

## Technical Memorandum

**To:** Electronic Distribution Recipients

**From:** Nancy T. Daubenberger, P.E.   
Assistant Commissioner, Engineering Services

**Subject: At-Grade Railroad Crossing Review When Project Utilizes Federal Funding**

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### Expiration

This is a new technical memorandum and will remain in force until December 11 2023, or until superseded or incorporated into the MnDOT Road Design Manual Chapter 11 or other departmental manual.

### Implementation

The guidance in this technical memorandum will be effective immediately.

### Introduction

The purpose of this technical memorandum is to provide guidance to MnDOT staff and local road authorities (LRA) on when to contact the MnDOT Rail Safety and Coordination unit to request a diagnostic review the warning devices at an at-grade railroad crossing as part of a Federal funded road improvement project.

### Purpose

23 CFR 646.214(b)(2) states the following:

(2) Pursuant to 23 U.S.C. 109(e), where a railroad-highway grade crossing is located within the limits of or near the terminus of a Federal funded highway project for construction of a new highway or improvement of the existing roadway, the crossing shall not be opened for unrestricted use by traffic or the project accepted by FHWA until adequate warning devices for the crossing are installed and functioning properly.

i) *Adequate warning devices*, under § 646.214(b)(2) or on any project where Federal funds participate in the installation of the devices are to include automatic gates with flashing light signals when one or more of the following conditions exist:

(A) Multiple main line railroad tracks.

(B) Multiple tracks at or in the vicinity of the crossing which may be occupied by a train or locomotive so as to obscure the movement of another train approaching the crossing.

(C) High Speed train operation combined with limited sight distance at either single or multiple track crossings.

(D) A combination of high speeds and moderately high volumes of highway and railroad traffic.

(E) Either a high volume of vehicular traffic, high number of train movements, substantial numbers of schoolbuses or trucks carrying hazardous materials, unusually restricted sight distance, continuing accident occurrences, or any combination of these conditions.

(F) A diagnostic team recommends them.

(ii) In individual cases where a diagnostic team justifies that gates are not appropriate, FHWA may find that the above requirements are not applicable.

(4) For crossings where the requirements of § 646.214(b)(3) are not applicable, the type of warning device to be installed, whether the determination is made by a State regulatory agency, State highway agency, and/or the railroad, is subject to the approval of FHWA.

(c) *Grade crossing elimination.* All crossings of railroads and highways at grade shall be eliminated where there is full control of access on the highway (a freeway) regardless of the volume of railroad or highway traffic.

## Authority

Under Minnesota Statutes 219.26 and per Minnesota Administrative Rules, Chapter 8830, the Commissioner of Transportation has jurisdiction of all public at-grade crossings in Minnesota.

## Project Type

Projects involving an alteration of the road, regardless of agency administering the project, will require side road crossings be investigated to determine their proximity to the project and to the main road. Examples of projects include, but aren't limited to:

- New layer of surface material.
- Reconstruction.
- Concrete pavement rehabilitation and reconstruction.
- Microsurfacing and/or thin lift overlays.
- Cape seals (slurry seal or microsurfacing over a new chip seal).
- In-place asphalt recycling

## Guidelines

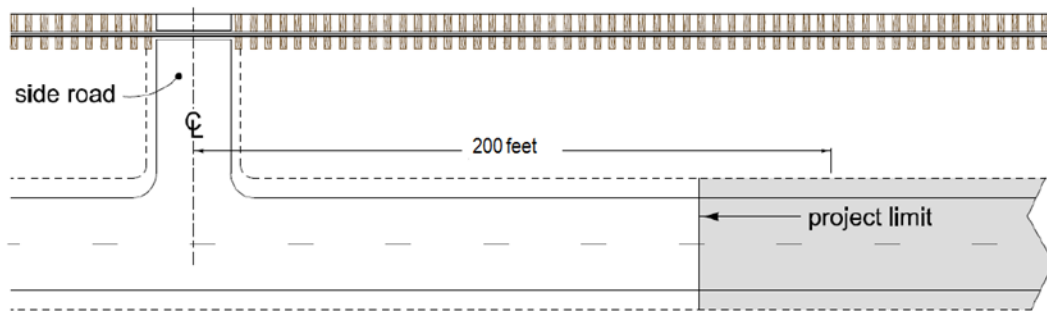
MnDOT shall consider a project to be "near the terminus" if any of the following conditions exist:

1. A Grade Crossing Advance Warning Sign (W10 series) for the crossing is located within the project limits in accordance with the Minnesota Manual on Uniform Traffic Control Devices (MN MUTCD) Part 8, Section 8B.6.
2. If a W10 warning sign is not present, the project shall be considered near the terminus if the limits are within the distance from the crossing at which a warning sign should be placed. This distance is given by MN MUTCD Table 2C-4, under Condition B, deceleration to 0 MPH.

Posted or 85th Percentile Speed	Distance from Centerline of Track
MPH	Feet
20	100
25	100
30	100
35	100
40	125
45	175
50	250
55	325
60	400
65	475
70	550
75	650

- An intersection traffic signal within the project limits is or will be linked to the railroad crossing's flashing light signal and gate.

For cases where the grade crossing is located within 200 feet on a "side road" and may be under the jurisdiction of another road authority, any required upgrades to that crossing are eligible for funding under the project.



If a road project is subject to either Condition 1, 2, or 3, the LRA shall request a diagnostic review of the railroad crossing by the Rail Safety and Coordination Office for upgrading to the newest MN MUTCD requirements in Part 8 for road-rail grade crossings.

## Questions

Any questions regarding the technical provisions of this Technical Memorandum can be addressed to either of the following:

Julie Whitcher, State Rail Safety Engineer  
(651) 366-3688

Jim Weatherhead, State Program Coordinator  
(651) 366-3671

Any questions regarding publication of this Technical Memorandum should be referred to the Design Standards Unit, [DesignStandards.DOT@state.mn.us](mailto:DesignStandards.DOT@state.mn.us). A link to all active and historical Technical Memoranda can be found at <http://techmemos.dot.state.mn.us/techmemo.aspx>. To add, remove or change your name on the Technical Memoranda mailing list, please visit the web page <http://techmemos.dot.state.mn.us/subscribe.aspx>