

NEW INDUSTRIAL & COMMERCIAL DRIVEWAY / ACCESS REQUEST PROCEDURES

**TRAFFIC ENGINEERING
ENGINEERING AND CONSTRUCTION**

January 1, 2011

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Design Criteria For a Proposed Access and Road Widening Within Region of Peel Right-Of-Way

1.0 Introduction

The purpose of the design criteria is to identify the procedure, design requirements, fees and engineering submissions of the road and access works within the right-of-way jurisdiction of the Region of Peel. The design guidelines will include widening design of existing road and construction required to facilitate the proposed development.

The road and access improvements required to facilitate the development as determined by the staff in the Traffic Engineering section or as indicated in the Traffic Impact Study. The Traffic Impact Study will specify the need for road widening and identify effects of traffic generated by the proposed development on the existing road network in the immediate vicinity of the proposed development.

Any changes and deviations from these guidelines may be acceptable where warranted. The consulting engineer shall contact the appropriate staff in the Traffic Engineering section to resolve the specific problems. In result, the consulting engineer shall confirm in writing the changes made and provide reason for these required changes. Drawings shall then be updated reflecting the changes.

2.0 Engineering Submission

2.1 Design Drawing Requirements

Proposed modifications to the existing road shall clearly specify the works proposed to be carried out and shall indicate existing and proposed road composition.

- a) Proposed road design modifications shall be designed to the Region “Design Criteria and Procedure Manual” and “Material Specifications and Standard Drawings Manual” and should comply with the latest OPSD Standards.
- b) All drawings shall indicate Region file number in the title block.
(i.e. D10714781N).
- c) A key plan is to be included on all drawings in the upper right hand corner, indicating existing roads and highways around the site.
- d) Plan drawings shall be prepared at a 1:500 scale and Profile Drawings at a 1:50 scale.
- e) A true north must be shown on all drawings.
- f) All drawings are to be submitted in a Microstation format for review and comment.

- g) The drawings shall be composed of the following
- Plan and Profile Drawing
 - Typical Sections Drawing
 - Pavement and Grading and Drainage Drawing
 - Pavement Marking and Signage Drawing
 - Traffic Management Plan Drawing

Examples of the above drawings are found in Appendix A.

- h) All drawings shall be stamped and signed by a registered professional engineer.
- i) When new traffic signals are required at a proposed access the traffic signal design shall comply with the Region of Peel standard practices and Guidelines.

2.1.1 Plan and Profile Drawing

- The elevations are to refer to geodetic datum. All base information reflecting the topographical conditions of the road within the limits of the right-of-way and on private side should be shown.
- All existing underground and above ground utilities shall be shown on the base plans. Any existing utilities that may conflict with the proposed road works shall be identified. It is the developer's responsibility to identify the utility conflicts, arrange for relocation and absorb all costs associated with such works.
- Drawing should indicate the right-of-way width with Property Line and Reserve and/or Buffer Block along the frontage of Regional road except at approved access point(s).
- Existing centre line of the road shall be identified.
- Existing road infrastructure must be identified and referenced to the appropriate OPS where applicable (i.e. curb and gutter, sidewalks, culverts, trees and or shrubs, etc.)
- All ditches, driveways and drainage direction must be defined.
- Existing storm sewer system must be identified and proposed design connection indicated.
- Centerline profile of proposed road is required.
- Indicate how the proposed access elevations will match the existing road elevations.
- Access corner radii must be shown.

2.1.2 Typical Sections Drawings

- Cross-section every 20 metre is required and must indicate existing and proposed road composition within the limits of construction.
- Provide sufficient Joint details.
- Existing and proposed slopes of top of pavement.
- Existing and proposed slopes of bottom of granular and pavement.
- In rural areas indicate side slopes towards the bottom of ditch.

- In urban areas indicate boulevard slopes and curb and gutter design.
- Centre line of road and widths of the lanes, shoulders, ditch, etc. should be defined with offsets to the property line.
- Existing Ground indicated on the drawing.
- Cross-section locations shall be indicated on the Plan and Profile Drawing with reference indicator.

2.1.3 Pavement and Grading Drawing

- Elevations of existing and proposed pavement should be shown every 20 metre interval.
- Centre line of road with edge of pavement and concrete curbs at centre islands and along corner radii should be shown.
- Existing access points should be shown.

2.1.4 Pavement Markings and Signage Drawing

- Existing and proposed pavement marking shall be shown on the drawings. All pavement markings must be in accordance with the Ontario Traffic Manual and to scale.
- Lane widths, skips and arrow spacing, stop bar widths, storage and taper lengths indicated.
- Existing and proposed traffic signs must be indicated.
- Existing and proposed street name signs must be indicated.
- Sign offsets and heights must be indicated and must comply with the Ontario Traffic Manual.
- The advance street name signs design should be provided with details. The sign location and design must be in accordance with the Guide Sign Design Manual for Ontario Highways.

2.3 Maintenance Bond

Prior to any construction on the subject lands the owner/developer is required to provide securities to ensure compliance with the terms and condition per the site plan application. The securities shall be at a 100% of the estimated cost of the design for the required road and access works within the Region's right-of-way. Cost estimate for the proposed road and access works shall be submitted for review and comment at the time of the final engineering submission. The required securities may be submitted in form of a Letter of Credit or certified cheque. A most up to date Sample Letter of Credit shall be obtained from Region staff, and can be found in Appendix C.

The maintenance bond is reduced to 10% upon completion of the road works and correction of any deficiencies. The 10% holdback will remain for the duration of a one year maintenance period.

2.4 Letter of Undertaking

Letter of Undertaking must be completed and reviewed by Region staff prior to the execution by the owner/applicant/developer. It is the consultant's responsibility to obtain the most up to date Draft Letter of Undertaking from Region staff. However a current Letter of Undertaking can be found in Appendix D.

2.5 P.U.C.C. Circulation

Copies of the final engineering submission are circulated to all public utility members in order to eliminate and/or reduce conflicts at the time of construction. This allows public utilities to identify any existing infrastructure that may be affected by the proposed road and access works. The typical circulation process takes up to six (6) weeks, or a min-procedure can be exercised only for emergency purposes. In addition the applicant/owner/developer shall acquire the public utilities to provide locates at its own discretion prior to any construction within Region right-of-way.

2.6 Engineering Fees

Engineering fees are calculated at 7% of the estimated cost at a minimum fee of \$1,500.00.

2.7 Insurance Certificate

The Region requires that the owner/applicant/developer carries a minimum 5 million dollar liability insurance coverage and that the Region of Peel be named on the certificate as additional insured.

2.8 Notice to Commence Work

The applicant's contractor shall complete a "Notification to Commence Work" 48 hours prior to any commencement of construction and shall be included with the construction drawings. A copy of the Notification to Commence Work is found in Appendix E.

2.9 Road Occupancy Permit

All work carried out within the Region's right-of-way is subject to a Road Occupancy Permit. The applicant or his successor must complete this form and include a fee of \$260.00. A copy of the Road Occupancy Permit can be found in Appendix F.

3.0 Reference Documents

Engineering submissions shall be designed based on the following reference documents:

- Geometric Design Standards for Ontario Highways – MTO
- Geometric Design Guide for Canadian Roads, 1999 – TAC
- Ontario Provincial Standards for Roads and Municipal Services
- Ontario Traffic Manual