REPORT:	FE-36-97
RAILROAD:	Burlington Northern Santa Fe Railway Company (BNSF)
LOCATION:	Emporia, Kansas
DATE, TIME:	Dec. 2, 1997, 7:45 p.m., CST
PROBABLE CAUSE:	The Conductor was standing foul of Track No. 6802 and did not move in the clear as an oncoming train approached.

EMPLOYEE:	**Craft.....**	**Transportation**
	Activity.....	Switching
	Occupation.....	Conductor
	Age.....	50 years
	Length of Service.....	30 years
	Last Rules Training.....	May 18, 1995
	Last Safety Training.....	May 18, 1995
	Last Physical Exam.....	July 21, 1992

Circumstances Prior to the Accident

On Dec. 2, 1997, a Train Crew consisting of an Engineer, Conductor, and Brakeman reported for duty at 10 a.m. (CST) at BNSF Argentine Yard, Kansas City, Kansas. The Crew was assigned to operate Train No. L-KAN-0031-02 from Kansas City to Newton, Kansas on the Emporia Subdivision. All Crew Members had received the required off-duty time prior to going on duty.

The Crew went on duty and received its normal paperwork. After reviewing this paperwork, the Crew Members proceeded to the diesel shop where they boarded the locomotives. Their train was located in the departure yard. After the locomotives were attached to the train, an initial terminal train air brake test was performed, and no defects were noted. The first scheduled work was performed at Lawrence, Kansas. According to the Crew Members, the normal time needed to complete their work at Lawrence was 35 to 40 minutes. Following the switching movement, the Crew performed an initial terminal air brake test on the cars picked up at Lawrence. The next scheduled work for this local was Topeka, Kansas.

At Topeka, the Crew set out four locomotives for repairs at the BNSF Topeka repair facility and

picked up one locomotive destined for Newton, Kansas. Next, the Crew completed the scheduled local work and departed for Emporia, Kansas at about 7:15 p.m.

Upon arrival in Emporia, the Crew Members contacted the Footboard Yardmaster for instructions. They were directed to set out the cars on Track No. 6811 destined for Emporia and pick up about seven cars from Track No. 6805. The Crew of L-KAN-0031-02 was told that the paperwork for the seven cars being picked up was in the Emporia Depot.

The Engineer stopped the train (L-KAN-0031-02) at the depot to pick up the paperwork, and the Crew had a job briefing on the way to the west end of Emporia Yard where the switching was to take place. The train traveled through Track No. 6803 on the way to the west end. The job briefing included how the switching was going to be accomplished. The Engineer stated he had been instructed by the Conductor to stop at the west end of the yard. The train was stopped adjacent to the derail on the lead track. Both the Conductor and Brakeman detrained on the left front side of the locomotive and radioed the Engineer to pull ahead. The cars destined for Emporia were located at the rear of the train.

The Conductor walked back to the lead switch on Track No. 6803, and the Brakeman walked east, lining the lead switches for the next move. The Engineer said he couldn't see either Crew Member at this time and the only one giving instruction to him by radio was the Conductor. The Conductor instructed him to stop so he (the Conductor) could take off the EOT (end-of-train device). The Engineer centered the reverser after he stopped for the EOT removal. He observed the head-end device as the brake pipe pressure went to zero and then came back up, at which time the Engineer told the Conductor, by radio, that possibly something was wrong with the air. The Conductor radioed the Engineer that the EOT had been removed. The Engineer stated the next transmission was garbled. The Engineer waited for a minute and radioed the Conductor saying, "Purple," (nickname for the Conductor), "if you are transmitting, I'm not receiving." The next radio contact was the Brakeman telling the Engineer that "Purple" was in the clear and was giving a back-up signal by hand.

The Engineer observed the Brakeman near the clearance point on Track No. 6811. The next move was eastward to set out the cars destined for Emporia on Track No. 6811. After acknowledging the instruction to move eastward, the Engineer repeated the number of car lengths he was given and the compass direction for the move. As he backed toward the set-out track, the Engineer continued to receive and acknowledge the car count for the distance to back up. During this time, the Engineer stated the Conductor had contacted him by radio and had asked the Engineer if he could hear his radio. The Engineer replied, "Loud and clear." The Brakeman continued to give the Engineer car counts until a stop was made. The Engineer looked at the ground and in his small rear-view mirror to judge his deceleration when spotting cars. The Brakeman made the cut in the train and instructed the Engineer, by radio, to pull ahead a specific distance. The Engineer repeated the distance and direction to the Brakeman by radio. This switching move was made with air in the train.

The Conductor verbally instructed him to stop when the rear-through car in the train was over

the Track No. 6805 switch. The Crew was aware that a coupling needed to be made on the pick up. The Brakeman remarked, "I'll walk over and get the pick up." The Conductor stopped the Engineer, again by radio, when the rear car of the train was over Switch No. 6805 and said to the Brakeman, "You want me to make this first joint?" The Brakeman said he would make the coupling and then gave the Engineer instructions on how far to back up. After repeating the instructions back to the Brakeman, the Engineer backed up to a coupling and stopped. The time was approximately 7:40 p.m. At about 7:41 p.m., the train was ready to pull west.

The train was stopped for a few seconds when an eastbound train passed the head end of the local. The headlight was on dim, and the local Engineer was waiting for a signal from one of his Crew Members that the air was to be cut in after the consist had been stretched. At this time, the independent brakes on the local were applied in the full position in addition to about 10 pounds of train air brakes, and the reverser lever was centered.

At the time of the accident, the sky was clear with visibility of greater than one mile, and it was raining lightly. The temperature was 38° F.

The Accident

The Engineer of eastbound Z-ALTWSP8-02 initiated an emergency application of the train air brakes as the Conductor on the eastbound train called the Engineer of the local on the radio and remarked, "We hit something when we went by your engines." The Engineer of L-KAN-0031-02 contacted the Brakeman to establish his whereabouts to which the Brakeman replied, "Okay." The Engineer then attempted to contact the Conductor twice and received no response. The Engineer informed the Brakeman by radio that he would head back, and the Brakeman said he would walk west toward the head end of the local.

The Engineer got off the locomotive (L-KAN-0031-02) on the right rear side and noticed what appeared to be a human organ in the locomotive step light. As he walked eastward, he discovered the Conductor's body by the rear of the third locomotive. The Engineer checked the Conductor's carotid artery for a pulse and detected none. The Engineer saw the Brakeman about 8-10 cars to the east on the north side of the local. The Engineer informed the Brakeman that "Purple" was dead and said, "Don't go up there."

The Engineer returned to the lead locomotive of the local and pressed the emergency tone button on the radio. He pressed the button about three times but did not receive a response. He then pressed the non-emergency tone button to contact the Train Dispatcher and received a quick response. The Engineer informed the Train Dispatcher that an ambulance and the police should be summoned to respond at Anderson Crossing (common name).

The Engineer (L-KAN-0031-02) detrained a second time and walked eastward toward the Brakeman when he noticed the train's air brakes had released on the now-stopped eastbound freight train (Z-ALTWSP8-02) which had started to roll back to the west. He informed the Crew Members of the eastbound train, by radio, that they needed to set the brakes. The Engineer

looked west at this time and could not see the rear of the eastbound train.

The Engineer surmised the emergency vehicles would respond from the north, and he told the eastbound Crew Members to pull their train eastward and to watch the foot-counter on the locomotive. When the train had moved a sufficient distance to clear the accident scene, the Engineer instructed the Crew to stop. The Brakeman's pack-set radio was used to accomplish this move.

The Engineer estimated the response time for the first responder's arrival was 15 to 20 minutes. He stayed at the scene until the arrival of a BNSF Special Agent and Claim Agent. This length of time was estimated to be 40 to 45 minutes. After a statement was given to the Sheriff's Department, the Claim Agent gave the Engineer and the Brakeman a ride to the BNSF Emporia Depot where they talked to the Trainmaster. After their interviews, a taxi was waiting to transport both Crews back to Argentine Yard. The Engineer said his arrival time home was 1:40 a.m., December 3.

Responding to the scene were the Lyon County Sheriff's Department, Emporia Police Department, Lyon County Coroner, and a host of BNSF Officers, Special Agents, and Claim Agents.

(Please see the attached diagrams of the Emporia Subdivision and accident scene to better visualize the chain of events that led up to the fatality.)

Post-Accident Investigation

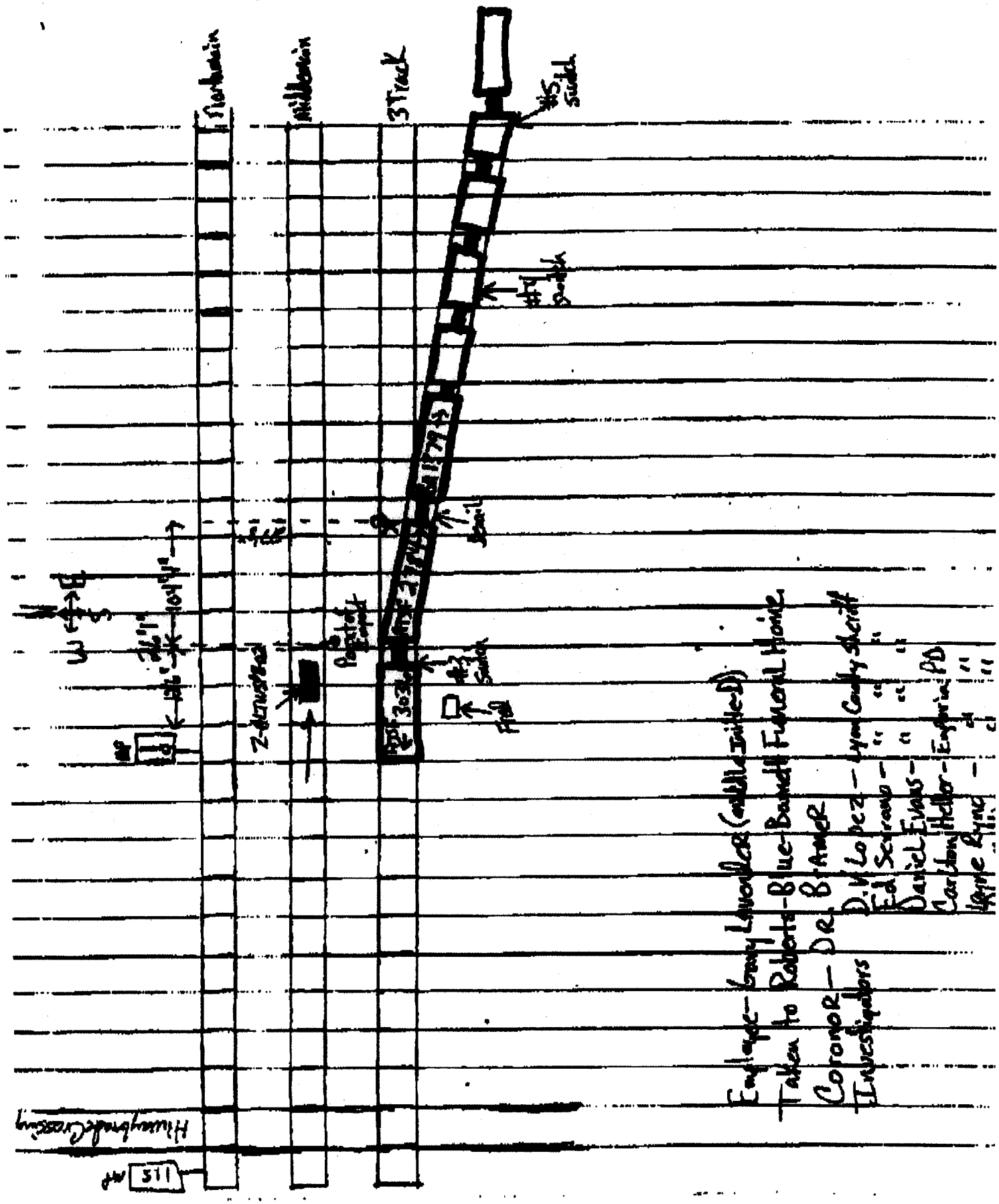
The BNSF Manager of Safety and Rules, Kansas Division, accompanied the Coroner to Roberts Blue Barnett Funeral Home to ensure toxicological samples were taken in accordance with Federal regulations.

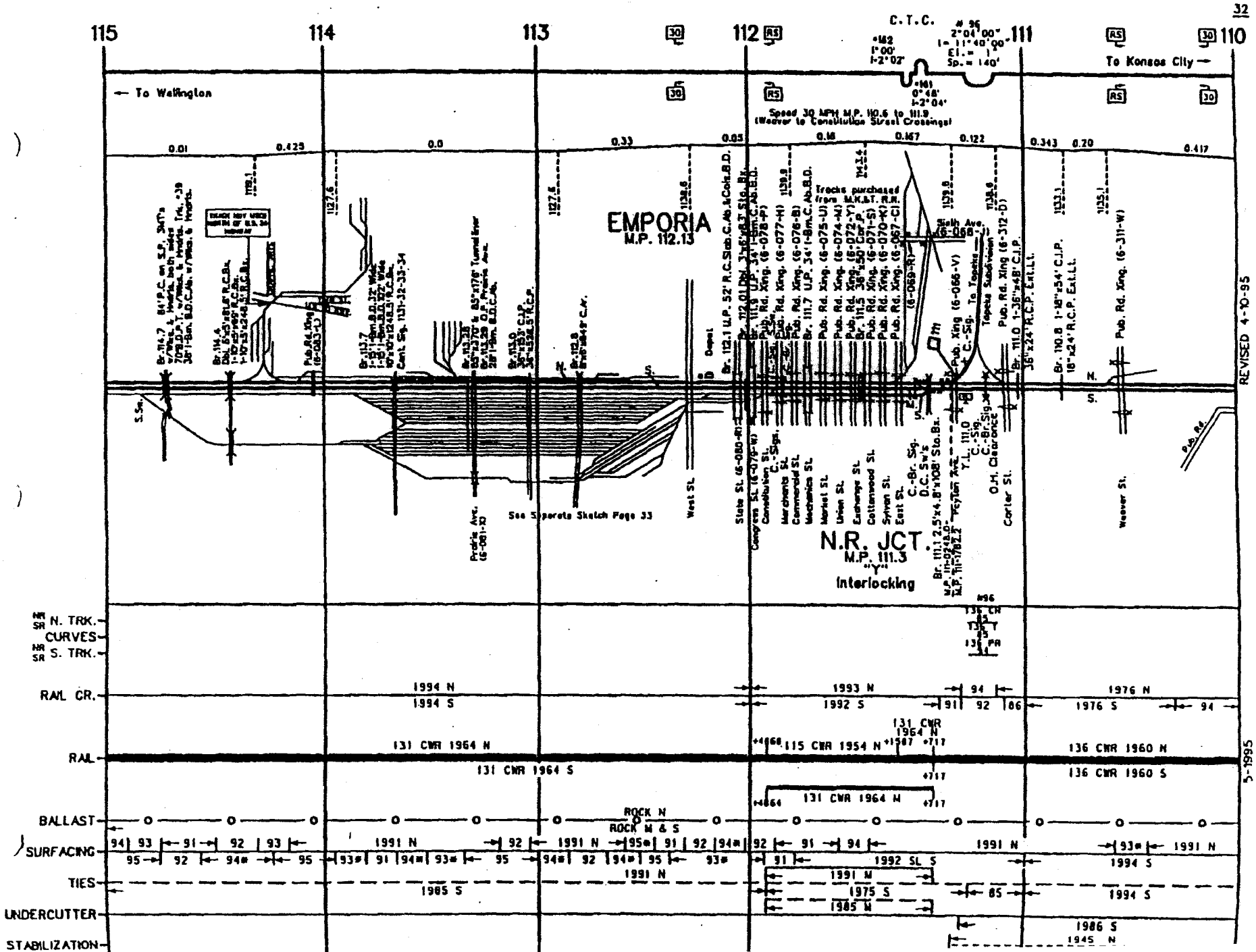
Following Crew interviews and the arrival of relief Crews, a re-enactment was conducted by BNSF to determine sound levels and sight distances. The sound level survey, to determine the sound pressure present when Locomotive ATSF 3036 was in idle position, revealed that dBA levels at various strategic locations were below the 90dBA limit at which hearing protection was required; and locomotive whistle surveys indicated that employees strategically placed near the location of the accident heard the whistle sound.

Investigators determined that the Engineer had been traveling at 55 mph when he saw the Conductor's lantern 1/4 mile from the point of impact, which they considered good sight distance. The Engineer had sounded the horn nine seconds before impact, but applied no emergency brakes until right before he hit the Conductor. Investigators determined that the Conductor, who was wearing no hearing protection, had adequate time to respond.

FRA responded to the scene the following morning, December 3. The agency's investigation revealed the Conductor was standing adjacent to and on the north side of the west end of the

steps of the second locomotive in his consist when he was struck by the passing train. The Conductor was standing on the end of the crossties between Track No. 6803 and the Middle Main Track with his back toward the oncoming through-freight train. Investigators could not determine why the Conductor was fouling the adjacent track or why he did not respond to the whistle being sounded by the oncoming freight train.


Florheim
Millheim
3 Track
#5 switch
#4 switch
#3 switch
Hwy
Pedestrian Tunnel
Z-Interlocking
Engineer – Gary Lamoller (called & Invited)
Taken to Roberts-Blue-Bagwell Funeral Home
Coroner – Dr. Bramer
Investigators D.W. Lopez – Lyon County Sheriff
Ed Serrano – " "
Daniel Evans – " "
Carl Anthony Heller – Emporia PD
Wayne Byrne – " "
Highway/Rail Crossing
MP 311



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