

Rw-44-1

DATE: June 9, 2011

REPORT TITLE: **AMENDMENT OF CONTROLLED ACCESS BY-LAW 59-77**

FROM: Dan Labrecque, Commissioner of Public Works

RECOMMENDATION

That the proposed by-law amendment be endorsed by Regional Council for discussion, in accordance with the report of the Commissioner of Public Works, dated June 9, 2011, titled "Amendment of Controlled Access By-law 59-77";

And further, that the proposed amendment be reviewed with the City of Mississauga, City of Brampton, Town of Caledon, the Peel Goods Movement Task Force and the Building Industry and Land Development Association (BILD);

And further, that staff report back to Regional Council with any further amendments to the Controlled Access By-law 59-77;

And further, that a copy of the subject report and resolution be forwarded to the Ministry of Transportation, City of Mississauga, City of Brampton, Town of Caledon, the Peel Goods Movement Task Force and BILD for their information.

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AMENDMENT OF CONTROLLED ACCESS BY-LAW 59-77**REPORT HIGHLIGHTS**

- The Region of Peel's Controlled Access By-law facilitates and supports the function and integrity of the Regional road system;
- The Region's Controlled Access By-law 59-77 should be amended to formalize current practices and incorporate new access arrangements;
- The Region's Term of Council Priorities (TOCP) action item 13 requests a complete arterial roads review;
- Full moves accesses will continue to be considered with a minimum spacing of 300 to 400 metres (984 to 1312 feet) from another full moves access;
- Right in / right out accesses will continue to be considered with a minimum spacing of 100 metres (328 feet) between accesses on the far-side of the intersection and 130 metres (427 feet) on the near-side of the intersection with the construction of a centre median extension where allowable and/or directional island;
- Right in / right out accesses at Service Station developments will be considered at the furthest limit of the property from the intersection;
- Partial moves accesses (right in and right out and left in) will be considered with a minimum spacing of 180 metres (591 feet) from another full moves access or partial moves access; and, where an adequate left turn lane can be constructed without impacting adjacent intersections and the safety and capacity of the roadway.

DISCUSSION**1. Background**

The Region of Peel's vision is to be a "safe, healthy, prosperous, sustainable and inclusive community that protects its quality of life". One of the goals in the Region's Strategic Plan for 2011 to 2014 is to "support and influence sustainable transportation systems"(Goal 4). To obtain that goal some actions include:

- Ensure an adequate arterial road infrastructure to support existing and changing transportation needs;
- Collaborate with other levels of government and agencies to influence solutions; and,
- Adapt, protect and accommodate integrated goods movement in the Regional transportation system while minimizing conflicts with adjacent land uses.

The Region of Peel's Term of Council Priorities (TOCP) action item 13 makes reference to a complete arterial roads review. All arterial roads within the Region of Peel are a major contributor to quality of life, success of its businesses and a building block of the Region's economic base. Arterial roads within Peel provide a service which is similar to that of provincial highways; as such they handle high volumes of traffic, including through traffic (usually at higher speeds), transit routes, join urban areas and communities and are corridors for goods movement.

The Region's Controlled Access By-law protects the fundamental function and integrity of the Regional road system. The By-law has been established to manage and balance competing priorities on our Regional roadways, supporting economic development while managing road capacity needs with the utmost safety.

The existing Controlled Access By-law designates all Regional Roads as controlled access facilities and prohibits or regulates the construction or use of any access on Regional roads.

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Presently, the Commissioner of Public Works or his designate has the authority to approve accesses on Regional roads utilizing the criteria outlined in the Controlled Access By-law. Although the criteria established utilizes sound traffic engineering practices, due to the current development and land use demands, it is recognized that additional potential variations of access arrangements can be considered if demonstrated to be safe without affecting the functionality of the roadway.

2. Findings**a) Purpose of Access Management**

Intersection spacing is critical for the effective movement of traffic and goods on Regional roads. The efficient movement of goods is critically important for the economies of Peel Region and the Province of Ontario. It is an important factor in attracting and retaining a range of industries and businesses indirectly impacting the competitiveness of Peel's business and the availability of high quality jobs. To mitigate traffic congestion, access spacing needs to be controlled to facilitate the most efficient movement of traffic through the Regional corridors.

Access management allows the municipal authority to effectively manage the provision of access to the public road system for new development or re-development. The major objective is to provide a safe access which is consistent with the function and operation of the public road and the access needs of the adjacent land uses. Access management achieves the necessary balance between traffic movement and land use access by careful control of the location, type and design of driveways and municipal intersections also benefiting active transportation i.e. pedestrians and cyclists by minimizing conflict points.

The Institute of Traffic Engineers (ITE) Handbook indicates that direct access from arterials should be discouraged or denied except where no alternative access exists. In addition, access to a property should be obtained from the local road system where possible.

Currently, in locations where access is being proposed from an arterial road it must be proven to be safe without negatively affecting the capacity of the roadway using criteria established in the proposed amendment to the Controlled Access By-law 59-77. Depending on the type of access a raised centre median shall be in place to physically restrict the access and reduce turning conflicts and potential collisions. Auxiliary turning lanes should be incorporated with all types of accesses as specified in the by-law. Left turn and right turn lanes are strongly recommended from both a safety and capacity point of view. It has been demonstrated that the frequency and severity of rear end collisions will be reduced when left and right turn lanes are in place.

Sufficient sight distance for vehicles using accesses is essential. Vehicles must be able to enter and leave the access safely. Sight distance requirements should be met for all access types using the standards indicated from the Transportation Association of Canada (TAC) manual and current Region of Peel practices.

b) Environmental Scan

Staff previously initiated a Traffic Development liaison group which included the City of Mississauga, City of Brampton and Town of Caledon to review current practices as it relates to accesses for development applications. Both the Cities of Mississauga and Brampton have similar access spacing guidelines depending on the type of road, however, they do not have their requirements in a by-law form. Similarly, the Town of

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Caledon has referred to the Region of Peel Controlled Access By-law 59-77, as amended, in an effort to minimize access points to maintain safety and efficiency.

As part of the review Regional staff have investigated access spacing requirements in jurisdictions in both, Canada and the United States. The Region of Peel has fairly liberal and accommodating requirements as compared to other jurisdictions. Access spacing on similar types of roadways for a full moves access, ranges from 365 to 1600 metres (1198 to 5249 feet), citing no negative business / economic impact to longer intersection spacing with reduced travel times, reduced collision rates and better traffic signal coordination. The current Ministry of Transportation Guideline is 365 to 400 metres (1198 to 1312 feet). However, this is currently being revised and the proposal includes adopting 800 to 1600 metres (2625 to 5249 feet) spacing for signalized intersections.

The Region's access spacing and requirements remain unchanged, except the amendments addressed herein.

3. Proposed Amendments - Access Approval and Criteria on Regional Roads

The substantial increase in construction and change in land use throughout the Region has prompted staff to review the policy and therefore are proposing an amendment to the existing by-law in order to provide potential additional alternative access types. In addition, staff recommend that the by-law be amended (Appendix I) to allow for current practices to be incorporated in the proposed by-law such as; provisions to request a transportation impact assessment and allow the Commissioner or his/her designate the authority to approve or deny an application for access when taking into account the provisions, policies and procedures of the Region that are in effect. These provisions, policies and procedures include without limitation: the Region's Official Plan policies; traffic safety and capacity considerations; and the Region's road design guidelines and standards for the engineering submission process. Furthermore, the by-law should be amended to permit the Commissioner or his/her designate to require the developer/applicant to be solely responsible for the expenses incurred for a transportation impact assessment and all road and access works associated with the development. The traffic impact assessment is required for all types of access application unless directed otherwise by the Commissioner or his/her designate.

The Region of Peel will circulate the proposed amendment to the City of Mississauga, City of Brampton, Town of Caledon, the Peel Goods Movement Task Force and BILD for comments and discussion and report back to Regional Council with any further amendments to Controlled Access By-law 59-77.

a) Right In / Right Out Restricted Accesses

Currently, right in / right out accesses are permitted under the existing Controlled Access By-law with various guidelines and criteria to be met. The proposed amendment would continue to permit right in / right out accesses with spacing of 100 metres (328 feet) between accesses and on the far-side of the intersection, and 130 metres (427 feet) on the near-side of the intersection (Appendices II, III and V):

- At locations where a centre median cannot be constructed due to limited roadway width, adjacent accesses and/or other constraints, the developer will be required to build a directional island to physically restrict the movements at the access point (see Appendix III);

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- As specified in the by-law, a right turn lane shall be required at all right in / right out accesses and will be at the developer's cost. The right turn lane will be constructed with a minimum storage of 30 metres (98 feet) and required taper length to reflect the design speed of the roadway and utilizing the standards used in the TAC Manual and or the Ontario Ministry of Transportation (MTO) Geometric Design Standards for Ontario Roads (as specified by the Region).

At locations where restricting access to a right in / right out is not conducive to the surrounding area, due to existing adjacent access or other physical constraints, the Region of Peel at its discretion may require a developer to enter into an access agreement to be registered on title to restrict an access in the future, in conjunction with a future road widening project or under the direction of Regional Council for public safety and capacity reasons.

It has been staff's experience that new and the rebuilding of existing service stations may include a multiple of retail service uses on these sites. At the present time many service stations include a drive-thru restaurant component in conjunction with a carwash and/or a convenience store. With multiple services provided on these sites, the number of trips in and out of the development increases significantly. As such, it is necessary to provide specific requirements as it relates to the type and location of access. With the development of new service stations, only one right in / right out access shall be considered at a location furthest from the intersection. Where possible, a right turn lane will be constructed at the access point. Similarly, at rebuilds of existing gas stations, all efforts will be made by staff to incorporate only one right in / right out access at the furthest limit of the property frontage. Where this is not possible, a minimum separation of 30 metres (98 feet) from the nearest intersection to the proposed access should be maintained to provide adequate corner clearances.

b) Full Moves Accesses

Currently full moves accesses are permitted under the existing Controlled Access By-law where a minimum spacing of 300 to 400 metres (984 to 1312 feet) from another full moves access can be obtained.

When considering a full moves access, spacing shall be adequate to accommodate queuing of through movements without the potential of blocking any adjacent full moves accesses. The current minimum spacing of 300 to 400 metres (984 to 1312 feet) between full moves accesses must be obtained when considering full moves accesses on Regional Roads. By continuing with this spacing acceptable roadway capacity, mobility, safety, traffic signal coordination and through / left turn storage requirements between intersections can be achieved as well as the advantages of proper access management outlined in Section 2a of the By-law.

A separate left turn lane and right turn lane shall be required at all full moves accesses as specified by the by-law (see Appendix IV). The minimum storage shall be 30 metres (98 feet) but may increase should the proposed turning volume warrant it. The taper lengths shall be based on the design speed of the roadway and utilizing the standards used in the TAC manual and or the MTO Geometric Design Standards for Ontario Roads.

The provision of future traffic control signals shall be evaluated in conjunction with a full moves access. The future traffic control signals will only be installed when warranted or otherwise directed by Regional Council. The cost for the installation of traffic control

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signals at a private full moves access shall be at the developer's/applicant's cost. In addition, it shall be the developer's/applicant's cost to pay for the annual maintenance associated with the traffic signals. It is staff's recommendation that the annual maintenance be billed to the developer annually for the life of the signalized full moves access.

c) Partial Moves Access

Partial Moves Accesses (Right In / Right Out and Left In) is not an access arrangement included in the existing Controlled Access By-law. Staff have experienced numerous requests for this type of access arrangement (Appendix V). Although the Region has approved such access arrangement at certain locations, it was determined that certain criteria shall be considered before approving this interim type of access and included in the proposed amendment to the Controlled Access By-law.

Partial moves accesses shall only be considered when:

- adequate spacing between the proposed access and any adjacent intersections can be achieved without having a negative impact on the upstream and downstream intersections or the road section;
- the location of a proposed partial moves access must ensure that the existing through queues from the adjacent intersections will not block the proposed access point, left turning vehicles shall not operate depending on courtesy gaps;
- the partial moves access does not adversely affect the safety and capacity of the roadway;
- an adequate left turn lane can be constructed to accommodate the necessary storage and taper for the proposed turning volume;
- that satisfactory back to back left turn lanes with the adjacent intersections can be accommodated;
- it is established as an interim conditional measure based on safety, capacity and functionality of the access/road section.

Although typical spacing for partial moves accesses will vary depending on the volume on each roadway and the necessary left turn storage and taper requirement, every effort shall be made to maximize the spacing for these proposed accesses. A minimum spacing of 180 metres (591 feet) shall be obtained from another full or partial moves access.

In conjunction with the required left turn lane, a separate right turn lane shall be required as specified in the by-law. The minimum storage shall be 30 metres (98 feet) but may increase should the proposed turning volume warrant it and/or subject to the review of the traffic impact assessment. The taper lengths shall be based on the design speed of the roadway and utilizing the standards used in the TAC Manual and/or the MTO Geometric Design Standards for Ontario Roads. In addition, a centre median shall be designed and built in such a way as to physically restrict the left out movement (see Appendix V).

CONCLUSION

The Region's Controlled Access By-law protects the function and integrity of the Regional road system. The Region's Controlled Access By-law should be amended and updated to validate current practices, existing policies/procedures and to reflect new interim access arrangements which includes Right In / Right Out and Left In, partial moves access.

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TRANSPORTATION DIVISION

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Dan Labrecque
Commissioner of Public Works

Approved for Submission:



D. Szwarc, Chief Administrative Officer

For further information regarding this report, please contact Damian Jamroz, Supervisor Traffic Development at extension 7856 or via email at damian.jamroz@peelregion.ca

DAS *JA* Authored By: *DA* Damian Jamroz / Joe Avsec

c. Legislative Services

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APPENDIX I

THE REGIONAL MUNICIPALITY OF PEEL

BY-LAW NUMBER

A by-law to amend By-law Number 59-77, as amended by By-laws 45-83 and 56-93, being a by-law to designate Regional Roads as controlled access roads and to prohibit or regulate the construction and use of any access onto a Regional Road.

WHEREAS By-law Number 59-77 was enacted on May 12, 1977, by the Council of The Regional Municipality of Peel to designate Regional Roads as controlled-access highways and to prohibit or regulate the construction and use of any access onto highways under the jurisdiction of The Regional Municipality of Peel (hereinafter called "Region");

AND WHEREAS, By-law 45-83 was enacted on April 28, 1983, by the Council of the Regional Corporation to amend By-law 59-77;

AND WHEREAS, By-law 56-93 was enacted on June 24, 1993, by the Council of the Regional Corporation to further amend By-law 59-77;

AND WHEREAS, under the broad powers delegated under the *Municipal Act, 2001*, S.O. 2001, c.25, as amended, a council is authorized to pass by-laws designating highways as controlled access highways and prohibiting or regulating the construction or use of any access onto highways is found in;

AND WHEREAS, it is the wish and intent of the Council of the Region for all Regional Roads to remain as controlled-access highways as established by By-law 59-77;

AND WHEREAS, the Council of the Region wishes to further amend By-law 59-77, as amended, to clarify and outline in greater detail the application process and criteria for access to a Regional Road;

NOW THEREFORE, the Council of The Regional Municipality of Peel enacts as follows:

1. That By-law Number 59-77, as amended is hereby further amended by deleting subsection 1.b) therein and substituting the following therefore:
 - b) "Regional Road" means any highway designated as a Regional Road in the Regional Road System By-law, being By-law Number 78-91, as amended or replaced from time to time;

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2. That By-law Number 59-77, as amended, is hereby further amended by adding to section 1 thereto the following definitions:
 - d) "Applicant" means the applicant for a Road Occupancy Permit under this By-law;
 - e) "Commissioner" means the Commissioner of Public Works or his or her designate;
 - f) "Commissioner of Public Works" means the Commissioner of Public Works and does not include his or her designate;
 - g) "Highway" means a common and public highway and includes any bridge, trestle, viaduct or other structure forming part of a highway, except as otherwise provided, includes a portion of a highway;
 - h) "Median" means the portion of a highway so constructed as to separate traffic travelling in one direction from traffic traveling in the opposite direction by physical barrier or a raised or depressed paved or unpaved separation area that is intended to prevent crossing vehicular movements;
 - i) "Owner" means the registered owner of the property directly adjacent to the portion of the Regional Road that the Applicant is applying for access onto;
 - j) "Transportation Impact Assessment" means a study submitted by the Applicant which estimates the traffic generated by a proposed development and assesses the effects it will have on the surrounding transportation network, to determine what provisions are needed for safe and efficient site access and traffic flow, and to address other related safety and capacity issues.
3. That By-law Number 59-77, as amended, is hereby further amended by adding thereto the following sections:
 - 2A. No person shall use, construct, relocate or alter or cause to be used constructed, relocated or altered an access onto a Regional Road without a permit having been issued by the Commissioner under this By-law for such access.
 - 2B. The Commissioner may approve, with or without conditions, or deny an application for access onto a Regional Road taking into account the principles contained in this By-law as well as the following:
 - a) the provisions, policies and procedures of the Region including without limitation; the Region's Official Plan policies, traffic safety and capacity considerations, and the Region's road design guidelines and standards for the engineering submission process;
 - b) generally accepted engineering principles;

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- c) input from the staff of the appropriate area municipality, where the Commissioner, in his/her sole discretion, has requested such input; and
 - d) the results of the Traffic Impact Assessment, where the Commissioner has required the Applicant to submit such an assessment as part of the Application.
4. That By-law Number 59-77, as amended is hereby further amended by deleting section 3 thereto and substituting therefore the following:
- 3. An Applicant for access onto a Regional Road shall submit to the Commissioner the following:
 - a) a completed Road Occupancy Permit Application, in a form approved by the Commissioner, which Application if approved shall form the Permit for the access and shall contain terms and conditions on which access is granted by the Commissioner in addition to any other conditions imposed by the Commissioner pursuant to his or her authority under this By-law;
 - b) the applicable fee under the Region's Fees By-law, as amended or replaced from time to time;
 - c) a letter outlining the reasons and purpose of the requested access;
 - d)
 - i. in the case of access other than to a private residential dwelling or for farming purposes an Application shall be accompanied by two copies of a site plan and a site grading plan; or
 - ii. in the case of access to a private residential dwelling or for farming purposes, the Application shall be accompanied by two copies of a site plan or sketch showing the location and dimensions of the access; and
 - e) at the discretion of the Commissioner, a Traffic Impact Assessment, the cost of which shall be the sole responsibility of the Applicant.
5. That By-law Number 59-77, as amended is further amended by adding thereto the following section:
- 3A. In addition to the terms and conditions contained on the Road Occupancy Permit the Commissioner may also impose either or both of the following as terms and conditions of granting access onto a Regional Road, the costs of which shall be the sole responsibility of the Applicant:

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- a) that a reference plan be prepared showing the location of the approved access;
 - b) that the Owner enter into an access agreement, the terms of which shall be determined by the Commissioner, to be registered on title to the Owner's property setting out the conditions of access approval, including but not limited to;
 - (i) in the case of an application for full access the responsibility for all costs associated with the construction, annual maintenance, annual traffic studies, and annual pavement markings related to the full access; or
 - (ii) in the case of an application for any access other than full access, the ability to physically restrict the access in the future for safety and capacity reasons as determined by the Commissioner.
6. That By-law Number 59-77, as amended is further amended by adding thereto the following section:
- 3B. All road and access works required by the Commissioner, whether temporary or permanent, associated with or arising as a result of the granting of access to the Applicant onto the Regional Road shall be at the sole expense of the Applicant.
7. That By-law Number 59-77, as amended is hereby further amended by deleting the words "of Public Works" in section 4 thereto.
8. That By-law Number 59-77, as amended is hereby further amended by deleting subsections 4 d) therein and substituting the following therefore:
- d) the controlled access should be not closer than 130 metres to an intersection on the near-side (deceleration) and not closer than 100 metres to an intersection on the far-side (acceleration).
9. That By-law Number 59-77, as amended is hereby further amended by adding the following subsections to section 4 thereto:
- f) Notwithstanding subsection 4. d) for property with frontage less than 100 metres or for new service stations and redevelopment of existing service stations, abutting an intersection, only one right in/right out access shall be considered at the furthest limit of the property frontage on the Regional Road and maintain the minimum separation of 30 metres from the nearest intersection or access to the proposed access in order to provide adequate corner clearances.
- g) At a location where a Median cannot be constructed due to the width of the Regional Road, adjacent accesses or other constraints as determined by the Commissioner, the Applicant shall be required to build a directional island to physically restrict the vehicular movement at the access to a right in/right out access.
- h) A right turn lane is required and shall be constructed with a minimum storage of 30 metres and shall in the opinion of the Commissioner be supported by a Transportation Impact Assessment and the required taper length to reflect the design speed of the Regional Road;

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10. That By-law Number 59-77, as amended is further amended by deleting the words "of Public Works" in the second line of section 5 thereto.
11. That By-law Number 59-77, as amended is hereby further amended by adding the following subsections to section 5 thereto:
 - d) A right turn lane is required and shall be constructed with a minimum of storage of 30 metres and shall in the opinion of the Commissioner be supported by a Transportation Impact Assessment and the required taper length to reflect the design speed of the Regional Road.
 - e) A left turn lane is required and shall be constructed with a minimum storage of 30 metres and shall in the opinion of the Commissioner be supported by a Transportation Impact Assessment and the required taper length to reflect the design speed of the Regional Road;
 - f) Traffic signals shall only be installed when:
 - (i) the criteria for traffic signals as set out in the Ontario Traffic Manual - Book 12, as it may be changed from time to time or replaced, is met; or
 - (ii) it is directed by either the Commissioner of Public Works or by the Council of the Region to install traffic signals.
 - g) The installation and annual maintenance of private access signals shall be solely at the expense of the Applicant or Owner.
12. That By-law Number 59-77, as amended is further amended by deleting section 6 thereto and substituting the following section therefore:
 6. When considering whether or not to permit a left in, right in and right out access, the Commissioner shall take into account the following principles:
 - a) the left in, right in/right out access shall be controlled by a Median designed and built in a way as to physically prevent the left out movement;
 - b) the minimum spacing between the accesses shall not be less than 180 metres from another access or intersection and shall in the opinion of the

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Commissioner be supported by a Transportation Impact Assessment of the adjacent intersection or access;

- c) a right turn lane is required and shall be constructed with a minimum storage of 30 metres and shall in the opinion of the Commissioner be supported by a Transportation Impact Assessment and the required taper length to reflect the design speed of the Regional Road; and
- d) a left turn lane is required and shall be constructed with a minimum storage of 30 metres and shall in the opinion of the Commissioner be supported by a Transportation Impact Assessment and the required taper length to reflect the design speed of the Regional Road.

13. That By-law Number 59-77, as amended is further amended by adding thereto the following section:

- 7. a) Where the Region is the owner of 0.3 metre (one foot) reserve that is prohibiting access onto a Regional Road and the Commissioner has approved access onto the Regional Road under this By-law and the Applicant has complied with any and all terms and conditions imposed, the Commissioner has authority upon receipt of the completed requirements to authorize the lifting of the reserve at the approved access location.
- b) After the Commissioner has authorized the lifting of the reserve at the approved access location, a by-law shall be submitted to Regional Council to dedicate the said lands as part of the public highway adjacent thereto.

14. That By-law Number 59-77, as amended is hereby further amended by adding thereto the following section:

- 8. Schedule "A" attached hereto shall form part of this By-law.

15. That By-law Number 59-77, as amended is hereby further amended by adding thereto the following section:

- 9. Any person without the Commissioner's written approval who contravenes any provision of this By-law is guilty of an offence and is liable upon conviction to a fine in accordance with the provisions of the *Provincial Offences Act*, R. S. O. 1990, c. P.33, as amended.

16. That By-law 59-77, as amended is further amended by adding thereto the following section:

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10. If a court of competent jurisdiction declares any section or part of a section of this By-law, as amended to be invalid, it is the intention of Council for the Region that the remainder of the By-law, as amended shall continue to be in force.

READ THREE TIMES AND FINALLY PASSED IN OPEN COUNCIL this ____ day of _____, _____ 2011.

Regional Clerk

Regional Chair

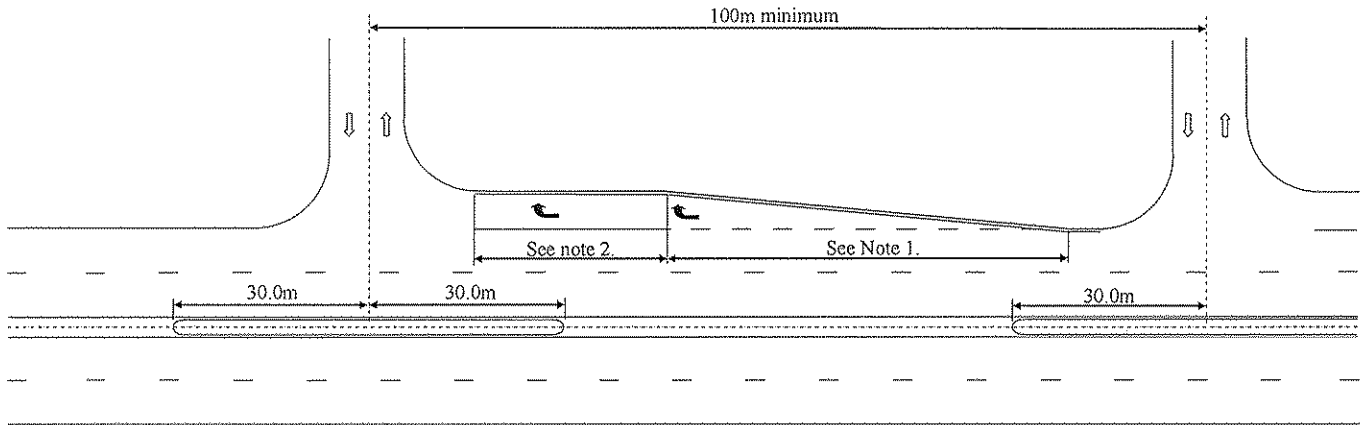
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APPENDIX II

SCHEDULE "A"

TYPICAL LAYOUT AND SPACING FOR A RIGHT IN/OUT ACCESS
ROADS WITH DIVIDED CENTRE MEDIAN ISLAND EXTENSION



NOTE:

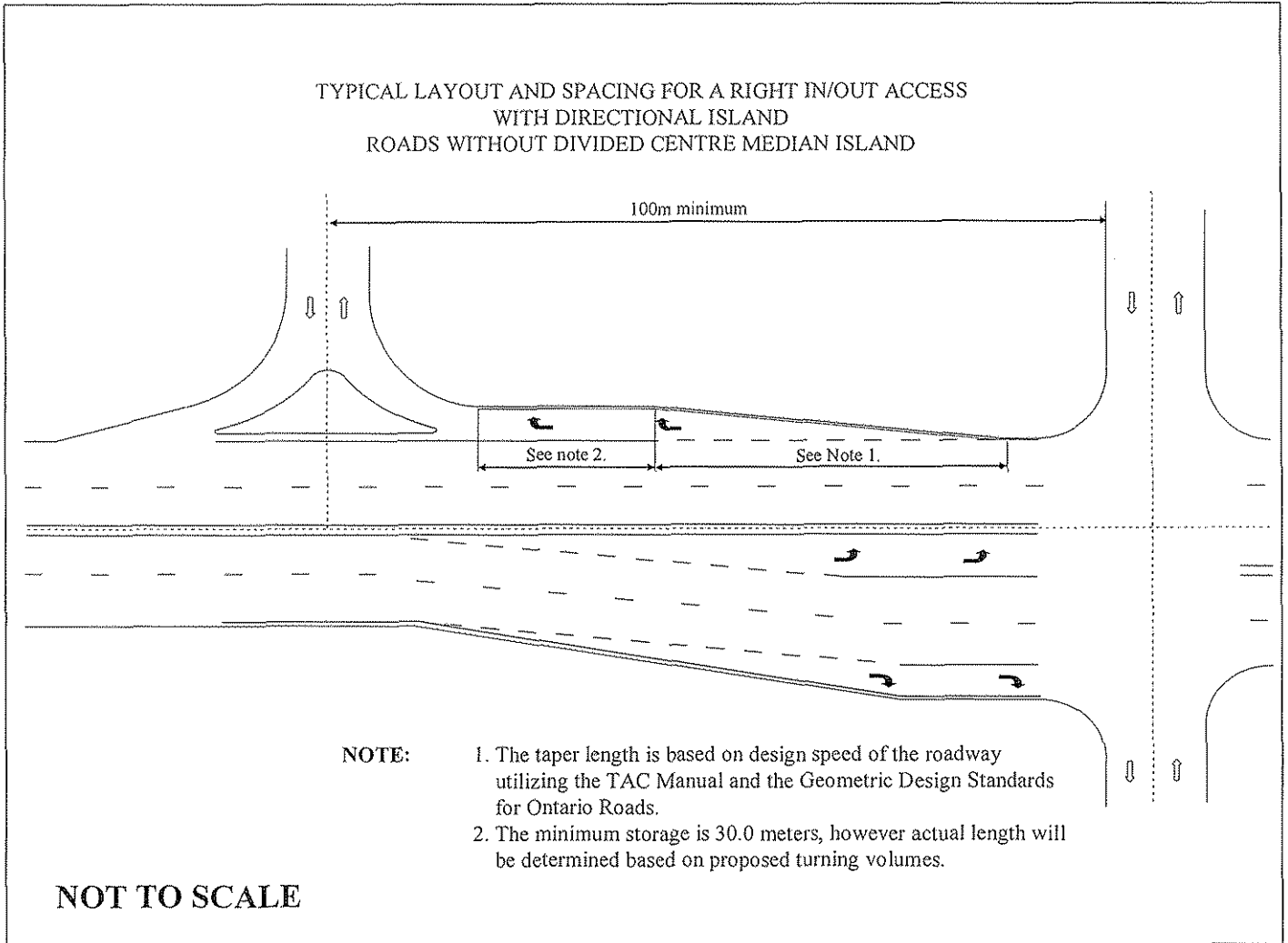
1. The taper length is based on design speed of the roadway utilizing the TAC Manual and the Geometric Design Standards for Ontario Roads.
2. The minimum storage is 30.0 meters, however actual length will be determined based on proposed turning volumes.

NOT TO SCALE

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APPENDIX III

SCHEDULE "A"



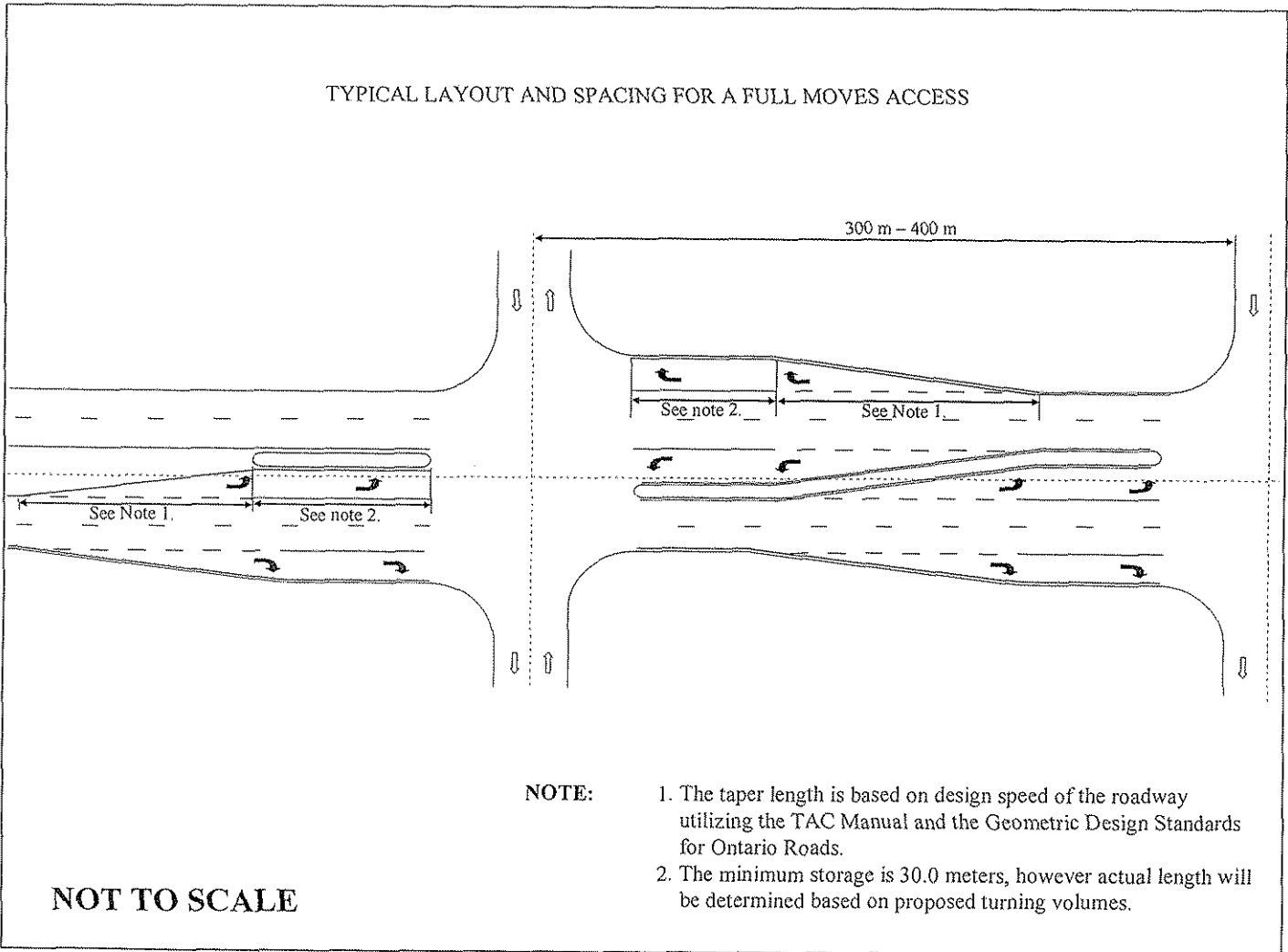
APPENDIX IV
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TRANSPORTATION DIVISION
REVIEW OF DRAFT AMENDMENT OF CONTROLLED ACCESS BY-LAW 59-77

APPENDIX IV

SCHEDULE "A"

TYPICAL LAYOUT AND SPACING FOR A FULL MOVES ACCESS



NOTE:

1. The taper length is based on design speed of the roadway utilizing the TAC Manual and the Geometric Design Standards for Ontario Roads.
2. The minimum storage is 30.0 meters, however actual length will be determined based on proposed turning volumes.

NOT TO SCALE

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APPENDIX V

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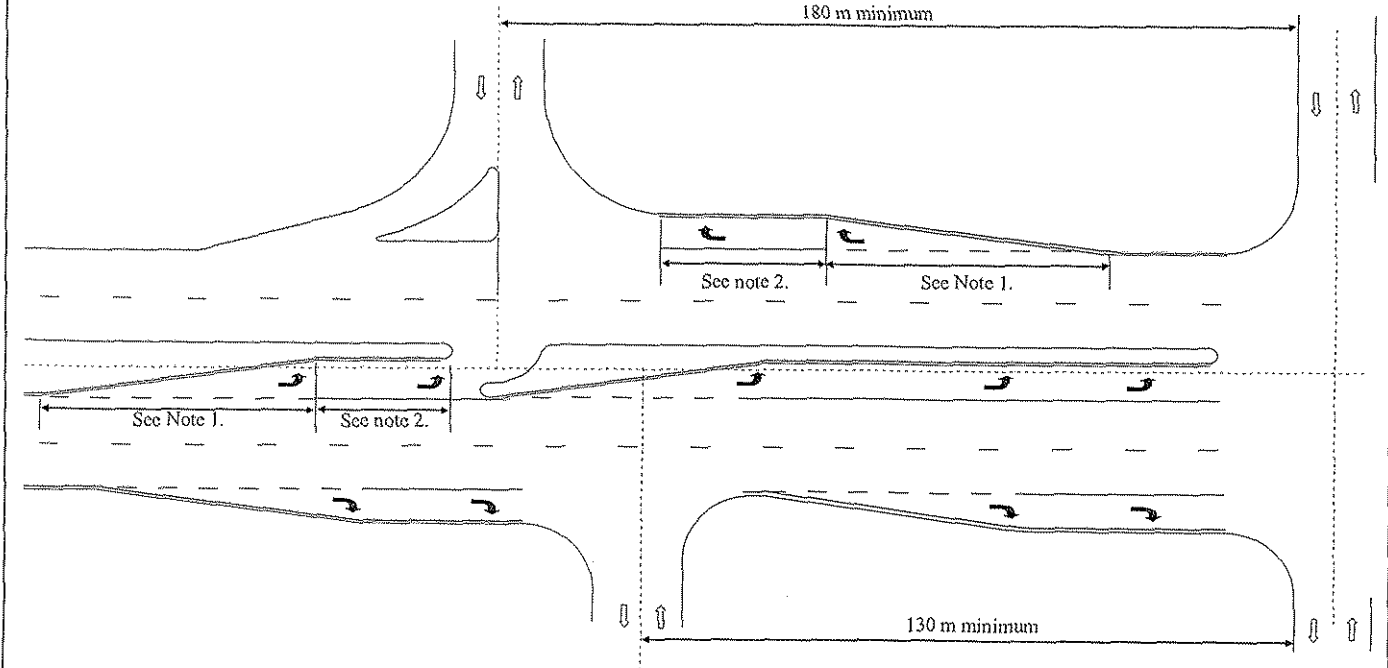
TRANSPORTATION DIVISION

REVIEW OF DRAFT AMENDMENT OF CONTROLLED ACCESS BY-LAW 59-77

APPENDIX V

SCHEDULE "A"

TYPICAL LAYOUT AND SPACING FOR A PARTIAL MOVES
LEFT IN - RIGHT IN/OUT ACCESS AND RESTRICTED RIGHT IN/OUT ACCESS
ROADS WITH DIVIDED CENTRE MEDIAN ISLAND



NOTE:

1. The taper length is based on design speed of the roadway utilizing the TAC Manual and the Geometric Design Standards for Ontario Roads.
2. The minimum storage is 30.0 meters, however actual length will be determined based on proposed turning volumes.

NOT TO SCALE