Airport Parkway Widening
Lester Road Widening
Environmental Assessment Study

Consultation Group Meetings

Date: December 2014

Meeting Objectives

- Introductions
- Project Overview/Study Process
- Study Challenges/Existing Conditions
- Needs and Justification/Alternative Solutions
- Design Considerations
- Stakeholder Involvement
- Project Schedule and Next Steps
- Group Discussion

Round Table Introductions

Briefly Share:

- Individual/Group/Agency you are representing
- Area of expertise/responsibility
- General Interest in the study and what matters to you

Your Role

- Represent the interests of your organization;
- Actively participate in the planning process by expressing your ideas and opinions;
- Review and comment on studies, alternative solutions, alternative designs, evaluations and recommendations;
- Work towards consensus to allow the City to achieve project milestones; and
- Liaise with peers in your organization

Project Overview

Study Team

- Colin Simpson, City of Ottawa (PM)
- Ron Clarke, Parsons (Consulting PM)

PARSONS

- Environmental Assessment
- Transportation & Urban Planning
- Transit Planning
- Road Design
- Municipal Servicing

Golder Associates

- Geotechnical/Hydrogeological
- Site Contamination
- Natural Environment
- Archaeology

GRADIENT WIND ENGINEERING

- Noise, Air Quality, Vibration

DOUGLAS & RUPELAND ASSOCIATES LTD.

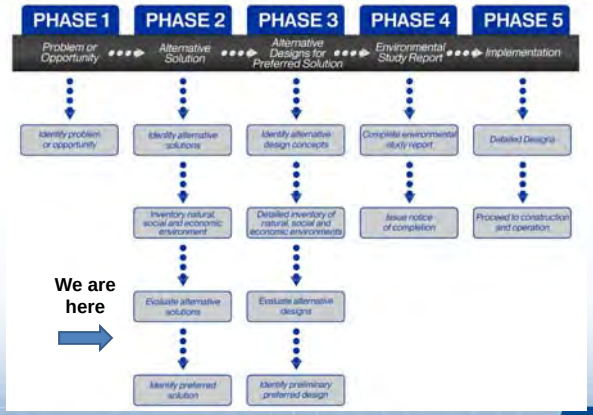
- Landscape Design/Visual Environment

EA Study Objectives

- Confirm the project need/solution (road widenings) that was established in the City's 2013 Transportation Master Plan (TMP)
- Evaluate alternative designs
- Recommend a preferred design
- Recommend (and build-in) environmental mitigation measures

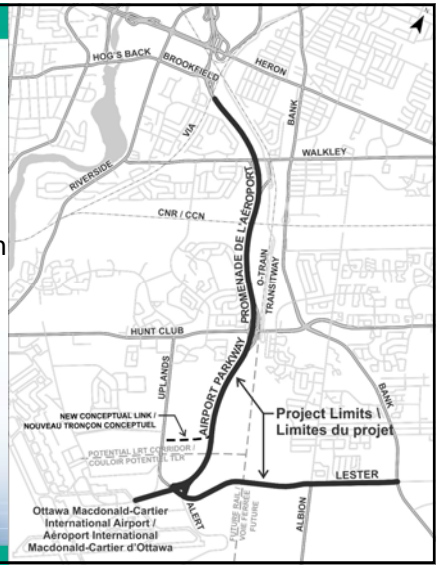
… and benefit from stakeholder input throughout the study process

Environmental Assessment Process



Study Limits

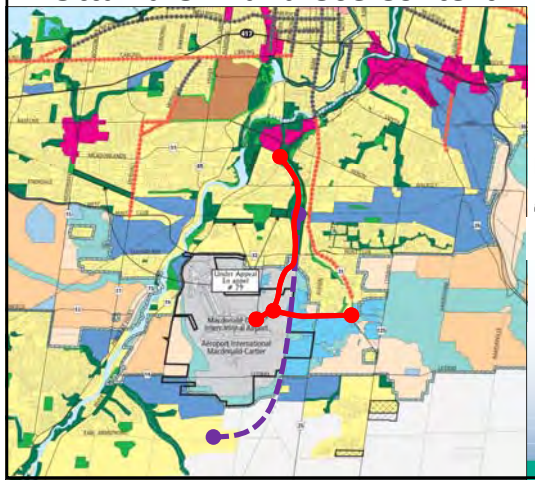
- Airport Parkway (AP) from Brookfield Ave to Ottawa Airport
- Lester Road (LR) from Airport Parkway to Bank Street
- New east-west road link from Airport Parkway to Uplands Drive

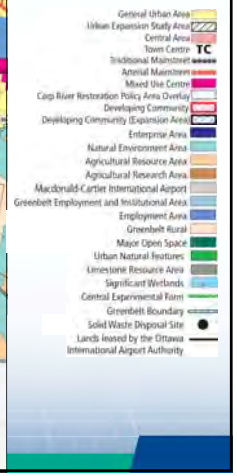


Coordination with O-Train Extension EA

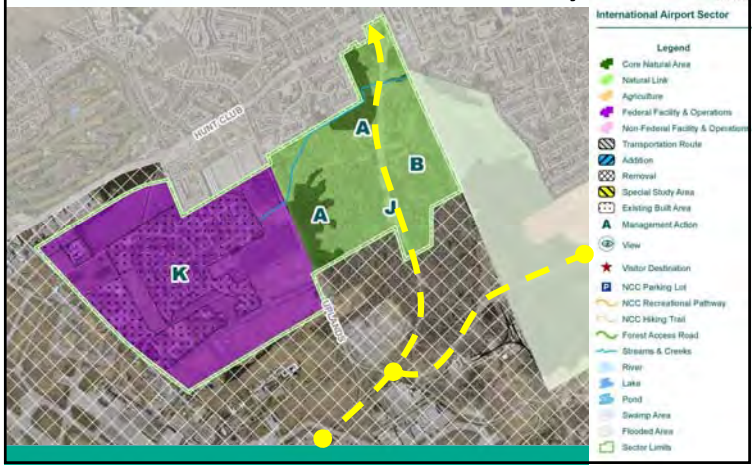
- Consider inter-relationships with the O-Train extension studies
- Particular attention paid to:
  - Potential rail transit connection across the Airport Parkway to the airport
  - Crossing of the O-Train at Lester Road

Ottawa OP Land Use Context





Greenbelt Master Plan Context - Parkway



Greenbelt Master Plan Context - Lester

Airport Lands – Secondary Plan

Airport Parkway Corridor - Planned Function

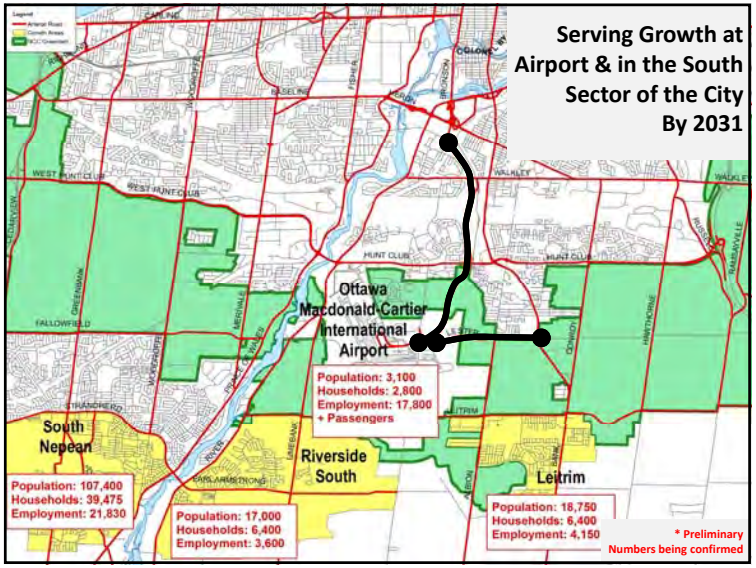
- Multi-Use Pathway Route
- Cycling Spine Route
- Arterial Road
- Scenic Entry Route
- Capital Arrival (NCC)
- Designated Open Space Corridor (north of Hunt Club)

Road Link to Uplands- Planned Function

- Arterial Road
- Transit Priority Corridor (Continuous Lanes) as designated in the Transportation Master Plan, including the Parkway north to Hunt Club
- Additional connectivity to/from the airport area

Lester Road Corridor - Planned Function

- Cycling Spine Route
- Arterial Road
- Truck Route, linking the airport and Uplands Drive to Bank Street
- Commuter route serving Leitrim, Riverside South, Greely and areas to the south



AP Role within the Arterial Rd Network

- Airport traveller access route to and from central Ottawa
- Access to/from airport employment uses
- Commuter route linking Hunt Club, Walkley, and Brookfield, serving adjacent communities to the south of Heron Commuter route linking Lester and serving communities to the south of Heron, including adjacent neighbourhoods, Leitrim, Riverside South, Greely and the rural area
- **Not** at truck route … current restrictions are to continue

LR Role within the Arterial Rd Network

- Airport traveller "back door" access route to/from Bank Street and areas to the east
- Commuter access to/from airport employment uses
- Commuter route joining Bank Street and Albion Road to the Airport Parkway, serving southern growth areas of Leitrim and Riverside South, as well as Greely and the rural area
- A truck route joining the OMCIA and Uplands Drive to Bank Street

Road Link Role within the Arterial Rd Network

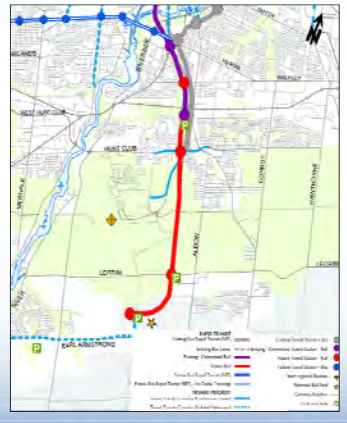
- New link into Airport Development Lands to Uplands
- Realignment of the Airport Parkway for travel to the Airport (longer term)
- Transit priority corridor (continuous bus lanes) to the Airport Lands

Confirming the Need & Opportunities

Affordable Road Network – 2013 TMP

- Phase 1 - widen undivided two-lane rural arterial to a divided four-lane rural arterial
  - *accommodates increasing traffic volume and improves access to and from the Airport*
- Phase 2 - widen undivided two-lane rural arterial to an undivided four-lane rural arterial
  - *accommodates growth in Riverside South and Leitrim and diverts traffic from Albion Road away from Blossom Park*
- Phase 3 - widen undivided two-lane rural arterial to a divided four-lane rural arterial
- consider bus / HOV lanes
  - *accommodates growth in Riverside South and Leitrim and improves access to the Airport*
- Phase 3 - new divided four-lane rural road
  - *improves access to the Airport*
  - *consistent with the Airport's long -term plan for a new northerly road connection to a future/expanded air terminal building*

Affordable RTTP Network – 2013 TMP

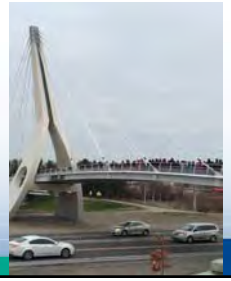


- An extension of the existing O-Train corridor to Riverside South
  - stations at Hunt Club Road/Airport Parkway, Leitrim Road and just north of Earl Armstrong Road
- Transit priority along the Airport Parkway south of Hunt Club Road to the Airport
  - peak period bus/high occupancy vehicle (HOV) lanes as part of the widening to 4 lanes, with the outside lanes used by transit, taxis and HOV's
- Transit priority along Hunt Club Road between Uplands Drive and Albion Road

Existing Transportation Conditions

- No bike lanes
- No sidewalks

- Some multi-use pathways in northern section
- New east-west ped/bike crossing north of Hunt Club Road



Existing Transportation Conditions

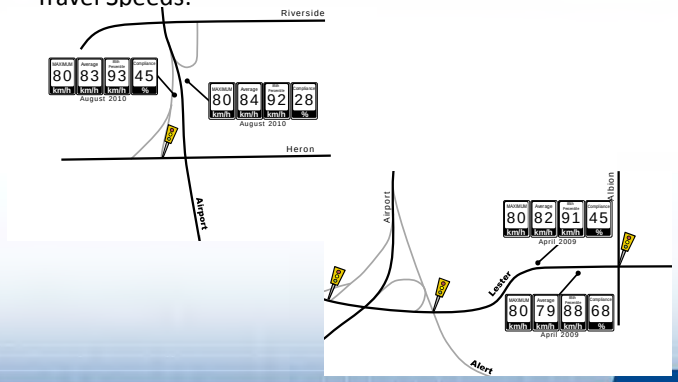
- Existing Traffic Volumes/Patterns:

Road Segment	Existing Peak Directional Volume (veh/h)	Assumed Capacity TRANS (veh/h)	Existing AADT (two-way)
Airport Parkway			
• North of Hunt Club Road	1,600	1,600	32,000
• Hunt Club Road to Lester Road	1,200	1,600	22,000
• South of Lester Road	900	1,200	17,000
Lester Road			
• Airport Pkwy to Albion Road	1,400	800*	14,000
• Albion Road to Bank Street	600	800	8,000

  - 85% autos with occupancy 1.09/ 10% taxis with occupancy 1.25;
  - high on/off demand at Hunt Club interchange (400-500 veh/h)
  - AM peak, 70% of northbound traffic on the Airport Parkway (south of Hunt Club) comes from Lester Road
  - PM peak, 50% of southbound traffic on the Airport Parkway (south of Hunt Club) is going to Lester Road

Existing Transportation Conditions

- Travel Speeds:



Existing Transportation Conditions

- Collisions (2011 to 2013 inclusive):
  - generally low impact collisions
    - 76% property damage only; 24% “non-fatal” (i.e., 0 fatalities in recent years)
  - 184 collisions on Airport Parkway
    - 37% rear-end, 18% single vehicle, 17% sideswipe, 13% turning movement (which includes 25 involving U-turns near Hunt Club)
    - 4 involved pedestrians/cyclists; 8 involved wildlife
  - 78 collisions on Lester Road
    - 27% single vehicle, 23% rear-end,, 21% angle, 18% turning movement
    - 2 involved cyclists; 1 involved wildlife

Confirming Project Need

- Projected Traffic Volumes (2031):

Road Segment	Projected Peak Directional Volume (veh/h)	Assumed Capacity TRANS (veh/h)	Existing AADT (two-way)
Airport Parkway			
• North of Hunt Club Road	2,200	1,600	42,000
• Hunt Club Road to Lester Road	1,800	1,600	36,000
• South of Lester Road	1,450	1,200	27,000
Lester Road			
• Airport Pkwy to Albion Road	1,800	800*	22,000
• Albion Road to Bank Street	900	800	13,000

  - ✓ assumes planned growth to the south / Airport employment / increased passenger activity / modal share targets established in TMP
  - projected traffic volumes to exceed the capacity of a single travel lane per-direction of both the Airport Parkway and Lester Road Corridors
  - deficit on Airport Parkway ranges between 200 and 600 veh/h

Confirming Project Need

- Inherent assumptions in 2031 traffic projections:
  - TMP modal share targets (region-wide)
    - 50% auto driver; 09% auto passenger, 26% transit; 15% pedestrian/cycle
  - auto occupancy 1.24
- What about increased transit ridership?
  - would need to achieve over 40% transit modal share to address 600 veh/h
- What happens if the status quo travel behavior is assumed?
  - estimated 15% - 20% non-auto modal share … + 600–700 veh/h
  - estimated auto occupancy of 1.10 to 1.15 … + 100–200 veh/h

Downstream Impacts?

- Existing Arterial Road Network is planned to accommodate growth in traffic with various choices
- Brookfield Road
- Heron Road
- Riverside Drive
- Bronson Avenue:
  - notable intersecting roads as traffic sources/sinks include Heron, Riverside, Sunnyside (Carleton U), Colonel By, QED, Carling, etc.
  - once capacity is reached, expect … modal shift, peak spreading, diversion to competing routes

Confirming Project Need - Conclusion

Even with anticipated increases in transit ridership and all of the other transportation investments and assumptions in the TMP (within the planning horizon), there is an overall need for:

- one additional travel lane in each direction within the Airport Parkway corridor between Lester Road/Uplands Drive and Brookfield Road
- one additional travel lane in each direction within the Lester Road corridor between the Airport Parkway to Bank Street

Confirming Project Need - Conclusion

(con't) …

- high capacity intersections at:
  - Airport Parkway and Lester Road
  - Lester Road and Albion Road
- appropriate connections between the Airport Parkway at Hunt Club Road, Walkley Road, and Brookfield Road; and

Confirming Project Need - Conclusion

(con't) …

- Also an opportunity for a new connecting road link from the Airport Parkway to Uplands Drive, providing for additional connectivity to the airport area
- possible long-term further extension west of Uplands to a future/relocated air terminal building

Source: Ernst & Young Centre

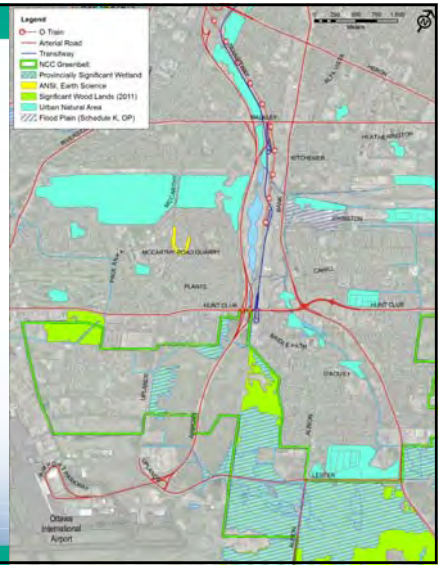
Identifying Opportunities

- There is an opportunity to improve valued environmental components including:
  - Improving the cycling and pedestrian environments within the Study Area;
  - Improving/enhancing Scenic Entry Routes to/from the City;
  - Improving/enhancing natural heritage features and function; and
- There is also an opportunity to coordinate the planning and design of transportation infrastructure in Airport Parkway and Lester Road corridors with other planned infrastructure including the O-Train Extension study.

Study Challenges & Existing Conditions

Natural Heritage

- Natural heritage and physical features along the corridors and within existing ROW
- Lester Road Wetland Complex & associated habitats
- high water tables



Natural Heritage Con't

- Sawmill Creek and associated slopes and floodplains
- Cahill Drain crossing south of Hunt Club
- Other values, currently being studied

Sawmill Creek, at Lester Road

Cahill Drain, at Airport Parkway

Socio-Economic

- Delivering an affordable plan
- Integrating with O-Train connection to airport
- Proximity of residences along the corridors
- Anticipating airport developments and providing access

Socio-Economic Con't

- Narrow Lester Road ROW and need for ROW widening through the Greenbelt area
- Anticipating federal interests including Greenbelt values
- Providing structures for grade separations

Alternative Solutions Evaluation

Alternative Solutions Evaluation

- A long list of alternative solutions that have some potential to address the project needs and opportunities
- A first screening was completed to evaluate each solutions ability (or not) to sufficiently achieve the needs/opportunities
- The remaining alternatives were carried forward for a high-level environmental impact assessment based on transportation need, as well as, social, biological, physical and economic criteria

Step 1: Screening Results

Alternative		Effect	Result
1	Do Nothing in the Corridors	Does not sufficiently address the need/opportunity	Screened out, but carried forward for comparison purposes
2	Only provide New Walking and Cycling Infrastructure in the Corridors	Does not sufficiently address the need/opportunity	Screened out
3	Only provide New Walking, Cycling, and Transit Priority (Bus-Only Lanes) in the Corridor	Does not sufficiently address the need/opportunity	Screened out
4	Only enact additional TDM Strategies	Does not sufficiently address the need/opportunity	Screened out
5	Only provide Additional Park and Ride Capacity	Does not sufficiently address the need/opportunity	Screened out
6	Only Widen Airport Parkway	Does not sufficiently address the need/opportunity	Screened out
7	Only Widen Lester Road	Does not sufficiently address the need/opportunity	Screened out
8	Widen Other Arterial Roads	May address the need/opportunity	Carried forward for further evaluation
9	Construct a New North-South Arterial Road	May address the need/opportunity	Carried forward for further evaluation
10	Construct a Reversible Lane	May address the need/opportunity	Screened Out
11	Widen and Connect both Airport Parkway and Lester Road	Will address the need/opportunity	Carried forward for further evaluation

Evaluation Criteria

1. **Transportation Need:** Ability to meet travel demand of all modes throughout the planning horizon
2. **Policies, Regulations, and Standards:** Supports planned function to accommodate growth and policies and/or standards of municipal, provincial, and federal authorities
3. **Social:** Minimizes impact on existing and planned communities/development/conservation lands including downstream impacts. Opportunity to enhance the visual environment and create a gateway to and character for the corridor

Evaluation Criteria Con't

4. **Biological:** Minimizes impact on natural heritage features including designated Core Natural Areas and Natural Links, Significant Wetlands, Species at Risk, surface water and aquatic habitats.
5. **Physical:** Minimization of impacts related to geotechnical considerations (geology and hydrology)
6. **Economic:** Minimization of capital construction cost as well as land acquisition costs

Preliminary Preferred Solution

- Widen and connect Airport Parkway and Lester Road
  - Re-confirms 2013 Council approved TMP
  - Best accommodates the needs/opportunities within the identified corridor
  - Greatest potential to manage/minimize environmental effects
  - Greatest opportunity to improve/enhance the visual environment and open space character of the corridors

Design Considerations

Design Considerations

- Alignment options
- Minimizing footprint & ROW requirements
- Rural versus urban road cross-sections

Design Considerations Con'd

- Walking and Cycling
- Roadside safety
- Noise management

Design Considerations Con'd

Via Rail Structure

Walkley Structure

Design Considerations Con'd

Rail Structure

Ped Bridge Structure

Hunt Club Structure

Design Considerations Con'd

Uplands Structure

Delta Taxiway Structure

Design Considerations Con'd

- Traffic management during construction
- Innovative approaches to road drainage and storm water management
- Building transportation facilities within the Lester Road Provincially Significant Wetland Complex and along Sawmill Creek

Design Objectives for Transportation Facilities through/along the Wetland

1. **Avoidance**: Choose alignments that avoid the amount of displacement of wetland areas as a first priority, and adjacent areas as a second priority, where practical:
   a. Follow existing developed right-of-ways
   b. Align roadways around wetland areas

Design Objectives for Transportation Facilities through/along the Wetland

2. **Compactness**: Use compact, efficient transportation cross-sections that minimize spatial footprint
   - Use the minimal acceptable road design criteria including lane widths
   - Use wide medians only where necessary based on road safety considerations
   - Use an urban (curbed) cross-section if/where appropriate
   - Consider benefits of roundabouts to avoid additional left-turn lane footprint

Design Objectives for Transportation Facilities through/along the Wetland

3. **Innovative Drainage**: Manage the quality, quantity and rate of flow of road drainage entering into the wetland and creek:
   a. Intercept and manage road drainage prior to discharge into the wetland and creek
   b. Consider options other than wide roadside ditches that contribute to wetland displacement
   c. Consider a range of treatment options including linear bioswales, ditch outlet control devices
   d. Use low maintenance, rooted grasses along slopes

Sawmill Creek and Alexander Drain

- Opportunity to integrate into the corridor

Design Objectives for Transportation Facilities through/along the Wetland

4. **Hydraulic Connectivity:** Provide for movement of surface/ground water under the road bed:

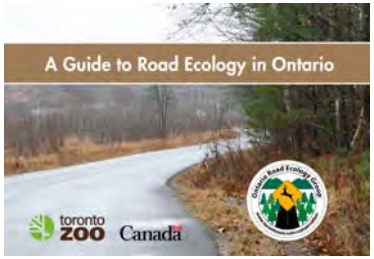
   a. Use frequent culverts that join low-lying areas across the roadway

   a. Consider using a permeable road bed/structure

Design Objectives for Transportation Facilities through/along the Wetland

5. **Wildlife Movement:** Provide for the movement of wildlife under and/or across the facility:
   a. Use “dry” and “wet” culverts that accommodate the range of species expected to cross the corridor
   b. Consider potential impacts (or not) of curbed cross-sections and medians on wildlife crossing.
   c. Consider the appropriateness of fencing and eco-passages.

Wildlife Movement



Source: Ontario Road Ecology Group, Hwy 10, Caledon

Wildlife Movement

- Eco-passages can enable flow of water and animals “under” roads and pathways
- Possible techniques for Sawmill Creek for example
- Requires study

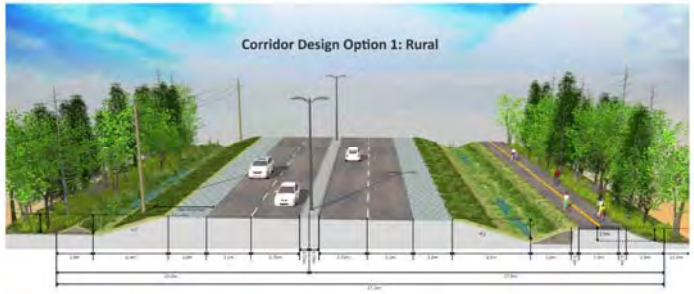
Design Objectives for Transportation Facilities through/along the Wetland

6. **<u>During Construction Impacts</u>:** Use construction techniques and that minimize the effects of site alteration:
   a. Consider completing works during winter/frozen conditions, if practical
   b. Employ best management practices for erosion and sediment control
   c. Identify “no build” sensitive wildlife periods

Design Objectives for Transportation Facilities through/along the Wetland

7. **<u>Net Environmental Gain</u>:** Strive for a result that improves the natural environment:
   a. Wetland augmentation
   b. Improved water quality
   c. Improved habitat
   d. Improved connectivity

Potential Cross-Sections: Natural Areas



Note: Utility need to be relocated along Lester Road, but are not proposed on the Airport Parkway

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Stakeholder Opportunities
Study Schedule
Next Steps

Opportunities for Stakeholder Involvement

- Three Study Consultation Groups
  - Agency Consultation Group
  - Business Consultation Group
  - Public Consultation Group
- Individual Stakeholder Meetings
- Three Public Open Houses
- City's Website

Project Schedule

• Project Start-up:	September 2014
• CGM's #1	December 2014
• Public Open House #1 (Preferred Solution)	January 2015
• CGM's #2	May 2015
• Public Open House #2 (Preferred Design)	June 2015
• CGM's #3	January 2016
• Public Open House #3 (Recommended Plan)	February 2016
• Transportation Committee and Council	April 2016
• ESR on Public Review	June 2016

Next Steps

- On-going Existing Conditions Inventories
- Public Open House #1 (Preferred Solution)
- Develop and Evaluate Alternative Designs

Group Discussion