

## 8. IMPROVEMENT PROGRAM IMPLEMENTATION

### 8.1 Program Cost

The capital cost of installing all of the preferred Riverside Drive solutions is summarized as follows by type of solution. More detailed cost tables are attached in **Appendix B** of this ESR:


#### EXHIBIT 8.1 – TOTAL CAPITAL COST ESTIMATES

Type of Solution	Capital Cost Estimate	%age of Total Capital Cost
Nodes (37 locations) including pavement works & streetscaping (not including signals & lighting), plus Traffic Circles	\$1,619,000	10.0%
Road Widening / Restoration	\$1,085,000	6.7%
Overlay existing road surface	\$ 984,000	6.1%
Road Reconstruction Curb-To-Curb	\$3,695,000	23.0%
Sidewalk Reconstruction – South Side	\$ 719,000	4.5%
Bike Lane Construction	\$1,424,000	8.8%
New Sidewalk – North Side	\$ 244,000	1.5%
Pedestrian Promenade (Huron Church Road to Lincoln Avenue)	\$2,163,000	13.5%
Viewpoints at Promenade	\$ 180,000	1.1%
Traffic Signals & Street Lighting at Nodes (including accessories)	\$ 781,000	4.8%
Miscellaneous Civil Works (storm drainage, hydro pole relocation, hydrant relocation, contingencies)	\$3,213,000	20.0%
<b>TOTAL ESTIMATED CAPITAL COST</b>	<b>\$16,107,000</b>	<b>100%</b>

*Note: rounding has occurred*

This capital cost estimate does not include modifications that may be required to some south edges of riverfront parkland totaling about 2.8 hectares along Riverside Drive where road improvements would encroach into park features. However, this cost is not expected to be high compared to other improvements, except in the case of the Pedestrian Promenade extension north of the current road edge into areas of steep slopes and intense park landscaping in the core from Huron Church Road to Lincoln Road.

It must again be noted that the Pedestrian Promenade is part of the Central Riverfront Implementation Plan (CRIP) adopted by City Council in September 2000. Since then, the Windsor Official Plan has been amended to include the CRIP as civic policy in Official Plan Volume II Secondary Plans & Special Policy Areas, Section 1.13. The cost of this CRIP works and other parkland encroachment resulting from the Riverside Drive improvements will not be known until the nature and extent of associated park modifications is developed in the detailed design stage.



As noted in Section 7 of this ESR, the preferred design solution for Riverside Drive can be accommodated within the existing road right-of-way with only minor private property acquisition requirements at the following locations:

1. Average 2 m strips totalling about 533 m<sup>2</sup> in the Devonshire Road and Walker Road areas from property owned by Ford of Canada and Hiram Walker & Sons Limited (see Sheet 10 in **Appendix A**);
2. A strip of property approximately one (1) metre wide and 90 m<sup>2</sup> in size from municipal address 4590, 4620 and 4670 Riverside Drive to include the new N-1 node at Pillette Road (see Sheet 14 in **Appendix A**);
3. A small 25 m<sup>2</sup> triangle from the front edge of municipal address 7180 Riverside Drive at Isabelle Place (see Sheet 18 in **Appendix A**);
4. A strip approximately one (1) metre wide and 58 m<sup>2</sup> in size from the south edge of municipal address 7380 and 7350 Riverside Drive and a small portion of the south edge of the lot to the west (see Sheet 19 in **Appendix A**); and
5. An approximately 10 m<sup>2</sup> triangle from the northwest corner of municipal address 8115 Riverside Drive (see Sheet 20 in **Appendix A**).

The cost to the City of acquiring easements, acquisitions or other forms of conveyance from these affected properties will be the subject of further negotiations, and involve a total of about 716 m<sup>2</sup> of private property. Using a preliminary property cost factor of between \$540 and \$1075 per square metre (\$50 – \$100/square foot), acquisition of private property for the preferred improvement program is expected to cost in the range of \$390,000 and \$770,000 depending on final appraisals and negotiations.

All other locations where the road improvements encroach beyond the existing road right-of-way occur abutting public parkland, measuring only about **2.8 hectares of parkland** encroached along the entire section of the Drive east of Strabane Avenue.

Maintenance requirements resulting from the preferred improvement program are expected to be similar to existing practices, with no need for different equipment (i.e. snow clearing, street cleaning) or increase in existing maintenance costs.

## **8.2 Improvement Program Staging**

The Riverside Drive improvement program is proposed to be implemented in five stages as shown on Exhibit 8.2 and summarized as follows:

**Stage 1:** Riverdale Avenue to Lauzon Road exhibiting poor surface conditions and high collision incidents and pedestrian crossings, where temporary safety improvements have been installed, and where the new Riverside Drive bike lanes can be linked with the existing Ganatchio Trail, extending the bikeway to Lauzon Road;

**NOTE:** Stage 1 of the improvement program must begin construction within five (5) years of the filing of the Notice of Completion of this ESR in the public record. If construction does not begin within this timeframe, the City will be required to conduct a review of the project to ensure it is still valid given the current planning context. This review would be reported in an ESR Addendum and placed on the public record where a Part II Order can be requested. After this initial five year period, subsequent staged construction can occur at any time without the need for project reviews or ESR Addendum.

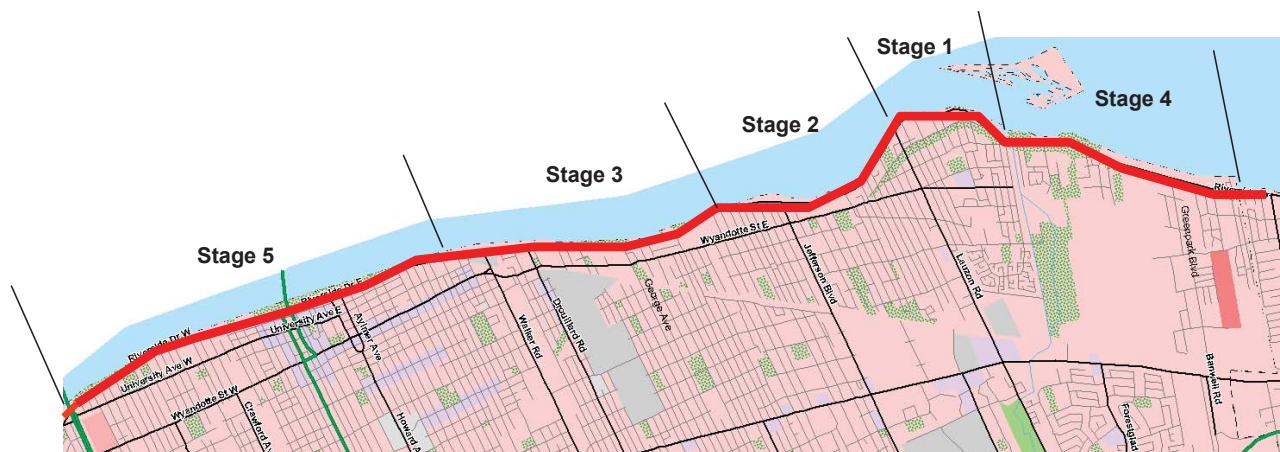
**Stage 2:** Lauzon Road west to Coventry Gardens at Ford Blvd. to improve poor to fair roadway surface conditions, improve pedestrian crossing safety, introduce north side sidewalks at parkland locations and extend the Riverside bikeway further west to riverfront attractions;

**Stage 3:** Ford Blvd to Lincoln Road that includes sections in poor physical condition, where intersection improvements (Strabane, Walker) can encourage traffic diversion and where the Riverside bikeway can be extended further west to link with the riverfront Recreationway as a continuous route;

**Stage 4:** Riverdale Avenue east to the east City limit to complete the easterly improvement of Riverside Drive; and

**Stage 5:** Lincoln Road west to Rosedale Avenue to complete the westerly improvement of Riverside Drive along the riverfront parkland, including construction of the Pedestrian Promenade.

## EXHIBIT 8.2 – PROPOSED IMPLEMENTATION STAGING



With the possible exception of Stage 1 from Riverdale to Lauzon, the remaining implementation stages can be divided into an appropriate number of multi-year construction phases based on requirements of the City, the affected residents, Windsor Utilities, other stakeholders and the construction contractor. Details of this more detailed construction staging will be determined during the detailed design and tendering processes.

### 8.3 Urban Design Guidelines

The inclusion of urban design improvements into the overall Riverside Drive improvements is an integral part of the improvement program. Improvements will be made not only for functional transportation reasons, but also to enhance the visual quality of Riverside Drive as a Scenic Drive and Civic Way. Each of the 38 nodes to be added to Riverside Drive provide opportunities for urban design enhancements in the form of visual treatments (i.e. coloured asphalt or concrete), streetscaping with vegetation, signage, public art and vista enhancements, and through the built form of development and redevelopment projects along the Drive. Actual urban design features will be prepared for each node and the pedestrian promenade as part of the staged detailed design

process, using a series of design guidelines provided in the project record **under separate cover**, and including the following topics:

Streetscape Design Guidelines:	Built Form Design Guidelines:
<ol style="list-style-type: none"> <li>1. Streetscape Material</li> <li>2. Ramps and Stairways</li> <li>3. Lighting</li> <li>4. Street Trees and Horticultural Plantings</li> <li>5. Pedestrian and Vehicle Wayfinding (Signage)</li> <li>6. Street Furniture</li> <li>7. Nodes and Linkages</li> <li>8. Public Art</li> <li>9. Environmental Sustainability</li> <li>10. Barrier Free Access</li> <li>11. Above Ground Utility Infrastructure</li> </ol>	<ol style="list-style-type: none"> <li>1. Building Height and Massing</li> <li>2. Building Orientation and Site Layout</li> <li>3. Building Facade and Ground Floor Design</li> <li>4. Building Rooftops and Rooflines</li> <li>5. Building Materials</li> <li>6. Building Service Areas</li> <li>7. Parking Areas</li> <li>8. Signage</li> </ol>

## 8.4 CEEA Requirements

### 8.4.1 FEDERAL TRIGGERS

As reported previously in this ESR, there are only two possible elements of the preferred Riverside Drive improvement program that could require, or trigger involvement from the Canadian Environmental Assessment Act (CEAA):

1. widening of the Little River bridge between Riverdale Avenue and Bertha Street to facilitate sidewalk improvements/additions and on-road bike lanes; and
2. crossing of the CN spur line with a new north sidewalk on Riverside Drive between Lincoln Road and Devonshire Road.

Both of these conditions were reported to the appropriate CEAA and other federal agencies with the following responses:

- **Department of Fisheries and Oceans** - Based on the information received regarding this project, the Department of Fisheries and Oceans will have no concern over this project and will not have a trigger under CEAA requiring the issuance of a Fisheries Act authorization. This is based on the understanding that the undertaking does not have any component that will be in water, thus possibly affecting fish habitat. This requires that any change to the Little River bridge remain a clear-span, even if widened to accommodate an added sidewalk or on-road bike lanes. Also, the proposed works are at least 30 meters from the Detroit River.<sup>1</sup>
- **Transport Canada** – Widening the clear-span crossing of the Little River Bridge will trigger Transport Canada's involvement under CEAA, requiring a Navigable Waters Protection Act permit since the Little River is a navigable waterway. Given that this bridge widening is not included in the five year capital budget of the City of Windsor, and it falls within Stage 4 of the improvement program recommended in Section 8.2 of this ESR, it is recognized that a permit from Transport Canada will be required at the detailed design stage.<sup>2</sup>

<sup>1</sup> e-mail from Joe de Laronde, DFO, June 6, 2006 and from Norm Smith, DFO, May 23, 2006  
<sup>2</sup> e-mail from Cathy Hainsworth, CEAA, May 19, 2006

- **Transport Canada** – Extending a north sidewalk over the CN spur between Lincoln Road and Devonshire Road on Riverside Drive is not viewed as a major issue by Transport Canada, and the agency will have no role in reviewing or approving the sidewalk extension so it does not create a CEAA trigger.<sup>3</sup>

#### 8.4.2 FIRST NATIONS

In accordance with new EA requirements and protocols in Ontario for contacts with First Nations in any Municipal Class Environmental Assessment, notification of this EA and public meetings was sent to Mr. Bill Messenger and Mr. Dave White as identified representatives of the Walpole First Nations. Telephone conversation follow-ups were conducted between both individuals and the EA consultant team project manager (Don Drackley), with the main topic of interest being early-history archaeological findings from the EA Stage 1 Archaeological Inventory and other inventories conducted recently along the Riverside Drive riverfront. First Nations interests will be further collected in Stage 2 archaeological inventories as part of the detail design stage.

In 2006, the City of Windsor also contacted the Six Nations of the Grand River Territory asking if this First Nation community has any interests in four ongoing EA projects in the City, including the Riverside Drive project. The response from Six Nations was that they were not in a position to review or provide response to these EAs at this time (letter from Jo-Ann Greene to Fahd Mikhael dated June 19, 2006), and no subsequent response from Six Nations was received.

A notice of the project and names of First Nations contacts was also sent to the following provincial and federal agencies to confirm there are no other First Nations communities with an interest in the Riverside Drive study area:

1. The Ontario Secretariat for Aboriginal Affairs
2. Indian and Northern Affairs Canada – Specific Claims Branch
3. Indian and Northern Affairs of Canada – Litigation Management and Resolution Branch
4. Indian and Northern Affairs of Canada – Comprehensive Claims Branch
5. Ministry of the Attorney General – Aboriginal Legal Issues Office

### 8.5 Program Monitoring and Impact Mitigation

#### 8.5.1 TRAFFIC CONDITIONS

Upon implementation of the staged traffic calming and diversion measures recommended along Riverside Drive, the City of Windsor will monitor traffic conditions on the Drive with traffic counts and speed surveys at appropriate times to identify what affects the measures have had on traffic conditions compared to the conditions recorded in 2005/06 during the preparation of this EA. If traffic conditions after program implementation remain unchanged, or worsen in terms of volumes and speeds, the City will have the option of either introducing additional, more effective traffic calming measures suitable to Riverside Drive as a Scenic Drive, further upgrade the level-of-service on Wyandotte Street as the primary alternative route and/or maintain

<sup>3</sup> e-mail from Monique Mousseau, Transport Canada, June 6, 2006



the existing program and continue to monitor for changes in travel patterns and traffic characteristics.

### 8.5.2 IMPACT MITIGATION AND COMMITMENTS

The preferred solutions for Riverside Drive improvements have been conceptually designed and contained within the existing road right-of-way, except where narrow strips of property may be required from the relatively small amount of public parkland and private property identified in the preceding Section 8.1 of this ESR. The final confirmation of these property impacts will be made at the detailed design stage of program implementation. Specific protection measures for both the socio-cultural and natural environment will be further developed for construction, operation and maintenance of an improved Riverside Drive, in consultation with affected stakeholders and property owners.

During detailed design, preliminary designs will be refined to develop detailed construction drawings and specifications. At this stage, the City of Windsor will generate, assess and evaluate detailed design alternatives and determine specifically how the preferred Riverside Drive improvement program will look. This will be where the details of specific environmental protection measures will be put into the design drawings and into construction contract documents. The design and specifications will reflect the environmental commitments and mitigation carried forward from this EA to the preliminary design and finalized in the detailed design for the following elements of the preferred improvement program:

- **Street Trees** – Direct impacts on and removal of between 8 and 11 existing street trees identified in this ESR will be confirmed at the detailed design stage, including arrangements for tree replacements, usually at a rate of two for one. There may also be possible conveyance of private property to allow sidewalk re-alignment around impacted trees wherever possible. All further street tree impact assessments will be conducted by a qualified arborist, including during the construction stage.
- **Property Acquisition** – Strips of abutting private property required beyond the existing road right-of-way will be limited only to those reported in Section 8.1 of this ESR. All other locations where the road improvements encroach beyond the existing road right-of-way occur abutting public parkland, thereby not requiring any property acquisition. In these cases, any removal of parkland landscaping or other features will be replaced as part of the road reconstruction.
- **Traffic Impacts at Nodes** – The three types of nodes included in the improvement program represent relatively subtle forms of traffic calming, expected to have a moderate but definite impact on vehicle speed, and associated traffic volumes. The pedestrian activated N-2 nodes are expected to interrupt the progression of traffic on days with high pedestrian crossing demands, focused mainly in the downtown area west of Lincoln Avenue for the benefit of residents living in the neighbourhoods to the south, and tourists visiting the downtown and riverfront. The performance of these nodes will be carefully monitored as improvement construction is staged to ensure that an adequate traffic level of service and progression is maintained along Riverside Drive, while at the same time slowing the pace of traffic and encouraging through traffic to use alternatives routes. Similarly, emergency service providers will monitor response times along Riverside Drive to ensure their minimum requirements continue to be met.
- **Intelligent Transportation Systems** – The City will continue to improve traffic network operations through the City, and on key specific routes such as Riverside Drive, through the implementation of appropriate Intelligent Transportation Systems technologies designed to improve transportation and mobility. The use of enhanced communication technologies such as speed, traffic and environmental condition displays will be used where

appropriate and effective on Riverside Drive to provide motorists with more information and control over their driving experience along the Drive.

- **Impacts on Private Landscaping within the Public Right-of-Way** – There are a number of locations along the residential sections of Riverside Drive where private landscaping and driveway treatments (i.e. interlocking driveway blocks, parking surfaces) have encroached into the road right-of-way. During preliminary and detailed design of the staged improvement program, all attempts will be made to avoid direct impacts on private property, but while still maintaining and using the public road right-of-way wherever required by the new road cross-section established for this project. Where encroachment has occurred into the public right-of-way and road cross-section, the involved landscape features, barriers, walls and parking surfaces will have to be removed from the public right-of-way, and with no mitigation or replacement of the features removed provided by the City of Windsor.
- **Impacts on Heritage Features** – As reported in this ESR, the preferred improvement program for Riverside Drive is able to avoid any direct or indirect impact on any heritage structures, features or homes along the entire length of Riverside Drive, as identified in the Heritage Impact Assessment provided under separate cover. The preliminary design and detailed design stages will reconfirm this conclusion.
- **Impacts on Archaeological Resources** – Archaeological sites have been found and registered along the north side of Riverside Drive in proximity to public parkland. Based on recommendations of the Stage 1 Archaeological Assessment, areas of abutting parkland that are impacted by the new road cross-section will be test-pitted to determine whether archaeological resources exist below the surface. Beyond the parkland, most other sections of Riverside Drive have been heavily impacted by road construction and servicing, and this is expected to have damaged or destroyed any archaeological resources in these areas.
- **Impacts on the Character of Riverside Drive** – Some members of the public have suggested that improving, widening and/or realigning Riverside Drive would adversely impact the cultural character of the road, especially in the primarily residential section east of Strabane Avenue. This character is formed by three elements; 1) a curving roadway alignment that historically followed the edge of the Detroit River, 2) one lane of traffic per direction and 3) provision of street trees, narrow boulevard spaces and south side sidewalks along much of the Drive.

Most of this Riverside Drive character is currently overshadowed by a poor roadway surface with severe cracking, serious rutting and poor rideability at a level that affects vehicle manoeuvring and public safety. The preferred Riverside Drive improvement program provides an opportunity to upgrade the appearance, safety and overall quality of the Drive, all while retaining the basic elements of the road's character. It is recognized that adding bike lanes to the roadway surface introduces a new element into the road character. However, this new element is expected to compliment the travel capacity of the Drive for both motorized and non-motorized travel modes, and be compatible with the established residential character on the Drive.