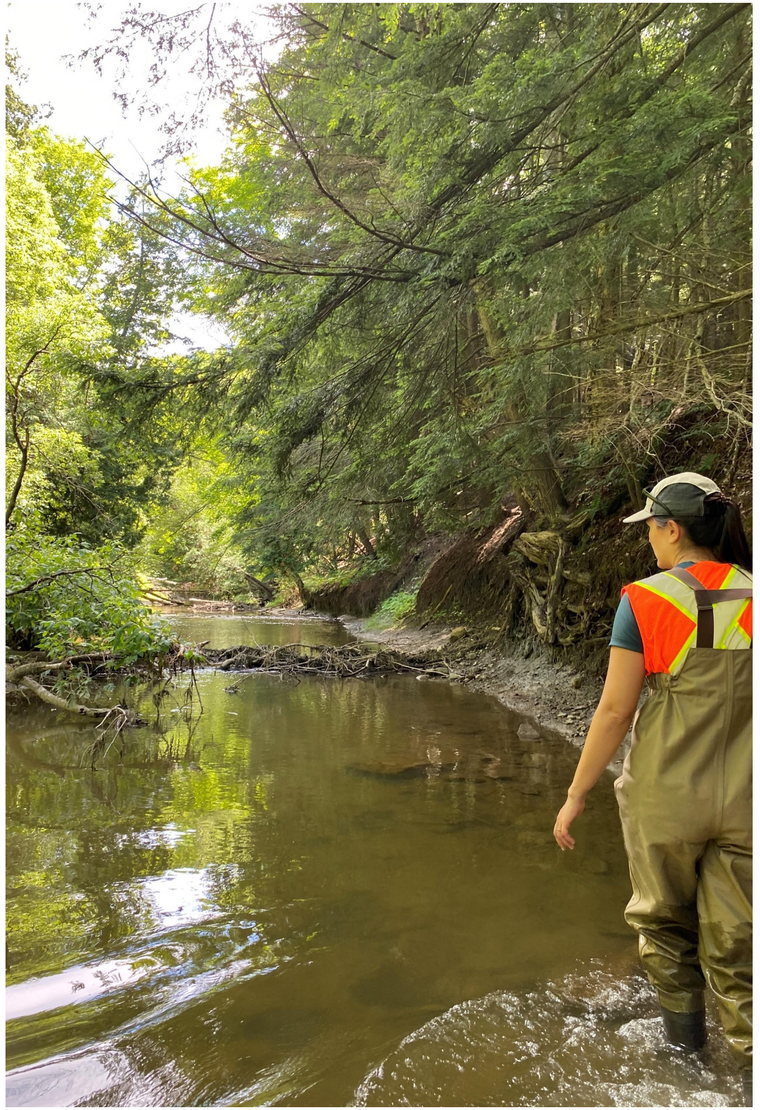
Indigenous communities can send CFLs to join the field teams carrying out environmental and archaeological fieldwork, and compensation for participation is provided.

CFLs have participated in Stage 2 archaeological investigations and field surveys for the Western Chorus Frog, Aquatic, Ecological Land Classification, Vernal Pools, Amphibian Calling, Breeding Birds, and Rapids Clubtail.

Natural Environment Studies

Investigations to support the Fish and Fish Habitat Study and the Terrestrial Ecosystems Study have included surveys of:

- fish communities and habitats
- wetlands
- vegetation communities and plant species
- amphibians
- breeding birds
- wildlife and wildlife habitat
- species at risk



Natural Environment: Fish and Fish Habitat

Four watersheds were identified in the Study Area: **16 Mile Creek, Credit River, Etobicoke Creek and the Humber River**.

Fish habitat assessments and community sampling were conducted for 97 watercourses during field investigations**.**

Of these, **42 were assessed as direct or seasonal fish habitats** and **54 as indirect habitats**. The Project Team is using this information to design culverts & bridges.

Spawning activity by Chinook Salmon was observed in the Credit River in the Fall of 2020. Background information indicated potential for Brown Trout, Brook Trout, and Rainbow Trout in the general area, but these species have not been recorded.

Natural Environment: Terrestrial Ecosystems

The Study Area measures 2,930 hectares. 440 hectares (15% of the Study Area) is comprised of vegetation communities including:

- wetlands
- forests/woodlands
- meadows
- valleylands

The remainder of the Study Area comprises agricultural fields, residential and commercial properties, and roads.

Information about existing conditions is used to develop options for appropriate mitigations.

Natural Environment: Findings

Approximately 805 species were identified in the Study Area, including:

24
Fish

9
Amphibians

118
Birds

602
Plants

Other species recorded during field investigations included mammals, reptiles, molluscs, crustaceans, and insects.

Natural Environment: Protecting Species-at-Risk

Critical Habitats for five species protected under the federal *Species at Risk Act* (SARA) have been identified for the Study Area.

Critical Habitat is a “habitat that is necessary for the survival or recovery of a listed species” (*Species at Risk Act, Section 2*). Critical Habitat provides the basis for the species’ Recovery Strategy or Action Plan and the Project Mitigation Plans.

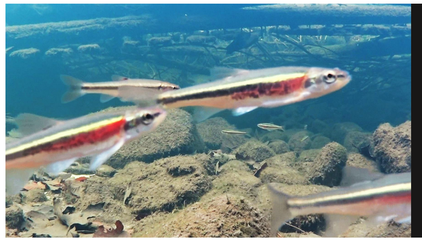
The presence of these five species were observed or recorded in field studies undertaken to date:

Western Chorus Frog

SARA Status: Threatened

Red-headed Woodpecker

SARA Status: Endangered (also protected under provincial legislation)



Redside Dace

SARA Status: Endangered (also protected under provincial legislation)

Rapids Clubtail

SARA Status: Endangered (also protected under provincial legislation)

Bank Swallow

SARA Status: Threatened (also protected under provincial legislation)

Natural Environment: Protecting Species-at-Risk

Other Species at Risk and Species of Conservation Concern (SOCC) with federal and/or provincial status were recorded in 2020 - 2022:

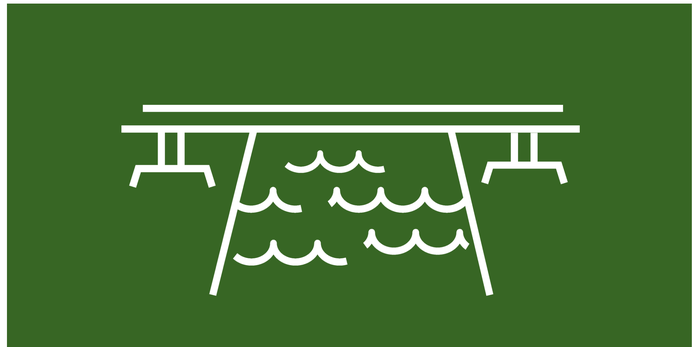
- Black Ash
- Butternut
- Barn Swallow
- Bobolink
- Chimney Swift
- Eastern Meadowlark
- Olive-sided Flycatcher
- Wood Thrush

Where direct impacts cannot be avoided, species-specific mitigation measures and newly created or enhanced habitats will be designed and implemented.

Natural Environment: Next Steps

Design refinements and proposed mitigation will focus on protecting or maintaining natural heritage features, including Species-at-Risk and their habitat. Examples include:

Minimizing construction footprints



Bridge design at watercourses

Mitigation plans

Stormwater management plan

Greenhouse Gas (GHG) Emissions

In addition to a planned Air Quality Impact Assessment, a GHG assessment is being completed. This will include an estimate of the net GHG emissions that may result from the Project during construction and operation.

Emissions are measured in CO_2e: carbon dioxide (CO_2), methane (CH_4) and nitrous oxide (N_2O).

Net GHGs will be calculated using the federal Strategic Assessment of Climate Change Guidelines, which includes emissions generated from:

- Construction equipment
- Land clearing
- Operations (including vehicles using the highway, maintenance vehicles, electricity purchases for lighting, etc.)

Mitigation options will also be developed, including construction best practices and monitoring.

Greenhouse Gas (GHG) Emissions

Analysis of yearly emissions estimates indicated that with Highway 413 there will be a:

- 1.5% increase in annual vehicle kilometres travelled
- 0.3% increase in CO_2e emissions due to a shift in traffic to the highway where vehicles have better fuel economy due to higher, more consistent driving speeds.

It is expected that the use of electric vehicles will increase throughout the corridor's operation, reducing the contribution of ridership-derived greenhouse gas emissions and potential effects on climate change.

Noise

The Ministry of Transportation investigates and evaluates potential noise effects for noise-sensitive areas, such as:

- A backyard of a residence at a height of 1.5 metres and 3 metres from the back of the home
- An outdoor communal living area of an apartment or condo building
- An outdoor communal area of a hospital or nursing home.

According to ministry guidelines, any new highways or highway improvements that increase noise levels by more than 5 decibels above the future ambient noise level or exceed 65 dBA require mitigation, where feasible.

In addition to provincial guidelines, studies also consider federal guidance, with a focus on noise impacts as they relate to health effects.

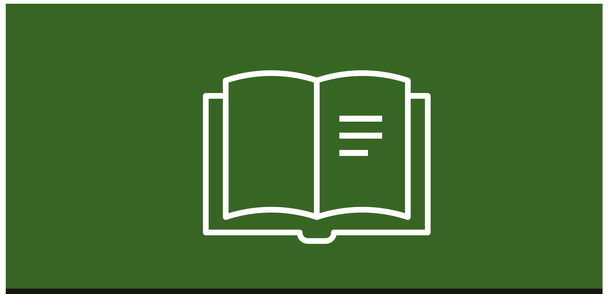
Noise and Vibration

The construction noise and vibration assessment is currently underway.

The operational noise and vibration assessment will be completed once the Preliminary Design is near completion.

Findings and recommended mitigations (such as muffling devices on construction vehicles, ambient monitoring of noise levels during construction and noise barriers) will be included in the Environmental Assessment Report.

Archaeology

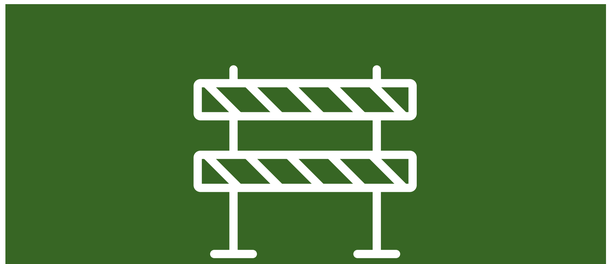


Stage 1: Background Study and Property Inspection

45% complete

Stage 2: Property Assessment

Stage 3: Site Specific Assessment



Stage 4: Mitigation of Development Impacts

- In Stage 2, over 100 properties have been evaluated, with around 45 showcasing cultural significance elements earmarked for further analysis.
- Following Stage 2, a report mandated by the Ontario Heritage Act must be presented to the Ministry of Citizenship and Multiculturalism, detailing findings and proposing mitigation strategies; a generalized version will later be publicly accessible.
- If resources with substantial cultural heritage value are unearthed, a detailed Stage 3 and 4 assessments may be required to delve deeper into the findings.

Socio-Economic and Human Health

Studies are underway to determine potential social, economic, and health effects within the municipalities the highway crosses.

Collect Information

Desktop Research

Interviews with municipal staff and community service providers

Develop Baseline Conditions

- Description of the population dynamics, including gender-based statistics
- Economic activities associated with the Study Area
- Labour and industry statistics
- Services and infrastructure in the Study Area:
  - Emergency services
  - Social supports
  - Business development supports
  - Public transportation
  - Recreational facilities
- Land use plans

Next Steps

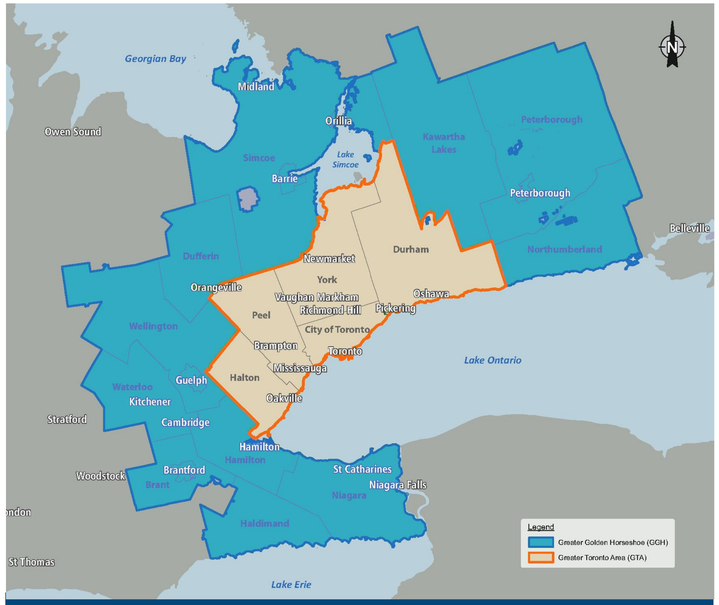
- Obtain feedback on the baseline conditions through the public review of the Initial Project Description
- Develop effects assessment – How will this project impact the factors outlined in the baseline?
- Seek input and feedback on the effects assessment from Indigenous communities, stakeholders and the public

Socio-Economic

The population of the Greater Golden Horseshoe is expected to be nearly 15 million people by 2051.

This population and housing growth causes extended urbanization of rural landscapes. It requires an increase in the development of enabling infrastructure, like roads, water, wastewater, recreation facilities, and health and social services.

The Highway 413 Project is also expected to lead to greater economic vitality in the region, facilitating better movement of goods and people, improving connectivity and enabling growth in various economic sectors.



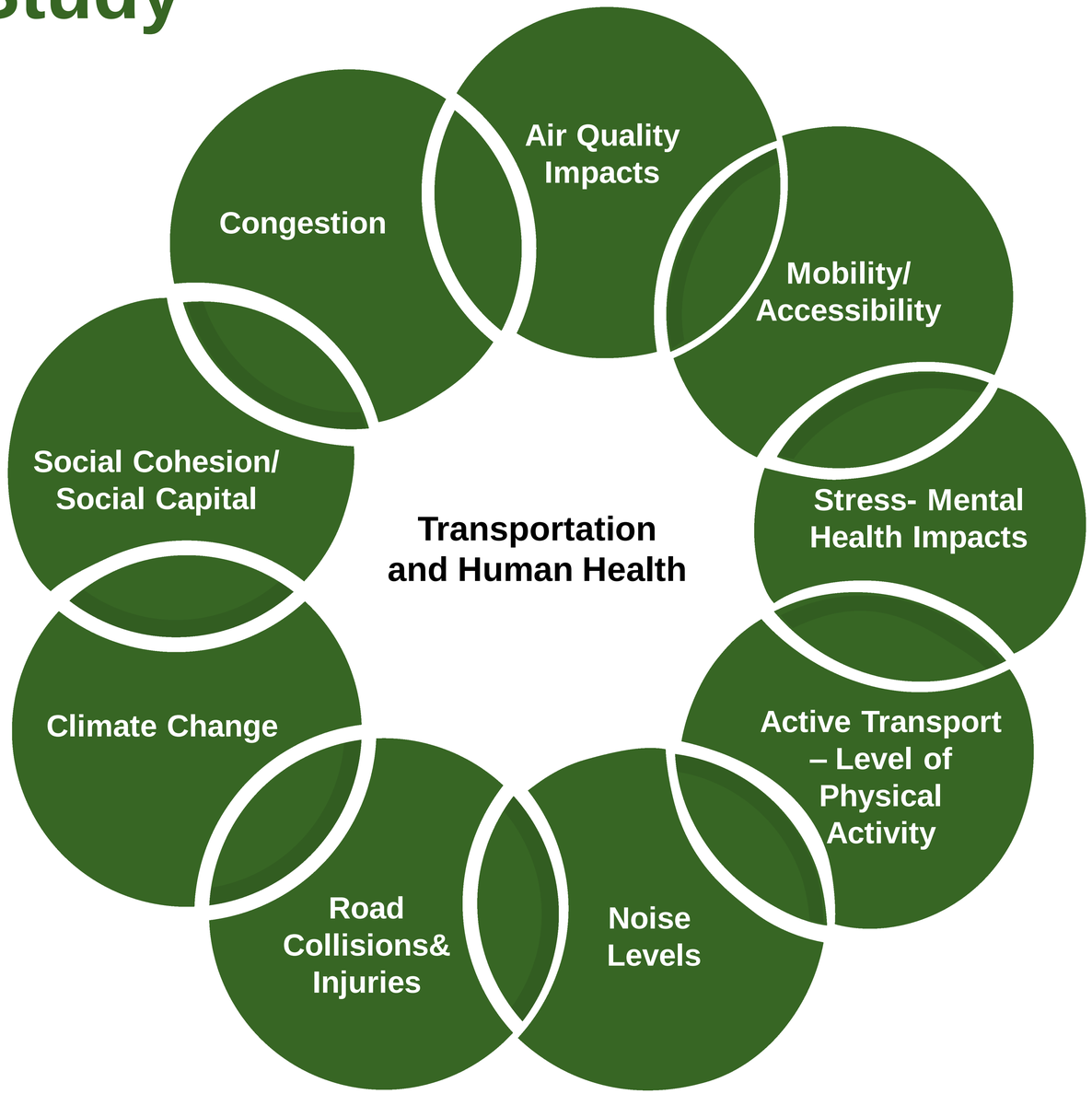
15,000,000 by 2051

Human Health Implications Study

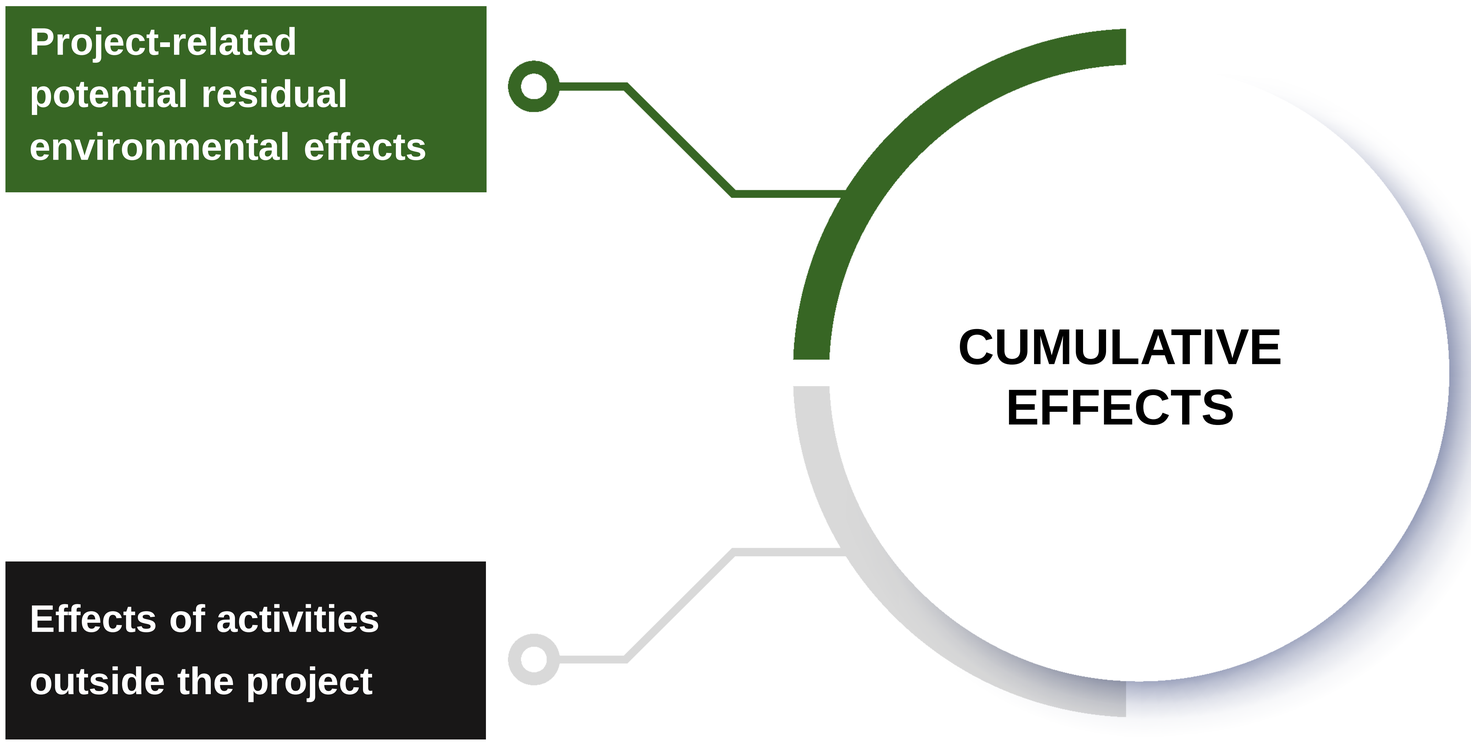
The Human Health Implications Study considers the project's potential positive and negative health impacts and the distribution of effects.

A Human Health Implications Scoping Report provides a baseline health profile of the study area and identifies potential health impacts at a high level. This report will be included in the Initial Project Description.

The next step will be the Assessment Phase, which considers the potential broader health impacts identified in the scoping phase and includes a human health risk assessment of air quality impacts.



Cumulative Effects



A Cumulative Effects Assessment considers a project's potential residual environmental effects while also considering the impacts of activities outside the project, occurring locally and extending beyond the project's location.

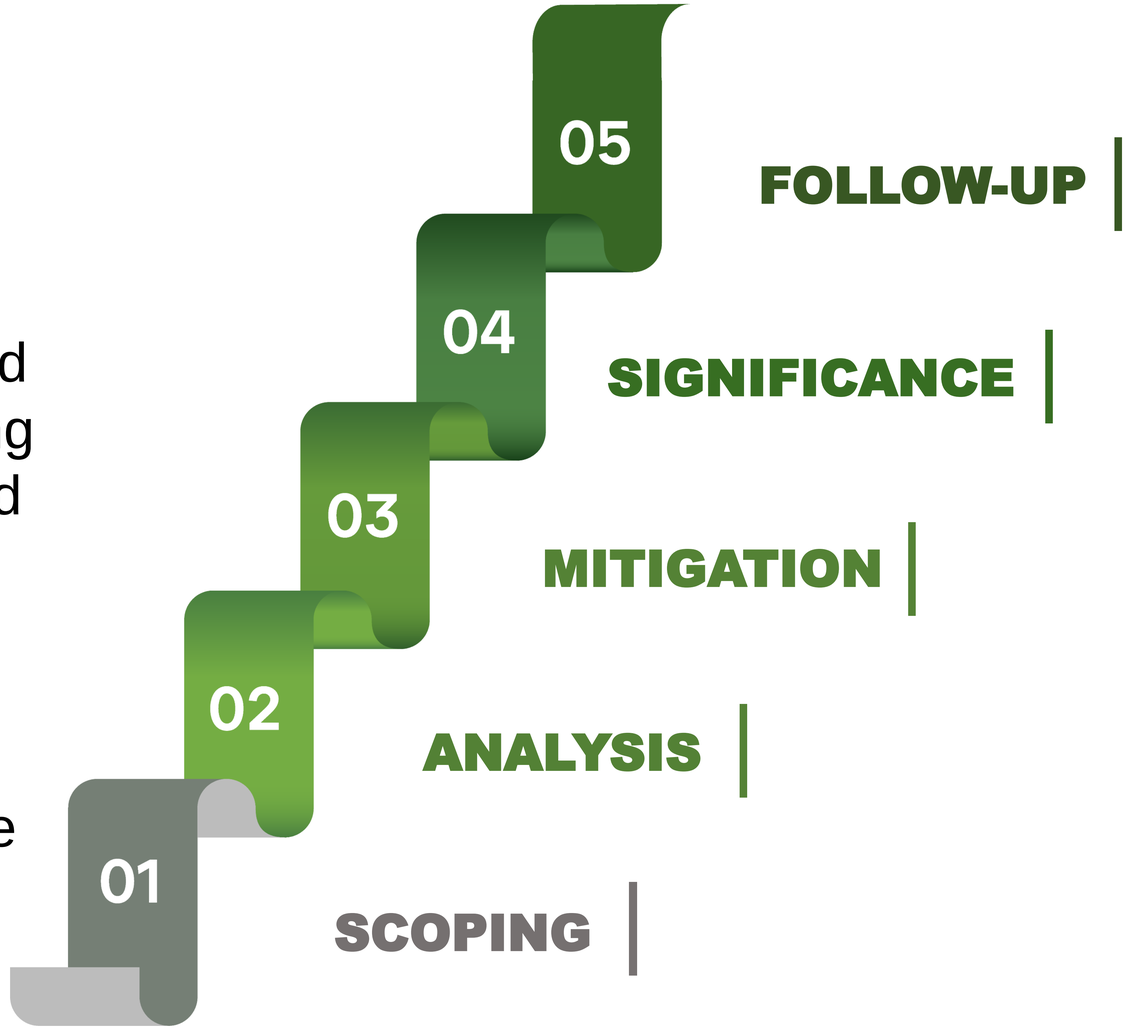
Cumulative Effects are environmental changes caused by the combined effects of past, present and future activities and processes.

Cumulative Effects

Cumulative Effects will be assessed through a five-step process.

First, a draft Cumulative Effects Assessment Framework for the project was developed based on a review of background information, including federal and provincial guidance documents, and completed Cumulative Effects Assessments. This framework serves as a work plan for the assessment.

Information regarding Cumulative Effects will be available following the PICs on the Project website. Look for information to provide your input.



Navigable Waterways

MTO is required to follow the Canadian Navigable Waters Act (CNWA).

As per the CNWA, navigable water means *“a body of water, including a canal or any other body of water created or altered as a result of the construction of any work, that is used by vessels, in full or in part, for any part of the year as a means of transport or travel for commercial or recreational purposes, or as a means of transport or travel for Indigenous peoples of Canada exercising rights recognized and affirmed by section 35 of the Constitution Act, 1982, and*

- *there is public access by land or by water;*
- *there is no such public access, but there are two or more riparian owners or*
- *the only riparian owner is either the Federal Government or a Provincial Government.”*

A preliminary screening process was completed to identify navigable waterways within the Study Area.

- 23 streams or rivers are considered to be *potentially* navigable.

Navigable Waterways- Provide your input

The Project Team needs public input to confirm our preliminary screening of navigable waterways within the Study Area.

The information you provide will be used to confirm the number of navigable waterways and develop plans to mitigate any effects the Project may have on navigation during construction or operation.

Information regarding Navigable Waterways will be available following the PICs on the Project website and look for news to provide your input.

Poll Question

Tonight’s third poll is regarding the Environment. Tell us which of the following topics are of most interest to you and that you would like to know more about:

(Can choose up to 3)

- Natural Environment
- Cumulative Effects
- Social Economic Issues
- Noise and Vibrations
- Greenhouse Gas Emissions & Climate Change
- Human Health
- Air Quality

Question & Answer Period

Next Steps

- The presentation material will be uploaded to the website following the PICs for a 30-day comment period.
- The IAAC will be consulting on the IPD in early 2024. The IAAC will notify stakeholders when the IPD is available.
- Project Website Updates – Coming Soon
  - Cumulative Effects - review the draft Cumulative Effects Assessment Framework and provide comments.
  - Navigable Waterways – Opportunity to provide input to confirm past, present or potential future uses of waterways within the study area.
  - Interactive Map – 50% preliminary design as demonstrated at today's event will be uploaded following the completion of the PICs.

Thank You + Contact Info

- Email: project_team@highway413.ca
- Phone: 1-877-522-6916

  - Comments and information regarding this study are being collected to assist the Ministry of Transportation in meeting the requirements of the Environmental Assessment Act. This material will be maintained on file for use during the study and may be included in project documentation
  - Information collected will be used in accordance with the Freedom of Information and Protection of Privacy Act. With the exception of personal information, all comments will become part of the public record
  - You are encouraged to contact members of the Project Team if you have any questions or concerns regarding the above information
  - For all media inquiries, please get in touch with mto.media@ontario.ca.