6.11.1 ARTERIAL ROADWAYS

Design

TRAFFIC VOLUME (vehicles per day)	NUMBER OF LANES	RIGHT-OF-WAY REQUIREMENT	MINIMUM INTERSECTION SPACING (Property Lines)
10,000 to 25,000	2 to 6 (see Geometric note)	30 m	200 m uncontrolled 400 m controlled

FUNCTION

- To distribute traffic in commercial areas, between residential communities and as community entry roadways
- To serve secondary traffic generators such as commercial centres, recreational facilities, schools and traffic from neighbourhood to neighbourhood within the community
- May be used as a transit route.

CONDITIONS

- Direct access to abutting commercial properties shall be a minimum of 70 m from a signalized intersection and 30 m from an un-signalized intersection
- Residential frontage is not permitted on an Arterial
- Arterial may intersect with Residential roadways, Minor Collectors, Major Collectors, or Arterial roadways
- Developers shall complete a Traffic Impact Assessment prior to approval of commercial driveway access to an Arterial
- When an Arterial intersects with an Arterial, all turns driveway access from adjacent properties shall not be allowed within a minimum distance of 70 m from the edge of the Arterial right of way
- Right in right out driveway access to adjacent property will be considered by Public Works pending completion of a Traffic Impact Assessment by the applicant
- Intersection spacing on Arterial shall not be less than 200 m property line to property line unless agreed to in writing by Public Works.

FEATURES	
Posted Speed (kph)	50 to 60
Parking	No
Sidewalk	Yes (*see Note 8*)
Traffic Signals	As Warranted
Pedestrian Crossing	At Grade Ramps required
Bikeway	TBD
Transit Route	Yes
Truck Route	Yes
Sound Attenuation	As warranted
Pavement Markings	Yes

NOTES

1. Basic right of way requirement is 30.0 m. Additional right of way shall be required for trees in boulevard and/or median
2. Divided roadway
3. All intersections shall be as near as possible to 90 degrees
4. Arterial roadways shall not end in a cul-de-sac
5. Arterial roadways shall be configured in loops and/or intersect with other Collector or Arterial roadways at a minimum of two locations
6. Modification of the Arterial standard will be considered by Public Works on a case-by-case basis
7. If the roadway is adjacent to low density residential development, one storey single family residential dwellings must back onto the Arterial unless sufficient noise attenuation is provided by the developer
8. Separate sidewalk, curb and gutter shall be provided on one side and regional pathway on one side
9. Play grounds shall be placed a sufficient distance from a collector to eliminate the need for a playground zone
10. If left turn bays will not be developed at the intersection the median width must be reduced
11. Manholes shall not be placed in pathways

Reference Drawings	00-04-03 00-04-06

6.11.2 ARTERIAL ROADWAYS

Geometric

CLASSIFICATION	DESIGN SPEED	DESIGN VEHICLE
Urban Collector Divided (UCD 60) Urban Collector Divided (UCD-70)	60 – 70 kph	Residential - WB-17 Commercial - WB-20 (1.0 m buffer with a minimum of 0.3 m each side of vehicle)

HORIZONTAL ALIGNMENT	
Minimum Stopping Sight Distance	**Minimum Radius of Curvature**
(see TAC)	(see TAC)
Median Left Turn Bay	
• Left turn bay storage lengths as per 6.12.1 Intersection Design • (see TAC)	
VERTICAL ALIGNMENT	
Maximum & Minimum Grades	
• Max 6%, Min 0.6%	
Grade at Intersections	
• (see TAC)	
Vertical Curves & Super Elevation	
• Vertical curve lengths in meters should not be less than speed in kilometers per hour • Use 0.04 or 0.06 super elevation tables	
PAVEMENT STRUCTURE	**REFERENCE DRAWINGS**
	City of Prince Albert Standard Detail Drawings

6.12.1 MAJOR AND MINOR COLLECTOR

Design

TRAFFIC VOLUME (vehicles per day)	NUMBER OF LANES	RIGHT-OF-WAY REQUIREMENT	MINIMUM INTERSECTION SPACING (Property Lines)
2,000 to 10,000	2 to 4	24.0 m	100 m

FUNCTION

- To collect and distribute traffic within residential communities
- To provide access to the adjacent residential lots within the subdivision
- To serve secondary traffic generators such as neighbourhood commercial centres, recreational facilities, schools and traffic from neighbourhood to neighbourhood within the community
- To serve as a transit route.

CONDITIONS

- Direct access shall be permitted to abutting residential and commercial properties
- Collectors shall intersect with Residential roadways, Minor/Major Collectors, or Arterial Roadways
- Lane intersections with Major Collector roadways are not preferred. (All efforts should be taken to eliminate the intersection)
- Adequate emergency services access shall be provided to all abutting properties
- When an existing Collector intersects with an Arterial, driveway access from adjacent properties shall not be allowed within a minimum distance of 55 m from a signalized intersection and 20 m from an un-signalized intersection
- Lane connections to Collector roadways will be treated as driveways until the lane generates more than 250 vehicles per day. (No less than 20 m from the nearest intersection measured from property line to property line)
- Intersection spacing on Collector roadways shall not be less than 100 m property line to property line unless agreed to in writing by Public Works
- The cross section of a collector asphalt carriageway shall be increased to 11 m at four way arterial intersections to allow development of two 3.5 m outbound lanes and one 4.0 m receiving lane.

FEATURES	
Posted Speed (kph)	50 to 60
Parking	Yes (see Note 4)
Sidewalk	Separate sidewalk, curb and gutter on both sides
Traffic Signals	As Warranted
Pedestrian Crossing	At Grade Ramps required
Bikeway	TBD
Transit Route	Yes
Truck Route	Yes
Sound Attenuation	No
Pavement Markings	At signalized intersections

NOTES

1. Undivided roadway
2. All intersections shall be as near as possible to 90 degrees
3. Intersection control by yield signs or stop signs as warranted
4. Parking permitted on both sides of roadway, but may be restricted on higher volume sections by Public Works on a case by case basis
5. Collector roadways shall not end in a cul-de-sac
6. Collector roadways shall be configured in loops and/or intersect with other Collector or Arterial roadways at a minimum of two locations
7. No front residential driveway access on Collectors with projected volumes exceeding 7000 vehicles per day
8. Collector roadways shall be configured to discourage transient traffic through residential neighbourhoods
9. Modification of the Collector standard shall be considered by Public Works on a case-by-case basis
10. Playground and School zones shall be minimized on Collector roadways.

Reference Drawings	00-04-02 00-04-06

6.12.2 MAJOR AND MINOR COLLECTOR

Geometric

CLASSIFICATION	DESIGN SPEED	DESIGN VEHICLE
Urban Collector Undivided (UCU 50) Urban Collector Undivided (UCU 60)	50 - 60 kph	Residential - WB-17 Commercial - WB-20 (1.0 m buffer with a minimum of 0.3 m each side of vehicle)

HORIZONTAL ALIGNMENT	
Minimum Stopping Sight Distance	**Minimum Radius of Curvature**
(see TAC)	(see TAC)

VERTICAL ALIGNMENT
Maximum & Minimum Grades
• Max 6%, Min 0.6%
Grade at Intersections
• (see TAC)
Vertical Curves & Super Elevation
• Vertical curve lengths in meters should not be less than speed in kilometers per hour • Use 0.04 or 0.06 superelevation tables

PAVEMENT STRUCTURE	REFERENCE DRAWINGS
	City of Prince Albert Standard Detail Drawings

6.13.1 LOCAL INDUSTRIAL ROADWAYS

Design

TRAFFIC VOLUME (vehicles per day)	NUMBER OF LANES	RIGHT-OF-WAY REQUIREMENT	MINIMUM INTERSECTION SPACING (Property Lines)
N/A	2 to 4	18 to 24 m	120 m

FUNCTION

- To collect and distribute traffic within industrial areas
- To serve as a transit route.

CONDITIONS

- Direct access shall be permitted to abutting commercial and industrial properties
- Local Industrial Roadways shall intersect with Lanes, other Local Industrial, Minor Collectors, Major Collectors or Arterial roadways
- Adequate Emergency Services access shall be provided to all abutting properties
- When a Local Industrial roadway intersects with an Arterial, driveway access from adjacent properties shall not be allowed within a minimum distance of 60 m from the edge of the Arterial right of way
- Intersection spacing on Local Industrial roadway shall not be less than 120 m unless agreed to in writing by Public Works
- Parking may be restricted to accommodate turning requirements for larger vehicles
- Parking may be restricted on higher volume Local Industrial roadways.

FEATURES		NOTES
Posted Speed (kph)	50 to 60	1. Undivided roadway 2. All intersections shall be as near as possible to 90 degrees 3. Intersection control by yield signs or stop signs as warranted 4. Parking permitted on both sides of roadway, but may be restricted under special circumstances 5. Local Industrial roadways shall not end in a cul-de-sac 6. Local Industrial roadways shall be configured in loops and/or intersect with other Local Industrial or Arterial roadways at a minimum of two locations 7. Modification of the Local Industrial roadway standard shall be considered by Public Works on a case-by-case basis
Parking	Yes (see Note 4)	
Sidewalk	Both Sides	
Traffic Signals	As Warranted	
Pedestrian Crossing	At Grade Ramps required	
Bikeway	TBD	
Transit Route	Yes	
Truck Route	Yes	
Sound Attenuation	No	
Pavement Markings	At signalized intersections	**Reference Drawings**: 00-04-01, 00-04-02, 00-04-06

6.13.2 LOCAL INDUSTRIAL ROADWAYS

Geometric

CLASSIFICATION	DESIGN SPEED	DESIGN VEHICLE
Urban Collector Undivided (UCU-60) Urban Collector Undivided (UCU-70)	60 – 70 kph	WB-20 or larger dependent on projected land use (1.0 m buffer with a minimum of 0.3 m each side of vehicle)

HORIZONTAL ALIGNMENT	
Minimum Stopping Sight Distance	**Minimum Radius of Curvature**
(see TAC)	(see TAC)

VERTICAL ALIGNMENT
Maximum & Minimum Grades
• Max 6%, Min 0.6%
Grade at Intersections
• (see TAC)
Vertical Curves & Super Elevation
• Vertical curve lengths in meters should not be less than speed in kilometers per hour • Use 0.04 or 0.06 super elevation tables

PAVEMENT STRUCTURE	REFERENCE DRAWINGS
	City of Prince Albert Standard Detail Drawings

6.14.1 RESIDENTIAL

Design

TRAFFIC VOLUME (vehicles per day)	NUMBER OF LANES	RIGHT-OF-WAY REQUIREMENT	MINIMUM INTERSECTION SPACING (Property Lines)
< 2000	2	18 m	40 m

FUNCTION

- To provide access to adjacent residential lots
- To convey local residential traffic to Collector roadways
- Local roadways include cul-de-sacs and P loops.

CONDITIONS

- Direct access shall be permitted to abutting residential properties
- Access shall not be permitted to commercial properties from Local roadways
- Residential roadways shall intersect with Lanes, Residential roadways, Minor Collectors, or Major Collectors
- Adequate Emergency Services access shall be provided to all dwelling units
- No dwelling shall be located more than 200 m as measured along the centreline of the roadway from a roadway intersection that provides the only access to the dwelling. This includes cul-de-sacs and multiple branch cul-de-sacs
- The length of road making up a P loop as measured along the centreline of the roadway shall not exceed 350 m
- P loop links shall be no shorter than 60 m as measured along the property line of the adjacent lots

FEATURES	
Posted Speed (kph)	40
Parking	Yes (see note 4)
Sidewalk	Both sides
Traffic Signals	No
Pedestrian Crossing	At Grade Ramps required
Bikeway	TBD
Transit Route	No
Truck Route	No
Sound Attenuation	No
Pavement Markings	No

NOTES

1. Undivided roadway
2. All intersections shall be as near as possible to 90 degrees
3. Intersection control by right-of-way rule, yield signs or stop signs
4. Parking permitted on both sides of roadway, but may be restricted under special circumstances
5. Parking in cul-de-sacs may be restricted for Emergency Services vehicle and solid waste vehicle access
6. P loops serving more than 100 dwelling units shall have the asphalt surface widened to 12 m (18.0 m R.O.W.) as measured from face of curb to face of curb to the first intersection in the P loop
7. A Local roadway with traffic volumes in excess of 1000 vehicles per day shall have the asphalt surface widened to 12 m (18.0 m R.O.W.) , as measured from face of curb to face of curb. Transitions will occur at intersections
8. Divided entrance roads shall be considered as a single entrance and shall be allowed only on the basis of providing a low maintenance entryway feature to the subdivision
9. Traffic calming shall be considered on Local roadways with potential for transient traffic
10. Modification of the local standard shall be considered by Public Works on a case-by-case basis.

Reference Drawings	
	00-04-01 00-04-04 00-04-05 00-04-06

6.14.2 RESIDENTIAL

Geometric

CLASSIFICATION	DESIGN SPEED	DESIGN VEHICLE
Urban Local Undivided (ULU-50)	50 kph	WB-17 (1.0 m buffer may be required with a minimum of 0.3 m each side of vehicle)

HORIZONTAL ALIGNMENT	
Minimum Stopping Sight Distance	**Minimum Radius of Curvature**
(see TAC)	(see TAC)

VERTICAL ALIGNMENT
Maximum & Minimum Grades
• Max 6%, Min 0.6%
Grade at Intersections
• (see TAC)
Vertical Curves & Super Elevation
• (see TAC)

PAVEMENT STRUCTURE	REFERENCE DRAWINGS
	City of Prince Albert Standard Detail Drawings

6.15.1 LANES

Design

TRAFFIC VOLUME (vehicles per day)	NUMBER OF LANES	RIGHT-OF-WAY REQUIREMENT	MINIMUM INTERSECTION SPACING (Property Lines)
N/A	N/A	6.0 m	30 m

FUNCTION

- To provide rear access to the adjacent lots within the subdivision
- To provide opportunity for loading and unloading in commercial districts.

CONDITIONS

- Direct access is permitted to abutting properties
- Lanes shall intersect with other Lanes, Residential roadways, Industrial Collectors and Minor Collectors
- Lane intersections with Major Collector roadways are not preferred. (All efforts should be taken to eliminate the intersection)
- Lane design shall accommodate Emergency Services access to abutting properties
- The distance along the centreline of a lane from a property to the nearest roadway shall not exceed 300 m
- Intersection spacing on Lanes shall not be less than 30 m unless agreed to in writing by Public Works
- Lane connections to higher classification roadways will be treated as driveways until the traffic generates more than 250 vehicles per day. (No less then 30 m from the nearest intersection measured from property line to property line). Lane intersections with higher classification roadways shall meet the intersection spacing requirements of the higher classification roadway.
- Accommodation of pedestrian facilities in a Lane require additional Lane width and permanent delineation of the pedestrian facility
- Pedestrian crossing points in Lanes shall include an offset pedestrian gate
- Dead end lanes shall provide a turnaround sufficient to accommodate emergency services vehicles and garbage trucks.

FEATURES	
Posted Speed (kph)	20
Parking	No
Sidewalk	No
Traffic Signals	No
Pedestrian Crossing	At Grade
Bikeway	No
Transit Route	No
Truck Route	No
Sound Attenuation	No
Pavement Markings	No

NOTES

1. All intersections shall be as near as possible to 90 degrees
2. Only T intersections are permitted in lanes
3. Intersection control between two lanes is by right-of-way rule
4. Where lanes intersect one another a sufficient fillet shall be provided to allow fire trucks and garbage trucks to turn in a single operation (contact Fire for appropriate vehicle size)
5. Lane design shall minimize opportunity for transient vehicle use (shortcutting)
6. All new Lanes shall be paved in accordance with the standard for paved lanes in the current version of the Engineering Standards.

Reference Drawings	00-04-07

6.15.2 LANES

Geometric

CONSTRUCTION TYPE	
HORIZONTAL ALIGNMENT	
Radius of Curvature	
• Based on design vehicle	
RIGHT-OF-WAY	
LENGTH	
GRADE	
• Max 6%, Min 0.6% • Last 5 m of lane at 1.5%	
PAVEMENT STRUCTURE	**REFERENCE DRAWING**
	City of Prince Albert Standard Detail Drawings

6.16.1 INTERSECTION

Design

DESCRIPTION

An intersection is formed when two or more roadway segments converge at a point. Intersection design is a complex engineering function which considers multimodal use of the road right of way, safety considerations, sight distances, traffic control devices, channelization, pavement markings, turning movement capacity/demand, drainage, etc.

FUNCTION

- Intersection requirements are design dependent based on classification of intersecting roadways and traffic demand.

CONDITIONS

- Left turn bay storage length shall be a minimum of 60 m and right turn bay shall be a minimum of 30 m on Collector and Arterial roadways
- Storage bay length shall be determined from Trafficware Synchro analysis of 95% queue length for a future 10 year horizon Synchro analysis when storage bay is defined by pavement markings
- Storage bay length shall be determined from Trafficware Synchro analysis of 95% queue length for a future 20 year horizon Synchro analysis when storage bay is defined by permanent curbing
- Intersection designs shall consider the appropriate design vehicles for the roadway classification and the accessible land uses
- For residential approaches the design vehicle shall be a WB-17
- For commercial/industrial approaches the design vehicle shall be a WB-20
- Alternate design vehicles shall be considered by Public Works on a case by case basis
- A 1.0 m buffer, with a minimum of 0.3 m each side of vehicle, shall be provided for the wheel path of the design vehicle relative to the edge of asphalt for all turning movements unless agreed to in writing by Public Works
- A 1.0 m buffer, with a minimum of 0.3 m on each side of vehicle, shall be provided for the swept path of the design vehicle relative to signs, poles, etc. placed on islands, medians and boulevards, for all turning movements unless agreed to in writing by Public Works.

FEATURES	
Posted Speed (kph)	Based on approach classification
Parking	No
Sidewalk	Match Roadway
Traffic Signals	As Warranted
Pedestrian Crossing	Yes
Bikeway	TBD
Transit Route	Match Roadway
Truck Route	Match Roadway
Sound Attenuation	No
Pavement Markings	As warranted

NOTES

1. The design of intersections shall include an evaluation of sight distance on all approaches for all relevant vehicle types expected to use the intersection
2. Sight lines shall be identified prior to landscape design
3. Opposing and alternating intersection approaches may have different design speeds and posted speed limits based on the approach classification
4. Additional travel lanes should be initiated or terminated at an intersection
5. Minimum intersection spacing identified in the design standards is relative to the property lines at the edge of the right of way. The centerline spacing is greater than the identified minimum intersection spacing
6. All intersections shall be as near as possible to 90 degrees.

Reference Drawings	00-04-05 00-04-11

6.16.2 INTERSECTION

Geometric

CLASSIFICATION	DESIGN SPEED	DESIGN VEHICLE
Adjoining Road Classification		Residential - WB-17 Commercial - WB-20 (1.0 m buffer required with a minimum of 0.3 m each side of vehicle)

HORIZONTAL ALIGNMENT

Minimum Stopping Sight Distance	Minimum Radius of Curvature
(see TAC)	(see TAC)

Median Left Turn Bay

- Arterial, Collector
- (see TAC)

VERTICAL ALIGNMENT

Maximum & Minimum Grades

Grade at Intersections

- (see TAC)

Vertical Curves & Super Elevation

- Vertical curve lengths in meters should not be less than speed in kilometers per hour
- emax = 0.04 or less

MINIMUM PROPERTY LINE CORNER CUTS (m)

	Arterial	Collector	Industrial	Residential	Lane
Arterial	10	10	10	N/A	N/A
Major Collector	8	5	5	5	5
Minor Collector	8	5	5	5	5
Industrial Collector	8	5	5	5	5
Residential	N/A	5	5	5	5
Lane	N/A	*Evaluate to provide sight distance**			5

PAVEMENT STRUCTURE	REFERENCE DRAWINGS
	City of Prince Albert Standard Detail Drawings

* Sight distance shall be considered for vehicle-vehicle and vehicle-pedestrian interaction.

6.17.1 ROUNDABOUT

Design

DESCRIPTION

An intersection with three or more approach legs in which the traffic streams merge and then diverge on a one-way roadway surrounding a central island. Traffic on this roadway travels counter-clockwise, and has the right-of-way over traffic entering the circulatory roadway.

Roundabout design is an iterative process that requires achieving an optimal balance between capacity and safety. The process of optimization is iterative and requires a thorough knowledge of site constraints and operating criteria. Even a minor change in geometry can have a substantial impact on safety and operational performance. In addition, designers should keep firmly in mind that the geometric elements are not independent on one another. How all the geometric elements of a roundabout interact is clearly more important than their individual impacts.

GUIDELINES

- Designers should consider "Roundabouts: A Different Type of Management Approach", Quebec Ministry of Transportation as the reference of choice for roundabout design in Prince Albert
- Projection of the centre line of each approach shall be to the left of the centre of the roundabout. Projection to the right of centre is NOT acceptable
- Approach legs should be evenly spaced around the Roundabout
- The speed differential between entering and circulating movements shall be less than 20 kph
- Manholes located within the landscaped portion of the Roundabout shall be accessible
- The curb height for a mountable truck apron shall be 75 mm
- Single lane entry and exit widths to include sufficient width for design vehicles plus 1.0 m buffer. To reduce speed the design should consider mountable areas for larger design vehicles.

FEATURES		**NOTES**
Posted Speed (kph)	Advisory speed may be posted	1. No raised landscaping planters 2. The slope of the central island should not exceed 6:1 3. Stopping sight distance and intersection sight distance must be established prior to landscape design 4. Landscape should block sight lines through the centre of the roundabout 5. Zebra striped crosswalks to be placed 6.0 m in advance of the yield line for single lane approaches 6. Bicycle traffic to access pedestrian crossing via up-ramps in advance of roundabout and multi-use sidewalk/path 7. Continuous involvement of Public Works is required during Roundabout design 8. Right turn bypass lanes should be used to increase capacity where high right turn volumes occur. Design shall consider safety requirements for pedestrians and bicyclists 9. Public Works may require a professional engineer's stamp on roundabout designs.
Parking	No	
Sidewalk	Match Roadway	
Traffic Signals	No	
Pedestrian Crossing	(see Note 5)	
Bikeway	(see Note 6)	
Transit Route	Match Roadway	
Truck Route	Match Roadway	
Sound Attenuation	No	
Pavement Markings	Permanent	**Reference Drawings**

6.17.2 ROUNDABOUT

Geometric

CLASSIFICATION	DESIGN SPEED	DESIGN VEHICLE
Adjoining Road Classification		Residential - WB-17 Commercial - WB-20 (1.0 m buffer required with a minimum of 0.3 m each side of vehicle) SU-9 & Bus to circulate without apron

HORIZONTAL ALIGNMENT	
Minimum Stopping Sight Distance	**Minimum Radius of Curvature**
(see TAC & Reference)	(see Reference)

Note

- Reference – "Roundabouts: A Different Type of Management Approach", Quebec Ministry of Transportation

VERTICAL ALIGNMENT

Vertical design should indicate the maximum longitudinal grades at the circle (<4%), crossfall and the need for pavement elevation plans in X and Y coordinates.

PAVEMENT STRUCTURE	REFERENCE DRAWINGS
	City of Prince Albert Standard Detail Drawings

6.18.1 RIGHT-IN RIGHT-OUT

Design

DESCRIPTION

A Right-in Right-out intersection provides vehicle access to and from one direction of travel on the adjacent roadway. Delineation at the Right-in Right-out, and in some cases a median in the centre of the adjacent roadway, prevent left turns and through movements.

Right-in Right-out intersections may be permitted as secondary access points to commercial developments; however, they may also be used to connect two public roadways when the roadway classification restricts full access due to intersection spacing constraints and/or safety issues.

GUIDELINES

- Right-in Right-out designs shall consider the appropriate design vehicles for the roadway classification and the accessible land uses
- The intersection spacing for a Right-in Right-out access shall be 50% of the corresponding roadway classifications intersection spacing. (e.g. Arterial RI/RO spacing of 50 m)
- A Traffic Impact Assessment addressing safety and operational considerations shall be required for a commercial Right-in Right-out access to an Arterial Collector unless this condition is waived in writing by Public Works.

FEATURES	
Posted Speed (kph)	N/A
Parking	No
Sidewalk	(See Note 2)
Traffic Signals	No
Pedestrian Crossing	(See Note 2)
Bikeway	N/A
Transit Route	Yes
Truck Route	Yes
Sound Attenuation	No
Pavement Markings	Yes

NOTES

1. Geometric design to meet or exceed minimum requirements of adjacent roadway classification
2. Pathway / pedestrian facility crossings at Right-in Right-out accesses shall be delineated such that it is clearly apparent to drivers that they are crossing a pathway / pedestrian facility where the pathway user / pedestrian has the right of way. The pathway / pedestrian facility crossing shall be provided as (a) a concrete sidewalk; (b) a raised asphalt crossing; or (c) permanent pavement markings in a zebra stripe or piano bar pattern. Signage identifying the location of the pathway / pedestrian facility shall be provided.
3. Sight lines shall be identified prior to landscape design.

Reference Drawings	00-04-12 00-04-13

6.18.2 RIGHT-IN RIGHT-OUT

Geometric

CLASSIFICATION	DESIGN SPEED	DESIGN VEHICLE
Adjoining Road Classification		Residential - WB-17 Commercial - WB-20 (1.0 m buffer required with a minimum of 0.3 m each side of vehicle)

HORIZONTAL ALIGNMENT	
Minimum Stopping Sight Distance	**Minimum Radius of Curvature**
(see TAC)	(see TAC)

VERTICAL ALIGNMENT
Maximum & Minimum Grades
• Max 6%, Min 0.6%
Grade at Intersections
• (see TAC)
Vertical Curves & Super Elevation
• Vertical curve lengths in meters should not be less than speed in kilometers per hour • emax = 0.04 or less

PAVEMENT STRUCTURE	REFERENCE DRAWINGS
	City of Prince Albert Standard Detail Drawings

6.19.1 PAVEMENT MARKINGS

Design

DESCRIPTION

Pavement markings include longitudinal, transverse, symbol and word pavement markings.

Pavement markings provide information to drivers. There are, however, limitations to the use of pavement markings including obstruction by snow cover, limited visibility when wet, and reduced visibility with wear.

The design of pavement markings must conform to the Manual of Uniform Traffic Control Devices for Canada.

The following table identifies marking material for all pavement markings on all roadway classification. Roadway design and engineering judgment will determine actual use of pavement markings and/or marking materials.

MATERIAL

	Arterial	Collector	Residential
Lane Lines	Paint	Paint	N/A
Edge Lines	Paint	Paint	N/A
Centre Lines	Paint	Paint	N/A
Crosswalks	Inlaid	Inlaid	Inlaid
Stop Bars	Inlaid	Inlaid	Inlaid
Continuity Lines	Paint	Paint	N/A
Guide Lines	N/A	N/A	N/A
Arrows	N/A	N/A	N/A

NOTES

1. Surface applied pavement markings include plastic (hot or cold applied), epoxy, Methyl Methacrylate (MMA), and hot tape.
2. Paint may be upgraded to Surface and applied in high volume areas.
3. All approaches of Collector roadways to Arterials will be treated with the same level of pavement marking as the higher classification roadway. Roadway design and engineering judgment will determine length of pavement markings required.

6.20.1 ERRATA

Design

DESCRIPTION

The Errata page presently identifies items identified by Public Works that have not found a permanent location elsewhere in the Design Standards document.

ERRATA

1. Adequate clear zone distance shall be provided between the edge of travel lanes and roadside obstructions. This includes separation for light standards, signs, landscaping, fences, etc
2. Stopping sight distance, decision sight distance and intersection sight distance shall be considered in all design
3. Driveway locations shall meet City of Prince Albert design standard and Bylaw requirements
4. Throat lengths for Arterial and Collector roadways shall meet or exceed the throat lengths identified for specific land uses in the TAC Geometric Design Guide for Canadian Roads unless this condition is waived in writing by Public Works
5. Roadways shall terminate in a temporary or permanent cul-de-sac. If a temporary cul-de-sac is provided until such time that the roadway is completed it shall be maintained by the developer to a level suitable for public use
6. Temporary construction access shall not attract shortcutting traffic to the construction access. Signage is required for all temporary construction access and the developer is responsible for construction and maintenance
7. As built drawings are required prior to Final Acceptance Certificate
8. Coordinate tree locations with street lights to minimize future tree trimming requirements
9. Sidewalk and pathway grades should not exceed a maximum of 5%.
10. A portion of roadway shall not have a change of gradient more than 1 in 12.5 over a maximum distance of 15 m
11. Handicap accessible ramps shall be provided for each individual crossing and shall be directed into the crosswalk location. The ramps shall not be located such that pedestrians are directed into the middle of the intersection.