

## 7. ALTERNATIVE DESIGN CONCEPTS FOR THE PREFERRED SOLUTION

Since the primary study area established for this EA is the Riverside Drive corridor, alternative ways of designing the improvement features for the preferred solution described in Section 6 are somewhat limited, compared to other types of roadway EA projects that involve, for example, alternative routes or widening options. For Riverside Drive, the alternative design concepts focus on specific locations and features where more than one reasonable mitigation options to localized conditions, impacts and

Alternative design concepts in this ESR are described in the context of a complete improvement program for Riverside Drive, extending the entire 16 km length from Rosedale Avenue to the east City boundary. For ease of presentation, and in response to the various characteristics of the Drive and its abutting land use, the design concepts are described in five program sections:

1. Rosedale Avenue to Lincoln Road
2. Lincoln Road to Strabane Avenue
3. Strabane Avenue to Lauzon Road
4. Lauzon Road to Riverdale Avenue
5. Riverdale Avenue to East City Limit

### 7.1 Program Section 1: Rosedale Avenue to Lincoln Road

This most westerly section traverses the Windsor downtown edge and fringe areas along the riverfront parkland. Two Special Streetscape Improvement Areas, namely the West End and Downtown, are included in this section. As such, the focus of Riverside Drive improvements within Program Section 1 is on the streetscape, and more particularly the recommendations of the City's Central Waterfront Implementation Plan (CRIP), including to:

*“create direct pedestrian connects across the street from the City Centre and adjacent neighbourhoods to the to the riverfront.”*

This provision of improved pedestrian access across Riverside Drive is addressed with the first improvement element in Section 1, namely the introduction of special nodes at strategic Riverside Drive intersections and mid-block locations

Design concept plans for sections of Riverside Drive along the entire length of the primary study area are included in **Appendix A** of this ESR document.

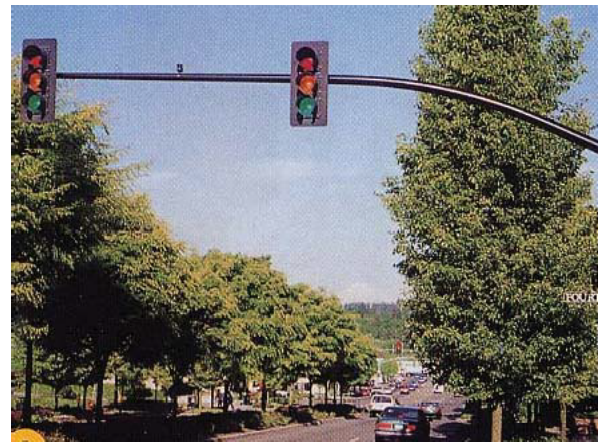
#### 7.1.1 NODES

Nodes are preferred on Riverside Drive where there is a significant opportunity for pedestrian activity and some form of special design treatment, including improved pedestrian crossing. There are three types of nodal treatment proposed that in most cases can be located within the existing road right-of-way. Where

additional property is required to accommodate nodes. It will only involve very narrow public property along some minor portions of selected riverfront parkland. Because one primary purpose of each node is to offer an improved pedestrian crossing capability on Riverside Drive, it is important that the location of nodes is dictated by the type of pedestrian crossing treatment being provided to ensure maximum safety, with minimum risk of liability to the City of Windsor

**N-1 Primary Node** Located only at major signalized intersections or mid-block pedestrian signal locations, N-1 nodes include a raised and coloured pavement surface across the intersection as a traffic calming feature, and to enhance the visibility and special character of these nodes. Landscaping, public art, information signage and other features that do not require Environmental Assessment approval will be added to each N-1 node based on the streetscape design guidelines developed for Riverside Drive (see Section 8.3) in the final installation plans. Exhibit 7.1 shows an N-1 node concept located on the westerly section of Riverside Drive, with a pedestrian promenade on the north side of the Drive as planned in the CRIP plan, and the existing sidewalk on the south side. Some N-1 node locations have a recommended sidewalk on both sides of the Drive as explained further in this program.

**N-2 Secondary Node** Located only with intersection pedestrian signals (IPS) or mid-block locations as shown at right that are pedestrian activated, N-2 nodes provide pedestrian crossings in key locations along the Drive, often associated with the location of riverfront parkland. They are also recommended in locations where they announce a change in character along the Drive, especially at major side-street intersections. Mid-block nodes are also located to serve pedestrian crossing to longer expanses of parkland where pedestrian may be expected to “jay-walk”, rather than walk an extra distance to cross at an intersection. Exhibit 7.2 shows the design concept of a N-2 node with a coloured surface treatment and marked crosswalks.

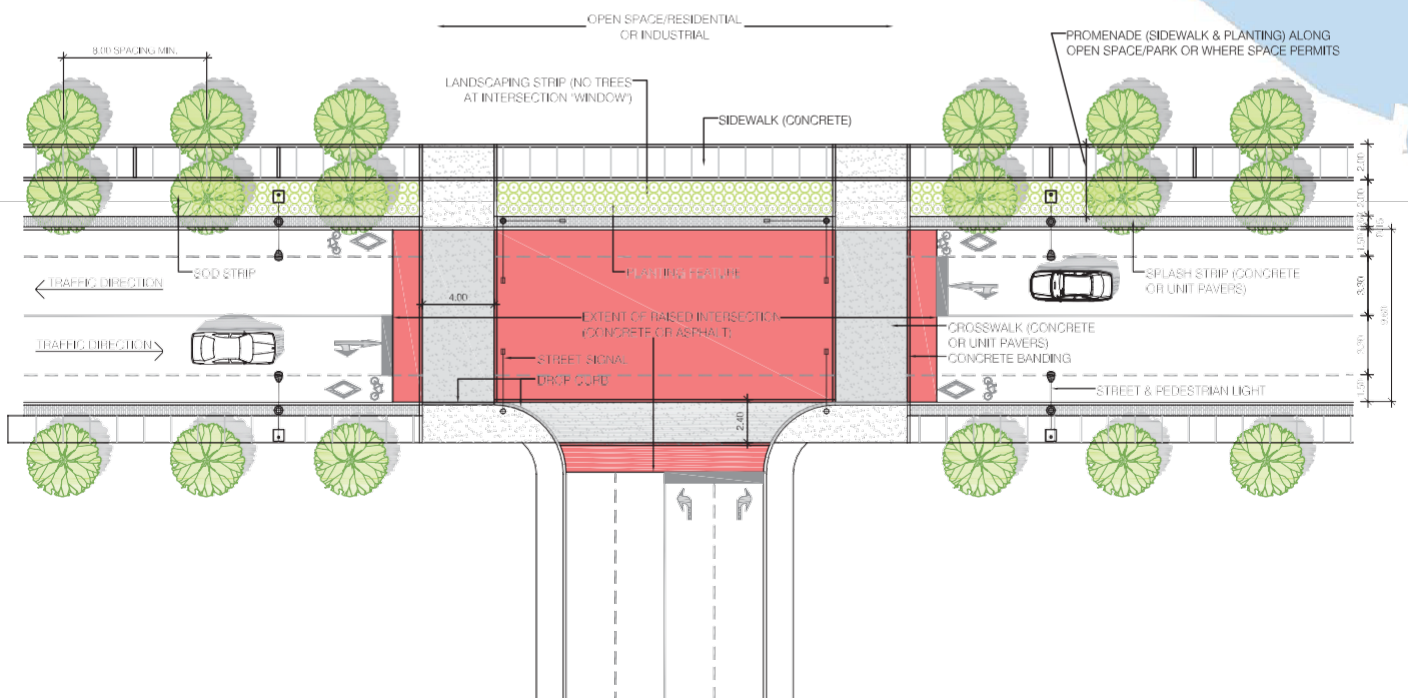


An Intersection Pedestrian Signal (IPS) is a traffic signal designed solely to assist pedestrians in safely crossing a major roadway. An IPS only regulates the traffic on the main street. Vehicles approaching an intersection from a side street are controlled by the STOP signs. At an IPS both motorists and pedestrians have responsibilities to ensure public safety. In Windsor, an IPS can be pre-empted by a Fire Department response vehicle similar to traffic signal pre-emption in order to reduce emergency response time delays.

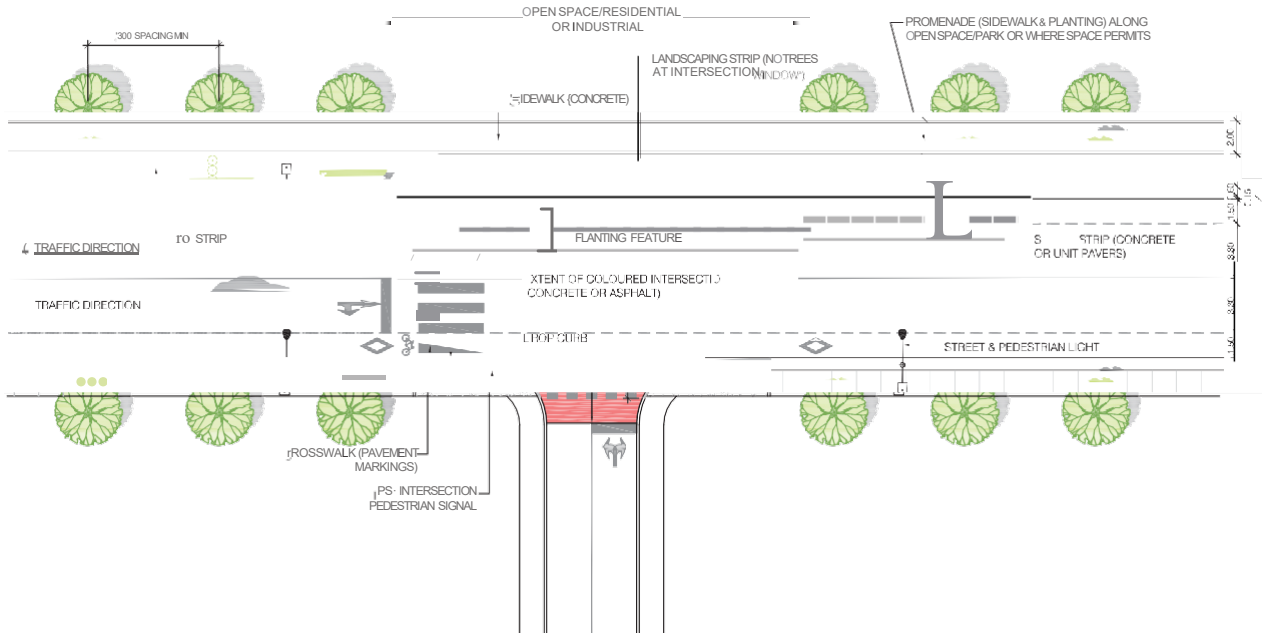
**N-3 Tertiary Node:** Located at locations with no existing stop controls and crossing pavement markings, N-3 nodes are provided with a centre median refuge island to facilitate safer pedestrian crossings as shown on Exhibit 7.3. These nodes will not only serve to increase pedestrian crossing and accessibility, but will also include access to additional pedestrian features such as stairways to riverfront parkland, the Pedestrian Promenade, prominent vista enhancement, public art and public information. They will also function as visual and physical traffic calming features where installed.

EXHIBIT 7.1 – N-1 NODE CONCEPT AT SIGNALIZED INTERSECTION

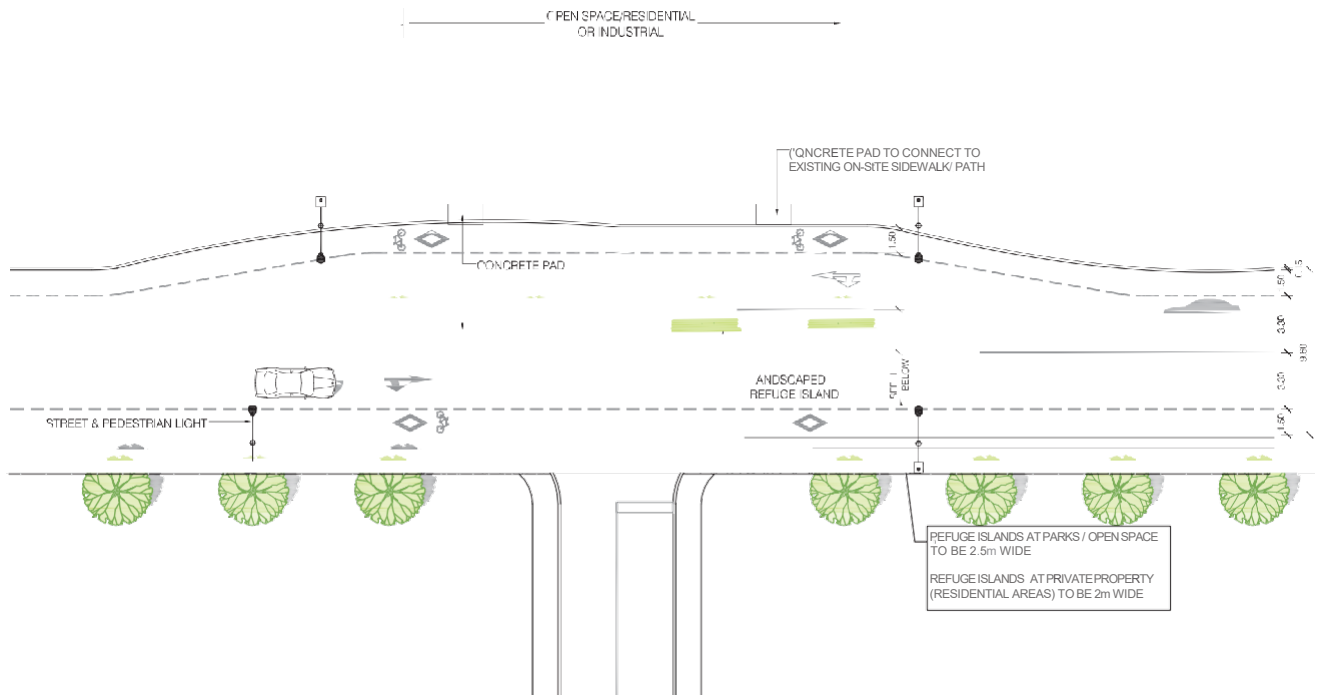
Nodes in Program Section 1 are recommended at the locations listed next. Note that six (6) new pedestrian activated signals and one new full signal are required to serve safe pedestrian crossings along Riverside Drive at the designated nodes in Section owing largely to the extensive riverfront parkland system and associated attractions. Also note that the with an asterisk (\*) are recommended as key entry points to the public parkland with recommended crosswalks in the Central Riverfront Implementation Plan.



### EXHIBIT 7.2 – N-2 NODE AT INTERSECTION PEDESTRIAN SIGNAL



### EXHIBIT 7.3 – N-3 NODE CONCEPT WITH MEDIAN REFUGE



Location	Existing Street Control Type	Node Type & Associated Crossing Requirement
Rosedale Avenue	None	N-2 requiring Intersection Pedestrian Signal (IPS) for stop control
Huron Church Road †	Signal	N-2
Patricia Road	None	N-3
California Avenue	None	N-3
Randolph Avenue	None	N-3
Ernest Atkinson Park between Rankin Ave. and Bridge St.	Mid-block	N-2 requiring mid-block pedestrian signal
Campbell Avenue *	None	N-2 requiring IPS pedestrian signal
Cameron Avenue	None	N-2 requiring IPS pedestrian signal at existing trail crossing
Crawford Avenue *	None	N-2 requiring full signal **
Caron Avenue *	None	N-2 requiring IPS pedestrian signal
Church Street *	Signal	N-
Ferry Street *	Signal	N-2
Ouellette Avenue *	Signal	N-
Between Goyeau Street and McDougall Avenue *	None	N-1 requiring mid-block pedestrian signal
Glengarry Avenue *	Signal	N-
Louis Avenue	None	N-3
Parent Avenue *	PS	N-2 with existing IPS pedestrian signal
Pierre Street *	None	N-2 requiring IPS pedestrian signal
Moy Avenue *	None	N-3
Lincoln Road *	PS	N-2 with existing IPS pedestrian signal

\* intersection recommended for pedestrian crossing improvement in CRIP plan

\*\* Note An IPS was originally considered for installation at the Riverside/Crawford N-2 node. However, the connection provided to the riverfront trail and park system in location to a number of high density residential building at and near Crawford, including the Devonshire Senior's Residence, warrants the addition of full signals at the Crawford node for pedestrian crossing rather than traffic control reasons.

## Key Impact Considerations

Positive Impacts	Negative Impacts
<p>Traffic delays will slow average traffic speed on Riverside Drive.</p> <p>Any driver frustration from delays may encourage use of alternative routes.</p> <p>Nodes provide opportunities to enhance streetscape quality.</p> <p>Nodes enhance pedestrian crossing safety.</p> <p>Fire Department can pre-empt traffic signals and Intersection Pedestrian Signals.</p> <p>No private property acquisition required.</p>	<p>Pedestrian activation of N-2 nodes will add delays to traffic flow on Riverside Drive, especially during high pedestrian activity events and seasons (i.e. summer weekends).</p> <p>Raised N-1 intersections will slow emergency vehicles to approximately 25 km/h through the intersection.</p> <p>Existing seniors residence pedestrian crossing between Bridge Street and Campbell Avenue should be removed and replaced with the N-2 node at Campbell.</p>

### 7.12 RIVERSIDE DRIVE PEDESTRIAN PROMENADE

The Riverside Drive VIP EA provides a method of implementing the planned Riverside Drive Pedestrian Promenade as recommended in the Central Riverfront Implementation Plan (CRIP), although EA approval is not required if constructed as a stand-alone project. Two types of promenade character, formal and passive, are planned using four design conditions as summarized next:

Character	Location	Design Condition
Formal Urban	1. Caron Avenue to Parent Avenue	Extending 6.1 m north of the north edge-of-curb into the parkland with a 2.6 m boulevard, 2 m sidewalk and 1.5 m landscaped strip, with no multi-use trail.
Passive Residential	2. Cameron Avenue to Caron Avenue	Topography does not accommodate full north side promenade extension. Promenade width is 4.7m to 5.2 m north of north edge-of-curb with 2.6 m boulevard, 1.5-2.0 m sidewalk and 0.6 m transition area. No multi use trail.
Passive Residential	3. Huron Church Road to Cameron Avenue	Promenade meanders from edge of curb 10.35 m north into the parkland with a 2.6 m boulevard, 4.5 m multi-use trail and 3.25 m transition fill area with railing.
Passive Residential	4. Parent Avenue to Lincoln Road	Promenade combines into the riverfront pedestrian/Recreationway (off-road trail) at Lincoln Road where the Recreationway moves to the south side of Riverside Drive and continues east as the existing on-road bike lanes. Up to Lincoln, the promenade extends 7.1 m north of the north edge-of-curb into the park with a 2.6 m boulevard, 2.0 m sidewalk and 2.5 m asphalt trail.