

Character Type	Predominant Land Use	Typical Riverside Drive Cross-Section	Extent
Civic / Single Sided Residential C/SSR	Public parkland and associated civic spaces predominant along north side of Riverside Drive, with abutting low to high density residential on the south side with site-specific institutional and commercial uses.	Four travel lanes with on-road bike lanes, to two-lane sections with no bike lanes and limited sidewalks. Off-road multi-use trail on north side through parkland from Huron Church Rd. to Lincoln Rd.	Rosedale Avenue east to Crawford Avenue Glengarry Avenue east to Lincoln Road Pratt Place east to Jos Janisse Avenue
Civic / Single Sided Residential with Trail C/SSRwT	C/SSR with off-road multi-use trail on south side (Ganatchio Trail) separating residential.	Two travel lanes with sidewalks one or both sides	Brumpton Park east to east of Flora Avenue Aberdeen Avenue east to Clover Avenue
Civic / Double Side Residential C/DSR	Abutting residential as predominant land use along both sides of Riverside Dr. interspersed with public parkland on north side.	Two travel lanes with no turn lanes or on-road bike lanes, with some sidewalks.	Jos Janisse Avenue east to Lauzon Road
Double-Sided Residential DSR	Exclusively low to high density residential abutting both sides of Riverside Dr.	Two travel lanes with no bike lanes and some sidewalks.	Lauzon Road east to Brumpton Park
Double-Sided Residential with Trail DSRwT	DSR with south side property separated by off-road multi-use trail (Ganatchio Trail).	Two travel lanes with no bike lanes and single side sidewalks (south side).	East of Flora Avenue to Beachview Drive Clover Avenue east to Tecumseh border
Civic / Business/ Entertainment C/B/E	Downtown/Downtown BIA with public parkland and civic spaces on the north side, and downtown commercial, mixed use and entertainment uses on the south side.	Four travel lanes with turn lanes at signalized intersections, and with multi-use off-road trail through parkland on north side of Riverside Drive.	Crawford Avenue east to Glengarry Avenue
Industrial / Business I/B	Predominant land use on both sides of Riverside Dr. with industrial, business and waterfront port land uses.	Two to four travel lanes with on-road bike lanes and sidewalks.	Lincoln Road east to Pratt Place West of Sandpoint Park

City of Windsor
RIVERSIDE DRIVE VISTA IMPROVEMENT PROJECT

Class Environmental Assessment



3.2 Secondary Study Area

The secondary study area includes University Avenue and Wyandotte Street, both east-west roads that run parallel to Riverside Drive. Unlike the Scenic Drive designation assigned to Riverside Drive in the Windsor Official Plan, Wyandotte Street and University Avenue are designated Class II Arterials, and as such provide much different operational characteristics and roles in the City’s roadway network compared to Riverside Drive, as highlighted in Exhibit 3.2:

EXHIBIT 3-2 – COMPARISON OF CLASS II ARTERIAL / SCENIC DRIVE CHARACTERISTICS

Characteristic	Class II Arterial (i.e. Wyandotte Street, University Avenue)	Scenic Drive (i.e. Riverside Drive)
Traffic Volume	High	Moderate
Planning Capacity	800 v/l/hr*	400v/l/hr*
Traffic Type	Passenger and commercial for intra-city travel	Predominantly passenger traffic
Traffic Speed	Moderate	Low to moderate
Basic Lane Configuration	2-4 lanes undivided	2-4 lanes undivided
Right-of-Way Width	Max. 30 m	20-24 m

** vehicles/lane/hour – note that the capacity of Riverside Drive was lowered in the Windsor Area Long Range Transportation Study to 400 v/l/hr as a reflection of its Scenic Drive role.*

Wyandotte Street in particular provides an alternative route to Riverside Drive from Huron Church Road in the west to Riverdale Avenue in the east, and is being further extended east to Florence Avenue in the short term, and then east to Bellagio Drive as part of the East Riverside community development. Wyandotte Street is characterised by predominantly mixed-use development from east of the University of Windsor at Huron Church Road, through the city centre to Walker Road. East of Walker Road, land uses adjacent to Wyandotte Street become industrial and business in nature, giving way to residential with strips of commercial and mixed-use development centred around Pillette Road, St. Louis Avenue, St. Rose Avenue and Lauzon Road.

Like Wyandotte Street, University Avenue is dominated by the University of Windsor at its western end and changes to mixed-use development after a section of residential land uses from Sunset Avenue to Bridge Avenue. Through the city centre, land use adjacent to University Avenue is primarily mixed-use, with institutional uses around City Hall east of Goyeau Street, and residential uses east of the downtown to the end of University Avenue at Pierre Avenue.

3.3 Existing Transportation Conditions

3.3.1 STREET NETWORK

Exhibit 3-3 provides a summary of the primary characteristics of Riverside Drive, University Avenue and Wyandotte Street within the study area boundaries. Additional discussion follows the table.

EXHIBIT 3-3: EXISTING ROADWAY CHARACTERISTICS

	Riverside Drive	University Avenue	Wyandotte Street
Road Classification	Scenic Drive	Class II Arterial	Class II Arterial
Direction	Two-way	Two-way	Two-way
Number of Travelled Lanes	2-4	2-4	2-4
Pavement Width – metres	8.0 (2 lanes)	Varies	Varies
R.O.W. Width metres (Approx)	13.4 – 26.1	20 – 30	20 – 24.4
Posted Speed – km/h	50	50	50
On-street parking	No	Yes (selected locations)	Yes (selected)
Transit Service	Yes	Yes	Yes

* see Section 4.1 for additional information on existing Riverside Drive right-of-way (ROW)

As with the land use characteristics of Riverside Drive, the transportation character of Riverside Drive varies greatly along the 16 kilometre study area route, including the following general features as summarized in Exhibit 3-4 and shown in the following photographs.



Riverside EB: Huron Church to Crawford



Riverside EB: Bruce to Moy

EXHIBIT 3-4: RIVERSIDE DRIVE CHARACTERISTICS

Riverside Drive Sections	Travel Lanes	On-Road Bike Lanes	Off-Road Mixed Use Trail	Boulevard	Sidewalk	Curbs	Centreline Type	Notes
Rosedale to Huron Church	2	No	No	No	Both	Barrier	Double yellow	2-lane from University to Huron Church
Huron Church to Crawford	2	Yes	Yes	No	Both	Barrier	Single yellow	North side trail, no bike lane McKay to Cameron
Crawford to Bruce	2	No	Yes	No	South only	Barrier	Double yellow	
Bruce to Moy	4	No	Yes	No	Both/south only	Barrier	Double yellow	Single yellow from Aylmer
Moy to Lincoln	4	No	Yes	No	South only	Barrier	Single yellow	Off-road trail ends
Lincoln to Devonshire	4	Yes	No	No	South only	Barrier	Single yellow	
Devonshire to Strabane	2	Yes	No	No	Both/south side	Barrier	Single yellow	Sidewalks both sides Devonshire - Montreuil
Strabane to Lauzon	2	No	No	Narrow <1m, wide >2m, none	South only	Barrier partial	Single yellow	
Lauzon to Riverdale	2	No	No	No	South only	Rolled V-type	Twin double yellow	
Riverdale to City Limit	2	No	Yes	No	No	Rolled V-type	Double yellow	Trail parallel to south side



Riverside EB: Lincoln to Devonshire



Riverside EB: Devonshire to Strabane



Riverside EB: Strabane to Lauzon



Riverside EB: Lauzon to Riverdale



Riverside EB: Riverdale to City Limit

The main features to note from Exhibit 3-4 and the accompanying photos are the changes in the form and function of Riverside Drive from section to section. There are also discontinuities in associated sidewalks, on-street bicycle lanes and off-street multi-use trails.

There is also a general lack of boulevards and separation of pedestrians from traffic, except at the locations where the Ganatchio off-street multi-use trail provides an alternative.

3.3.2 TRANSIT

Transit Windsor operates three (3) bus routes on portions of Riverside Drive, as well as on University Avenue and Wyandotte Street in the secondary study area. The services that use Riverside Drive are noted as follows:

- Crosstown 2: on Riverside Drive between Lauzon Road and Riverdale Avenue, and Wyandotte Street between Mill Street and Lauzon Road;
- Crosstown 2 Express: on Riverside Drive between McDougall Street and Strabane Avenue and between Lauzon Road and Riverdale Avenue. On Wyandotte Street between the University of Windsor and Ouellette Avenue, and between Strabane Avenue and Lauzon Road;
- Lauzon 10: Riverside Drive between Riverdale Avenue and Cora Greenwood Drive; Wyandotte Street between Lauzon Road and Riverdale Avenue;
- South Windsor 7 (westbound) on Riverside Drive from Rosedale Avenue to Huron Church Road; and

- Walkerville 8 on Riverside Drive from McDougall Street to Lincoln Road.
- In the peak hours of traffic, the above services, plus small portions of other specialized routes including the Tunnel Bus translate into the following volumes of transit vehicles on Riverside Drive:

EXHIBIT 3-5: RIVERSIDE DRIVE TRANSIT VOLUMES

Riverside Drive Sections	Routes on Section	Peak Hour Buses on Riverside (both directions)
Rosedale to Huron Church	Transway 1C (WB only) South Windsor (WB only)	4
Goyeau to Glengarry	Tunnel (EB only)	3
McDougall to Glengarry	Crosstown 2 Express 2X (EB only), Tunnel Bus Walkerville 8 (EB only)	7
Glengarry to Gladstone	Crosstown 2 Express 2X Walkerville 8	6
Gladstone to Lincoln	Crosstown 2 Express 2X Walkerville 8 (WB only)	4
Lincoln to Strabane	Crosstown 2 Express 2X	2
Lauzon to Riverdale	Crosstown 2 Crosstown 2 Express 2X	10
Riverdale to Cora Greenwood	Lauzon 10	4

There is also a Casino Windsor shuttle service operating every 8-10 minutes between the Drouillard Road remote parking and the Casino, and from hotels between Church Street and the Casino.

In the secondary study area, Transit Windsor operates the following services:

- Transway 1A: Wyandotte Street between Ouellette Avenue and Goyeau Street;
- Transway 1C: University Avenue between Riverside Drive and Ouellette Avenue;
- Transway 1C Express: University Avenue between the University of Windsor and Ouellette Avenue;
- Crosstown 2 along Wyandotte Street from west of Huron Church Road to Lauzon Road;
- Central 3: Wyandotte Street between Crawford Avenue and Ouellette Avenue;
- Ottawa 4: sections of Wyandotte Street and Ouellette Avenue in the core, and on Wyandotte between Pillette Road and Jefferson Blvd.;
- Dominion 5: University Avenue between Pelissier Street and Goyeau Street; Wyandotte Street between Campbell Avenue and Pelissier Street;

- Dougall 6: University Avenue between Ouellette Avenue and Goyeau Street; Wyandotte Street between Ouellette Avenue and Goyeau Street;
- Walkerville 8: University Avenue from Freedom Way to McDougall; and
- Parent 14: University Avenue between McDougall Avenue and Goyeau Street; Wyandotte Street between Aylmer and Glengarry Avenues.

In total, there are 38 bus stops on Riverside Drive, 35 bus stops on University Avenue, and 140 bus stops on Wyandotte Street. Each of these bus stops may serve more than one Transit Windsor bus route.

3.3.3 CYCLING AND WALKING

Windsor maintains an extensive network of exclusive on-road bike lanes, off-road multi-use trails and signed bike routes throughout the city. Within the study area, the Riverside Drive corridor currently includes the following three (3) major sections of cycling and walking routes:

- A parallel off-road multi-use trail through riverfront parkland follows sections of Riverside Drive on the north side from the Ambassador Bridge area east to Lincoln Road. Within this section, exclusive on-road bike lanes are also provided on both sides of Riverside Drive from Vista Place at Assumption Park east to Crawford Avenue, with a one-block gap between McKay Avenue and Cameron Avenue;
- Exclusive on-road bike lanes are provided on Riverside Drive between Lincoln Road and Strabane Avenue; and
- The off-road Ganatchio Trail starts at Isabelle Place and Wyandotte Street west of Lauzon Road, and extends east to link with the south side of Riverside Drive at Brumpton Park, then extends along the south side of Riverside Drive to the Tecumseh border at the eastern extreme of the study area.

Bicycle lanes are also provided on University Avenue between Huron Church Road and Bruce Avenue. In 2001, the City of Windsor adopted the Bicycle Use Master Plan (BUMP), which recommended a Primary Cycling Network that included the following elements within the Riverside Drive study area, and as shown on Exhibit 3-6:

Riverside Drive – In the 0-5 year timeframe, exclusive on-road bike lanes were planned on Riverside Drive from the Ambassador Bridge area to Bruce Avenue, thereby extending the existing bike lanes east from Crawford Avenue to Bruce. On-road bike lanes have already been installed on the Drive from Lincoln Road to Strabane Avenue as per the BUMP plan. In the 5-20 year timeframe, additional on-road bike lanes are planned on Riverside Drive from Bruce Avenue to Lincoln Road through the downtown, and from Strabane Avenue east to the east City border. The result would be continuous on-road bike lanes on Riverside Drive along its entire length within the Riverside Drive Vista Improvement Project study area. The BUMP planners believed, and still believe that the location of Riverside Drive along the riverfront provides a primarily cycling opportunity, and a natural extension of the existing riverfront multi-use trail system.

Wyandotte Street – The 0-5 year timeframe recommends exclusive on-road bike lanes extending from Gladstone Avenue to Devonshire Road east of the downtown, and from Strabane Avenue east to Matthew Brady Avenue parallel to Riverside Drive. In the 5-20 year timeframe, Wyandotte Street bike lanes are to

extend from California Street at the University east to Gladstone Avenue, and from Matthew Brady Avenue to Bellagio Drive in association with the planned Wyandotte Street extension. East of this point, a signed bike route is planned along local streets to the Tecumseh border. Currently there are on-road bike lanes along Wyandotte Street between Strabane and George that were installed in 2005.

University Avenue – The 0-5 year timeframe recommends on-road bike lanes along this arterial from Huron Church Road east to McDougall Street. Currently, the section of University Avenue from Huron Church Road to Bruce Avenue has on-road bike lanes.

EXHIBIT 3-6 – BUMP RECOMMENDED PRIMARY CYCLING NETWORK

It is important to note that the BUMP planners have been, and continue to be supportive of exclusive bike lanes on Riverside Drive between Strabane Avenue and at least the Ganatchio Trail east of Lauzon Road. Upon meeting



with representatives of some Riverside Drive residents who in 2001 were opposed to bike lanes, the BUMP planners reconfirmed their support for on-road bike lanes on Riverside Drive East, with details to be confirmed through additional study, functional design and consultation.¹ This has been provided by this current EA project. City Council passed resolution CR 943/99 in 1999 to approve the Windsor Area Long Range Transportation Study (WALTS), including a condition that no consideration be given to widening Riverside Drive East from Strabane Avenue to St. Rose Avenue for the purpose of bike lanes. However, the subsequent Council resolution CR554/2001

¹ Marshall Macklin Monaghan, letter to J. Tofflemire, February 7, 2001

in 2001 approving the Bicycle Use Master Plan (BUMP) stated that this resolution would remain in place until the issue of bicycle facilities along Riverside Drive between Strabane Avenue and Lauzon Road is referred to a Traffic Calming Study and Environmental Study Report (ESR). This resolution led to the initiation of this Riverside Drive VIP EA.

3.3.4 TRUCK ROUTES

The City of Windsor is crossed by a network of truck routes, outside of which trucks weighing over 4,500 kg are permitted only to travel on the shortest route between the truck route network and the origin/destination. This truck route network includes Riverside Drive from Goyeau Street to Strabane Avenue, Wyandotte Street from Huron Church Road to Lauzon Road, and University Avenue from Riverside Drive to Goyeau Street. The designated truck routes connecting to the Town of Tecumseh to the east of the study area are Tecumseh Road/County Road 2 and the E.C. Row Expressway/County Road 22.

It was noted in the 1999 WALTs Study that modifications were made to the truck route network between 1988 and 1996 to remove truck routes from the downtown area on Riverside Drive, parts of Ouellette Avenue, Dougall Avenue and McDougall Street. The changes also included addition of truck routes on Jefferson Boulevard and Lauzon Parkway.



3.4 Transportation System Performance

3.4.1 TRAFFIC VOLUMES

City of Windsor staff provided average daily traffic (ADT) volume data for Riverside Drive, University Avenue and Wyandotte Street, as well as for several streets intersecting Riverside Drive. Details of the ADT counts are shown in Exhibit 3.7.