BROTHERHOOD OF LOCOMOTIVE ENGINEERS AND TRAINMEN

A DIVISION OF THE RAIL CONFERENCE
INTERNATIONAL BROTHERHOOD OF TEAMSTERS

SAFETY TASK FORCE

Independence, OHIO

BEFORE THE NATIONAL TRANSPORTATION SAFETY BOARD

NTSB Accident Number: RRD19FR002
Class: Regional

November 30, 2018

Proposed findings, probable cause, and safety recommendations, in connection with the fatality of a CSX Transportation Track Welder struck by a freight train while working on track at North Estill, South Carolina.

S. J. Bruno, BLET-Safety Task Force, National Chairman

R. Dumey, BLET-Safety Task Force, Party Spokesman

Final Submission

The Brotherhood of Locomotive Engineers and Trainmen ("BLET"), a division of the Rail Conference of the International Brotherhood of Teamsters ("IBT"), was assigned party status by the Board in the above-referenced investigation. BLET respectfully submits these proposed, findings, probable cause, and safety recommendations to the Board for consideration.

Accident Synopsis:

On November 30, 2018, at approximately 10:20 a.m. Eastern Standard Time ("EST")[1] a northbound CSX Transportation ("CSX") train operating northward on the Main Track of the CSX Columbia Subdivision struck and fatally injured a CSX Track Welder.[2] The accident occurred at the north siding switch in Estill, South Carolina, milepost ("MP") 449.70. , This territory is single track main line operated under Centralized Traffic Control ("CTC") rules, with a siding at this location. The fatally injured employee was performing welding/grinding duties under Watchman/Lookout Train Approach Warning ("TAW") protection.[3] The train was traveling at approximately forty-eight (48) miles per hour ("MPH"). The weather was 60° F with clear skies and a southeast wind of approximately four (4) MPH.

Train Information:

CSX train F79430 consisted of two (2) locomotives (CSX 8065 lead, CSX 5358 trailing), with forty-four (44) mixed freight loads, including hazardous materials ("Hazmat"), and thirty (30) empties. The train weighed 6383 tons and was 4517 feet long. F79430 was restricted to fifty (50) MPH as a maximum authorized speed ("MAS") due to empty bulkhead flat cars placed within the train.[4]

Method of Operation:

The CSX Columbia Subdivision consists of 137.5 miles of single main track between MP S-359.7 and MP S-497.2 with timetable directions North and South. For freight trains, the MAS is sixty (60) MPH unless otherwise restricted.

[1] All times throughout report will be Eastern Standard Time ("EST").
[2] *See* Appendix 1 at the end of this report for timetable page of accident area.
[3] Train Approach Warning refers to 49 CFR § 214.329 actions provided by watchmen/lookouts.
[4] Per instructions on Train No. F79430's work orders.

CSX Operating Rules and Special Instructions for Train Yard & Engine employees:

- CSX rule book dated April 1, 2017
- CSX Bulletin Orders for Train No. F79430
- CSX Columbia Subdivision Timetable No. 2, effective Oct. 1, 2018

CSX Operating Rules for Maintenance of Way employees ("MOW"):

- CSX operating rule book dated January 1, 2014

CSX Train Crew:

The train crew went on duty November 30, 2018 at 7:00 a.m. at Savannah, Georgia to operate CSX train F79430 to Cayce, South Carolina. The Crew had been off duty for four (4) consecutive days.[5] The Crew boarded their locomotives and prepared their train for departure. They departed Savannah, GA at approximately 7:47 a.m., proceeded to Garnett siding (MP 458.30) where they met a southbound train, then proceeded further north to Estill, SC, where the accident took place.

Locomotive Engineer Interview:

The Locomotive Engineer recalled that there are about 8-9 highway crossings at grade immediately south of the accident location that required the Locomotive Engineer to blow the whistle.[6] He recalls they were traveling at a speed between 45-48 MPH on a clear signal.[7]

At approximately one-half mile from the accident site the Locomotive Engineer recalls seeing something in the middle of the track which he initially thought was debris or a trash bag. It is common to see debris strewn on/about the tracks, especially in a town. The crew had no prior written or verbal notice/warning that employees may be working at this location.

[5] Neither the amount of sleep nor the amount of time the Crew was awake before reporting for duty were established in this investigation. Fatigue does not appear to be a contributing factor in this accident.
[6] *See* Appendix 2 at the end of this report for a map of the surrounding area.
[7] Clear signal means to proceed at timetable maximum authorized speed ("MAS").

Subsequently, he noticed a MOW truck parked next to the main line, and a person wearing a High Visibility Vest with his back turned and he realized that this was MOW personnel. At approximately the same time, he realized that the debris was actually someone squatting down working between the rails. He immediately made a fifteen (15) pound brake pipe reduction thereby applying the train's automatic brakes. Train No. F79430 stopped approximately 5340 feet after the initial brake pipe reduction was made (approximately 4500 feet after striking the MOW personnel).[8]

The Locomotive Engineer stated that he had little time and distance between the location where he realized there was someone within the gauge of the rail and the moment of impact. At the moment he made the brake pipe reduction he determined that an emergency application of the brakes was not a practical or viable option.[9] Since the train was carrying hazardous materials and long empty bulkhead flat cars, he was concerned that the in-train forces resulting from an emergency application of the brakes would cause a derailment and possible hazmat release.

Even if he had initiated an emergency application of the brakes at the exact moment that he saw something in the tracks (approx. one-half mile away), it is unlikely that the train, which was travelling at 48 MPH, could have stopped in time to avoid striking the employee. The Locomotive Engineer confirmed that they had no prior notice or warning that MOW personnel were working at this location on their train orders or from the CSX Train Dispatcher. However, it should be noted that neither of these advance warnings are required when TAW protection is being utilized.

Conductor Interview:

The Conductor stated that the train was operating normally at track speed when he saw what appeared to be a "trash bag" in the middle of the tracks. He stated he was not sure what it was and that he and the Locomotive Engineer briefly discussed what appeared to be debris. He went on to state that about the time they passed "Jenks Motor Sports," which was on their left side of the tracks, he saw a High Visibility Vest worn by a person looking into a truck beside the tracks. He noted the person was facing towards the truck and could have been looking inside the open truck door, but definitely was facing away from the track. He also stated that even after they saw the man next to the truck, the Locomotive Engineer continued blowing the horn, however the person

[8] Per the CSX 8065 lead Locomotive event recorder download.
[9] *See* S. Lott testimony page 19, lines 7-12 and page 31, lines 19-24.

next to truck did not react to the horn. As the train came closer to the truck and seconds before impact, they realized it was a person in the tracks. He stated that the person in the track was wearing dark colored clothes and was bent over or kneeling, facing away from their train. He also stated that he sees near misses like this too often and does not understand why there could not be a warning or protection in place such as a False/Partial warning which would require the train to operate with caution when workers are present in an area such as an EC-1 form[10].

Figure 1 - *View facing south, in direction F79430 was approaching from (Photo courtesy of NTSB)*

Watchman/Lookout Interview:

The Watchman/Lookout hired out with CSX in January 2015. For approximately the last two and one-half years he has worked the Columbia Subdivision as a Trackman and Watchman/Lookout. He stated that on November 30, 2018, his day began by reporting to work at the Yamasee, South Carolina Engineering Building at 7:00 a.m. He was assigned by the CSX MOW Roadmaster to work with the fatally injured Welder. He stated the track welding crew's workday began with the usual Job Safety Briefing and job assignment given by the CSX MOW Roadmaster. The Roadmaster instructed the crew to weld the frog at the north end of Estill and then go to Fairfax (MP 436) and repair that frog as well. After their Job Safety Briefing the crew proceeded to Estill, which is about a 30 to 40 minute drive. The Watchman/Lookout stated that the fatally injured

[10] EC-1 form is a CSX generated form used to give instructions to operating crews on track work, false and/or partial activation of grade crossing failures, etc. *See* Appendix 3 for a sample.

employee decided to use the Watchman/Lookout Protection instead of other options such as EC-1 protection.[11] They did not discuss sight distance or speed for the Watchman/Lookout protection they were going to be using.[12] They did, however, discuss that the Safe Zone would be next to the MOW truck that was parked next to the track.[13]

After beginning the work at Estill, the Watchman/Lookout saw the headlights of a southbound train that was approaching, and then heard the locomotives horn/whistle. At that time, he was standing 5-6 feet from the Welder and he tapped him and they "split the train" (one standing on each side of the tracks), as it passed and then went back to welding. After the welding was complete, the Welder then started grinding the welds he had made. The Watchman/Lookout stated that the Welder was wearing a hard hat, face shield, leggings and Bluetooth earbuds (which were recovered from the scene), but was not wearing any High Visibility clothing such as a vest or jacket.[14]

The Watchman/Lookout further stated that the Welder was still working in the track when the Welder told him to start picking up the electrical welder leads that run from the truck to the welder box that is located between the rails. He said while he was rolling up the welder leads, which took about two (2) minutes, he saw something out of the corner of his eye, when he saw the Welder still on the tracks and being struck by the train. The Watchman/Lookout also stated the truck, welder, and grinder were running., Those noise sources, as well as the traffic from the highway, prevented him from hearing the train. He also said he was not wearing any hearing protection.

The Watchman/Lookout affirmed that he had been trained how to use Watchman/Lookout protection. He stated the main purpose of the job is to make sure your co-worker is out of the track before you do anything else. He also stated that they did not have with them Watchman equipment

[11] Per D. Poston's testimony (pg. 14, lines 4-5 and pg. 20, lines 20-24), he instructed the work gang to use TAW, but later stated they could opt for enhanced protection if they felt the need.
[12] *See* Appendix 4 for a copy of their job briefing form.
[13] Safe zone is an area decided to be where the employees can be for 15 seconds prior to any impeding movements (such as a train).
[14] CSX Rule 2009.7 states: CSX flame resistant high visibility apparel must be worn within 25 feet of a track when: a) Engaged in live electrical work, or b) Cutting, burning, or welding outside of a shop environment except when accompanied by a qualified watchman/lookout who is wearing high visibility apparel.

such as an air horn, banner flag (paddle), or plastic whistle that are used for this type of TAW protection.[15]

The Watchman/Lookout provided testimony:

> Q: Would it be safe or would it be fair to say that you left a position that would have prevented you from warning the welder of an approaching train?
> A. Yes, sir.
>
> Q. Would it be safe or fair to say that you did not devote your full attention to watching for trains?
> A. Yes, sir.

R. Long, page 33, lines 14-20

The interview examined the type of personal protective equipment the Watchman/Lookout had while on the scene as well:

> Q. -- (indiscernible) that. Okay. So as a watchman, what equipment do you have?
> A. I mean, working radio and your normal PPE.
>
> Q. Okay. Do you have a whistle?
> A. No, sir. I didn't.
>
> * * *
>
> Q. Okay. You didn't have a -- did you have an air horn?
> A. No, sir.
>
> Q. Okay. Did you have a banner, like a stick with a sign or something on it?
> A. No, sir.
>
> Q. Okay. So when you -- I'm just trying to get an idea how the -- you know, is the idea that, like, you were going to go tap him on the shoulder or something when he was working or was it like a --
> A. Yes, sir.

R. Long, page 23, lines 21-25 and page 24, lines 1-10.

[15] *See* Appendix 5 for definitions of CSX Rules 705.3, 705.6, 705.7, and FRA Roadway Worker Protection Requirements for Train Approach Warning; 49 CFR 214.7.

CSX Roadmaster Interview:

The CSX Roadmaster is headquartered at Yamasee, SC and supervises ten (10) employees, who cover 289 miles of track. These employees consist of three (3) track inspectors, two (2) welders, and five (5) trackmen. It is the Roadmaster's duty to assure employees are trained and compliant with FRA Regulations, and track protection rules such as Rule 704, which gives specific limits control point to control point, Rule 707 which establishes track and time to perform work between point A and point B, and Watchman/Lookout rules which includes establishing sight distance and time to reach the designated Safe Zone. Normally, with TAW protections, the Watchman would stay close enough to physically tap the Welder on the shoulder (such protection is aka "Tapman") when he sees or hears an approaching train. This protection stays in effect until all the work is complete and employees are clear. In addition, it is the Roadmaster's duty to perform observation tests of his employees and, check the condition of their tools.

On the morning of the accident, the Roadmaster discussed with the Welder and Watchman, during the Job Safety Briefing, that they were to repair the frog at Estill siding and then go to Fairfax and weld a frog at that location. He advised them to use Watchman/Lookout Protection because the work should have taken about one and one-half hours to complete. He advised them to use this procedure even though he stated he did not particularly like it. [16] The Roadmaster also stated that, if the employees in the field do not like the protection they are assigned to use, such as Watchman/ Lookout, they can change it. He also stated that in the future they will try to avoid Watchman/ Lookout Protection.

Finally, the Roadmaster stated that both employees were qualified for Watchman/Lookout Protection, and that neither the Welder nor the Watchman had previously received any failures in Operations Testing for Watchman/ Lookout Protection.

[16] Per D. Poston's testimony (pg. 10, lines 13-14 and pg. 20, lines 4-13), he states that he does not like using Watchman/Lookout protection, but there are times when "you have to"

Watchman/Lookout Duties:

The duties of a Watchman/lookout are defined by 49 C.F.R. § 214.7, which states,

§ 214.7 Definitions

> *Train approach warning* means a method of establishing on-track safety by warning roadway workers of the approach of trains in ample time for them to move to or remain in a place of safety in accordance with the requirements of [part 214].
>
> *Watchman/lookout* means an employee who has been trained and qualified to provide warning to roadway workers of approaching trains or on-track equipment. Watchmen/lookouts shall be properly equipped to provide visual and auditory warning such as whistle, air horn, white disk, red flag, lantern, fuse. A watchman/lookout's sole duty is to look out for approaching trains/on-track equipment and provide at least fifteen seconds advanced warning to employees before arrival of trains/on-track equipment.

The duties of a Watchman/Lookout are further outlined in 49 CFR § 214.329, which states,

> Roadway workers in a roadway work group who foul any track outside of working limits shall be given warning of approaching trains by one or more watchmen/lookouts in accordance with the following provisions:
>
> (a) Train approach warning shall be given in sufficient time to enable each roadway worker to move to and occupy a previously arranged place of safety not less than 15 seconds before a train moving at the maximum authorized speed on that track can pass the location of the roadway worker. The place of safety to be occupied upon the approach of a train may not be on a track, unless working limits are established on that track.
>
> (b) Watchmen/lookouts assigned to provide train approach warning shall devote full attention to detecting the approach of trains and communicating a warning thereof, and shall not be assigned any other duties while functioning as watchmen/lookouts.
>
> (c) The means used by a watchman/lookout to communicate a train approach warning shall be distinctive and shall clearly signify to all recipients of the warning that a train or other on-track equipment is approaching.
>
> (d) Every roadway worker who depends upon train approach warning for on-track safety shall maintain a position that will enable him or her to receive a train approach warning communicated by a watchman/lookout at any time while on-track safety is provided by train approach warning.
>
> (e) Watchmen/lookouts shall communicate train approach warnings by a means that does not require a warned employee to be looking in any particular direction at the time of the warning, and that can be detected by the warned employee regardless of noise or distraction of work.
>
> (f) Every roadway worker who is assigned the duties of a watchman/lookout shall first be trained, qualified and designated in writing by the employer to do so in accordance with the provisions of § 214.349.

> (g) Every watchman/lookout shall be provided by the employer with the equipment necessary for compliance with the on-track safety duties which the watchman/lookout will perform.

The BLET strongly urges CSX to mandate the use of an EC-1 (Rule 704) and/or working limits on controlled tracks (Rule 707)[17] instead of Train Approach Warning ("TAW") protection procedures. However, if the TAW form of protection continues to be utilized, we suggest that employees in sufficient numbers be used to address the circumstances safely, but no less than two (2) in any situation.

Fatality Analysis of Maintenance-of-Way Employees and Signalmen ("FAMES") Train Approach Warning:[18]

Subsequent to this accident, a June 15, 2018 Report was generated by the FRA-sponsored Fatality Analysis of Maintenance-of-Way Employees and Signalmen ("FAMES") Committee. Under the heading "Fatal Accidents Under Train Approach Warning (Watchman/Lookout)", the Report states, in part: "Following the implementation of the Roadway Worker Protection ("RWP") Rule in 1997, the FAMES Committee, using FRA accident data, estimated that there have been a total of 52 fatal RWP accidents, in which 55 roadway workers have died as of February 1, 2017."

Since the initial release of its findings and recommendations, the FAMES Committee has determined that at least five (5) additional TAW fatalities have occurred. These fatalities are still under analysis by the FAMES Committee, but FAMES felt it was imperative to update and rerelease the Committee's recommendations.

Of the fifty-five Roadway Worker fatalities analyzed by FAMES, thirteen of the accidents which resulted in sixteen fatalities occurred when TAW was being used. The Watchman/Lookout was the fatally injured employee in five of the thirteen accidents. In three of the fatal accidents, the Watchman/Lookout was performing other duties, or was not focused solely on the detection of approaching trains when the fatality occurred. Additionally, in one accident, the fatally injured Roadway Worker was not in a position that allowed him to receive TAW. The relevant FAMES Committee Recommendations states as follows:

[17] *See* Appendix 6 at the end of this report for a copy of the definitions for these rules.
[18] *See* Appendix 7 at the end of this report for the FAMES Report.

"Watchmen/Lookouts ***must focus their sole attention*** to the detection of approaching trains and equipment." (emphasis added)

Additionally, the recommendations state "Whenever environmental or working conditions change that could interfere with a Watchman/Lookout's ability to detect the approach of a train or provide appropriate warning, the Watchman/Lookout must immediately clear Roadway Workers from the tracks until proper protection can be established." BLET believes this Recommendation should be codified in FRA regulations and CSX rules as a means of affording Roadway Workers and Watchmen/Lookouts a higher level of safety.

Post-Accident Actions by CSX:

On December 14, 2018, CSX produced a Sub System Bulletin aimed at establishing a new rule (702), and modifying their existing rule (705.3) in an effort to enhance safety procedures for Roadway Workers in the field.[19]

[19] See Appendix 8 at the end of this report for a copy of the CSX Bulletin.

PROBABLE CAUSE

The probable cause of this accident was the failure of protection that should have been afforded to the decedent Welder. The use of Train Approach Warning for his protection was the root cause of this accident. In general, the use of Train Approach Warning procedures creates a single point of failure situation. Noise from equipment, power tools, highway vehicles and other distractions created an inherently unsafe work environment which was exacerbated by human limitations.

The Welder's request and the Watchman's decision to assist the Welder by collecting the welding tools (electrical leads) from the work location distracted the Watchman from his duty to "focus his sole attention to the detection of approaching trains. Once the single point of protection was removed the fatally injured employee was unprotected. This was the final and primary contributing factor. Had he remained with the Welder until the Welder reached a place of safety, the Watchman would have been able to provide the "tap" warning of the approaching train.

Another contributing factor was the Welder's decision to continue working within the gauge of the rail after directing the Watchman/Lookout to begin another task not associated with watching out for his safety.

Lack of proper equipment was a contributing factor in the accident. Had the Watchman/Lookout been equipped with an air horn, he may have been able to provide an auditory warning to the Welder of the oncoming train even though he may have been out of position.

Also, the systemic lackadaisical handling of information contributed to this accident. Apparently, CSX, as a matter of policy, declines to make operating crews aware of the presence of employees working on or about the tracks at all times. Simply advising the crew in this incident may have helped their initial observation – of debris – to be more accurate. The extra time could have provided an opportunity for the fatally injured employee or his watchman to react to the oncoming train. Clearly, when more personnel are aware of a dangerous situation it is more likely one or more of the employees can prevent accidents or injuries. We can think of no rational reason why a train crew cannot be told that personnel are working on the tracks they are to traverse.

Proposed Recommendations:

To the Federal Railroad Administration ("FRA")

Revise 49 CFR § 214.329 to require that when TAW is used as protection, no less than two (2) employees will be utilized.

To CSX Transportation, Inc.:

1) Discontinue the use of TAW protection on Main tracks in locations where the maximum authorized speed exceeds restricted speed whenever possible.

2) Use CSX rules 704 and/or 707 while performing track maintenance on controlled tracks.

3) In scenarios that dictate that the TAW form of protection continues to be used, ensure that a minimum of two (2) employees are utilized solely for this purpose.

4) Implement a requirement for work crews to notify Train Dispatchers of their work locations when they foul and when they clear, using the same radio channel the operating crew is monitoring.

5) Implement a requirement for the Train Dispatcher to alert crews to the presence of work crews on their route for as far as the movement has been authorized (by signal or other movement authority) or until the work crew has reported clear.

CERTIFICATE OF SERVICE

I certify that on January 30, 2020 I have electronically served upon Mr. Tomas Torres (tomas.torres@ntsb.gov), Investigator in Charge, National Transportation Safety Board, a complete and accurate copy of these proposed findings regarding the fatality of CSX Track Welder struck by train while working on track at North Estill, South Carolina (NTSB Docket No. RRD19FR002). An electronic copy of same was also forwarded to the individuals listed below in this certificate of service, as required by 49 CFR § 831.14(a) (Proposed Findings).

National Transportation Safety Board
c/o Mr. Tomas Torres
Investigator in Charge, RRD19FR002
490 L' Enfant Plaza, SW
Washington, DC 20594
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Nathan Wolfe
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Matt Campbell
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Email: [redacted]

Sincerely yours,

[redacted]

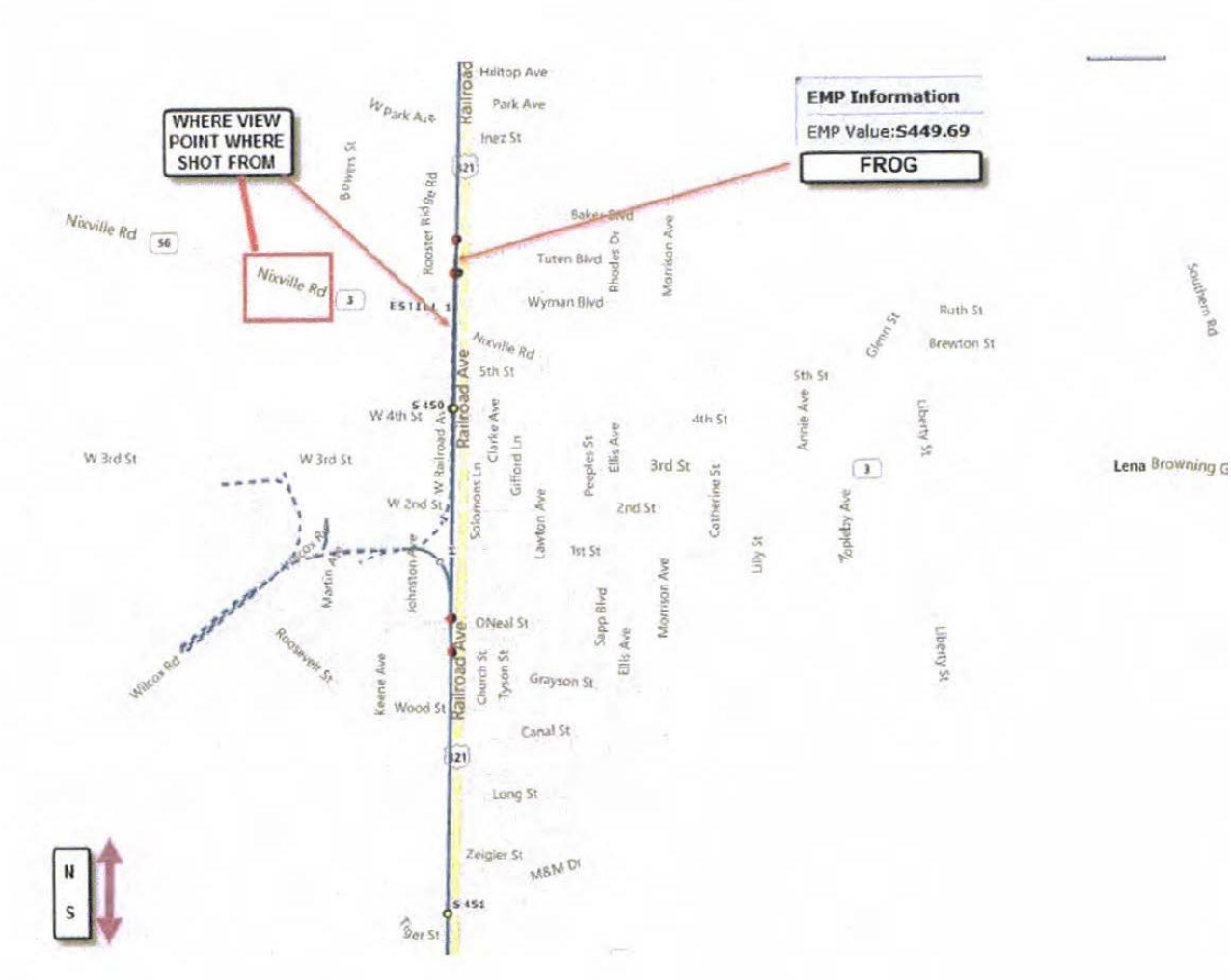
Stephen J. Bruno
Brotherhood of Locomotive Engineers & Trainmen
National Secretary Treasurer
National Chairman, Safety Task Force
7061 East Pleasant Valley Road
Independence, OH 44131

Appendix 1

COLUMBIA SUBDIVISION - C2

AUTHORIZED SPEED - REFER TO SPEED TABLES		MILE POST	STATION	TRACK DIAGRAM (SOUTH)	AUTH FOR MOVE	NOTES
79	60	S 435.9			TC	
35	35				TC	
		S 436.0 = AMH 471.9	NE FAIRFAX	AUGUSTA SD SP	CP	
			0.6	CSDG 2,245 FT SP	TC	
35	35	S 436.6	SE FAIRFAX		CP	
79	60		6.3		TC	
		S 442.9	NE GIFFORD		CP	
			1.4	SSDG 6,336 FT SP	TC	
		S 444.3	SE GIFFORD		CP	
			5.4		TC	
		S 449.7	NE ESTILL		CP	
			0.8	CSDG 3,700 FT SP	TC	
		S 450.5	SE ESTILL		CP	
		S 454.1	7.8	DD	TC	
		S 458.3	NE GARNETT		CP	
			2.0	SSDG 9,963 FT SP	TC	
		S 460.3	SE GARNETT		CP	
79	60	S 465.3			TC	
45	45					
		S 466.0		DB		
25	25		8.1			
		S 466.2				
79	60				TC	
		S 468.4	NE CLYO		CP	
			0.6	CSDG 2,800 FT SP	TC	
		S 469.0	SE CLYO		CP	
79	60				TC	

Appendix 2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Nixville Rd
Railroad Ave
Hilltop Ave
Park Ave
Inez St
Bowers St
Rooster Rid Rd
Baker Blvd
Tuten Blvd
Wyman Blvd
Rhodes Dr
Morrison Ave
Glenn St
Ruth St
Brewton St
Southern Rd
5th St
4th St
3rd St
2nd St
1st St
W 4th St
W 3rd St
W 2nd St
W Railroad Ave
Clarke Ave
Gifford Ln
Solomons Ln
Lawton Ave
Peeples St
Ellis Ave
Catherine St
Lilly St
Annie Ave
Topsiby Ave
Liberty St
Lena Browning G
Martin Ave
Johnston Ave
Roosevelt St
Wilcox Rd
ONeal St
Sapp Blvd
Church St
Tyson St
Keene Ave
Wood St
Grayson St
Canal St
Long St
Zeigler St
M&M Dr
Tiger St
S 450
S 451
N
S

Appendix 3

EC-1 NUMBER ____________ DATE ____________ LOCATION ____________

C&E TRAIN ID ____________ ENG ____________ EMPLOYEE ____________

1A OPR ON ______ TRK ______ DIR FRM/BTW ____________ ____ TRK
TO/AND ____________ ____ TRK 1A CAN ____ HRS DISPR ___

1B OPR ON ______ TRK ______ DIR FRM/BTW ____________ ____ TRK
TO/AND ____________ ____ TRK 1B CAN ____ HRS DISPR ___

1C OPR ON ______ TRK ______ DIR FRM/BTW ____________ ____ TRK
TO/AND ____________ ____ TRK 1C CAN ____ HRS DISPR ___

1D OPR ON ______ TRK ______ DIR FRM/BTW ____________ ____ TRK
TO/AND ____________ ____ TRK 1D CAN ____ HRS DISPR ___

2A CROSS OVER AT ____________ FROM ______ TRK TO ______ TRK

2B CROSS OVER AT ____________ FROM ______ TRK TO ______ TRK

3 ______ TRK (S) O.O.S. BTW MP ______ AND MP ______ IN CHARGE OF EMPLOYEE ______

4 UNTIL ______ HRS ___/___/___ EXT UNTIL ______ HRS ___/___/___ EXT UNTIL ______ HRS ___/___/___

DO NOT EXCEED THE FOLLOWING SPEED

5A - ____/____ MPH ON ____ TRK BTW MP ______ AND MP ______ SIGNS ___ 5A CAN ____ HRS DISPR ___
5B - ____/____ MPH ON ____ TRK BTW MP ______ AND MP ______ SIGNS ___ 5B CAN ____ HRS DISPR ___
5C - ____/____ MPH ON ____ TRK BTW MP ______ AND MP ______ SIGNS ___ 5C CAN ____ HRS DISPR ___
5D - ____/____ MPH ON ____ TRK BTW MP ______ AND MP ______ SIGNS ___ 5D CAN ____ HRS DISPR ___
5E - ____/____ MPH ON ____ TRK BTW MP ______ AND MP ______ SIGNS ___ 5E CAN ____ HRS DISPR ___

6A __ACTIVATION FAILURE 6B__FALSE/PARTIAL ACTIVATION 6A CAN ____ HRS DISPR ___
6B CAN ____ HRS DISPR ___

ACCOUNT AUTOMATIC GRADE CROSSING WARNING DEVICE MALFUNCTION AT ____________ ROAD CROSSING
AT MP ______ ON ______ TRK(S) FLAGGER ____

7 DO NOT PASS ____________ WITHOUT PERMISSION OF DISPATCHER 7 CAN ____ HRS DISPR ___

8 DD LOCATED AT MP ______ ON ______ TRK(S) IS TEMPORARILY REMOVED FROM SERVICE 8 CAN ____ HRS DISPR ___

9A __HEAT WARNING 9B__FLASH FLOOD WARNING 9A CAN ____ HRS DISPR ___
9B CAN ____ HRS DISPR ___

IN EFFECT ON ______ TRK (S) ON ____________ SD
IN EFFECT ON ______ TRK (S) BTW MP ______ AND MP ______ ON ______ SD

10 DISPR MESSAGE(S) ______ ______ ______ ______ ______ ______ ______ IS/ARE ANNULLED

11 OTHER INSTRUCTIONS / INFORMATION ____________

REPORT BY LOCATION - EC - LINE 1

EC-1 NO. ______ TRAIN ID ______ ENG. ______ EMPLOYEE ______ REPORTING
______ DIR OF ______ ON ______ TRACK AT ______ HRS DISPR ____

EC-1 NO. ______ TRAIN ID ______ ENG. ______ EMPLOYEE ______ REPORTING
______ DIR OF ______ ON ______ TRACK AT ______ HRS DISPR ____

EC-1 NO. ______ TRAIN ID ______ ENG. ______ EMPLOYEE ______ REPORTING
______ DIR OF ______ ON ______ TRACK AT ______ HRS DISPR ____

EC-1 NO. ______ TRAIN ID ______ ENG. ______ EMPLOYEE ______ REPORTING
______ DIR OF ______ ON ______ TRACK AT ______ HRS DISPR ____

RELEASE EC-1 AUTHORITY

EC-1 NO. ______ TRAIN ID ______ ENG. ______ EMPLOYEE ______ RELEASING MY AUTHORITY ON
ALL TRACKS FRM/BTW ______ TO/AND ______ AT ______ HRS DISPR ____

EC-1 NO. ______ RELEASED AT ____ HOURS
OK AND EFFECTIVE AT ______ HOURS

DISPR ______
DISPR ______
V 09.26.2010

Appendix 4

JOB BRIEFING FORM

DATE: 11-30-18 WEATHER CONDITIONS: 70's Clear 911 Area: Y ✓ N ___
Hospital Name & Location: FAIRFAX HWY 278 FAIRFAX
SAFETY RULE _____ OPERATING RULE: _____
Last _____ Div. Injury _____ Div. FI _____ Days Injury Free _____
Leading Indicators _____

Subdivision	Work Location	Job Description
Columbia	NE FSTILL / FAIRFAX CONNECTION	WELD PROCS

CIRCLE OF SAFETY

Specific Hazards Identified	Initials
A) Cell Phones 25' from Track	
B) Red Zones 15-19-15	
C) Slips / Trips / Falls 3 point contact / House Keeping / Eyes before feet	
D) Hand Tool Inspection & Use No Modifications / Use Chipping protectors	
E) Vehicle Operations Defensive Driving, Avoid busy routes	
F) Body Positions Push don't pull / Life's monthly don't jerk	
G) Equipment Spacing & Condition	
H) Housekeeping Keep truck and work area clean and orderly	
I) Follow Up Job Briefing	

PPE Required: ✓ Hard Hat ✓ Safety Glasses ✓ Safety Shoes ✓ High Visibility Apparel
Is Fall Protection Required for this Job Y ___ N ✓
Will Train Control Employees be Involved Y ___ N ✓
Height Of Truck _____ Do we need to use the Boom Raised Flag Today? Y ___ N ✓
RPM of Grinding wheel test _____ RPM's
Designated Back Up Man (If more than 1 Employee) RW LONG
Designated employee responsible for any equipment move to be made involving any Red Zone.

New Employees Mentor N/A
CPR Qualified N/A

Type Of Track Protection

Who is the employee in-charge of my on-track safety RW LONG
What type of on-track safety do I have on the track I am working on _____
Review 704 Authority _ Authority # _____ MP of Initial Occupancy _____
Limits From _____ To _____
Time From _____ To _____
Review 707 Authority Authority # _____ MP of Initial Occupancy _____
Limits From _____ To _____
Time From _____ To _____
Lone Worker (S.O.T.S. Form) Time to Clear (Seconds) 15 Sight Distance _____
Clear Location _____
Watchman Lookout Time to Clear (Seconds) 15 Sight Distance _____
Clear Location _____
Non-Controlled Track Derails Y ___ N ___ Switches Spiked Y ___ N ___
Is the Type of Protection Appropriate for the Work Being Performed Y ✓ N ___
Will Other Machines or Personnel be involved in the Work Y ___ N ✓
What Type of on Track Safety do I have, if any, on Adjacent Tracks WATCHMAN
Where can I Find a Copy of CSX On-Track Safety Rules WELDING TRUCK
Do you Feel Adequately Protected against Trains & Other Track Equipment Y ✓ N ___
Do you Understand all Aspects of your On-Track Safety Y ✓ N ___

Appendix 5

705.6 When Train Approach Warning is used to protect only one employee, audible and visual warnings are not required when:

1. Advanced watchman is not required, and
2. Watchman can physically touch the employee being protected.

705.7 The employee providing watchman duties for Train Approach Warning must:

1. Not foul any track unless necessary to provide warning,
2. Not perform any tasks unrelated to providing warning or that interfere with providing warning to the employee being protected,
3. Provide warning as if every train or on-track equipment movement is approaching at the maximum authorized speed allowed, and
4. Provide warning sufficiently in advance to allow all workers and watchman to reach the predetermined place of safety at least 15 seconds before the train or on-track equipment reaches the location.

Train Approach Warning-Rule 705.3

Use of Train Approach Warning for on-track safety only if:

1. At least two qualified roadway workers are working are working together and one the employees is designated as the watchman,
2. All employees can reach an established place of safety at least 15 seconds before a train or on-track equipment reaches the location,
3. A method of communicating the approach or a train is established,
4. Employees hold a job briefing and all confirm their understanding and responsibilities,
5. Watchman/lookout knows and maintains required sight distance,
6. Watchman/lookout has unrestricted ability to see and hear approaching trains or on-track equipment, and
7. Watchman/lookout has access to a working radio.

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2 CSX defines Controlled Track as- A track designated in special instruction where a train dispatcher authorizes all movements.

FRA Roadway Worker Protection Requirements

Train Approach Warning

49 CFR214.7: Definitions

Watchman/lookout means an employee who has been annually trained and qualified to provide warning to roadway workers of approaching trains or on-track equipment. Watchmen/lookouts shall be properly equipped to provide visual and auditory warning such as whistle, air horn, white disk, red flag, lantern, fusee. A watchman/lookout's sole duty is to look out for approaching trains/on-track equipment and provide at least fifteen seconds advanced warning to employees before arrival of trains/on-track equipment.

49CFR214.329 Train approach warning provided by watchmen/lookouts. Amendment and published on June 10, 2016.

Roadway workers in a roadway work group who foul any track outside of working limits shall be given warning of approaching trains by one or more watchmen/lookouts in accordance with the following provisions:

(a) Train approach warning shall be given in sufficient time to enable each roadway worker to move to and occupy a previously arranged place of safety not less than 15 seconds before a train moving at the maximum authorized speed on that track can pass the location of the roadway worker. The place of safety to be occupied upon the approach of a train may not be on a track,

unless working limits are established on that track.

(b) Watchmen/lookouts assigned to provide train approach warning shall devote full attention to detecting the approach of trains and communicating a warning thereof, and shall not be assigned any other duties while functioning as watchmen/lookouts.

(c) The means used by a watchman/lookout to communicate a train approach warning shall be distinctive and shall clearly signify to all recipients of the warning that a train or other on-track equipment is approaching.

(d) Every roadway worker who depends upon train approach warning for on-track safety shall maintain a position that will enable him or her to receive a train approach warning communicated by a watchman/lookout at any time while on-track safety is provided by train approach warning.

(e) Watchmen/lookouts shall communicate train approach warnings by a means that does not require a warned employee to be looking in any particular direction at the time of the warning, and that can be detected by the warned employee regardless of noise or distraction of work.

(f) Every roadway worker who is assigned the duties of a watchman/lookout shall first be trained, qualified and designated in writing by the employer to do so in accordance with the provisions of §214.349.

(g) Every watchman/lookout shall be provided by the employer with the equipment necessary for compliance with the on-track safety duties which the watchman/lookout will perform.

Appendix 6

704 - EC-1/EC-1e Line 1 Authority

Before occupying or fouling a controlled track to perform short-term work or move on-track equipment, the employee-in-charge must:

1. Have a copy of the current day dispatcher bulletin for the territory involved, and
2. Receive authority to occupy or foul track and copy the authority onto line 1 of Form EC-1/ EC-1e.

Use radio communication, if possible, when requesting Form EC-1/EC-1e line 1 authority and provide the following to the control station:

1. Your name and ID number,
2. Specific location and milepost of initial occupancy,
3. Specific track name or number,
4. Beginning and ending limits of the request,
5. Direction of travel needed, and
6. Length of time necessary to complete work and clear the track. Copy Form EC-1/EC-1e line 1 authorities onto the prescribed form in the prescribed format.

A Form EC-1/EC-1e line 1 authority may be issued in cases of emergency when a conflicting train is stopped within the required limits provided the train dispatcher confirms that the train is stopped. The employee requesting authority must:

1. Hold a job briefing with the crewmembers of the stopped train, and
2. Identify the train ID, locomotive number, and location and record that information on Form EC-1/EC-1e.

When receiving and copying Form EC-1/EC-1e line 1 authority, copy the following into the remarks section:

1. Required information not contained in dispatcher bulletin, and
2. The following required information on any preceding train:
    1. Locomotive number,

2. Train number,
3. Direction of travel, and
4. Location.

After receiving and copying Form EC-1/EC-1e line 1 authority:

1. Conduct a job briefing with all employees who will operate or work under the authority,
2. In multiple track territory, ensure all employees covered by the protection acknowledge the specific track to be occupied or fouled,
3. Ensure all occupants of on-track equipment initial the copied Form EC-1/EC-1e, and
4. If it has been 30 minutes or more between the initial job briefing and time the track will be occupied or fouled, read Form EC-1/EC-1e aloud and conduct another job briefing.

When issued a Form EC-1/EC-1e line 1 authority to follow a preceding train, do not foul or occupy the track until confirming the preceding train has passed the initial point of occupancy by:

a. Visually identifying the train by locomotive number, or
b. Verbal confirmation from the train crew or train dispatcher.

The employee who received EC-1/EC-1e line 1 authority may permit on-track equipment movements not associated with the working group within the limits of the authority after:

1. Establishing on-track safety for the employees, and
2. Recording onto the proper form the name of the employee-in-charge of the other work group and the nature of the work to be performed.

Do not operate into any authority issued to another employee until that employee gives permission to occupy the track within the authority. If granted permission of opposing limits within the authority, operators of opposing equipment must:

1. Announce passing all mileposts, and
2. Confirm understanding of any do not pass limit.

When operating within the limits of an EC-1/EC-1e line 1 authority, employees must:

1. Stop at each control point and conduct a job briefing to verify authority extends beyond the control point before proceeding,
2. Not pass a preceding train without the permission and protection of the train dispatcher,
3. Not occupy or foul any track not covered by the authority,
4. Not move in a direction other than the one authorized, and
5. Not occupy a section of track after that section has been released or reported by.

Employees operating within the limits of EC-1/EC-1e line 1 authority must make radio announcements:

1. Stating initial occupancy location prior to fouling or occupying the track,
2. Prior to passing a control point, and
3. In non-signal territory, prior to passing each end of siding locations.

When making required radio announcements, employees must use positive identification and state:

1. Track name or number,
2. Direction of travel, and
3. Name and milepost of location.

When instructed by the train dispatcher to report by specific locations, make sure:

1. The entire movement is clear of the location in the specified direction before reporting by the location, and
2. To receive a new authority for those limits prior to occupying any portion of track reported by.

Promptly release EC-1/EC-1e line 1 authorities to the train dispatcher after the entire movement clears the limits of the authority. Make every effort to clear the limits before the expiration of the time authorized and do not consider the authority

clear until the train dispatcher acknowledges his or her understanding.

If unable to clear the limits of an authority before the time limit expires, contact the train dispatcher and request a time extension. If unable to contact the train dispatcher or if the train dispatcher does not grant a time extension, do not exceed restricted speed until the authority is cleared.

707 - Working Limits on Controlled Tracks (Conditional Stop)

When long-term working limits will be necessary, the employee-in-charge must request a dispatcher message to be issued. The request must be made at least 14 hours in advance and include:

1. Subdivision;
2. Date;
3. Time limits;
4. Name and initials of the employee-in-charge;
5. Specific track limits of either milepost, control point, or main track yard limits; and
6. Any instructions related to the posting of signs.

Before any member of the working group fouls or occupies the track within the working limits, the employee-in-charge must:

1. Obtain a current dispatcher bulletin that contains the dispatcher message governing the working limits for that day;
2. Contact the train dispatcher and confirm the dispatcher bulletin date and dispatcher message number for the working limits;
3. Inform the train dispatcher if the signal system will be affected;
4. When control points are within the work limits, confirm with the train dispatcher how trains will move through the control point;
5. In multiple track territory, confirm with the train dispatcher which track will be occupied by work forces and which track will be used to pass trains;

6. Confirm with the train dispatcher the use and position of switches within the work limits;
7. Receive from the train dispatcher and copy on the dispatcher bulletin an authority number, train dispatcher OK and initials, and time authorized; and
8. Ensure signs are properly posted.

Signs are required in conjunction with long-term working limits and must be:

1. Clean and easily recognizable, and
2. Posted no more than 30 minutes in advance of the effective time, as long as the employee- in-charge has the ability to communicate with any train or equipment that approaches the working limits.

If permanent conditions prevent the display of wayside signs as directed by rule:

1. Train dispatcher must be notified, and
2. A dispatcher message must be issued stating how signs are displayed.

Unless stated otherwise in a dispatcher message or Form EC-1, wayside signs will be placed at the beginning and end of the restriction as indicated by the chart below:

Number of Tracks	Sign Placement
One	Place signs next to the affected track.
Two	Place signs on the field side (outside) of the affected track.
Three or more	Place signs to the field side of the affected track for the outside track(s) and next to the affected track for middle track(s).

Place Warning signs at least two miles, but not more than two and one-half miles, from the beginning of the working limits on each end.

Place Conditional Stop signs in the following locations:

1. The beginning of the limits on each end,
2. Each junction point, and
3. Other locations as specified in dispatcher message.

The employee-in-charge is responsible for all train and on-track equipment movements within the working limits and must make a written record on the prescribed form of all movements permitted to enter and move within the working limits.

Before granting permission for movements not part of the working group to enter or move within the working limits, the employee-in-charge must:

1. Ascertain that all roadway workers and equipment of the working group are clear of the limits or that portion of the limits on which the movement will be authorized to operate,
2. Notify affected roadway work group the speed at which trains or on-track equipment will be authorized to operate through the working limits, and
3. Determine the track or portion of track is safe for movement.

The employee-in-charge must communicate the following information when granting permission for a train or on-track equipment to enter long-term working limits using the following verbiage:

1. Locomotive number of a train or name of on-track equipment operator,
2. Name of the employee-in-charge of the working limits,
3. Milepost location of the working limits or specific portion of the working limits the train or on-track equipment may occupy, and
4. Permitted operating speed of the train or on-track equipment that must be one of the following:
    a. A specific speed, or
    b. Restricted speed, or
    c. Authorized speed.

The employee-in-charge may permit a train or on-track equipment to proceed to one intermediate location within the working limits and stop. When safe to do so, the employee-in-charge must clear the movement through the entire remaining limits.

After granting permission to a train or on-track equipment that is

not part of the working group to enter and move in the working limits, the employee-in-charge must not allow roadway workers and equipment in the working group to foul the affected track until the trailing end of all trains or other on-track equipment has passed and remains ahead of the affected roadway workers.

The employee-in-charge must plan to have all roadway workers and equipment clear of the working limits before the expiration time. Before clearing the authority, make certain:

1. All roadway workers and equipment of the working group are clear of the limits,
2. The track is safe for normal operation or the train dispatcher has been advised of any necessary restrictions for movement,
3. All trains and on-track equipment that were cleared to enter and move within the limits have cleared the limits, and
4. Promptly remove signs after the work authority expires or is canceled.

When employee-in-charge determines the track cannot be cleared before the expiration time, he or she must take one of the following actions at least five minutes before the expiration:

a. Obtain a new authority from the train dispatcher, or
b. Post a flagman at each Warning sign.

Appendix 7

Fatality Analysis of Maintenance-of-way Employees and Signalmen

FAMES

June 15, 2018

Dedication:

The FAMES Committee dedicates its efforts to all roadway workers who have lost their lives in the performance of duty and to the families, loved ones, and coworkers they have left behind.

Fatal Accidents

Under

Train Approach Warning

(Watchman/Lookout)

Mission Statement:

The Mission of the Fatality Analysis of Maintenance-of-way Employees and Signalmen (FAMES) Committee is to analyze all fatalities and selected related incidents in order to make recommendations to reduce the risk of future occurrences and eliminate fatalities to roadway workers.

Fatal Accidents Under Train Approach Warning (Watchman/Lookout)

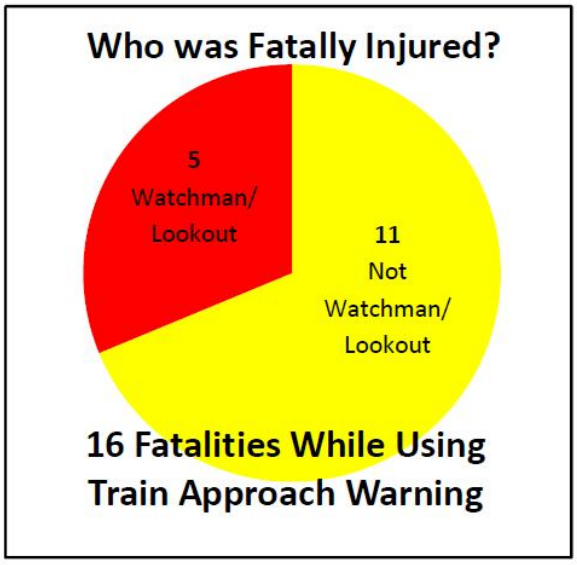
Following the implementation of the Roadway Worker Protection (RWP) Rule in 1997, the FAMES Committee, using available FRA accident data, estimates that there have been a total of 52 fatal RWP accidents, in which 55 roadway workers have perished, as of February 1, 2017.

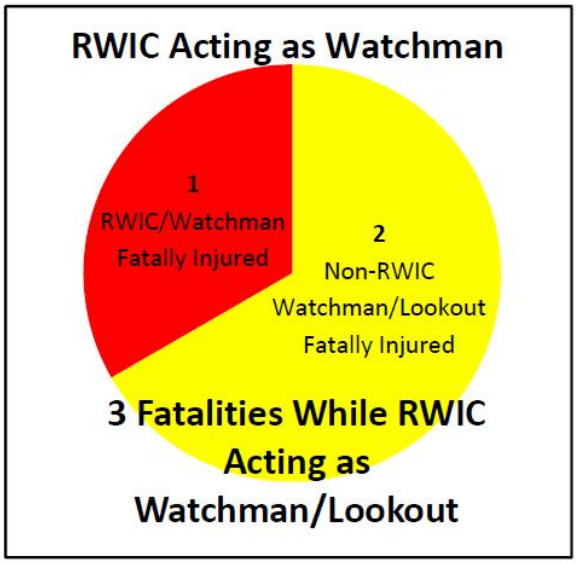
Since the initial release of these recommendations, the FAMES Committee has determined that at least 5 additional "Train Approach Warning" (TAW) fatalities have occurred. These fatalities are still under analysis by the FAMES Committee but FAMES felt it was imperative to update and re-release these recommendations.

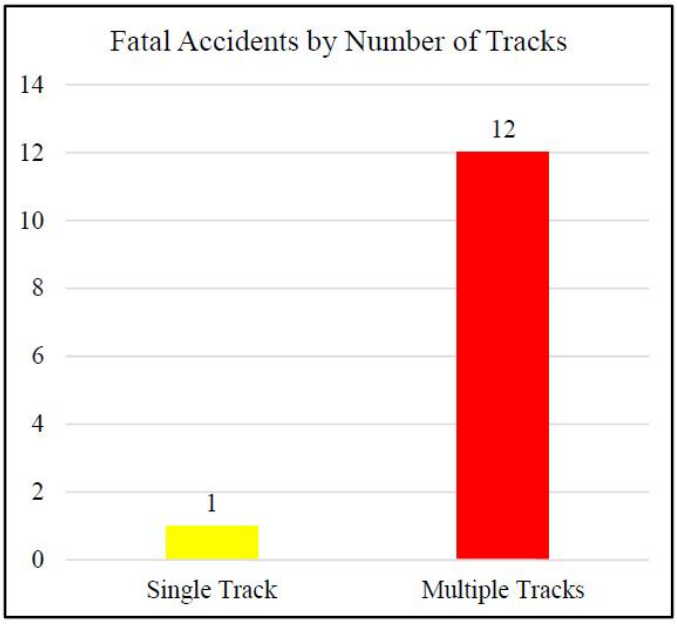
One form of On-Track Safety for Roadway Work Groups is TAW provided by Watchmen/ Lookouts.

- TAW (often referred to as Watchman/Lookout) does not require trains to get authorization from the Roadway Worker in Charge (RWIC) to move on any track(s).
- When using TAW, a warning must be given in sufficient time to enable each Roadway Worker to occupy a previously arranged place of safety at least 15 seconds prior to a train passing the Roadway Worker's location.
- Watchmen/Lookouts must be trained, qualified, and properly equipped to provide warning to Roadway Workers of approaching trains or on-track equipment.

Of the 55 Roadway Worker fatalities analyzed by FAMES, 13 accidents resulting in 16 fatalities occurred where TAW was being used.







In 4 of the 13 fatal accidents, the Watchmen/Lookouts were not using prescribed warning devices, such as a whistle, air horn, white disk, red flag, lantern, or fusee. In one fatal accident under TAW, FAMES was unable to determine if the Watchman/Lookout was equipped with such devices. In the other 8 fatal accidents, the Watchmen/Lookouts were equipped with the prescribed warning devices.

Findings:

- **In 5 of the 13 fatal accidents, *the Watchman/Lookout was the fatally injured employee.***
- In 12 of the 13 fatal accidents, the accident occurred in multiple track territory.
- In 3 of the fatal accidents, the Watchman/Lookout was performing other duties or not focused solely on the detection of approaching trains when the fatality occurred.
- In 1 accident, the fatally injured Roadway Worker was not in a position that allowed him to receive the TAW.
- In 4 of the fatal accidents, trains were running against the anticipated flow of traffic.
- In 2 of the fatal accidents, two trains passed in close succession and a Roadway Worker was struck by the second train.

Recommendations:

- **Watchmen/Lookouts must focus their sole attention to the detection of approaching trains and equipment.**
- **Watchmen/Lookouts should position themselves outside the foul of any track whenever possible.** If a Watchman/Lookout must foul a track to provide protection for a work group, when the work group is notified to clear, the Watchman/Lookout must also clear.

> ***A predetermined place of safety must not be a live track.***

- Whenever environmental or working conditions change that could interfere with a Watchman/Lookout's ability to detect the approach of a train or provide appropriate warning, the Watchman/Lookout must immediately clear Roadway Workers from the tracks until proper protection can be established.
- Watchmen/Lookouts should take into consideration that passenger trains are generally quieter and faster than freight trains.
- **If the work requires oversight or supervision from an RWIC, the RWIC must not perform the duties of a Watchman/Lookout.**
- The RWIC must communicate precise instructions and expectations to Watchmen/ Lookouts during the on-track safety briefings and ensure that Watchmen/Lookouts have a clear understanding of their responsibilities and duties.
- During the on-track safety briefing, the RWIC must identify the method that the Watchman/Lookout will use to indicate when it is safe for Roadway Workers to re-enter the foul of the track.
- The RWIC should consider rotating Watchman/Lookout assignments periodically.
- Each Roadway Worker must maintain a position so he or she can receive a warning from a Watchman/Lookout at all times.
- Roadway Workers must not be in the foul of the track anytime they believe that TAW protection is insufficient or no longer appropriate. Roadway Workers have the right and responsibility to initiate a good faith challenge when necessary.

> ***Roadway workers have a responsibility to not only ensure their safety but that of their fellow workers.***

Appendix 8

C S X T R A N S P O R T A T I O N
DECEMBER 14, 2018

HEADQUARTERS SUB SYSTEM BULLETIN 018

TO: T&E CREWS AND ALL CONCERNED
SUBJECT: NEW OPERATING RULE 702 AND MODIFICATION TO RULE 705.3
EFFECTIVE: 0800HRS, DECEMBER 17, 2018

ITEM 1 - NEW OPERATING RULE 702 - REQUIREMENTS WHEN WELDING FROGS AND SWITCH POINTS ON CONTROLLED TRACKS

702.1 WHEN WELDING WILL BE PERFORMED ON A FROG OR A SWITCH POINT ON CONTROLLED TRACK THE EMPLOYEE-IN-CHARGE MUST:

1. CONTACT THE TRAIN DISPATCHER AND HOLD A JOB BRIEFING THAT MUST INCLUDE:

   A. THE MILE POST LOCATION OF WORK
   B. AMOUNT OF TIME NEEDED TO COMPLETE THE WORK
   C. LINE UP OF TRAINS THAT MAY APPROACH OR TRAVERSE THE WORK LOCATION

2. OBTAIN AN EC-1E LINE 1 AUTHORITY IF POSSIBLE,

3. PLACE A 10 MPH TEMPORARY SPEED RESTRICTION AT THE WORK LOCATION BEFORE THE WORK BEGINS UNTIL WORK IS COMPLETED

4. IF NECESSARY TO UTILIZE WATCHMAN/LOOKOUT THE WATCHMAN MUST:

   A. REMAIN IN POSITION SO THEY CAN PHYSICALLY TOUCH THE EMPLOYEE BEING PROTECTED
   B. UTILIZE MAXIMUM AUTHORIZED TIMETABLE SPEED FOR THE PURPOSES OF SIGHT DISTANCE

ITEM 2 - MODIFY RULE 705.3 NUMBER 2

THE FOLLOWING RULE 705.3 NUMBER 2 HAS BEEN REPLACED BY THE FOLLOWING:

2. ALL EMPLOYEES CAN REACH AN ESTABLISHED PLACE OF SAFETY AT LEAST 15 SECONDS BEFORE A TRAIN OR ON-TRACK EQUIPMENT REACHES THE LOCATION, REFERENCING MAXIMUM TRACK SPEED, AND THE PLACE OF SAFETY MUST BE DOCUMENTED ON THE JOB BRIEFING FORM.

ISSUED BY OPERATING RULES DEPARTMENT