

HE  
1780  
1A 8 4  
4/86



RAILROAD ACCIDENT INVESTIGATION,



REPORT NO 4186,

---

---

PENN CENTRAL TRANSPORTATION COMPANY

FALL RIVER, MASS

MARCH 2, 1972

---

---

Dept. of Transportation  
SFP 8 1977  
Library



L.S.  
cc

FEDERAL RAILROAD ADMINISTRATION ,  
2

OFFICE OF SAFETY

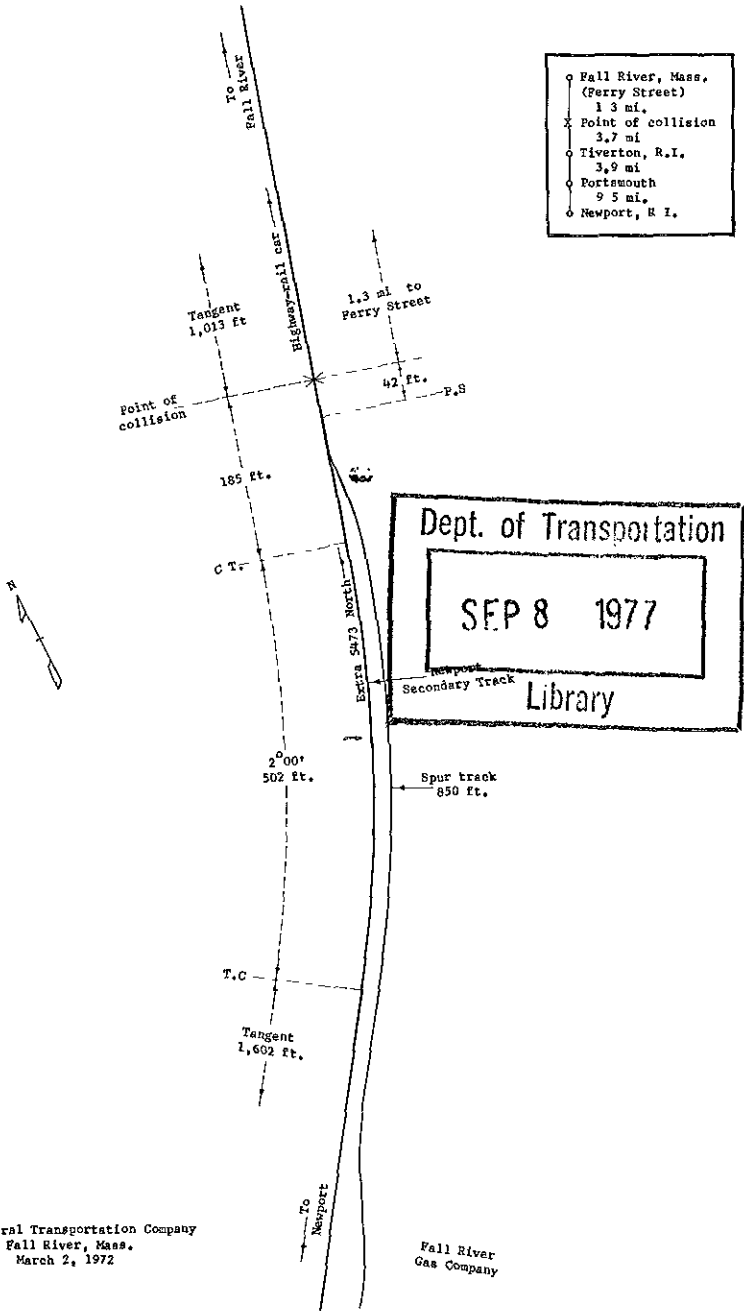
Washington, D C 20590

Summary

DATE: March 2, 1972  
RAILROAD: Penn Central  
LOCATION: Fall River, Mass  
ACCIDENT TYPE: Rear-end collision  
EQUIPMENT INVOLVED: Freight train Highway-rail car  
TRAIN NUMBER: Extra 5475 North  
LOCOMOTIVE NUMBER: Diesel-electric unit  
5475  
CONSIST: 3 cars, caboose  
SPEEDS: 15 m p h Slow or standing  
OPERATION: Verbal authority  
TRACK: Single; tangent; level  
WEATHER: Foggy  
TIME: 11:05 a m  
CASUALTIES: 1 killed; 6 injured  
CAUSE: Trainmaster permitting highway-rail  
car to occupy track without proper  
authority

1980  
A.S.  
10.  
4186

- Fall River, Mass. (Perry Street) 1.3 mi.
- × Point of collision 3.7 mi
- Tiverton, R.I. 3.9 mi
- Portsmouth 9.5 mi.
- Newport, R.I.



Penn Central Transportation Company  
Fall River, Mass.  
March 2, 1972

Fall River  
Gas Company

DEPARTMENT OF TRANSPORTATION  
FEDERAL RAILROAD ADMINISTRATION  
OFFICE OF SAFETY

---

RAILROAD ACCIDENT INVESTIGATION  
REPORT NO 4186

---

PENN CENTRAL TRANSPORTATION COMPANY

MARCH 2, 1972

Synopsis

On March 2, 1972, a Penn Central freight train struck the rear of a highway-rail car while moving under heavy fog conditions near Fall River, Massachusetts. The collision resulted in fatal injury to one, and in injury to six, occupants of the highway-rail car.

Cause

The accident was caused by a trainmaster permitting the highway-rail car to occupy the track without proper authority.

Location and Method of Operation

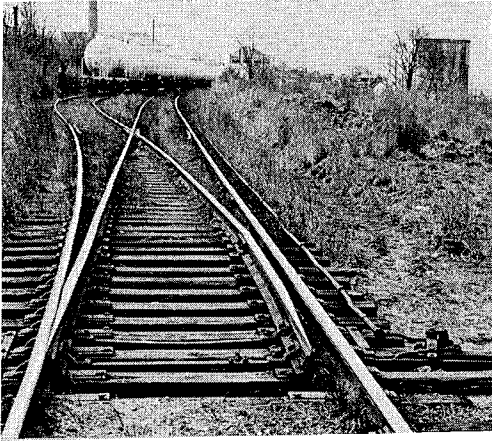
The accident occurred on that part of the railroad extending southward from Ferry Street, Fall River, Mass. to Newport, R. I., a distance of 18.4 miles. This is a single-track line, designated as the Newport Secondary track, over which trains operate under verbal authority of the train dispatcher. There is no block-signal system in use.

South of Ferry Street, a spur track parallels the secondary track on the east. It is 850 feet long and is used to service the Fall River Gas Company. Its switch is trailing point for northbound movements on the secondary track and is 1.3 miles south of Ferry Street.

The collision occurred on the secondary track, approximately 1.3 miles south of Ferry Street and 42 feet north of the switch of the spur track serving the Fall River Gas Company.

Track

From the south on the secondary track there are, successively, a tangent 1602 feet in length, a 2°00' curve to the left 502 feet, and a tangent 185 feet to the collision point and 1013 feet northward. The grade is practically level.



View southward along secondary track. Switch of spur track serving Fall River Gas Company is in foreground. The collision occurred 42 feet north of that switch.

#### Authorized Speed

The maximum authorized speed for all trains between Fall River and Newport is 25 m.p.h.

#### Time and Weather

The collision took place at 11:05 a.m., under foggy weather conditions which restricted visibility to less than approximately 400 feet.

#### Carrier's Operating Rules

**Pilot** -- An employee assigned to a train when the engineer, conductor, or driver of track car is not qualified on the physical characteristics or rules of the railroad, or portion of the railroad, over which the movement is to be made.

**Reduced Speed** -- Prepared to stop short of train or obstruction.

**Secondary Track** -- A designated track upon which trains or engines may be operated without timetable authority, train orders or block signals.

**Track Car** -- ...The term "Track Car" shall include other self propelled units such as ...Highway Rail Cars...

110. On secondary tracks where Block Signal System rules are not in effect, trains and engines may proceed at

Reduced Speed on permission of employee in charge or in an emergency under flag protection Trains and engines will not protect against following movements

801 Track cars will be in charge of driver, governed by rules and special instructions applying to track cars and by the same rules and special instructions as apply to trains other than passenger trains

804 Track cars must not be placed on the track at any time unless authorized by the Train Dispatcher, Operator or Yardmaster who authorizes movements on such track

#### Tiveiton Bridge and Operator

At Tiveiton, R 1, 5.0 miles south of Ferry Street, Fall River, a movable railroad bridge spans a body of water. The bridge is normally left unattended and open for water traffic. It is usually used for rail traffic only on Thursdays, by a freight train making a roundtrip from Ferry Street to Newport and return.

When the agent-operator at Portsmouth, R 1, 3.9 miles south of Tiveiton, learns the train is about ready to depart from Ferry Street, he proceeds to the Tiveiton bridge and closes it. After passage of the train, he reopens the bridge and returns to the station at Portsmouth. The agent-operator repeats the process described above when he learns the train is about ready to leave Newport for its return trip to Ferry Street.

Movements over the bridge are governed by wayside signals controlled by the agent-operator at the bridge.

#### Highway-Rail Car Involved

This was a 1969 Dodge Sportsman Wagon of the cab-over-engine van type. In addition to four wheels for highway use, it had four flanged wheels that were mounted on a special frame and could be lowered for movement of the vehicle on a track. The car was normally used for track inspections, and was provided with flagging equipment consisting of torpedoes, fuses and red flags. It had seating accommodations for seven persons; two front doors; a double door on the right side behind the right front door, and a double door at its rear end.

#### Circumstances Prior to Accident

##### Train

About 7:50 a.m. the day of the accident (Thursday), the train dispatcher verbally authorized a freight train to operate from Ferry Street, Fall River, to Newport and return. Upon being advised of this, the agent-operator at the Portsmouth station proceeded to the Tiveiton bridge and closed it. The train moved southward over the bridge at 8:24 a.m. and continued toward Newport, arriving there at 9:40 a.m. Meanwhile, the agent-operator reopened the bridge for water traffic, advised the dispatcher as to the passage of the

train, and returned to the station at Portsmouth. At approximately 9:50 a m., the conductor telephoned the agent-operator and advised him the train was about ready to depart northward from Newport on its return trip to Ferry Street. The agent-operator left Portsmouth soon thereafter and proceeded to the Tiverton bridge. He closed it at 10:35 a m., and caused the wayside signal governing northbound rail movements over the bridge to display a Proceed aspect.

The train, operating as Extra 5473 North, departed from Newport at 10:00 a m. Shortly afterward, it stopped at a U S naval base to pick up and set out cars. After this was accomplished and its brakes had been tested, the train proceeded northward toward the Tiverton bridge and Ferry Street.

Extra 5473 North, consisting of one road-switcher type diesel-electric unit, a caboose and three cars, in that order, approached the Tiverton bridge at approximately 10:50 a m. The engineer and front brakeman were seated, respectively, on the left and right sides of the cab at the rear of the locomotive. The conductor and flagman were in the caboose.

#### Highway-Rail Car

As a result of the New England L P Gas Company seeking permission to erect a facility on a site near the Fall River Gas Company and objections raised by citizens in the Fall River area, a Massachusetts State legislator requested the Massachusetts Department of Public Utilities (D.P.U.) to inspect the Penn Central track in the general area of Fall River and the Fall River Gas Company. The D.P.U. in turn requested the Penn Central to provide a track car for the inspection. After one postponement, arrangements were made for a highway-rail car to pick up the track inspection party at the Ferry Street yard office at approximately 9:30 a m. the day of the accident. The members of the party were to be the Boston terminal trainmaster, the assistant division engineer, a track supervisor, the Massachusetts State Legislator, and two D.P.U. inspectors. On the morning of the appointed day, the assistant division engineer drove a highway-rail car over highways from Boston to Fall River and parked it near the Ferry Street yard office at approximately 9:40 a m. Other members of the track inspection party were in or near the yard office at that time, waiting for the State legislator and the car.

According to his statements, the assistant division engineer was not familiar with the track over which the highway-rail car was to operate and thought the trainmaster had been assigned to act as pilot for the highway-rail car. The trainmaster, however, stated he had not been designated as the pilot and would have demurred if he had been so designated because of not being qualified in the Fall River area. It is apparent the trainmaster considered himself in charge of the track-inspection party and operation of the highway-rail car on the track.

After waiting until approximately 10:30 a m. for the State legislator to arrive at the Ferry Street yard office and receiving word he would probably not put in an appear-

ance, the other members of the track inspection party decided to go on without him. The trainmaster then informed the train dispatcher by telephone that he wanted to place the highway-rail car on the secondary track at Liverton and operate it northward on that track in return to Ferry Street. The dispatcher replied that he could not authorize the highway-rail car to occupy the secondary track as he had already given a train authority to operate on that track from Ferry Street to Newport and return. He apparently also informed the trainmaster that the train had moved over the Tiverton bridge at 8:24 a. m. on its trip from Ferry Street to Newport. The trainmaster acknowledged he understood the situation, and advised the dispatcher that he would have the highway-rail car operate on the secondary track with protection provided by himself against the train on its return trip northward from Newport. In addition, the trainmaster requested the dispatcher to communicate with the agent-operator at Portsmouth and instruct him to hold the train, on its return trip, at the Tiverton bridge until the highway-rail car was reported clear of the secondary track at Ferry Street. He then concluded the telephone conversation and proceeded to the highway-rail car without waiting to receive confirmation as to whether the Portsmouth agent-operator received the aforesaid instructions. Best information available indicates that after concluding the telephone conversation with the trainmaster, the dispatcher called the Portsmouth station by telephone but received no response because of the agent-operator having left the station to close the Liverton bridge for Extra 5473 North. It appears the dispatcher did not pursue the matter by trying to contact the agent-operator at the bridge. Hence, the agent-operator remained unaware of the forthcoming operation of the highway-rail car on the secondary track.

The Fall River police chief and deputy fire chief were in the vicinity of the Ferry Street yard office when the track-inspection party was about to board the highway-rail car. A D P U inspector requested and received permission for them to be included in the track-inspection party, so they would be in a position to provide an authoritative report to the State legislator in the event he requested them for information concerning the proposed construction of the gas company facility. Soon afterward, apparently at approximately 10:40 a. m., the entire track-inspection party boarded the highway-rail car and proceeded, via highway, to a private rail-highway grade crossing located about two miles north of the Tiverton bridge.

The highway-rail car arrived at the grade crossing about 10:50 a. m., and was promptly placed on the secondary track with its front end facing north. It then proceeded northward on the track at a speed slightly under 15 m. p. h., as estimated by the driver. Its headlights and tail lights were lighted. The assistant division engineer was seated at the controls with a D P U inspector alongside. The track supervisor, police chief, and deputy fire chief occupied the middle seat; the trainmaster and another D P U inspector occupied the rear seat.



## The Accident

### Extra 5473 North

As the train neared the Tiverton bridge, its engineer and front brakeman observed that the northward wayside signal for the bridge displayed a Proceed aspect. Shortly afterward, at 10:55 a m, the train moved over the bridge and the agent-operator promptly notified the dispatcher of this event by telephone. In response, the dispatcher informed the agent-operator that a highway-rail car was en route to Tiverton to get on the secondary track and instructed him to tell its occupants to follow Extra 5473 North to Ferry Street. The agent-operator never did see the highway-rail car and was still at the bridge, waiting for the car, when the accident occurred.

About 10 minutes after it moved over the Tiverton bridge, Extra 5473 North began to pass the spur track serving the Fall River Gas Company and entered a curve to the left while moving under heavy fog conditions at a speed of 15 to 20 m p h., as estimated by crew members. While the locomotive was moving in the vicinity of the north end of the curve, the front brakeman saw the tail lights of the highway-rail car come into view on the track ahead at a distance which he estimated to have been 50 to 100 feet. He called a warning and the engineer applied the train brakes in emergency. Soon afterward, apparently before its speed was reduced materially, the train struck the rear of the highway-rail car, 42 feet north of the switch of the spur track serving the Fall River Gas Company.

None of the train crew was aware of the operation of the highway-rail car before the car was seen on the track ahead. Both the engineer and front brakeman said they neither saw nor heard any flagging signals while approaching the collision point.

### Highway-Rail Car

The trainmaster stated that when the highway-rail car was placed on the secondary track at the grade crossing located about two miles north of the Tiverton bridge, he believed he had the dispatcher's permission to do so. His statements indicate that as a result of having some knowledge of the weekly roundtrip of a train between Ferry Street and Newport, he also erroneously believed that Extra 5473 North would not depart northward from Newport until some time in the afternoon.

Apparently about the time Extra 5473 North moved onto the Tiverton bridge, the highway-rail car departed from the grade crossing and proceeded northward on the secondary track. Soon afterward, it began to pass the spur track serving the Fall River Gas Company. That track was occupied by tank cars and as the highway-rail car neared its switch, the D P U inspector seated alongside the assistant division engineer (driver) requested the car be stopped to obtain information relative to the loading and unloading of tank cars at the

Fall River Gas Company. The highway-rail car stopped immediately thereafter with its rear end 42 feet north of the switch of the spur track.

The trainmaster stated that as the car came to a stop, he prepared to go back with fuses and provide flag protection. He further stated that while he was preparing to alight from the car, he observed the headlight of Extra 5473 North closely approaching from the rear and called a warning to the other members of the track-inspection party. The assistant division engineer put the car in forward gear and applied power when he heard the warning. Immediately afterward, while the car was stopped or moving slowly forward with all the members of the track-inspection party still inside, it was struck from the rear by the train.

#### Damages

The train stopped with its front end 237 feet north of the collision point. It was not derailed or damaged significantly.

The coupler at the front of the locomotive penetrated the double door at the rear of the highway-rail car (see following photograph). The car derailed to the west, remained upright, and was pushed forward on the track structure by the train. It eventually stopped upright on and in line with the structure of the secondary track in front of the train locomotive.

According to the carrier's estimate, the cost of damages to the highway-rail car was \$1000.



Highway-rail car.

#### Casualties

##### Extra 5473 North

No member of the train crew was injured.

### Highway-Rail Car

The deputy fire chief sustained internal injuries and fractures to his ribs and collar bone. He succumbed to his injuries 16 days after the accident. The police chief, trainmaster, assistant division engineer, and a D P U inspector sustained abrasions, contusions, and/or lacerations about their faces and/or bodies. The other D, P U inspector sustained bruises to his knees and whiplash injury to his neck. The track supervisor sustained fractures to bones of both legs, lacerations about his right eye, abrasions of both knees, a back sprain, and sprains of both wrists.

### Service Record - Trainmaster

The trainmaster, age 53, was first employed by the carrier as a yard clerk in January 1941. He was successively promoted to night general yardmaster in October 1964; general yardmaster in November 1967; assistant trainmaster in November 1969, and terminal trainmaster in December 1970. His record was clear. It shows that he last passed an operating rules examination in September 1971, and that he resigned from the carrier's service three days after the accident.

### Train Stopping Distance

Best information available indicates that with the engineer's reaction time taken into consideration, Extra 5473 North was capable of stopping within a distance of about 280 feet under an emergency brake application initiated at a speed of 20 m p h.

### Analysis

Under the carrier's rules, a highway-rail car is considered to be a track car and is required to be operated under the same rules and regulations applicable to trains other than passenger trains. The carrier's operating rule No. 804 prohibits a highway-rail car from occupying the secondary track involved unless it is authorized to do so by the train dispatcher. It is apparent the highway-rail car transporting the track-inspection party had no authority whatsoever under the carrier's rules to occupy the secondary track between Tiverton and Ferry Street after the dispatcher declined to give it permission to operate on that track. The trainmaster in charge nevertheless elected to place the car on the track near Tiverton and to operate it toward Ferry Street ahead of Extra 5473 North.

The investigation revealed the highway-rail car was placed on the secondary track without authority of the train dispatcher. The trainmaster apparently erroneously assumed that Extra 5473 North would not leave Newport until some time later in the day or that it would be held at the Tiverton bridge pursuant to his request it be held at the bridge until the highway-rail car was reported to have arrived at Ferry Street.

Extra 5473 North had the dispatcher's permission to operate on the secondary track. Under these circumstances, rule No. 110 authorized the train to proceed on that track at Reduced Speed, prepared to stop short of a train or obstruction. In view of the computed stopping distance for the train under an emergency brake application initiated at a speed of 20 m p h. and the distance that the train moved after colliding with the highway-rail car, it appears Extra 5473 North was moving at a speed of approximately 20 m p h. when the front brakeman warned the engineer about the car occupying the track ahead. It is quite clear that the speed of the train was not controlled, as required in approach to the collision point, and that the excessive speed was a causal factor in the accident.

Lackadaisical performance by the dispatcher and/or officials of the carrier appears to have been also a causal factor in the accident for reasons summarized in the following:

- (a) Arrangement was made for the highway-rail car to operate on the track between Tiverton and Ferry Street on the only day of the week that a train operated between Ferry Street and Newport.
- (b) Although the aforesaid arrangement was evidently made some days in advance, nothing was done the day of the accident to inform the train crew about the operation of the highway-rail car or to arrange for protection of the train and car under instructions or authority of the dispatcher.
- (c) Acting on the trainmaster's request, the dispatcher called the Portsmouth station to instruct its agent-operator to hold Extra 5473 North at the Tiverton bridge until the highway-rail car was reported clear of the track at Ferry Street. However, after receiving no response to that call, apparently due to the agent-operator having gone to the Tiverton bridge, the dispatcher made no timely effort to call the agent-operator at the bridge and impart the instructions requested by the trainmaster. Hence, the agent-operator remained unaware of the highway-rail car and did not provide it the protection requested, resulting in the accident.

#### Findings

1 At the time of the accident, the highway-rail car was occupying the track under heavy fog conditions without authority of the train dispatcher, as required. This was the major causal factor in the accident.

2 The speed of the train was not being controlled as required in approach to the accident point resulting in the train being unable to stop short of a collision after the highway-rail car was seen to be occupying the track ahead. Failure of the engineer to properly control the speed of the train was a contributing factor in the accident.

3 Failure of carrier officials and/or the train dispatcher to make proper arrangements for operation of the highway-rail car in accordance with the rules was also a contributing factor in the accident

4 While he was not required to do so under the carrier's operating rules, it would appear the dispatcher had an obligation to arrange for protection of the highway-rail car as requested by the trainmaster in charge of that car. Hence, failure of the dispatcher to instruct the agent-operator at the Tiverton bridge to provide protection for the car, as requested by the trainmaster, is considered to be a causal factor in the accident.

Dated at Washington, D C , this 13th  
day of July 1973  
By the Federal Railroad Administration

Mac E Rogers  
Associate Administrator  
Office of Safety