

**Fore River Transportation Corporation Roadway Worker
Protection Plan**

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What is a roadway worker?

A roadway worker is an employee, or employee of a contractor whose duties include and who is engaged in the inspection, construction, maintenance, or repair of track, bridges, roadway, signal and communication systems, electric traction systems, roadway facilities, or roadway maintenance machinery on or near track with the potential of fouling a track, and employees responsible for on track protection.

What is on track protection?

On track protection is a state of freedom from the danger of being struck by moving trains or other railroad equipment. On track protection is provided by the Operating and Safety Rules that govern track occupancy by employees, train, and on-track equipment.

What information does this manual contain?

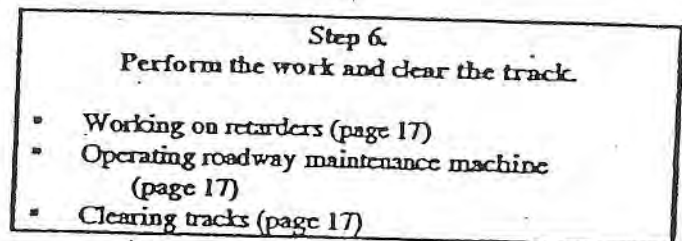
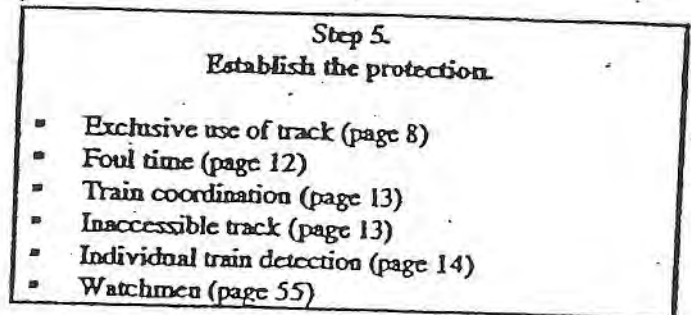
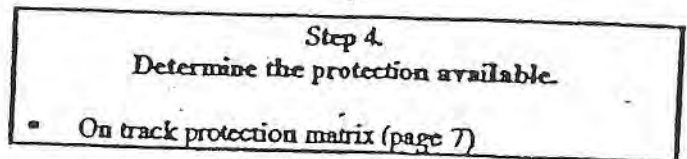
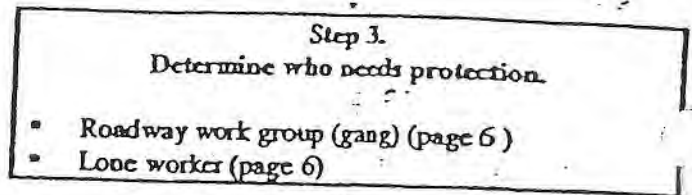
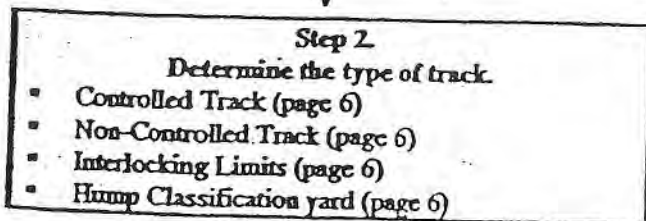
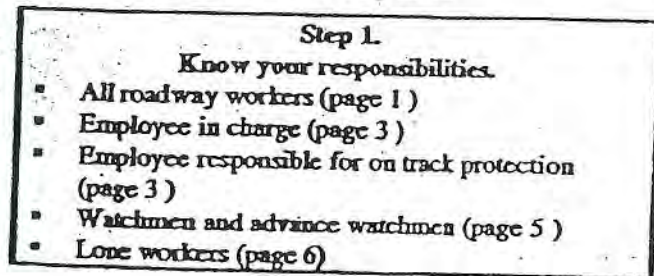
This manual contains all Safety Rules, Operating Rules, and procedures that apply to on track safety, including the responsibilities of roadway workers and procedures for providing protection from train, clearing tracks, and working in various settings.

This manual uses the following icons to identify NORAC Operating Rules:

□ NORAC Operating Rule

How should I use this manual?

- If you are providing on track protection for yourself or other employees, keep this manual with you at all times.
- Use the following flow chart to understand the steps in establishing on track protection. The sections of the manual follow this flow chart.



Establishing On Track Protection

Step 1. Know Your Responsibilities

Step 1 in establishing on track protection is to know your responsibilities.

This section gives responsibilities for five types of roadway employees:

- All roadway workers
- Employee in charge
- Employee responsible for on track protection
- Watchmen and advance watchmen
- Lone workers

All Roadway Workers

The following rules give the responsibilities of all roadway workers. See the following pages for the complete rules.

- Job Briefings
- Responsibilities of Employees
- Crossing Tracks

- Wearing a High Visibility Vest or orange hardhat
- Safety Precautions For Working On or Around Self-Propelled Equipment
- Engine Whistle or Horn Signals (NORAC Rule 19, Paragraph (b)(2))
- Engine Bell (NORAC Rule 20, paragraph (4))

Job Briefings

Before beginning work, all employees must participate in a Job Briefing.

Responsibilities of Employees

If you are a roadway worker, you have the following responsibilities:

1. Comply with the rules and instructions in the *On Track Safety Manual* and other instructions.
2. Do not foul tracks except when necessary to perform your duties.
3. Before fouling any track:
 - a. Verify that proper on track protection is being provided.
 - b. Acknowledge understanding of the on track protection procedures being used.
 - c. Know who is the employee responsible for on track protection.

NOTE: Items a. through c. will be provided in your job briefing.
4. You have the absolute right to challenge, in good faith, any directive that would violate an on track Safety or Operating Rule. If you are given such a directive.
 - a. Inform the employee in charge that the on track safety protection to be applied does not comply with the *On Track Safety Manual*.
 - b. Remain clear of the track until the conflict is resolved.

NOTE: Refer to the Challenge Resolution section on page 18.
5. Do not perform any work that will interfere with the safe passage of trains.
6. When on or about the track, wear a high visibility vest or other approved garment.

Crossing Tracks

When you are crossing tracks, expect equipment to move on any track, in either direction, at any time.

Follow these precautions when crossing tracks:

1. Look both ways, then take the shortest route. If you must cross more than one track, stop and look both ways before crossing each track.
2. Cross tracks at least 25 feet from standing equipment.
Do not pass between cars standing less than 50 feet apart on the same track unless:

- a. It is safe to do so.
- b. It is absolutely necessary.
- c. You have received three-step protection from the Conductor or Engineer if a locomotive is on the track.

Note: See page 22 for the definition of three-step protection.

4. Avoid crossing in front of a moving train or equipment. If you must cross in front of a moving train or equipment, make sure that you can reach the opposite side at least 15 seconds before the train or equipment arrives.

Wearing a High Visibility Vest or Orange Hardhat

Wear a high visibility vest, orange hardhat, or other approved garment when:

- Working on or about tracks
- Inspecting, working on, or working at a highway grade crossing where you are near traffic

Safety Precautions For Working On or Around Self-Propelled Equipment

Follow these precautions when working on or around self-propelled equipment:

1. All persons operating and riding on self-propelled equipment must understand the duties that each person will perform.
2. Use the handrail when getting on, riding on, or getting off equipment.
3. Do not get on or off moving equipment.
4. When working near or observing equipment:
 - a. Communicate with the equipment operator and make sure that everyone understands:
 - Normal equipment operating procedures
 - Location of employees working around or observing equipment
 - Operator's blind spots
 - Signals warning that the equipment will move
 - b. When your duties require you to be around the equipment, keep outside the 15-foot safe area around the equipment.

EXCEPTION: If your duties require you to be within the 15-foot safe area around the equipment, perform those duties from the location established when you communicated with the operator.

☐ Engine Whistle or Horn Signals (NORAC Rule 19, Paragraph (b)(2))

Engine whistle or horn signal must be sounded as follows:

- (b)(2) “_ _ o _” approaching locations where workers may be at work on tracks, bridges, and other points.

NOTE: A “_” indicates a long sound; “o” indicates a short sound.

☐ Engine and Bell (NORAC Rule 20, Item (4))

If a train is equipped with an engine bell, it must be sounded:

- (4) When approaching locations where roadway workers may be at work on tracks, bridges, and other points.

Employee in Charge

The following rules give the responsibilities of the employee in charge. See the following pages for the complete rules.

- Foremen and Track Car Drivers: Responsibilities, Governing Rules, Qualifications (NORAC Rule 800)
- Designating the Employee in Charge
- Responsibilities of the Employee in Charge

☐ Foremen and Track Car Drivers: Responsibilities, Governing Rules, Qualifications (NORAC Rule 800)

Foremen and Track Car Drivers will be in charge of the track cars under their jurisdiction. They will be governed by the rules and special instructions that apply to trains, except as modified by the rules governing Movement of Track Cars. Foremen and Track Car Drivers must be qualified on the Operating Rules, Timetable, and physical characteristics of the territory on which they are to operate.

Designating the Employee In Charge

When roadway workers are working on or about track, one employee must be designated the employee in charge.

When two or more gangs work as a single gang, one employee must be designated the employee in charge. Generally, the employee in charge will be the senior
On Track Safety Manual

foreman or the foreman in whose territory the work is being performed.

Responsibilities of the Employee in Charge

The employee in charge is responsible for the safety, instruction, performance, and on track protection of all employees under his or her jurisdiction.

If you are the employee in charge, you also have the following responsibilities:

1. Prepare employees for their job assignments by giving all employees under your jurisdiction a job briefing as follows:
 - a. Inform employees of the general plan and procedure that the work will follow and the on track protection measures that will be used.
 - b. Make definite work assignments.
 - c. Inform employees where they must go if it is necessary to clear for trains.
 - d. Do not consider the job briefing complete until all employees acknowledge understanding of the on track protection being used.
2. Wear a warning whistle when on or about the track.
3. If the on track protection changes or is no longer in effect:
 - a. Immediately warn employees to clear the track.
 - b. Conduct an additional job briefing before you allow employees to return to the track.
4. Make sure that employees comply with all applicable rules.
5. Personally and continuously supervise any work involving hazards and discuss specific procedures to protect
6. Promptly advise your supervisor if an employee does not comply with your orders or does not improve unsafe work habits.

Employee Responsible For On Track Protection

The following rules give the responsibilities of the employee responsible for on track protection. See the following pages for the complete rules.

- Duties of the Employee Responsible for On track Protection
- Flagman Rule: Protecting Work Locations: Qualified Employee's Duties (NORAC Rule 131)
- Protecting Gangs With Watchmen
- Assigning Watchmen
- Stationing Watchmen and Advance Watchmen

- Working On Tracks and Retarders In a Remotely Controlled Hump Classification Yard

NOTE: In addition, the employee responsible for on track protection is responsible for removing the protection when it is no longer necessary.

Duties of the Employee Responsible For On Track Protection

If two or more gangs are working within the same Working Limits, one employee must be designated the employee responsible for on track protection.

If your duties require fouling a track, you must have one employee responsible for providing on track protection. This employee must be qualified on the NORAC Operating Rules, the *On Track Safety Manual*, and the physical characteristics of the territory where the work will be performed.

If you are the employee responsible for on track protection, you also have the following responsibilities:

1. Conduct job briefings with each employee (or the employees in charge if multiple gangs are included in your Working Limits) include the on track protection that will be provided and the safety procedures that will be followed.
2. Do not consider the job briefing complete until all employees acknowledge understanding of the on track protection being used.
3. Before any employee fouls a track, inform each employee (or each employee in charge if multiple gangs are included in your Working Limits) of the on track protection procedures to be used and followed while the work is being performed at that time and that location.
4. Make sure that protection is in effect on all adjacent tracks that are not included in the Working Limits when performing large-scale track maintenance, including but not limited to rail, tie, and surface gangs; production in track welding; ballast distribution; and undercutting.

NOTE: Adjacent tracks are all tracks with track centers less than 25 feet from the center of the track where the work is being performed.

5. If the on track protection changes during the work period, inform each employee before the change becomes effective, except in an emergency. If an employee cannot be notified in advance because of an emergency, have the employee clear the track immediately and stay clear until on track protection is reestablished.
6. Notify all employees before the Working Limits are released for the operation of trains. Do not release the work area until all affected employees

have either left the track or have been given on track protection by watchmen.

Flagman Rule:

Protecting Work Locations: Qualified Employees Duties (NORAC Rule 131)

Qualified employees assigned to protect work locations of railroad construction or private contractors whose operations may affect the safe movement of trains must take the five actions below.

1. Secure Flagging Equipment

Employees must secure proper flagging equipment according to NORAC Rule 12, "Day and Night Signals."

2. Ensure that Tracks Are Not Fouled Without Permission

Upon reporting for work each day, the employee must determine who is in charge of the workers. The employee must also ensure that all workers have been instructed not to foul any railroad track at any time without his permission.

3. Get Permission to Foul Track

When workers request permission to foul any specific track, the employee assigned to protect the work location must communicate with the employee in charge of the track to secure necessary permission.

4. Report Failure to Comply by Workers

If workers fail to comply with instructions of the employee, he must make an immediate report to the employee in charge of the track.

5. Take Action if Safe Passage is Endangered

If an event occurs that would interfere with the safe passage of trains, the employee must take immediate action to stop trains by radio communication to trains and the Dispatcher. If protection cannot be immediately ensured, or if communications fail, flag protection must be immediately provided as prescribed by NORAC Rule 130, paragraph (b), "Flag Protection against Trains on Adjacent Tracks."

Protecting Gangs with Watchmen

Watchmen establish on track protection by warning employees of the approach of trains in ample time for them to move to or remain at a place of safety in accordance with the Watchman Rules.

Assigning Watchmen

Employees in charge are responsible for a safe operation and must take every reasonable precaution to protect employe(s) in their charge. They will assign watchmen and advance watchmen when needed.

1. When a gang fouls a track outside the work limits, assign one or more watchmen to give employees warning of approaching trains, engines, and on-track equipment.
2. Assign only trained and qualified watchmen who have received a qualification card.

NOTE: Trained and qualified watchmen must carry their qualification cards at all times when on duty.

3. If employees may have trouble hearing the watchman's warning whistle or horn (due to noisy machinery, the size of the gang, or any other reason), assign additional watchmen as necessary.
4. If the watchman does not have sufficient sight distance to clear the gang at least 15 seconds before the train or engines reach the work site, assign advance watchmen. See the following table.

Distances Trains Travel in 15 Seconds	
Miles Per Hour	Feet in 15 Seconds
10	220
15	330
20	440
25	550
30	660
35	770
40	880
45	990
50	1,100
55	1,210
60	1,320
65	1,430
70	1,540
75	1,650
80	1,760
85	1,870
90	1,980
95	2,090
100	2,200
105	2,310
110	2,420

5. If visibility is restricted by weather or any other reason, use additional on track protection measures as needed.

Stationing Watchmen and Advance Watchmen

Watchmen and advance watchmen are stationed by the employee in charge, station watchmen and advance watchmen as follows:

1. Station watchmen so that they are:
 - a. Clear of all tracks.

EXCEPTION: A watchman assigned to protect only one employee who is performing work where advance watchmen are not required does not need to stand clear of all tracks.

- b. Able to see approaching trains from both directions.
 - c. Close enough to the gang to allow employees to hear the warning whistle or horn clearly.
 - d. Far enough from the gang to prevent being distracted by the work.
2. When employees are working near noisy equipment that will interfere with the watchman's ability to communicate with the employees, station an employee at the equipment's shut-off valve. **NOTE:** This employee watches the watchman and, at the watchman's signal, shuts off the equipment so the other employees can hear the watchman's signals.
3. Station advance watchmen far enough from the gang that they can clear the gang at least 15 seconds before the train reaches the point of work.

Working On Tracks and Retarders In a Remotely Controlled Hump Classification Yard

4. Employees in charge who provide on track protection in a hump classification yard must be specifically qualified in that yard.

Watchmen and Advance Watchmen

Responsibilities of Watchmen

Where Working Limits are not established, the employee in charge assigns watchmen to watch for approaching trains and to warn employees to clear the tracks. If a watchman has not been assigned, the employee in charge acts as a watchman.

If you have been assigned as a watchman, you are responsible to:

1. Give full attention to detecting the approach of trains and warning employees to clear the tracks.
2. Do not perform any other duties, even momentarily.
3. Signal employees to clear the tracks if:
 - You do not have sufficient sight distance to detect approaching trains and clear the gang at least 15 seconds before the train reaches the point of work, or
 - You cannot give your full attention to your duties as a watchman.
4. Do not leave your assigned station until:
 - The employee in charge tells you that the gang is no longer fouling the track and watchmen are no longer needed, or
 - The employee in charge has assigned another watchman who is in position and watching for approaching trains.

Lone Workers

Protection For the Lone Worker

As an employee working alone and providing your own on track protection, you may watch for trains yourself (where permitted) or use another method to provide on track protection.

NOTE: Also refer to the section on Individual Train Protection on page 14.

Step 2. Determine the Type of Track

Step 2 in establishing on track protection is to determine the type of track to be protected. Determine whether the track is a:

- Controlled track
- Non-controlled track
- Interlocking limits
- Hump classification yard

Controlled Track

Controlled track is track upon which all movements must be authorized by a Train Dispatcher or Operator.

Non-Controlled Track

Non-controlled track is track upon which trains are permitted by the rules or special instructions to move without receiving authorization from a Train Dispatcher or Operator.

Interlocking Limits

Interlocking limits are the tracks between the opposing home signals of an interlocking.

Hump Classification Yard

A hump classification yard is the area where cars can roll freely into tracks; in other words, the area from the crest of the hump through and including the ladder tracks at the pull-out end of the class yard. This includes the class tracks.

Step 3. Determine Who Needs Protection

Step 3 in establishing on track protection is to determine who needs to be protected. Determine whether the employee(s) to be protected are a:

- Roadway work group (gang)
- Lone worker

Roadway Work Group (Gang)

A roadway work group (gang) is two or more employees working together on a common task.

NOTE: A member of a gang can never be considered a lone worker.

Lone Worker

A lone worker is an individual employee who is not being afforded on track protection by another employee, is not a member of a gang, and is not engaged in a common task with another employee.

NOTE: If several employees are working near each other but are not engaged in a common task, each employee is a lone worker.

Step 4. Determine the Protection Available

Step 4 in establishing on track protection is to determine what types of protection are available based on the type of track and employees that need to be protected.

Use the matrix on the following page to determine the types of protection available in your situation:

- Exclusive use of track
- Foul time
- Inaccessible track
- Train Coordination
- Individual train detection (ITD)
- Watchmen

Exclusive Use Of Track

Exclusive use of track establishes Working Limits on *controlled track* by one of three methods:

- The Dispatcher or Operator withholds or restricts authority to move into the Working Limits, or
- Within interlocking limits, signal maintainer places interlocking in local control, with stop signals displayed, or
- Flagmen protect the approaches to the Working Limits.

NOTE: Exclusive use of track is established by a Form D line 2 & 3, line 4, or line 5 issued by the Dispatcher.

Foul Time

Foul time establishes Working Limits on *controlled track* through exclusive track occupancy.

- The Dispatcher or Operator gives an employee verbal permission to foul a specific segment of controlled track during a specific time period, and
- The Dispatcher or Operator applies blocking devices to protect the track being fouled.

Foul time remains in effect until the employee to whom the foul time was issued reports clear of the track.

NOTE: Foul time cannot be used if the work involves on-track equipment or if the work will make the track structure unsafe for Normal Speed.

Types of Protection		TYPES of TRACK			
		Controlled Track Gang	Non-Controlled Gang	Interlocking Gang	Hump Classification Yd Lone
Exclusive use of Track	>	>	>	>	*
Foul Time	>	>	>	>	>
Inaccessible Track	>	>	>	>	>
Train Coordination	>	>	>	>	*
Individual Train Detection	>	>	>	>	>
Watchmen	>	>	>	>	>

*Where there is only one train crew or a segment of track.

Inaccessible Track

Inaccessible track establishes Working Limits on *non-controlled track* by using switches, derails, and/or flagmen to prevent access to the Working Limits.

Train Coordination

Train Coordination protection may be used when roadway workers are working with individual train and engine crews during weather emergencies, snow duty, handling materials with a work train, or repairing track at a derailment site.

Individual Train Detection (ITD)

Individual train detection may be used under strictly defined circumstances by trained and qualified lone workers to provide on track protection on certain tracks outside Working Limits.

NOTE: Lone workers have the right to use types of on track protection other than ITD if they feel it is necessary to perform the work safely.