

# PUBLIC SECTOR DIGEST

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THE INFRASTRUCTURE DEFICIT AND ASSET  
MANAGEMENT: FINALLY SOME PROGRESS?  
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## INFRASTRUCTURE & ASSET MANAGEMENT

### **THE INFRASTRUCTURE DEFICIT AND ASSET MANAGEMENT: FINALLY SOME PROGRESS?**

CARL BODIMEADE & DARLA D.W. CAMPBELL, ONTARIO COALITION FOR SUSTAINABLE INFRASTRUCTURE

The first Canadian Infrastructure Report Card was released on September 11, 2012, a joint initiative by the Federation of Canadian Municipalities (FCM), Canadian Public Works Association (CPWA), Canadian Society of Civil Engineers (CSCE) and the Canadian Construction Association (CCA). The Report Card offers an objective assessment of the state of municipal infrastructure in 123 communities across the country and the results were then extrapolated nationally. In the four categories of municipal assets measured, municipal roads fared the lowest. The Report Card determined that the replacement cost for municipal roads, i.e., to bring the infrastructure ranked 'fair and below' up to a 'good' ranking, is \$91.1 billion or \$7,325 per household in Canada. The total value of these types of municipal infrastructure is estimated to be \$538.1 billion.

## I. CHALLENGES FACED BY MUNICIPALITIES

In Toronto, the sky is literally falling, as chunks of concrete have been reported falling from the Gardiner Expressway. Fortunately, no one has been hurt. In Ottawa, a 3.6-metre-wide pipe collapsed under Highway 174, leading to the formation of a sinkhole that swallowed the car of an unsuspecting motorist. The driver was reported to have crawled out of the hole and escaped, but the car remained. These are only two examples of recent news stories highlighting aging infrastructure. Municipalities face many challenges that impact their ability to effectively manage their infrastructure. For example:

- municipalities own the majority of infrastructure, yet have access to a relatively small tax base
- aging infrastructure, some nearing or beyond useful life
- impacts of work demographics including a wave of retirements, loss of institutional knowledge, difficulty in attracting new workers

Smaller and rural municipalities have additional challenges: no economies of scale; scattered dispersed population; possibly reduced tax base due to declining industries. Northern and First Nation communities face further challenges due to remoteness and climate. Although there are many challenges, there are positive developments with federal, provincial, and municipal governments starting to acknowledge the problem and evaluate possible solutions.

## II. FEDERAL AND PROVINCIAL BUDGETS

This past spring, both the Ontario and federal budgets were tabled. In general, infrastructure funding has emerged relatively unscathed which bodes well for improving the adequacy and sustainability of our infrastructure systems. In Ontario, the level of infrastructure funding provided in *Building Together*, the province's long-term infrastructure plan was maintained at \$35 billion over three years. In the lead-up to the budget, the report by the Drummond Commission, Commission on the Reform of Ontario's Public Service, was published which recommended that full cost pricing be implemented for water and wastewater services. In addition, the Commission recognized the need for an open, public dialogue on how best to address the significant investments needs for transportation infrastructure.

On the federal side, it is recognized that a new program will need to be put in place once the Building Canada fund expires in 2014. Infrastructure Canada is presently in consultation with stakeholders, including the Association of Consulting Engineers of Canada (ACEC) and the Canadian Public Works Association (CPWA), among others. Over the summer, the federal Minister of Infrastructure and Communities hosted roundtables across the country exploring how future federal infrastructure programs could respond to specific challenges in various regions and sectors. The Ontario Coalition for Sustainable Infrastructure's (OCSI) submission to Minister Denis Lebel included these key messages:

The need for maintenance of existing infrastructure to be managed and funded. Sustainable infrastructure is not only about

### CANADIAN INFRASTRUCTURE REPORT CARD

- Drinking Water (15.4% rank fair or below) Good, adequate for now
- Wastewater (30.1% rank fair or below) Good, adequate for now
- Storm Water (23.4% rank fair or below) Very Good, fit for the future
- Municipal Road (52.6% rank fair or below) Fair, requires attention

building new infrastructure, it's about managing existing infrastructure and receiving good value. Effective management of existing infrastructure includes: operation and maintenance; repair, rehabilitation and replacement; and disposal.

1. The consideration of life cycle costing in the building of new capital projects, which may result in selecting more expensive initial investments in order to minimize maintenance over the life cycle. Low bid options and pricing often run counter to long-term planning.
2. Effectiveness of asset management plans that integrate technical, operational/maintenance, and financial perspectives which provide municipalities with necessary information to make informed decisions.

## III. ONTARIO GIVES A BOOST TO SMALL MUNICIPALITIES

OCSI applauds the Ontario Government for launching the first phase of its Municipal Infrastructure Strategy. This initiative, under its long-term infrastructure plan, *Building Together*, includes funding to assist smaller municipalities in the amount of \$60 million over three years. As announced on August 16<sup>th</sup> by Ontario Infrastructure Minister Bob Chiarelli, the launch of the first phase of the province's Municipal Infrastructure Strategy helps ensure communities secure the greatest value from infrastructure investments. Asset management planning is a cornerstone of this strategy. This type of planning ensures the best possible decisions are made when it comes to building, operating, maintaining, renewing, replacing, and disposing of infrastructure assets over their lifetime.

Ontario has made available the *Building Together: Guide for Municipal Asset Management Plans*, which sets out the information and analysis that, at a minimum, municipal asset management plans should include. The guide is complemented by an online toolkit to help municipalities prepare asset management plans and share best practices.

## IV. IN A MUNICIPAL CONTEXT

Many municipalities have instituted multi-year, annual water and wastewater rate increases which, in the order of eight to 10 percent, are significantly above the current rate of inflation. In general, these have been accepted by the public without undue concern. One reason for this public reception may be that, in most cases, water and wastewater services are funded by dedicated rates: the public knows where the money is going. That is not often the case with property taxes which the public does not directly associate with the other valuable services that are provided by municipalities (i.e., roads, storm drainage, solid waste, parks and recreation). A better job must be done in communicating this message.

Transit has been a hot topic of debate at Toronto City Council this year. Although that debate has been acrimonious at times, there has been one positive outcome: The need for dedicated funding tools to pay for the expansion of transit has been raised. Although nobody wants to hear 'road tolls', major infrastructure programs cannot totally rely on uncertain senior government contributions. There must be recognition of the 'user pays' principle, appreciation and recovery of the economic benefits (e.g., property value uplift) that such projects generate, or a conscious decision that pricing is going to be used as a tool to encourage people to use transit, rather than inefficient and unsustainable private vehicles.

Although it is early days, we firmly believe this to be the beginning of a growing awareness that the users of infrastructure services have to pay the full cost of these services, whether they are roads,

## *Cost savings on the operations and maintenance are more important to front line providers, and over time, these costs far exceed the initial capital cost by 5:1.*

transit, or water and wastewater, and whether it be members of the public, businesses, or property developers paying the cost. Only by removing the price distortions inherent in our current pricing structures, can we encourage the users of these services to conserve them. We must also recognize and draw attention to the economic benefit(s) which result from investments in infrastructure, and the impediment to economic growth if such investments are not made. It has been shown by several studies and reports, including those from such bodies as the Conference Board of Canada, that for every \$1 invested in infrastructure, between \$1.11 and \$1.25 in economic benefits can result.

### **V. THREE STEPS TOWARDS A SOLUTION**

So what can be done to resolve the problem? The way we see it, the solution relies on a three point approach.

1. **Awareness:** We must increase awareness and recognize the extent of the problem. The recent adoption of the Public Servicing Accounting Board (PSAB) 3150 rules by municipalities was a good first step. This required municipalities to report the depreciated value of their assets in their financial reports, so for the first time quantifying the funds which are required annually to counter depreciation.
2. **Communication:** We must communicate the problem to elected officials and the public. We must do a better job at demonstrating the value that the public receives through the various taxes it pays, how those are directly responsible for the infrastructure upon which our health, quality of life, and economic competitiveness depend. And equally important, we must communicate the consequences if that infrastructure is not maintained. If we gain public support, then Step 3 will be possible.
3. **Planning:** We must plan to address the problem better than we have done in the past. This will require integrated land use, engineering, and fiscal planning. We must take a longer range view of our communities and take into account life cycle costs. Cost savings on the operations and maintenance are more important to front line providers, and over time, these costs far exceed the initial capital cost by 5:1. Then, having designed and constructed infrastructure to minimize the life cycle costs, we need financial plans to provide for those costs in a sustainable way.

Implementation of those plans, and the political will to do so, will come easier if we have recognized the problem, communicated it, and planned for it. Jennifer Keesmaat, City of Toronto's new chief planner, published an article in the *Globe and Mail* on September 10, 2012 where she stated, "We need new planning paradigms that entwine our cities and regions, we need clarity about what it will cost to make the public infrastructure investments that we require, and we need to embrace new, creative financing models."

The sooner we act to make our infrastructure systems sustainable from environmental, societal (service level), and fiscal viewpoints, the less it will cost our citizens. Conversely, the longer we delay, the more it will cost our rate payers and the more difficult it will be to address our challenges.

We must work together to keep the momentum going. OCSI is working cooperatively with its constituent organizations to encourage the Ontario government and its ministries to advance these initiatives, and not get distracted by short term, politically driven issues. We must support those parts of government which are taking a longer term view and work with them to promote and communicate the importance of that approach throughout the government, to elected officials, to businesses, and to the citizens of the province as a whole.

OCSI is part of a network of similar organizations across the country focused on asset management, with counterparts in BC, Alberta, Saskatchewan and Quebec. At the national level, OCSI will be working with the Canadian Network of Asset Managers (CNAM).

As municipalities in Ontario apply their funding to support the development of their asset management plans, great value can be achieved without reinventing the wheel. The question is: will municipalities see asset management planning, and its implementation, as the right thing to do or only as a regulatory requirement? Will the federal and provincial governments continue to work with municipalities to ensure adequate and predictable investment in infrastructure? Not only are these the right things to do, they are an essential component of delivering safe and sustainable infrastructure. Keep it on the agenda.

CARL BODIMEADE, P.Eng, has a strong interest in the sustainability of infrastructure systems. He works with stakeholders to develop policy positions and advocate in order to achieve that objective. He is a Senior Vice-President with Hatch Mott MacDonald and Chair of OCSI.

DARLA CAMPBELL, P.Eng, is experienced in municipal and provincial infrastructure development from environmental assessment through design, construction and operation and is adamant that strategic thinking and public engagement are essential in solving the infrastructure deficit. She is President of Amonavi Consulting Group Inc. and Executive Director of OCSI.