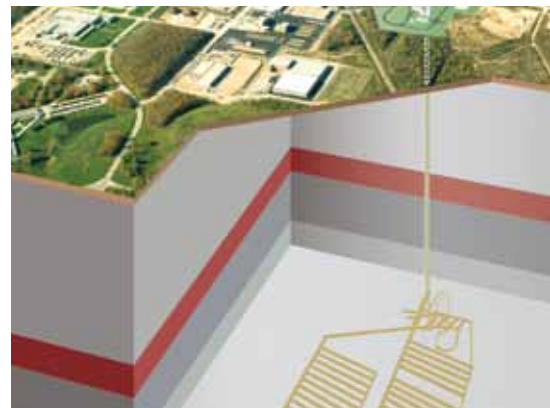


# Top 100

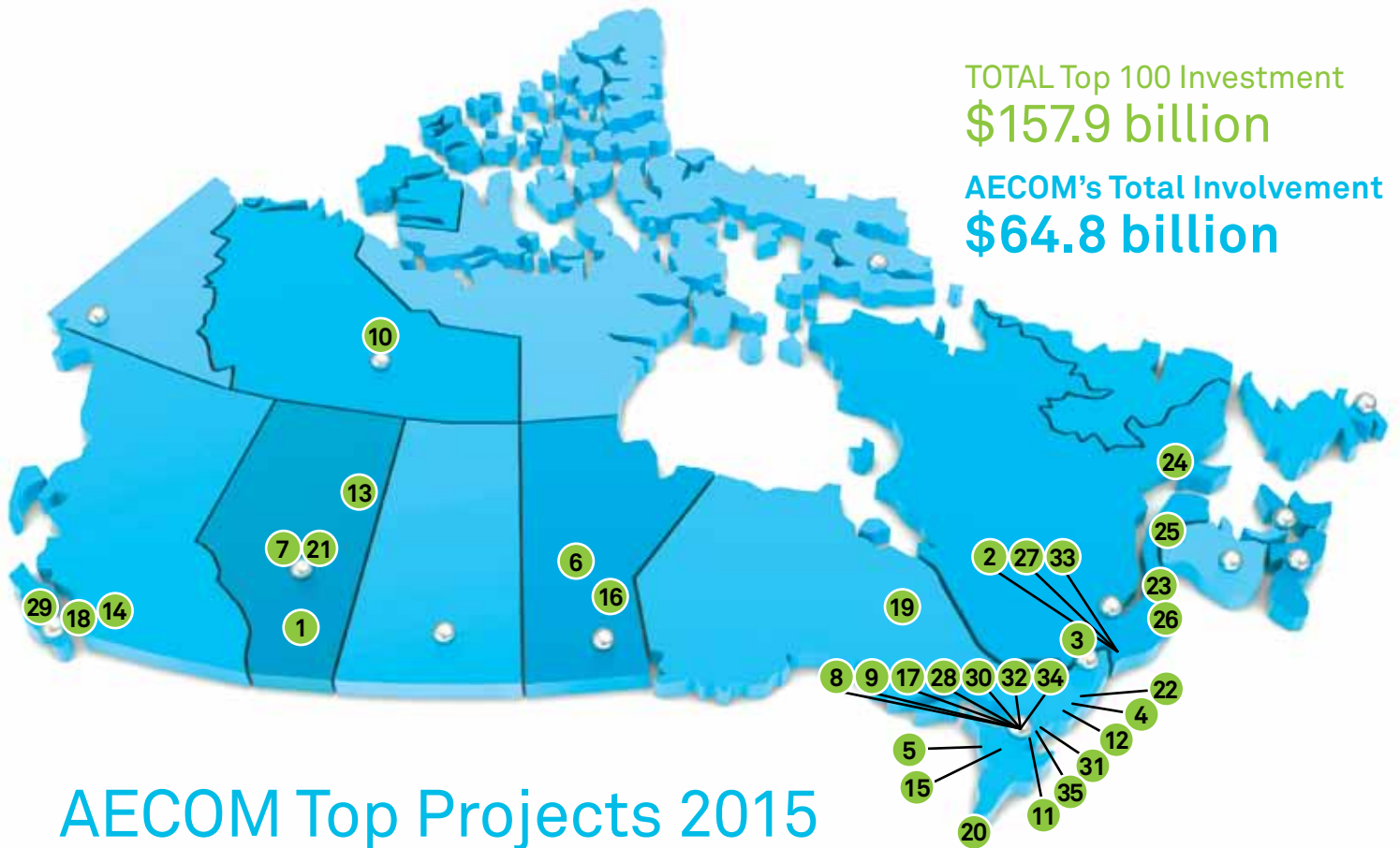
Canada's Biggest Infrastructure Projects

AECOM  
Top Projects  
2015



TOTAL Top 100 Investment  
**\$157.9 billion**

AECOM's Total Involvement  
**\$64.8 billion**



## AECOM Top Projects 2015

- 1 Airport Development Program – Calgary International Airport**  
Calgary, Alberta
- 2 CHUM (Centre hospitalier de l'université de Montréal) Redevelopment**  
Montreal, Quebec
- 3 Confederation Line**  
Ottawa, Ontario
- 4 Darlington Refurbishment Project**  
Clarington, Ontario
- 5 Deep Geological Repository**  
Kincardine, Ontario
- 6 East Side Transportation Initiative**  
Eastern Manitoba
- 7 Edmonton Valley Line – Stage 1**  
Edmonton, Alberta
- 8 Eglinton Crosstown LRT**  
Toronto, Ontario
- 9 Finch West LRT**  
Toronto, Ontario
- 10 Giant Mine Remediation Project**  
Yellowknife, Northwest Territories
- 11 Hanlan Water Project**  
Mississauga, Ontario
- 12 Highway 407 East Extension – Phase 1**  
Pickering to Clarington, Ontario
- 13 Highway 63 Twinning Program**  
Grassland to Fort McMurray, Alberta
- 14 Interior to Lower Mainland Transmission Project**  
Merritt to Coquitlam, British Columbia
- 15 ION Region of Waterloo LRT**  
Waterloo, Ontario
- 16 Keeyask Hydroelectric Project**  
Lower Nelson River, Manitoba
- 17 Leslie Barns and Connection Track Project**  
Toronto, Ontario
- 18 Lions Gate Secondary Wastewater Treatment Plant**  
North Vancouver, British Columbia
- 19 Lower Mattagami Hydroelectric Complex**  
Northeast of Kapuskasing, Ontario
- 20 New International Trade Crossing**  
Windsor to Detroit, Michigan
- 21 Northeast Anthony Henday Drive**  
Edmonton, Alberta
- 22 Port Hope Area Initiative**  
Port Hope, Ontario
- 23 Romaine Complex A Renewable Energy Project**  
Havre-Saint-Pierre, Quebec
- 24 Romaine Complex Transmission Line**  
Minganie Region, Quebec
- 25 Route 185 Widening**  
Rivière-du-Loup, Quebec to the New Brunswick border
- 26 Route 389 Upgrade**  
Baie-Comeau/Fermont, Quebec
- 27 Sainte-Justine University Hospital Centre Modernization**  
Montreal, Quebec
- 28 Scarborough Subway Extension**  
Toronto, Ontario
- 29 Seattera Program**  
Vancouver Island, British Columbia
- 30 Sheppard East LRT**  
Toronto, Ontario
- 31 Southeast Collector Trunk Sewer**  
York and Durham regions, Ontario
- 32 Spadina Subway Extension**  
Toronto, Ontario
- 33 Turcot Interchange**  
Montreal, Quebec
- 34 Wilson Facility Enhancement and Yard Expansion**  
Toronto, Ontario
- 35 York Viva Bus Rapid Transit**  
York Region, Ontario



---

## AECOM Top Projects 2015

---

**EDITOR** André Voshart

**PUBLISHER** Todd Latham

**ART DIRECTOR  
& DESIGN** Donna Endacott

**ASSOCIATE  
EDITOR** Rachel Phan

---

# AECOM

AECOM is a premier, fully integrated professional and technical services firm positioned to design, build, finance and operate infrastructure assets around the world for public- and private-sector clients. With nearly 100,000 employees — including architects, engineers, designers, planners, scientists and management and construction services professionals — serving clients in over 150 countries around the world, AECOM is ranked as the #1 engineering design firm by revenue in Engineering News-Record magazine's annual industry rankings, and has been recognized by Fortune magazine as a World's Most Admired Company. The firm is a leader in all of the key markets that it serves, including transportation, facilities, environmental, energy, oil and gas, water, high-rise buildings and government. AECOM provides a blend of global reach, local knowledge, innovation and technical excellence in delivering customized and creative solutions that meet the needs of clients' projects. A Fortune 500 firm, AECOM companies, including URS Corporation and Hunt Construction Group, have annual revenue of approximately \$19 billion.

More information on AECOM and its services can be found at [aecom.ca](http://aecom.ca)

Follow us on Twitter: [@aecom](https://twitter.com/aecom)

---

©2015 Actual Media Inc. All rights reserved. The contents of this publication may not be reproduced by any means in whole or in part, without prior written consent from the publisher.



Printed in Canada on FSC certified paper.

# AECOM Top Projects 2015



The Top 100 is ReNew Canada magazine's annual report on the country's biggest infrastructure projects. The report not only acts as an indication of which industries—and which provinces—are host to Canada's infrastructure mega-projects, it also shows which companies are true key players.

Once again, AECOM dominated this year's Top 100 list with 34 projects, representing a total investment of \$64.8 billion, or 59 per cent of the list's total value. Transportation and transit dominated the report, with AECOM engaged in 11 of the 17 top transit projects, which have a combined value of \$27.6 billion. Transit continues to attract attention, especially in Ontario—home to three of the largest transit projects—where urban mobility is recognized as critical for future prosperity and the rehabilitation of aging infrastructure continues to be a priority to insure safety and durability.

Hydroelectricity and energy transmission also remain important activities across the country. AECOM's hydroelectric facilities hold the report's 3rd, 4th, and 15th spots, with the La Romaine, Keeyask, and Lower Mattagami developments.

Last year also saw the integration of AECOM and URS, merging two of the Top 100's most significant key players. The sheer number of Top 100 projects in transit and transportation that both firms are involved in suggests that this new combined company is well positioned to provide the kind of integrated services large infrastructure project owners are increasingly demanding.

"Together we bring expanded and strengthened capabilities to our projects," AECOM executive VP Doug Allingham said. "Integrated services covering all four components of the in-project lifecycle: design, build, finance, and operate."

Globally, AECOM now has nearly 100,000 employees. In Canada, Allingham believes the merger has increased the company's end markets and geographic reach to serve the needs of clients.

"We have joined resources, and we now operate as a single company like no other," he said. "Over the past year, I've seen an incredible level of internal collaboration that strengthened the confidence of our shared clients across Canada.

"Working together, we believe the AECOM and URS integration strengthens our position as a market leader in the delivery of large-scale infrastructure projects in Canada."

**André Voshart**  
Editor, ReNew Canada

---

For details about AECOM's Top 100 projects, or to browse all 100 projects by sector, location, value, and funding model, visit [top100projects.ca](http://top100projects.ca)

---

*Projects are ranked by dollar value and, to make the list, must be underway, whether undergoing an environmental assessment, in procurement, or under construction.*

*All dollar amounts listed in this publication are in Canadian dollars.*



Credit: CHUM

## CHUM (Centre hospitalier de l'université de Montréal) Redevelopment

**Top 100 Rank: 16**  
**Cost: \$2.6 billion**

**Location:** Montreal, Quebec

**Owner:** CHUM

**AECOM's Role:** Owner's Engineer

**Funding:** Public

– **Provincial:** \$2.6 billion

## Financing

Collectif Santé Montréal raised \$1.37 billion through the sale of secured bonds. This is the largest senior debt funding ever raised in Canada for a P3. The consortium's proposed phasing is the key to this innovative approach and will permit delivery of a fully functioning hospital. Any private funding will be reimbursed by the government.

A new hospital and research centre will replace the three facilities, which currently make up the CHUM: the Hôtel-Dieu de Montréal, Hôpital Notre-Dame, and Hôpital Saint-Luc. Following years of delay, the project received its go-ahead in 2010. The Research Centre will be certified LEED Silver.

It is a significant economic development lever that will include a research centre (which opened fall 2013) and a new teaching hospital complex that will welcome its first patients in spring 2016. (The final of three phases, a medical office tower and conference facility, is scheduled for completion in spring 2020 and not included in the current cost.)



Credit: CHU Sainte-Justine

## Sainte-Justine University Hospital Centre Modernization

**Top 100 Rank: 53**  
**Cost: \$995 million**

**Location:** Montreal, Quebec

**Owner:** Sainte-Justine University Hospital Centre

**AECOM's Role:** Project Manager

**Funding:** Public/  
Philanthropy  
– **Provincial** \$925 million  
– **Philanthropy** Ste. Justine University Hospital Foundation: \$70 million

The expansion and retrofit project, which is targeting LEED-Silver certification, is being carried out in several phases, some of which have already been completed. Construction activity was ongoing in 2013. A specialized units building and research centre are scheduled for

completion by summer 2016. Final modernization of the existing building will take place between 2016 and 2018.

Sainte-Justine University Health Centre is a teaching hospital affiliated with the Université de Montréal. It specializes in obstetrics and other care for mothers and children.



Credit: Hydro-Québec



## Romaine Complex A Renewable Energy Project

**Top 100 Rank:** 3  
**Cost:** \$6.5 billion

**Location:** Havre-Saint-Pierre, Quebec

**Owner:** Hydro-Québec

**AECOM's Role:** Engineer

**Funding:** Public  
– Provincial Hydro-Québec: \$6.5 billion

Hydro-Québec's 1,550-megawatt hydroelectric complex on the Romaine River is still on track for completion in 2020. It involves four generating stations and reservoirs spaced over 150 kilometres in a remote area on the north shore of the Gulf of St. Lawrence. Each one will have an associated rockfill dam, two or three generating units and a spillway. Two access roads will also need to be built, one 10-kilometre stretch linking to Romaine-1, and one 150-kilometre connection to Romaine-4.

Romaine-2 was commissioned in 2014, and Romaine-1, Romaine-3, and Romaine-4 are expected to be online in 2016, 2017, and 2020, respectively.

Credit: Manitoba Hydro



## Keeyask Hydroelectric Project

**Top 100 Rank:** 4  
**Cost:** \$6.5 billion

**Location:** Lower Nelson River, Split Lake Resource Management Area, Manitoba

**Owner:** Keeyask Hydropower Limited Partnership

**AECOM's Role:** Site infrastructure engineering services

**Funding:** Public  
– Provincial/First Nations Keeyask Hydropower Limited Partnership (co-owned by Manitoba Hydro and Keeyask Cree Nations): \$5.6 billion

This 695-MW hydroelectric generating station will be a source of renewable energy, producing an average of 4,400 gigawatt-hours of electricity each year. Energy produced will be integrated into Manitoba Hydro's electric system for use in Manitoba and for export. Keeyask will be Manitoba's fourth-largest generating station. The design for the project agreement is based on a partnership model between Manitoba Hydro and the four Keeyask Cree Nations, including the Tataskweyak Cree Nation, War Lake First Nation, Fox Lake Cree Nation, and York Factory First Nation.

As of July 2014, all regulatory and environmental approvals and permits have been received, and construction on the station itself began on July 16. Work continues on the project's main camp, which will be completed in the fall of 2014. The station's first unit is scheduled to go into service in 2019, with all units commissioned by 2020.

Credit: AECOM



## Lower Mattagami Hydroelectric Complex

**Top 100 Rank:** 15  
**Cost:** \$2.6 billion

**Location:** 70 kilometres northeast of Kapuskasing, Ontario

**Owner:** Ontario Power Generation (OPG) and Moose Cree First Nation

**AECOM's Role:** Architect, Engineer, and Impact Studies

**Funding:** Public  
– Provincial OPG: \$2.6 billion

This project is the largest investment in hydroelectric power in Northern Ontario in nearly 40 years. It has four components, which include the rebuilding of the Smoky Falls Generating Station as well as the addition of new generating units at the Harmon, Kipling, and Little Long generating stations. By the time work is completed, the capacity of the Lower Mattagami plants will have increased to 924 from 486 MW.

Smoky Falls was originally constructed in 1931, while the others were built in the 1960s. In order to accommodate the additional energy that will be supplied because of this project, Hydro One is adding an additional 230-kV circuit to the transmission line that runs from the Harmon Junction to the Kipling Generating Station, running approximately 4 km. The Moose Cree Nation will have up to a 25-per-cent equity share in the project. Construction is ongoing with the entire project slated for completion in 2015.

## Darlington Refurbishment Project – Definition Phase

**Top 100 Rank: 17**

**Cost: \$2.5 billion**

**Location:** Clarington, Ontario

**Owner:** Ontario Power Generation (OPG)

**AECOM's Role:** Architect and Engineer  
– Support Building; Planning and Environmental Approvals – Plant

**Funding:** Public

– Provincial OPG: \$600 million

The Darlington generating station consists of four reactors, whose total output power is 3,512 MW. Refurbishment involves the replacement of core reactor components to enable the plant to operate until 2055. Each reactor is taken out of service for about three years to allow for: the replacement of fuel channels, feeder pipes, calandria tubes, and end fittings; rehabilitation of steam generators, turbine generators, and fuel handling equipment; and system improvements and plant upgrades to meet current regulatory requirements.

More than 450 unique tools were developed and delivered to complete the refurbishments. The reactor mockup was completed in March 2014, and detailed design and the procurement of materials continue. Starting in 2015, the mockups will be used for tool testing and to train the trainers, trades, and management to prepare for execution on the first unit scheduled for refurbishment (Unit 2).

OPG will commit to a final cost and schedule in fall 2015 before entering the Execution Phase of the project. Execution of the first unit will begin in October 2016. Final commitments on subsequent units will take into account the performance of the initial refurbishment. If approved, refurbishment of all four units would be completed in 2025.



Credit: Hydro-Québec

## Romaine Complex Transmission Line

**Top 100 Rank: 45**

**Cost: \$1.2 billion**

**Location:** Minganie Region, Quebec

**Owner:** Hydro-Québec

**AECOM's Role:** Engineer

**Funding:** Public

– Provincial Hydro-Quebec: \$1.2 billion

This project involves the construction of transmission lines needed to connect the 1,550-MW Romaine Complex (No. 3) to the rest of the grid in Quebec. Draft-design studies and applications for authorization have been carried out for the generating stations and now Hydro-Québec TransÉnergie is studying the structures required for integration into the power system. The project includes building more than 500 km of transmission lines, designed for both 315 kV and 735 kV but operated at 315 kV, constructing new switchyards at the generating stations, and modifying and adding equipment in existing facilities.

The transmission line is a separate venture from the Romaine Complex project, and construction has been underway since summer 2011.



Credit: BC Hydro

## Interior to Lower Mainland Transmission Project

**Top 100 Rank: 66**

**Cost: \$725 million**

**Owner:** BC Hydro

**AECOM's Role:** Engineer

**Funding:** Public

**Location:** Merritt to Coquitlam, British Columbia

– Provincial BC Hydro: \$725 million

The 247-kilometre, 500-kilovolt transmission line will deliver power to southern British Columbia and Vancouver Island, which will reach over 1.4 million industrial, commercial, and residential customers. Increasing demand, changing patterns of use, and aging equipment have put pressure on the transmission grid, which continues to operate reliably but is reaching capacity in some areas. Conductor stringing commenced in summer 2014. The project will be completed and in service in 2015.



## Port Hope Area Initiative

**Top 100 Rank: 42**  
**Cost: \$1.28 billion**

**Location:** Port Hope and Clarington, Ontario

**Owner:** Natural Resources Canada and Atomic Canada Limited

**AECOM's Role:** Engineer (Port Granby) and Environmental Assessment

**Funding:** Public  
– Federal \$1.28 billion

This is a long-term federal environmental initiative to clean up and manage approximately 1.7 million cubic metres of historic low-level radioactive waste (LLRW) in the municipalities of Port Hope and Clarington in Ontario. The initiative includes two distinct projects: the Port Hope Project and Port Granby Project.

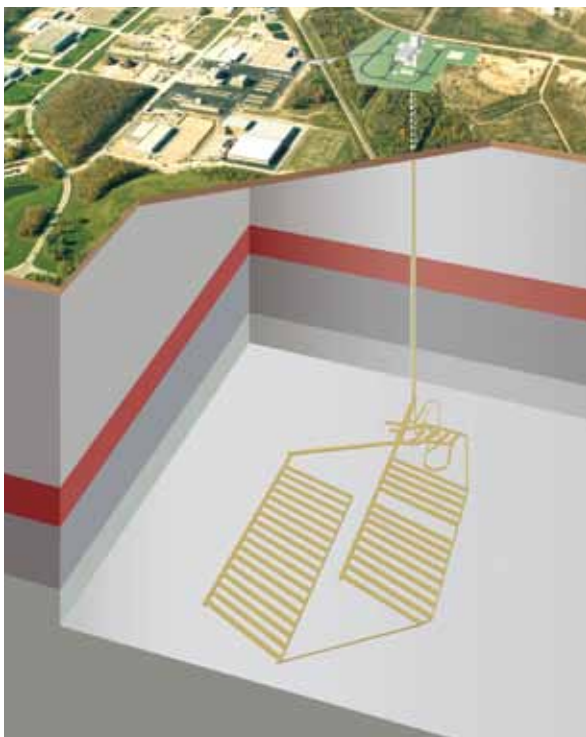
The Port Hope Project will clean up approximately 1.2 million cubic metres of historic LLRW in the municipality of Port Hope. Waste at the existing site and from the other large and small-scale sites in the community will be excavated and placed in a new engineered aboveground mound. Construction of a \$25.5-million wastewater treatment plant at the new site was completed in late 2014. The

Property Radiological Survey is underway, testing approximately 5,000 properties for the presence of historic LLRW. Remediation of sites will begin once the long-term waste management facility is ready to receive waste, anticipated in 2017.

The Port Granby Project will clean up approximately 450,000 cubic metres of historic LLRW located at an existing waste management facility on the shoreline of Lake Ontario in Clarington. The waste will be relocated to a new long-term waste management facility to be built about a kilometre north of the current site.

The cleanup is expected to begin in 2016.

Credit: Ontario Power Generation



## Deep Geological Repository

**Top 100 Rank: 49**  
**Cost: \$1 billion**

**Location:** Kincardine, Ontario

**Owner:** Ontario Power Generation

**AECOM's Role:** Environmental Consulting (Socio-Economic Impact Assessments, Communications, and Consultation Programs)

**Funding:** Public

This 680-metre-deep underground storage facility will house 200,000 cubic metres of low and intermediate-level radioactive waste. Low-level waste consists of material that may be contaminated through the normal course of operations at a nuclear facility and includes paper towels, mops, and used tools. While low-level waste does not require specialized shielding for workers, the intermediate waste will require special handling and can consist of items such as irradiated core components, ion exchange resins, and various filters. Used fuel, considered high-level waste, is not to be stored in the Deep Geological Repository.

As of late 2012, the review period for the project had been extended to allow for Ontario Power Generation to respond to information requests. Public hearings closed in fall 2014, and an EA report is being submitted to the federal Minister of the Environment in early 2015. The joint review panel for the project may then be authorized to decide on whether or not to license the project's site preparation and construction.

## Giant Mine Remediation Project

**Top 100 Rank: 54**  
**Cost: \$903.5 million**

**Location:** Yellowknife, Northwest Territories

**Owner:** The Government of the Northwest Territories and Aboriginal Affairs and Northern Development

**AECOM's Role:** Construction Management (Socio-Economic Impact Assessments, Communications, and Consultation Programs)

**Funding:** Public

Between 1948 and 2004, the Giant Mine was a major economic driver for Yellowknife and the Northwest Territories. Mining operations at the site, which grew over the years to encompass more than 870 hectares, including a number of ponds and small lakes, were halted in July 2004. Since 2005, Aboriginal Affairs and Northern Development Canada (AANDC) and the Government of Northwest Territories have co-managed the site, with the Deton'Cho Nuna joint venture providing on-site care and maintenance. However, when the mine closed, 237,000 tonnes of arsenic trioxide were left behind in underground chambers. Under a multi-year services agreement with AANDC, Public Works and Government Services Canada is contributing project management, engineering, procurement, and environmental services in the implementation of assessment and remediation of such contaminated sites.

The remediation project proposes to leave behind a site suitable for future community use as the community sees fit. In August 2014, the decision was made to move forward in implementing the measures outlined in the EA. The project's goal is to ultimately protect public health and safety and the environment through long-term containment and management of the site's waste, water treatment, and surface cleanup at the site.



Credit: Metrolinx

## Eglinton Crosstown Light Rail Transit (LRT)

**Top 100 Rank: 5**  
**Cost: \$5.3 billion**

**Location:** Toronto, Ontario

**Owner:** Metrolinx

**AECOM's Role:** Architect, Consulting Engineer, Preliminary Planning/Study, Design

**Funding:** Public  
– **Provincial** Ministry of Transportation capital allotment to Metrolinx: \$5.3 billion

This LRT line will run along Toronto's Eglinton Avenue between Mount Dennis (Weston Road) and Kennedy Station. Part of the Government of Ontario's light transit plan for the city, this 19-km corridor will include a 10-km underground portion between Keele Street and Laird Drive. When running at street level, the Crosstown will carry passengers in dedicated right-of-way transit lanes separate from regular traffic with priority signaling at intersections. Travelling at an average speed of 28 km/h, it will link to 54 bus routes, three subway stations, and various GO Transit lines.

A successful P3 team will be announced this year, and construction is estimated to be completed by 2020.

## Scarborough Subway Extension

**Top 100 Rank: 11**  
**Cost: \$3.3 billion**

**Location:** Toronto, Ontario

**Owner:** TTC

**AECOM's Role:** Environmental Assessment

**Funding:** P3  
– **Federal** Building Canada Fund: \$660 million  
– **Provincial** \$1.48 billion  
– **Municipal** TTC: \$990 million (\$165 million, development charges; \$745 million, property tax)

This subway extension will extend the Bloor-Danforth subway line approximately 7.6 km from Kennedy Station to Sheppard Avenue and McCowan Road. The environmental assessment contract will include determining the route and where and how many stations there will be. The selection of a partner to construct and maintain the system through the AFP process is underway.

## Spadina Subway Extension

**Top 100 Rank: 14**  
**Cost: \$2.63 billion**

**Location:** Toronto, Ontario

**Owner:** Toronto Transit Commission

**AECOM's Role:** Architecture and Engineering Design

**Funding:** Public  
– **Federal** FLOW program: \$697 million (including \$622 million from the Building Canada Fund and \$75 million from the Public Transit Capital Trust)  
– **Provincial** Move Ontario Trust (including interest gathered by the Trust): \$1.055 billion  
– **Municipal** City of Toronto: \$526 million from the TTC Capital Program Budget; York Region: \$352 million

This is the largest subway expansion project to be undertaken by the Toronto Transit Commission since the Bloor-Danforth subway line was built 40 years ago. The subway network will link Toronto with communities in York Region. The 8.6-kilometre extension to the existing Spadina subway line will include six new stations: Sheppard West, Finch West, York University, Pioneer Village at North West Gate and Steeles Avenue, Highway 407, and the Vaughan Metropolitan Centre.

Construction work on the Highway 407 station is progressing with the south tunnel completed and construction of the north tunnel soon to commence. Service is expected to begin in late 2016.



Credit: City of Ottawa



This project is set to meet the City of Ottawa’s infrastructure challenge by way of a state-of-the-art LRT system with an initial capacity of 24,000 riders per hour in each direction, including a 2.5-km tunnel that will rapidly move riders across downtown. Some parts of the existing bus rapid transit will be converted to LRT while others will be converted to park, pedestrian, or cycling areas.

The project also includes the widening of Highway 417 as well as the building of a maintenance and storage facility on Belfast Road, at which time selected vehicle assembly, as well as all cleaning, inspection, heavy maintenance, washing, and storage, will take place.

The maintenance and storage facility is expected to be complete by 2015. Operational testing of the line will commence in 2017, and full service will occur in spring 2018.

## Confederation Line

**Top 100 Rank: 20**

**Cost: \$2.13 billion**

**Location:** Ottawa, Ontario

**Owner:** City of Ottawa

**AECOM’s Role:** Preliminary Engineering

**Funding:** P3

– **Federal** \$761.5 million (Building Canada Fund: \$600 million; Gas Tax Fund: \$161.5 million)

– **Provincial** \$887 million (Government of Ontario: \$600 million; Provincial Gas Tax: \$287 million)

– **Municipal** \$481.5 million (development charge revenues and transit reserves)

Credit: City of Edmonton



## Edmonton Valley Line – Stage 1

**Top 100 Rank: 25**

**Cost: \$1.8 billion**

**Location:** Edmonton, Alberta

**Owner:** City of Edmonton

**AECOM’s Role:** Engineer

**Funding:** P3

The Valley Line is the largest single infrastructure project in the history of Edmonton. It consists of a 27-km, low-floor urban line running from Mill Woods to Lewis Farms, which crosses downtown. It will be separate from the city’s existing high-floor LRT system.

The 13.1-km southeast section from Mill Woods to 102 Street (Stage 1) will be the first section to be built, with future extensions eventually taking the line out west to Lewis Farms. The project is currently in the design phase. The RFP was issued in fall 2014 for all shortlisted bidders, and the successful team will be selected this year.

Construction is expected to start in the spring, and service will be open to the public in 2020.

## York VIVA Bus Rapid Transit (vivaNext)

**Top 100 Rank: 37**  
**Cost: \$1.4 billion**

**Location:** York Region, Ontario  
**Owner:** York Region Rapid Transit Corporation and Metrolinx

**AECOM's Role:** Planning and Preliminary Design, Architect and Engineering Design

**Funding:** Public  
– **Provincial** Capital allotment to Metrolinx: \$1.4 billion

The dedicated bus lanes, which VIVA is calling Rapidways, are separate centre lanes that will allow VIVA buses to travel freely no matter how much traffic is using the conventional roadway. Some of the new stations will connect to the TTC subway system, GO Transit commuter rail, express buses, York Rapid Transit local bus services, and other transit systems operating in neighbouring regions.

The project is currently under construction. The Enterprise Drive, Highway 7, and Yonge Street lines should all be completed in 2020.

## Finch West LRT

**Top 100 Rank: 50**  
**Cost: \$1 billion**

**Location:** Toronto, Ontario  
**Owner:** Metrolinx

**AECOM's Role:** Technical Advisor

**Funding:** Public

The Finch West LRT will create 11 new kilometres of light rail transit line that will run along the surface of Toronto's Finch Avenue from the planned Finch West Subway Station at Keele Street to Humber College. The line will operate in a dedicated lane in the centre of the street, serving 2,700 people per hour in the peak direction by 2031. Primary design and engineering work is currently underway.

## Sheppard East LRT

**Top 100 Rank: 51**  
**Cost: \$1 billion**

**Location:** Toronto, Ontario  
**Owner:** Metrolinx

**AECOM's Role:** Environmental Assessment and Preliminary Design

**Funding:** Public  
– **Federal** \$333 million  
– **Provincial** Ministry of Transportation capital allotment to Metrolinx: \$667 million

The Sheppard East LRT is a 13-km light rail transit line that will run in a dedicated lane in the centre of the street, along the surface of Toronto's Sheppard Avenue from Don Mills Station to Morningside Avenue. The line is projected to serve 3,000 people per hour in the peak direction by 2031.

A vital component of the new LRT line will be the Sheppard East Maintenance and Storage Facility. The facility will service the 100 light rail vehicles that will operate on the Sheppard East LRT and Scarborough RT. The 17,500-square-metre facility will be built on approximately 12.9 hectares of land located on the corner of Sheppard Avenue and Conlins Road.

Primary design and engineering work is currently underway. Completion is projected for 2021.

## ION Region of Waterloo LRT

**Top 100 Rank: 59**  
**Cost: \$818 million**

**Location:** Waterloo, Kitchener and Cambridge, Ontario  
**Owner:** Region of Waterloo

**AECOM's Role:** Transit Project Assessment Process Team  
**Funding:** Public  
– **Federal** Building Canada Fund: \$265 million  
– **Provincial** \$300 million  
– **Municipal** \$253 million

Transit options for the Region of Waterloo were debated at length before light-rail technology was selected instead of bus rapid transit. LRT offers the best long-term value for expanding the local public transit system.

This rapid transit service will shape the future of the community's transportation system by bringing LRT in two stages. Stage 1 is expected to open in 2017 and includes a 19-km LRT route from Conestoga Mall Transit Terminal to Fairview Park Mall Transit Terminal, with stops in downtown Kitchener, Grand

River Hospital, UpTown Waterloo, both universities, and Waterloo Park. It also features a 17-km route of adapted bus rapid transit (aBRT) from Fairview Park Mall to the Ainslie Street Terminal in Cambridge, with four stops along Hespeler Road. The aBRT service will begin operating in early 2015. Stage 2 will see the BRT line converted to LRT, creating a seamless 37-km ION service of 23 stops between Cambridge and Waterloo.

Detailed design is underway, and construction of Stage 1 has commenced and is on track.

## Wilson Facility Enhancement and Yard Expansion

**Top 100 Rank: 88**  
**Cost: \$500 million**

**Location:** Toronto, Ontario

**Owner:** Toronto Transit Commission (TTC)

**AECOM's Role:** Project Manager, Architect and Engineering Design

**Funding:** Public

TTC's Wilson Yard is undergoing a significant expansion of the rail yard and supporting maintenance facilities, which are required to accommodate the needs for train storage as a result of the introduction of the Spadina Subway Extension and increasing service demands on Line 1 (Yonge-University-Spadina).

Site services and track bed preparation for Stage 1, the storage tracks, is almost complete, and installation of the tracks has begun. Preparation for Stage 2, the run-around tracks, has been awarded, and all other systems contracts have been tendered. Systems installation will follow each stage of track installation completion.



## Leslie Barns and Connection Track Project

**Top 100 Rank: 89**  
**Cost: \$497 million**

**Location:** Toronto, Ontario

**Owner:** TTC

**AECOM's Role:** Prime Consultant for Architecture and Engineering Services

**Funding:** Public  
– **Municipal TTC:** \$497 million

The TTC, in cooperation with the City of Toronto and Waterfront Toronto, is undertaking significant construction in the Leslie Corridor, including construction of Leslie Barns, a new streetcar maintenance and storage facility at the southeast corner of Lake Shore Boulevard and Leslie Street that will house and service about half of Toronto's new streetcar fleet; major upgrades to underground infrastructure on Leslie Street from Commissioners to Queen streets; construction of a streetcar track connection along Leslie Street that will connect Leslie Barns to the existing streetcar tracks on Queen Street; and streetscaping improvements.

Council approved the project in 2009, and work began in 2010. The expected completion date for construction is spring 2015.

## Transportation



## Turcot Interchange

**Top 100 Rank: 9**  
**Cost: \$3.7 billion**

**Location:** Montreal, Quebec

**Owner:** Transports Québec

**AECOM's Role:** Project Manager

**Funding:** Public  
– **Provincial Transports Québec :** \$3.7 billion

The Turcot Interchange is a major traffic hub in the Montreal area, connecting Autoroutes 15, 20, and 720, and facilitating access to the Champlain Bridge. The final plans for the reconstruction of the deteriorating expressway interchange include more space allocated to public transit, cyclists, pedestrians, and green space. A corridor will be reserved along Notre Dame and St. Ambroise streets for a possible future LRT, and several bus-only lanes have been reserved along Highway 20, Notre Dame Street West, and St. Patrick Street.

In December 2014, the Quebec government awarded the contract to rebuild the interchange. When the bidding process was announced, the government said construction would begin in 2015 and wrap up by 2020.

## Airport Development Program – Calgary International Airport

**Top 100 Ranking: 21**  
**Cost: \$2.4 billion**

**Location:** Calgary, Alberta

**Owner:** Calgary Airport Authority

**AECOM's Role:** Project Manager – Runway Development Project and International Facilities Project (IFP); Design Consultant – IFP Electrical/Mechanical

**Funding:** Private  
– **Calgary Airport Authority:** \$2.4 billion

This improvement project includes a temporary baggage hall expansion, terminal renovations, terminal expansion for the E Pier, and a new 14,000-foot-long, 200-foot-wide runway—the longest civil aviation runway in Canada. As the third-busiest and fastest-growing airport in the country, these projects are both capacity driven, ensuring the airport and its partners are well positioned for future growth and development. The airport development project, which includes both the runway development and the international facilities projects, will be the largest expansion this airport has ever undertaken.

The international terminal expansion incorporates a number of sustainable design principles, including high efficiency lighting and co-generation power. The new runway is able to depart the world's largest aircraft without payload restrictions and includes new parallel and cross-field taxiways, LED runway and taxiway lighting, and two taxiway underpasses.

The new international concourse is scheduled to be completed in late 2015, and the airport's fourth and newest runway is now in full operation.

## New International Trade Crossing

**Top 100 Ranking: 19**  
**Cost: \$2.14 billion**

**Location:** Windsor, Ontario to Detroit, Michigan

**Owner:** Windsor-Detroit Bridge Authority

**AECOM's Role:** Engineer

**Funding:** P3y

This crossing is the largest and most ambitious bi-national border infrastructure project along the Canada–United States border. The project includes a new six-lane bridge across the Detroit River, associated border inspection plazas, and connections to the freeway systems in Ontario and Michigan. This project will provide a new alternative crossing for this trade corridor.

The Canada-Michigan Crossing Agreement, signed in June 2012 by Canada and Michigan, provided a framework for the construction, financing, operation, and maintenance of the new publicly owned bridge. The Crossing Agreement called for the establishment of a crossing authority, known as the Windsor-Detroit Bridge Authority (WDBA), to deliver, procure, and fund the project through a P3 and an international authority to oversee the project procurement and the compliance with the Crossing Agreement.

Both the formation of the WDBA, a Canadian Crown Corporation, and the International Authority were announced in July 2014. Since then, the WDBA has issued tenders for advance construction works, such as site preparation for the Canadian plaza and land acquisition on the U.S. side of the border.

## Northeast Anthony Henday Drive

**Top 100 Rank: 24**  
**Cost: \$1.81 billion**

**Location:** Edmonton, Alberta

**Owner:** Alberta Transportation

**AECOM's Role:** Engineer

**Funding:** P3

- Federal P3 Canada Fund: up to \$36.8 million
- Provincial \$1.77 billion

This project is the last leg of the Anthony Henday Drive project. Scheduled to open in 2016, this 26-km, six and eight-lane highway is part of the larger Edmonton Ring Road project. Construction will also include nine interchanges, two fly over roads, eight rail crossings, and two bridges over the North Saskatchewan River. Construction is currently ongoing, with substructure in process, girders being erected, and pile driving having commenced.

Credit: Fillion Corporation



Credit: Transports Québec



## Route 185 Widening

**Top 100 Rank: 40**  
**Cost: \$1.34 billion**

**Location:** Rivière-du-Loup to the New Brunswick border, Quebec

**Owner:** Transports Québec

**AECOM's Role:** Engineer, Environmental Assessment, and Hydraulic and Hydrologic Studies

**Funding:** Public

- Federal \$222.5 million
- Provincial \$1.08 billion

This project will expand 94 km of Route 185 from two lanes to a divided four-lane highway, significantly reducing bottlenecked traffic and road delays. As a part of the Trans-Canada Highway and the main route between the Maritimes and the rest of Canada, the project has received significant federal funding. It is currently in Phase 2 of its construction.



## Highway 63 Twinning Program

**Top 100 Rank: 43**  
**Cost: \$1.22 billion**

**Location:** Grassland to Fort McMurray, Alberta  
**Owner:** Alberta Transportation  
**AECOM's Role:** Engineer  
**Funding:** Public  
– Provincial \$1.22 billion

The twinning of 240 km of Highway 63 between Grassland and Fort McMurray is for the safety of motorists and to improve traffic flow within Fort McMurray. By fall of 2015, 70 per cent of the twinning commitment is expected to be complete, and the remaining 30 per cent will be completed by fall 2016.

## East Side Transportation Initiative

**Top 100 Rank: 46**  
**Cost: \$1.125 billion**

**Location:** Eastern Manitoba

**Owner:** East Side Road Authority  
**AECOM's Role:** Design Engineering and Contract Administration  
**Funding:** Public  
– Provincial \$1.125 billion

This initiative is a large-scale transportation project that aims to connect 13 First Nations communities on the east side of Lake Winnipeg that currently do not have all-season road access. The initiative will build 1,000 km of all-season road connecting the communities to Manitoba's road network.

By fall 2014, the Bloodvein River Bridge project was completed, providing all-season road access to the 1,800 residents of Bloodvein First Nation. The road north of Bloodvein and south of Berens River is under construction and should be completed by 2019. Further north, three Acrow bridge panels are being installed on the winter road network to increase the length of time the roads can be used by local residents and commercial truckers. The detailed and functional design is underway for this initiative.



Credit: Ontario Ministry of Transportation

## Highway 407 East Extension — Phase 1

**Top 100 Rank: 48**  
**Cost: \$1 billion**

**Location:** Pickering to Clarington, Ontario  
**Owner:** Ontario Ministry of Transportation  
**AECOM's Role:** Owners Engineer; Planning, Environmental Assessment and Preliminary Design  
**Funding:** P3  
– Provincial: \$1 billion

This will be a 65-kilometre toll highway built in two phases. Phase 1 extends the 407 east from Brock Road in Pickering to Harmony Road in Oshawa. This phase will include the West Durham Link (WDL), which is made up of a four-lane north/south highway linking the 407 to the 401, freeway to freeway interchanges from the WDL to the 401, and three new interchanges.

Phase 1 is under construction and is expected to be open to traffic in late 2015. By 2017, a portion of Phase 2, from Harmony Road to Taunton/East Durham Link, will be open to traffic and will be fully completed by 2020.

## Financing

Phase 1 of this project will be delivered through a DBFM P3. Concessionaires Cintra and SNC-Lavalin (partners in 407 East Development Group General) are the owners and operators of the existing 407 toll road. However, unlike the existing stretch of the 407, which was sold by the Conservative government in 1999 for \$3.1 billion in exchange for a 99-year lease, the province will retain ownership of the new extension and retains the right to set the tolls and levels of operation.

## Route 389 Improvement Program

**Top 100 Rank: 96**  
**Cost: \$438 million**

**Location:** Baie-Comeau/Fermont, Quebec  
**Owner:** Transports Québec  
**AECOM's Role:** Project/Construction Manager  
**Funding:** Public  
– Provincial: \$438 million

The 570-kilometre Route 389 extends north from Baie-Comeau to Fermont at the Labrador border, passing the Manicougan Reservoir. It is significant not only as the primary land route to Labrador, but also to access the hydroelectric dams and power stations along the Manicougan River. The project calls for resurfacing and other improvements to the highway.

The feasibility studies have been completed, environmental and geotechnical data has been gathered, and the needed measurements for the environmental studies and designs have been acquired. The MTQ is communicating with the elective representatives, partners, and population to acknowledge their needs and opinions about the project.

The EA is underway and the project is in the preparation stage.

## Seaterra Program

**Top 100 Rank: 63**  
**Cost: \$788 million**

**Location:** Southern Vancouver Island, British Columbia

**Owner:** Capital Regional District

**AECOM's Role:** AECOM, along with Graham Infrastructure and others, has formed Harbour Resource Partners, the joint venture named in 2014 as the preferred proponent to design, build and partially finance the McLoughlin Point wastewater treatment plant, which is the first component of the program.

**Funding:** Public  
– **Federal:** \$253.4 million  
– **Provincial:** \$248 million  
– **Municipal:** \$287 million

The Seatererra Program's goal is to implement an effective wastewater treatment solution for the municipalities of Victoria, Saanich, Oak Bay, Esquimalt, View Royal, Colwood, and Langford in British Columbia. Currently, wastewater from the core area and Greater Victoria receives only primary treatment before being dumped into the ocean via the Juan de Fuca Strait. In 2006, the BC Ministry of Environment mandated the region to bring in secondary wastewater treatment, and the Seatererra Program is responsible for ensuring that the region is in line with new federal standards by the end of 2020.

At this point, the program has been paused while the CRD looks at other possible options, including alternate locations, a decentralized system, and tertiary treatment. Work continues on the replacement of the existing Craigflower Pump Station and the design for the Arbutus Road Attenuation Tank.

## Lions Gate Secondary Wastewater Treatment Plant

**Top 100 Rank: 68**  
**Cost: \$700 million**

**Location:** North Vancouver, British Columbia

**Owner:** Metro Vancouver

**AECOM's Role:** Engineer

**Funding:** Public

This greenfield secondary treatment plant will replace an existing primary treatment plant. New federal and provincial regulations require the upgrade of all primary treatment plants. The existing primary plant removes only 40 to 60 per cent of suspended organic matter in the wastewater that, after primary treatment, is discharged directly into Burrard Inlet—a matter of concern for some environmentalists—and is located on land leased from the Squamish Nation. The new secondary plant will be able to remove more than 90 per cent of organic matter and will be located 2 km east of the existing plant. Metro Vancouver will use a DBF delivery model and other conveyance upgrades using the conventional design-bid-build delivery model.

The new plant is scheduled to be operational by the end of 2020, and the existing primary plant will be de-constructed once the new plant is in service.



## Southeast Collector Trunk Sewer

**Top 100 Rank: 84**  
**Cost: \$546 million**

**Location:** York and Durham regions, Ontario

**Owner:** Regional Municipality of York

**AECOM's Role:** Detailed Design, Construction Management and Environmental Assessment

**Funding:** Public  
– **Municipal York Region:** \$546 million

This project has been in development since 2002—though the environmental assessment was not approved until early 2010. The earth pressure balance tunnel boring machines, which avoid requirements for dewatering and impacting the aquifers, and the segmental precast concrete tunnel lining, have both been procured. Hatch Mott MacDonald and AECOM (in a joint venture) have completed design of the tunnel, shafts, and surface facilities, as well as conforming the contract documents. Project design involves a 15-kilometre-long, 3,000-millimetre-diameter tunnel with 17 access shafts ranging between four and 48 metres in depth and diameter varying from four to 14 metres.

Construction is underway, with tunnelling completed and shafts and facilities being fitted. Live flows were commissioned by the end of 2014. The project is scheduled for completion by 2016.

## Hanlan Water Project

**Top 100 Rank: 94**  
**Cost: \$450 million**

**Location:** Mississauga, Ontario

**Owner:** Region of Peel

**AECOM's Role:** Environmental Assessment, Preliminary Design Report, and Tunnel Design and Engineering

**Funding:** Public  
– **Municipal**

The Hanlan Feedermain will run approximately 14.5 kilometres from the Lakeview Water Treatment Plant on Lake Ontario to the Hanlan Reservoir and Pumping Station at Tomken Road and Britannia Road East. Part of the same project, the 1,500-mm-wide Mississauga City Centre Subtransmission Main will run approximately six kilometres from the Hanlan Reservoir and Pumping Station to the intersection of Cawthra and Burnhamthorpe roads. As part of the York-Peel Water Agreement, Peel Region will provide water to York Region via the feedermain. In exchange, York Region will be funding 35.6 per cent of the feedermain costs.

Both the feedermain and the subtransmission main are undergoing installation. Construction began in 2011 and is scheduled to be completed by early 2017.



AECOM is involved with these projects.

RANK	PROJECT NAME	PROJECT COST	PROJECT LOCATION
<b>ENVIRONMENT</b>			
42	Port Hope Area Initiative	\$1,280,000,000	Ontario
49	Deep Geologic Repository	\$1,000,000,000	Ontario
54	Giant Mine Remediation Project	\$903,500,000	Northwest Territories
<b>TRANSIT</b>			
5	Eglinton Crosstown LRT	\$5,300,000,000	Ontario
11	Scarborough Subway Extension	\$3,305,000,000	Ontario
14	Spadina Subway Extension	\$2,634,000,000	Ontario
<b>WATER/WASTEWATER</b>			
63	Seaterra Program	\$788,000,000	British Columbia
68	Lions Gate Secondary Wastewater Treatment Plant	\$700,000,000	British Columbia
75	Regina Wastewater Treatment Plant	\$611,000,000	Saskatchewan
<b>BUILDINGS</b>			
13	New Oakville Hospital	\$2,700,000,000	Ontario
16	CHUM (Centre hospitalier de l'université de Montréal) Redevelopment	\$2,600,000,000	Quebec
22	45-141 Bay Street	\$2,000,000,000	Ontario
<b>ENERGY</b>			
1	Site C Clean Energy Project	\$8,775,000,000	British Columbia
2	Muskrat Falls Project	\$6,990,000,000	Newfoundland and Labrador
3	Romaine Complex	\$6,500,000,000	Quebec
<b>TRANSPORTATION</b>			
6	New Bridge for the St. Lawrence Corridor Project	\$5,000,000,000	Quebec
7	Southwest Calgary Ring Road	\$5,000,000,000	Alberta
9	Turcot Interchange	\$3,700,000,000	Quebec



AECOM

# SHAPING THE FUTURE OF OUR WORLD

AECOM congratulates all the companies and our clients for having their impressive projects recognized in *ReNew Canada's* 2015 Top 100: Canada's Biggest Infrastructure Projects. We offer a powerful combination of innovative and award-winning expertise that advances our clients' ideas and strategies. Having our projects honoured provides further incentive to do our part in shaping the future of our world.

AECOM is a premier, fully integrated infrastructure and support services firm. We are a leader in all of the key markets that we serve, including transportation, facilities, environmental, energy, mining, oil and gas, water, high-rise buildings and government. Our capabilities are further enhanced and strengthened following the acquisition of URS.

#CanadaBuildsBig  
[www.aecom.ca](http://www.aecom.ca)

