

# SUSTAINABLE MOBILITY AND INFRASTRUCTURE

THE JACQUES CARTIER AND CHAMPLAIN BRIDGES INCORPORATED

Sustainability Report 2015 – 2016

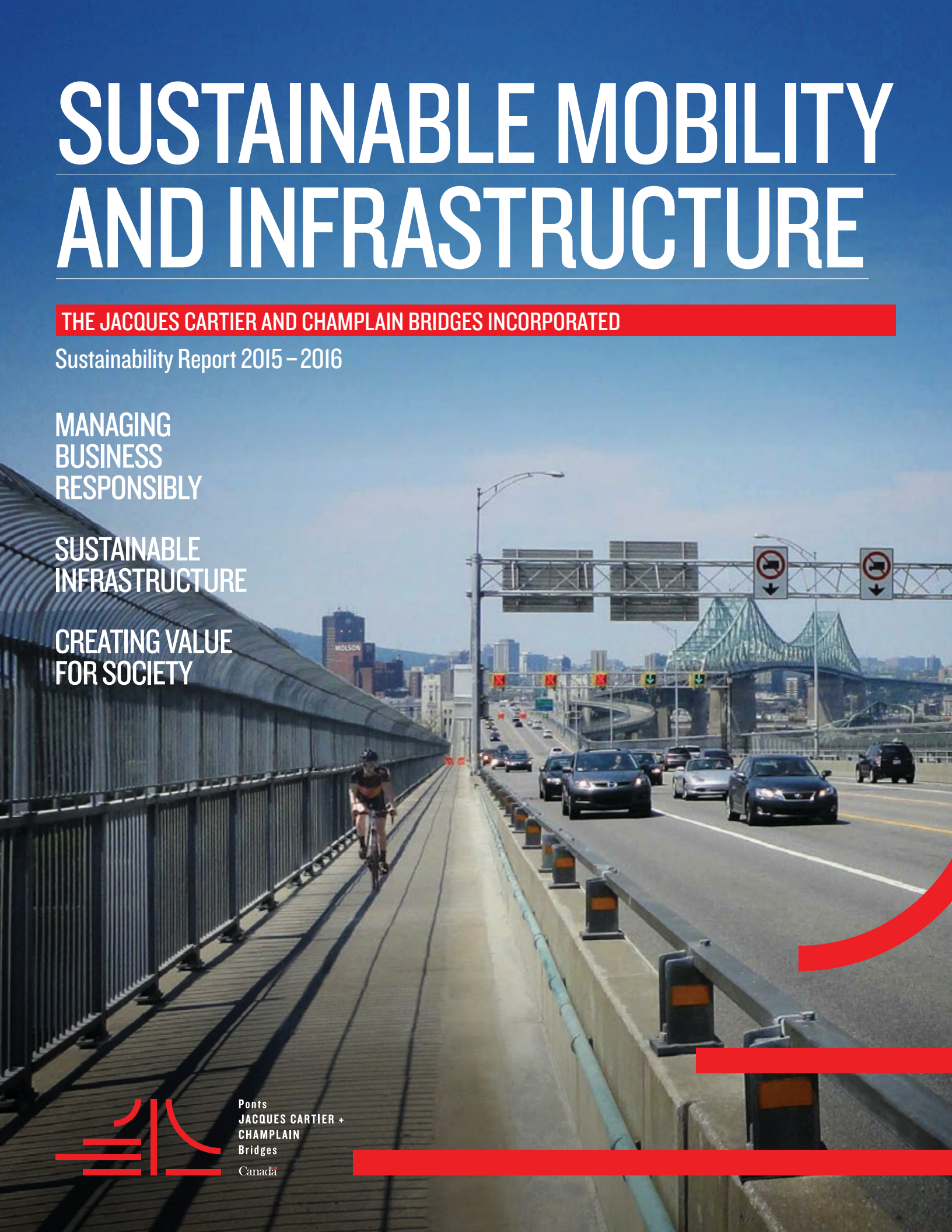
MANAGING  
BUSINESS  
RESPONSIBLY

SUSTAINABLE  
INFRASTRUCTURE

CREATING VALUE  
FOR SOCIETY



Ponts  
JACQUES CARTIER +  
CHAMPLAIN  
Bridges  
Canada







At The Jacques Cartier and Champlain Bridges Incorporated (JCCBI), we believe in the benefits of a sustainability approach and are committed to managing our organization responsibly, taking leadership in sustainable infrastructure management, and creating a positive impact for the community.

We are proud to issue our first Sustainability Report, which demonstrates through our actions how we are making a difference for society and contributing to the development of sustainable mobility and infrastructure.

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# MESSAGE FROM THE CHIEF EXECUTIVE OFFICER

**Glen P. Carlin**



**A**t The Jacques Cartier and Champlain Bridges Incorporated, we believe that sustainable development serves our stakeholders' interests and meets their needs.

It is our duty to stakeholders to consider the financial and non-financial impacts of our operations by integrating environmental, social and economic dimensions in our integrated management approach. This is an important issue for us as a major infrastructure manager.

## **A STRONG COMMITMENT**

Sustainability is an integral part of our mission. We are committed to taking sustainability into consideration in our decisions, in both carrying out our infrastructure projects and managing our organization.

This year, we formalized this commitment by preparing our Sustainability Plan. We conducted a thorough analysis of our practices and a benchmarking study against international standards and some peers' practices. We assessed the risks and opportunities related to sustainability within our organization and engaged our stakeholders on the issues that mattered to them most.

Our strategy, including objectives and a multi-year action plan, is built around three (3) pillars:

- + managing business responsibly;
- + sustainable infrastructure; and
- + creating value for society.

We are proud to present our first Sustainability Report, which outlines this Plan and shows how our commitments are being put into action.

**“As a federal Crown corporation, we ensure every Canadian taxpayer dollar is invested to optimize the economic, social and environmental return on investment generated for the community.”**

## **CONTINUOUS IMPROVEMENT**

As you read this report, you will notice that our commitment to sustainability is not new. Our maintenance and asset management programs, which have been deployed for a number of years throughout our network, demonstrate that our desire to implement solutions inspired by best practices is already well entrenched. In this regard, the creation in 2015 of our Infrastructure Innovation Centre is a flagship

initiative that helps to promote our expertise in developing innovative and sustainable solutions.

In the coming years, we will continue to deploy our action plan and periodically issue progress reports.

## **CREATING VALUE**

We believe that dialogue with our stakeholders is a key factor in the success of our operations, particularly for carrying out major work across our network.

As a federal Crown corporation, we ensure every Canadian taxpayer dollar is invested to optimize the economic, social and environmental return on investment generated for the community.

We assume this responsibility, convinced that it will help us become a leader in major infrastructure management as an innovative expert, a mobility leader, and a social and urban contributor.

A handwritten signature in black ink, appearing to read 'Glen P. Carlin'.

**Glen P. Carlin**  
Chief Executive Officer

# THE CORPORATION AT A GLANCE

We ensure that some of the most important transportation infrastructure of the Greater Montreal area remains safe, functional and aesthetically pleasing, both today and in the future.

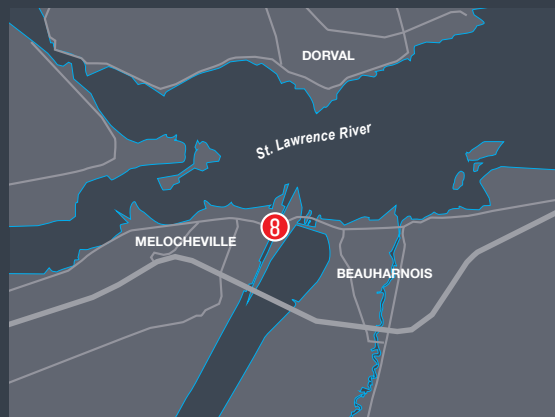
The Jacques Cartier and Champlain Bridges Incorporated (JCCBI) is a federal Crown corporation established since 1978 that is responsible for managing major federal infrastructure in the Greater Montreal area.

Our asset management activities include infrastructure maintenance, day-to-day network monitoring, and work planning in collaboration with mobility stakeholders in the region to ensure the network runs smoothly for our users.

We are also responsible for the periodic inspection of the structures, the engineering and the management of construction, rehabilitation and reinforcement projects, which supplement the asset management cycle in order to ensure the durability of the structures.

## OUR INFRASTRUCTURE

- Jacques Cartier Bridge 1
- Champlain Bridge 2
- Champlain Bridge Ice Control Structure 3
- Federal portion of the Bonaventure Expressway 4
- Nuns' Island Bypass Bridge 5
- Federal portion of Highway 15 6
- Federal portion of the Honoré Mercier Bridge 7
- Melocheville Tunnel 8



Champlain Bridge



Jacques Cartier Bridge



Nuns' Island Bypass Bridge





Champlain Bridge  
Ice Control Structure



Honoré Mercier Bridge

## OUR EXPERTISE TO SERVE THE COMMUNITY

We plan works, and operate and maintain the network to ensure safe crossing for thousands of users.

**25,500** metres

of road network connecting the South Shore to the island of Montreal

**130** million

trips annually



## OUR FUNDING

We are mainly financed through parliamentary appropriations from the Government of Canada.

**\$245M**

in appropriations received from the government in 2015-2016

## OUR ACTIVITIES AND PROJECTS

Our customized and innovative solutions are aimed at extending the lifespan of the infrastructure under our responsibility.

**\$215M**      **8,000**

invested in major works in 2015-2016

interventions carried out on the structures in 2015-2016

## OUR TALENTED PEOPLE

Our team is composed of talented people who work in multiple disciplines and trades.

over **150**

employees as of March 31, 2016, with 66% covered by collective agreements

# VISION AND STRATEGY

## Integrating sustainability into our management approach

### OUR SUSTAINABILITY STRATEGY



### AN INTEGRATED APPROACH

Over the 2015-2016 year, we strengthened our sustainability approach by making it more systemic and integrated.

We refreshed our corporate vision and mission and formally made sustainable development an integral part of our strategy.

To support this strategy and provide a framework for our approach, we defined a Sustainability Plan, which demonstrates our commitment to act on integrating social, economic and environmental considerations in the manner in which we conduct our activities and manage our assets.

### DEVELOPING OUR PLAN

Our Sustainability Plan was developed in alignment with international standards on sustainability, including the Global Reporting Initiative and the ISO 26000 standard on corporate social responsibility.

With the help of external experts, we analyzed our existing processes and benchmarked our performance against our peers.

The maturity of our approach was assessed on four (4) criteria:

- + our commitments;
- + our implementation programs;
- + our performance measurement capabilities; and
- + our reporting practices.

We conducted a rigorous analysis of our approach, which is drawing on industry best practices and international standards.

Based on the results of the assessment, we identified areas of improvement within eight (8) sustainability themes. We used these themes to frame the structure of our Sustainability Plan, which defines our priorities and objectives to put our commitments into action.



## SETTING OUR PRIORITIES

In order to ensure we chose the right priorities and objectives in each of the themes of our Sustainability Plan, we took into account the sustainability risks and opportunities for our operations as well as the importance of different sustainability aspects for our various stakeholders.

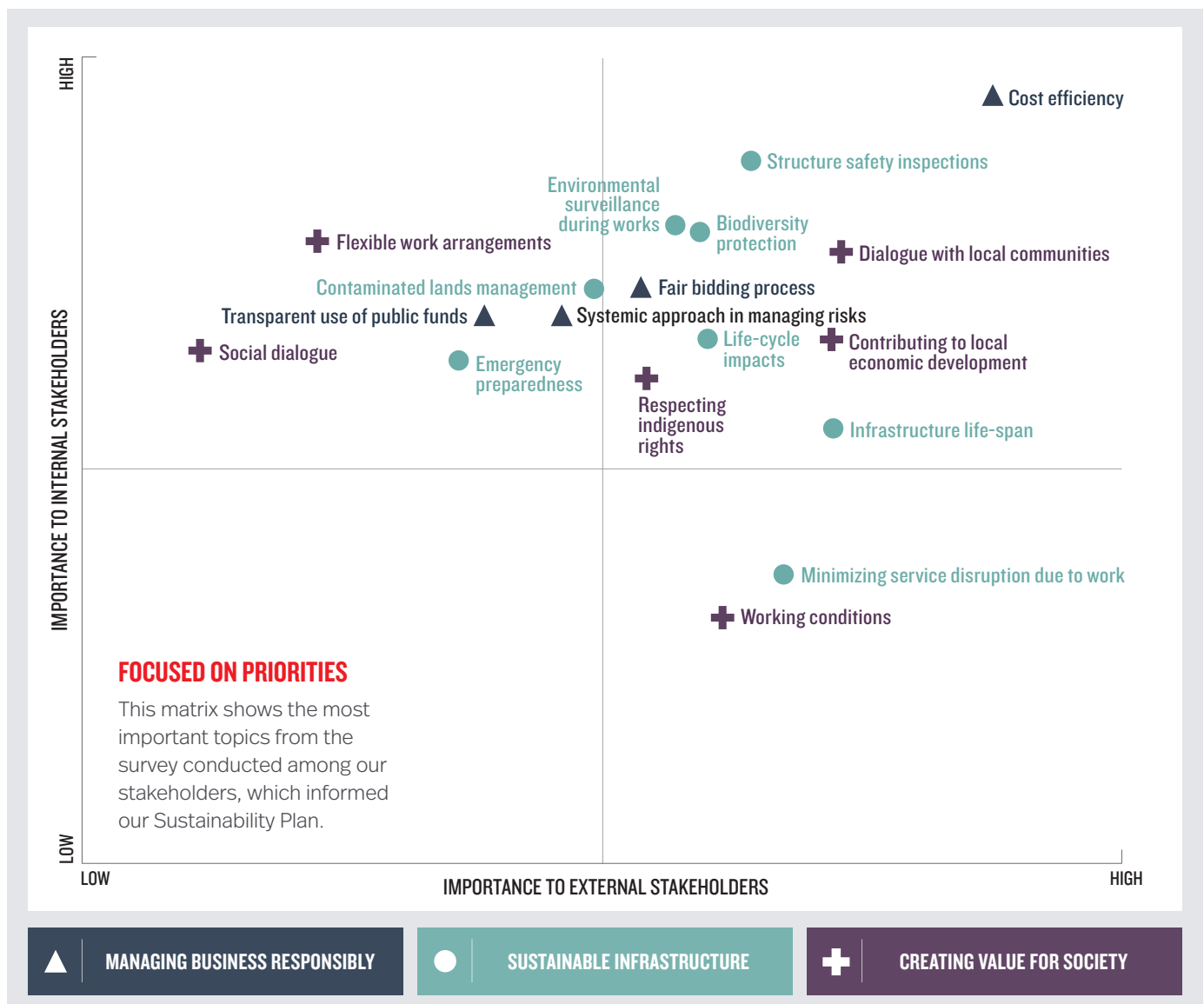
We conducted a survey of 300 stakeholder representatives, including suppliers, construction contractors,

government authorities, public transport partners, media, First Nations representatives, local community organizations, and environmental associations, as well as our employees. The survey was also publicly available on our web platforms.

The matrix below presents the main results of the survey and the relative importance of the topics deemed most important to our internal and external stakeholders.

These topics were taken into account to define our Plan, notably to direct and prioritize our actions, and set the framework for information reporting in this Report.

## PRIORITIES ACCORDING TO OUR STAKEHOLDERS



# SUSTAINABILITY PLAN

## Putting our commitment into action

Our sustainability strategy is based on three (3) pillars: Managing business responsibly, taking leadership in sustainable infrastructure management, and creating value for society. Each pillar has several themes and for each theme, we have set specific objectives to guide our action while ensuring we address our stakeholders' priority concerns. In the years ahead, we will report the progress we are making in this context.

KEY THEMES	STAKEHOLDERS' PRIORITIES	OUR OBJECTIVES
<b>MANAGING BUSINESS RESPONSIBLY</b>		
<p><b>RESPONSIBLE GOVERNANCE AND STRATEGY</b></p> <p>Integrating sustainable development principles into our governance, strategic planning and administration processes</p>	<p><b>Systemic approach in managing risks</b></p>	<ul style="list-style-type: none"> <li>+ Integrate sustainable development aspects into our corporate strategy</li> <li>+ Be able to assess our global performance (both financial and non-financial results)</li> <li>+ Manage risks in a preventive and systemic manner, covering all economic, social and environmental risks</li> <li>+ Consider our stakeholders' expectations in our strategy and engage them</li> <li>+ Communicate transparently on our strategy, challenges and global performance</li> </ul>
<p><b>INTEGRITY AND FINANCIAL STEWARDSHIP</b></p> <p>Managing funds with integrity and in a responsible and efficient way</p>	<p><b>Cost efficiency</b></p> <p><b>Fair bidding process</b></p> <p><b>Transparent use of public funds</b></p>	<ul style="list-style-type: none"> <li>+ Carry out our activities in accordance with the law and the Values and Ethics Code</li> <li>+ Award contracts fairly and equitably, and fight against corruption in all its forms</li> <li>+ Communicate transparently on government funding and the use of public funds</li> </ul>
<p><b>RESPONSIBLE PROCUREMENT</b></p> <p>Ensuring that our partners act in accordance with the same ethical values and contribute with us to sustainability</p>	<p><b>Environmental surveillance during works</b></p>	<ul style="list-style-type: none"> <li>+ Make sure our suppliers act responsibly</li> <li>+ Use more sustainable products and equipment</li> </ul>



KEY THEMES	STAKEHOLDERS' PRIORITIES	OUR OBJECTIVES
<b>SUSTAINABLE INFRASTRUCTURE</b>		
<p><b>INFRASTRUCTURE AND USERS' SAFETY</b></p> <p>Providing a reliable and safe service for the users of our infrastructure</p>	<p>Structures safety inspections</p> <p>Emergency preparedness</p>	<ul style="list-style-type: none"> <li>+ Manage infrastructure safety aspects in a systemic and preventive approach</li> <li>+ Manage public safety in a systemic and preventive approach</li> <li>+ Ensure preparedness to emergency situations</li> <li>+ Provide a safe and healthy work environment</li> </ul>
<p><b>INFRASTRUCTURE SUSTAINABLE DESIGN</b></p> <p>Designing and developing our transport infrastructure with a sustainability lens</p>	<p>Life-cycle impacts</p> <p>Infrastructure life-span</p> <p>Minimizing service disruption due to works</p>	<ul style="list-style-type: none"> <li>+ Optimize the social, economic and environmental aspects throughout the infrastructure lifecycle</li> <li>+ Promote environmentally friendly transport modes (such as walking, cycling, public transport)</li> <li>+ Minimize service disruptions due to works</li> </ul>
<p><b>ENVIRONMENTAL STEWARDSHIP</b></p> <p>Reducing the impact of our operations and contributing positively to ecosystems conservation</p>	<p>Biodiversity protection</p> <p>Environmental surveillance during works</p> <p>Contaminated lands management</p>	<ul style="list-style-type: none"> <li>+ Manage environmental aspects in a systemic approach in order to continuously improve our performance</li> <li>+ Protect and preserve the natural species on and in the vicinity of our infrastructure</li> <li>+ Responsibly manage the assets under our management with regards to their contamination</li> <li>+ Limiting our environmental footprint (GHG emissions, water and energy consumption, waste production)</li> </ul>
<b>CREATING VALUE FOR SOCIETY</b>		
<p><b>HUMAN CAPITAL</b></p> <p>Providing a fair, equitable, safe and healthy work environment for our employees, enabling them to excel</p>	<p>Working conditions</p> <p>Flexible work arrangements</p> <p>Social dialogue</p>	<ul style="list-style-type: none"> <li>+ Sustain a good social dialogue</li> <li>+ Offer competitive compensation</li> <li>+ Support employees' well-being by implementing attraction and retention measures</li> <li>+ Provide our employees with opportunities for learning and development</li> </ul>
<p><b>SOCIO-ECONOMIC CONTRIBUTION</b></p> <p>Contributing to the economic development and quality of life of people in the communities where we operate</p>	<p>Dialogue with local communities</p> <p>Respecting Indigenous rights</p> <p>Contributing to local economic development</p>	<ul style="list-style-type: none"> <li>+ Maintain an open dialogue with the local communities</li> <li>+ Respect Indigenous rights and collaborate with local First Nations communities</li> <li>+ Contribute to the socio-economic development of the area</li> <li>+ Actively contribute to the development of knowledge on infrastructure engineering</li> <li>+ Support community initiatives around our infrastructure</li> </ul>



# MANAGING BUSINESS RESPONSIBLY

Governance and ethical conduct | Financial stewardship |  
Responsible procurement





**O**ver the years, we have become known and recognized as a responsible manager of the infrastructure under our responsibility. We value our reputation, which we believe is a testament to our high standards in integrity, fiscal acumen, rigorous and efficient project management, and the strong relationships we have built with our stakeholders.

Managing our activities responsibly will continue to be a priority, with an ongoing focus on:

**GOVERNANCE AND ETHICAL CONDUCT** – We are committed to lead by example, living up to high standards of good corporate governance and ethical conduct, and apply a risk prevention culture to ensure sustained and reliable service.

**FINANCIAL STEWARDSHIP** – We remain vigilant in how we use public funds and align with the government's direction for expenditure restraint, while integrating sustainability in our investment decisions.

**RESPONSIBLE PROCUREMENT** – We continually strengthen our relationships with our suppliers to manage the risks related to our activities and work closely with them to share our sustainability values.

24

meetings of the Board of Directors in 2015-2016

88%

of our budget invested in major works in 2015-2016

over 400

suppliers providing goods and services

# GOVERNANCE AND ETHICAL CONDUCT

## Managing responsibly

As a Crown corporation and an agent of Her Majesty in right of Canada, we recognize the important responsibility we have to lead by example and live up to the high standards of good corporate governance and business ethics. This is why we are focused on ensuring responsible governance, risk management, transparent reporting practices and ethical conduct in all aspects of our business.

### OUR APPROACH

To support government direction and allow us to achieve what is expected of us, we have established systems of governance and control that underpin how we manage our organization responsibly.

We have developed robust processes to manage our business and infrastructure risks and rigorous standards

for good governance, ethics and risk management.

As we move forward, we will continue to focus on embedding sustainability values into our culture, strategy and management processes to ensure the success and sustainability of our development in the years ahead.



### OUR ACHIEVEMENTS

- + Established a multi-functional Sustainability Committee with Executive Senior Management members and managers from different departments to provide direction on the implementation of the Sustainability Plan
- + Refined our corporate mission to include our sustainability commitment
- + Initiated engagements on internal audit and on the enhancement of corporate risk management processes

### OUR GOVERNANCE AND ACCOUNTABILITY MODEL

MINISTER OF INFRASTRUCTURE AND COMMUNITIES



CHIEF EXECUTIVE OFFICER (CEO)



EXECUTIVE COMMITTEE



#### BOARD OF DIRECTORS COMMITTEES

##### COMMITTEES

- Audit
- Governance
- Human Resources
- Information Technology and Change Management
- Legal, Communications and Environmental Issues

##### RISK COMMITTEES

- Expert Committee – Champlain Bridge
- Honoré Mercier Bridge and Melocheville Tunnel
- Jacques Cartier Bridge, Ice Control Structure and Bonaventure Expressway

#### OTHER INTERNAL COMMITTEES

- Executive Committee
- Committee of Directors
- Steering Committee
- Strategic Axis Committee
- Sustainability Committee
- Local Occupational Health and Safety Committee
- Labour Relations Committee – White Collar Union Members
- Labour Relations Committee – Blue Collar Union Members



“Progress made this year in managing infrastructure risk and integrating it in the communities we serve is strengthening our foundation for the challenges and opportunities that lie ahead.”

**PAUL T. KEFALAS**  
Chairman of the Board

## CORPORATE GOVERNANCE

Our Board of Directors is the highest decision-making body for all matters deemed material to our organization.

The Board comprises six (6) members, including the Chairman and the Chief Executive Officer appointed by the Governor in Council on the recommendation of the Minister of Infrastructure and Communities.

The other members are appointed by the Minister, with the approval of the Governor in Council.

In accordance with sound governance practices, Board standing and advisory committees have been set up to address specific matters. Among these committees, the Committee of Legal, Communications and Environmental Issues provides oversight notably on matters related to the environment, including monitoring the performance of the Sustainability Plan.

Responsibility for the day-to-day management of our organization is delegated to the Chief Executive Officer, who is supported by a cross-functional Executive Committee.

In 2015-2016, we established a multi-functional Sustainability Committee, which includes the CEO and Executives. This committee



## BOARD OF DIRECTORS

From left: Guy Martin (Director), Paul T. Kefalas (Chairman), Glen P. Carlin (CEO), Denise Hébert (Director), Serge Martel (Vice Chair), Dominique Bouchard (Director).

ensures the implementation of the Sustainability Plan and reports to the Executive Committee.

## ETHICS AND VALUES

Our five (5) core values are the basis of our culture and our approach to responsible management:

- + Team work
- + Transparency
- + Thoroughness
- + Innovation
- + Commitment

We abide by the federal Values and Ethics Code for the Public Sector and our corporate directives on conflicts of interest and the administration of contracts.

The Code and the corporate directives constitute our code of conduct, defining the behavior expected of our employees as well as the guiding principles for them. These principles are championed by our Board of Directors and Executives, and all employees are required to confirm their ongoing compliance with the Directive on Conflict of Interest and Post-Employment on an annual basis.

Employees are also required to report any conduct that contravenes these principles.

## RISK MANAGEMENT

Risk management is handled by various bodies in our organization: the management of corporate-wide risks is overseen by the Board of Directors, notably through the Audit Committee, and advisory committees have also been established with regard to the risk management of each of our structures.

We take a precautionary approach when identifying, assessing and mitigating risks that could impact our activities.

We apply this culture into our day-to-day management and operations by sharing best practices and by making every employee accountable.

We also conduct internal controls and audits of our management processes to ensure compliance, effective risk mitigation and continuous improvement.

# 9

Access to Information Requests processed in 2015-2016

# FINANCIAL STEWARDSHIP

## Managing our funds with integrity and efficiency

As a Crown corporation using public funding, we are required to be financially prudent and accountable for the use of funds. To fulfill our mission, we must remain vigilant in how we use the funds provided by the government and align with the government's budgetary restraint. Integrating sustainability into our investment decisions is also an important issue to be addressed.



### OUR ACHIEVEMENTS

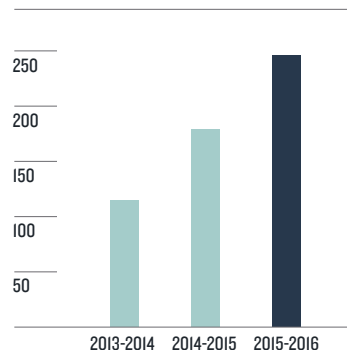
- + Developed a strategic dashboard for monitoring performance
- + Established a monitoring process to ensure fairness in our procurement process during Calls for Tenders for professional services

### OUR APPROACH

The Corporation reports on its activities through its five-year strategic plan. When making financial decisions, we apply sound management principles – vigilance, transparency and rigorous procurement process – to ensure we deliver value for money to Canadians.

Managing our budget responsibly and effectively is a priority. This involves the implementation of a rigorous and efficient project management process, and a disciplined procurement process to ensure its competitiveness and fairness for our suppliers.

**Parliamentary appropriations**  
(in millions of \$)



### FUNDING MANAGEMENT AND ACCOUNTABILITY

We are mainly funded through federal parliamentary appropriations. Income from other sources, such as leases and permits, contribute to our funding, but only marginally.

In our decision-making, we always consider how to best use available resources to protect the assets under our management and ensure a safe drive for our users.

Our funding is mainly used for construction and rehabilitation projects, and to repair and maintain components of our structures (such as piers, girders, decks, structures and paving). Funding also covers snow removal, road cleaning and maintenance, landscaping, and the operation and maintenance of lane signal control systems, road lighting and surveillance cameras.

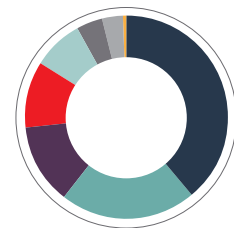
We are subject to annual audits by the Auditor General of Canada to ensure



### Major works in 2015-2016

(in millions of \$)

■ Champlain Bridge	84.2
■ Jacques Cartier Bridge	46.9
■ Champlain Bridge Ice Control Structure	27.8
■ Bonaventure Expressway	22.6
■ Honoré Mercier Bridge	17.4
■ Highway 15	9.1
■ Melocheville Tunnel	7.2
■ Bonaventure Environmental Project	0.9



88% of the budget was invested in major works

Our main investments in 2015-2016 include reinforcement and major maintenance of the Champlain Bridge, maintenance of the Jacques Cartier Bridge, reinforcement of the Ice Control Structure and construction of a bicycle path, and replacement of the deck on the Honoré Mercier Bridge.

that our financial statements fairly present our financial results in accordance with the public sector accounting standards.

Through our annual and quarterly reports, we transparently communicate our use of funds and management results, and show the progress made in providing safe and fluid mobility for the Greater Montreal area.

### COST MANAGEMENT AND EFFICIENCY

As part of our financial stewardship responsibilities, we ensure that resources are used efficiently. To be vigilant with public funds, we first align with the government's direction and guidelines for sound financial management.

To do so, when awarding construction contracts, we ensure that funds are used efficiently and that contractors comply with contract requirements by withholding a portion of the amounts

payable until works are completed as well as retaining another provision until the end of the warranty period on the works.

In 2015-2016, we initiated the implementation of an enterprise resource planning system for enhanced project planning, monitoring and cost analysis.

In the years ahead, we will be exploring opportunities to integrate sustainability into our decision-making and optimize the overall return on investment in our infrastructure projects over the long term.

### FAIR PROCUREMENT PROCESS

In the course of our activities, we spend significantly on suppliers for the procurement of various goods, equipment and services, and especially on construction contractors.

We have implemented strict procedures for Calls for Tenders, whether public or by invitation, to ensure contracts

are awarded fairly, with transparency and on a competitive basis. For example, a Fairness Monitor provides an unbiased view of the procurement process for large professional services contracts.

We also conduct internal audits on the integrity of our process for awarding contracts to construction contractors and professional service firms.



# RESPONSIBLE PROCUREMENT

## Strengthening our relationships with suppliers

Every year, we collaborate with hundreds of suppliers on a wide range of goods and services to ensure the quality and safety of our infrastructure. It is therefore essential that we maintain strong relationships with our suppliers, who are critical to our business, and work with them to implement responsible procurement practices.



### OUR ACHIEVEMENTS

- + Created a guide for evaluation committees for professional service proposals
- + Strengthened our construction contracts with probity clauses and the *Code of Conduct for Procurement* from Public Works and Government Services Canada
- + Maintained strong relationships with more than 400 suppliers concerning a wide range of goods and services

### OUR APPROACH

In addition to meeting regulatory requirements, we expect our suppliers to comply with our standards, including those related to quality, occupational health and safety and the environment.

To minimize risks related to our suppliers, we set out our expectations in contract clauses and monitor performance throughout the contract.

When applicable, we also work with them to promote sustainable and innovative products and services, based on best practices.

### SELECTION OF SUPPLIERS

For us, responsible procurement is as much about managing the direct and indirect risks to our activities as it is about ensuring we work with suppliers who share our values.

As part of our procurement process for construction contracts, we perform controls on suppliers' probity by using government databases. Depending on the nature of the work, we include health, safety and environmental requirements in our specifications and contracts.

### SCREENING AND PERFORMANCE MONITORING

The screening and ongoing performance monitoring of our suppliers helps us reduce potential risks for our activities. Where issues are identified, we work with suppliers to remedy the situation.



**In addition to meeting regulatory requirements, we expect our suppliers to meet the strict standards set out in our contract clauses, including those related to quality, occupational health and safety, and the environment.**

For professional services contracts, our process includes an evaluation of bidders based on per-established criteria. Evaluation committees are created on a case-by-case basis, and we provide the employees with a best practices guide. In addition, for large contracts, the process is overseen by a Fairness Monitor who ensures compliance with internal guidelines and that it is a fair and transparent process.

### **PERFORMANCE MONITORING**

In addition to meeting regulatory requirements, we expect our suppliers to meet the strict standards set out in our contract clauses, including those related to quality, occupational health and safety, and the environment.

We strengthened our Call for Tenders documents for construction contracts by integrating probity clauses and

excerpts from the Code of Conduct for Procurement from Public Works and Government Services Canada.

Our teams regularly assess the performance of suppliers during and upon completion of work. For most construction contracts, we use supervision firms to ensure contractors are meeting both regulatory and contractual obligations on site. If performance issues are identified, we work with contractors and suppliers to remedy the situation.

### **RESPONSIBLE PROCUREMENT**

We believe that our procurement practices can be a major incentive for our suppliers and stakeholders in the supply chain to commit to sustainability. This is why we would like to enhance our approach and work closely with our suppliers to purchase greener and more responsible goods and services.

We foresee to set up a structured program including tools and guidance for our employees on the basis of best practices available, with the support of the *Espace québécois de concertation sur les pratiques d'approvisionnement responsable* (ECPAR).



## **USING MORE SUSTAINABLE GOODS AND SERVICES**

### **OUR INFLUENTIAL ROLE**

With close to 80% of our budget allocated to more than 400 direct suppliers, we have an important role in influencing the suppliers in our supply chain to use more sustainable products and services.

With regard to infrastructure for instance, we chose to use high-quality concrete panels with a 75 year lifespan to replace the deck of the Honoré Mercier Bridge.

For our operations, we are testing more environmentally friendly alternative materials, such as beet juice compounds to reduce the amount of salt required for de-icing the roads (see page 25) and ecological windshield washer fluid for our service vehicles.

As part of our office activities, we are applying responsible procurement practices for paper and information technology equipment (Energy Star® certification).

In 2016, we are relocating our administrative offices in Longueuil into a building that is in the process of obtaining the LEED® environmental certification.

**ABOVE:**

The high-quality green building that hosts our new administrative offices.





# SUSTAINABLE INFRASTRUCTURE

Safe infrastructure | Sustainable planning and design |  
Environmental stewardship





**O**ur infrastructure is critical to socio-economic development and mobility in the Greater Montreal area. It also includes major civil structures that are part of a natural, rich and unique environment.

We are therefore aware of the important role we play in the community in managing and maintaining such infrastructure so that it remains safe, functional and aesthetically pleasing both today and in the future. Integrating sustainability considerations in our future projects is one of our priorities in order to make us an innovative leader in infrastructure management.

With regards to sustainable infrastructure, we take action on:

**SAFE INFRASTRUCTURE** – We ensure safe and secure transit for users of our infrastructure through preventive management, and major maintenance and rehabilitation programs, while minimizing service disruptions and ensuring we are prepared for emergency situations.

**SUSTAINABLE PLANNING AND DESIGN** – We acknowledge our role in developing sustainable transportation systems and investing in the development, planning and design of long-lasting infrastructure, which is resilient to changing climate and environmental conditions while responding to the mobility needs of communities.

**ENVIRONMENTAL STEWARDSHIP** – We are making every effort to protect and enhance the environment in the vicinity of our structures by conducting impact assessments of our projects, mitigating such impact based on best practices, and helping to preserve ecosystems (protecting biodiversity and preventing pollution).

**300** sensors

installed on the Champlain Bridge for real time monitoring

**\$1.17M**

amount allocated to the environment in 2015-2016

**6,363** metres

total length of our bicycle path network

# SAFE INFRASTRUCTURE

Safety is our top priority

Ensuring a safe transit for thousands of daily users of our network is a top priority. We recognize the important responsibility we have to consider how best to use available resources to protect the assets we manage and ensure this infrastructure remains safe and secure, and fully functional both today and in the future.



## OUR ACHIEVEMENTS

- + Revised the structures inspection program to align with industry best practices
- + Developed a new web interface to report service disruptions and real time traffic to the public
- + Improved the signals, telemonitoring equipment and fire alarm systems in the Melocheville Tunnel
- + Won three Awards of Excellence for the engineering of the “super beam” and modular trusses installed on the Champlain Bridge, and the accompanying communication campaign

## OUR APPROACH

A well-maintained and well-managed infrastructure is vital to ensuring public safety. Thus, our resources are used primarily to plan and carry out the repair and maintenance of our network, and we always prioritize works concerning the safety of users.

We are doing our best to manage infrastructure in a systemic and preventive manner to ensure the safety of users and structures on a day-to-day basis and in case of emergencies, while minimizing service disruptions.

Transparency is also an important aspect of our approach and we are committed to communicating proactively with the public about it.

## STRUCTURE SECURITY

The safety and quality of the infrastructure is our primary responsibility. Every year, significant capital expenditures are invested to ensure the safety of new and existing assets.

Maintaining and monitoring the entire network is a daily technological challenge, particularly in the context of the aging infrastructure under our responsibility. Given that many of the structures are more than fifty years old, it is imperative that



their health and behaviour be examined and monitored.

Our regular inspection program in addition to ad hoc studies inform our decisions for the implementation of short-, medium- and long-term maintenance and rehabilitation programs. Over a maximum four (4) year cycle, each structure in the network will have undergone a detailed and thorough inspection under the supervision of the Engineering Department.

Risk management committees have been set up by the Board of Directors. They are responsible for tracking and monitoring the implementation of action plans defined in each structure’s management strategy.

# \$10M

Budget for inspections and studies in 2015-2016



## ONGOING MONITORING OF THE BRIDGE STRUCTURAL SAFETY

### CHAMPLAIN BRIDGE MONITORING

Faced with the unique challenges of the Champlain Bridge, we implemented a structural monitoring system, which permits ongoing monitoring of some bridge components. It is a unique and comprehensive data management and performance monitoring system for bridges.

To support the system, more than 300 monitoring sensors were installed on the bridge. Monitoring stations are interconnected by a fiber optic communication network making it possible to remotely consult and download data in real time.

The health of the bridge is therefore continuously monitored and the data collected can help analyze and detect irregularities in structural behaviour. The equipment in place allowed us to verify the effectiveness of the modular trusses installed on the bridge in 2015 to take over the load from the edge girders.

### MINIMIZING SERVICE DISRUPTIONS

Striving to provide our users with the best quality service, we are working to ensure minimal disruptions due to works on our network.

To this end, strict comprehensive work planning is therefore used, while optimizing lane closure management to limit the impact on the flow of traffic. The strategies we implement include: coordinating our contractors' work in a time efficient way, concentrating closures at night or on weekends, and optimizing temporary traffic routes.



Communication and information-sharing are also an integral part of how we optimize traffic flow. Thus, we are involved in the Mobility Montreal group to coordinate with other transportation actors in the metropolitan area, and we strive to provide our users with relevant and reliable information on traffic conditions, in advance and in real time.

This year, we also launched a new website to provide users with a simple and unique tool to plan their transits.

### NEW LIVE WEB INTERFACE FOR USERS

Our new website provides users with an integrated dashboard with live traffic conditions, traffic cameras, in-progress service disruptions on the network, as well as the seven-day work schedule for our structures. Visit: [JacquesCartierChamplain.ca](http://JacquesCartierChamplain.ca)



### COLLABORATING TO PROVIDE REAL TIME INFORMATION AND COORDINATING WORKS

We provide real time traffic information online for users and on information panels in the vicinity of the structures. We are also constantly communicating with the media, and are part of the Mobility Montreal group to coordinate work scheduling with other transportation actors in order to optimize traffic flows and minimize service disruptions.





## ONGOING MONITORING OF THE NETWORK

Our operations and maintenance teams travel the network on a daily basis to monitor infrastructure safety and security and the traffic flow.

Cameras installed across our network are fed into a monitoring station for ongoing surveillance of the network. Such installation is crucial for enhancing the safety of users and for making it easier to quickly detect incidents.

Working closely with our partners, we can readily respond to emergency situations guided in particular by the Emergency Response Plan.

ABOVE:  
One of the surveillance cameras installed on the Jacques Cartier Bridge.



“Ensuring the safety of the users on our infrastructure is of the utmost importance and we focus on this task by regularly inspecting the structures, monitoring the network on an ongoing basis, collaborating with the Sûreté du Québec and emergency response services, and executing our major maintenance program.”

**SANDRA MARTEL**  
Chief Operating Officer

### SAFETY AND MONITORING

We aim to adopt a systemic and coordinated management approach to ensure the safety of the users of our infrastructure.

Cameras are in place on our structures to allow us to track in real time the safety and fluidity of the network.

Under the terms of a contractual agreement, we work closely with the Sûreté du Québec (SQ), which monitors the network on an ongoing basis and follows up on events that have occurred, whether concerning road safety, dangerous behaviours or malicious acts.

### EMERGENCY PREPAREDNESS

In order to take immediate action and effectively manage emergency situations, an Emergency Response Plan has been put in place to cover various identified high-risk situations. We are working in cooperation with the SQ and emergency services to set up emergency response procedures, as well as emergency response drill testing.

We train our employees on operational procedures to follow in the event of an incident or emergency.

When an incident occurs, we communicate proactively and transparently with users through the media, message signs on our structures, our website and social media networks.



#### PARTNERSHIP WITH THE SÛRETÉ DU QUÉBEC

We have formed a strategic partnership with the Sûreté du Québec, which provides for the ongoing monitoring and security of our network and takes action in the event of an emergency. This collaboration aims notably at improving road safety and optimizing traffic flows.



#### ROAD SAFETY IMPROVEMENTS

Our operations and engineering teams constantly seek opportunities to improve road safety on our network.

In 2015-2016, several initiatives were undertaken such as the installation of automated barriers on the Jacques Cartier Bridge, the installation of lane control lights for heavy trucks on the Champlain Bridge, and the improvement of signals, telemonitoring equipment and fire alarm systems in the Melocheville Tunnel.

100

operating cameras on the network

over 20

employees assigned to network operations and maintenance

# SUSTAINABLE PLANNING AND DESIGN

## Reinforcing infrastructure resilience and sustainability

A sustainable transportation infrastructure is vital to the economic prosperity of a region and is essential for enhancing the ability of communities on the territory to thrive and innovate. Sustainable infrastructure also helps develop harmonious urban communities that are integrated in their natural environment. We must therefore ensure that the major infrastructure under our management is resilient and meets the needs of the community, while having a limited impact on the environment.



### OUR ACHIEVEMENTS

- + Implemented a project management approach to identify risks and opportunities at an early stage in the planning phase
- + Created the Centre for Infrastructure Innovation and launched several studies on sustainable materials and innovative techniques
- + Constructed a dedicated pathway for more sustainable travel options on the Champlain Bridge Ice Control Structure

### OUR APPROACH

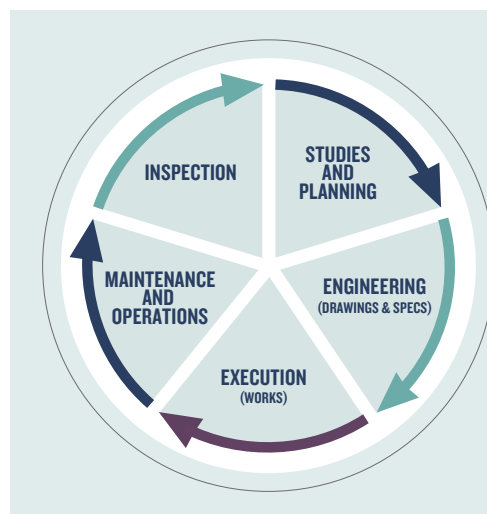
We have an important role to play in the development of a resilient and sustainable transportation system in the Greater Montreal area. Thus, integrating sustainability thinking into the planning of our infrastructure projects is part of our corporate philosophy.

We aim to enhance the resilience of our infrastructure by focusing on extending its lifespan, adapting it to

climate changes and researching more sustainable materials in order to optimize its life cycle.

We also aim to continuously improve service to users by providing sustainable solutions for pedestrians, cyclists, public transit users and motorists.

### OUR PREVENTIVE AND SYSTEMIC MANAGEMENT APPROACH



To ensure that our infrastructure remains safe, fully functional and aesthetically pleasing both today and in the future, we implemented a preventive and systemic project management approach. Inspections conducted on our structures feed the project planning pipeline. Projects are then managed through cross-functional teams before being delivered to the operations and maintenance team.

This systemic approach captures the whole life cycle and identifies the risks and opportunities relating to the works and the project at an early stage in the planning and design phase.



## EXTENDING INFRASTRUCTURE LIFESPAN

Our infrastructure is aging and, in some cases, shows signs of deterioration having been subject to years of heavy traffic, harsh climate conditions and heavy use of salt. This is why we prioritize preventive maintenance, in order to ensure the safety and durability of our structures.

Extending the lifespan of the bridges, roads and tunnels under our responsibility is an integral part of our mission. Our teams of professionals with extensive know-how and experience in transportation infrastructure and civil engineering structures thus manage major construction, rehabilitation and repair projects to maintain and extend the lifespan of our structures.

In 2015-2016, our major projects included rehabilitation work on the Bonaventure Expressway, replacement of the deck on the federal portion of the Honoré Mercier Bridge, and rehabilitation of the steel structure and concrete piers of the Jacques Cartier Bridge.



### MAJOR REHABILITATION OF THE DECK OF THE HONORÉ MERCIER BRIDGE

To extend the life of the bridge by at least 75 years, we adopted a proactive and preventive management approach by replacing the deck on the federal portion of the bridge with precast concrete slabs made at a plant in Quebec, using a prestressed concrete technique for assembly.

### ADAPTING TO CLIMATE CHANGE

Global warming is certainly one of the most significant threats facing our transportation system, particularly with respect to changing climate conditions. While the mitigation of climate change remains a collective priority, adapting to its effects is becoming an increasing concern for infrastructure managers.

To better inform planning and design decisions, we plan on increasing our knowledge of changing climate conditions and their impact on our infrastructure. By better understanding the potential risks we will be able to develop mitigation and adaptation plans aimed at enhancing its resilience.



### NEW LIFE FOR THE JACQUES CARTIER BRIDGE

To offer a second life to the Jacques Cartier Bridge, which is already 86 years old, and extend its lifespan another 50 years, we have undertaken reinforcement work on the bridge steel structure, and major rehabilitation work on the supports and concrete piers.



## DEDICATED BICYCLE PATHWAY ON THE CHAMPLAIN BRIDGE ICE CONTROL STRUCTURE

In order to promote sustainable mobility and ensure the safety of users, we conducted major work on the Champlain Bridge Ice Control Structure in 2015 to build a “dedicated” bike path.

The new pathway is three (3) metres wide and separated from the lanes used by heavy trucks, providing a safe and improved experience for cyclists and pedestrians.

It has an anti-skid surface made of lightweight and durable material, and seven (7) emergency entry points. A LED street light system was also installed which has considerably improved lighting quality while decreasing energy and greenhouse gas emissions.

During the course of 2016, indigenous vegetation will be gradually replanted near the Ice Control Structure, and a panoramic rest area will be constructed near the north entrance on Nuns’ Island.

ABOVE:  
Two (2) kilometres of dedicated pathway for the use of pedestrians, runners and cyclists.



“We strive to integrate sustainability and to get community stakeholders involved in the planning and design of our works.”

**STEVE TSELIOS**  
Senior Director, Engineering

## SUSTAINABLE TRANSPORT ALTERNATIVES

As a major actor of mobility, we have a role to play in planning and designing sustainable, integrated transportation systems that are tailored to the needs of the communities they serve.

For us, sustainable mobility means enhancing the transportation infrastructure under our management to offer users a safe, healthier and greener service (by minimizing traffic congestion and promoting less polluting means of transportation).

Our commitment to sustainable mobility has resulted in several improvement projects such as the transformation of the Champlain Bridge Ice Control Structure into a more community-focused design, through a dedicated cycling and walking pathway, and the integration of a bike path and a dedicated lane for public transit on the Nuns' Island Bypass Bridge.



## SUSTAINABLE MATERIALS AND LIFE CYCLE

The use of more sustainable building materials represents an important part of our strategy which we are progressively implementing to make our infrastructure resilient and sustainable.

These sustainable materials, which can be used for building, repairing or maintaining our structures, include materials from renewable or recycled resources, those designed to last longer and/or be recycled, those that are less harmful to the environment, and those from local resources.

From a life-cycle perspective, using greener building materials helps conserve dwindling non-renewable resources, minimizes the environmental impacts across the lifecycle of our infrastructure, and helps reduce maintenance, replacement and end-of-life processing costs.

For example, in 2015-2016, we studied a beet juice compound to reduce the use of de-icing salt. We also launched our Centre for Infrastructure Innovation whose mandate is to develop and promote our expertise in advancing the use of innovative and sustainable materials for our structures.

### BEET JUICE AS AN ALTERNATIVE TO SALT

In 2015-2016, a pilot test was performed on specific sections of the Jacques Cartier Bridge to reduce the quantity of salt used to de-ice the roads by adding a sugar beet juice compound, which is more ecological and less corrosive for the metallic structures.



## DEVELOPING INNOVATIVE AND SUSTAINABLE SOLUTIONS

### CENTRE FOR INFRASTRUCTURE INNOVATION

The Centre for Infrastructure Innovation was created in 2015 to support the development of innovative solutions for the management and maintenance of our major infrastructure in an effort to extend its useful life and make it more resilient and sustainable.

Two research studies are currently being conducted in partnership with universities:

- + The study of innovative ultra-high performance concrete for long-term performance and rehabilitation of bridge piers (with the École Polytechnique de Montréal)
- + The evaluation of shear reinforcement of girders with the application of glass- or carbon-fibre reinforced polymer bands (with McGill University)

Through the Centre, we are looking for innovative practices, techniques and materials that could generate technical applications and new business opportunities.

ABOVE:

Ultra-high performance fiber concrete studied for the reinforcement of bridge piers.



# ENVIRONMENTAL STEWARDSHIP

## Adopting innovative environmental solutions

We are committed to be responsible stewards of the environment by reducing the impact of our infrastructure projects, and by doing our part to protect neighbouring ecosystems. We assume this responsibility because we recognize that the environment is important for our ongoing operations and the sustainable development of communities: preserving the natural resources and environment for future generations.



### OUR ACHIEVEMENTS

- + Participated in the Greening Committee of the Federal Interdepartmental Group on Sustainable Development
- + Conducted an environmental impact assessment study on reinforcing the Ice Control Structure and building a bicycle pathway
- + Successfully implemented measures for preserving biodiversity, such as installing bird nesting beams and creating a hibernaculum for brown snakes within proximity of the Ice Control Structure
- + Finalized the design of a solution for containing and treating contaminated groundwater on the land close to the Bonaventure Expressway

### OUR APPROACH

Our environmental policy articulates our commitment to protect the environment, which is based on compliance, prevention and continuous improvement.

Our Environment team is dedicated to integrating sound environmental management into the planning, engineering, construction, operation and maintenance.

Beyond regulatory compliance, we aim to manage risks responsibly and act on opportunities for improvement in alignment with best practices to minimize pollution and irritants and help preserve ecosystems. We extend these expectations to our contractors who undertake work on our behalf and collaborate with them to minimize impacts.

### ENVIRONMENTAL IMPACT ASSESSMENT

Conducting an environmental impact assessment is the first step in a major infrastructure project, the objective of which is to understand adverse environmental impacts in order to minimize them. We comply with the requirements under the Canadian Environmental Assessment Act, and go beyond our compliance obligations where possible.



“We conduct environmental impact assessments of our projects in order to identify and mitigate risks related to soil contamination, water and air releases, and their adverse impacts on fauna, flora and populations.”

**MARTIN CHIASSON**  
Director, Environment



These assessments involve the physical and climate conditions of the territory, water and air quality, biodiversity, and other community issues such as noise.

We work with environmental specialists to conduct detailed studies and suggest measures, aligned with best practices, to avoid, mitigate or compensate for the adverse impacts of the projects.

By assessing the potential environmental impacts of our projects at an early stage, we can integrate into our infrastructure projects proactive measures to address the local environment and communities issues. While the project is then being carried out, robust measures are put in place to monitor compliance and the application of the measures, and regular status updates are communicated to the public.

Recent examples of infrastructure projects subject to an impact assessment include the projects relating to the Nuns' Island Bypass Bridge and the Champlain Bridge Ice Control Structure.

#### CHARACTERIZATION STUDY ON OUR LANDS

We strive to minimize the environmental impact of our activities. We conduct detailed studies in collaboration with experts to understand the land where we operate and its biodiversity. In 2016, we launched a site characterization study to give us a picture of the soil, groundwater and biodiversity features of all the land surrounding our infrastructure.



## MINIMIZING ENVIRONMENTAL IMPACTS

### CHAMPLAIN BRIDGE ICE CONTROL STRUCTURE

In planning the works to be conducted for the Champlain Bridge Ice Control Structure, an environmental assessment was undertaken as required by the legislation.

The physical environment of the land (soil, water, and climate), the biological environment (the fauna and flora), and the human environment were all considered in the study, to identify any risks related to the construction and operation of the infrastructure. We listened to the concerns of the residents living near the project area, notably regarding construction dust and noise.

In response to the assessment, various measures were put in place to minimize the project's impact, and even improve the environment, including:

- + Applying dust control measures
- + Implementing strict rules to prevent any releases into the soil or the water
- + Monitoring plant and animal species during and after the works
- + Introducing compensation measures for impacts on brown snake habitats
- + Implementing measures for public safety and fostering recreational activities
- + Planning for a renaturalization through reforestation of the site

To ensure compliance with these environmental measures, clauses were included in the construction contract and a monitoring program was established during the works.

Through these measures, the project's impact on the environment was minimized.





## PROTECTING THE PEREGRINE FALCONS AND CLIFF SWALLOWS

Through our integrated management approach, we identify opportunities to preserve, protect and restore biodiversity in areas that are affected by our activities.

In particular, a number of species protected by federal and provincial laws live on or in the vicinity of the infrastructure we manage. These include peregrine falcons and cliff swallows, which nest on our bridges during the breeding season, which can be challenging during maintenance or rehabilitation works.

Over the past few years, we have worked with biologists to study the behaviour of these migratory species, particularly during the nesting period and we established management plans for their protection.

As part of our mitigation plans, we designed and installed six (6) nesting boxes for the peregrine falcons in different places on our three (3) bridges, and built twenty-eight (28) beams to enable the cliff swallows to nest on the Ice Control Structure, providing ideal conditions for nesting and reproduction.

We closely monitor the impact of our actions on the bird colonies and are pleased to see that these measures are giving good results.



ABOVE:  
In order to preserve this endangered species, special "nesting boxes" were installed on the Champlain Bridge for peregrine falcons to nest in.



Our goal is to protect the wildlife habitat in areas that are impacted by our activities and, where possible, achieve a net positive impact on the environment.

## BIODIVERSITY PROTECTION AND PRESERVATION

We strive to preserve the biodiversity of lands in the vicinity of our infrastructure. Our goal is to protect wildlife habitat in areas that are affected by our activities and, where possible, achieve a net positive impact on the environment.

To do so, we work with environmental experts to undertake characterization studies of surrounding flora and fauna to inform our understanding of the ecosystems and the conservation needs of special status species. We integrate the results of these studies into the development of biodiversity programs.

Our programs include mitigation measures to eliminate or reduce impacts, and where impacts are unavoidable, we implement compensation measures to recreate the habitats affected by the works.

We have implemented innovative initiatives for the cliff swallow colonies and peregrine falcons that nest on our bridges, and for the brown snakes in the Nuns' Island sector and around the St. Lawrence Seaway dike.



## PREVENTION AND MANAGEMENT OF CONTAMINATED LAND

Pollution prevention during infrastructure construction and maintenance is one of our environmental stewardship priorities.

We use the results of our environmental impact assessments to develop pollution prevention mitigation measures for a range of impacts, including air, dust, particle and greenhouse gas emissions, waste generation, water releases, particularly runoff, and movement of contaminated soil.

The requirements are communicated to our contractors and closely monitored and tracked to ensure compliance.

We also have in place a management program for contaminated land and we participate in the Federal Contaminated Sites Action Plan (FCSAP). In this context, we worked in 2015 on the Solution Bonaventure project to contain and treat contaminated groundwater in proximity to the Bonaventure Expressway, between the Champlain and Victoria Bridges.

## RESEARCH ON BROWN SNAKES

We launched a research project to protect brown snakes in partnership with UQAM University and the Quebec Ministère des Forêts, de la Faune et des Parcs. In preparation for the construction of the Bypass Bridge, the brown snakes were successfully relocated to a hibernaculum on the southern tip of Nuns' Island.



## TACKLING A CENTURY OF POLLUTION

### SOLUTION BONAVENTURE ENVIRONMENTAL PROJECT

For many years, we have participated in the Federal Contaminated Sites Action Plan administered by Environment Canada with regard to the management of groundwater from contaminated land located close to the Bonaventure Expressway, a former landfill site that was active between 1866 and 1966.

In partnership with federal, provincial and municipal authorities, we led studies to identify the environmental issues and assess the different scenarios for managing the contaminants and prevent them from migrating into the St. Lawrence River.

The environmental project Solution Bonaventure will involve different innovative solutions for the two (2) distinct sectors:

- + In the East sector, a groundwater confinement wall will be used to capture hydrocarbons
- + In the West sector, a hydraulic barrier and a series of wells will enable the groundwater to be pumped out and sent to an onsite treatment system

Construction work is expected in 2016 and 2017, with commissioning in 2017.

#### ABOVE:

The sector of the Bonaventure Expressway where contaminated water will be contained.

# CREATING VALUE FOR SOCIETY

Human capital | Socio-economic contribution





**O**ur activities help make a difference in the lives of the communities where we operate, through employment, the positive socio-economic benefits of our investments, and the improvement of mobility in the metropolitan area.

Through our actions and interactions with our stakeholders, we want to create a positive social, economic and environmental return on investment for the community.

As a committed social and urban actor, we focus our efforts on:

**HUMAN CAPITAL** – We invest in human capital development to provide an attractive, rewarding, healthy and safe work environment, where our employees can develop their talent and thrive as individuals through the organization’s projects.

**SOCIO-ECONOMIC CONTRIBUTION** – We contribute to the development of communities by optimizing the socio-economic benefits of our activities, preserving heritage structures, and developing strong relationships with our local partners, including First Nations and stakeholders in local communities.

**7,000** hours

of training taken by our employees in 2015-2016

nearly **6,000**

indirect jobs supported by our investments

over **24,000**

followers of our social media accounts



# HUMAN CAPITAL

## Being an inclusive and attractive employer

The foundation of our success lies with the more than 150 employees who work for us today. Our ability to provide a reliable and safe service on the network could not be achieved without their support and dedication. Developing a human capital that reflects the needs of our organization and the communities where we operate is of great importance to us.



### OUR ACHIEVEMENTS

- + Created the JCCBI Academy for the training and professional development of our employees
- + Rolled out our first employee engagement survey and obtained a 70% response rate
- + Implemented an organizational matrix structure for project-based management

### OUR APPROACH

Given the size and growth of our projects, we have developed our human capital through several additions of key positions in recent years. As a result, we have the necessary skills to achieve our vision and our strategic objectives.

We are committed to investing in the development of our employees in order to provide them with a favourable, stimulating, healthy and safe work environment, where they can develop their talent.

Our five (5) core values – Team work, Transparency, Thoroughness, Innovation and Commitment – underpin our culture that promotes collaboration to fulfill our mission responsibly while serving the community.

### WORKING IN COLLABORATION WITH EXPERTS

Our project managers and line managers work in conjunction with specialized consultants and contractors, bringing unique expertise to all our projects. In the photo, our Champlain project team on site to install the modular trusses above Highway I32.

### A FAVOURABLE WORK ENVIRONMENT

Our team is comprised of more than 150 employees from various disciplines and trades, including numerous experienced professionals. We want our employees to feel proud of being part of the Corporation, of practicing their profession, and of contributing to our mission in serving the community.

We want to provide our employees with a stimulating work environment where skills and performance are recognized and rewarded, with possibilities for advancement and professional development.

Given our expertise and collective know-how, we provide them with



**“Our team of talented professionals is the key to our success. Our objective is to provide all our employees with a healthy and stimulating work environment, while promoting their personal and professional development.”**

**NATHALIE CAYOUILLE**  
Director, Human Resources

the opportunity to work on unique, innovative and large-scale projects.

We also work to ensure that employment conditions and remuneration packages are competitive with the job market. We provide all our employees with employee benefits that include the federal public service pension plan and a comprehensive group insurance plan.

Moreover, we support their health and well-being through a flexible hours program and by promoting fitness.

### **OCCUPATIONAL HEALTH AND SAFETY**

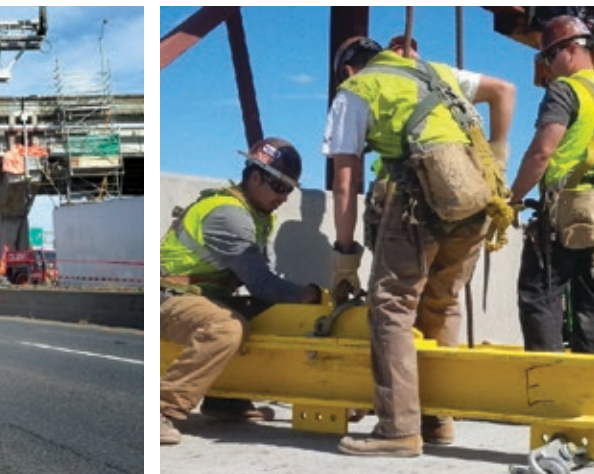
In order to promote and maintain a safe and healthy work environment for our employees, we have been implementing an occupational health and safety (OH&S) risk management and prevention program for the past few years.

Through the Occupational Health and Safety Committee, in collaboration with the unions, the risks specific to each

workplace and the measures to mitigate them are examined with the objective of establishing best practices for prevention and control.

In 2015-2016, we increased our efforts to embed health and safety in our corporate culture through training programs. More than twenty (20) training modules about OH&S requirements were developed and provided to our employees.

From a continuous improvement perspective, we will continue to work with contractors who are responsible for the carrying out of all the work on our construction sites to strengthen operational procedures and requirements in order to achieve the highest workplace health and safety standards.



### **SAFETY ON CONSTRUCTION SITES**

On structures and construction sites, all employees and contractors must meet requirements for using personal protective equipment and follow strict procedures to minimize the risk of injury and accidents.



## **PROVIDING STIMULATING OPPORTUNITIES**

### **STÉPHANIE BLEAU'S EXPERIENCE AS A CIVIL ENGINEER**

Being an engineer at The Jacques Cartier and Champlain Bridges Incorporated means you can be called upon to solve concrete and often complex technical problems.

Stéphanie Bleau has been part of the Construction team for over three (3) years. For her, civil engineering is a very dynamic profession. “You can get involved in building the society that we want.”

As an engineer project manager, she collaborates with numerous stakeholders – various internal departments, consultants, contractors and other partners – to ensure the success of the projects assigned to her. What she particularly likes about our organization is her work autonomy, field work, and the opportunity to collaborate on large-scale technical challenges.

Stephanie's love for what she does has led her to get involved in passing on knowledge to younger people while taking students and graduates under her wing. Young people bring a new dimension to projects: “They have a different vision and are much more focused on the environment and rehabilitation.” So she is pleased that we make a lot of room for young people within the organization.



## DEVELOPING MANAGEMENT SKILLS

Our training programs focus on the development of management skills in our managers and employees. They aim to create a culture based on common values and to strengthen our leadership and our ability to innovate through a cross-cutting approach.

Since 2014, we deployed a project-based matrix organization to enable us to:

- + Implement cross-functional teams to manage project delivery from start to finish;
- + Identify, as soon as possible, any potential coordination problems with other projects to ensure the achievement of each project's objectives;
- + Mitigate project risks through cohesive, cross-functional teams; and
- + Provide an overview of each project for follow-up and to maintain strict control over the quality of deliverables, deadlines, and costs.

In addition, we established a work plan to meet the specific training needs of each department and included the skills and behaviours sought in the performance evaluation criteria of our employees.

All our employees benefit from development opportunities, which include the development of technical, general and personal skills. Employees have access to both internal and external training programs, enabling them to enhance their knowledge and skills and maintain their professional qualifications.

ABOVE:  
Our employees taking a training session on the new project-based matrix management approach.



Our current and future success is based on our values, our spirit of innovation and the continuing development of our talents.

## PROFESSIONAL TRAINING AND DEVELOPMENT

To be an employer of choice, we invest to attract and retain talented people and develop their skills in a way that enables them to grow both personally and professionally.

Over the past year, we have transformed our organization from a functional structure to a matrix structure in order to apply a project-based management approach that promotes cooperation among cross-functional teams. As part of this transformation, we established a training program for employees and managers.

We also initiated an analysis of specific skills and training needs for each department and updated continuing development plans for managers in line with strategic objectives. As a result, we developed a comprehensive training plan that we expect to implement over the next few years through the JCCBI Academy. We also intend to update our contingency plan and prepare a succession plan to promote skill development and ensure the sustainability of our activities.



## EMPLOYEE ENGAGEMENT

We engage our employees through various events that bring us together to discuss and celebrate our accomplishments, and invite speakers to share enriching experiences and innovations.

As part of our continuous improvement approach, we wish to further engage our employees to put our values into practice and implement our strategy.

Last year, we conducted an engagement survey among all our employees to learn more about what motivates them, how they perceive the Corporation and its management, and what they think about their work environment. The results of this survey are valuable in understanding engagement triggers and assessing our reputation in the minds of our most important stakeholders.

As a result, we can develop action plans aimed to produce important targeted improvements for our organization.

## EMPLOYEES VOLUNTEERING ON ASSET DEVELOPMENT INITIATIVES

Our employees participate in asset development initiatives that enhance the value of our assets, with a focus on improving urban integration, functionality and the aesthetic appeal of structures and land under our responsibility. In the photo, employees are landscaping the south entrance of the Jacques Cartier Bridge.



## LISTENING TO AND ENGAGING OUR EMPLOYEES

### EMPLOYEE ENGAGEMENT SURVEY

For the first time, in 2015, we conducted an engagement survey among our employees. A total of 70% of employees responded to the survey, sharing their views on our strong points and on the progress to be made.

Overall, the survey results were positive: our employees feel committed to the organization. They are motivated by their work and the professional challenges provided to them.

The most favourable scores were in the following areas:

- + Feeling of contributing to team success
- + Job meaningfulness
- + Direct manager access

The survey results were shared with all the employees. In each department, results were presented and analyzed, and targeted action plans were prepared. These improvements will be implemented in the months and years ahead, and we will monitor the progress made concerning employee engagement.

#### ABOVE:

At the employee breakfasts, presentations and discussions enable everyone to express their views on issues affecting current and future activities.

# SOCIO-ECONOMIC CONTRIBUTION

Contributing positively to society

As a major infrastructure manager in the Greater Montreal area, we play an important role in the economic and social well-being of Canadians. Our structures are critical for local and regional users, as well as for national and international supply chains. We therefore contribute to the socio-economic development of Canada and promote the quality of life of the communities that we connect to one another.



## OUR ACHIEVEMENTS

- + Continued to develop strong relationships with the First Nations community of Kahnawà:ke through our partnership with them for the work conducted on the Honoré Mercier Bridge
- + Created an Asset Development Committee composed of volunteer employees
- + Partnered with local universities and engineering schools to provide training sessions and internships for students

## OUR APPROACH

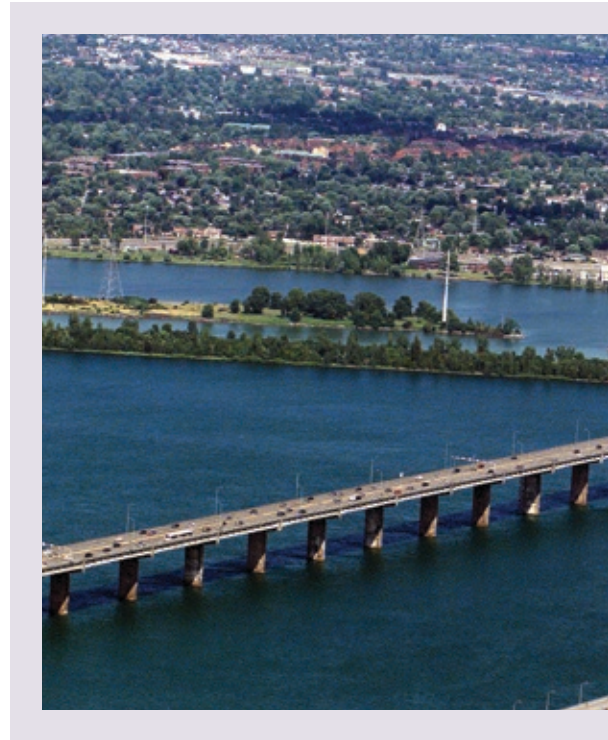
We are mindful of our role in the daily lives of thousands of citizens and our strategic position with regard to economic development and wish to make the most of them by making a positive contribution to the creation of sustainable value for society.

Our contribution relates to the positive socio-economic impacts of our activities for the Greater Montreal area, the role we play in preserving heritage structures, the mutually beneficial relationships we have with the First Nations community of Kahnawà:ke, and our participation in community dialogue and development.

The longstanding relationships that we have built and maintained with local stakeholders are vital to the success of our operations.

## SUPPORTING JOBS THROUGH OUR LOCAL CONTRACTORS AND SUPPLIERS

We partner with hundreds of suppliers, in particular construction contractors who work with us in maintaining and rehabilitating our structures. The economic benefits in terms of wealth and jobs generated contribute to the social and economic development of our community.



## ECONOMIC BENEFITS FOR THE REGION

We recognize the significance of the strategic mandate we have in managing some of the most important transportation infrastructure in Canada, such as the Champlain Bridge and the approach to the bridge from the Bonaventure Expressway, the Honoré-Mercier Bridge and







## ONE OF CANADA'S BUSIEST BRIDGES

### CHAMPLAIN BRIDGE

The Champlain Bridge connects Montreal to the South Shore and its surrounding area. With an annual estimate of 50 million trips and \$20 billion in trade, it is one of the busiest bridges in Canada and the main gateway to the continental corridor.

In this sector, we are responsible for the operation, maintenance and management of the existing Champlain Bridge and the federal portion of the Bonaventure Expressway, the Champlain Bridge Ice Control Structure and the Nuns' Island Bypass Bridge.

Prior to the commissioning of the new Champlain Bridge, our responsibility is to ensure the safe and efficient transit for users on the existing bridge. We therefore conducted work for the installation of steel structure reinforcement systems and a monitoring system to monitor and keep the existing bridge operational.

the Jacques-Cartier Bridge, which connect the island of Montreal with the rest of the Canadian and continental network.

Our transportation infrastructure benefits thousands of users – individuals, businesses and local communities – and enables greater mobility and connections resulting in direct and indirect socio-economic benefits.



Moreover, we help create local jobs in the communities where we operate, with over 150 direct jobs and thousands of indirect jobs for our various suppliers.

As we look forward, we are committed to conducting our business in a way that maximizes the creation of sustainable and profitable value for everyone in present and future generations.

# 785

purchase orders issued to about 400 suppliers in 2015-2016



### THE MELOCHEVILLE TUNNEL – FOR A FLUID ROAD AND MARINE TRAFFIC

The Melocheville Tunnel is located directly under the Beauharnois Canal on Montreal's southwest shore and allows the uninterrupted traffic for both road and marine transport. To this end, we work closely with the St. Lawrence Seaway Management Corporation.



“In addition to naturally supporting economic development in the region, we take great pride in preserving and promoting the historical and cultural heritage of the structures we manage.”

**VINCENT GUIMONT-HÉBERT**  
Engineer, Environment

### PRESERVATION OF HISTORICAL AND CULTURAL HERITAGE

We take great pride in our contribution to preserving Montreal’s historical structures and safeguarding its cultural heritage for the benefit of present and future generations.

Our Employee Committee for Asset Enhancement, which is comprised of employee volunteers, coordinates initiatives to preserve and enhance this heritage.

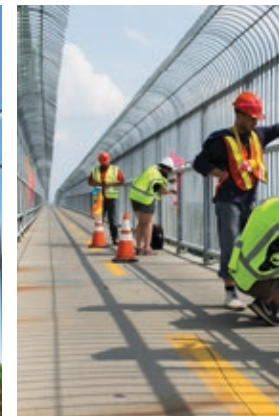
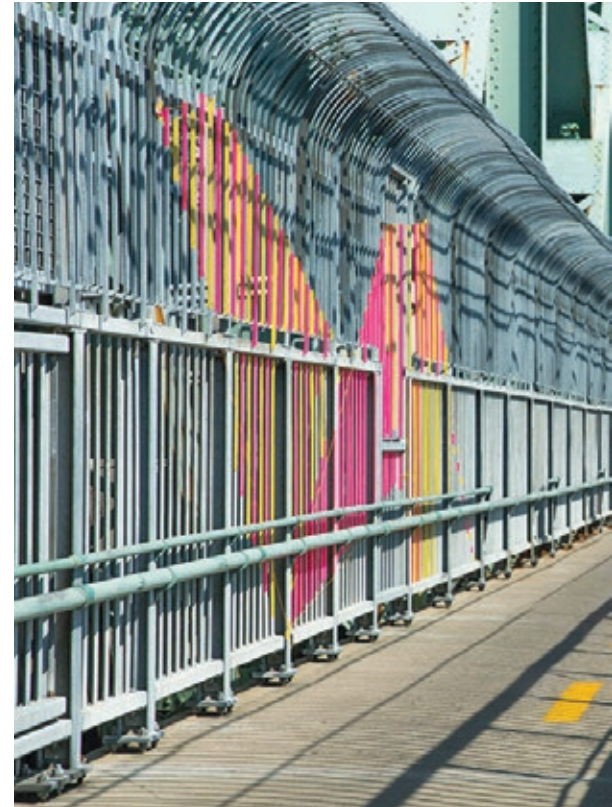
Many of the structures under our management – in particular, the Jacques Cartier, Champlain and Honoré Mercier bridges – are iconic Montreal bridges that reflect significant architectural, cultural and historical value. For more information on the historical and cultural relevance of these structures, refer to our website at: [JacquesCartierChamplain.ca](http://JacquesCartierChamplain.ca).

As part of the responsible management of our structures, we support various local artistic and cultural initiatives that enhance and reinforce their aesthetic appeal and their urban integration.

Specifically, the Jacques Cartier Bridge, a true Montreal landmark, attracts numerous sports events and artistic initiatives, including the Veduta urban art project initiated in 2015.

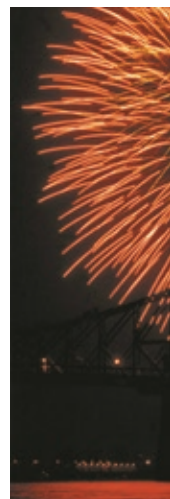
### URBAN ART ON THE MULTI-FUNCTIONAL BICYCLE PATH

As part of an urban integration process to enhance the aesthetic appeal of the Jacques Cartier Bridge, the Veduta urban art project was initiated in 2015 in collaboration with the artist Stéphane Leclerc. The coloured stripes applied to the posts on the path visually shape the space and create a unique experience for users.



### LIGHTING UP THE JACQUES CARTIER BRIDGE

In celebration of the 150<sup>th</sup> anniversary of Confederation and Montreal’s 375<sup>th</sup> anniversary, we are conducting a project to illuminate the Jacques Cartier Bridge that will make the city reflect the seasons and Montrealers’ excitement starting in 2017.







### GREEN MOSAIC "THE MAN WHO PLANTED TREES"

The spectacular green sculpture was installed at Parc des Faubourgs, at the Jacques Cartier Bridge approach, as an initiative of the city of Montreal following the 2013 Mosaïcultures Internationales Montréal 2013 competition. The work, entitled "The Man who Planted Trees", is composed of ten (10) sculptures made from 35,000 plants and flowers. The design promotes gardening and horticulture as a vital component of the urban landscape.



### CULTURAL AND SPORTS EVENTS

We work with event organizers to provide access to our structures for various cultural, tourist and sports events, including the Montreal Marathon.

During these events, our priority is to ensure public safety. Our traffic engineers take care of the signals and traffic flow planning, while our operations and maintenance teams help with field coordination.

For example, during the Marathon the bridge is completely closed off to traffic to ensure the safety of the tens of thousands of runners. The public is informed about route changes through signs and information we relay to the media and social networks.







## COLLABORATING WITH THE KAHNAWÀ:KE FIRST NATIONS FOR THE REHABILITATION OF THE HONORÉ MERCIER BRIDGE

We have developed a strategic partnership with the Mohawk Council of Kahnawà:ke.

Since 2008, we have worked with the Mohawk Bridge Consortium (MBC), a group of Kahnawà:ke contractors, to perform the rehabilitation work on the Honoré Mercier Bridge.

This partnership reinforced our commitment to collaborate with the First Nations on innovative and inclusive approaches that generate actual economic and social benefits.

The deck rehabilitation project is one of the largest projects of its kind ever undertaken by the First Nations in Canada. Through our concerted efforts, the project undertaken by the MBC is a success. The 2015 work was finished ahead of schedule and the project should be completed in 2016-2017.

**ABOVE:**

The Chairman and CEO of the Corporation celebrate the end of the first year of work to replace the deck with representatives of the Mohawk contractors.



## RELATIONSHIPS WITH FIRST NATIONS

We maintain good relationships with the First Nation communities. We respect their unique traditions and culture, and we consult them for our projects, for instance regarding the environment.

We work closely with the Mohawk community, in particular for work on the Honoré Mercier Bridge, which connects the island of Montreal with the Kahnawà:ke reserve.

During the work to replace the deck on the bridge, collaboration with the Council of Kahnawà:ke and the Mohawk contractors was crucial. This project was a success – it is one of the largest of this kind undertaken by the First Nations in Canada.

Recognizing the value attributed by the First Nations to the environment, we will be initiating roundtables as a project to share best practices on responsible environmental management of construction sites, and thus help protect the local ecosystem along the St. Lawrence River.

## COMMUNITY OUTREACH

We are engaged in open dialogue with the users, residents and communities we serve. We believe that transparency is essential to gain the trust of our users and partners.

This commitment happens in a variety of ways. We communicate openly with the public through our website, social networks and the media, and we participate in various government, sectoral and cross-sectoral initiatives. We also engage in dialogue with professional associations and universities.

We organize guided tours of our infrastructure as well as press conferences on work programs and public presentations at our annual meetings.

We also hold consultation meetings with stakeholders for particular projects, for example, the annual follow-up on the rehabilitation work on the Honoré Mercier Bridge, on the Nuns' Island Bypass Bridge construction project and on the steel structure rehabilitation project on the Jacques Cartier Bridge.

## SUPPORT TO COMMUNITY DEVELOPMENT

We invest in community initiatives in order to bring social, economic and environmental improvements to citizens.

We support various local community groups, in particular by making land available to them as is the case for the Les Valoristes cooperative, which comes to the aid of the less fortunate by helping them collect returnable containers, and the organization Spectre de Rue, for collecting dirty needles under the Jacques Cartier Bridge.

From an education perspective, we collaborate with various local universities and institutions to develop know-how and skills, and we provide opportunities for internships for students interested in gaining experience in engineering, infrastructure management and environmental management.



### PUBLIC CONSULTATION

As part of the environmental impact assessment preceding the construction of the Nuns' Island Bypass Bridge, presentations and meetings were organized with local community members to consult on the project and to consider relevant mitigation measures.



### PARTNERING WITH UNIVERSITIES

We develop partnerships with various institutions to support knowledge development and innovation in engineering, including at McGill University, the École Polytechnique de Montreal and the École de Technologie Supérieure. We participate in student competitions, as was the case recently at the Polytechnique's presentation of civil engineering projects (photo above).



### SUPPORTING LOCAL ASSOCIATIONS

We support several local associations. In 2014-2015, we welcomed the Les Valoristes cooperative under the Jacques Cartier Bridge, where it where it allowed people in need to collect some revenue by returning recyclable containers (photo above). We have also provided financial support to Spectre de Rue, an organization that comes to the aid of drug addicts, to collect dirty needles.



# GRI INDEX

## Aligning with international standards

In compiling the content for this report, we were guided by the *Sustainability Reporting Guidelines - G4* Guidelines of the Global Reporting Initiative (GRI). The following table presents the GRI standard disclosures covered in this report.

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A.R. = More information in our Annual Report 2015-2016

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A.R. = More information in our Annual Report 2015-2016



# ABOUT THIS REPORT

## Committing to transparency

“This first Sustainability Report speaks to the vision of our organization and how we approach responsible infrastructure management. Building on this foundation for accountability, our reports will aim to measure our progress in relation to the different sustainability pillars and present an accurate, overall picture of our performance.”

**CLAUDE LACHANCE**  
Senior Director, Administration

We are committed to communicating transparently on our vision and our progress toward sustainability, taking into account the expectations of our stakeholders.

### REPORT PROFILE

This 2015-2016 Report is the Corporation's first report on sustainable development. It presents our vision and our Sustainability Plan, as well as the processes and programs that we have already implemented in recent years. It establishes the baseline of our current situation, and highlights the actions carried out during the year 2015-2016.

This report was reviewed and approved by the Sustainability Committee and the Board of Directors. It contains quantitative data from all the Corporation's operations for the 2015-2016 fiscal year (from April 1 to March 31), unless otherwise stated.

Our objective is to issue a sustainability report on an annual basis, to report on our progress toward the objectives set in our Plan.

### ALIGNMENT WITH THE GRI STANDARD

We have developed the content of this report taking into account the G4 Guidelines of the Global Reporting Initiative (GRI), as shown in the GRI index on pages 42 and 43.

This report represents a major step forward in our approach, but we relentlessly pursue improvement in how we measure and disclose our

performance results. We will therefore continue to work on improving our reports by following international standards on sustainability reporting.

### ENGAGING WITH OUR STAKEHOLDERS

In preparing this report, we took into consideration the results of the stakeholders' survey conducted in 2015 to inform the development of our Sustainability Plan (see the "Vision and strategy" section on page 5).

We have therefore prioritized the aspects that are the most important for our stakeholders and are material for our organization.

Engaging with our stakeholders is a key success factor in our approach, and we are committed to maintaining an ongoing dialogue with them on all sustainability issues.

### EXTERNAL ASSURANCE

The data provided in this report has not been specifically audited by a third party.

In the years to come, we will continue our efforts to strengthen our communication by developing quantitative indicators, and we will then be considering external assurance.

# CONTACT

We value your opinion.

If you would like to provide feedback or if you have any questions about this report, please contact us at:

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## JOIN THE CONVERSATION



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[Les Ponts Jacques Cartier et Champlain Inc.](#)

[JacquesCartierChamplain.ca](http://JacquesCartierChamplain.ca)



## OUR MISSION

Use systemic management and a sustainable development approach to ensure the safety and longevity of the major infrastructure under our responsibility.

## OUR VISION

Become a leader in major infrastructure management as an innovative expert, a mobility leader and a social and urban contributor.

## OUR VALUES

- + TEAM WORK
- + TRANSPARENCY
- + THOROUGHNESS
- + INNOVATION
- + COMMITMENT



Ponts  
JACQUES CARTIER +  
CHAMPLAIN  
Bridges  
Canada

