

SECTION 7A

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STANDARD DRAWINGS

R1	Downtown
R2	Urban Collector
R3	Rural/Industrial Collector
R4	Urban Local
R5	Rural/Industrial Local
R6	Lane
R7	Standard Cul-de-sac and Offset Cul-de-sac
R8	Rural/Industrial Cul-de-sac and Offset Cul-de-sac
R9	Statutory Right of Ways for Municipal Services
R10	Typical Driveway Grades
R11	Typical Sign Installations

SECTION 7A

STREETS - DESIGN7A.1 **SCOPE**

In general, streets shall be designed in accordance with the "Manual of Geometric Design Standards for Canadian Roads and Streets", distributed by the Transportation Association of Canada (TAC).

7A.2 **WIDTH OF RIGHT-OF-WAY**

When approved by the Engineer, the right-of-way widths listed below may be varied.

7A.2.1	<u>Road Class</u>	<u>R/W Width</u>	<u>Std. Dwg. No.</u>
	Downtown (Parking Both Sides)	24.0m	R1
	Urban Collector	20.0 m	R2
	Rural/Industrial Collector	21.0 m	R3
	Urban Local (Parking Both Sides)	15.5m	R4
	Rural/Industrial Local	18.0 m	R5
	Lane	6.0m	R6
	Urban Cul-de-sac Diameter	30.0 m	R7
	Rural/Industrial Cul-de-sac Diameter	36.0m	R8

7A.2.2 In hillside locations where the land slope exceeds ten percent (10%) the minimum width of right-of-way shall be 20 metres.

7A.3 **WIDTH OF PAVEMENT (Gutter to Gutter)**

When approved by the Engineer, the pavement widths listed below may be varied.

<u>Road Class</u>	<u>Pavement Width</u>	<u>Dwg. No.</u>
Downtown	19.0 m	R1
Urban Collector	10.0 m	R2
Rural/Industrial Collector	11.5 m	R3
Urban Local	8.0 m	R4
Rural/Industrial Local	8.0 m	R5
Lane	4.0-5.5m	R6
Urban Cul-de-sac Dia.	24 m	R7
Urban Offset Cul-de-sac Dia.	See Drawings	R7
Rural/Industrial Cul-de-sac Dia.	28 m	R8
Rural Offset Cul-de-sac Dia.	See Drawings	R8

7A.4 **DESIGN CROSS SECTIONS**

All road cross sections shall conform to the standard drawings unless otherwise approved by the Engineer.

7A.5 **STREET CLASSIFICATION DEFINITIONS**

"Downtown Street" means a street that serves traffic of regional importance and volumes of less than 5,000 veh. per day. Downtown streets allow for direct access to adjacent land use. The downtown streets are integrated with the collector street system and pedestrians and parking are a high priority. It is not desirable to have truck and transit vehicles on downtown streets.

"Collector Street" means a street that serves traffic of sub-regional importance and volumes less than 5,000 veh. per day. Collector streets collect traffic from the local road system, connect neighbourhoods within the Town and provide access to major trip destinations. Pedestrians and cyclists are accommodated.

"Local Street" means a street that serves traffic of local importance and volumes less than 700 veh. per day. Local streets are integrated with the collector street system and allow direct access to all adjacent land use. Local streets integrate pedestrians and cyclists, but do not carry trucks or transit.

"Cul-de-sac" means a local street which has only one connection to the street system and which cannot reasonably be extended and which terminates in an area for the turning of motor vehicles.

7A.6 **MINIMUM BASE AND PAVEMENT STRENGTHS**

The minimum base and pavement strength standards shall be as shown below. Proof of minimum strengths shall be required.

	<u>Lanes & Urban Local Streets</u>	<u>Other Streets</u>
Coarse Gravel Sub-base, compacted 75 mm minus	250 mm	250 mm
Crushed Gravel Base, compacted 20 mm minus	100 mm	100 mm
Hot plant-mix asphalt pavement, compacted	50 mm	75 mm
Asphalt prime coat as directed		
Maximum Benkelman Beam deflection (when required by Engineer)	1.5 mm	0.75 mm
Minimum compaction of subgrade & gravel	95 % modified proctor	95 % modified proctor

7A.7 **STANDARD LONGITUDINAL GRADE**

7A.7.1 Minimum for all streets	0.50%
Maximum desirable Collector and Local streets	8%
Maximum absolute Collector & Local streets	12%
Maximum Arterial streets	8%
Maximum Cul-de-sac	6%
* Maximum desirable approach to an intersection	5%
* Maximum desirable approach to a T intersection	3%
Driveways up to 5m from street edge	12%

* Unless otherwise approved by the Engineer

7A.7.2 Vertical Curvature at Intersection (K Values)

Providing the intersecting street is marked as a STOP, the following K Values may be used for the minor street:

<u>Classification</u>	<u>Crest Curves</u>		<u>Sag Curves</u>	
	<u>Min</u>	<u>Pref</u>	<u>Min</u>	<u>Pref</u>
Arterial	4	6	4	6
Others	2	4	1.5	4

Minimum K Values for sag curves may be used where street lighting is provided.

7A.8 STANDARD CROWN AND CROSSFALL GRADES

7A.8.1	Street pavements minimum	2%
	Street pavements maximum	6%

7A.8.2 All roads shall normally be a crown section. Crossfalls shall require prior approval from the Engineer.

7A.9 GEOMETRICS

Vertical curves, super elevation, spirals and intersection geometrics shall be in accordance with the TAC Manual.

7A.10 EARTHWORK

7A.10.1 Gravel and earthwork slope in cut and fill:

Desirable	2H:1V	Maximum 1.5H:1V to be used only with approval from the Engineer on a site specific basis.
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7A.10.2 Rock slope in cut:

Maximum	1H:4V
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7A.11 STANDARD CROSS SECTIONS AND UTILITIES

The arrangements of utilities in relation to surface works and pavements and in relation to the right-of-way width shall be as shown in the Street Section Standard Drawings.

7A.12 CUL-DE-SACS

7A.12.1 Cul-de-sacs shall conform to the standard drawings.

7A.12.2 The length of any cul-de-sac shall not exceed 180 m to the end of the turnaround and shall permit a direct line of vision from the point of entry to the closed end.

7A.13 TEMPORARY CUL-DE-SACS

Temporary cul-de-sacs shall be required for all temporary dead end streets. Extent of works to be determined on a site specific basis and approved by the Engineer.

7A.14 DRIVEWAYS

7A.14.1 Residential driveways shall conform to Standard Drawing R10

7A.14.2 Commercial driveways shall be reviewed by the Engineer on an individual basis.

7A.14.3 A driveway permit must be obtained from the Municipality prior to construction of any driveway on an existing road.

7A.15 STREET NAME AND TRAFFIC SIGNS

7A.15.1 The design and construction of all roads shall include the design and installation of traffic signs (regulatory and warning), and traffic signals, in accordance with the most current standards contained in the "Manual of Uniform Traffic Control Devices for Canada" distributed by the Transportation Association of Canada (TAC).

7A.15.2 Street name signs shall be provided at all intersections, where possible, the street name sign shall be located above a traffic sign at one corner of the intersection.

7A.15.3 Sign locations shall be approved by the Engineer and in accordance with the most current standards contained in the "Manual of Uniform Traffic Control Devices for Canada" distributed by the Transportation Association of Canada (TAC).

7A.16 STREET MARKINGS

7A.16.1 The design and construction of all roads shall include the design and application of pavement markings and hazard and delineation markings in accordance with the most current standards contained in the Manual of Uniform Traffic Control Devices in Canada distributed by the Transportation Association of Canada (TAC).

7A.16.2 Curb markings delineating "Bus Stops" shall be red, "No Parking" yellow, and "Loading Zones" white.

7A.16.3 Crosswalk locations shall be determined as required by the Engineer.

7A.17 COMMUNITY MAIL CENTRES

7A.17.1 Contact Canada Post to obtain agreement on the type and location of community and centralized mail centres (CMC).

7A.17.2 The location of the CMC will be marked on the drawings submitted for final subdivision approval.