FOSTERING INNOVATION

C-TEP 6th Annual Western Canada Pavement Workshop
2015 Edition

“Building a Culture of Roads Innovation”

February 03, 2015
Barry Poon, Manager, Construction Roads, Transportation, City of Calgary
No thanks!

We are too busy
Overview

- What is Innovation?
- Innovation at Roads and The City of Calgary
- Innovation and You
Innovation is....

- A new idea, device or process
- Better solutions that meet new or existing market and societal needs
- Use of a better novel idea or method; doing something different
- Not invention; which is the creation of the idea or method itself
What WE think is innovative

Innovation in the eyes of the Owner (City)

- Efficient & Cost Effective
- Quality, Less complaints
- Safe, Sustainable
What THEY think is innovative

Innovation in the eyes of the User (Public)

- Smooth Ride, Quality
- Less Traffic Congestion
- Best bang for the buck
- Save time, money
What really matters...

Features Tell – **Benefits** Sell

- Road users may not appreciate the actual innovative processes, materials or technology
- Realization of benefits from the innovations, increase their satisfaction level
Why innovate?

• Only key to sustain long-run growth, or survive and grow

• Gain competitive advantage by meeting changing customer needs

• Escalated expectation for efficiency
What it takes to innovate...

Innovation

- Need
- Finance Support
- People & Technology
Innovation at The City of Calgary
Recognizing the Needs of our Customers

Principles of TG:
- Transparency
- Accountability
- Civic Engagement
- Innovation
- Citizen Orientation
- Sustainability
Transforming Government...

eBIDDING

The old way, with hard-copy submissions...

1. Write.  
2. Copy.  
3. Deliver.  
4. Time-stamp.

The new way, with MERX e-Bidding...

1. Write.  
2. Upload.  
3. Relax.

TOTAL SAVINGS

$12,756,319

95,444 hrs

119,061 hrs

CUT RED TAPE
City of Calgary wants to be leader in innovation

Council Priorities for the next 4 years

Innovation is in the City’s Goals and Objectives
How your property tax dollars will be spent each month in 2018*

$160.90 per month is what a median household will pay to receive tax-supported City services in 2018.

- Approximately 40% of property taxes collected go to province and 60% to The City.

$36.92

<table>
<thead>
<tr>
<th>Service</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>$14.85</td>
<td>$16.40</td>
<td>$24.15</td>
<td>$19.20</td>
</tr>
<tr>
<td>Property tax (based on 2014 Assessment of $430,000)</td>
<td>$5.95</td>
<td>$6.60</td>
<td>$6.85</td>
<td>$7.20</td>
</tr>
<tr>
<td>Utilities</td>
<td>$0.70</td>
<td>$0.60</td>
<td>$1.00</td>
<td>$1.00</td>
</tr>
<tr>
<td>Waste &amp; Recycling ('estimated')</td>
<td>$0.20</td>
<td>$0.20</td>
<td>$6.70</td>
<td>$0.20</td>
</tr>
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$1931 median residential property tax bill (2018 municipal portion) representing an annual increase in the average residential property tax of $8.66 per month from 2015–2018.
## Innovative Planning & Budgeting

<table>
<thead>
<tr>
<th>Function</th>
<th>Percentage</th>
<th>Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobility hubs &amp; transit corridors</td>
<td>37%</td>
<td>$1.3B</td>
</tr>
<tr>
<td>Goods movement</td>
<td>22%</td>
<td>$0.8B</td>
</tr>
<tr>
<td>Optimization</td>
<td>6%</td>
<td>$0.2B</td>
</tr>
<tr>
<td>Lifecycle</td>
<td>35%</td>
<td>$1.2B</td>
</tr>
</tbody>
</table>

Transportation’s Capital Plan has shifted to break down by function, instead of travel mode or asset type to achieve our broader long-term goals and outcomes.
Innovation in Roads

To provide a safe, effective and well maintained road system for all travel modes with a commitment to excellence, innovation, sustainability and environmental sensitivity. We will foster a workplace that respects, inspires and supports employees who all take pride in service excellence.
Greener Roads - Complete Streets Guide

17 Ave SE
Now

Concept - future
13 Ave Greenway
Green modes of travel, A safe and liveable street

- Sets a framework for the shaping of a unique and vibrant public realm inclusive of all travel modes

Complete Street
Downtown Calgary Cycle Track
Sustainable and Safe transportation choices
Tuscany C - Train Station
Automated Public Toilet, Information Display Signs
New buses and LRVs
Operational efficiencies, passenger comfort and safety
Flood-Resilient Bridges
Precast deck, repeatable components/designs
Technical Pavement Innovations
Pavement Rehabilitation

Materials and Research group innovative technologies

- SMA
- RAP
- RAS
- FDR
- CIR
- WMA
Smart LED Streetlights
50% reduction in energy consumption ($5M savings/year)
Airport Tunnel
Long-range planning, risk mitigation, collaboration
In 2013, a Roads - Waste & Recycling partnership produced road base gravel with 10% crushed glass.

5,755 tonnes of glass from bottles collected as part of the Blue Bin program was diverted from the landfill.

Clay was reused through a Roads-Water partnership.
Asphalt Plant Upgrades

Environmental benefits

Yesterday
32 Year Old Batch Plant

Today
First Dratch Plant in Canada
Slope Stability Policy/Framework

- Design/Build strategy to manage risks due to complexity of project

Highfield Road - Flood-damaged slope and roadway
Interactive Maps / Mobile Info
Improving communications
Streets as Places
Innovative and effective use of streets

• Food Trucks
• Pop-up patios
• Hop-on, hop-off tours
• Car sharing programs
• S-Park (Street as a public space)
Innovation is not always easy...

- Laws and Regulations
- Contracting Processes
- Collaboration among all stakeholders
- Standardization
- Resistance to change
- Risks
- Cost of implementation
- Lack of Incentives
Now let's pick the innovative idea with the greatest potential to keep things exactly as they are.
How we do it...

- Deliberate and disciplined approach
- Management support
- Innovative mindset and can-do attitude.

A Culture of Innovation!
What about You?

What will you do differently in your work area?

How will you identify and connect your dots?
Any Questions?