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TO:	CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON MARCH 29, 2016
FROM:	EDWARD SOLDO, P.ENG. DIRECTOR, ROADS & TRANSPORTATION
SUBJECT:	TRANSPORT CANADA GRADE CROSSING REGULATIONS

RECOMMENDATION

That, on the recommendation of the Director, Roads and Transportation, the following report with respect to road authority compliance with the new Regulation 2014-275 (Grade Crossing Regulations) pursuant to the Railway Safety Act **BE RECEIVED** for information.

PREVIOUS REPORTS PERTINENT TO THIS MATTER
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- Civic Works Committee – April 28, 2014 – Rail Safety Week
- Civic Works Committee – October 7, 2013 – Railway Pedestrian Crossing Safety
- Civic Works Committee – February 25, 2013 – Railway Pedestrian Crossing Safety
- Environment and Transportation Committee – November 28, 2005 – Priority Setting Factors for Future Rail / Road Grade Separations
- Environment and Transportation Committee – February 14, 2000 – Railway Issues in London

2015-19 STRATEGIC PLAN

The 2015 – 2019 Strategic Plan identifies the implementation and enhancement of road safety measures for all users as a means to deliver convenient and connected mobility choices.

BACKGROUND

Purpose

The purpose of this report is provide Committee and Council with an update of the new Grade Crossings Regulations (Statutory Order and Regulations 2014-275) pursuant to the Railway Safety Act. These new regulations require due diligence actions by the road authority.

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Introduction

Collisions at grade crossings are more severe compared to other road user collisions, and they are more likely to result in death or severe injury. Data has shown that these collisions are ten times more likely to result in a fatality. Between 2009 and 2013, collisions at public and private crossings resulted in an average of 26 fatalities and 26 serious injuries per year across Canada. Transport Canada introduced the new Grade Crossing Regulations (GCR) in response to Transportation Safety Board concerns and Railway Safety Act reviews highlighting the challenges for managing safety at grade crossings.

Railway companies, road authorities and private crossing owners are each responsible for managing railway crossing safety in Canada. Historically the majority of grade crossing improvements have been based on adherence to Transport Canada standards at times of maintenance or capital works. The roles and responsibilities for monitoring conditions at these grade crossings can be unclear and the previous standards that were in place were typically applied as guidance. A 2011 Transport Canada study found that only 30% to 50% of the crossings met these standards. In order to provide a consistent level of safety at each railway crossing, the new GCR put forward key requirements and enforceable standards.

In late 2014, Transport Canada published the GCR, pursuant to sections of the Railway Safety Act. The intended purpose of the new GCR is to address gaps that exist within the existing voluntary standards and regulations in order to improve safety performance of grade crossings across Canada. The GCR aims to bring grade crossing safety standards to a consistent level across the country and promote collaboration between the road authorities and railway companies to ensure that all grade crossings are proactively brought up to standard within 7 years from the date the regulation came into force in November 2014.

Key Aspects of Grade Crossing Regulations

There are many aspects to be considered as part of the new GCR. The key items include:

Grade Crossings Standards - The Grade Crossing Standards, July 2014 (GCS) are incorporated by reference in the proposed Regulation. The GCS meet the safety goals of the Railway Safety Act (RSA) and are enforceable, thus improving safety and consistency at grade crossings.

Roles and Responsibilities - The proposed Regulation provides clarification for the roles and responsibilities of each party (railway companies, road authorities and private authorities).

Sharing of Safety Information - Railway companies and road authorities are required to share specific critical information with each other for existing and newly constructed grade crossings and when altering or changing the operations of existing public grade crossings.

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Sightlines - The Regulation sets out specific standards for sightlines and their maintenance. The railway companies, road authorities and private authorities are required to maintain sightlines at the grade crossings.

Signage and Warning System - Prescriptive requirements related to signage and warning systems have been outlined in the Regulation and GCS.

Train Whistling - The Regulation prescribes the requirements applicable to areas where the cessation of train whistling has been applied by municipal bylaw and is based on safety attributes of the grade crossings.

Compliance - establishes requirements for inspection, testing and maintenance of warning systems and traffic control devices.

General Requirement - The Regulation includes other items such as restrictions on grade crossing obstructions. For example road authorities are required to ensure that vehicles are not prone to stopping on the crossing surface, typical of queuing.

City of London Context

The City of London is serviced by a network of railway lines that move freight and passengers. The network is comprised of railways owned by Canadian National Railway (CN), Canadian Pacific Railway (CPR) and Goderich Exeter Railway (GEXR), which account for over 60 at-grade crossings within the City. The railways are crucial to the economic prosperity of London and Southwestern Ontario as they provide a reliable and affordable way to transport goods.

The City of London has traditionally been proactive with rail crossing safety. In 2007, a safety review was completed by the City with the assistance of Transport Canada (TC), CN, CPR and GEXR of all railway crossings in London. The review assessed signage, pavement markings, vegetation, fencing and other issues. All recommended upgrades within City control were completed as a result of the review.

In 2013, the City undertook pedestrian safety reviews at railway crossings in order to assess potential safety improvements for the existing pedestrian at-grade crossings in light of the anticipated GCR forthcoming. Various data was collected and tabulated for each of the pedestrian crossings, including recommendations for improvements at various locations using the applicable engineering guidelines and standards. Communications with the rail companies shared the data and proposed recommendations in an effort outline the strategy for implementation, cost apportionment and other logistic measures required to complete these upgrades. Improvements within City control have been undertaken. However, the implementation of many of the recommended upgrades and repairs identified in the pedestrian safety review have been limited as a result of the City's lack of authority at the crossings. Improvements within grade crossings require railway approval and coordination including the provision of railway flagging.

Funding of improvements has been based on board order direction, seniority at the specific crossing locations (road authority or rail company) and on cost apportionment as approved by the Canadian Transportation Agency. Staff have been allocating a portion of transportation life cycle renewal capital funds to cover these costs.

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If a railway company and road authority cannot agree on who should pay for work at a road-rail crossing, either party can ask the Canadian Transportation Agency to apportion the costs of the project. Transport Canada also has a Grade Crossing Improvement Program that provides up to 50% of eligible cost for approved projects.

Objectives

The goal of the regulation is to save lives by providing consistent grade crossing standards for both new and existing crossings, clearly defining roles and responsibilities of each party and promoting collaboration between the parties ensuring the sharing of key safety information. In particular, the proposed Regulations would improve safety by:

- providing comprehensive safety standards;
- establishing enforceable safety standards for grade crossings;
- clarifying the roles and responsibilities of railway companies and road authorities; and
- ensuring the sharing of key safety information between railway companies and road authorities.

Timelines/Main Components

In order to comply the road authority must undertake the following actions according to the schedule below:

GCR Requirement	Steps for Road Authority	Deadline	Status
Critical safety information must be shared between the road authority and railway companies	<ol style="list-style-type: none"> 1. Collect / Assemble roadway data 2. Share / Exchange date with railway companies (by November 2016) 	November 2016	Underway
All existing grade crossings must comply with the standards	<ol style="list-style-type: none"> 3. Develop Review Plan 4. Detailed Safety Assessment 5. Build Capital Plan for Upgrades 6. Deficiencies Upgrade Implementation (by November 2021) 	November 2021	To be initiated in 2016
Continuing compliance	<ol style="list-style-type: none"> 7. On-going regular inspection 	Post 2021	Future

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The initial roadway data collection required to be shared under the GCR is currently underway by City staff. The 2013 Railway Pedestrian Crossing Safety study provides some of the required information. The grade crossing information is comprised of 40 pieces of data that need to be collected and shared between the City and the railway companies. The roadway data being collected includes items such as the number of traffic lanes that cross the crossings surface, average annual daily traffic, road design speed, road classification, width of each lane, design vehicle, stopping sight distance, average gradient of the road approach, adjacent traffic signal operational parameters, presence of a sidewalk, path or trail, and if so, whether the sidewalk, path or trail has been designated for persons using assistive devices.

After the data collection and sharing has been completed, the City will review and assess the resource and expertise required for steps 3 to 7 and examine if this work can be completed in house to provide efficiencies.

Costs

The scope of required future improvements and associated costs will be determined through the upcoming detailed safety assessments. Once cost estimates are created, appropriate cost apportionment will need to be established with the railway companies. The GCR does not clearly specify how the costs for the improvements and upgrades to meet the standards are to be shared between the road authority and railway companies. Cost apportions will be reviewed subsequent to the conclusion of the safety assessments.

The City currently does not have specific allotted funds to deal with the studies and potential upgrades required as per the new GCR. As GCR compliance will require significant efforts from the road authority, a reassessment and prioritization of the existing transportation lifecycle capital expenditures may be required upon the determination of capital upgrades. Cost sharing will be required with the railways companies.

Compliance

One of the key changes to grade crossings safety, as introduced by the GCR, is the requirement of compliance. Although conducting railway grade crossing safety assessments is not new, the requirement to meet the GCR is. The GCR identifies enforcement actions associated with lack of compliance.

SUMMARY

New GCR pursuant to the Railway Safety Act have been passed to improve the safety of at-grade road-rail crossings. The new GCR will apply to over 60 grade crossings within the City of London. This will represent a significant investment in time, expertise and funds to implement.

In order to evaluate and advise Council regarding the implications of the GCR in London, Roads and Transportation staff are currently collecting, tabulating and formatting the grade crossing information required to be shared with the railway

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companies at each of the public grade crossings as part of the first steps of these requirements.

The remaining components and deadlines, including the safety assessments and identification of capital upgrades to existing crossing required to reach compliance with the GCR will be undertaken. These works will require funding prioritization and coordination with the railway companies regarding resources and implementation.

Acknowledgements

This report was prepared with the assistance of Ardian Spahiu, Karl Grabowski of the Transportation Planning & Design Division and Doug Bolton of the Roadway Lighting & Traffic Control Division.

SUBMITTED BY:	SUBMITTED BY:
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RECOMMENDED BY:	REVIEWED & CONCURRED BY:
EDWARD SOLDI, P.ENG. DIRECTOR, ROADS AND TRANSPORTATION	JOHN BRAAM, P.ENG. MANAGING DIRECTOR, ENVIRONMENTAL & ENGINEERING SERVICES AND CITY ENGINEER

Attachment: Appendix A – London Railway Map

cc: Transportation Advisory Committee

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APPENDIX A LONDON RAILWAY MAP

