SE to West LRT
Preliminary Design
To develop and finalize the **Preliminary Design** for a 27 km urban style low-floor LRT along the City Council-approved corridor (route) from Mill Woods to Lewis Farms.
Project Schedule

Where we were

- **Conceptual Design:** 2009 – 2011
- **City Council Approval of Concept Plan:** 2011 - February 2012

Where we are going

- **Public Involvement and Communication:** 2011 – 2013
- **Preliminary Design:** Completion Fall 2013
- **Detailed Design, Construction and Operation:** In Future
During Concept Phase, City Council approved

- Corridor (route) location
- Track alignment (where track fits in right-of-way)
- Stop/station/transit centre locations
- Low floor vehicles
Refining the City Council-approved Concept Plan in greater detail to better understand impacts and opportunities

- Aesthetics—structural, stop/station and landscape
- Connectivity to the existing transportation network—all modes
- Understanding impacts to stakeholders and working to resolve/minimize issues
Approved Corridor
SE to West LRT

- 27 km route from Mill Woods to Lewis Farms
- Vertical connection to existing LRT at Churchill Station downtown
- Low-floor technology, urban style
- 3 stations, 25 stops
- 6 bridges and 1 pedestrian bridge
- 1 tunnel
- Integration with 5 transit centres
- 2 Park ‘n’ Ride sites
- 1 Operation and Maintenance Facility
• Trains run on approx. 5 minute intervals during peak hours
• Trains share traffic signals with other road users
• Trains operate in their own right-of-way
• A complementary bus network is being reviewed—some existing bus stops may be relocated to better integrate with LRT
Urban Style LRT

• Improves connections between LRT and community
  • Smaller scale stops/stations, spaced closer together
  • Less impact in community—stops are at street level
  • Encourages pedestrian access
  • Reduced right-of-way
  • Fewer barriers (bells and gates)
  • Links to destinations with strong bus, pedestrian and cyclist connections
  • Reduced speeds in congested areas
  • Investment in landscaping and architectural features
  • Maximize openness of space to create safe environment
  • Does not share right of way with other road users but does share traffic signals

• City Council direction for extensions to existing and all new LRT lines
Low Floor Technology

• Stops are similar to bus stops—at street level
• Passengers board at street level
• Industry standard for LRT systems worldwide
Integrated Urban Style

roadways

sidewalks
Integrated Urban Style

catenary

public art
Integrated Urban Style

track

stops & stations
**Stops and Stations**

**What is a stop?**
A stop is similar to bus stops in terms of scale. It contains basic amenities and is accessed at street level.

**What is a station?**
A station is an elevated stop. It contains basic amenities and is accessed using stairs or elevators.
Noise Impact Assessment

• Noise modeling is being conducted in keeping with the City’s Urban Traffic Noise Policy along the LRT corridor (route)
• Traffic noise levels are measured in decibels (dBA) over several days and averaged for a 24 hour period (Leq24)
• If predicted noise level is 65 dBA Leq24 or greater, a noise barrier may be provided

<table>
<thead>
<tr>
<th>FAMILIAR NOISES</th>
<th>dBA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inside average urban home</td>
<td>50</td>
</tr>
<tr>
<td>Quiet street</td>
<td>50</td>
</tr>
<tr>
<td>Normal conversation at 1 m</td>
<td>60</td>
</tr>
<tr>
<td>Noisy restaurant</td>
<td>70</td>
</tr>
<tr>
<td>Highway traffic at 15 m</td>
<td>75</td>
</tr>
<tr>
<td>Busy traffic intersection</td>
<td>80</td>
</tr>
<tr>
<td>Bus or heavy truck at 15 m</td>
<td>88-94</td>
</tr>
<tr>
<td>Jackhammer</td>
<td>88-98</td>
</tr>
<tr>
<td>Freight train at 15 m</td>
<td>95</td>
</tr>
<tr>
<td>Jet taking off at 600 m</td>
<td>100</td>
</tr>
<tr>
<td>Amplified rock music</td>
<td>110</td>
</tr>
</tbody>
</table>
Vibration could occur during LRT construction and operation
LRT runs on continuous welded rail to minimize vibration
A complete vibration screening of corridor (route) is being conducted
Pre-construction assessments of structures abutting the LRT route may be completed
Environmental and Geotechnical

- **Environmental Impact**
  - Mitigating environmental impact is significant throughout all phases of project
  - Environmental impact assessments are nearing completion

- **Geotechnical Studies**
  - Assess ground conditions to determine suitability for construction
  - Provide design advice on stability of slopes for foundations, tunnels, chambers and other structures
Get Involved

Public Involvement in Preliminary Design

Determining how the LRT will look, feel and integrate into your community.

WE ARE HERE

Stage 1: Pre-Consultation (complete)
Stage 2: Initiation (complete)
Stage 3: Consultation
Stage 4: Refinement
Stage 5: Conclusion

Public Input | Information Questions | Public Input | Design | Public Input | Design | Public Input | Design | Public Information
Get Involved

5 Stages of Public Involvement

Stage 1  Pre-Consultation

Stage 2  Initiation

Stage 3  Consultation, May – December 2012

Stage 4  Refinement, September 2012 – June 2013

Stage 5  Conclusion, January – December 2013
How your input is used

Your input is valuable and used along with other information to inform the project.
What kind of feedback are we looking for?

• Look/feel of stop/station—landscape, architecture, colours, treatment, public art
• Important connections/access points
• Confirmation of how amenities will look
What kind of feedback are we unable to use?

- Comments about decisions made in Concept Phase—route, stop/station locations, vehicle technology
- Comments about elements that cannot be addressed until later stages of the project
- Comments regarding elements outside the project scope
Thank you

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