



# **BUILDING ON STRONG FOUNDATIONS**

Leading Ontario's Transportation Future

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**96<sup>th</sup> ANNUAL ONTARIO ROAD BUILDERS'  
ASSOCIATION CONVENTION & AGM**

**FEBRUARY 6 & 7, 2023 • Fairmont Royal York, Toronto**



# Outline

Opening Remarks – Jennifer Graham Harkness, P. Eng.

Technical Updates – Alain Beaulieu, P. Eng.

Capital Program Updates – Michelle Pasqua



# Opening Remarks



Jennifer Graham Harkness, P.Eng,  
Assistant Deputy Minister, Transportation Infrastructure Management Division



# Thank You!

Building the transportation network Ontarians rely on.



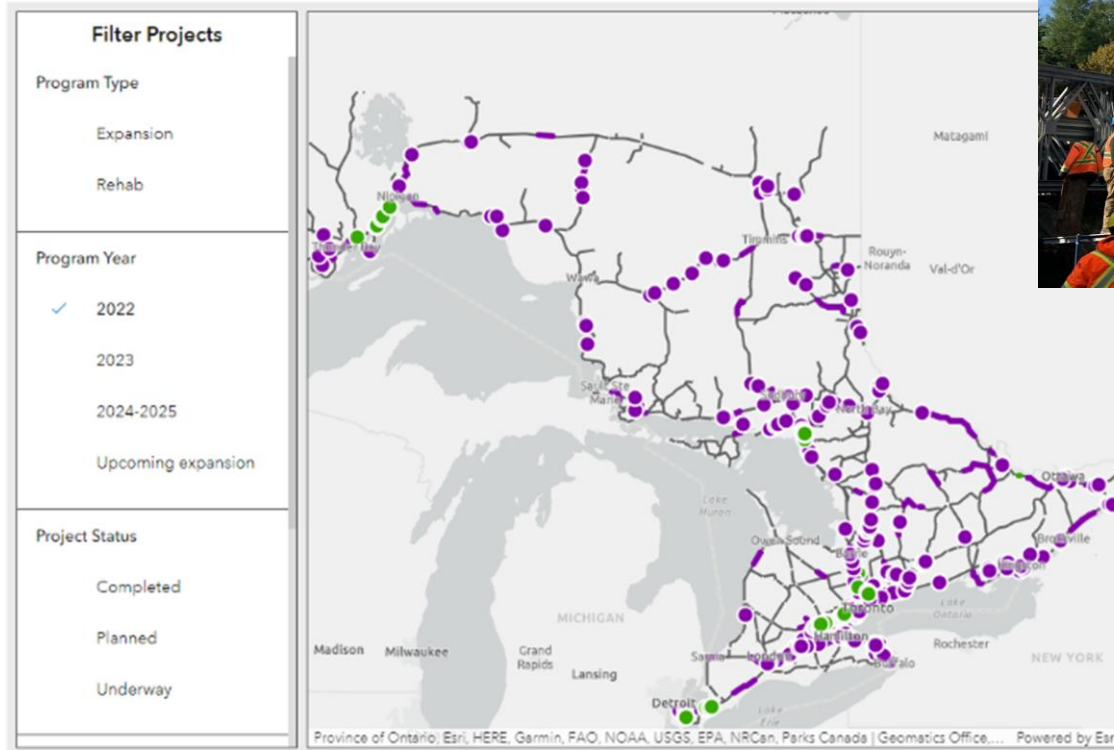
# Delivering a Suite of Critical and Exciting Projects



## Ontario's highways programs interactive map

[Instructions on how to navigate the interactive map](#) [PDF]

[Ontario Highways Program data guide](#) [PDF]



# Highway 401 Expansion – Mississauga to Milton



Under the Public-Private Partnership (P3) model with Infrastructure Ontario – new express, collectors, and High Occupancy Vehicle (HOV) lanes opened in November 2022.



Back filling CP Rail Bridge abutment walls

**Canadian Pacific Rail Bridge**



Inside lanes and shoulder paving

**Construction of New Express and Collector Lanes**

# Highway 417 – Mid-Town Bridges



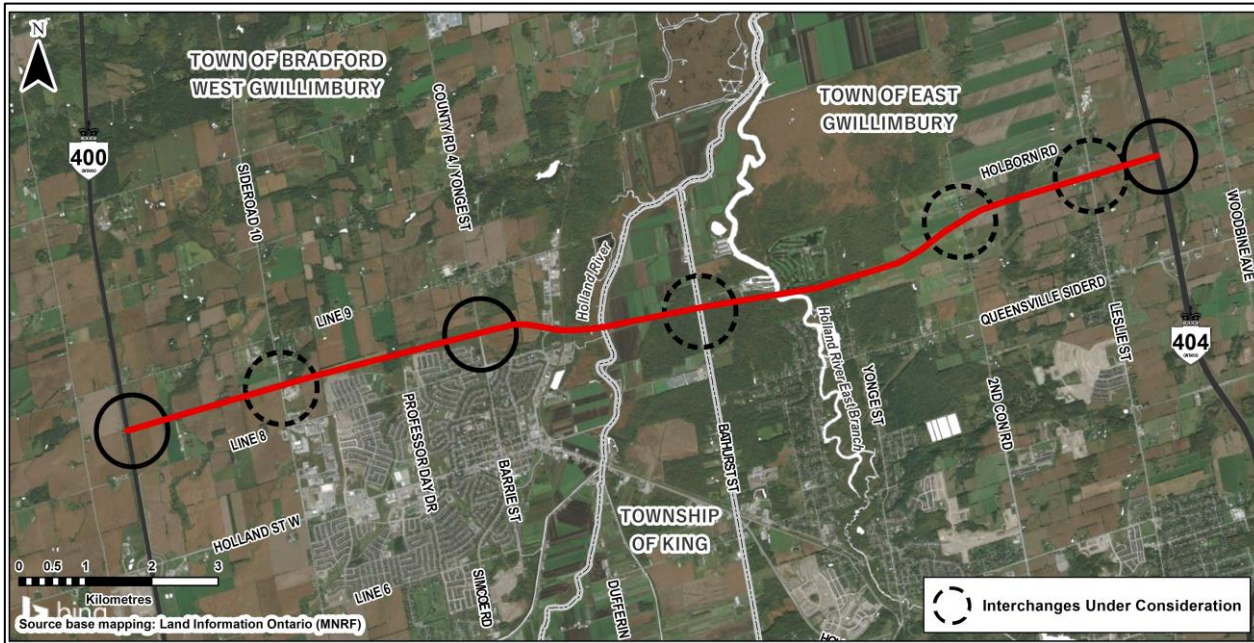
# QEW – Diverging Diamond Interchange (DDI)

Another first for Ontario – the DDI eliminates left-hand turns crossing oncoming traffic.





# Bradford Bypass

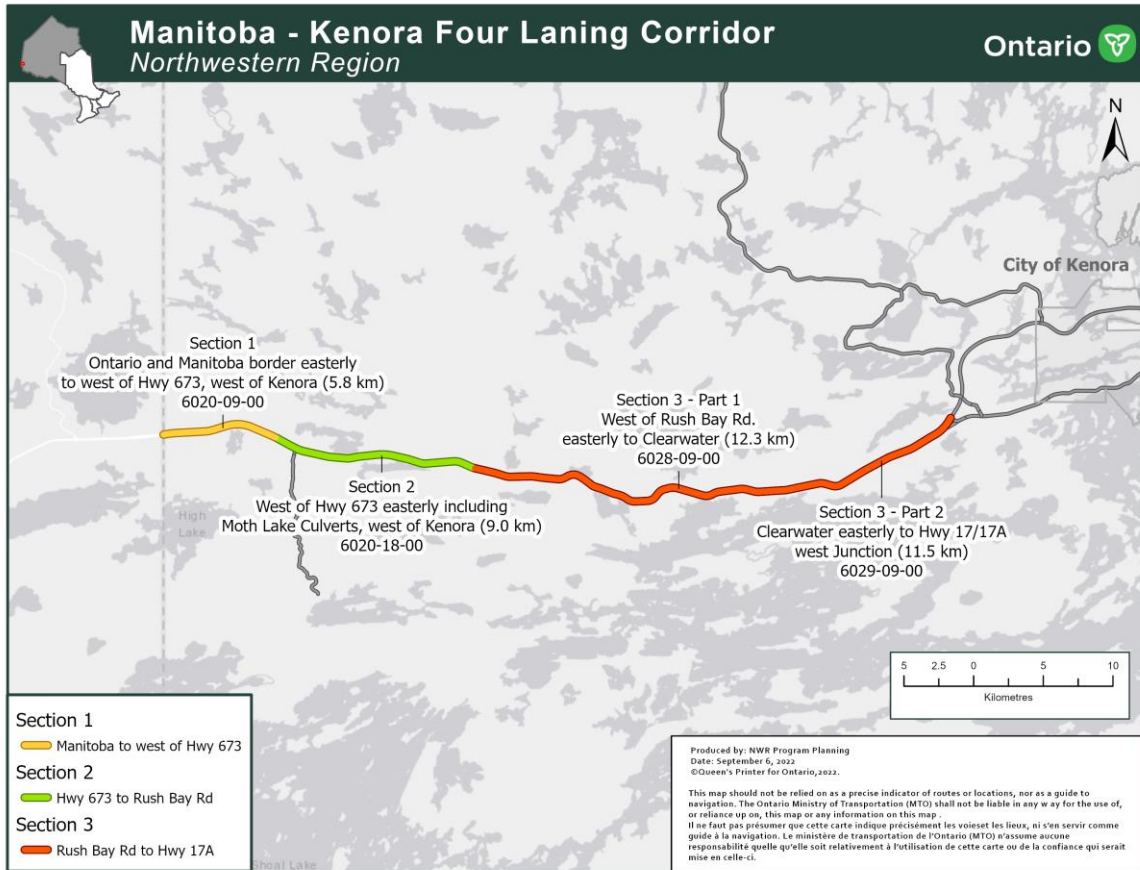


- Advancing the design stage of the Bradford Bypass.
- It includes considerations for interchanges at Highway 400, 10th Sideroad, Simcoe County Road 4, Bathurst Street, 2nd Concession Leslie Street, and Highway 404; and two significant crossings of the Holland River.
- The Technically Preferred Route was presented at the Public Information Centre in November 2022.

## Current Status:

- Early works for the new bridge at Simcoe Road 4 is in construction with opening to traffic scheduled by late fall 2024.
- Environmental clearance anticipated to be completed – summer 2023.

# Highway 17 Kenora to Manitoba



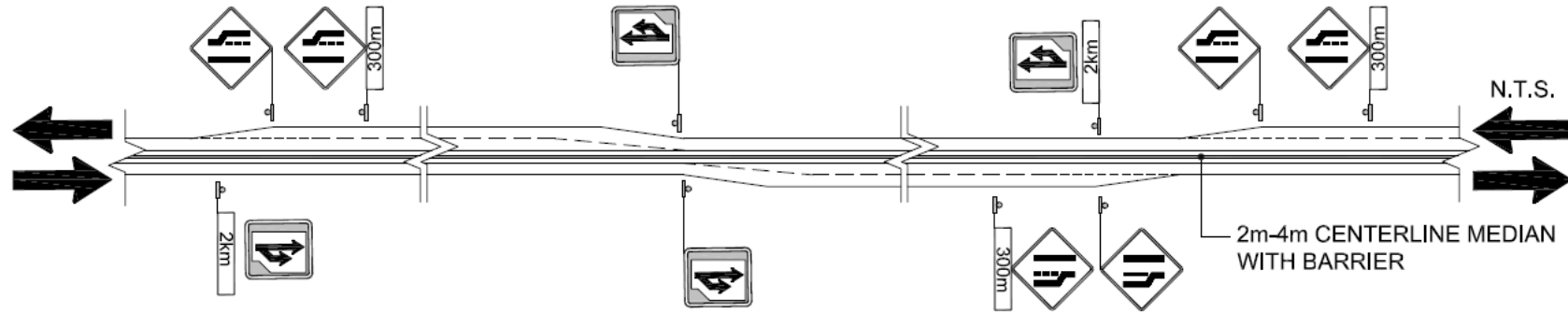
- Widening Highway 17 for 40 km from Kenora to the Manitoba border.
- The province continues to work in close collaboration with local Indigenous communities to advance the project.

## Current Status:

- Section 1:
  - Construction of main grading contract is underway by Moncrief Construction following award in March 2022.
  - Two contracts for early works (clearing and advance crushing) were signed with Indigenous partners in November 2021.
- MTO will continue to work with property owners, municipalities, and First Nation and Métis communities through Section 2 and Section 3 design phases to advance the next phase to construction as early as 2024.

[www.highway17kenoratomanitoba.ca](http://www.highway17kenoratomanitoba.ca)

# Highway 11 2+1 Model



- Moving forward with a 2+1 highway pilot on Highway 11 north of North Bay.
- The two locations being considered for a pilot are:
  - Highway 11 from Sand Dam Road to Ellesmere Road (14 km)
  - Highway 11 from Highway 64 to Jumping Caribou Lake Road (16 km)
- While one area will be prioritized, both locations will follow the regular planning, design and environmental assessment process for building highway improvements.
- Engineering and environmental assessment work is advancing with the engineering consultant expected to be in place by summer 2023.

# Auditor General Report



## The audit required:

- A significant investment of time and effort from people across five divisions.
- Staff responded to more than 200 requests.
- Staff attended close to 100 meetings.



## What we have heard from AGO:

- Oversight is good.
- Changes to contracts are minimal.
- Expertise in the field allows for resolution before issues become a claim.

# Ottawa Light Rail Transit Report



Some key recommendations from the report with potential impacts for MTO and its partners include:

- Expectation setting with stakeholders and the public regarding project budgets and schedules for infrastructure projects.
- Opportunities to strengthen delivery models and align provincial requirements.
- Focus on flexibility and collaboration between partners.

# Delivery Models



Design-Bid-Build – Highway 11/17 Expansion –  
Ouimet



Contractor General Management Contract –  
Highway 401 Grand River Bridges – Kitchener



Design-Build – Nat River Bridge –  
Highway 101

# Quality Management



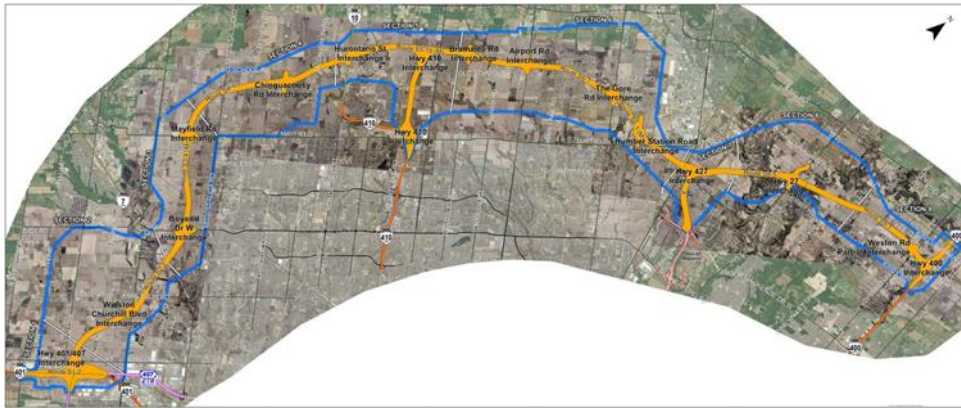




# Looking Ahead



## From Planning



Future Highway 413 Preferred Route

To

## Delivery



Design-Bid-Build – Highway 35



Highway 21 Bayfield River Bridge

# Technical Updates



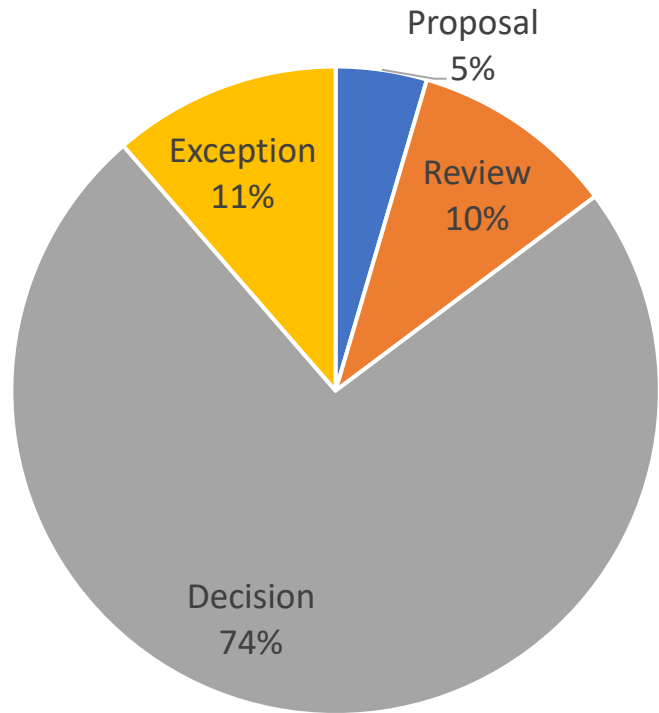
Alain Beaulieu, P.Eng  
Director, Standards and Contracts Branch



# MTO Technical Consultation Portal (TCP)



- 314 registered users accessing TCP including some international suppliers
- To date, posted 88 standards and policies



Ontario  MTO Technical Consultation Portal

Home About Search Contact Us Register Log in Français

## Welcome to the MTO Technical Consultation Portal

This is the place where you can take part in the development and revisions of MTO technical documents. The Ontario Ministry of Transportation (MTO) portal provides access for the public and industry to technical documents in development and offers an opportunity for comments and suggestions.

Search for policies, standards and specifications

### Recent policies, standards and specifications

- [Construction Administration and Inspection Specifications \(CAIS\) 313 - 06](#)  
**Decision** Decision posted: December 23, 2022
- [MTO Guide for Water Crossing Hydrotechnical Reports](#)  
**Proposal** Closing date: February 5, 2023
- [Cost Estimating Guide](#)  
**Proposal** Closing date: January 26, 2023
- [Corporate Performance Rating Pause in Bid Evaluation of Engineering Services](#)  
**Proposal** Closing date: January 23, 2023
- [Chain Link Fence Standards Update](#)

### Featured notice

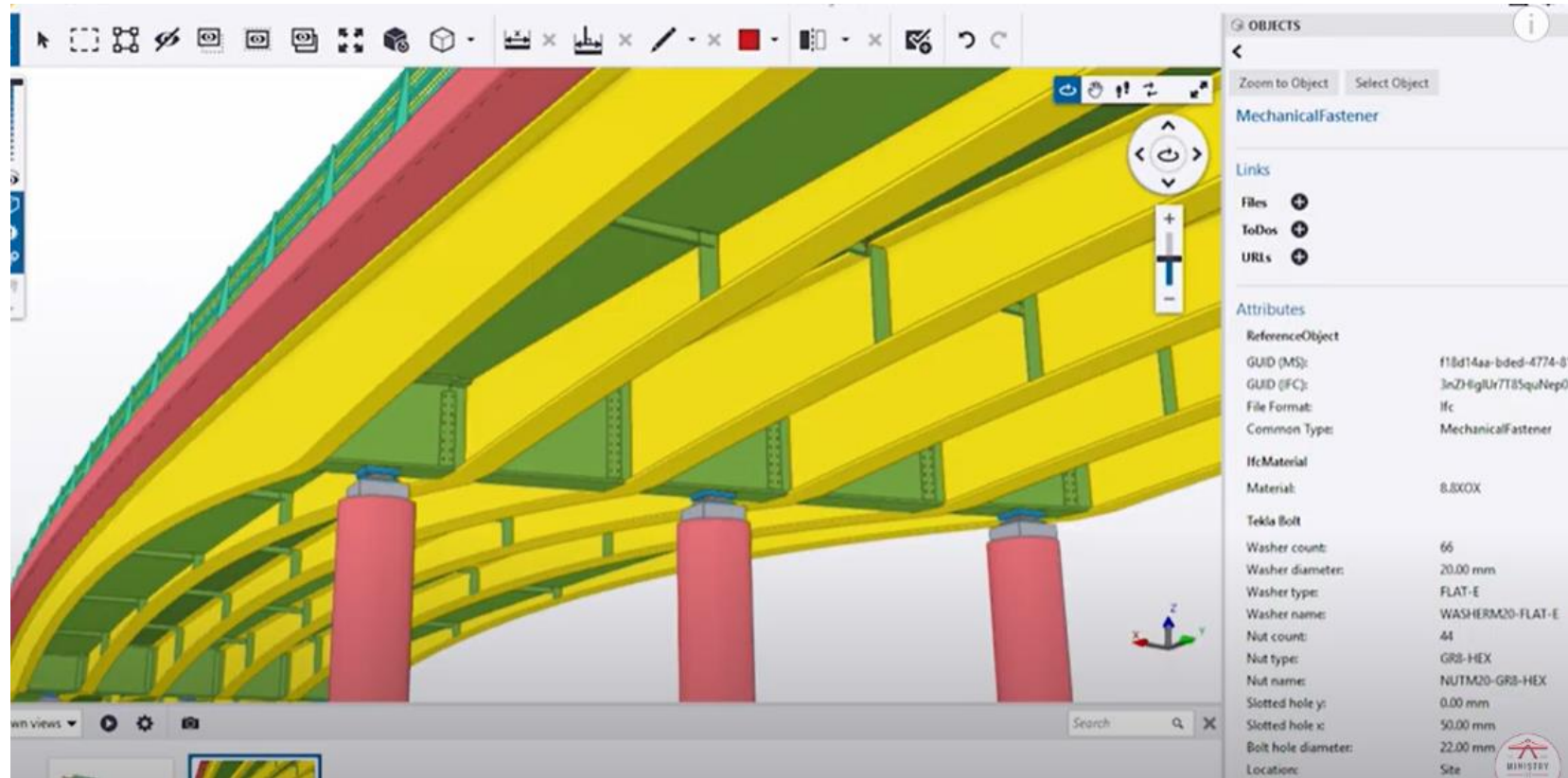


[2+1 Roadway Pilot Project, Site Selection and Design Parameters Report](#)

# Digital Delivery (BIM/BrIM)



- MTO Working Group starting to develop BIM MTO roadmap
- Started two pilots to support BIM
  - ✓ DB Contract Highway 401/Dorchester Road Underpass Replacement and Interchange Improvements
  - ✓ Highway 11 North Driftwood River Bridge



# New Contract Management System (CMS)



- CMS live February 13
- Training sessions week of February 6 and post go live
- No subscription fees
- All data migrated to new system
- Onboarding of active users and contracts first. Followed by completed contracts

The screenshot shows the Kahua Network dashboard for a site administrator. The header includes a navigation bar with 'Getting Started' and the current project name 'HWY 417 & HWY 7 Interchange easterly to Eagleson Road Interchange (new)'. The main content area features a sidebar with navigation options: Project Finder, Apps, Dashboard, Calendar, Search, Tasks, Messages, and Getting Started (highlighted). The main area displays a welcome message: 'Hi, Jamie. Welcome to The Kahua Network, the world's only collaborative network for construction project management. Select one of the links below to start configuring your Kahua site. Please note you are currently a site (domain) administrator.' Below this are several widgets: 'Recent Tasks' (empty), 'Recent Messages' (empty), 'Tasks by App' (empty), 'Open Tasks' (empty), 'Recent Projects' (empty), 'Tour of Kahua' (with a video icon), 'Complete Your Profile' (with a user icon), and 'Help Center' (with a question mark icon). A footer bar shows the user is logged in at 11:14 AM Eastern Time (US & Canada).



# Recessed Pavement Markings Trials



- Trial applications of recessed, high-performance pavement marking materials on capital construction contracts in 2022
- To obtain valuable data on performance, longevity, and driver experience
- Additional trial sections in 2023



# Foundations



Sustaining our infrastructure with smart investment decisions and innovation helps us save time and money without compromising quality

Examples of initiatives and innovations in foundations:

- **Pile load testing:** Highway 400 and Essa Road
- **Reuse of foundations:** Highway 9 and Greenock River Bridge currently in design
- **Ground Improvement:** Highway 401/Country Rd 2/34
- **Pile Driving:** rather than Hiley formula





# Reduced Load Periods (RLP)



- Development of RLP Onset and Removal Model supported by data from its Road Weather Information System (RWIS) and results from pavement strength testing
- Improves the protection of infrastructure assets and optimizes timing of RLP to reduce impacts to industry
- Model provides an approach to share pavement strength, frost depth, moisture and temperature data and assist municipalities to understand and use real-time factors to optimize the application of RLPs
- Partnering with Good Roads (formerly the Ontario Good Roads Association (OGRA)) to support municipalities

# De-Risking – Material Price Indexes



- Development of a model aimed at reducing risk related to significant steel price fluctuations and consider additional operations to fuel and PGAC indices

## New steel price index

- Contract language and administrative framework currently under development; new specification will be posted on TCP in early 2023
- Principles - Similar to PGAC:
  - Applies when price index fluctuates over a set threshold
  - Ability to opt out at award
  - Based on an industry standard index

## Additional indices

- PGAC index will be included in more design-build projects, effective immediately
- Considering the addition of other operations/items to fuel and PGAC indices
- New items will be considered based on magnitude of impacts

# Stakeholder Forum



- Annual forum to provide all MTO stakeholders with a line of sight to upcoming specification and policy development (i.e. new or updates/changes to specifications, policies, etc. that are planned to be posted on the [Technical Consultation Portal](#) in the 2023-24 fiscal year)
- Inaugural event to be held virtually in **March 2023**, with a potential of moving to a hybrid model in future years



# Capital Program and Budget Update



Michelle Pasqua  
Director, Asset Management Branch



# 2022-23 Capital Program Overview

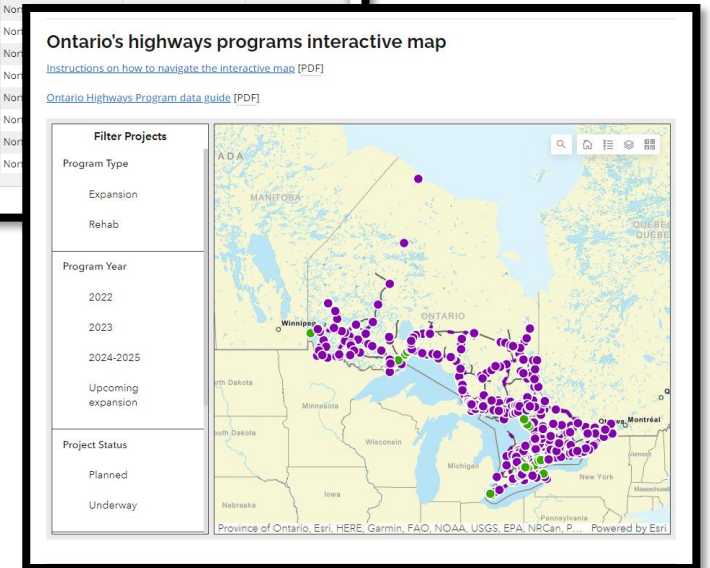


- Expect to fully spend highway infrastructure budget
- Commenced the 2022-23 fiscal year with **95** carry-over projects with a total construction value of **\$3.85 billion**
- Issued **109** tenders for MTO-delivered major capital projects in 2022 (January to December 2022), with total construction valued at approximately **\$1.38 billion**
- Continued strong capital program with **397** projects planned to be tendered over the next 4 years

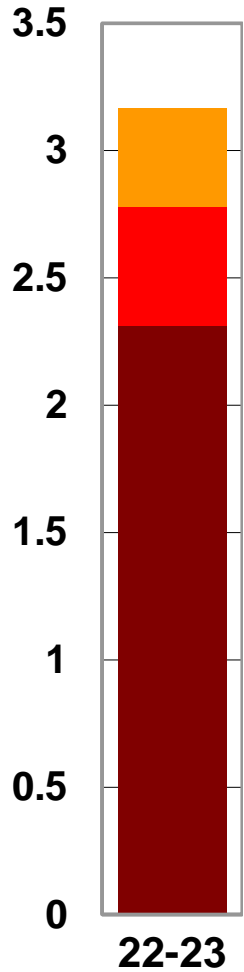
Search table  Filter table by Start Year  [Show/hide columns](#)

Searches include hidden columns

Program Type	Start Year	Region	Highway	Location
Expansion	2016	Northeastern	69	North of Hwy 522 north
Expansion	2024-2025	Northeastern	652	Cochrane Bypass, exte
Expansion	2024-2025	Northeastern	69	North of Hwy 559, nor
Expansion	2024-2025	Northeastern	69	North of the north jun
Expansion	Upcoming expansion	Northeastern	69	Hwy 69 connection to
Expansion	Upcoming expansion	Northeastern	69	South junction of Hwy
Expansion	Upcoming expansion	Northeastern	69	North Hwy 7182 (Sheb
Expansion	Upcoming expansion	Northeastern	69	Patrol yard on Hwy 52
Expansion	2020	Northwestern	11, 17	3 km west of CPR over
Expansion	2021	Northwestern	11, 17	Truck inspection stati
Expansion	2022	Northwestern	11, 17	Hwy 587 easterly to P
Expansion	2022	Northwestern	11, 17	Coughlin Rd. westerly
Expansion	2022	Nor		
Expansion	2023	Nor		
Expansion	2024-2025	Nor		
Rehab	2019	Nor		
Rehab	2020	Nor		
Rehab	2020	Nor		
Rehab	2021	Nor		
Rehab	2021	Nor		



# 2022-23 Capital Program Budget \$3.166B\*



- ← **\$385.1 M** for other transportation programs  
(Capitalized Interest, Remote Airports, Ferries, Program Support, etc.)
- ← **\$470.0 M** for design and property
- ← **\$2,311.0 M** for highway construction\*\*

\$M	Rehab	Expansion	Total
South	1,071.0	616.3	<b>1,687.3</b>
North	479.0	144.7	<b>623.7</b>
	1,550.0	761.0	<b>2,311.0</b>

Notes:

\* Data above is based on the most up-to-date information available.

\*\* Both the rehabilitation and the expansion programs include projects with P3 and non-P3 delivery models.

# OHP - Program Overview



- **Total of 602 Projects on the program**
  - 560 Rehabilitation Projects
  - 42 Expansion Projects

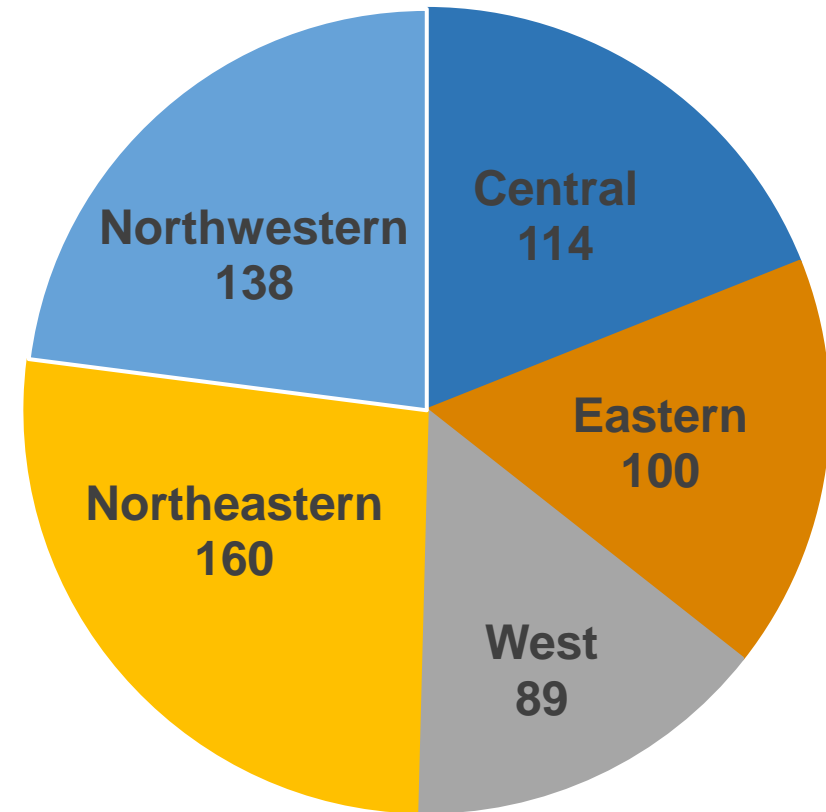
- **Yearly Breakdown:**

• Underway (previous years starts)	95
• 2022 starts	109
• 2023 starts	127
• 2024 - 2025 starts	261
• Upcoming Expansion (beyond 2025)	<u>10</u>
	602

- Planned early tenders (January 2023 – March 2023)  
– 55 Projects (subject to change)

- OHP link: <https://www.ontario.ca/page/ontarios-highway-programs>

Projects by Region



*The OHP reflects the majority of projects on the capital program (generally, projects over \$2M)*

# January 2023 - March 2023 Planned Tenders



- The tables illustrate the **advertising plan** for Q4 2022-23 (ie. Early Tenders)

	Central	East	West	Northeast	Northwest
<b>55 Early Tenders Planned*</b>	20	7	8	9	11

- Timing of planned tenders is subject to change** due to factors such as status of planning, design, environmental approvals, funding and property acquisition

Delivery Method	Early Tenders
Design-Build	4
Design-Bid-Build	51
<b>Total*</b>	<b>55</b>

Cost Range	Early Tenders
\$0 – \$10 million	34
\$8 – \$20 million	11
\$15 – \$50 million	10
<b>Total*</b>	<b>55</b>

\* Planned tenders January - March 2023. Based on January 16, 2023 update of OHP.



# 2022-23 Projected Accomplishments – South/North



	South	North	Total
<b>New or Expanded Highways (Lane km)</b>	<b>120</b>	<b>0</b>	<b>120</b>
<b>New Bridges</b>	<b>11</b>	<b>0</b>	<b>11</b>
<b>Repaired Highways (Lane km)</b>	<b>720</b>	<b>727</b>	<b>1447</b>
<b>Repaired Bridges</b>	<b>81</b>	<b>27</b>	<b>108</b>
<b>New Culverts (&gt;3m span)</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Repaired Culverts (&gt;3m span)</b>	<b>22</b>	<b>16</b>	<b>38</b>

# 2022-23 Projected Accomplishments – by Region



	West	Central	East	Northeastern	Northwestern	Total
<b>New or Expanded Highways (Lane km)</b>	<b>29</b>	<b>91</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>120</b>
<b>New Bridges</b>	<b>0</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>11</b>
<b>Repaired Highways (Lane km)</b>	<b>286</b>	<b>286</b>	<b>139</b>	<b>538</b>	<b>198</b>	<b>1447</b>
<b>Repaired Bridges</b>	<b>19</b>	<b>47</b>	<b>15</b>	<b>14</b>	<b>13</b>	<b>108</b>
<b>New Culverts (&gt;3m span)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Repaired Culverts (&gt;3m span)</b>	<b>0</b>	<b>16</b>	<b>6</b>	<b>12</b>	<b>4</b>	<b>38</b>

# Closing Remarks



Thank you!



# Contacts



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