

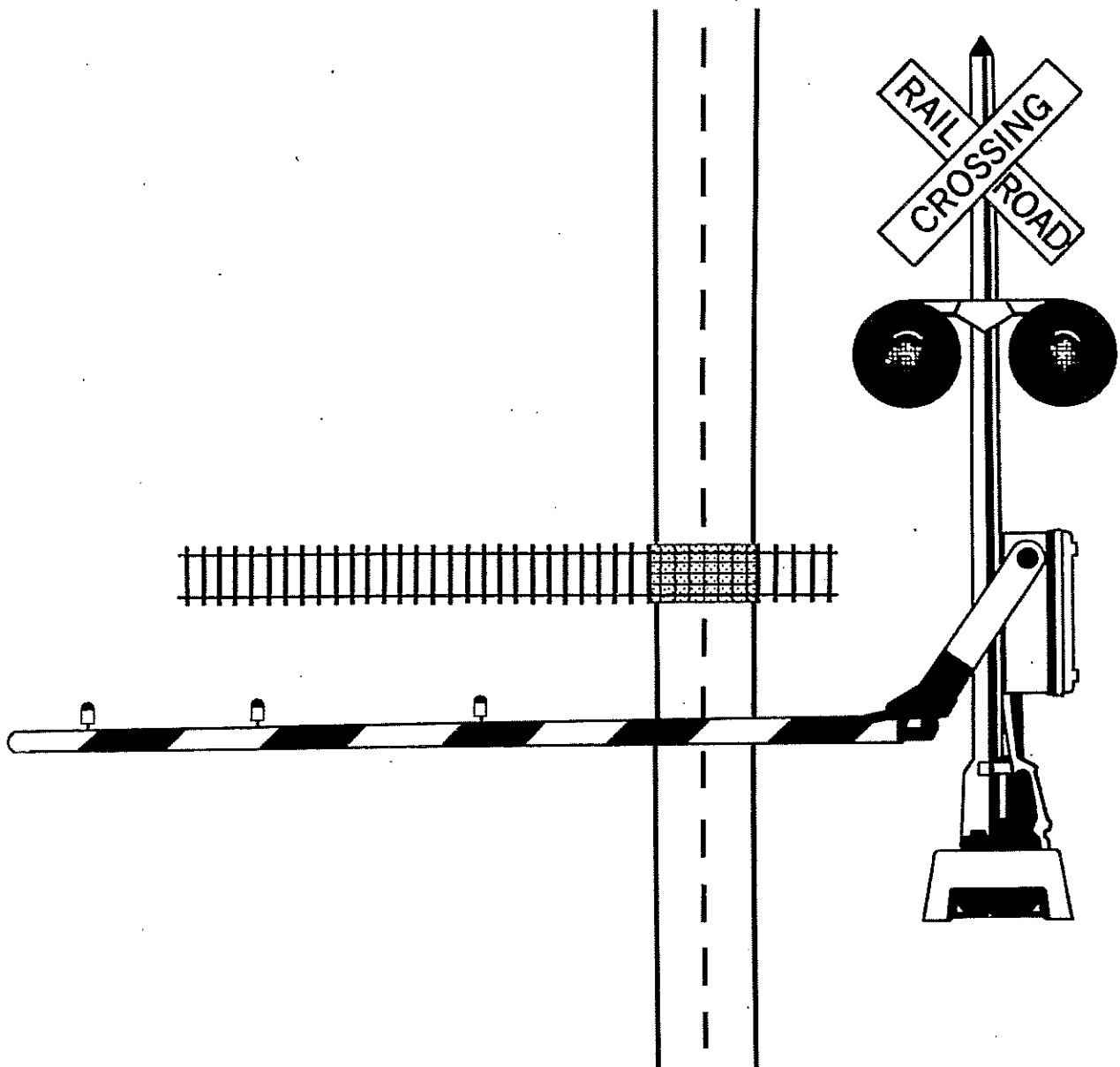
Attachment 2



U.S. Department
of Transportation
**Federal Highway
Administration**

RAILROAD-HIGHWAY GRADE CROSSING HANDBOOK

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IX. SPECIAL ISSUES

There are several issues that are important to railroad - highway grade crossing safety and operations that either were not specifically covered in previous chapters or that warrant special consideration. These include private crossings, short line railroads, high speed rail corridors, pedestrians, bicycles and motorcycles, and special vehicles.

A. Private Crossings

Private railroad-highway grade crossings are those that are on roadways not open to use by the public nor are they maintained by a public authority. According to the U.S. DOT/AAR National Rail-Highway Crossing Inventory, in 1983 there were 133,011 private crossings in the United States. Usually, an agreement between the land owner and the railroad governs the use of the private crossing.

Typical types of private crossings are as follows.

- o Farm crossings that provide access between tracts of land lying on both sides of the railroad
- o Industrial plant crossings that provide access between plant facilities on both sides of the railroad
- o Residential access crossings over which the occupants and their invitees reach private residences from another road, frequently a public road paralleling and adjacent to the railroad right-of-way
- o Temporary crossings established for the duration of a private

construction project or other seasonal activity

In some instances, changes in land use have resulted in an expansion of a crossing's use to the extent that it has become a public crossing as evidenced by frequent use of the general public. This may occur whether or not any public agency has accepted responsibility for maintenance or control of the use of the traveled way over the crossing. The railroad and highway agency should continually review the use of private crossings so that mutual agreement is obtained on its appropriate classification. If the general public is making use of the crossing, appropriate traffic control devices should be installed for their warning and guidance. Usually, State and Federal funds are not available for use at private crossings.

The number of accidents at private crossings represent a small portion of all crossing accidents; however, safe design and operation at private crossings should not be overlooked. Very few private crossings have active traffic control devices and many do not have signs. Typically, they are on narrow gravel roads often with poor roadway approaches.

In 1983, there were 599 accidents, 33 fatalities, and 156 injuries at private crossings. These represent reductions, since 1979, of 37.4% in accidents, 32.7% in fatalities, and 24.3% in injuries as shown in Table 47.

As with accidents at public crossings, the majority of accidents at private crossings involved automobiles. Table 48 gives the number of

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Table 47. Accidents at Private Crossings, 1979 - 1983

<u>Year</u>	<u>Accidents</u>	<u>Fatalities</u>	<u>Injuries</u>
1979	957	49	206
1980	848	45	228
1981	749	31	172
1982	590	27	129
1983	599	33	156

Source: Ref. 3

accidents and casualties by roadway user for 1983.

At private crossings, the majority of motor vehicle accidents, 345 or 61.4%, occurred during daylight, while 185, or 32.9%, occurred during darkness. The remaining 32 accidents occurred during either dusk or dawn. Most of the accidents involving motor vehicles, 244 or 43.4%, occurred at crossings without signs or signals as shown in Table 49. Accident rates (number of accidents at crossings

Table 49. Motor Vehicle Accidents at Private Crossings by Traffic Control Device, 1983

<u>Traffic Control Device</u>	<u>Accidents</u>	<u>Percent</u>
Automatic gates	7	1.24
Flashing lights	26	4.63
Highway signals, wigwags or bells	13	2.31
Special*	37	6.58
Crossbucks	162	28.83
Stop signs	52	9.25
Other signs	21	3.74
No signs or signals	244	43.42
Total	562	100.00

*"Special" are traffic control systems that are not train activated, such as a crossing being flagged by a member of the train crew.

Source: Ref. 3

Table 48. Accidents at Private Crossings by Roadway User, 1983

<u>Type of Vehicle</u>	<u>Accidents</u>		<u>Fatalities</u>		<u>Injuries</u>	
	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>
Automobile	261	43.57	17	51.52	76	48.72
Truck	189	31.55	11	33.33	50	32.05
Tractor-trailer	111	18.53	1	3.03	20	12.82
Bus	---	---	---	---	---	---
School bus	---	---	---	---	---	---
Motorcycle	1	0.17	---	---	---	---
Pedestrian	2	0.34	2	6.06	---	---
Other*	35	5.84	2	6.06	10	6.41
Total	599	100.00	33	100.00	156	100.00

*"Other" usually refers to farm equipment.

Source: Ref. 3

with each type of traffic control device divided by number of crossings with that type of traffic control device) cannot be determined for private crossings since no national statistics are kept on the type of traffic control devices at private crossings.

Some States and railroads have established minimum signing requirements for private crossings. Typically, these signs consist of a crossbuck, stop sign, and/or a warning against trespassing. California and Oregon public utility commissioners use a standard highway stop sign together with a sign indicating that the crossing is a private crossing. A typical configuration is shown in Figure 104.

As with public crossings, the first consideration for improving private crossings is closure. Adjacent crossings should be evaluated to determine if they can be used instead

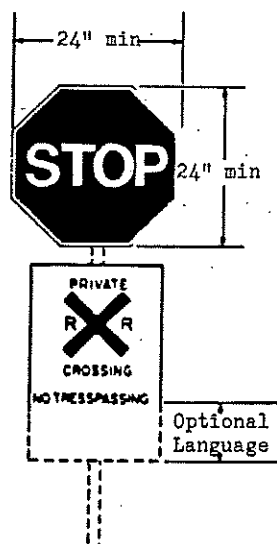


Figure 104. Typical Private Crossing Sign

Source: Ref. 1

of the private crossing. Every effort to close the crossing should be made.

If the private crossing is determined to be essential to the private landowner, then the crossing should be marked with some type of sign. Controversy exists over whether the marking should be identical to public crossings so that the motorist is presented with uniform traffic control devices, or whether the marking should be distinct to notify the motorist that the crossing is private and that use without permission is trespassing. No national guidelines exist; however, it seems reasonable that the crossing should be marked so that it is identified as a private crossing. Supplemental crossbucks or stop signs might also be installed.

Some private crossings have sufficient train and roadway traffic volume that they require active traffic control devices. Considerations for the installation of these devices are the same as for public crossings, as discussed in Chapter IV. Federal funds, and often State funds, cannot be used for the installation of traffic control improvements at private crossings. The railroad and the landowner usually come to an agreement regarding the financing of the devices. In some cases, if the landowner is required to pay for the installation of the crossing and its traffic control devices, the landowner might reevaluate the need for the crossing.

B. Short Line Railroads

There are numerous short line railroads and the number is growing due to Federal deregulation. Short line railroads are typically Class III railroads, as defined by the Interstate Commerce Commission (ICC).