

Appendix D: SAFETY ASSESSMENT REPORT

The grade crossing assessment report should be brief and concise, and should document and highlight the safety issues identified by the assessment team. It should include a description and evaluation of the alternatives that were considered. The report should make clear recommendations/suggestions on how to reduce the crash risks for each safety issue identified. The report should also contain a statement about providing a formal response to the assessment and when the next grade crossing safety assessment is to be conducted. The safety assessment report should typically be prepared within 3 to 4 weeks after the safety assessment has been conducted. A letter report format should be sufficient for the non-complex grade crossing safety assessments. A typical table of contents is presented below.

TYPICAL TABLE OF CONTENTS: GRADE CROSSING SAFETY ASSESSMENT REPORT ¹

1.0 BACKGROUND

1.1 Project Description

Briefly describe the objectives of the project. Explain how the crossings were selected for the assessment and how they fit into the overall grade crossing safety assessment program.

1.2 Assessment Objectives

Briefly describe the grade crossing safety assessment objectives.

1.3 Assessment Scope and Material

Describe the type of assessment (pre-construction or in-service/ Level 1 or Level 2). Explain what items are grand-fathered under the regulations and are not subject to change. List all the material that was reviewed as part of the assessment.

1.4 Assessment Team and Process

Describe the assessment team members and their qualifications and the milestone project dates. These include dates for the start-up meeting, site visits and assessment analysis.

1.5 Site Visit Objectives

Summarize the key site observations that may affect the safety performance of the grade crossings studied.

2.0 FINDINGS AND SUGGESTIONS

2.1 Safety Concern/Threat 1

Describe the safety concern. Provide an assessment of the crash risk. Describe the road/railway grade crossing user that is at risk. Describe the alternatives/suggestions that the road authority and/or the railway company can consider to reduce the risk.

2.2 Safety Concern/Threat 2

2.X Other Safety Issues

Describe other miscellaneous and minor safety issues and inconsistencies that may not necessarily be concerns, but could potentially be easily addressed or corrected by the road authority or railway company.

2.Y Next Steps

Remind the road authority and the railway company of the need to provide a response report and make recommendations when the next safety assessments are required.

1. Adapted from The Canadian Road Safety Audit Guide (TAC) Ref.1.

EXEMPLARY DETAILED SAFETY ASSESSMENT REPORT

Date

Recipient's Name
and Address

Dear Mr. Smith

Re: Grade Crossing Safety Assessment:
Main St., Pleasantville
Rail Company mile 98.76, Pleasantville Subdivision

A safety assessment of the above captioned grade crossing was undertaken on April 6, 2004. The crossing was assessed as part of Rail Company's and Road Authority's joint program to periodically assess the safety of road/railway grade crossings.

The fundamental objectives of the assessment were:

- 1) Reduce crash risk within the grade crossing environment.
- 2) Minimize the frequency and severity of preventable crashes.
- 3) Consider the safety of all grade crossing users.
- 4) Verify compliance of the technical standards referred to in the Railway Safety Act/Grade Crossing Regulations and contained in the RTD 10 Road/Railway Grade Crossing Technical Standards and Inspection, Testing and Maintenance Requirements document.
- 5) Ensure that all the crash mitigation measures/factors aimed to eliminate or reduce the identified safety problems are fully considered, evaluated and documented for review/action by the appropriate authorities.

The assessment team assembled for this review included:

- name, title, company
- name, title, company
- etc.

Data on the crossing were collected in accordance with the Transport Canada Field Guide for conducting Detailed Safety Assessments. Completed field data forms from the guide are attached as Appendix A.

For the purposes of this report, Main St. crossing is described in a north-south orientation, while the rail line is described in an east-west orientation. The crossing does not have an active warning system in place. With only six freight trains and no passenger trains daily, the cross-product is well below the threshold of 1,000 which is specified in the RTD-10 as a warrant for a grade crossing warning system. Even though this road only serves a few houses before its termination south of the crossing, the design vehicle selected was a tractor-trailer to represent daily traffic to and from a farm (see Photo 6).

Outstanding safety issues are outlined in Table 1 along with suggested remediation. Note that provisions are made in Table 1 for recording the decision of the appropriate authorities relative to the assessment findings.

Note:

The safety assessment of the grade crossing on Main Street, Pleasantville, NB covers physical features which may affect road and rail user safety and it has sought to identify potential safety hazards. However, the auditors point out that no guarantee is made that every deficiency has been identified. Further, if all the recommendations in this assessment were to be addressed, this would not confirm that the crossing is 'safe'; rather, adoption of the recommendations should improve the level of safety of the facility.

Sincerely,

Names and signatures of assessment team members

**TABLE 1: Grade Crossing Safety Assessment: Main Street, Pleasantville, NB
Canadian National, mile 98.76, Pleasantville Subdivision**

Observations	Suggested Actions	CLIENT RESPONSE	
		Agree yes/no	COMMENTS
1.0 Sight Distances			
<p>a. Detailed sightline calculations are attached on the field sheets in Appendix A. It was found that insufficient sight distance exists for stopped vehicles (D-stopped) on the northbound approach (looking west) due to the presence of vegetation. Furthermore, if large vehicles are parked in lots located in the northeast, southeast, and southwest quadrants, Dstopped will not be available. Although the presence of gates partially mitigates the necessity to provide Dstopped, these sightlines should be maintained wherever possible.</p> <p>b. The warning light control cabinet located in the northwest quadrant can potentially block sight lines for trains approaching from the west (see Photo #8) if the autos are not stopped in the proper location.</p>	<p>Remove vegetation in the northeast quadrant. Restrict parking in the adjacent quadrants where possible.</p> <p>Provide a stop line (see item 2 a. below).</p>		
2.0 Signs and Road Markings			
<p>a. There are no pavement markings present on either approach to the rail crossing.</p>	<p>Apply pavement markings to comply with the Uniform Traffic Control Devices Manual.</p>		

Observations	Suggested Actions	CLIENT RESPONSE	
		Agree yes/no	COMMENTS
3.0 Sidewalks			
a. The crosswalk width provided on the west side of the crossing is not wide enough as illustrated in Photos 5 and 6.	Extend crosswalk as needed.		
4.0 Warning System			
a. The base structure for both the north and south gates are located too close to the travel lanes (see Figures 3,4 and 7). This is likely a result of street widening that has occurred at some point.	Reposition gate structures or provide additional crash protection.		
5.0 Miscellaneous			
a. School children were observed crossing the rail line east of the crossing near the rail station. b. Westbound traffic turning left from Maple Street have the potential to by-pass an activated rail crossing gate.	Either restrict access to the rail line or re-institute whistling practices in this area. Consider countermeasures such as prohibiting lefts turns from this street, reconfiguring the street to one-way flow eastbound, or install a supplemental FLB fixture for this approach.		

Main Street Rail Crossing

Date, 2004



Photo 1: Main St. Southbound Approach



Photo 2: Main St. Southbound Approach



Photo 3: Southbound Main showing alignment of gate hardware



Photo 4: Northbound Main showing intrusion of gate hardware.

Main Street Rail Crossing

Date, 2004



Photo 5: non-contiguous crosswalk on west side of crossing



Photo 6: reverse view of Photo 5



Photo 7: Looking west from northbound Main St.



Photo 8: Looking west from southbound Main St.

Main Street Rail Crossing

Date, 2004



Photo 9: Maple St. adjacent to the crossing in the northeast quadrant



Photo 10: Example of design vehicle

