Achieving sustainability is not a linear path. By its nature, sustainability requires knocking down silos and building bridges instead. It’s a process of thinking broadly about connections between things that might not at first be obvious.

This document works in similar ways. There are many different ways you can read this. You can start at the beginning and scroll all the way through. Or, you can click on the many links in the document to learn about an area of specific interest.

This Sustainability Implementation Plan is a snapshot of what is happening at MTO at a specific moment in time; information was gathered mid-2011. While the document is static, our activities are not. That is why some milestones are recorded as underway while others have been completed and still others have yet to begin.

When we release our next Sustainability Implementation Plan, we will provide a comprehensive update on all the activities recorded here.

Enjoy your read.
In 2009, the Ministry of Transportation affirmed a long-term commitment to sustainability by establishing it as one of our five priorities. This is a significant step. It holds us accountable for making decisions that will lead us to become a more sustainable organization and influence a more sustainable transportation system.

_Sustainability inSight_, MTO’s sustainability strategy, was published in February 2011. It presents a common vision for a sustainable MTO – a vision to guide our work and rally our partners to work alongside us.

Reaching our vision requires us to take action. This document, MTO’s first Sustainability Implementation Plan (SIP), documents the specific projects that we will undertake across the ministry over the next three years. It reflects MTO’s collective responsibility for achieving the seven strategic goals identified in _Sustainability inSight_. And this is just the beginning. From this point on, we will release a new SIP every three years with new commitments and a progress report on prior ones.

While there is work to be done, this is also an opportunity to celebrate our successes. MTO staff members are dedicated to advancing a transportation system that balances social, environmental, and economic considerations. Our success stories are not always reported on, and may not be well known. The SIP profiles some of our achievements and helps recognize and share the innovative work being done across our ministry. We want to maintain this momentum and encourage staff in the ministry to continue looking for opportunities to bring a sustainability perspective to their work.

Sustainability is not only about what we do as a ministry; it is also about the users of the transportation system. We hope that with the direction set in _Sustainability inSight_, we can all journey together towards greater sustainability.
Welcome
Message from MTO’s Senior Management Team
Vision, Priorities & Goals
About the Ministry of Transportation

Overview

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Vision, Priorities & Goals

VISION
To be a world leader in moving people and goods safely, efficiently and sustainably, to support a globally competitive economy and a high quality of life.

PRIORITIES
1. Increase transit ridership
2. Promote a multimodal transportation network to support the efficient movement of people and goods
3. Promote road safety in order to remain among the safest jurisdictions in North America
4. Improve Ontario’s highway, bridge and border infrastructure
5. Integrate the principle of sustainability into the ministry’s decision making, programs, policies and operations

MTO’s Vision and Mandate
Sustainability Strategy

Strategic Goals

• Increase accessibility by improving mobility, choice and safety
• Integrate transportation and land use planning to reflect sustainability
• Consistently apply a context sensitive approach in MTO’s work
• Optimize infrastructure design, capacity and investment
• Demonstrate good stewardship
• Engage MTO staff expertise to promote innovation
• Drive a cultural shift towards sustainability

Sustainability Implementation Plan
Action items to support strategic goals
About the Ministry of Transportation

The Ministry of Transportation (MTO) is responsible for Ontario’s transportation policy and planning, management of provincial highways, and road user safety. Over 4,000 employees at MTO deliver these services for Ontarians.

CORPORATE SERVICES DIVISION
CSD continually strives to provide value added advice, service and leadership in delivering ministry and corporate priorities, and is committed to understanding MTO’s business needs to provide sound advice, using a risk management approach.

LABOUR AND TRANSPORTATION I&IT CLUSTER
The Labour and Transportation I&IT Cluster is a client-focused organization, committed to operational excellence, providing I&IT support and leadership to Ministry of Labour and Ministry of Transportation.

POLICY AND PLANNING DIVISION
The Policy and Planning division oversees Ontario’s long-term strategic transportation interests. In consultation with key federal and municipal partners, the division undertakes multimodal transportation policy development and long-range transportation planning to ensure that all of the elements of the system (air, rail, road, marine and transit) work together efficiently.
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The division helps achieve provincial transportation-related climate change objectives and is also responsible for managing the province’s relationship with Metrolinx, which includes GO Transit.

PROVINCIAL HIGHWAYS MANAGEMENT

Provincial Highways Management Division is responsible for the stewardship of all aspects of the provincial highway network, including its planning, design, construction, maintenance, operations and management. PHM sets highway standards and policies and manages contractors, engineering, maintenance and other highway service providers.

ROAD USER SAFETY

The mandate of the Road User Safety Division is to actively promote road safety, to deliver the highest standards of customer service to the public, and to nurture effective relationships with all the Division’s partners. They strive to make Ontario’s roads the safest in the world and to excel in providing high quality products and services to their customers.

TRANSPORTATION IN ONTARIO BY THE NUMBERS

The Ministry of Transportation

- MTO manages 16,500 km of highway, more than 2,720 bridges and structures, and 29 remote airports.
- MTO owns and operates or provides funding for 9 ferry services.
- MTO uses more than 200 COMPASS cameras to manage traffic flow and increase road user safety along its highways.
- GO Transit, the Greater Toronto and Hamilton Area’s interregional public transportation service, carried 57 million revenue passengers in 2010.
- On an average weekday, GO Transit carries approximately 217,000 commuters.

Vehicles

- In 2010, there were 8.7 million registered vehicles in Ontario.
- On a typical weekday in Ontario, more than 437,000 vehicles use the section of Highway 401 near Highway 400, making it one of the busiest sections of highway in North America.
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Transit

- Ontario has 58 conventional transit systems with more than 7,430 transit vehicles serving over 9.85 million passengers.
- Since 2003, Ontario has made record investments in transit totalling more than $10.8 billion.
- Ontario provides 2 cents per litre of the provincial gas tax to municipalities for public transit.

Safety

- Ontario is among the safest jurisdictions in North America for road user safety.
- Between 1980 and 2008, Ontario’s fatality rate per 10,000 licensed drivers has declined by 77%.

Accessibility

- The Accessibility for Ontarians with Disabilities Act was passed in 2005, making Ontario the first jurisdiction in Canada to create comprehensive accessibility standards in all areas of daily life.
- The province’s plan is to make Ontario fully accessible by 2025.
- At the end of 2009, there were 676 accessible transit routes in Ontario, up from 302 in 2003 (increase of 124%).

Emissions

- Between 1990 and 2008, transportation GHG emissions grew by 1.3% per year; emissions from road transportation grew by 1.6% per year, while GDP grew by 2.6% per year.
- Since 1990, Ontario’s air pollution emissions from the transportation sector have continuously declined.
  - Nitrogen Oxides (NOx) at a rate of 3.2% per year
  - Volatile Organic Compound (VOC) at a rate of 4.1% per year
  - Carbon Monoxide (CO) at a rate of 3.3% per year

Demographic Trends

- The number of seniors aged 65 and over is projected to more than double from 1.8 million, or 13.9 per cent of population, in 2010 to 4.1 million, or 23.4 per cent, by 2036.
- The Greater Toronto Area (GTA) is projected to be the fastest growing region of the province, with its population increasing by 3.0 million, or 47.7 per cent, by 2036.
- The other regions of the province will grow more slowly than the GTA and are projected to see their shares of provincial population decline gradually. The Northwest region is projected to experience a small population decline.
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Strategic Goals

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GOAL 4: Optimize infrastructure design, capacity and investment
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GOAL 5: Demonstrate good stewardship
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GOAL 7: Drive a cultural shift towards sustainability
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GOAL 1

Increase accessibility by improving mobility, choice and safety

Areas of focus include:
- identifying ways to eliminate the need for some trips by focusing on moving ideas and services, instead of people and goods
- giving individuals and businesses access to a variety of transportation options, so that they can choose the mode that best meets the needs of a specific trip
- establishing a multimodal transportation network, with effective intermodal connections to reduce the reliance on any one transportation mode for passengers and for freight
- making each transportation mode – for both passengers and freight – as efficient as possible
- encouraging safe and sustainable transportation practices
- improving equity of access for people of different ages, genders, socioeconomic status and abilities
**GOAL 1:** Increase accessibility by improving mobility, choice and safety

**Commitment no.1**
Establish, monitor, and review the Electric Vehicle Incentive Program.

**ACCOMPLISHMENTS TO DATE**
- Established the Electric Vehicle Incentive Program, providing between $5,000 and $8,500 towards the purchase or lease of a new eligible plug-in electric vehicle
- As of Nov 15, 2011 issued 225 green plates and 130 consumer incentives

**2011 MILESTONES**
- Raise public awareness of EVs and the incentive program
- Increase public awareness of electric vehicle technology and the incentives offered by the Ontario government to support the adoption of electric vehicles by providing online information, distributing promotional print materials, and participating in trade shows and conferences

**2012 MILESTONES**
- Initiate a mid-program review to assess uptake of EV incentive program
- Continue to encourage the use of electric vehicles by updating online resources and exploring additional promotional tactics

**LEAD BRANCH**
Transportation Policy
**GOAL 1:** Increase accessibility by improving mobility, choice and safety

### Commitment no.2

**Install parking spaces with charging infrastructure for electric vehicles at GO stations.**

**2011 MILESTONES**
- Complete installation of conduit and cables for 20 parking spaces with EV charging infrastructure at 4 GO Transit stations

**2012 MILESTONES**
- Install charging equipment pending sourcing of equipment by Infrastructure Ontario in collaboration with the MTO Sustainability Office
- Evaluate potential for further installation of EV charging infrastructure at GO Transit stations

**LEAD BRANCH**
Metrolinx/Transit Policy
GOAL 1: Increase accessibility by improving mobility, choice and safety

Commitment no.3
Update MTO’s 1992 Bicycle Policy to reflect current provincial active transportation objectives and priorities.

ACCOMPLISHMENTS TO DATE
- Developed a draft update to MTO’s 1992 Bicycle Policy in consultation with internal stakeholders

2011 MILESTONES
- Conduct research and analysis on best practices in order to develop a knowledge base from which to develop draft implementation guidelines to support the draft policy

2012 MILESTONES
- Consult with external stakeholders on the draft policy and incorporate feedback
- Finalize the policy

2013 MILESTONES
- Begin implementation of policy
- Complete inventory of existing cycling routes in Ontario
- Review and update as necessary

LEAD BRANCH
Transportation Policy
GOAL 1: Increase accessibility by improving mobility, choice and safety

Commitment no.4
Continue to monitor cycling safety issues.

ONGOING
- Monitor cycling safety issues
- Continue to promote “share the road” messaging to encourage safe cycling

LEAD BRANCH
Safety Policy and Education
GOAL 1: Increase accessibility by improving mobility, choice and safety

Commitment no.5
Improve pedestrian and cyclist access to GO transit facilities.

ACCOMPLISHMENTS TO DATE:
- Incorporated GO Transit Station Access Strategy, which commits to provide access within stations for pedestrians, cyclists and local transit, into the GO Transit Design Requirements Manual (DRM) and GO Transit Level of Service (LOS) Documents
- Improved pedestrian and cyclist facilities at Mount Pleasant, Brampton, Malton and Bronte GO Transit stations
- Installed 100 bike shelters at stations
- Published and disseminated Metrolinx’s Mobility Hub Guidelines
- Mapped cycling networks around mobility hubs in a Geographic Information Systems (GIS) database
- The usage of bicycle parking has increased 50% in one year to 900 spots used system-wide in October 2011
- Pedestrian and cyclist access at Erindale has been incorporated in the redesign of the site as associated with the current design build contract
- Site redesign has been completed at Ajax and is part of the Parking Structure Contract which has been tendered and closed

Continued...
GOAL 1: Increase accessibility by improving mobility, choice and safety

2011 MILESTONES:
- Improve pedestrian and cyclist facilities as part of station improvements or refurbishments, where possible
- Install 30 additional bike shelters at stations
- Mobility Hubs planning studies underway at Weston, Kennedy and Mt. Dennis
- Working with the City of Toronto to expand the use of bike lockers at GO stations

2012 MILESTONES:
- Integrate GO Transit Station Access Strategy, which commits to provide access at stations for pedestrians, cyclists and local transit, into new initiatives, such as First Mile/Last Mile, which seeks to spur modal shift away from sole occupant personal vehicles to stations as the mode of choice for our passengers. Note the Station Access Strategy has been integrated with the GO Transit Design Requirements Manual and the GO Rail Level of Service Documents
- Work on a Mobility Hub Plan for Mid-Town Oakville has begun and will be completed late 2012

2013 MILESTONES:
- Improved station and area mapping
- Assessment of walkability at 5-10 mobility hubs and GO Stations
- Continue to implement Mobility Hub Guideline recommendations into new regional projects, including Eglinton Crosstown station designs

LEAD BRANCH
Metrolinx/Transit Policy
GOAL 1: Increase accessibility by improving mobility, choice and safety

Commitment no. 6
Implement a new multi-jurisdictional multimodal traveller information service for Ontario in partnership with industry.

ACCOMPLISHMENTS TO DATE
- Developed a new Traveller Information Services (TIS) Framework for Ontario, identifying a long-term direction for TIS in the province

2011 MILESTONES
- Create a new governance model for TIS in Ontario

2012 MILESTONES
- GTHA Construction, Incident and Planned Event TIS
- Develop an open data policy

ONGOING
- Roll-out of partnerships

2013 MILESTONES
- Assessment of opportunities for private sector partnerships in data collection and the provision of traveller information services
- Issue of Requests for Proposals for select private sector partnerships

LEAD BRANCH
Central Region
Commitment no. 7
Update the 1996 Ontario Bikeways Planning and Design Guidelines, used by MTO and municipalities to accommodate cyclists on transportation infrastructure.

ACCOMPLISHMENTS TO DATE
- Reviewed Ontario Bikeways Planning and Design Guidelines using the findings from the “Cyclists and Pedestrians at Interchanges” study

2012 MILESTONES
- Update and publish the guidelines

LEAD BRANCH
Highway Standards
GOAL 1: Increase accessibility by improving mobility, choice and safety

Commitment no.8
Reduce travel by MTO staff through investments in IT (e.g., video-conferencing, web-casting) and by reducing current levels of air travel.

ACCOMPLISHMENTS TO DATE
- Videoconferencing being widely used throughout ministry
- Baseline for air travel mileage received in Q4 2010-11 fiscal
- Baseline for personal travel mileage received in Q4 2010-11 fiscal

2011 MILESTONES
- Additional plans for videoconferencing improvement and roll-out to be provided by Labour and Transportation I&IT Cluster (LTC)
- Reporting on air travel reduction/increase as part of year end green plan reporting
- Reduce personal vehicle mileage
- Reduce GHGs and fuel consumption

LEAD BRANCH
Corporate Services Assistant Deputy Minister’s Office
Commitment no.9
Continue significant investments in public transit across Ontario.

2011 ACCOMPLISHMENTS
- Continued to administer and support record provincial investments in transit, which include enhancements to and expansion of GO Transit, regional and municipal transit projects and the provision of provincial Gas Tax funding for public transit.
- Supported Metrolinx in:
  - Working to deliver on the Government’s commitment for rapid transit in the GTHA.
  - Successfully completing the roll out of the PRESTO regional farecard on the entire GO Transit network along with 8 municipal transit providers.
  - Constructing the Air Rail Link through expansion of the Georgetown South Corridor, procuring vehicles and awarding the contract (working with Infrastructure Ontario) to design, build and finance the spur line and passenger station at Pearson Airport Terminal 1.
- Executed a Transfer Payment Agreement for the provincial commitment to the Ottawa LRT project.

Continued...
GOAL 1: Increase accessibility by improving mobility, choice and safety

2012 MILESTONES
- Deliver the 8th year of provincial Gas Tax funding
- Implement PRESTO system-wide on OC Transpo
- Expand PRESTO on the TTC with the addition of selected subway stations and negotiation of an agreement for system-wide implementation
- Work with the City of Toronto to move forward with rapid transit projects
- Begin construction of the Terminal 1 station infrastructure and spur line on the Air Rail Link
- Support the City of Ottawa to complete and award the RFP contract and begin construction on Ottawa LRT
- Negotiate a Transfer Payment Agreement for the provincial commitment to the Waterloo rapid transit project

LEAD BRANCH
Transit Policy
GOAL 1: Increase accessibility by improving mobility, choice and safety

Success Stories

Cycling Safety

Through local safety events and publications, the ministry works with stakeholders to promote safe cycling among young and adult riders. MTO publishes and distributes the Young Cyclist's Guide and Cycling Skills: Ontario's Guide to Safe Cycling. Both guides are available online and have information on bicycle equipment, riding tips, and the rules of the road to promote safe cycling.

Additional resources
- Young Cyclist's Guide
- Cycling Skills: Ontario's Guide to Safe Cycling
GOAL 1: Increase accessibility by improving mobility, choice and safety

Success Stories

Mobility Hubs

The Regional Transportation Plan for the Greater Toronto and Hamilton Area being implemented by Metrolinx imagines a transportation system where transit stations become vibrant destinations that offer many different services. Known as mobility hubs, these sites would connect and support different modes of transportation, for example, local transit service, regional commuter service, cycling and pedestrian networks, secure storage facilities for bikes, car-share, drop-off areas and more. They could also attract development such as residential buildings, office space, hospitals, education facilities, daycares and grocery stores. Ideally, providing all these services in close proximity will create compact, dynamic communities where people have options that reduce the need to drive.

Additional resources
- Metrolinx
GOAL 1: Increase accessibility by improving mobility, choice and safety

Success Stories

E-bikes

From October 3, 2006 to October 3, 2009, the province of Ontario conducted a three-year pilot program to test the safe integration of electric power-assisted bikes (e-bikes) on Ontario roads. E-bikes increase mobility and reduce commute times. The pilot program expanded cycling opportunities for Ontarians who are not able to or are concerned about using conventional bicycles that are solely muscular-powered. They are also an environmentally friendly alternative to driving, reducing fuel consumption and emissions.

As a result, effective October 3, 2009, electric bikes (both those resembling conventional bicycles and those resembling motor scooters) are permanently allowed on roads and highways where conventional bicycles are permitted.

Additional resources
- New and Alternative Vehicles
Success Stories

Online vehicle registration pilot

The current vehicle registration process requires that dealers, fleets, and their authorized agents visit an in-person ServiceOntario location in order to register a new vehicle purchase or to register the transfer of a used vehicle as a result of purchase/re-sale.

In March 2011, the Modernization of Vehicle Registration Pilot project offered online registration to two pilot dealers. The pilot was successful, so full roll-out to over 5000 dealers will start in 2012/13. This further expands MTO’s online services and reduces the need to travel.
Incorporating Cycling Safety in the Driver’s Handbook

MTO is responsible for publishing and reviewing the official Ontario Driver’s Handbook. As part of a recent review of the handbook, MTO has recommended adding educational information for drivers to address specific cycling safety issues. Some of the recommended amendments include information for drivers regarding:

- Safe car-bike interaction at roadway intersections;
- Checking blind spots for cyclists on the right;
- The MTO document Cycling Skills.

This is one way MTO is promoting safety for all road users and helping more people choose cycling as a safe, active transportation alternative.

Additional Resources

- The Official MTO Driver’s Handbook
- Cycling Skills
GOAL 1: Increase accessibility by improving mobility, choice and safety

Success Stories

Investing in public transit

Considerable efforts are underway to ease congestion, create jobs, reduce emissions and build a strong economy by investing in public transit. From 2003 to 2011, over $13.4B has been invested in public transit including over $6.0B in GO transit. These investments are delivering results – GO Transit ridership has increased from 45.2 million in 2004 to 57.9 million riders per year in 2010-11 – a 28% increase.

From 2004 to 2011, the Province has provided over $1.9B in Gas Tax funding, including $318M for the 2010/11 program year. These investments are paying off – in 2010, we saw an increase of nearly 132 million passenger trips on municipal transit systems, compared to 2003. Because of that, approximately 110 million car trips were removed from our roads.

Continued...
GOAL 1: Increase accessibility by improving mobility, choice and safety

Success Stories

...continued from previous page

Work is underway on implementing the provincially supported Mississauga Transitway, Brampton Zum and Durham Highway 2 bus rapid transit projects which will provide efficient and reliable rapid transit within Peel and Durham Regions and will integrate with other transit systems in the GTA.

We are also making direct investments in regional transit projects such as the provincial commitment of $600M to Ottawa Light Rail Transit (OLRT). The investment in OLRT will cut commuting time in the downtown core and provide a net benefit to the city’s economy of $276M between 2019 and 2031. Expanding their transit system will ensure a viable, efficient and environmentally friendly alternative to driving.

Additional resources
- GO Transit
- Mississauga Transit
- Brampton Transit
- Durham Region Transit
- Ottawa Light Rail
GOAL 1: Increase accessibility by improving mobility, choice and safety

Success Stories

Ontario’s modern smart-card solution to transit fare payment

PRESTO is a transit-based smartcard system that aims to improve client service while enabling revenue collection and efficient operations of Ontario transit systems. Currently, 10 public sector transportation agencies are on board with PRESTO including GO Transit, the major transit systems in the City of Hamilton and the Regions of Halton, Peel, York and Durham, as well as 12 TTC subway stations so far. The PRESTO farecard is scheduled to be implemented in Ottawa in Spring, 2012. Full implementation of PRESTO on the TTC is expected by 2015. As of November 2011, 90,000 PRESTO cards have been issued. Customer satisfaction with the card has been reported to be very strong and highly positive. In addition to being a convenient and paperless method for customers to pay transit fares, it also aims to encourage increased transit usage by providing seamless integration of fare payments between various transit operators in the Province.

Additional resources

- PRESTO
Integrate transportation and land-use planning to reflect sustainability

Areas of focus include:
- recognizing that land use and transportation have a symbiotic relationship; both have a permanent effect on communities and influence the transportation choices of people and businesses
- encouraging integrated planning that emphasizes communication between ministries, across levels of government and with other organizations to reach common goals (e.g., in reviewing municipal Official Plans or conducting Environmental Assessments)
- bringing a stronger sustainability perspective to the transportation planning process to balance business and passenger transportation needs, manage sprawl and congestion, protect natural and agricultural lands, and promote more active forms of transportation
**GOAL 2:** Integrate transportation and land-use planning to reflect sustainability

**Commitment no. 1**
Set a strategic direction for transportation planning and investment that better integrates transportation and land-use planning in support of system-wide sustainable transportation choices. MTO will implement a program to support this strategic direction in conjunction with other ministries and municipal planning partners.

**2012 MILESTONES:**
- Prepare a study objective and plan
- Conduct preliminary research
- Identify lessons learned from specific MTO examples of transportation planning exercises, Niagara to GTA (NGTA) and GTA West
- Consult MTO and external stakeholders
- Develop a draft proposal and preliminary program to establish the strategic direction for transportation planning and investment

**2013 MILESTONES:**
- Seek support from stakeholders, clients, partners, and senior management for the proposed strategic direction for transportation planning and investment

**LEAD BRANCH**
Transportation Planning
GOAL 2: Integrate transportation and land-use planning to reflect sustainability

Commitment no. 2
Publish updated Transit-Supportive Guidelines (updating the document first published in 1992 by MTO and MMAH) to better integrate land-use and transportation decisions.

ACCOMPLISHMENTS TO DATE:
- Released draft updated Transit-Supportive Guidelines for public consultation

2011 MILESTONES
- Publish final updated Transit-Supportive Guidelines

LEAD BRANCH
Transportation Planning and Transit Policy
**GOAL 2:** Integrate transportation and land-use planning to reflect sustainability

**Commitment no.3**
Develop and release Freight-Supportive Guidelines to help municipalities effectively plan for the movement of goods through land-use planning policy and practices.

**2011 MILESTONES**
- Undertake pre-consultation with key stakeholders on the development of Freight-Supportive Guidelines

**2012 MILESTONES**
- Consult with key stakeholders on the development of Freight-Supportive Guidelines
- Release Freight-Supportive Guidelines

**LEAD BRANCH**
Transportation Planning
Commitment no.4

Develop new, or revised, transportation planning policies for inclusion in the updated Provincial Policy Statement (PPS). The updated PPS provides an opportunity to outline matters of provincial interest related to transportation for consideration in land use planning decisions across Ontario.

2011 MILESTONES

- Recommend draft transportation policies for consideration in MMAH’s updated Provincial Policy Statement, building on input received from stakeholders through the MAH consultation process

LEAD BRANCH

Transportation Planning
**GOAL 2:** Integrate transportation and land-use planning to reflect sustainability

### Commitment no.5
Apply a sustainability lens to the review of municipal Official Plans as part of the provincial “one window” planning service.

**ACCOMPLISHMENTS TO DATE**
- Consulted with Ministry of Municipal Affairs and MTO Policy and Planning to assess options to include sustainability in the review of municipal Official Plans

**2012 MILESTONES**
- Develop tools and educational products to support MTO’s sustainability objectives to be used by municipalities when developing or updating Official Plans, as well as by MTO staff reviewing and commenting on Official Plans
- Publish tools and educational products for municipal staff, municipal organizations, and MTO staff that support sustainable transportation objectives within Official Plans

**LEAD BRANCH**
Contract Management and Operations
GOAL 2: Integrate transportation and land-use planning to reflect sustainability

Success Stories

Highway 407 East Transitway

Highway 407 East is one of the largest highway construction projects to ever take place in Ontario. By planning for a high-speed transitway as part of the project, the province will help meet the long-term needs for transit in the Greater Toronto Area.

The planned transitway will ultimately be 150 kilometres running parallel to Highway 407 on a separate right-of-way. In the short-term, the transitway will integrate with the existing planned transportation network, accommodating buses. In the long-term, the transitway could be converted to accommodate light rail transit (LRT).

The transitway is a component of the official plans of stakeholder municipalities, as well as the province’s MoveOntario 2020 plan and the Growth Plan for the Greater Golden Horseshoe.

Additional resources
- Highway 407 East Environmental Assessment
- Highway 407 East project website
Success Stories

**Long Range Multi-modal Transportation Planning**

MTO incorporates sustainability in the development of long-range multi-modal transportation strategies by considering environment, economy and community in the planning process. A balanced transportation system that provides choice and flexibility for the movement of people and goods is essential to meet the complex and multi-modal demands.

Recent MTO transportation planning initiatives have used a robust “building block” approach to identify and select options for improving the transportation network. These options first seek to optimize the existing transportation network, and then incorporate non-roadway infrastructure improvements before moving to consider widening of existing roads or the provision of new roads. The use of the “building block” approach ensures that the...
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transportation network offers sustainable choices to both people and business as they make travel decisions and rely less on the single occupant vehicle.

Exploring options to first optimize the existing transportation networks can improve the performance of the existing system by shifting and reducing auto and truck demand and improving system operating efficiency. This will help the Government in support of:

- compact, vibrant and complete communities;
- a prosperous and competitive economy; and
- a protected environment.
Consistently apply a context-sensitive approach in MTO’s work

**Areas of focus include:**

- recognizing that there may be a need for different sustainability solutions in different contexts (e.g., rural versus urban, respecting historical or cultural heritage)
- engaging communities throughout the planning and implementation of a transportation infrastructure project
- making sure that infrastructure provides lasting value to the community by meeting its transportation needs and respecting local values and identities
- building relationships with Aboriginal communities through positive, respectful and proactive engagement of First Nations, Métis, Inuit and urban Aboriginal communities
GOAL 3: Consistently apply a context-sensitive approach in MTO’s work

Commitment no.1
Reflect sustainability in the MTO Class Environmental Assessment process for Provincial Transportation Facilities.

ACCOMPLISHMENTS TO DATE
- Prepared amendments and revisions to the MTO Class EA process which reflect sustainability goals

2011 MILESTONES
- Submit amended Class EA document to Minister of the Environment for formal review and approval

2012 MILESTONES
- Implement the approved amended MTO Class EA
- Develop support materials and toolkits for MTO practitioners to implement new amended Class EA

LEAD BRANCH
Transportation Planning
GOAL 3: Consistently apply a context-sensitive approach in MTO’s work

Commitment no.2
Implement the Greening the Right-of-Way program, planting trees and shrubs on land within and adjacent to highway rights-of-way.

ACCOMPLISHMENTS TO DATE
- In 2010, planted 40,000 trees or shrubs on MTO rights-of-way
- In 2011, planted 250,000 trees or shrubs on MTO rights-of-way

2012 – 2014 MILESTONES
- Continue to plant 200,000 trees and shrubs/year over the next 3 years on and adjacent to MTO rights-of-way in Central, West and East Regions

LEAD BRANCH
Central Region
GOAL 3: Consistently apply a context-sensitive approach in MTO’s work

Commitment no.3
Work with Active and Safe Routes to School (ASRTS) to establish standard signs for municipalities to use to identify safe walking routes for children to take to school.

2011 MILESTONES
- Work with ASRTS to design and finalize signs
- Conduct outreach to select municipalities

2012 MILESTONES
- Notify municipalities and stakeholders of new signs

2013 MILESTONES
- Update the Ontario Traffic Manual to include the sign at the next available opportunity

LEAD BRANCH
Highway Standards and Transportation Policy
Highway 407 East Community Value Plans

The Highway 407 East project is one of the largest highway construction projects to take place in Ontario. To enhance public consultation on this significant project, a Community Value Plan (CVP) was created with input from stakeholders and community members. The main objective of a CVP is to better understand the cultural, historical and environmental concerns of the communities affected by the transportation corridor. Understanding community values will help create a transportation corridor that is complimentary to its physical, environmental, and cultural surroundings.

Based on the input received during the CVP process, the 407 East extension project team found ways to improve the corridor by including additional environmental mitigation measures and other enhancements. For example, the project will include additional wetland restoration, landscaping screening and strategic wildlife crossings. One unique enhancement technique involves the addition of relief art work on local overpass structures.

Additional resources
- Highway 407 East Environmental Assessment
- Highway 407 East project website
Highway 407 East and First Nations

The Highway 407 East project is one of the largest highway construction projects to take place in Ontario. A number of First Nations communities are impacted by this significant project.

One way in which affected First Nations communities have been engaged in the Environmental Assessment process is through archaeological studies. The Williams Treaties First Nations and the Huron-Wendat First Nation were funded partners in the excavation of sites of Aboriginal significance. Furthermore, as part of information sharing and relationship building, two traditional Aboriginal ceremonies were held with nine First Nation communities to honour their ancestors who lived in communities along the 407 corridor.

Additional resources
- Highway 407 East Environmental Assessment
- Highway 407 East project website
Highway 404 Extension Reforestation Program

MTO is extending Highway 404 from Newmarket to Queensville, Ontario. As part of this process, MTO is creating a significant reforestation plan working with the Ontario Ministry of Natural Resources. The plan will improve water quality, compensate for trees and vegetation that are being removed due to the project, and enhance the natural environment within the Maskinonge watershed. Lake Simcoe Region Conservation Authority (LSRCA) has also been a crucial partner during the consultation and review of the plan. Once the contract for the reforestation is finalized by MTO, LSRCA is also interested in bidding on the work for the reforestation plan once construction begins.

As part of the reforestation project, LSRCA held a native plant rescue, prior to construction, to save woodland plants from a woodlot slated to be cut to make way for the extension. Approximately 200 people participated in the plant rescue, including representatives from...Continued
GOAL 3: Consistently apply a context-sensitive approach in MTO’s work

Success Stories

...continued from previous page

Community groups like the Maskinonge River Recovery Project and the North American Native Plant Society. LSRCA has salvaged over 4,000 plants within the highway right-of-way to replant within the Maskinonge watershed.

In addition to the plant salvage operation, MTO and LSRCA also allocated mature butternut timber to local artisans. The wood was used to make carvings and other items that would be donated back to LSRCA for fundraising initiatives.

Additional resources
- Lake Simcoe Region Conservation Authority
GOAL 3: Consistently apply a context-sensitive approach in MTO’s work

Aboriginal Relations Branch

MTO’s Aboriginal Relations Branch was established in 2011. The branch’s mandate is to foster the spirit of the ministry’s new relationship with First Nations, Métis, and Inuit people that is built on a foundation of respect, fulfilling the ministry’s obligations and upholding the honour of the Crown. The branch will:

• take the lead in educating and sensitizing ministry staff on Aboriginal peoples and issues;
• develop strategies to facilitate Aboriginal economic opportunities in the transportation sector and develop a strategic plan to engage Aboriginal communities in long range planning and transportation infrastructure design;
• develop a new approach to relationship building by facilitating contact with Aboriginal communities, through positive, respectful and proactive engagement with First Nations, Métis, Inuit and urban Aboriginal communities; and
• support MTO initiatives and day-to-day business by providing strategic advice and facilitation on specific projects and operational issues.

Continued...
GOAL 3: Consistently apply a context-sensitive approach in MTO’s work

Success Stories

...continued from previous page

The branch will also be a resource to Aboriginal communities by creating regional forums for ongoing dialogue, to provide information about MTO projects and to respond to concerns about transportation issues. The Aboriginal Relations Branch will contribute to the evolution of a transportation system that is more inclusive and offers opportunities and benefits to Ontario’s Aboriginal peoples.
GOAL 3: Consistently apply a context-sensitive approach in MTO’s work

Success Stories

Province’s First Ethno-Cultural Signage

Many municipalities across Ontario have mature ethno-cultural communities offering a range of facilities and services such as dining, shopping, cultural centres and events that give the community a distinct cultural identity. MTO has now installed the first ethno-cultural highways signs to direct motorists to the communities of Little Italy and Chinatown in the Ottawa area. Signs were installed on Highways 416 and 417.
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GOAL 3: Consistently apply a context-sensitive approach in MTO’s work

Success Stories

Windsor-Essex Parkway – A Cultural Gateway

The Windsor-Essex Parkway is a once-in-a-generation project. In addition to improving the flow of international-bound and local traffic through the construction of a six-lane freeway, and a four-lane service road network, the Parkway will also integrate over 300 acres of green space, 20 kilometres of recreational trails, ecological protection and restoration areas and unique community connections.

Landscape and design consultation has included public information open houses, workshops and stakeholder meetings. The general landscape components are being further defined through a Landscape and Trail Master Plan. This plan details what features such as trails, lighting, seating, public art and key gateway locations will look like and how they will be used. A “Carolinian” theme will be the primary theme for the green space. This theme reflects ecological sensitivity with a contemporary approach. It supports protection and expansion...
GOAL 3: Consistently apply a context-sensitive approach in MTO’s work

Success Stories

...continued from previous page

of adjacent natural areas with a focus on Tallgrass Prairie and Oak Savannah. The landscape and aesthetic features will be developed from the perspective of the Parkway’s drivers, pedestrians and adjacent residents.

Additional resources:
Windsor-Essex Parkway
GOAL 4

Optimize infrastructure design, capacity and investment

Areas of focus include:

- developing a more inclusive approach to accounting methodology to evaluate long-term social, environmental and economic costs and benefits
- managing transportation demand as well as transportation supply (e.g., reducing the need to travel by offering alternatives, like online services or incentives like faster travel times for more sustainable forms of transportation)
- expanding the use of intelligent transportation systems (ITS) technology to improve the existing transportation system’s efficiency
- using resources sustainably throughout the infrastructure lifecycle
GOAL 4: Optimize infrastructure design, capacity and investment

Commitment no.1
Develop and implement the Green Pave rating system.

ACCOMPLISHMENTS TO DATE
- Finalized rating system, met with stakeholders and prepared for roll-out

2011 MILESTONES
- Roll-out rating system to MTO’s regional geotechnical offices and provide training, support and communication

2012 MILESTONES
- Roll-out rating system to regional contracts and provide training, support and communication

2013 MILESTONES
- Continue to monitor other jurisdictions with similar rating systems
- Update and incorporate sustainable innovation to the rating system

LEAD BRANCH
Highway Standards
**GOAL 4:** Optimize infrastructure design, capacity and investment

### Commitment no.2
Identify opportunities to generate renewable energy on MTO properties, such as installing solar panels along MTO rights-of-way (ROW) or using surplus land.

#### ACCOMPLISHMENTS TO DATE
- Issued Request for Proposal for installation of solar panels on MTO property at Thousand Islands Parkway and Hwy. 137 in Gananoque
- Prepared tender documents for installation of solar panels at Highway 401 and Culloden Rd. in Ingersoll and Highway 403 and Garden Ave. in Brantford

#### 2011 MILESTONES
- Install solar panels at Gananoque in December 2011

#### 2012 MILESTONES
- Install solar panels at Ingersoll and Brantford in January, 2012
- Provide public access to website identifying energy production statistics for the new solar arrays
- Review and analyze data to determine viability for application on a larger scale

#### LEAD BRANCH
Contract Management and Operations

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**Welcome**

Message from MTO’s Senior Management Team

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GOAL 4: Optimize infrastructure design, capacity and investment

Commitment no.3
Use connected vehicle concepts to improve the management of Ontario’s transportation network.

ACCOMPLISHMENTS TO DATE
- In partnership with Networked Vehicle Association, investigated and encouraged automotive and information/communication technology sector interaction.
- Created an ITS Canada-lead industry-academia-government forum - Connected Vehicle Interest Group.
- Conducted technical and business feasibility workshops with industry.

2012 MILESTONES
- Prepare a discussion paper on ITS opportunities and impacts for MTO.

2013 MILESTONES
- Develop strategy for Ministry incorporation of connected vehicle concepts into our business.

LEAD BRANCH
Central Region.
Commitment no.4
Identify opportunities to consider sustainability when making corporate policy and resource submissions for consideration by ministry decision-makers.

ACCOMPLISHMENTS TO DATE
- The Ministry of Transportation has added a new ministry priority: “Integrate the principle of sustainability into the ministry’s decision making, programs, policies and operations by implementing the ministry’s sustainability strategy and continuing to build awareness.” This was identified in the ministry’s publicly-available 2010-11 Results-based Plan Briefing Book
- Ways have been identified to assist ministry staff in better understanding where to capture significant sustainability considerations when developing policy and resource proposals for decision-makers

2011 MILESTONES
- Provide information and raise awareness amongst ministry staff on the best ways to identify where to document significant sustainability considerations in policy and resource submissions

LEAD BRANCH
Finance
Strategic Policy and Transportation Economics
GOAL 4: Optimize infrastructure design, capacity and investment

Commitment no.5
Identify the provincial role in transportation demand management (TDM) policy and education.

2011 MILESTONES
- Develop understanding of current TDM context in Ontario including:
  - Identify current MTO TDM-related initiatives
  - Perform jurisdictional scan and literature review to assess the status of TDM outside and within Ontario
  - Perform a scan of Ontario-based and Canadian NGO’s involved in TDM
- Based on above, perform a gap analysis in order to understand the TDM needs of the province
- Continue participating in TDM Coordinating Committee meetings (coordinated by Metrolinx)

2012 MILESTONES
- Consult with stakeholders on potential provincial role in TDM and opportunities to collaborate with municipal and other stakeholder activities
- Make recommendations on scope and potential areas of focus for MTO’s TDM policy work
- Initiate work on selected TDM initiatives

2013 MILESTONES
- Continue working on selected initiatives or new initiatives as appropriate

LEAD BRANCH
Transportation Policy
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**GOAL 4:** Optimize infrastructure design, capacity and investment

Success Stories

**Sustainable Road Paving**

MTO uses a variety of sustainable road paving methods that require fewer natural resources and less energy. These methods also emit fewer greenhouse gases (GHGs) and air pollutants during the construction process.

Cold in-place recycling (CIR) and cold in-place recycling with expanded asphalt (CIREAM) are two of the most environmentally friendly pavement rehabilitation techniques available. CIR works by recycling the original hot mix asphalt already in place. As a result, CIR saves on asphalt cement, aggregates, and trucking. Because the process does not require heat, CIR uses 80% less energy and minimizes greenhouse gas emissions.

- Per 2-lane kilometre, CIR/CIREAM emits approximately 50% fewer GHG emissions, consumes 62% fewer aggregates with an asphalt overlay, and costs 40 – 50% less when compared to conventional mill and overlay treatments.
- Since the implementation of CIR/CIREAM contracts, MTO has reduced GHG emissions by 144,380 tonnes of carbon dioxide.
Reducing, Reusing and Recycling for pavements

Scrap tires have been used in asphalt pavement since the early 1980s as a way of mitigating the negative environmental impacts of stockpiled waste tires. “Rubberized asphalt” turns this source of waste into a usable commodity, reducing the number of tires in storage. In 2010, MTO began testing rubberized asphalt in five test sections in Ontario.

Asphalt roofing shingles are another waste product that can be put to use in pavement instead of being sent to a landfill. MTO has worked with the private sector to do some field studies and now allows scrap asphalt shingle trimmings in hot mix asphalt. Research is also underway with Ryerson University on the use of used roofing shingles as an aggregate for granular material.
Perpetual Pavement

“Perpetual pavement” is a thick asphalt pavement consisting of a flexible, fatigue-resistant, asphalt-rich bottom layer, a strong rut-resistant middle layer, and a smooth, durable renewable surface layer. It is designed to provide a significantly longer road-life than a traditional asphalt pavement. Other benefits include ease of maintenance, quick and easy repair, and a smooth, quiet drive.

MTO engineers have been using perpetual pavement in trials. The first trial was constructed in 2007 on Highway 406 in the Niagara Region. MTO has also constructed two two-kilometre perpetual pavement sections on Highway 401 near Woodstock, Ontario. The ministry is monitoring the performance of these trial sections compared to conventional flexible pavement design.
Tire Derived Aggregate

Each year in Ontario, about 12 million scrap rubber tires are generated, many of which are dumped or stockpiled in the province with considerable negative environmental impacts. Large volumes of scrap tires can be put to use as tire derived aggregate (TDA), an alternative to earth fill in the construction of highway embankments.

TDA has numerous environmental benefits. Large volumes of tires can be diverted from landfills and similar volumes of non-renewable aggregate are spared from consumption. TDA can perform better than conventional fill in a number of respects. It is:

- lightweight
- less likely to settle
- highly permeable
- compressible
- non-biodegradable

Continued...
MTO is demonstrating the use of TDA on a bridge replacement on Highway 401 in Cornwall. This project alone is recycling approximately 400,000 scrap tires. MTO is conducting engineering and environmental monitoring on the project to examine the benefits of using TDA in highway embankment construction. Based on the results of this trial project, MTO will consider other sites and applications for TDA in Ontario. If MTO were to implement TDA on a broader scale – at ten embankments per year, for example – about one quarter to one third of the scrap tires generated annually could be put to use.

Typical tire shreds that would be used in TDA.
Pervious Concrete Pavements

Pervious concrete pavements are an emerging technology that can help reduce the size of MTO’s ecological footprint. They offer a surface suitable for many applications, including parking lots and walkways, and are more harmonious with the natural environment than traditional impermeable surfaces.

Unlike conventional impervious pavements that must be sloped for proper drainage and often require expensive stormwater facilities, pervious concrete pavements allow stormwater to flow through the pavement. Depending on the project design, the stormwater that enters the pervious concrete pavement can be allowed to percolate into the underlying soil, avoiding the need for a stormwater management pond. This results in cost savings and eliminates a potential drowning hazard and mosquito-breeding site. Also, by allowing water to drain directly into the soil, there is better recharging of the groundwater.
GOAL 4: Optimize infrastructure design, capacity and investment

Success Stories

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Pervious concrete pavements have a number of other environmental benefits. They produce a lower heat island and provide for increased illumination over a hot mix pavement. They are also reported to provide enhanced vegetation growth by allowing a greater amount of water and air through the pavement and into the ground.

MTO constructed its first pervious concrete pavement in a commuter parking lot at Highway 401 and Guelph Line in 2007.

Additional resources
- Transportation Association of Canada conference paper
GOAL 4: Optimize infrastructure design, capacity and investment

Success Stories

W.E. PAY IT FORWARD

Windsor-Essex Parkway is part of a long-term transportation solution to improve the movement of goods and people between the Windsor-Detroit border. As part of the construction of the Windsor-Essex Parkway, over 300 buildings were slated for demolition. MTO and its private sector partner worked closely with W.E. Pay It Forward, a first-of-its-kind community-based project in Ontario to reclaim materials from buildings slated for demolition and recycle them back into the community.

W.E. Pay It Forward was launched in 2010 to coincide with the start of significant demolition activities in the Windsor-Essex corridor. Over 500 volunteers reclaimed materials from 216 houses, four commercial buildings and one hotel. Charities and nonprofit groups recovered approximately 250 tonnes of materials and recovered over 1500 plants and shrubs, kilometres of fencing, numerous sheds and five tonnes of concrete pavers and interlocking brick. The materials are being reused by numerous nonprofit and charitable organizations located throughout Windsor and Essex County.

Additional Resources
- Windsor-Essex Parkway
- W.E. Pay It Forward
COMPASS

COMPASS is a high-tech Freeway Traffic Management System developed by MTO. The COMPASS system offers many benefits. For users of the transportation system, the COMPASS system can alert drivers to road conditions ahead so that they can adjust their driving behaviour and avoid any unnecessary risks or surprises. Travellers and commercial drivers can access COMPASS information before they begin their trip so they can make better decisions about their routes which improves travel reliability and helps manage traffic flow by adding to already congested areas. With COMPASS, MTO can help emergency responders react more effectively by providing detailed, real-time information about incidents on the highway. Environmental performance is also improved when traffic is kept moving in a steady flow and re-routing can prevent unnecessary idling of vehicles caught in traffic.

Continued...
GOAL 4: Optimize infrastructure design, capacity and investment

Success Stories

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There are currently 3 COMPASS systems: Toronto (Highway 401), Burlington/Mississauga (QEW), and Ottawa (Highway 417). A unique feature in Burlington is that in the event of high winds or major incidents on the Burlington Skyway, traffic can be redirected to a lift bridge on a parallel arterial road.

Additional resources
- About COMPASS
- Systems in Operation
GOAL 4: Optimize infrastructure design, capacity and investment

Success Stories

Traveller Information Services (TIS) help you make better travel choices

TIS can play a large role in making our transportation services more sustainable by incorporating the user in the transportation management process. For example, by giving people information about traffic conditions, they can shift their travel to more effective modes (for example, taking transit versus driving), take a different route or travel at a different time. With technological advances, road users can even contribute to the pool of travel information.

To capitalize on the opportunities presented by emerging technologies, MTO is working with the public and private sectors. MTO has partnered with Metrolinx to co-chair the Ontario Traveler Information Services Advisory Committee which also includes the City of Toronto, Toronto Transit Commission, City of Ottawa and OC Transpo, the March of Dimes, Ontario Motor Coach Association, Intelligence Transportation Systems Canada, Ministry of Tourism, Infrastructure Ontario and others.
Social Networking for Vehicles

It's true. Technology is evolving that will allow vehicles to communicate with each other as well as with roadside infrastructure, traffic systems, pedestrians and cyclists. Allowing this communication can improve road safety and give drivers better information so they can make more informed decisions.

Many players need to work together to make this happen – engineers, intelligent transportation systems technicians, auto manufacturers and automotive parts manufacturers, the telecommunications industry and research and testing facilities. MTO is actively involved in this emerging area to position Ontario as an early adopter to prove the concept of the “connected vehicle”.

Additional resources
- Learn more at http://www.connectedvehicle.ca/
GOAL 4: Optimize infrastructure design, capacity and investment

Success Stories

Highway 137 Solar Power Project

As a turn-key project, a contractor will provide services to design and construct/install a 9.9 kW solar power generating system within the right-of-way of Highway 137 at the Thousand Islands Bridge/Hill Island International Border Crossing. The electrical generating system will comply with the provinces net-metering program and will supply electricity to operate the existing Queue-End Warning System at the Thousand Islands Bridge/Hill Island International Border Crossing and along Highways 137 and 401.

The proposed solar power system provides energy from a renewable resource and meets the Ministry’s desire for greening our right-of-ways. Any surplus energy from the system is transferred to the existing electrical grid assisting in reducing the need for energy from non-renewable sources.
GOAL 4: Optimize infrastructure design, capacity and investment

Success Stories

Portland-Limestone Cement

Portland-limestone cement (PLC) was introduced in Canada in 2008; it consists of conventional cement of which 15% is replaced by limestone. Production of PLC generates about 10% less CO₂ than production of conventional cement.

Inclusion of the new cement in Canadian national standards was based on a review of the European experience, however there was little data available on durability of PLC concrete in severe environments, or performance of PLC-supplementary cementing material combinations in such environments.

MTO identified the need for Ontario field installations of PLC concrete and monitoring of their performance in order to provide confidence that the durability of concrete made with Portland-limestone cement would be comparable to conventional concrete. This is an area of concern due to the harshness of the Ontario highway environment.

Continued...
MTO was approached by the Canadian cement industry in 2009 regarding potential for use of Portland-limestone cement in field trials; to date three trials have been put in place, in 2009, 2010 and the most recent one in October 2011. MTO plans to monitor the trial sections over three winters, focussing on durability such as early indication of any significant issues with salt-induced scaling, or sensitivity to curing method or use of supplementary cementing materials.
GOAL 4: Optimize infrastructure design, capacity and investment

Success Stories

Ontario Long Combination Vehicle (LCV) Program

The LCV program is part of the government’s effort to build a stronger, greener economy that promotes the efficient flow of goods within the province and beyond. In Canada, any combination of vehicles over 25 metres overall length is considered to be an LCV. Ontario LCVs are made up of a tractor pulling two full-length semi-trailers up to 40 metres overall length.

Since August 2009, participating carriers safely completed over 37,000 one-way LCV trips, totalling over 12 million kilometres. LCVs are good for manufacturers and consumers. They allow Ontario retailers and manufacturers to bring light-weight, bulky goods to market at a lower cost. One tractor and driver rather than two tractors and two drivers consumes one-third less fuel and reduces costs for carriers.

Continued...
GOAL 4: Optimize infrastructure design, capacity and investment

Success Stories

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By using less fuel to carry goods, LCVs reduce the greenhouse gas emissions associated with shipping goods by approximately one-third. We estimate that over the course of Ontario’s pilot program, more than 2.4 million litres of fuel were saved, reducing greenhouse gas emissions by about 6,600 tonnes.

LCVs also provide congestion relief on Greater Toronto Area (GTA) highways by shifting truck movements from peak to non-peak hours. LCVs also place less stress on roads and bridges than the two tractor-trailers they replace, leading to a reduction in infrastructure repair costs.
Demonstrate good stewardship

Areas of focus include:

- recognizing that many natural resources are finite and shared, and making every effort to conserve, reuse and recycle them as much as possible
- minimizing disruptions to the natural environment or to historic or cultural features
- responding to climate change by reducing GHG emissions from the transportation sector and preparing for the potential impacts of climate change
- investigating methodologies to improve our ability to incorporate sustainability in our Environmental Assessment process
- supporting the Ontario Public Service-wide Green Transformation, an initiative that will reduce the environmental footprint of the provincial government and foster a green organizational culture
Commitment no.1
Assist in reducing greenhouse gas emissions from commercial vehicles.

ACCOMPLISHMENTS TO DATE
- During the course of the Green Commercial Vehicle Program, the province provided about 2100 grants totalling $5.5 million for anti-idling devices or new alternative fuel commercial vehicles

2011 MILESTONES
- Data collection, monitoring and consultation with grant recipients

2012 MILESTONES
- Data collection, monitoring and consultation with grant recipients
- Summary of findings to be shared with stakeholders and posted on MTO’s website

2013 MILESTONES
- Develop a business tool to guide companies purchasing green vehicles

LEADING BRANCH
Transportation Policy
**Commitment no.2**

Inventory the mitigation and compensation measures MTO uses to protect Species at Risk (SAR) in Ontario as a way to share best practices among staff.

**ACCOMPLISHMENTS TO DATE**
- Developed an internal Microsoft Access database to assist staff engaged in discussions around species at risk and MTO operations.
- Entered 178 records consisting of permits, agreements, protocols and mitigation/compensation measures. Information about monitoring, training programs, overall benefit details and design features are also included.
- Trained 32 staff members on the use of the database.
- Made database available for use by the Environmental Function staff.

**2011 MILESTONES**
- Roll-out the database and train regional staff on the use of the database, including an accompanying user manual, and incorporate staff comments and suggestions.

**ONGOING**
Update database as necessary

**LEAD BRANCH**
Transportation Planning
Commitment no.3
Reduce paper used in procurement and in the acquisition of consultants by streamlining processes and developing an electronic tendering and bidding system.

ACCOMPLISHMENTS TO DATE
- As part of an MGS/MTO working group, examine ways to streamline the procurement process and reduce paper requirements
- Identified, communicated with the consulting industry and implemented “quick wins” to reduce paper consumption that can be implemented prior to introducing an electronic consultant tendering and bidding system in 2013
- Developed an electronic construction tendering and bidding system

2012 MILESTONES
- Test, implement and host an electronic construction tendering and bidding system
- Engage MTO experts to identify business requirements for a new electronic consultant tendering and bidding system
- Identify and acquire necessary IT resources and obtain approvals for electronic consultant tendering and bidding system

Continued...
GOAL 5: Demonstrate good stewardship

2013 MILESTONES
- Develop, test, implement and host the electronic consultant tendering and bidding system
- Train ministry and industry users of the new system
- Research and implement a similar reduction strategy to reduce paperwork associated with the acquisition of goods and non-consulting services

LEAD BRANCH
Finance
Contract Management and Operations

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Commitment no. 4
Find appropriate ways, such as automation, to reduce the consumption of paper in the permitting process for signs, buildings, entrances, and encroachments.

ACCOMPLISHMENTS TO DATE
- MTO initiated renewal of its Corridor Management Permitting System, which will allow for “paperless permitting,” thereby reducing the consumption of paper by permit applicants and the ministry
- Consulted with external stakeholders to determine permitting process requirements
- Completed market scan and Request for Information to identify appropriate solutions
- Completed “Checkpoint 0” IT project approvals

2012 MILESTONES
- Define detailed functional requirements for new system
- Prepare business case for procurement approval
- Issue Request for Proposal for development of new system

LEAD BRANCH
Contract Management and Operations
**GOAL 5: Demonstrate good stewardship**

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**Commitment no.5**  
Reduce paper consumption in MTO transactions with municipalities, courts and police.

**ACCOMPLISHMENTS TO DATE**
- Reduced by half the amount of paper used in the documentation that MTO provides to municipalities after an infraction is captured on a red light camera
- Allowed the official seal required on certified documents for red light camera infractions to be printed on recycled paper instead of special paper stock

**2012 MILESTONES**
- Introduce a process to electronically distribute documents to provincial courts, reducing use of paper documents

**ONGOING**
Identify additional opportunities to implement electronic distribution and to reduce the amount of paper required in MTO’s routine transactions with municipalities, courts and police

**LEAD BRANCH**
Licensing Services
Commitment no.6
Improve salt management practices to mitigate environmental impacts.

ACCOMPLISHMENTS TO DATE
- Participated in an Environment Canada-led review of salt management practices

2012 MILESTONES AND ONGOING MILESTONES
- Update MTO’s Salt Management Plan to conform with Environment Canada requirements
- Identify areas vulnerable to salt in consultation with Conservation Authorities as part of Source Water Protection
- Perform operational research on available mitigating technologies

LEAD BRANCH
Highway Standards
GOAL 5: Demonstrate good stewardship

Commitment no.7
Reduce office paper consumption by reducing the number of printers and by promoting green printing practices.

ACCOMPLISHMENTS TO DATE
- Distributed Green Print Kits
- inventoried all ministry print devices and identified printers that can be eliminated

2011 MILESTONES
- Coordinate the removal of identified print devices

LEAD BRANCH
Corporate Services Assistant Deputy Minister’s Office
Commitment no.8
Implement green meeting practices.

2011 MILESTONES
- Green Meeting Guide to be launched by end of Q3 2011-12

LEAD BRANCH
Corporate Services Assistant Deputy Minister’s Office
GOAL 5: Demonstrate good stewardship

Commitment no.9
Identify opportunities to incorporate green building best practices in ministry workplaces.

ACCOMPLISHMENTS TO DATE
- With a Leadership in Energy and Environmental Design (LEED) certified consultant, conducted a green building feasibility study of ministry workplaces and provided staff training

2012 MILESTONES
- Incorporate LEED best practices in renovations

2013 MILESTONES
- Incorporate LEED best practices into accommodation projects (i.e., office renovation and reconfiguration) where possible
- Work with Infrastructure Ontario (IO) and CBRE (property managers) to encourage the use of sustainable products and building systems

LEAD BRANCH
Facilities and Business Services
Commitment no. 10
Green the Ontario Public Service vehicle fleet.

ACCOMPLISHMENTS TO DATE
- Developed (in 2007) and refreshed (in 2009) the OPS Green Fleet Strategy
- Increased the number of hybrid vehicles in the OPS fleet to 1,069, representing 30% of the entire fleet
- As of November 30, 2011, deployed twenty-five battery electric vehicles (BEV) for Ontario Public Service (OPS) ministry and general vehicle pool use
- Deployed four battery electric vehicles (BEVs) for ministerial courier and general vehicle pool use
- Committed to a goal of making 20% of all eligible new OPS passenger fleet vehicle purchases electric by the year 2020 (subject to vehicle availability and excluding OPP and ministry enforcement vehicles that have different performance requirements)
- Trained over 1,100 OPS staff in defensive driving techniques, including green driving practices
- Developed a green life-cycle analysis methodology, based on a 70% weighting for fuel consumption and GHG emissions, to determine the vehicles that offer the best overall return on investment environmentally and financially
- Developed and published the 2012 OPS Vehicle Selector that contains only those vehicles that meet the green life-cycle vehicle criteria to ensure the most environmentally favourable vehicle is used for the appropriate application. Removed full-size passenger car and sport utility vehicles

Continued...
GOAL 5: Demonstrate good stewardship

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2011 MILESTONES
- Conduct an externally-coordinated “fleet review” to identify areas within the Green Fleet Program that could be improved
- Following the fleet review, make adjustments to the OPS Green Fleet Program
- Conduct a Request for Information to establish a certification rating system designed to assist and recognize fleets that improve fuel efficiency, reduce emissions, implement best management practices, and make use of new technologies and alternative fuels
- Create an online fleet ride-matching service that will facilitate carpooling among OPS staff travelling to similar locations using a fleet vehicle

2013 MILESTONES
- Receive E3Fleet certification (either Gold or Platinum level), a rating system that provides services and resource to assist and recognize progressive fleets to improve fuel efficiency, reduce emissions, implement best management practices, incorporate new technologies, and use alternative fuels
- If Gold level achieved, use audit results to identify areas of concern to address in order to achieve a higher rating

Continued...
GOAL 5: Demonstrate good stewardship

ONGOING
- Continue to add alternative technology vehicles, including plug-in hybrid and fully electric vehicles, to the OPS fleet
- Continue to establish multi-ministry vehicle pools in multiple locations and work with other ministries to establish pools within their respective regions
- Through the OPS Centre for Leadership and Learning, continue to provide training for defensive driving for OPS staff, which includes a module dedicated to green driving
- Continuing with pilot project involving up to 83 vehicles across multiple ministries utilizing advanced technology to reduce the time spent idling by enforcement and other emergency response vehicles
- Continue to carry out “fleet right sizing,” which involves disposing older, legacy fleet vehicles; balancing the size of the fleet through monitoring utilization and reducing the number of larger, fuel inefficient vehicles; improving fleet management to optimize asset life-cycle management; and developing and implementing fleet utilization standards
- Continue the OPS anti-idling campaign
- Purchase auxiliary power units (APUs) for MTO vehicles that require engineers to operate in order to power on-board systems or equipment when the vehicle is stationary (e.g., during a bridge inspection)
- Implementing a Fleet Management Information System (FMIS), an OPS-wide data collection asset management tracking and reporting system

LEAD BRANCH
Facilities and Business Services
Commitment no. 11
Increase awareness and usage of the mandatory Ontario Shared Services e-waste program across MTO.

2012 MILESTONES
- Issue a communication regarding e-waste to targeted staff by Q4 2011-12

ONGOING
- In partnership with Ontario Shared Services, increase communication to staff about the program

LEAD BRANCH
Corporate Services Assistant Deputy Minister’s Office
Salmon River Fish Habitat Compensation Plan

The Salmon River Bridge crossing is located in eastern Ontario on Highway 401 between Belleville and Napanee. The river and surrounding area is environmentally significant, supporting eight provincially rare plant species. Eighty-five animal species were documented within or adjacent to the area, including 23 bird species identified by the Ministry of Natural Resources as species of conservation concern. Furthermore, the aquatic habitat is home to two rare species of fish, the river redhorse and the channel darter, amongst other fish species.

As part of bridge widening and rehabilitation, a number of measures were taken to minimize and mitigate disturbances to the environment and wildlife. To ensure no harm or disturbance to migratory birds, wooden planks were placed under the bridge structure during construction to prevent nesting.

Continued...
MTO, in partnership with the project consultants, the Ministry of Natural Resources and the Department of Fisheries and Oceans, developed and implemented a compensation plan to create new and enhanced fish habitat using native vegetation. The design of the fish habitat included proven techniques, but also new designs such as pike spawning channels. The effectiveness of the compensation plan was documented as part of a two-year monitoring program including field surveys in the spring, summer and fall. After two years of monitoring, the vegetation was well established and numerous fish species, including channel darters, were spotted within the compensation habitat.
Highway 69 Wildlife Crossings

As part of the Highway 69 four-laning project, a wildlife bridge has been constructed in the Burwash area, along a part of the road where a high rate of large mammal and car collisions occurred in the past.

A wildlife bridge allows for animal movement without impacting traffic. Fencing along the highway right-of-way on both sides funnels animals to a bridge crossing the highway. The wildlife bridge is 30 metres across, spanning the four-lane Highway 69. It has been landscaped with trees, shrubs, brush, and rock piles to create a natural environment to encourage wildlife to use the land bridge. The landscaping also provides a visual buffer to highway traffic.
Ontario Government ‘Greens’ its Vehicle Fleet

The Ontario Public Service’s (OPS) Fleet Management Centre, managed by the Ministry of Transportation, has made it a priority to invest in vehicle technologies that reduce greenhouse gas emissions – and save the government money. Here’s how:

- The OPS fleet now consists of about 1069 hybrid vehicles which represent 30% of the OPS passenger fleet.
- There are 25 Battery Electric Vehicles (BEVs) that are powered by rechargeable batteries and produce no greenhouse gas emissions. Three are used for daily courier service from Toronto’s Queen’s Park offices to Downsview offices and are available for staff to use for travel to meetings as well. The fourth vehicle is used by the Ministry of Government Services, Mail and Courier Service.
- Charging stations have been installed at Queen’s Park and Downsview in order to recharge the vehicles.
- The government is also using E85, a fuel blend containing 85% ethanol in their Flex Fuel Vehicles (FFVs).
- Green Driver training has been delivered for 1,100 OPS staff.
eCollisions

Annually the ministry receives approximately 270,000 paper collision reports from police services. The eCollisions project will allow police services to submit collision information electronically through two separate channels and eliminate the need for paper forms. Both channels will validate data prior to acceptance, which will ensure that the ministry receives accurate information in a timely manner.

The first channel available in late November 2011 is Electronic Data Submission and linkages will be provided to allow police to retrieve and authenticate Ontario Driver, Vehicle and Carrier information.

The second channel will be a Web Application available in spring 2012 which will replace the current collision system for the ministry and can be externalized for use by police services.
Plants removed from MTO construction areas find new life

MTO has partnered with organizations and municipal governments to find new homes for the plant life that is otherwise disrupted or removed from MTO construction sites. Two recent examples happened with construction of Highway 69 South and the Highway 404 expansion.

The City of Greater Sudbury is working to redevelop healthy, self-sustaining forest which requires soil microorganisms and insects, fungi, lichens, mosses and a broad variety of forest floor plants. The land that MTO was going to use for Highway 69 expansion was a good source for this material, and so a process of transplantation was begun. Through this partnership, enough forest floor was transplanted to cover a football field (one acre). These reclamation sites will also be an important source of information. Vegetation surveys were conducted to determine what plants were present in the transplants and assessments will be undertaken over the next several years to monitor species richness, evaluate transplant survival, and track its eventual spread into surrounding reclamation areas.

.....Continued
At the site of the Highway 404 expansion, a free, public ‘plant rescue’ was held to remove plants from a woodlot slated for removal. The plants were either relocated in an ecological restoration project or could be taken home to be planted in participants’ yards. The event was conducted by MTO in partnership with the Maskinonge River Recovery Project and the Lake Simcoe Region Conservation Authority. Thirty-six species of flowers, herbs, ferns, sedges (grass-like plants), and trees were available, and over 4300 plants were rescued.
Protecting Species at Risk turtles in Brant County

In the spring of 2008, eight dead Blanding’s turtles were found along a section of Highway 24 in Brant County, Ontario. This section of highway had been rehabilitated several years before, but no one knew about the species at risk turtles living in the adjacent wetlands and ponds, which form part of the Oakland Swamp Wetland Complex. Working in partnership with the Toronto Zoo, the MTO installed temporary silt fencing along this section of highway to direct the turtles to an existing culvert where they could swim under the highway. A year of monitoring proved that this fencing was successful at keeping the turtles off the highway, as there were no mortalities.

In 2010 the MTO installed a permanent fence in this location. To confirm whether or not this fence was acting as a barrier, the Toronto Zoo obtained species at risk funding to hire a biologist to conduct monitoring of the turtles at this site. For the summer of 2010, 63 Blanding’s turtles and 25 Snapping turtles were captured and marked and 19 Blanding’s turtles and 3 Snapping turtles were captured and marked and 19 Blanding’s turtles and 3 Snapping...
GOAL 5: Demonstrate good stewardship

Success Stories

...continued from previous page

turtles were radio-tagged. A passive data-logging radio receiver was installed in the culvert to track turtle movement through the culvert. Throughout the spring and summer of 2011 the turtles movements were tracked and it was confirmed, both visually and electronically, that they were regularly using the culvert to move between the wetland and the ponds. Once again, there were no Blanding’s or Snapping turtle mortalities noted on this section of highway since the fence was installed.

MTO is using the information gained from this study to recommend steps to take in future projects where species at risk turtles may be present.

Additional Resources

- Ontario Road Ecology Group
Areas of focus include:

- building MTO’s internal sustainability expertise
- sharing knowledge and best practices internally and with our partners, as well as reaching out to new partners, to encourage innovation
- making sure that our standards and protocols can adapt to incorporate new and proven approaches to move sustainability into the mainstream
- promoting, rewarding and celebrating innovation
- empowering our staff to try unconventional approaches, taking into account an appropriate level of risk for a public sector organization

GOAL 6
Engage MTO staff expertise to promote innovation
GOAL 6: Engage MTO staff expertise to promote innovation

Commitment no.1
Encourage the use of pervious concrete pavement by supporting research and innovation, sharing MTO expertise, and developing an Ontario Provincial Specification for construction.

2011 MILESTONES
- Developed an Ontario Provincial Specification for the construction of pervious concrete pavement

ONGOING
- Communicating MTO’s pervious concrete design leadership to municipalities, contractors, and consultants through seminars, field trials, and publications
- Support research and encourage industry innovation in achieving pervious concrete performance requirements

LEAD BRANCH
Highway Standards
Commitment no.2
Continue to support research into the use of recycled materials in pavements and to share MTO expertise in reducing, reusing, and recycling road building materials.

ACCOMPLISHMENTS TO DATE
- Since the implementation of Cold In-Place Recycling (CIR) and Cold In-place Recycling with Expanded Asphalt (CIREAM), two environmentally friendly pavement rehabilitation techniques, reduced carbon dioxide emissions by 144,380 tonnes, nitrogen oxide by 1,176 tonnes and sulphur dioxide by 25,150 tonnes.
- Between 2005 and 2008, used 8.3 million tonnes of aggregate from recycled road building and recovered waste materials, approximately 20% of aggregates used by MTO.

ONGOING
- Communicate MTO’s leadership in reducing, reusing, and recycling road building materials to municipalities, contractors and consultants through seminars and publications.
- Support research into the use of recycled materials in pavements.

LEAD BRANCH
Highway Standards

GOAL 6: Engage MTO staff expertise to promote innovation
Commitment no.3
Collect and analyze weather and road condition data recorded at Autonomous Monitoring Stations.

ACCOMPLISHMENTS TO DATE
- Installed 26 rain gauges in northern Ontario and 26 new road weather information stations across Ontario

2011 MILESTONES
- Develop a monitoring and data collection mechanism

ONGOING
- Monitor and collect data

LEAD BRANCH
Highway Standards
Commitment no.4
Publish an ongoing series of discussion papers providing more in-depth examinations of sustainable transportation concepts.

2012 MILESTONES
- Determine scope and outline requirements for the production of discussion papers
- Develop shortlist of paper topics
- Working with management team, select paper topic
- Begin development of initial discussion paper

2013 MILESTONES
- Release initial discussion paper
- Commit to release one discussion paper annually

LEAD BRANCH
Transportation Policy
GOAL 6: Engage MTO staff expertise to promote innovation

Commitment no. 5
Establish a ministry Green Team to support the OPS Green Transformation and participate in the implementation of ministry “greening” and broader sustainability activities.

ACCOMPLISHMENTS TO DATE
- Green team established by Q4 2011-12

ONGOING
- Track local events and report as part of Green Plan year-end

LEAD BRANCH
Corporate Services Assistant Deputy Minister’s Office
GOAL 6: Engage MTO staff expertise to promote innovation

Commitment no.6
Modernize the current collision reporting process to reduce paper use.

2011 MILESTONES
- A pilot of electronic submission of collision reports to be implemented, reducing paper based reporting by 4%

2012 MILESTONES
- In the spring of 2012, a new Web Application will be implemented for use by the ministry and police services to report collision information
- Reduce paper collision reports received by the ministry by 10% to 15%

2013 MILESTONES
- An additional reduction of paper collision reports received by the ministry by 75% to 80%

LEAD BRANCH
Licensing Services
GOAL 6: Engage MTO staff expertise to promote innovation

Commitment no.7
Promote and develop sustainable and integrated transit solutions.

ACCOMPLISHMENTS TO DATE
- Completed a Planning and Preliminary Design Environmental Assessment for the initial 23 km section between Highway 400 and Kennedy Road (Markham). This project supports this strategic direction in conjunction with other transit agencies and municipal planning partners.

2011 MILESTONES
- Received endorsements from local and regional municipal councils and other stakeholders and approval from MOE for the EA, under the Transit Projects Assessment Process.

LEAD BRANCH
Central Region
Welcome
Message from MTO’s Senior Management Team
Vision, Priorities & Goals
About the Ministry of Transportation

Overview

Strategic Goal 1
Strategic Goal 2
Strategic Goal 3
Strategic Goal 4
Strategic Goal 5
**Strategic Goal 6**
  - Engage MTO staff expertise to promote innovation

Success Stories

**Break Wind Make Money**

During Ontario’s winters, problems due to blowing and drifting snow are typical in areas with
level fields and minimal ground cover found downwind of farm lands. Blowing and drifting
snow account for roughly 30% of plowing, salting and sanding on provincial highways. In areas
such as these, annual highway maintenance costs are approximately $3,000 per two-lane
kilometre of road.

Tree windbreaks offer a “living” solution to snow drifting problem sites. Windbreaks, which
can be single rows of one plant species or multiple rows of mixed plantings of several woody
species, slow the wind and guide snow to drifts on the downwind side.

To encourage the use of tree windbreaks to reduce winter maintenance and improve road
safety, MTO staff obtained funding from the Ontario Public Service Innovation Fund to launch
the Farm Windbreaks project. Part of the project includes a public campaign promoting to
Ontario farmers the many benefits of windbreaks, which include:

Continued...
GOAL 6: Engage MTO staff expertise to promote innovation

Success Stories

...continued from previous page

- Protection of high-value crops
- Increased corn and soybean yields (between 7 and 25 per cent)
- Better crop pollination by bees
- Improved spray applications
- Earlier planting, faster seedling emergence

The program is delivered in partnership with nonprofit groups, including Ontario Conservation Authorities, which have been instrumental in negotiating agreements with land owners and planting the windbreaks.

In spring 2011, farm windbreaks were planted at key locations adjacent to provincial highways by the Lower Thames River Conservation Authority, the Grand River Conservation Authority and the Nottawasaga Valley Conservation Authority.

Additional resources
- Conservation Ontario
GOAL 6: Engage MTO staff expertise to promote innovation

Success Stories

QEW/Ontario Street Carpool Parking Lot

In addition to encouraging carpooling, this lot includes two innovations that made it a winner of the 2011 Environmental Commissioner’s Annual Recognition Award: Bioretention Cells & Rubber Modified Asphalt.

The parking lot makes use of a bioretention system that is the first of its kind for MTO. Bioretention aims to mimic the natural hydrologic cycle to manage surface runoff and remove pollutants from surface water. The bioretention system appears as a slight depression in a landscaped area of the parking lot that contains mulch and vegetation. The trees, plants and bushes at the site act as new habitat for birds and other wildlife, improve air quality, reduce the urban heat island effect, and improve aesthetics – a noted concern of the surrounding communities.

At the same carpool parking lot, MTO is also using rubber modified asphalt (RMA). RMA is a combination of ground scrap rubber tires and conventional hot mix asphalt. It provides a new use for scrap tires that would otherwise be stockpiled or placed in a landfill. Half of the asphalt in the carpool lot contains RMA.
MTO is partnering with the Ontario Road Builders’ Association (ORBA), and the Ontario Good Roads Association (OGRA) to present an annual “ORBA Green Leadership and Sustainability Award” to recognize and promote environmental stewardship in the road building industry.

The award recognizes the leadership of ORBA members that “initiate or adopt practices, methods, management approaches, innovations, changes in equipment, materials or other initiatives to further the objectives of environmental protection and sustainability”. Work on a MTO capital or maintenance contract or other municipal or transportation project are eligible for the award.

Examples of categories of activity/work that are eligible for the award include:

- Construction methods and practices;
- Products and materials;
- General environmental stewardship in delivering the project (project management);
- Technology and equipment;
- Environmental management systems;
- Education/training for employees.
An Innovative Way To Replace Highway Bridges In Ontario

Rapid bridge replacement is state-of-the-art technology that lifts out the old bridge and replaces it with a new one that was constructed nearby. This method reduces costs, improves site safety, minimizes environmental impact, reduces traffic disruption and gets traffic flowing sooner.

The latest project to use the technology was the replacement of the Carling Avenue Eastbound Bridge on Highway 417 in Ottawa during the weekend of July 30, 2011. This bridge was replaced in just 15.5 hours on July 30 and 31, 2011. The new bridges are 21 metres long and the eastbound bridge is 21 m wide while the westbound bridge is 30 m wide. Conventional rehabilitation of this type of bridge would have taken two to three years to complete with lane closures.

Additional resources

- Video clip: http://www.mto.gov.on.ca/english/bridges/rapid-bridge-projects.shtml
GOAL 7

Drive a cultural shift towards sustainability

Areas of focus include:

- providing staff with the necessary tools to improve the overall sustainability of projects and programs
- raising awareness, on an ongoing basis, about the benefits of sustainable practices
- rewarding successful sustainability initiatives
- using MTO’s significant purchasing power to influence the availability of sustainable goods and services
- educating the public about sustainable transportation issues
GOAL 7: Drive a cultural shift towards sustainability

Commitment no.1
Promote and encourage the use of active transportation and carpooling as ways of commuting to work, to school, or to access transit services.

ACCOMPLISHMENTS TO DATE
- Carpool to GO pilot project that reserved carpool spaces at 4 GO stations
- Promoted Bike to Work Day annually in the GTHA
- Stepping It Up, a pilot project at 30 schools in Hamilton and the Region of Peel, encourages children and staff to use active modes of transportation to get to elementary schools
- Held Cyclist Appreciation Day for GO Transit riders in conjunction with Bike To Work Day 2011 (Hamilton, Burlington, and Ajax GO Transit stations)
- Participated in Pollution Probe’s annual Clean Air Commute event (held in June) to raise awareness of the connection between commute modes and the environment
- Smart Commute Week (Sept 19-25, 2011) promoted at various locations across GTHA promoting sustainable commute modes
- Promote Carpool Week Annually (in February) to encourage carpooling across GTHA
- Through SmartCommute, work with major employers in the GTHA to encourage commuting by carpool, transit, or active transportation. By March 2011, reached 177 employers and 430,000 participating commuters

Continued...
GOAL 7: Drive a cultural shift towards sustainability

...continued from previous page.

ONGOING
- Continue to promote future Bike to Work Days, Carpool Week and Smart Commute Week in the GTHA
- Continue to hold Customer Appreciation Days for those cycling to GO Transit stations
- Through SmartCommute, continue to work with major employers in GTHA to provide alternative commuting options, with the goal of reaching 339 employers and 583,000 commuters by March 31, 2013

LEAD BRANCH
Metrolinx/Transit Policy
GOAL 7: Drive a cultural shift towards sustainability

Commitment no.2
Launch a website that facilitates carpooling among OPS staff.

ACCOMPLISHMENTS TO DATE
- The Ontario Infrastructure and Lands Corporation has launched a carpool pilot program at the Downsview Government Complex with 41 designated carpool spots reserved for vehicles with 3 or more people.

2011 MILESTONES
- Work with Metrolinx, Ministry of the Environment and Ministry of Government Services to compile OPS carpool resources and to have the OPS join Carpool Zone’s ride-matching service.

2012 MILESTONES
- Launch the OPS Carpool Resource webpage and Carpool Zone for OPS employees as part of Carpool Week in February 2012.

LEAD BRANCH
Corporate Services Assistant Deputy Minister’s Office
Transportation Policy
Commitment no.3
Develop MTO guidelines for alternative work arrangements.

ACCOMPLISHMENTS TO DATE
- Supported the development of corporate Flexible Work Arrangement framework developed by HROntario

2011 MILESTONES
- Finalized ministry guidelines for a Telework pilot including eligibility of position and participants
- Launched the Telework Pilot in the Road User Safety Division at the Downsview Complex in September 2011
- 24 participants have been accepted into the pilot and have received training in October 2011
- These participants will be starting their Telework arrangements in the month of November 2011

2012 MILESTONES
- Conduct a mid-year evaluation of the twelve month pilot

2013 MILESTONES
- Evaluate pilot and make recommendations on future alternative work arrangements

LEAD BRANCH
Strategic Human Resources & Organizational Development and Controllership
GOAL 7: Drive a cultural shift towards sustainability

Commitment no. 4
Increase awareness of Environmental Bill of Rights requirements and lead a culture change to increase awareness of sustainability among MTO staff.

ACCOMPLISHMENTS TO DATE
- Provided lunch and learns for MTO staff to raise awareness of legal obligations and the everyday application of Ontario’s Environmental Bill of Rights and MTO’s Statement of Environmental Values in the ministry’s environmental decision-making process
- Presented lunch and learns at regional and head office locations

2011 MILESTONES
- Develop a communications plan that outlines the strategies that will be used to raise awareness of sustainability among MTO staff
- Retain a graphic design firm to support the development of tools and products with a consistent visual identity that will increase awareness of sustainability

2012 MILESTONES
- Continue to implement communications plan and roll-out products developed to increase awareness of sustainability at MTO

LEAD BRANCH
Transportation Planning
Transportation Policy
Commitment no.5
Develop sustainability training programs for MTO managers and directors.

2012 MILESTONES
- Explore opportunities for and content of training sessions

2013 MILESTONES
- Launch at least one round of training
- Evaluate success of training sessions and make recommendations on future programs

LEAD BRANCH
Strategic Human Resources
Transportation Policy
GOAL 7: Drive a cultural shift towards sustainability

Commitment no.6
Increase awareness of and incorporate green office practices into MTO’s workplaces.

ACCOMPLISHMENTS TO DATE
- Developed a multi-year Green Plan that outlines commitments for workplace greening initiatives in support of the OPS Green Transformation Strategy; provided year-end update on Green Plan
- Developed and launched annual employee awareness campaign on energy conservation

2011 MILESTONES
- Distribute a Green Meeting Guide that provides tips for staff to minimize the environmental impact of meetings and conferences
- Distribute a videoconferencing guide for staff

2012 MILESTONES
- Launch e-learning opportunities that can reduce staff travel and paper usage

2013 MILESTONES
- Following a baseline year review, reduce air travel to meet OPS Green Office set targets (to be set in 2012 and 2013)

LEAD BRANCH
Corporate Services Assistant Deputy Minister’s Office
Facilities and Business Services
GOAL 7: Drive a cultural shift towards sustainability

Commitment no.7
Explore the development of performance indicators to measure progress on sustainability.

2012 MILESTONES
- Undertake research to understand process for developing performance measures
- Look for examples of appropriate sustainability performance measures from other jurisdictions and organizations

2013 MILESTONES
- Develop options and seek endorsement of recommended approach

LEAD BRANCH
Transportation Policy
**GOAL 7: Drive a cultural shift towards sustainability**

**Commitment no.8**
Launch eco-driver training and an anti-idling campaign to reduce fuel consumption from the OPS fleet.

**ACCOMPLISHMENTS TO DATE**
- More than 1100 OPS staff have completed training

**ONGOING**
- Continue to offer courses

**LEAD BRANCH**
Corporate Services Assistant Deputy Minister’s Office
Facilities and Business Services
Commitment no.9
Redesign the internal Greening @ MTO website as a resource for staff to share tips, best practices, and links.

2011 MILESTONES
- The Corporate Services Division webpage was launched in Q2 2011-12 and includes a Greening MTO page under the CAO link
- A detailed Greening website was launched in Q2 2011-12. A link to this site is also included on the CSD Greening site

LEAD BRANCH
Corporate Services Assistant Deputy Minister’s Office
Commitment no. 10
Launch an internal e-learning program to reduce staff travel and paper usage.

ACCOMPLISHMENTS TO DATE
- Several e-Learning modules have been launched

2011 MILESTONES
- Release 1-2 additional modules in 2011-12 fiscal

LEAD BRANCH
Corporate Services Assistant Deputy Minister’s Office
GOAL 7: Drive a cultural shift towards sustainability

Commitment no. 11
Increase profile of ministry’s commitment to sustainability.

ACCOMPLISHMENTS TO DATE
- Held Public Meetings, hosted a project website and worked diligently with Transit and Municipal partners to develop a plan for the initial 23 km phase of the 407 Transitway, the 150 km high-speed interregional transit facility on a separate right-of-way that parallels Hwy 407 from Burlington to the Highway 35/115 interchange.

2012 MILESTONES
- Prepare standard messaging about MTO’s sustainability goals and implementation plan that can be used by the Minister, Deputy Minister and Senior Management at speaking engagements, stakeholder meetings, and other events, where appropriate.
- Provide materials to support Communications Branch staff working on public facing materials such as speeches, news releases, and correspondence so that sustainability messages are incorporated wherever possible.
- Post resources on MTO’s public website profiling sustainable transportation options for individuals, businesses, municipalities, and other organizations.

ONGOING
- Include sustainability messaging wherever possible.
- Continue to develop and update online resources and to seek other opportunities for promoting sustainable transportation choices.

LEAD BRANCH
Central Region, Communications and Transportation Policy.
GOAL 7: Drive a cultural shift towards sustainability

Success Stories

Green Commercial Vehicle Program

The Green Commercial Vehicle Program (GCVP) provided grants to encourage businesses to reduce greenhouse gases (GHG) from the transportation sector. Under the program, private sector companies could obtain grants towards the purchase of alternative fuel vehicles and anti-idling technologies. Eligible technologies were medium-duty hybrid-electric, propane, plug-in electric and natural gas vehicles, and accessory power units, cab heaters and cab coolers for heavy-duty vehicles.

MTO approved approximately 2,100 grants from about 180 companies with a value of $5.5 million. This leveraged some $24 million of private sector investment in green vehicles and technologies. The benefits of GCVP are reduced GHG emissions, reduced costs and improved competitiveness by improving fuel-efficiency and adoption of environmentally-friendly vehicles and technologies. The total annual GHG savings from the GCVP is estimated to be 24,100 tonnes, or approximately 24 kilo-tonnes, equivalent to taking almost 5,000 cars off the road.
GOAL 7: Drive a cultural shift towards sustainability

Success Stories

OPS Unplugged: Raising Awareness of Standby Power Consumption

The Ontario Public Service’s Green Office runs a two-week competition called OPS Unplugged, a government-wide challenge to promote energy conservation and reduce standby power consumption. A typical appliance draws between 0.5 to 10 watts of power when it remains plugged in, even when it is turned off. Across a large organization like the OPS, standby power consumption can add up.

During the two-week competition, staff are encouraged to unplug office devices that consume standby power, like cell phone chargers, desktop scanners and printers when they are not in use. Based on the first two years of participation in OPS Unplugged, the Ministry of Transportation unplugged the most, with an average of 1,209 devices each year. MTO’s contribution reduced power consumption by an estimated 11,000 kWh. Across the entire OPS, a total of 7,389 devices were unplugged in 2010, resulting in a savings of approximately 98,000 kWh.
GOAL 7: Drive a cultural shift towards sustainability

Success Stories

Corporate Correspondence Paper Reductions

The Corporate Correspondence Unit (CCU) at MTO manages the Minister’s correspondence. In 2010, it managed 8,581 pieces of correspondence, including emails, letters and phone calls. It is the first such unit within the Ontario Public Service to take a comprehensive approach to green their operations.

MTO’s CCU is taking steps to reduce the amount of paper they use in their daily operations. When responding to correspondence, they do so increasingly by email. In 2010, 50% of responses were sent by email, up from 40% the year before. As correspondence is being drafted and approved by different areas of the ministry, an electronic tracking system is used to reduce the need for paper approvals. They are also working with other ministries to ensure referral letters are sent between ministries by email, eliminating the practice of sending hard copies of letters.

Within the first six months of implementing practices to reduce paper consumption, paper used went down by 10%. The CCU aims to reduce paper use by 20% within the first year of implementation.
The Commitments

GOAL 1 COMMITMENTS

1. Establish, monitor, and review the Electric Vehicle Incentive Program.
2. Install parking spaces with charging infrastructure for electric vehicles at GO stations.
3. Update MTO’s 1992 bicycle policy to reflect current provincial active transportation objectives and priorities.
4. Continue to monitor cycling safety issues.
5. Improve pedestrian and cyclist access to GO transit facilities.
6. Implement a new multi-jurisdictional multimodal traveller information service for Ontario in partnership with industry.
7. Update the 1996 Ontario Bikeways Planning and Design Guidelines, used by MTO and municipalities to accommodate cyclists on transportation infrastructure.
8. Reduce travel by MTO staff through investments in IT (e.g., video-conferencing, web-casting) and by reducing current levels of air travel.

GOAL 2 COMMITMENTS

2. Set a strategic direction for transportation planning and investment that better integrates transportation and land-use planning in support of system-wide sustainable transportation choices. MTO will implement a program to support this strategic direction in conjunction with other ministries and municipal planning partners.
3. Publish updated Transit-Supportive Guidelines (updating the document first published in 1992 by MTO and MMAH) to better integrate land-use and transportation decisions.
4. Develop and release Freight-Supportive Guidelines to help municipalities effectively plan for the movement of goods through land-use planning policy and practices.
5. Apply a sustainability lens to the review of municipal Official Plans as part of the provincial “one window” planning service.
6. Develop new, or revised, transportation planning policies for inclusion in the updated Provincial Policy Statement (PPS). The updated PPS provides an opportunity to outline matters of provincial interest related to transportation for consideration in land use planning decisions across Ontario.
7. Publish updated Transit-Supportive Guidelines (updating the document first published in 1992 by MTO and MMAH) to better integrate land-use and transportation decisions.
8. Develop and implement the Green Pave rating system.
9. Identify opportunities to generate renewable energy on MTO properties, such as installing solar panels along MTO rights-of-way (ROW) or using surplus land.
10. Use connected vehicle concepts to improve the management of Ontario’s transportation network.
11. Identify opportunities to consider sustainability when making corporate policy and resource submissions for consideration by ministry decision-makers.
12. Identify the provincial role in transportation demand management (TDM) policy and education.
## GOAL 5 COMMITMENTS

1. Assist in reducing greenhouse gas emissions from commercial vehicles.
2. Inventory the mitigation and compensation measures MTO uses to protect Species at Risk (SAR) in Ontario as a way to share best practices among staff.
3. Reduce paper used in procurement and in the acquisition of consultants by streamlining processes and developing an electronic tendering and bidding system.
4. Find appropriate ways, such as automation, to reduce the consumption of paper in the permitting process for signs, buildings, entrances, and encroachments.
5. Reduce paper consumption in MTO transactions with municipalities, courts and police.
6. Implement green meeting practices.
7. Identify opportunities to incorporate green building best practices in ministry workplaces.
8. Green the Ontario Public Service vehicle fleet.
9. Reduce office paper consumption by reducing the number of printers and by promoting green printing practices.
10. Reduce paper used in procurement and in the acquisition of consultants by streamlining processes and developing an electronic tendering and bidding system.

## GOAL 6 COMMITMENTS

1. Encourage the use of pervious concrete pavement by supporting research and innovation, sharing MTO expertise, and developing an Ontario Provincial Specification for construction.
2. Continue to support research into the use of recycled materials in pavements and to share MTO expertise in reducing, reusing, and recycling road building materials.
3. Collect and analyze weather and road condition data recorded at Autonomous Monitoring Stations and share information publicly through MTO’s Traveller’s Information Portal (TRIP).
4. Publish an ongoing series of discussion papers providing more in-depth examinations of sustainable transportation concepts.
5. Establish a ministry Green Team to support the OPS Green Transformation and participate in the implementation of ministry “greening” and broader sustainability activities.
6. Modernize the current collision reporting process to reduce paper use.
7. Promote and develop sustainable and integrated transit solutions.
8. Establish a ministry Green Team to support the OPS Green Transformation and participate in the implementation of ministry “greening” and broader sustainability activities.

## GOAL 7 COMMITMENTS

1. Promote and encourage the use of active transportation and carpooling as ways of commuting to work, to school, or to access transit services.
2. Launch a website that facilitates carpooling among OPS staff.
3. Develop MTO guidelines for alternative work arrangements.
4. Increase awareness of Environmental Bill of Rights requirements and lead a culture change to increase awareness of sustainability among MTO staff.
5. Develop sustainability training programs for MTO managers and directors.
6. Increase awareness of and incorporate green office practices into MTO’s workplaces.
7. Explore the development of performance indicators to measure progress on sustainability.
8. Launch eco-driver training and an anti-idling campaign to reduce fuel consumption from the OPS fleet.
9. Redesign the internal Greening @ MTO website as a resource for staff to share tips, best practices, and links.
10. Launch an internal e-learning program to reduce staff travel and paper usage.
11. Increase profile of ministry’s commitment to sustainability.
The Success Stories

**GOAL 1 SUCCESS STORIES**
1. Cycling Safety
2. Mobility Hubs
3. E-bikes
4. Online vehicle registration pilot
5. Incorporating Cycling Safety in the Driver’s Handbook
6. Investing in public transit
7. Ontario’s modern smart-card solution to transit fare payment

**GOAL 2 SUCCESS STORIES**
1. Highway 407 East Transitway
2. Long Range Multi-modal Transportation Planning

**GOAL 3 SUCCESS STORIES**
1. Highway 407 East Community Value Plans
2. Highway 407 East and First Nations
3. Highway 404 Extension Reforestation Program
4. Aboriginal Relations Branch
5. Province’s First Ethno-Cultural Signage
6. Windsor-Essex Parkway – A Cultural Gateway

**GOAL 4 SUCCESS STORIES**
1. Sustainable Road Paving
2. Reducing, Reusing and Recycling
3. Perpetual Pavement
4. Tire Derived Aggregate
5. Pervious Concrete Pavements
6. W.E. PAY IT FORWARD
7. COMPASS
8. Traveller Information Services (TIS) help you make better travel choices
9. Social Networking for Vehicles
10. Highway 137 Solar Power Project
11. Portland-Limestone Cement
12. Ontario Long Combination Vehicle (LCV) Program

**GOAL 5 SUCCESS STORIES**
1. Salmon River Fish Habitat Compensation Plan
2. Highway 69 Wildlife Crossings
3. Ontario Government ‘Greens’ its Vehicle Fleet
4. eCollisions
5. Plants removed from MTO construction areas find new life
6. Protecting Species at Risk turtles in Brant County

**GOAL 6 SUCCESS STORIES**
1. Break Wind Make Money
2. QEW/Ontario Street Carpool Parking Lot
3. Award to Recognize Environmental Excellence
4. An Innovative Way to Replace Highway Bridges in Ontario

**GOAL 7 SUCCESS STORIES**
1. Green Commercial Vehicle Program
2. OPS Unplugged: Raising Awareness of Standby Power Consumption
3. Corporate Correspondence Paper Reductions
Useful Links

- Brampton Transit
- COMPASS
- Connected Vehicle Canada
- Conservation Ontario
- Cycling Skills: Ontario’s Guide to Safe Cycling
- Durham Region Transit
- GO Transit
- Green Pave
- Growth Plan for the Greater Golden Horseshoe
- GTA West Corridor
- Highway 407 East Environmental Assessment
- Highway 407 East Project
- Lake Simcoe Region Conservation Authority
- Metrolinx
- Mississauga Transit
- Mobility Hubs
- MoveOntario 2020
- New and Alternative Vehicles
- Niagara to GTA Corridor Planning and Environmental Assessment Study
- Ontario Road Ecology Group
- Ottawa Light Rail
- PRESTO
- Rapid Bridge Replacement Video
- Smart Commute
- Systems in Operation
- The Official MTO Driver’s Handbook
- Transportation Association of Canada conference paper
- W.E. Pay It Forward
- Windsor-Essex Parkway
- Young Cyclist Guide