



## APPENDIX A – BEST PRACTICES LITERATURE SEARCH

### RELEVANT FREIGHT STUDIES

#### ISSUES (ATTRIBUTES) AND SOLUTIONS

##### *ISSUES*

*NTSB Safety Study Safety at Passive Grade Crossings Volume 1: Analysis*

<http://www.nts.gov/Publictn/1998/SS9802.pdf>

*NTSB Safety Study Safety at Passive Grade Crossings Volume 2: Case Studies*

<http://www.nts.gov/Publictn/1998/SS9803.pdf>

Highway-Railroad Grade Crossing Safety Assessment (Includes blockage, emergency response, costs and economic significance factors)

[http://www.arena.org/eseries/scriptcontent/custom/e\\_arena/library/1999\\_Conference\\_Proceedings/00026.pdf](http://www.arena.org/eseries/scriptcontent/custom/e_arena/library/1999_Conference_Proceedings/00026.pdf)

*Metairie Railroad Corridor Study Summary*

<http://ntl.bts.gov/DOCS/acknowle.html>

*National Railway Level Crossing Safety Strategy (Australia)*

[http://www.transport.qld.gov.au/resources/file/eb62a30b659ea68/Rail\\_safety\\_level\\_crossing\\_safety\\_strategy.pdf](http://www.transport.qld.gov.au/resources/file/eb62a30b659ea68/Rail_safety_level_crossing_safety_strategy.pdf)

*A structured model for evaluating countermeasures at highway (Impacts and solutions to blockages*

[http://article.pubs.nrc-cnrc.gc.ca/ppv/RPViewDoc?\\_handler\\_=HandleInitialGet&journal=cjce&volume=32&calyLang=fra&articleFile=l05-017.pdf](http://article.pubs.nrc-cnrc.gc.ca/ppv/RPViewDoc?_handler_=HandleInitialGet&journal=cjce&volume=32&calyLang=fra&articleFile=l05-017.pdf)

*Fatalities From Motor – Vehicle Collisions with Trains Kansas..(relates incidents to factors)*

<http://www.cdc.gov/mmwr/preview/mmwrhtml/00038936.htm>

*\*\*\*Passive railroad-highway grade crossings \*\*\**

[http://www.trafitec.dk/pub/Passive\\_railroad-highway\\_grade\\_crossings.pdf](http://www.trafitec.dk/pub/Passive_railroad-highway_grade_crossings.pdf)

*Rail Safety*

[http://www.dot.state.fl.us/rail/Publications/2000Plan/CHAPTER\\_4.pdf](http://www.dot.state.fl.us/rail/Publications/2000Plan/CHAPTER_4.pdf)



## SOLUTIONS

*NTSB Safety Study Safety at Passive Grade Crossings Volume 1: Analysis*  
<http://www.nts.gov/Publictn/1998/SS9802.pdf>

*Guidance on Traffic Control Devices at Highway-Rail Grade Crossings, FHA*  
<http://safety.fhwa.dot.gov/media/twgreport.h>

*Railroad-Highway Grade Crossing Handbook- Revised Second Edition Aug. 2007 (Chapter I-Active Traffic Control Devices) also provided in hardcopy*  
<http://www.ite.org/bookstore/gradecrossing/sec04b.htm#i>

*Railroad-Highway Grade Crossing Handbook- Revised Second Edition Aug. 2007 (Chapter 9-Special Issues)) also provided in hardcopy*  
<http://www.ite.org/bookstore/gradecrossing/sec09.htm>

*FHWA – Railroad – Highway Grade Crossing Handbook – 4 Identification*  
<http://www.ite.org/bookstore/gradecrossing/sec04a.htm>

*Grand Junction Rail-With-Trail Feasibility Study Chapter 4*  
[http://www.ci.cambridge.ma.us/~CDD/et/infra/gj/gj\\_ch4.pdf](http://www.ci.cambridge.ma.us/~CDD/et/infra/gj/gj_ch4.pdf)

*SMS Toolbox (Iowa)*  
<http://www.iowasms.org/reports/toolbox/chapter21.pdf>

*Delaware Passenger Engineering Study – TM 6 020115*  
<http://www.dartfirststate.com/reports/railstudy/Final Report 1-15-02/TM-6 Grade Crossings 020115.doc>

*NCHRP Report 470 – Traffic-Control Devices for Passive Railroad*  
[http://gulliver.trb.org/publications/nchrp/nchrp\\_rpt\\_470-b.pdf](http://gulliver.trb.org/publications/nchrp/nchrp_rpt_470-b.pdf)

*Railroad-Highway Grade Crossings A Look Forward (Active TCD)*  
<http://aolsearcht5.search.aol.com/aol/redirect?src=websearch&requestId=b4cfc0d0e261d035&clickedItemRank=1&userQuery=railroad+at-grade+crossing+studies&clickedItemURN=http%3A%2F%2Fwww.trb.org%2Fpublications%2Fmillennium%2F00096.pdf&title=%3Cb%3ERailroad%3C%2Fb%3E-Highway+Grade+%3Cb%3ECrossings%3C%2Fb%3E+A+Look+Forward&moduleId=matching sites.jsp.M&clickedItemPageRanking=1&clickedItemPage=2&clickedItemDescription=WebRes ults>

\*\*\*Passive railroad-highway grade crossings \*\*\*



[http://www.trafitec.dk/pub/Passive railroad-highway grade crossings.pdf](http://www.trafitec.dk/pub/Passive%20railroad-highway%20grade%20crossings.pdf)

*TCRP Report 17: Integration of Light Rail Transit into City Streets*

[http://gulliver.trb.org/publications/tcrp/tcrp\\_rpt\\_17-c.pdf](http://gulliver.trb.org/publications/tcrp/tcrp_rpt_17-c.pdf)

## **COST-BENEFIT METHODOLOGY FOR COUNTERMEASURE SELECTION**

*Rail Crossings: A Strategy to Select Countermeasure Improvements...*

<http://repositories.cdlib.org/cgi/viewcontent.cgi?article=1034&context=its/tsc>

*Introductory Section – Rail System Plan Iowa Department of*

<http://www.iowadot.org/railplan/section1.htm>

*Chapter Forty Railroad Grade Crossings*

[http://www.dot.state.il.us/blr/manuals/Chapter 40.pdf](http://www.dot.state.il.us/blr/manuals/Chapter%2040.pdf)

*Rail Crossings: A Strategy to Select Countermeasure Improvements...*

<http://repositories.cdlib.org/cgi/viewcontent.cgi?article=1034&context=its/tsc>

*Assessment of Risks for High-Speed Rail Grade Crossings on the...*

<http://www.fra.dot.gov/downloads/Research/rdv0005.pdf>

## **NEW TECHNOLOGY**

*NCDOT Rail Division Safety Programs Testing New Technology*

<http://www.bytrain.org/SAFETY/technology.html>

*Rail*

<http://www.photocop.com/rail.htm>

*ITS Costs: From a cross-cutting study of seven highway-rail... (cost of ITS technology)*

<http://aolsearcht5.search.aol.com/aol/redirect?src=websearch&requestId=b4cfc0d0e261d597&clickedItemRank=3&userQuery=railroad+at-grade+crossing+studies&clickedItemURN=http%3A%2F%2Fwww.itslessons.its.dot.gov%2Fits%2Fbenecost.nsf%2Fprint%2FA876BDE016E9479085256DFA004C98D2&title=ITS+Costs%3A+From+a+cross-cutting+%3Cb%3Estudy%3C%2Fb%3E+of+seven+highway-rail+%3Cb%3E...%3C%2Fb%3E&moduleId=matchingsites.jsp.M&clickedItemPageRanking=3&clickedItemPage=6&clickedItemDescription=WebResults>

*Railroad-Highway Grade Crossings A Look Forward (Active TCD)*



<http://aolsearcht5.search.aol.com/aol/redirect?src=websearch&requestId=b4cfc0d0e261d035&clickedItemRank=1&userQuery=railroad+at-grade+crossing+studies&clickedItemURN=http%3A%2F%2Fwww.trb.org%2Fpublications%2Fmillennium%2F00096.pdf&title=%3Cb%3ERailroad%3C%2Fb%3E-Highway+Grade+%3Cb%3ECrossings%3C%2Fb%3E+A+Look+Forward&moduleId=matching sites.jsp.M&clickedItemPageRanking=1&clickedItemPage=2&clickedItemDescription=WebResults>

*An Innovative, Train-Illuminated Passive Warning Sign for Hi.. (its solution – safety)*

<http://aolsearcht5.search.aol.com/aol/redirect?src=websearch&requestId=b4cfc0d0e261d035&clickedItemRank=2&userQuery=railroad+at-grade+crossing+studies&clickedItemURN=http%3A%2F%2Fwww.ctre.iastate.edu%2FPUBS%2Fsemisesq%2Fsession2%2Frussell%2Findex.htm&title=An+Innovative%2C+Train-Illuminated+Passive+Warning+Sign+for+Highway+%3Cb%3E...%3C%2Fb%3E&moduleId=matching sites.jsp.M&clickedItemPageRanking=2&clickedItemPage=2&clickedItemDescription=WebResults>

## **SELECTION CRITERIA AND PROCESS**

*Identifying Highway-Railway Grade Crossing Black Spots: Phase 1, Canada – Transportation Development Centre Transport Canada*

<http://www.tc.gc.ca/tdc/publication/pdf/14100/14168e.pdf>

*Railroad-Highway Grade Crossing Handbook- Revised Second Edition Aug. 2007 (Chapter 8- Evaluation of Projects and Programs) also provided in hardcopy*

<http://www.ite.org/bookstore/gradecrossing/sec08.htm>

*Highway-Railroad Grade Crossing Safety Assessment*

[http://www.arena.org/eseries/scriptcontent/custom/e\\_arena/library/1999\\_Conference\\_Proceedings/00026.pdf](http://www.arena.org/eseries/scriptcontent/custom/e_arena/library/1999_Conference_Proceedings/00026.pdf)

*\*\*\* Vermont Agency of Transportation Highway Safety Improvement \*\*\**

<http://www.aot.state.vt.us/sms/Documents/HSIPAnnualReport2004.pdf>

*Colorado (Colorado DOT strategy for selecting locations to be improved)*

[http://www.dot.state.co.us/Traffic\\_Manuals\\_Guidelines/HSIP\\_2002/HSIP\\_20020805.pdf](http://www.dot.state.co.us/Traffic_Manuals_Guidelines/HSIP_2002/HSIP_20020805.pdf)

## **PROJECT PRIORITIZATION METHODOLOGY**

Highway-Railroad Grade Crossing Safety Assessment (Includes blockage, emergency response, costs and economic significance factors)



[http://www.arena.org/eseries/scriptcontent/custom/e\\_arena/library/1999\\_Conference\\_Proceedings/00026.pdf](http://www.arena.org/eseries/scriptcontent/custom/e_arena/library/1999_Conference_Proceedings/00026.pdf)

Highway/Rail Crossing Project Selection, RDT 03-017, MoDOT  
Provided only in hard copy

*Rail Crossing Priority Analysis*

[http://209.85.135.104/search?q=cache:PykeF\\_ifm5gJ:www.wrcog.cog.ca.us/downloads/railcrossinganalysis.pdf+Rail+Crossing+Priority+Analysis&hl=en&ct=clnk&cd=1&gl=us](http://209.85.135.104/search?q=cache:PykeF_ifm5gJ:www.wrcog.cog.ca.us/downloads/railcrossinganalysis.pdf+Rail+Crossing+Priority+Analysis&hl=en&ct=clnk&cd=1&gl=us)

\*\*\* *Vermont Agency of Transportation Highway Safety Improvement* \*\*\*

<http://www.aot.state.vt.us/sms/Documents/HSIPAnnualReport2004.pdf>

## **BEST PRACTICES**

*Chapter 20 Safety and Traffic Engineering (best practices)*

[http://www.dot.state.co.us/designsupport/Design Guide 05/DG05 Ch 20 Safety and Traffic Engineering.pdf](http://www.dot.state.co.us/designsupport/Design%20Guide%2005/DG05%20Ch%2020%20Safety%20and%20Traffic%20Engineering.pdf)

## **LOCAL IMPACTS**

*Dane County Commuter Rail Feasibility Study --- Chapter 5*

<http://www.co.dane.wi.us/rail/crfs/final/html/chap5.htm>

## **OTHER FEDERAL STUDIES**

FHWA Railroad - Highway Grade Crossing Handbook - Overview

<http://www.ite.org/bookstore/gradecrossing/sec01.htm>

*FHWA – Railroad-Highway Grade Crossing Handbook – 2 Components of ...*

<http://www.ite.org/bookstore/gradecrossing/sec02.htm>

*Highway-Rail Crossing Reports, 1969 – 2006 (lists Federal studies and how to get them)*

<http://www.fra.dot.gov/downloads/Safety/gxlistofpubs2006.pdf>

*FHWA – Railroad-Highway Grade Crossing Handbook – 3 Assessment of*

<http://www.ite.org/bookstore/gradecrossing/sec03.htm>



*Guidance on Traffic Control at Highway- Rail Grade Crossings (FHA)*  
<http://safety.fhwa.dot.gov/media/twgreport.htm>

### **SITES LISTING OTHER SOURCE MATERIAL**

*TRB E-Newsletter Search Results – TRB.org (provides TRB source)*  
[http://trb.org/news/search\\_news.asp?q\\_aw=Highway+grades](http://trb.org/news/search_news.asp?q_aw=Highway+grades)

*Evaluating factors affecting safety at Highway – Railway Grade Crossings (Provides TRB source (lists abstracts and where to purchase articles)*  
<http://trb.metapress.com/index/P8J730X5Q8513KM6.pdf>

*TDC – Grade Crossing Research Program - Projects*  
[http://aolsearcht5.search.aol.com/aol/redirect?src=websearch&requestId=b4cfc0d0e261d3c3&clickedItemRank=3&userQuery=railroad+at-grade+crossing+studies&clickedItemURN=http%3A%2F%2Fwww.direction2006.com%2Fsecpar%2Fen\\_TDCprojects.asp&title=TDC+-+Grade+%3Cb%3ECrossing%3C%2Fb%3E+Research+Program+-+Projects&moduleId=matchingsites.jsp.M&clickedItemPageRanking=3&clickedItemPage=5&clickedItemDescription=WebResults](http://aolsearcht5.search.aol.com/aol/redirect?src=websearch&requestId=b4cfc0d0e261d3c3&clickedItemRank=3&userQuery=railroad+at-grade+crossing+studies&clickedItemURN=http%3A%2F%2Fwww.direction2006.com%2Fsecpar%2Fen_TDCprojects.asp&title=TDC+-+Grade+%3Cb%3ECrossing%3C%2Fb%3E+Research+Program+-+Projects&moduleId=matchingsites.jsp.M&clickedItemPageRanking=3&clickedItemPage=5&clickedItemDescription=WebResults)

*FHWA – Railroad – Highway Grade Crossing Handbook – Appendix K (list of FRA studies)*  
<http://aolsearcht5.search.aol.com/aol/redirect?src=websearch&requestId=6167ba78f54e0f90&clickedItemRank=5&userQuery=railroad+at-grade+crossing+studies&clickedItemURN=http%3A%2F%2Fwww.ite.org%2Fbookstore%2Fgradecrossing%2Fappenk.htm&title=FHWA+-+%3Cb%3ERailroad%3C%2Fb%3E-Highway+Grade+%3Cb%3ECrossing%3C%2Fb%3E+Handbook+-+Appendix+K%3A+List+%3Cb%3E...%3C%2Fb%3E&moduleId=matchingsites.jsp.M&clickedItemPageRanking=5&clickedItemPage=3&clickedItemDescription=WebResults>

### **MISCELANEOUS**

*FDM 17-35-1, Overview*  
<http://roadwaystandards.dot.wi.gov/standards/fdm/17/17-35-1.pdf>