



***Federal Railroad Administration
Office of Safety
Headquarters Assigned
Accident Investigation Report
HQ-2006-40***

***Amtrak (ATK)/Norfolk Southern (NS)
Jackson, Mississippi
May 30, 2006***

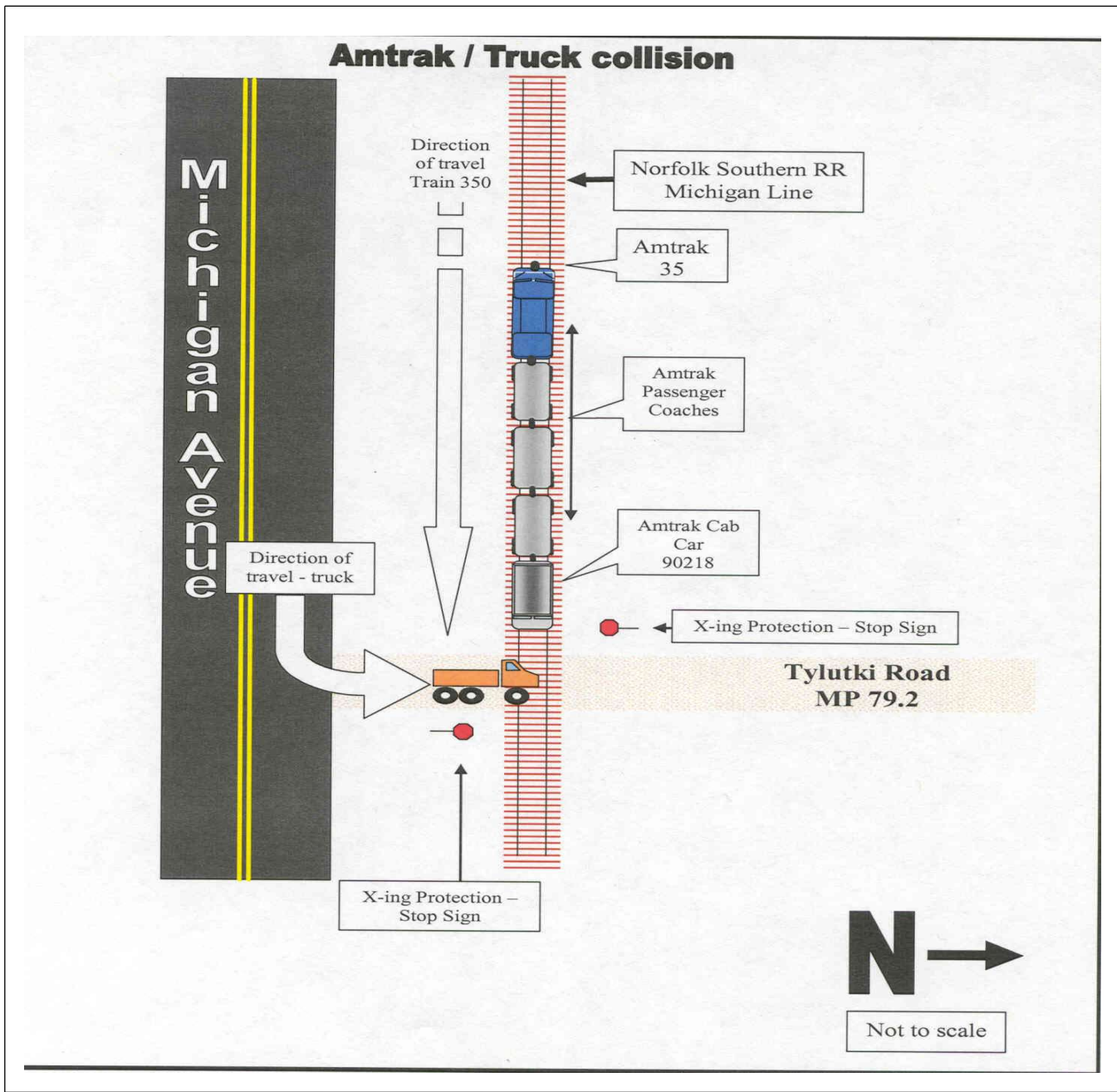
Note that 49 U.S.C. §20903 provides that no part of an accident or incident report made by the Secretary of Transportation/Federal Railroad Administration under 49 U.S.C. §20902 may be used in a civil action for damages resulting from a matter mentioned in the report.

DEPARTMENT OF TRANSPORTATION FEDERAL RAILROAD ADMINISTRATION		FRA FACTUAL RAILROAD ACCIDENT REPORT				FRA File # <u>HQ-2006-40</u>	
1. Name of Railroad Operating Train #1 Amtrak [ATK]				1a. Alphabetic Code ATK		1b. Railroad Accident/Incident No. 100847	
2. Name of Railroad Operating Train #2 N/A				2a. Alphabetic Code N/A		2b. Railroad Accident/Incident N/A	
3. Name of Railroad Responsible for Track Maintenance: Amtrak [ATK]				3a. Alphabetic Code ATK		3b. Railroad Accident/Incident No. 100847	
4. U.S. DOT_AAR Grade Crossing Identification Number 545296H				5. Date of Accident/Incident Month Day Year 05 30 2006		6. Time of Accident/Incident 01:09:00 <input type="checkbox"/> AM <input checked="" type="checkbox"/> PM	
7. Type of Accident/Incident (single entry in code box)							
1. Derailment		4. Side collision		7. Hwy-rail crossing		10. Explosion-detonation	
2. Head on collision		5. Raking collision		8. RR grade crossing		11. Fire/violent rupture	
3. Rear end collision		6. Broken Train collision		9. Obstruction		12. Other impacts	
						13. Other (describe in narrative) 07	
8. Cars Carrying HAZMAT 0		9. HAZMAT Cars Damaged/Derailed 0		10. Cars Releasing HAZMAT 0		11. People Evacuated 0	
						12. Division CENTRAL	
13. Nearest City/Town JACKSON				14. Milepost (to nearest tenth) 79.2		15. State Abbr Code N/A MI	
16. County JACKSON							
17. Temperature (F) (specify if minus) 82 F		18. Visibility (single entry) Code 1. Dawn 3. Dusk 2. Day 4. Dark 2		19. Weather (single entry) Code 1. Clear 3. Rain 5. Sleet 2. Cloudy 4. Fog 6. Snow 1		20. Type of Track Code 1. Main 3. Siding 2. Yard 4. Industry 1	
21. Track Name/Number SINGLE MAIN				22. FRA Track Code Class (1-9, X) 4		23. Annual Track Density (gross tons in millions) 4.1	
						24. Time Table Direction Code 1. North 3. East 3	
OPERATING TRAIN #1							
25. Type of Equipment Consist (single entry)		1. Freight train 4. Work train 7. Yard/switching		A. Spec. MoW Equip. Code		26. Was Equipment Attended? Code	
2. Passenger train 5. Single car 8. Light loco(s).		3. Commuter train 6. Cut of cars 9. Maint./inspect.car		2		1. Yes 2. No 1	
27. Train Number/Symbol 350							
28. Speed (recorded speed, if available) Code R - Recorded 76 MPH R E - Estimated		30. Method(s) of Operation (enter code(s) that apply) a. ATCS g. Automatic block m. Special instructions b. Auto train control h. Current of traffic n. Other than main track c. Auto train stop i. Time table/train orders o. Positive train control d. Cab j. Track warrant control p. Other (Specify in narrative) Code(s) e. Traffic k. Direct traffic control f. Interlocking l. Yard limits				30a. Remotely Controlled Locomotive? 0 = Not a remotely controlled 1 = Remote control portable 2 = Remote control tower 3 = Remote control transmitter - more than one remote control transmitter 0	
29. Trailing Tons (gross tonnage, excluding power units) N/A							
31. Principal Car/Unit		a. Initial and Number		b. Position in Train		c. Loaded (yes/no)	
(1) First involved (derailed, struck, etc)		N/A		1		no	
(2) Causing (if mechanical cause reported)		0		0		N/A	
						32. If railroad employee(s) tested for drug/alcohol use, enter the number that were positive in the appropriate box.	
						Alcohol Drugs N/A N/A	
						33. Was this consist transporting passengers? (Y/N) Y	
34. Locomotive Units		a. Head End		Mid Train		Rear End	
		b. Manual		c. Remote		d. Manual c. Remote	
(1) Total in Train		0		0		0 1	
(2) Total Derailed		0		0		0 0	
35. Cars		a. Freight		b. Pass.		c. Freight d. Pass. e. Caboose	
(1) Total in Equipment Consist		0		3		0 2 0	
(2) Total Derailed		0		0		0 0 0	
36. Equipment Damage This Consist		97000		37. Track, Signal, Way, & Structure Damage		0	
38. Primary Cause Code		M308		39. Contributing Cause Code		M302	
Number of Crew Members				Length of Time on Duty			
40. Engineer/Operators N/A		41. Firemen 0		42. Conductors 1		43. Brakemen 1	
44. Engineer/Operator Hrs 7 Mi 14		45. Conductor Hrs 4 Mi 59					
Casualties to:		46. Railroad Employees		47. Train Passengers		48. Other	
Fatal		0		0		1	
Nonfatal		N/A		14		0	
49. EOT Device? 1. Yes 2. No 2		50. Was EOT Device Properly Armed? 1. Yes 2. No N/A		51. Caboose Occupied by Crew? 1. Yes 2. No N/A			
OPERATING TRAIN #2							
52. Type of Equipment Consist (single entry)		1. Freight train 4. Work train 7. Yard/switching		A. Spec. MoW Equip. Code		53. Was Equipment Attended? Code	
2. Passenger train 5. Single car 8. Light loco(s).		3. Commuter train 6. Cut of cars 9. Maint./inspect.car		N/A		1. Yes 2. No N/A	
54. Train Number/Symbol N/A							
55. Speed (recorded speed, if available) Code R - Recorded N/A MPH N/A E - Estimated		57. Method(s) of Operation (enter code(s) that apply) a. ATCS g. Automatic block m. Special instructions b. Auto train control h. Current of traffic n. Other than main track				57a. Remotely Controlled Locomotive? 0 = Not a remotely controlled 1 = Remote control portable	

DEPARTMENT OF TRANSPORTATION FEDERAL RAILROAD ADMINISTRATION		FRA FACTUAL RAILROAD ACCIDENT REPORT				FRA File # <u>HQ-2006-40</u>													
56. Trailing Tons (gross tonnage, excluding power units)		N/A		c. Auto train stop d. Cab e. Traffic f. Interlocking		i. Time table/train orders j. Track warrant control k. Direct traffic control l. Yard limits		o. Positive train control p. Other (Specify in narrative) Code(s)		2 = Remote control tower 3 = Remote control transmitter - more than one remote control transmitter		N/A							
58. Principal Car/Unit		a. Initial and Number		b. Position in Train		c. Loaded(yes/no)		59. If railroad employee(s) tested for drug/alcohol use, enter the number that were positive in the appropriate box.											
(1) First involved (derailed, struck, etc)		N/A		N/A		N/A						Alcohol N/A		Drugs N/A					
(2) Causing (if mechanical cause reported)		N/A		N/A		N/A		60. Was this consist transporting passengers? (Y/N)						N/A					
61. Locomotive Units		a. Head End		Mid Train b. Manual c. Remote		Rear End d. Manual c. Remote		62. Cars		Loade a. Freight b. Pass.		Empty c. Freight d. Pass.		e. Caboose					
(1) Total in Train		N/A		N/A		N/A		(1) Total in Equipment Consist		N/A		N/A		N/A					
(2) Total Derailed		N/A		N/A		N/A		(2) Total Derailed		N/A		N/A		N/A					
63. Equipment Damage This Consist		N/A		64. Track, Signal, Way, & Structure Damage		N/A		65. Primary Cause Code		N/A		66. Contributing Cause Code		N/A					
Number of Crew Members						Length of Time on Duty													
67. Engineer/Operators		N/A		68. Firemen		N/A		69. Conductors		N/A		70. Brakemen		N/A					
Casualties to:		73. Railroad Employees		74. Train Passengers		75. Other		71. Engineer/Operator		Hrs N/A Mi N/A		72. Conductor		Hrs N/A Mi N/A					
Fatal		N/A		N/A		N/A		76. EOT Device?		1. Yes 2. No N/A		77. Was EOT Device Properly Armed?		1. Yes 2. No N/A					
Nonfatal		N/A		N/A		N/A		78. Caboose Occupied by Crew?		1. Yes 2. No		N/A							
Highway User Involved						Rail Equipment Involved													
79. Type C. Truck-Trailer. F. Bus J. Other Motor Vehicle A. Auto D. Pick-Up Truck G. School Bus K. Pedestrian B. Truck E. Van H. Motorcycle M. Other (spec. in narrative)						83. Equipment 3. Train (standing) 6. Light Loco(s) (moving) 1. Train(units pulling) 4. Car(s)(moving) 7. Light(s) (standing) 2. Train(units pushing) 5. Car(s)(standing) 8. Other (specify in narrative)						Code 2							
80. Vehicle Speed (est. MPH at impact) 15						81. Direction geographical 1. North 2. South 3. East 4. West						Code 2							
82. Position 1. Stalled on Crossing 2. Stopped on Crossing 3. Moving Over Crossing 4. Trapped						85. Circumstance 1. Rail Equipment Struck Highway User 2. Rail Equipment Struck by Highway User						Code 1							
86a. Was the highway user and/or rail equipment involved in the impact transporting hazardous materials?						86b. Was there a hazardous materials release by						Code 4							
1. Highway User 2. Rail Equipment 3. Both 4. Neither						1. Highway User 2. Rail Equipment 3. Both 4. Neither													
86c. State here the name and quantity of the hazardous materials released, if any.																			
N/A																			
87. Type of Crossing Warning		1. Gates 2. Cantilever FLS 3. Standard FLS		4. Wig Wags 5. Hwy. traffic signals 6. Audible		7. Crossbucks 8. Stop signs 9. Watchman		10. Flagged by crew 11. Other (spec. in narr.) 12. None		88. Signaled Crossing Warning (See instructions for codes)		Code N/A		89. Whistle Ban 1. Yes 2. No 3. Unknown		Code 2			
Code(s)		08		N/A		N/A		N/A		N/A									
90. Location of Warning 1. Both Sides 2. Side of Vehicle Approach 3. Opposite Side of Vehicle Approach				Code 1		91. Crossing Warning Interconnected with Highway Signals 1. Yes 2. No 3. Unknown				Code 2		92. Crossing Illuminated by Street Lights or Special Lights 1. Yes 2. No 3. Unknown				Code 2			
93. Driver's Age 42		94. Driver's Gender 1. Male 2. Female		Code 1		95. Driver Drove Behind or in Front of Train and Struck or was Struck by Second Train 1. Yes 2. No 3. Unknown				Code 2		96. Driver 1. Drove around or thru the Gate 2. Stopped and then Proceeded 3. Did not Stop				Code 3			
97. Driver Passed Standing Highway Vehicle 1. Yes 2. No 3. Unknown				Code 2		98. View of Track Obscured by (primary obstruction) 1. Permanent Structure 3. Passing Train 5. Vegetation 7. Other (specify in narrative) 2. Standing Railroad Equipment 4. Topography 6. Highway Vehicle 8. Not obstructed								Code 8					
101. Casualties to Highway-Rail Crossing Users				Killed 1		Injured 00		99. Driver Was 1. Killed 2. Injured 3. Uninjured				Code 1		100. Was Driver in the Vehicle? 1. Yes 2. No				Code 1	
								102. Highway Vehicle Property Damage (est. dollar damage) 3000				103. Total Number of Highway-Rail Crossing Users (include driver) 1							
104. Locomotive Auxiliary Lights? 1. Yes 2. No						Code 1						105. Locomotive Auxiliary Lights Operational? 1. Yes 2. No						Code 1	
106. Locomotive Headlight Illuminated? 1. Yes 2. No						Code 1						107. Locomotive Audible Warning Sounded? 1. Yes 2. No						Code 1	

108. DRAW A SKETCH OF ACCIDENT AREA INCLUDING ALL TRACKS, SIGNALS, SWITCHES, STRUCTURES, OBJECTS, ETC., INVOLVED.

40-2006
Accident
Sketch.jpg



109. SYNOPSIS OF THE ACCIDENT

Synopsis

An eastbound Amtrak train collided with a dump truck at a private grade crossing on May 30, 2006, at 1:09 p.m. local time. The accident occurred near Jackson, Michigan, at Norfolk Southern Corporation (NS), milepost 79.2, Michigan Line Subdivision of the Dearborn Division. The motor vehicle driver was killed, and the truck was completely destroyed. There was no derailment. However, 14 passengers and one crew member sustained minor injuries. The lead control car sustained damage of about \$97,000.

At the time of the accident it was daylight and clear, with a southern wind of 13 mph. The temperature was 82 °F.

The accident was caused by failure of the motor vehicle driver to stop at the private grade crossing. The Jackson County Sheriff's Department determined the driver was in violation of Michigan Statute 93002.

110. NARRATIVE

Circumstances Prior to the Accident

The crew of Amtrak train No.350, included a locomotive engineer, a conductor, and an assistant conductor. The locomotive engineer went on duty at 5:55 a.m., EDT, May 30, 2006, at Pontiac, Michigan. The conductor and the assistant conductor went on duty in Chicago, Illinois at 7:10 a.m. CDT. All crew members obtained their statutory off-duty period. The locomotive engineer operates in turnaround service from Pontiac to Battle Creek, Michigan, on trains 351/350. The conductor and assistant conductor are crew members on train No. 350 from Chicago to Pontiac.

Amtrak No. 350 is an eastbound train, which originates in Chicago, and is destined for Pontiac. The train has a crew change for the locomotive engineer at Battle Creek. After a job briefing between the crew members, the train departed Battle Creek at 12:14 p.m., with the three person crew and 75 passengers. The locomotive engineer performed a running air brake test, no exceptions were found. Amtrak No. 350 operated in a push/pull mode with control car 90218 in the lead and Amtrak Locomotive No. 35 in the pushing mode. The train's consist included three passenger cars.

The train operates over a portion of the NS railroad en route to Pontiac. The Method of Operation is NS Operating Rule 261, Track Signaled in Both Directions, and is controlled from the NS Dispatching Center located in Dearborn, Michigan.

The train crew reported no unusual circumstances during the trip. After departing Battle Creek, the next scheduled station stop is Jackson.

The Accident

As the train approached MP 79.20 operating on a clear signal at 80E, the train was traveling at 76 mph on the single main track (maximum authorized speed is 75 mph), the engineer noticed a dump truck traveling from south to north at the Tylutki private grade crossing. The truck did not appear that it was going to stop for the crossing. The engineer sounded the horn and rang the bell, and realized the truck was not going to stop. He initiated an emergency train air brake application, and made an "emergency" announcement over the train radio system. The train did not stop in time and collided with the empty dump truck. The driver of the dump truck sustained fatal injuries, and the train traveled approximately one-half mile after the collision before coming to a stop.

Upon impact, control car 90218 caught fire as a result of the truck bursting into flames. The locomotive engineer originally tried to exit the unit through the rear compartment. However, there was too much smoke in the compartment and he could not see clearly. He returned to the control cab and exited from the engineer's side door, jumping to the ground on the south side of the train.

The engineer reported that he went to the second car of the train and assisted a passenger off the train. He then went to the vestibule of the second car and grabbed a fire extinguisher. He returned to the front of the control car 90218 and tried to extinguish the fire, emptying the entire contents of the extinguisher. The Jackson County Fire Department had just arrived at the scene and finished extinguishing the fire.

The locomotive engineer then joined his fellow crew members and assisted with helping the passengers off the train. A total of 14 passengers claimed injuries. The assistant conductor of the train also claimed an injury, a foreign object in the right eye. All passengers and the assistant conductor were treated and released at Foote Hospital in Jackson.

On the day of the accident visibility was 10 miles. Vehicle traffic must enter the private road crossing, known as Tylutki crossing, from the south via Michigan Ave. According to the locomotive engineer the driver failed to stop for the Tylutki crossing. The dump truck was traveling west to east on Michigan Ave. The report filed

by the Jackson County Sheriff Department reflects that one witness stated that the driver did not stop for the crossing. The driver of the dump truck approached the crossing from the south.

The train struck the truck near the cab of the vehicle and ejected the driver. The truck was split into two pieces with the cab lying on the north side of the main track and the bed of the truck on the south side. Two axles from the vehicle were found about 150 yards east of the accident on the south side.

The Jackson County Sheriff Department arrived on the scene at 1:10 p.m. In addition, the following emergency response units assisted with the accident: Blackman Township Public Safety Department, Summit Township Police Department, Parma-Sandstone Township Police Department, Michigan State Police, Jackson County Fire Department, Jackson Community Ambulance and Leslie Ambulance.

The crew members were interviewed by the Jackson County Sheriff Department. An Amtrak road foreman was dispatched to the scene and arrived about 3 p.m. He ascertained the condition of the train, and decided to move the train approximately one mile to the east to clear the main track. There was no track damage. The driver of the truck was pronounced dead at the scene.

Train crew members were transported to Pontiac, in a company vehicle. No Post Accident toxicology testing was performed. The engineer and conductor on the train crew went off duty at 4:47 p.m. After being treated and released at the hospital, the assistant conductor went off duty at 1:15 a.m.

Analysis and Conclusion

The driver of the truck was a 42 year old male. He was a licensed Michigan driver with no outstanding traffic violations. The Jackson County, Michigan, Medical Examiner performed toxicological testing on the remains of the driver, and the results were negative.

The private grade crossing is equipped with stop signs on both the south and north side of the crossing. There are no active warning devices. Access to the crossing is from a public road, Michigan Ave., there is 75 feet of clearance from Michigan Ave. to the south rail of the single main track. Visibility from Michigan Ave. to the crossing is not obscured. Vehicular traffic that has stopped at the stop sign on the south side of the crossing have an unobstructed view when looking either in an east or west direction. The roadway intersects with the railroad at a 90 degree angle. The track is tangent. Eight Amtrak, and four NS trains operate daily over the crossing. The crossing is maintained by the NS. The last reported accident for this crossing occurred on October 24, 1999, which also involved Amtrak Train No. 350. There were no fatalities involved in that accident.

The lead control car was equipped with a headlight, auxiliary lights, and the audible warning device required by Federal regulations. The locomotive engineer testified that these devices were functioning as intended at the time of the accident. There was no record of any post accident testing of the equipment.

The control car was equipped with a speed indicator and an event recorder as required by Federal regulations. The relevant event recorder data was downloaded by the road foreman at the accident site, and analyzed accordingly. The analysis disclosed that the locomotive engineer was in compliance with all applicable railroad operating and train handling requirements. FRA reviewed the results of this analysis, and concurred with the conclusions.

Conclusions

The railroad was in full compliance with their own operating and safety rules, and all applicable Federal regulations. The train crews' locomotive engineer witnessed the driver fail to stop for the stop sign, and an additional witness interviewed by the sheriffs' department verified this information. The driver of the vehicle had worked for Tylutki Excavating Inc. since April 2006, and traveled over this crossing on numerous occasions. Based on the evidence available, the sheriffs' department surmised that the driver was not paying attention to the stop sign or the train.

Probable Cause & Contributing Factors

The Federal Railroad Administration's investigation found driver inattentiveness to be the contributing factor. It was also determined that the accident occurred because the driver of the truck failed to stop at the private grade crossing, as required by Michigan Statute 93002.

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