APPENDIX B ALTERNATIVE CROSS-SECTIONS
This Appendix provides a set of conceptual cross-sections describing the potential arrangement and dimensions of each roadway element composing the roadway corridors identified in Section 3 of the main document.

- Due to the fact that the existing right-of-way and elements composing the different roadway corridors servicing the study area varies along each corridor, in addition to general requirements for right-of-way widths as described in Chapter 7 of the City of Windsor Official Plan, the required right-of-way widths presented in Schedule X needs to be considered during the development of alternative cross-sections.
- The conceptual cross-sections and dimensions presented in this Appendix are provided for illustration purposes and cannot be directly used for design purposes.

For the development of the conceptual cross-sections, minimum and/or desired width standards were used for each one of the following roadway elements based on the characteristics of the Context Zones, roadway classification and right-of-way availability:

- **Sidewalks.** Aside of complying with the requirements of the Accessibility for Ontarians with Disabilities Act (AODA) policy guidelines for the design of public spaces, proposed sidewalk width recognizes the nature of the surrounding area and the potential purpose of the trip;
- **Boulevards.** Space allocated to boulevards provides opportunities for utilitarian activities and enhancement of the spatial experience through the introduction of street furniture and landscaping. If the boulevard is not used for streetscaping purposes, but to locate utility and street light poles, trash pickup, and street signs, a separation of no less than 0.30 metres from the edge of the curb may be considered as recommended by Ontario Traffic Manual Book 1 Appendix B – Sign Design Principles.
- **Curb and Gutters.** Ontario Standard OPSD 600.04 (Concrete Barrier Curb with Standard Gutter for Flexible Pavement) was considered as a general guideline for all proposed alternative cross-sections;
- **Parking.** Space allocated to on-street parking considered the interaction with other roadway elements such as: bicycle lanes, transit facilities and bulb-outs;
  - Preference expressed by City Staff that provision for parking is preferred;
  - A width of 2.5 metres was considered based on the recommendations provided by OTM Book 18 (Section 4.2) on-street parking adjacent to conventional bicycle lanes.
- **Traffic Lanes.** Number and space allocated to traffic lanes considered the interaction vehicles vehicular traffic, bicycles and transit buses as appropriate for each corridor; and
- **Bicycle lanes.** Aside of the dimensions provided by the City of Windsor Development Manual, the following documents were taken into consideration for the determination of type and dimensions of bicycle lanes:
  - Bikeways Design Manual, Ontario Ministry of Transportation, 2014; and
1.1 Wyandotte Street

CLASS 2 ARTERIAL ROAD

Existing roadway elements:
- Sidewalks both sides with boulevard, parking lane, 3 lanes of traffic

Key Features of Alternative:
- Road lane width reduced to accommodate bicycle lanes.
1.2 Ouellette Avenue

CLASS 2 ARTERIAL ROAD

Existing roadway elements:
- Sidewalks both sides, 4 lanes of traffic, continuous left turn lane

Key Features of Alternative:
- Use existing center lane for isolated raised median islands (where possible).

This drawing is a conceptual representation. Designers should consider the minimum available right-of-way width through all sections of this road segment and confirm available right-of-way width when developing design concepts.

Compliance with the Accessibility for Ontarians with Disabilities Act must be ensured and the placement of roadway elements should not obstruct travel in a manner that conflicts with established guidelines.

Existing cross-section south of Erie Street (Source: Google Earth, 2015)
1.3 University Avenue

1.3.1 University Avenue - Alternative 1 – No Parking

CLASS 2 ARTERIAL ROAD

Existing roadway elements:

- Sidewalks both sides, 2 parking lanes, 2 lanes of traffic

Key Features of Alternative:

- On-street parking removed to accommodate bicycle lanes and boulevards.

This drawing is a conceptual representation. Designers should consider the minimum available right-of-way width through all sections of this road segment and confirm available right-of-way width when developing design concepts.

Compliance with the Accessibility for Ontarians with Disabilities Act must be ensured and the placement of roadway elements should not obstruct travel in a manner that conflicts with established guidelines.

Existing cross-section west of Church Street (Source: Google Earth, 2015)
1.3.2 University Avenue - Alternative 2 – Parking

**CLASS 2 ARTERIAL ROAD**

Existing roadway elements:
- Sidewalks both sides, 2 parking lanes, 2 lanes of traffic

Key Features of Alternative:
- Road lane width reduced to accommodate bicycle lanes.

This drawing is a conceptual representation. Designers should consider the minimum available right-of-way width through all sections of this road segment and confirm available right-of-way width when developing design concepts.

Compliance with the Accessibility for Ontarians with Disabilities Act must be ensured and the placement of roadway elements should not obstruct travel in a manner that conflicts with established guidelines.

Existing cross-section west of Church Street (Source: Google Earth, 2015)
1.3.3 University Avenue – Alternative 3 – Central Boulevard

**CLASS 2 ARTERIAL ROAD**

Existing roadway elements:
- Sidewalks both sides, 2 parking lanes, 2 lanes of traffic

Key Features of Alternative:
- On-street parking removed to accommodate central boulevard.

This drawing is a conceptual representation. Designers should consider the minimum available right-of-way width through all sections of this road segment and confirm available right-of-way width when developing design concepts.

Compliance with the Accessibility for Ontarians with Disabilities Act must be ensured and the placement of roadway elements should not obstruct travel in a manner that conflicts with established guidelines.

Existing cross-section west of Church Street (Source: Google Earth, 2015)
1.3.4 University Avenue – Alternative 4 – No Parking

 Existing roadway elements:

+ Sidewalks both sides, 2 parking lanes, 2 lanes of traffic

Key Features of Alternative:

+ On-street parking removed to accommodate centre bike path and boulevards.

This drawing is a conceptual representation. Designers should consider the minimum available right-of-way width through all sections of this road segment and confirm available right-of-way width when developing design concepts.

Compliance with the Accessibility for Ontarians with Disabilities Act must be ensured and the placement of roadway elements should not obstruct travel in a manner that conflicts with established guidelines.

Existing cross-section west of Church Street (Source: Google Earth, 2015)
1.4 Pitt Street

1.4.1 Pitt Street – Alternative 1 – Parking (One Side)

This drawing is a conceptual representation. Designers should consider the minimum available right-of-way width through all sections of this road segment and confirm available right-of-way width when developing design concepts.

Compliance with the Accessibility for Ontarians with Disabilities Act must be ensured and the placement of roadway elements should not obstruct travel in a manner that conflicts with established guidelines.

Existing roadway elements:
- Sidewalks both sides, 2 parking lanes, 2 lanes of traffic

Key Features of Alternative:
- Eliminate parking lane and/or vehicular lane to accommodate boulevards and shared transit lane.

Existing cross-section east of Ferry Street (Source: Google Earth 2015)
1.4.2 Pitt Street – Alternative 1 – Parking (Both Sides)

CLASS 1 COLLECTOR ROAD

Existing roadway elements:
- Sidewalks both sides, 2 parking lanes, 2 lanes of traffic

Key Features of Alternative:
- An alternative option fronting the University of Windsor facilities provides space for accessible parking.

This drawing is a conceptual representation. Designers should consider the minimum available right-of-way width through all sections of this road segment and confirm available right-of-way width when developing design concepts.

Compliance with the Accessibility for Ontarians with Disabilities Act must be ensured and the placement of roadway elements should not obstruct travel in a manner that conflicts with established guidelines.

Existing cross-section east of Ferry Street (Source: Google Earth 2015)
1.4.3 Pitt Street – Alternative 2 – No Parking

CLASS 1 COLLECTOR ROAD
Existing roadway elements:
✦ Sidewalks both sides, 2 parking lanes, 2 lanes of traffic

Key Features of Alternative:
✦ Eliminate on-street parking and/or vehicular lane to accommodate boulevards and shared transit lane.

This drawing is a conceptual representation. Designers should consider the minimum available right-of-way width through all sections of this road segment and confirm available right-of-way width when developing design concepts.

Compliance with the Accessibility for Ontarians with Disabilities Act must be ensured and the placement of roadway elements should not obstruct travel in a manner that conflicts with established guidelines.

Existing cross-section east of Ferry Street (Source: Google Earth 2015)
1.4.4 Pitt Street – Alternative 3 – Two-Way Traffic Operations

CLASS 1 COLLECTOR ROAD

Existing roadway elements:

- Sidewalks both sides, 2 parking lanes, 2 lanes of traffic

Key Features of Alternative:

- Replace the current one-way traffic operations to two-way traffic and provides parking on both sides of the road.

This drawing is a conceptual representation. Designers should consider the minimum available right-of-way width through all sections of this road segment and confirm available right-of-way width when developing design concepts.

Compliance with the Accessibility for Ontarians with Disabilities Act must be ensured and the placement of roadway elements should not obstruct travel in a manner that conflicts with established guidelines.

Existing cross-section east of Ferry Street (Source: Google Earth 2015)
1.5 Chatham Street

1.5.1 Chatham Street – Alternative 1 - Parking

This drawing is a conceptual representation. Designers should consider the minimum available right-of-way width through all sections of this road segment and confirm available right-of-way width when developing design concepts.

Compliance with the Accessibility for Ontarians with Disabilities Act must be ensured and the placement of roadway elements should not obstruct travel in a manner that conflicts with established guidelines.

Existing roadway elements:

- Sidewalks both sides, 2 parking lanes, 2 lanes of traffic

Key Features of Alternative:

- Eliminate parking lane and/or vehicular lane to accommodate boulevards and shared transit lane.

Existing cross-section west of Goyeau Street (Source: Google Earth 2015)
1.5.2 Chatham Street – Alternative 2 – No Parking

Existing roadway elements:
- Sidewalks both sides, 2 parking lanes, 2 lanes of traffic

Key Features of Alternative:
- Eliminate on-street parking and/or vehicular lane to accommodate boulevards and shared transit lane.

This drawing is a conceptual representation. Designers should consider the minimum available right-of-way width through all sections of this road segment and confirm available right-of-way width when developing design concepts.

Compliance with the Accessibility for Ontarians with Disabilities Act must be ensured and the placement of roadway elements should not obstruct travel in a manner that conflicts with established guidelines.
1.5.3 Chatham Street – Alternative 3 – Two-Way Traffic Operations

CLASS 1 COLLECTOR ROAD

Existing roadway elements:
- Sidewalks both sides, 2 parking lanes, 2 lanes of traffic

Key Features of Alternative:
- Replace the current one-way traffic operations to two-way traffic and provides parking on both sides of the road.

This drawing is a conceptual representation. Designers should consider the minimum available right-of-way width through all sections of this road segment and confirm available right-of-way width when developing design concepts.

Compliance with the Accessibility for Ontarians with Disabilities Act must be ensured and the placement of roadway elements should not obstruct travel in a manner that conflicts with established guidelines.

Existing cross-section west of Goyeau Street (Source: Google Earth 2015)
1.6 Victoria Avenue – North of University Avenue

1.6.1 Victoria Avenue (N. of University) – Alternative 1 – Parallel Boulevards

This drawing is a conceptual representation. Designers should consider the minimum available right-of-way width through all sections of this road segment and confirm available right-of-way width when developing design concepts.

Compliance with the Accessibility for Ontarians with Disabilities Act must be ensured and the placement of roadway elements should not obstruct travel in a manner that conflicts with established guidelines.

**LOCAL ROAD**

Existing roadway elements

- Sidewalk both sides, diagonal parking both sides, 2 lanes of traffic

Key Features of Alternative:

- Replace diagonal parking with parallel parking and add bicycle lanes.

Existing cross-section north of University Avenue (Source: Google Earth 2015)
1.6.2 Victoria Avenue (N. of University) – Alternative 2 – East Side Boulevard

LOCAL ROAD
Existing roadway elements
+ Sidewalk both sides, diagonal parking both sides, 2 lanes of traffic

Key Features of Alternative:
+ Replace diagonal parking with parallel parking and add bicycle lanes with boulevard on one side of the roadway.
1.6.3 Victoria Avenue (N. of University) – Alternative 3 – Central Boulevard

LOCAL ROAD

Existing roadway elements

- Sidewalk both sides, diagonal parking both sides, 2 lanes of traffic

Key Features of Alternative:

- Replace diagonal parking with parallel parking and add bicycle lanes with a central boulevard.

This drawing is a conceptual representation. Designers should consider the minimum available right-of-way width through all sections of this road segment and confirm available right-of-way width when developing design concepts.

Compliance with the Accessibility for Ontarians with Disabilities Act must be ensured and the placement of roadway elements should not obstruct travel in a manner that conflicts with established guidelines.

Existing cross-section north of University Avenue (Source: Google Earth 2015)
1.6.4 Victoria Avenue (N. of University) – Alternative 4 – Multipurpose Area

**LOCAL ROAD**

Existing roadway elements

- Sidewalk both sides, diagonal parking both sides, 2 lanes of traffic

Key Features of Alternative:

- Replace diagonal parking with a multipurpose central boulevard with parking.

This drawing is a conceptual representation. Designers should consider the minimum available right-of-way width through all sections of this road segment and confirm available right-of-way width when developing design concepts.

Compliance with the Accessibility for Ontarians with Disabilities Act must be ensured and the placement of roadway elements should not obstruct travel in a manner that conflicts with established guidelines.
1.7 Victoria Avenue (North of Park Street)

1.7.1 Victoria Avenue (North of Park Street) – Alternative 1 – Parallel Boulevards

This drawing is a conceptual representation. Designers should consider the minimum available right-of-way width through all sections of this road segment and confirm available right-of-way width when developing design concepts.

Compliance with the Accessibility for Ontarians with Disabilities Act must be ensured and the placement of roadway elements should not obstruct travel in a manner that conflicts with established guidelines.

CLASS 2 COLLECTOR ROAD
Existing roadway elements

+ Sidewalk both sides, diagonal parking one side, parking lane, 3 lanes of traffic

Key Features of Alternative:
+ Replace existing parking with parallel parking and add bicycle lanes.

Existing cross-section north of Park Street (Source: Google Earth 2015)
1.7.2 Victoria Avenue (North of Park Street) – Alternative 2 – Central Boulevard

CLASS 2 COLLECTOR ROAD

Existing roadway elements

- Sidewalk both sides, diagonal parking one side, parking lane, 3 lanes of traffic

Key Features of Alternative:

- Replace existing parking with parallel parking and add bicycle lanes with a central boulevard.

This drawing is a conceptual representation. Designers should consider the minimum available right-of-way width through all sections of this road segment and confirm available right-of-way width when developing design concepts.

Compliance with the Accessibility for Ontarians with Disabilities Act must be ensured and the placement of roadway elements should not obstruct travel in a manner that conflicts with established guidelines.

Existing cross-section north of Park Street (Source: Google Earth 2015)
1.7.3 Victoria Avenue (North of Park Street) – Alternative 3 – East Side Boulevard

This drawing is a conceptual representation. Designers should consider the minimum available right-of-way width through all sections of this road segment and confirm available right-of-way width when developing design concepts.

Compliance with the Accessibility for Ontarians with Disabilities Act must be ensured and the placement of roadway elements should not obstruct travel in a manner that conflicts with established guidelines.

CLASS 2 COLLECTOR ROAD

Existing roadway elements

+ Sidewalk both sides, diagonal parking one side, parking lane, 3 lanes of traffic

Key Features of Alternative:

+ Replace existing parking with parallel parking and add bicycle lanes with boulevard on one side of the roadway.

Existing cross-section north of Park Street (Source: Google Earth 2015)
1.7.4 Victoria Avenue (North of Park Street) – Alternative 4 – Multipurpose Boulevard

This drawing is a conceptual representation. Designers should consider the minimum available right-of-way width through all sections of this road segment and confirm available right-of-way width when developing design concepts.

Compliance with the Accessibility for Ontarians with Disabilities Act must be ensured and the placement of roadway elements should not obstruct travel in a manner that conflicts with established guidelines.

CLASS 2 COLLECTOR ROAD

Existing roadway elements

- Sidewalk both sides, diagonal parking one side, parking lane, 3 lanes of traffic

Key Features of Alternative:

- Replace existing parking with a multipurpose central boulevard with parking.
1.8 Victoria Avenue (south of Park Street)

1.8.1 Victoria Avenue (south of Park Street) – Alternative 1 – One Way Traffic Operation

CLASS 2 COLLECTOR ROAD
Existing roadway elements
✦ Sidewalk both sides, boulevard both sides, parking both sides, 2 lanes of traffic

Key Features of Alternative:
✦ Replace one lane of parking with a two-way bicycle path.

This drawing is a conceptual representation. Designers should consider the minimum available right-of-way width through all sections of this road segment and confirm available right-of-way width when developing design concepts.

Compliance with the Accessibility for Ontarians with Disabilities Act must be ensured and the placement of roadway elements should not obstruct travel in a manner that conflicts with established guidelines.

Existing cross-section south of Park Street (Source: Google Earth 2015)
1.8.2 Victoria Avenue (south of Park Street) – Alternative 2 – Two Way Traffic Operation

CLASS 2 COLLECTOR ROAD
Existing roadway elements
- Sidewalk both sides, boulevard both sides, parking both sides, 2 lanes of traffic

Key Features of Alternative:
- Replace one lane of parking with bicycle lanes

This drawing is a conceptual representation. Designers should consider the minimum available right-of-way width through all sections of this road segment and confirm available right-of-way width when developing design concepts.

Compliance with the Accessibility for Ontarians with Disabilities Act must be ensured and the placement of roadway elements should not obstruct travel in a manner that conflicts with established guidelines.
1.9 Victoria Avenue (south of Wyandotte Street)

1.9.1 Victoria Avenue (S. of Wyandotte) – Alternative 1 – One Way Traffic Operation

**CLASS 2 COLLECTOR ROAD**

Existing roadway elements

- Sidewalk both sides, boulevard both sides, parking lane, 2 lanes of traffic

Key Features of Alternative:

- Replace one lane of parking with a two-way bicycle path.

This drawing is a conceptual representation. Designers should consider the minimum available right-of-way width through all sections of this road segment and confirm available right-of-way width when developing design concepts.

Compliance with the Accessibility for Ontarians with Disabilities Act must be ensured and the placement of roadway elements should not obstruct travel in a manner that conflicts with established guidelines.

Existing cross-section south of Wyandotte Street (Source: Google Earth 2015)
1.9.2 Victoria Avenue (S. of Wyandotte) – Alternative 2 – Two Way Traffic Operation

**CLASS 2 COLLECTOR ROAD**

Existing roadway elements

- Sidewalk both sides, boulevard both sides, parking lane, 2 lanes of traffic

Key Features of Alternative:

- Convert to two-way traffic operation with share-the-road lanes.

This drawing is a conceptual representation. Designers should consider the minimum available right-of-way width through all sections of this road segment and confirm available right-of-way width when developing design concepts.

Compliance with the Accessibility for Ontarians with Disabilities Act must be ensured and the placement of roadway elements should not obstruct travel in a manner that conflicts with established guidelines.

Existing cross-section south of Wyandotte Street (Source: Google Earth 2015)
1.10 McDougall Street

CLASS 1 COLLECTOR ROAD
Existing roadway elements
- Sidewalk both sides, boulevard both sides, 4 lanes of traffic

Key Features of Alternative:
- Road lane width reduced to accommodate bicycle lanes and parking

This drawing is a conceptual representation. Designers should consider the minimum available right-of-way width through all sections of this road segment and confirm available right-of-way width when developing design concepts.

Compliance with the Accessibility for Ontarians with Disabilities Act must be ensured and the placement of roadway elements should not obstruct travel in a manner that conflicts with established guidelines.

Existing cross-section north of Wyandotte Street (Source: Google Earth 2015)
1.11 Janette Avenue – Bruce Avenue

**CLASS 1 COLLECTOR ROAD**

Existing roadway elements

- Sidewalk both sides, bicycle lane, parking lane, one lane of traffic

Key Features of Alternative:

- The same roadway elements and cross-section are proposed for both corridors.
- The Boulevard option requires the use of the adjacent alleyway as off-street bicycle path.

This drawing is a conceptual representation. Designers should consider the minimum available right-of-way width through all sections of this road segment and confirm available right-of-way width when developing design concepts.

Compliance with the Accessibility for Ontarians with Disabilities Act must be ensured and the placement of roadway elements should not obstruct travel in a manner that conflicts with established guidelines.
1.12 Aylmer Avenue

1.12.1 Aylmer Avenue – Alternative 1 – One-Way Traffic Operation

This drawing is a conceptual representation. Designers should consider the minimum available right-of-way width through all sections of this road segment and confirm available right-of-way width when developing design concepts.

Compliance with the Accessibility for Ontarians with Disabilities Act must be ensured and the placement of roadway elements should not obstruct travel in a manner that conflicts with established guidelines.

Existing roadway elements

- Sidewalk both sides, boulevard both sides, two lanes of traffic, parking lane

Key Features of Alternative:

- Replace one lane of traffic with a two-way bicycle path.

CLASS 2 ARTERIAL ROAD

Existing cross-section south of University Avenue (Source: Google Earth 2015)
1.12.2 Aylmer Avenue – Alternative 2 – Two-Way Traffic Operation

This drawing is a conceptual representation. Designers should consider the minimum available right-of-way width through all sections of this road segment and confirm available right-of-way width when developing design concepts.

Compliance with the Accessibility for Ontarians with Disabilities Act must be ensured and the placement of roadway elements should not obstruct travel in a manner that conflicts with established guidelines.

### CLASS 2 ARTERIAL ROAD

Existing roadway elements

- Sidewalk both sides, boulevard both sides, two lanes of traffic, parking lane

Key Features of Alternative:

- Delineate parking with bulb-outs.

Existing cross-section south of University Avenue (Source: Google Earth 2015)
1.13 Howard Avenue

CLASS 2 ARTERIAL ROAD

Existing roadway elements
+ Sidewalk both sides, boulevard both sides, two lanes of traffic, parking lane

Key Features of Alternative:
+ Replace one lane of parking with bicycle lanes¹.

If removal of parking is unacceptable the alternative is to use parallel local roads as share-the-road type of facilities.

Existing cross-section south of Elliott Street (Source: Google Earth 2015)

Compliance with the Accessibility for Ontarians with Disabilities Act must be ensured and the placement of roadway elements should not obstruct travel in a manner that conflicts with established guidelines.

This drawing is a conceptual representation. Designers should consider the minimum available right-of-way width through all sections of this road segment and confirm available right-of-way width when developing design concepts.
1.14 Local Roads – Louis Avenue, Elliott Street and Marentette Avenue

This drawing is a conceptual representation. Designers should consider the minimum available right-of-way width through all sections of this road segment and confirm available right-of-way width when developing design concepts.

Compliance with the Accessibility for Ontarians with Disabilities Act must be ensured and the placement of roadway elements should not obstruct travel in a manner that conflicts with established guidelines.

LOCAL ROADS
Existing roadway elements
+ Varies

Key Features of Alternative:
+ Conversion of existing lane to share-the-road configuration.

Existing cross-section Louis Avenue, Elliott Street, Marentette Avenue (Source: Google Earth 2015)
1.15 Erie Street

**CLASS 1 COLLECTOR ROAD**

Existing roadway elements

+ Sidewalk both sides, four lanes of traffic

Key Features of Alternative:

+ Road lane width reduced to accommodate bicycle lanes.

This drawing is a conceptual representation. Designers should consider the minimum available right-of-way width through all sections of this road segment and confirm available right-of-way width when developing design concepts.

Compliance with the Accessibility for Ontarians with Disabilities Act must be ensured and the placement of roadway elements should not obstruct travel in a manner that conflicts with established guidelines.

Existing cross-section west of Pelissier Street (Source: Google Earth 2015)