

# Grade Crossing Surface Metric

## Background

The state receives complaints from the public about the condition of at-grade railroad-highway grade crossing surfaces. ORDC administers federal funding to improve grade crossing safety, but only to address safety hazards. Poor surface conditions may cause vehicular crashes if drivers deviate from the posted speed limits and are struck from behind or if they swerve across lane lines to avoid potholes. Vehicle damage may also result from hazardous surfaces.

The current process to identify hazardous railroad crossing surfaces is reactive and starts with a complaint from a community, railroad or citizen. Current criteria used in the evaluation involve a visual inspection of the crossing surface and observation of the speed of vehicles traversing the crossing. A detailed inspection includes visually looking for damage to the surface (loose asphalt, failed timber, missing or failed panels, etc.).

## Goals

The goals of the Grade Crossing Surface Metric development project are to:

- Develop a quantitative scale for railroad crossing surface conditions;
- Determine a threshold at which a surface should be considered hazardous.

## Project

The proposed Grade Crossing Surface Metric project will use ODOT pavement condition data for state routes to develop a scale that assesses railroad crossing surfaces. The scale will also establish a threshold at which conditions represent a safety hazard. ORDC intends to be able to use the scale and threshold to evaluate individual locations for potential federally-funded improvement projects.

ORDC expects that this project and subsequent use of the metric will be limited to crossings on the state system due to the availability of pavement condition data.

Other variables that can be considered for incorporation into the metric include pavement friction and nearby crash data. ORDC is also open to other variables that are available to ODOT.

ORDC will provide a list of crossings that have recently been reconstructed as well as crossings that are the subject of open complaints. Additionally, the consultant will have access to railroad crossing and roadway data from ODOT.