

Updating the DOT National Crossing Inventory File

Railroad Safety Advisory Committee
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DOT National Highway-Rail Crossing Inventory

- Background, Purpose and Goals
- How it Works & Requirements
- Numbering and Filing for New Crossings
- Responsibilities for Updating
- Updating for Public Authorities – 3 Steps
- Updating for States and Railroads – 3 Steps

Background

- Original Inventory Started January 1, 1975
- Contains both Current and Historical Records
- Currently, 1.8 Million Records in the File
- 1975 had 365,000 at-grade Crossings
- 2003 has 250,000 at-grade Crossings
- Process 80K to 100K Updates per Year
- Submittals Received from 50 States and 650 Railroads

Establishing a National Database

- 1972-1974 The AAR, ASLRA, States, FHWA, NHTSA & FRA developed:
 - the DOT/AAR Crossing Inventory Numbering System,
 - the Operating Procedures and Database
- FRA is the **Custodian** for the National Inventory Data File
- **This is YOUR Inventory.**
FRA only updates it with **YOUR** data.

Purpose & Goals

- 1973 Federal-Aid Highway Act (Section 203)
 - Requires each State to maintain a State Inventory of all crossings
 - States may maintain just National File
 - Act also requires a Priority List of Improvements
- Purpose is to Provide Information to Governments and Railroads for Safety Improvement

Purpose & Goals

- Merge Data with Accident Files to plan Safety improvements – Accident Prediction Model
- 2001 - Support Homeland Security and the Inventory is critical for supporting ENS (1-800) Program

Importance of Updating

- The ONLY national database
 - Researchers
 - Aid to national policy-making
- OIG recommendation
- FHWA urging States to update (9/04)
- FRA has made it part of its safety reauthorization bill
- Safety advisory

How it works

- A Voluntary Program
- Every Crossing shall have a DOT Crossing Number
 - Six (6) digits followed by an alphabetical character
 - Number is like a “street-name sign”
- Coincides with Inventory Data in the File
 - Information on Location, Classification, Physical Characteristics, Traffic Control Devices, Railroad data, Highway data.
- Posted on both sides of the Crossing
 - Responsibility for posting is the Railroad
 - Aluminum motorcycle license-plate size
 - Alternative posting

Requirements (for it to work)

- Every Railroad & State Agency needs to maintain an Inventory of all Crossings
- Each Crossing must be assigned a DOT Inventory Number which is posted at the Crossing
 - Private Company Rail Yards, Docks, etc.
 - Railroad Yards can have just one (1) Number
- DOT Number is Required on Accident Reports
 - “So, inventory ALL of your crossings now, and there will not be a problem later.”

Initial Numbering and Filing

- Responsibility of the Operating Railroad
- Public at-grade: Complete Parts I – IV and forward to the State to complete Part V
- Private: Complete Part I and send to FRA
 - Send copy to State

FRA only accepts Inventory Updates from the State Inventory Contacts or the Railroad Inventory Contacts

Responsibility for Updating

- Responsibility is both State and Railroad
 - Whenever any characteristics change
 - As a minimum, review and update data at least every three years to keep File current
- Responsibility is Public Authorities for QZ
 - To keep a Pre-Rule Quiet Zone
 - To create a New Quiet Zone
 - Must provide updated crossing inventory data within six (6) months of notification
 - Railroads must provide data when requested

Updating for States and Railroads

- No Updating Electronically On-line
- Use Hardcopy for less than 40 crossings
- Use Lists or Electronic Computer Files (can be via e-mail) for Single Element Updates
 - Closures, change in train or highway counts

Updating for States and Railroads

- Use Electronic files using Standard Formats
 - .txt ASCII file, or Comma Delimited
 - .dbf Database file
 - .xls Excel file
 - .mdb Access file
- Use GX32 Computer Program
 - Obtain Free from processing contractor CITI
- Hardcopy also acceptable
- Always copy/notify the other party

Step 1 for States & Railroads

Do NOT Initially Send the whole Data File

- Send Open Crossings ONLY - - Crossing Number, State, Railroad, Type (Public, Private or Pedestrian), Position (at-grade or grade-separated)
- Compare and get agreement on:
 - Crossing Numbers
 - Open or Closed
 - In same State / On correct Railroad
 - Public or Private
 - At-grade or Grade-separated
- **Resolve Discrepancies**

Step 2 for States & Railroads

- Send Location (Part 1) Information:
 - County, City, Highway and Street;
 - Railroad Division and Line Names, Milepost;
 - Etc.
- Compare and get agreement on:
 - Location Information
 - State accepts Railroad Information
 - Railroad accepts State Information
 - Check with other entity if questioned
- **Resolve Discrepancies**

Step 3 for States & Railroads

- Send balance of data for Crossings where Identification and Location agreement of Crossings exists – When no discrepancies
- Provide in the correct Form and Format
- Notify the other party(s) of Updating Action being taken and send copy of data transmitted to FRA.
- Success!
- Don't Forget
 - Continue to Resolve Discrepancies

How to Update for Public Authorities – a 3 Step Process

- (1)** Use Crossing Inventory Form F-6180.71
 - Or *Current Inventory Record* printout
 - Reference FRA's Website for a copy of the Form, Instructions and Contact List (State and Railroad), and other information.
- (2)** Perform a Site Survey – obtain updated data
 - Contact the Railroad and State for correct current information
- (3)** Forward Updated Form/Record to the State Inventory Contact to verify and send to FRA

Inaccurate Data – “Mismatches”

Comparison of Accident Data for 2002-2003

- 151 Accident Reports that have NO Inventory Record
- 2001-2003 (151 Mismatched Reports) (see table on slide 10)
- **Railroad Accident Reporting Officers Need to Verify**
- **the Accident Reports with the National Inventory File**
- **BEFORE Filing, and make any necessary corrections.**
- 11 are in different States
- 143 are in different Counties

Current Availability of Data

- Website (.dbf file)
 - <http://safetydata.fra.dot.gov/officeofsafety/>
 - Current and Historical Records
- GX32 (.mdb Access file)
 - obtain directly from our Contractor CITI
- WBAPS (Web Based Accident Prediction System)

Inventory Improvements

New Form Approved by OMB – March 14, 1999

- New Inventory Form with 32 New Data Elements
- Expanded File Structure and Data Fields
 - Latitude/Longitude and Source
 - Highway Signal Interconnection/Preemption
 - High Profile (hump) Vertical Surface
 - High Speed Rail Corridor Identifier Code
 - Whistle Ban in Effect
 - Passenger Train Count and Type of Service
 - School Bus Usage
 - DOT Accident Prediction Value
 - Five Years Accident History
 - Parent Railroad & Crossing Owner

Inventory Improvements

- Expanded File Structure and Data Fields
 - Source of Last Update and Date Posted
 - Full Blockage of Crossing
 - Four Quadrant Gates
 - Full Barrier
 - Highway Median Barriers with 2 Quad Gates
 - Public Access at Private Crossings
 - Four Fields for Railroad Data
 - Four Fields for State Data
 - Narrative for special notes
 - Last Update Year for both AADT and Train Counts
 - Telephone Numbers for:
 - Emergency Contact (Toll-Free Number Posted at Crossing)
 - Railroad Contact (Public Project Engineering Office)
 - State Contact (Inventory or Section 130 Engineering Office)

Inventory Improvements

- Expanded File Structure and Data Fields (continued)
 - ENS (1-800) Sign Installed
 - Type of Track Detection Circuitry for Installed Signals
 - Distance to Nearest Intersecting Roadway
 - Adjacent Crossing DOT Number
 - Hazardous Material Vehicles using Crossing
 - Posted Highway Speed
 - Crossing Illuminated by Street Lights
 - Numbers of Flashing Light Pairs
- New Form Expanded to Two Pages
 - White Paper, Printed on Front & Back, No Carbons
- Legislation has been offered to make Updating Mandatory on both States and Railroads

Efforts to Improve

- Outreach in 2002 to stakeholders
- Identified the need to:
 - Assign responsibility for various fields
 - Develop new fields
- Conflicting projects has delayed progress but will renew efforts this year.
- Your help is essential

Conclusions

- Inventory is an important tool
- FRA will continue to improve updating procedures
- Need the assistance of States and railroads to keep it up to date

Questions

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