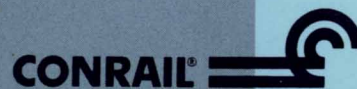


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On Track Safety Manual

June 1996

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Introduction

What is a roadway worker?

A roadway worker is an employee, or employee of a contractor to Conrail, whose duties include 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, trains, 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 trains, clearing tracks, and working in various settings.

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



Conrail Safety Rules



NORAC Operating Rules

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.

Step 1.

Know your responsibilities.

- All roadway workers (page 6)
- Employee in charge (page 11)
- Employee responsible for on track protection (page 13)
- Watchmen and advance watchmen (page 20)
- Lone workers (page 21)



Step 2.

Determine the type of track

- Controlled track (page 22)
- Non-controlled track (page 22)
- Interlocking limits (page 22)
- Hump classification yard (page 22)



Step 3.

Determine who needs protection.

- Roadway work group (gang) (page 23)
- Lone worker (page 23)



Step 4.

Determine the protection available.

- On track protection matrix (page 26)



Step 5.

Establish the protection.

- Exclusive use of track (page 28)
- Foul time (page 44)
- Train coordination (page 46)
- Inaccessible rack (page 47)
- Individual train detection (page 51)
- Watchmen (page 55)



Step 6.

Perform the work and clear the track

- Working on retarders (page 59)
- Operating roadway maintenance machines (page 59)
- Clearing tracks (page 62)

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 Garment
- 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 65.

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 15 feet from standing equipment.
3. Do not pass between cars standing less than 30 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 77 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 Garment

Wear a high visibility vest 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 Bell (NORAC Rule 20, Paragraph (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 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 against such hazards.
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 Employee's 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 (c), "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 employee(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. If you are 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 Detection on page 51.

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		Non-Controlled		Interlocking		Hump Classification	
	Gang	Lone	Gang	Lone	Gang	Lone	Gang	Lone
Exclusive Use Of Track	✓	✓			✓	✓		
Foul Time	✓	✓			✓	✓		
Inaccessible Track			✓	✓			✓	✓
Train Coordination	✓	✓	✓*	✓*	✓	✓	✓*	✓*
Individual Train Detection		✓		✓				
Watchman	✓			✓		✓		✓

*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.

Watchmen

Watchmen establish on track protection by warning employees of approaching trains so the employees can clear the tracks before the trains reach the work site.

Step 5. Establish the Protection

Step 5 in establishing on track protection is to establish the specific type of protection chosen in Step 4:

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

Exclusive Use Of Track

The following rules give procedures for establishing exclusive use of track. See the following pages for the complete rules.

- Protection When Fouling or Working on a Track; Protection in Unforeseen Conditions (NORAC Rule 132)
- Removing a Track from Service (NORAC Rule 133)
- Protection by Stop Signs When an In-Service Track is Obstructed for Maintenance (NORAC Rule 135)
- Train Coordination (Rule 135a)
- Placing or Operating Track Cars on Tracks (NORAC Rule 803)
- Additions to Form D Line 2 (NORAC Rule 804)
- Track Car Following Other Movements (NORAC Rule 805)

- Train Following Track Car (NORAC Rule 806)
- Approach, Stop, and Resume Speed Signs (NORAC Rules 296c, 297, 297a)
- Placing Approach, Stop, and Resume Speed Signs (MW 4)

Protection When Fouling or Working on a Track; Protection in Unforeseen Conditions (NORAC Rule 132)

Trains must be fully protected against any known condition that may interfere with their safe passage.

If work on or adjacent to a track will create a condition interfering with the safe passage of trains, that work must not be attempted without permission of the employee in charge of the track.

On tracks where ABS, DCS, or Interlocking rules are in effect, the Dispatcher (or Operator when authorized by the Dispatcher) must assure that protection against trains in both directions has been provided as follows:

1. If the work involves on-track equipment or will disturb the track or catenary structure so that it would be unsafe for Normal Speed, Form D line 4 or Form D line 5 must be issued.
2. If the work will not disturb the track or catenary structure, the Dispatcher may verbally authorize foul time in accordance with NORAC Rule 140.

Form D line 4, Form D line 5, and foul time may be issued only to employees who are qualified on the operating rules and the physical characteristics of the territory involved.

If an event occurs or conditions are found that may interfere with the safe passage of trains and no protection has been provided, employees must immediately attempt to stop trains by radio communication to trains and the Dispatcher. They must provide flag protection in both directions as prescribed by NORAC Rule 130, paragraph (c), "Flag Protection against Trains on Adjacent Tracks." Flag protection must be maintained until the unsafe condition has been corrected, or until employees are assured by the Dispatcher or Operator that other protection has been provided.

Removing a Track from Service (NORAC Rule 133)

Whenever Form D line 4 is issued to remove a track from service, the following procedures will apply:

a. Action Required Prior to Issuance

Before Form D is issued, the Dispatcher must determine that:

1. The affected track is clear of other movements, **and**
2. Controlled signals leading to the affected track are in Stop position, **and**
3. Blocking devices are applied to the controls of switches and signals leading to the affected track.

These signals must not be displayed for movement leading to the out-of-service track, except as provided for in NORAC Rule 134, paragraph (a), "Movement in the Direction of the Out-of-Service Track."

b. Addressees

Form D must be issued to both:

1. The employee requesting use of the track, **and**
2. The Operators controlling entrance to the track.

c. Establishing Out-of-Service Limits

Each end of the out-of-service limits must be defined by one of the following physical features:

1. A Timetable location.
2. A whole mile post.
3. A track barricade or flagman at a designated location.

d. Movements and Work within Out-of-Service Limits

ABS, CSS, DCS, and Interlocking rules do not apply within the out-of-service limits. All movements must operate at Restricted Speed. The employee named in Form D line 4 is in charge of all movements and work.

e. Admitting Additional Equipment from Locations Controlled by Dispatcher or Operator

The Dispatcher or Operator may admit additional track cars or trains to the out-of-service limits after:

1. He has obtained permission of the employee named in Form D line 4, and
2. He has delivered a copy of the Form D line 4 to the person in charge of the additional equipment.

EXCEPTION: When the out-of-service limits are published by Bulletin Order, the delivery of Form D to additional equipment is not required.

If movement to the out-of-service limits will involve passing a Stop Signal, the Dispatcher or Operator may then authorize movement in accordance with NORAC Rule 241, "Passing a Stop Signal."

f. Admitting Additional Equipment from Locations Not Controlled by Dispatcher or Operator


The employee named in Form D line 4 may admit additional track cars or trains to the out-of-service limits by showing or reading his copy of the Form D to the employee in charge of the track car or train.

g. Returning the Track to Service

When the track is to be returned to service, the employee in charge of the out-of-service track must take two actions:

1. Notify the Dispatcher or Operator of any restrictions necessary for the safe passage of trains, and
2. Ascertain that all track cars and trains are clear of the track, and notify the Dispatcher or Operator that they are clear.

EXCEPTION: With the Dispatcher's permission, the track may be returned to service while it is still occupied by equipment. Before the track is returned to service, the employee in charge of the track must ensure that the equipment remaining on the track receives proper authority to occupy the track after it is returned to service. If the track is governed by NORAC Rule 261, permission must include direction of movement.

 **Protection by Stop Signs When an In-Service Track is Obstructed for Maintenance (NORAC Rule 135)**

Whenever Form D line 5 is to be issued, the following procedures will apply. *Restricted Area* refers to the area designated by Form D line 5 or Bulletin Order, and *Working Limits* refers to the areas within the restricted area that is between the Stop Sign (or Working Limits Speed Limit Sign) and the Working Limits Resume Speed Sign.

a. Addressees

Form D line 5 must be issued to both:

1. The employee requesting to obstruct the track, and
2. Trains approaching the obstructed track.

EXCEPTION: When the Restricted Area is published by Bulletin Order, issuance of Form D to approaching trains is not required.

b. Designation of Working Limits by Signs

The approach to the Working Limits must be indicated by an Approach Sign.

The Working Limits must be indicated by a Stop Sign and a Working Limits Resume Speed Sign. A Working Limits Speed Limit Sign may be substituted for the Stop Sign when the track is not obstructed. These signs may be moved within the Restricted Area as the work progresses.

c. Action Required Prior to Issuance

The Dispatcher must not issue Form D line 5 authority until he has been notified by the employee in charge that the signs have been properly placed.

d. Movements within Working Limits

Trains entering the Restricted Area must operate as follows:

1. If an Approach Sign is observed, comply with the Approach Sign indication.
2. If an Approach Sign is not observed, operate at Restricted Speed until contacting the employee in charge to determine the location of the Working Limits.

A train must not enter the Working Limits until permission has been received from the employee in charge. Information regarding the location of the Working Limits does not, in itself, convey this permission.

The employee in charge must not authorize a train to enter the Working Limits until he has been assured that the track through the Working Limits is not obstructed. Trains must not exceed 30 MPH through the Working Limits, unless directed by the employee in charge to operate at a higher or lower speed.

EXCEPTION: Trains and track cars that will be performing maintenance within the Working Limits may be admitted by the

employee in charge while the Working Limits are still obstructed. All trains and track cars performing maintenance within the Working Limits must operate at Restricted Speed and must not leave the Working Limits without proper authority.

e. Interlocking Switches within Restricted Area

Dispatchers or Operators controlling interlocking switches within the Restricted Area must line such switches for movements within the Restricted Area and must apply blocking devices to the controls of those switches. These blocking devices must not be removed without permission of the employee in charge of the Restricted Area. This requirement does not relieve employees operating within the Restricted Area from complying with interlocking signal indications.

Train Coordination:

A lone worker or an employee in charge of group of Roadway Workers may establish Working Limits by notifying the crew of a train or engine to which the Roadway Worker(s) have been assigned that they will now be working under Train Coordination and must not move without the permission of the Roadway Worker requesting Train Coordination. The train or engine must be stopped during notification that Train Coordination protection will be used. This method of 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.

A member of the train crew will be on the ground with Roadway Worker(s) while they are fouling the track to ensure that proper 3 step protection is provided.

Train Coordination on non-controlled track may only be used when:

- 1) the track has been made inaccessible to all movements except the single train or engine to which the Roadway Worker is assigned, or
- 2) all other locomotives which have access to the same tracks where Train Coordination is being used will cease all movements and provide three-step protection or will be unoccupied and secured to prevent movement.

Placing or Operating Track Cars on Tracks (NORAC Rule 803)

a. Tracks Where ABS or DCS Rules Are in Effect.

Form D line 2 and line 3 is the authority for the movement of track cars and must be obtained before track cars are placed or operated on a track where ABS or DCS rules are in effect. Three exceptions are:

1. Track car movements within yard limits in non-signaled DCS territory may be made with verbal permission of the Dispatcher (or Operator when authorized by the Dispatcher).
2. Track car movements at an interlocking may be made one track car length beyond the home signal into ABS or DCS territory. Such move-

ments require verbal permission of the Dispatcher (or Operator when authorized by the Dispatcher).

3. Track car movements that will be performing maintenance within Working Limits may be made on verbal permission of the employee in charge as prescribed by NORAC Rule 135.

Before issuing Form D lines 2 and 3 or granting verbal permission for a track car to shift at an interlocking as outlined in item (2) above, the Dispatcher must ensure that:

1. The track on which the movement is to be made is clear of opposing movements, **and**
2. Signals governing opposing and following movements are in Stop position, **and**
3. Blocking devices are applied to protect against opposing and following movements.

The Dispatcher must issue a copy of the Form D to all Operators involved.

b. Tracks Where ABS or DCS Rules Are Not in Effect

On tracks where ABS or DCS rules are not in effect and an employee is in charge of the track, track cars must not be placed or operated on the track unless authorized by that employee. Where no employee is in charge of the track, track cars may occupy the track without permission

Additions to Form D Line 2 (NORAC Rule 804)

The Dispatcher may direct addressee(s) to add additional line 2 authorities to a specified direction Form D which is still in effect providing no new trains or

track cars have been authorized to operate within the limits of the additional line 2. Before issuing additional line 2 authorities, protection as prescribed by NORAC Rule 803, "Placing or Operating Track Cars on Tracks," must be applied.

Additional line 2 authorities will be added as follows:

1. The Dispatcher must contact the addressee(s), state his intent to give them an additional line 2 authority, and state the number and date of the Form D to which the line 2 authority will be added.
2. The Dispatcher will then transmit the additional line 2 authority and his initials. The addressee(s) will repeat the authority. The Dispatcher must not transmit the "time" of the addition to the addressee(s) until they have correctly repeated the authority. The addressee(s) must not act upon the additional authority until they receive the "time" of the addition.
3. The Dispatcher and the addressee(s) must record all additional information on line 2 of their Form D.

Track Car Following Other Movements (NORAC Rule 805)

A track car may be permitted to follow a train or another track car when Form D line 3 specifies the train or track car ahead. When no trains or track cars are ahead, "NONE" must be written on line 3 of the Form D. When line 3 indicates a train or track car ahead, speed must be regulated as follows:

1. Passenger and truck type highway rail cars must operate at a speed that will allow stopping within one-half the range of vision, short of a train or track car.
2. All other track cars must operate at Restricted Speed.

When the train or track car ahead clears the limits of the following track car's line 2 authority, the Dispatcher may authorize the following track car to operate at Normal Speed. To make this authorization, the Dispatcher must instruct the Track Car Driver or Foreman to add the words "[insert applicable train or track car number] is clear at [time] [Dispatcher's initials]" to line 13 of the original Form D.

Train Following Track Car (NORAC Rule 806)

Except in an emergency, a train must not be permitted to follow a track car into ABS or DCS territory. In an emergency, the Dispatcher may permit a train to follow a track car by issuing Form D line 2 and line 3 authority. The Dispatcher must instruct the train to operate at Restricted Speed on Form D line 13.

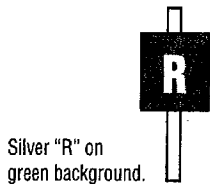
Placing Approach, Stop and Resume Speed Signs (MW 4)

Follow these requirements for placing Approach, Stop, and Resume Speed Signs:

1. Place Approach, Stop, and Resume Speed Signs to the right of each track to be protected for both directions of traffic.

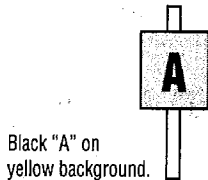
Approach, Stop, and Resume Speed Signs (NORAC Rules 296c, 297, 297a)

RESUME SPEED SIGN
(NORAC Rule 296c)



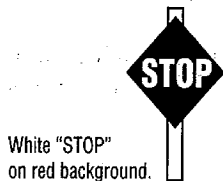
Resume speed after the entire train has passed the Resume Speed Sign.

APPROACH SIGN
(NORAC Rule 297)



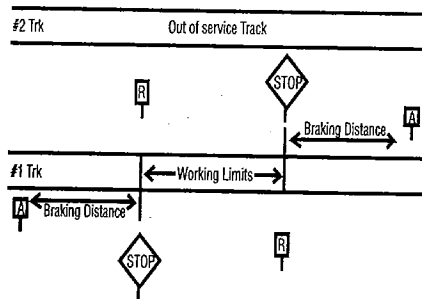
Proceed prepared to stop at the Stop Sign. Trains exceeding Medium Speed must begin reduction to Medium Speed as soon as the engine passes the Approach Sign.

STOP SIGN
(NORAC Rule 297a)



Stop, unless permission is received as prescribed by NORAC Rule 135.

2. Place signs to give the greatest possible unobstructed view, considering alignment and other local conditions.
3. Keep the reflecting surfaces of signs clean to preserve their reflecting ability.
4. When placing Stop Signs and Resume Speed Signs:
 - a. Place the Stop Sign at the point where the Working Limits begin.
 - b. Place the Resume Speed Sign where the Working Limits end.



Placing Approach, Stop, and Resume Speed Signs.

5. When placing Approach Signs:
 - a. Place the Approach Sign so that it faces the direction from which trains are approaching.
 - b. Place the Approach Sign far enough ahead of the Stop Sign to permit trains to stop from Normal Speed.

- For a level or ascending grade, use Table 1 to determine the minimum stopping distance for passenger and freight trains.

Minimum Stopping Distances From Approach Signs To Stop Signs On Level or Ascending Grades	
Normal Speed (MPH)	Minimum Stopping Distance (feet)
100	9,200*
90	7,500*
80	6,200*
70	14,500
60	14,500
50	11,100
40	8,700
30	5,900
20	3,800
10	1,900

*NOTE: Only passenger trains may operate at 80 MPH or above; they require less stopping distance than freight trains.

Table 1. Minimum stopping distances from approach signs to stop signs on level or ascending grades.

- For a descending grade, increase the stopping distance in Table 1 by the amount shown in Table 2.

Additional Stopping Distances From Approach Signs To Stop Signs On Descending Grades	
Grade (%)	Increase Stopping Distance In Table 1 By:
Level to 0.09	None
0.10 to 0.30	10%
0.31 to 0.50	20%
0.51 to 0.80	30%
0.81 to 1.00	40%
1.01 to 1.10	50%
1.11 to 1.30	60%
1.31 to 1.40	70%
1.41 to 1.60	80%
1.61 to 1.70	90%
1.71 to 1.80	100%
1.81 to 1.90	110%
1.91 to 2.00	120%

Table 2. Additional stopping distances from approach signs to stop signs on descending grades.

Train Coordination:

A lone worker or an employee in charge of group of Roadway Workers may establish Working Limits by

notifying the crew of a train or engine to which the Roadway Worker(s) have been assigned that they will now be working under Train Coordination and must not move without the permission of the Roadway Worker requesting Train Coordination. The train or engine must be stopped during notification that Train Coordination protection will be used. This method of 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.

A member of the train crew will be on the ground with Roadway Worker(s) while they are fouling the track to ensure that proper 3 step protection is provided.

Train Coordination on non-controlled track may only be used when:

- 1) the track has been made inaccessible to all movements except the single train or engine to which the Roadway Worker is assigned, or
- 2) all other locomotives which have access to the same tracks where Train Coordination is being used will cease all movements and provide three-step protection or will be unoccupied and secured to prevent movement.

Inaccessible Track

The following rules give procedures for establishing inaccessible track. See the following pages for the complete rules.

- Protection on Tracks Not Controlled by Dispatcher or Operator (NORAC Rule 141)
- Working On Non-Controlled Tracks
- Working On Tracks and Retarders In a Remotely Controlled Hump Classification Yard



Protection on Tracks Not Controlled by Dispatcher or Operator (NORAC Rule 141)

When roadway worker protection is required on a track not controlled by the Dispatcher or Operator, each end of the Working Limits must be protected by one of the following methods:

1. A switch or derail aligned to prevent access to the Working Limits and secured with an effective securing device.
2. A remotely controlled switch aligned to prevent access to the Working Limits and secured with a blocking device by the employee who controls the switch.

Blocking device protection must not be considered in effect until it has been confirmed by the employee controlling the switch. Protection must be maintained until the employee who requested the protection has reported clear.
3. A disconnected rail or a track barricade.

4. A flagman assigned to hold trains and equipment clear of the Working Limits.

Movements within Working Limits may be made only with the permission of the roadway worker in charge.

Working On Non-Controlled Tracks

Follow these procedures when working on and clearing non-controlled track (industrial, yard, or any other track not controlled by a Dispatcher or Operator):

1. Make the Working Limits inaccessible to trains, engines, or other on-track equipment using one of the following procedures:
 - a. A switch lined, effectively secured, and effectively tagged with an S-105 "Do Not Operate" tag in one of the following ways:
 - Private lock on switches that will accommodate them
 - Properly secured switch point clamp
 - Properly driven spikes and wedges that require appropriate tools to remove them
 - b. A derail secured in the derailing position and tagged with an S-105 tag.
 - c. A remotely controlled switch or derail lined to prevent access to the Working Limits and secured with a blocking

- d. A flagman assigned to hold trains and equipment clear of the Working Limits.
- e. Exclusive track occupancy of main track which is the only entrance to a yard, industrial, or siding track so that no train or other equipment has access, relieves the Roadway Worker from securing and tagging switches.

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

NOTE: When working in a remotely controlled hump classification yard, you must have protection from trains and equipment on both sides of your Working Limits.

1. When fouling any track in a remotely controlled hump yard (including the hump area, the class tracks, and the pull out ladder tracks), either make the work limits inaccessible to trains or assign watchmen.
 - a. Make the Working Limits inaccessible to trains using either or both of the following methods:
 - A switch or derail aligned to prevent access, secured with an effective securing device, and tagged with an S-105 "Do Not Operate" tag.
 - A remotely controlled switch lined to prevent access to the Working Limits, secured with a blocking device, and logged on the CT-1888 form by the employee who controls the switch according to NORAC Rule 141.

Establishing On Track Protection

If you are a lone worker and cannot comply with all the provisions of Individual Train Detection (Watching For Trains Yourself), you must establish another form of on track protection before you foul any track.

Individual Train Detection (Watching For Trains Yourself)

If you are a lone worker who fouls a track while performing routine inspection or minor correction, you may watch for trains yourself only if the following eight conditions are met:

1. You are trained and qualified to use individual train detection (ITD).
2. You are not within:
 - An interlocking, **or**
 - A remotely controlled hump classification yard.
3. You are able to visually detect the approach of a train moving the maximum speed authorized for that track and move to a previously determined place of safety at least 15 seconds before the train reaches you.

NOTE: The place of safety may not be on another track unless Working Limits are established on that track.

4. There are no power-operated tools or roadway maintenance machines in use within your range of hearing.

5. Your ability to see and hear approaching trains and other on-track equipment is not impaired by background noise, lights, fog, precipitation, passing or standing trains, or any other physical conditions.
6. You may not occupy a position or engage in any activity that would interfere with your ability to maintain a vigilant lookout for, and detect the approach of, a train moving in either direction.
7. You must conduct a job briefing (communication) with your supervisor or other designated employee, such as the Dispatcher or Operator, at the beginning of your tour of duty. This briefing must include:
 - Your planned itinerary, **and**
 - The on track protection you plan to use.

EXCEPTION: If you are unable to communicate with the designated employee due to a communications failure, you may begin the work and conduct the job briefing as soon as communications are restored.

8. You have completed a Statement of On Track Safety. Only one statement can be in effect at a time. See the figure on the following page.

ITD Statement of On Track Safety					
Name _____		Date _____		Time _____	
Line _____		Track Number _____		From M.P. _____ To M.P. _____	
Yard _____		Track Number(s) _____			
Instructions: This form must be used by a Lone Worker when using ITD. Use your Timetable to determine the maximum speed authorized in the area you will be fouling. Place an X in the box adjacent to this maximum authorized speed. Determine that you have the required sight distance to clear the track 15 seconds prior to the arrival of the train. You must produce this form when requested by an FRA Representative or Conrail Supervisor, and retain it for seven (7) days after use.					
Maximum Authorized Speed In MPH	Required Sight Distance In Feet	Maximum Authorized Speed In MPH	Required Sight Distance In Feet	Maximum Authorized Speed In MPH	Required Sight Distance In Feet
5	110	45	990	85	1870
10	220	50	1100	90	1980
15	330	55	1210	95	2090
20	440	60	1320	100	2200
25	550	65	1430	105	2310
30	660	70	1540	110	2420
35	770	75	1650		
40	880	80	1760		
The Lone Worker has the absolute right to use On Track Protection procedures other than ITD if deemed necessary and to occupy a place of safety until another form of protection can be established.					

Statement of On Track Safety.

Working On Non-Controlled Industrial and Yard Tracks

3. If you are a lone worker using ITD on non-controlled track (other than in a remotely controlled hump classification yard):
 - a. The place of safety cannot be on a track that is not shown on your Statement of On Track Safety, unless Working Limits are established on that track.
 - b. You must always be prepared to clear all tracks if necessary.

Watchmen

The following rules give procedures for using watchmen to establish on track protection. See the following pages for the complete rules.

- Duties Of Watchmen
- Duties Of Advance Watchmen
- Watchmen Equipment

Duties Of Watchmen

Watchmen are responsible for watching for approaching trains and signaling employees to clear the tracks. If a watchman has not been assigned, the employee in charge will be the watchman.

Follow these procedures when you are assigned the duties of a watchman:

1. When a train, engine, or on-track equipment approaches from either direction, warn employees in time for them to clear the tracks at least 15 seconds before the train reaches the point of work. Assume that the train is moving at the maximum speed authorized for that track.

NOTE: You may need to give additional warnings around noisy operations.

2. When an advance watchman signals the approach of a train, or signals that a train is clear, repeat the signal to the advance watchman and then signal the gang.
3. Signal employees of an approaching train as follows:

- a. Sound a warning whistle or horn.
 - b. Hold the white disc at arm's length above your head.
 - c. Hold the white disc horizontally at arm's length toward the place designated in the job briefing where employees are to go to clear the tracks.
4. Signal employees that it is safe to resume work as follows:
- a. Hold the white disc horizontally at arm's length toward the work site.

Duties Of Advance Watchmen

Advance watchmen are responsible for watching for approaching trains and signaling the watchman when a train is approaching. The watchman then acknowledges the signal by repeating it back to the advance watchman.

Follow these procedures when you are assigned the duties of an advance watchman:

1. Signal the watchman of an approaching train as follows:
 - a. Sound a warning whistle or horn.
 - b. Hold the white disc at arm's length above your head.
2. Signal the watchman that it is safe to resume work as follows:
 - a. Hold the white disc horizontally at arm's length toward the work site.

3. If your signal is not acknowledged by the watchman, signal the approaching train to stop.

Watchmen Equipment

Watchmen, advance watchmen, and employees in charge must have the appropriate equipment to perform their duties. If you are a watchman, advance watchman, or employee in charge, follow these procedures when you are protecting or supervising employees:

1. Keep your equipment in good condition and ready for use.
2. If you are a watchman or advance watchman, you must have a standard Conrail watchman's bag. Before performing your duties, check the bag's contents to make sure that all of the required equipment is in the bag and in good condition.
3. Wear the warning whistle or horn outside your clothing so that you can use it quickly.
4. Have and use the equipment indicated in the following table.

Equipment For Watchmen	
Good Visibility	
Watchman	<ul style="list-style-type: none"> • Warning whistle or horn • Standard white disc*
Advance watchman	<ul style="list-style-type: none"> • Warning whistle or horn • Standard white disc • Red flag
Employee in charge	<ul style="list-style-type: none"> • Warning whistle or horn
Poor Visibility (in tunnel or at night)	
Watchman	<ul style="list-style-type: none"> • Warning whistle or horn • Suitable white light
Advance watchman	<ul style="list-style-type: none"> • Warning whistle or horn • Suitable white light • Two red fuseses
Employee in charge	<ul style="list-style-type: none"> • Warning whistle or horn • Suitable white light

Equipment For Watchmen.

***NOTE: A watchman assigned to protect only one employee who is performing work where advance watchmen are not required does not need to be equipped with a white disc.**

Step 6. Perform the Work and Clear the Track

Step 6 in establishing on track protection is performing the work with the appropriate protection and clearing the track when a train or equipment is approaching.

This section gives rules for the following duties:

- Working on retarders
- Operating roadway maintenance machines
- Clearing tracks

Working On Retarders

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

2. When fouling tracks while working on a car retarder, and a train or equipment approaches on another track:
 - a. If the track centers are less than 20 feet, discontinue all work.
 - b. If the track centers are 20 feet or more, work may continue.

Operating Roadway Maintenance Machines

Operating Self-Propelled Equipment

Follow these precautions when operating self-propelled equipment:

1. You must be qualified or qualifying under the supervision of a qualified employee.

NOTE: Qualified employees must carry their qualification card (MW-100) at all times when on duty.

2. Keep the Operator's Manual available on the equipment if possible so you can refer to it to determine safe operating procedures.
3. Communicate with any employee(s) who are near the equipment regarding:
 - Normal equipment operating procedures
 - Location of employee(s) working around or observing the equipment
 - Operator's blind spots
 - Signals warning that the equipment will move
4. Do not get closer than 15 feet to employee(s) working on the track in front of or behind your equipment unless:
 - The operation requires employee(s) to be closer, **and**
 - You have communicated with the affected employee(s).
5. Keep at least 30 feet between standing or working equipment to avoid collisions. Increase the distance between machines when:

- The equipment is working on territory where grades or curves limit the sight distance, **or**
- The rail is wet, icy, or oily.

EXCEPTION: When the operation requires, the 30-foot distance between equipment may be reduced after arrangements have been made with all affected employee(s) to ensure that no ground employee(s) are between the equipment.

6. Consider the following factors when determining a working speed for the equipment:
 - Location of employee(s) required to be on the track in the area
 - Operator visibility
 - Braking distances
 - Speed required to do the job
 - Physical characteristics of the track
 - Environmental conditions
7. Do not foul an adjacent track with any part of the equipment unless:
 - The adjacent track is a controlled track and exclusive use or foul time has been established on the track, **or**
 - The adjacent track is a non-controlled track and the track has been made inaccessible.
8. Test the brakes immediately after starting to travel.
9. When employee(s) are getting on, getting off, or between self-propelled equipment:
 - a. Stop the equipment.

- b. Disengage the clutch or gears.
 - c. Set the brakes to hold.
10. Do not allow anyone to distract you or interfere with your duties. If this happens, stop all movement.

Clearing Tracks

The following rules give procedures for clearing tracks. See the following pages for the complete rules.

- Clearing a Track Specified on Form D Line 2 (NORAC Rule 808)
- Safety Precautions For Clearing Tracks
- Clearing Controlled Track
- Working On Non-Controlled Industrial and Yard Tracks

Clearing a Track Specified on Form D Line 2 (NORAC Rule 808)

When a track car clears the track specified on Form D line 2, the Form D authorizing the use of the track is fulfilled, and a new Form D must be issued for any further movement. The Foreman or Track Car Driver must report clear to the Dispatcher or Operator.

Safety Precautions For Clearing Tracks

Follow these safety precautions when clearing tracks:

1. When you are notified or become aware of the approach of a train, stop all work. Clear the tracks at least 15 seconds before the train reaches you.

NOTE: Refer to the train travel chart on page 18.

2. Report to the location designated by the employee in charge during the job briefing.

NOTE: You may not clear onto another track unless Working Limits have been established on that track.

3. Stop all equipment and vehicles on the right of way while the train is passing.
4. Do not leave tools, objects, material, or equipment where they could be struck by the passing train.
5. Face the direction from which the train is approaching. Watch for projecting, dragging, or falling objects.
6. Inspect all passing trains. If you detect a dangerous condition, use any available means to warn crew members on the passing train to stop. If the train does not stop at once, notify the Dispatcher.
7. Stay clear until you are notified that it is safe to resume work.

Clearing Controlled Track

Follow this procedure to clear a controlled track, which is any track shown in the timetable as being under the control of a Dispatcher or Operator:

1. Clear all tracks, keeping at least 30 feet from passing trains and equipment, if possible. Do not clear onto another track.

EXCEPTION: When it is not possible to clear all tracks, the safest location might be on the track where you are working, as long as Working Limits remain in effect on that track.

2. If you are operating equipment and you are within the gage of the track, stay on your machine. If you are not within the gage of the track, dismount the equipment and clear the track.

Working On Non-Controlled Industrial and Yard Tracks

Follow these procedures when working on and clearing non-controlled track (industrial, yard, or any other track not controlled by a Dispatcher or Operator):

2. If a train approaches on an adjacent track, stop work and stand in the center of the track where you are working.
3. If you are a lone worker using ITD on non-controlled track (other than in a remotely controlled hump classification yard):
 - a. The place of safety cannot be on a track that is not shown on your Statement of On Track Safety, unless Working Limits are established on that track.
 - b. You must always be prepared to clear all tracks if necessary.

Challenge Resolution

Rights Of Conrail Roadway Workers

A Conrail roadway worker has the absolute right to challenge, in good faith, any directive that would violate a Conrail On Track Safety or Operating Rule. The roadway worker also has the absolute right to remain clear of the track until the challenge is resolved.

Resolving an On Track Safety Challenge

Follow this procedure if a Conrail roadway worker has concerns about whether the on track safety procedures at the work location comply with Conrail rules (also see the flowchart on page 70):

1. The roadway worker discusses the on track safety procedures at the work location with the employee in charge. The worker and the employee in charge try to clarify any misunderstandings and resolve any differences of opinion about the procedures.
2. If the worker and the employee in charge are unable to resolve the issue, the worker may challenge the on track safety procedures. To issue such a challenge, the worker must:
 - Do so in good faith.

In other words, the worker must have an honest concern about whether the on track safety procedures at the work location

comply with Conrail rules. In addition, the worker's concern must be such that a reasonable person under the same circumstances would also have such a concern.

- Be able to explain his or her concern about the on track safety procedures being applied.
3. If the worker decides to challenge the on track safety procedures, he or she must perform the following steps immediately:
- a. Notify the employee in charge, who will promptly notify his or her supervisor (or the supervisor's designee).
 - b. Notify any other roadway workers of the potential danger.
 - c. Clear the track.
4. The worker explains the reason for his or her concern on an On Track Protection Good Faith Challenge Form. (See page 69) This form includes:
- The worker's name, the supervisor's name, and the work location
 - A full description of the on track safety procedures applied (or lacking) at the work location
 - A list of the Conrail Safety and Operating Rules that are not being complied with
 - A full description of the worker's reason for challenging the on track safety procedures applied at the work location

- The names of other employees (including supervisors and the employee in charge) whose knowledge of the situation is relevant to the challenge

5. The worker gives the On Track Protection Good Faith Challenge Form to his or her immediate supervisor.
6. The worker's immediate supervisor reviews the Challenge Form and determines whether:
- The worker's statement of the on track safety procedures at the work location is accurate, **and**
 - The on track safety procedures at the work location comply with Conrail Safety and Operating Rules.
- a. If the supervisor determines that the on track safety procedures are inadequate, the supervisor changes the procedures so that they comply with Conrail Safety and Operating Rules. If the worker considers the challenge resolved, the supervisor forwards the Challenge Form to the Division Engineer's office and the worker returns to work.
- b. If the supervisor determines that the on track safety procedures *do* comply with Conrail Safety and Operating Rules, the supervisor notifies the worker and documents the determination on the Challenge Form. If the worker considers the challenge resolved, the supervisor forwards the Challenge Form to the Division Engineer's office and the worker returns to work.

7. If the worker still does not consider the challenge resolved, the supervisor forwards the Challenge Form to the Assistant Division Engineer (or designee) for review. The worker gives the Assistant Division Engineer all information previously provided to the supervisor and an explanation of why the worker rejected the supervisor's determination.

NOTE: In this program, the title of Assistant Division Engineer includes equivalent-level system positions such as Assistant Production Engineer and C&S Project Engineer.

8. The Assistant Division Engineer (or designee) reviews the Challenge Form and determines whether the on track safety procedures at the work location comply with Conrail Safety and Operating Rules. The Assistant Division Engineer may contact the relevant employees named on the form to make this determination.

a. If the Assistant Division Engineer determines that the on track safety procedures are inadequate, the Engineer arranges for the procedures to comply with Conrail Safety and Operating rules. Once the procedures are in compliance, the Assistant Division Engineer authorizes the roadway workers to foul the track.

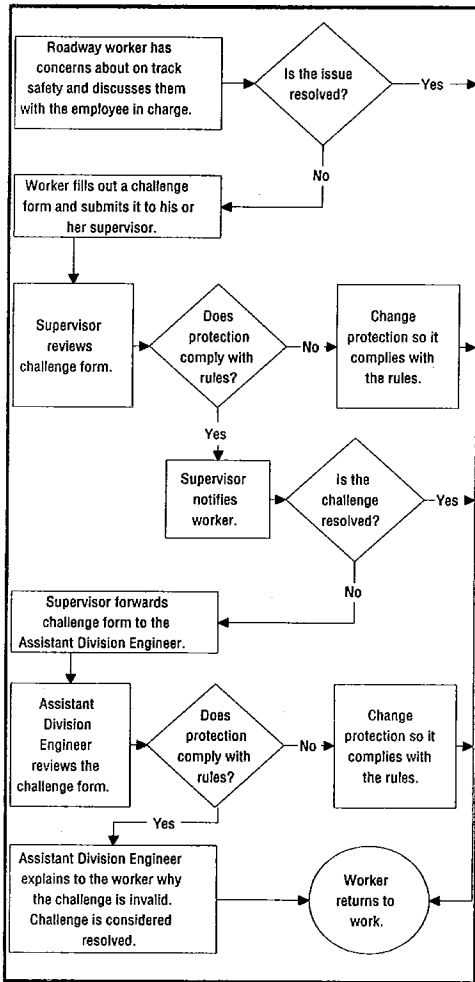
b. If the Assistant Division Engineer determines that the on track safety procedures do comply with Conrail Safety and Operating Rules, the Engineer explains to the worker why the worker's challenge is

invalid. For the purpose of this program, the challenge is considered resolved. The Engineer then instructs the worker to return to work.

NOTE: Nothing in this program diminishes or enlarges any rights or obligations in Section 20109 of the Federal Railroad Safety Act, as amended, 49 U.S.C. §20109.

On Track Protection Good Faith Challenge Form	
Name:	_____
Job Position:	_____
Headquarters Point:	_____
Supervisor's Name/Title:	_____
Date and Time of Occurrence:	_____
Work Location	_____
Track and Mile Post:	_____
Nearest City/Town:	_____ State _____
On Track Safety Procedures applied (or lacking) at Work Location:	_____ _____ _____
Conrail Safety or Operating Rule not being complied with (Give # if known):	_____ _____ _____
Reason for Challenge:	_____ _____ _____ _____
Other Employees with Information Regarding Situation:	_____ _____ _____
Signature: _____	Date: _____
Determination by Supervisor:	_____ _____ _____
_____	_____
Supervisor	Date
<small>INSTRUCTIONS: The employee making challenge shall complete this form, sign and date it, give it to his Supervisor who shall document his determination, sign and forward form to his respective Assistant Division Engineer.</small>	

On Track Protection Good Faith Challenge Form.



Resolving On Track Safety Challenges.

Definitions

Adjacent Tracks

Two or more tracks with track centers spaced less than 25 feet apart.

Blocking Device

A lever, plug, ring, or other method of control that restricts the operation of a switch or signal.

Controlled Track

Track upon which all movements must be authorized by a Train Dispatcher or Operator.

Derail

A track safety device designed to guide a car off the rails at a selected spot as a means of protection against collisions or other accidents.

Effective Securing Device

A device, used to prevent the operation of a manually operated switch or derail, that is:

1. Vandal resistant,
2. Tamper resistant, and

3. Designed to be applied, secured, uniquely tagged, and removed only by the class, craft, or group of employees for whom protection is being provided.

Exclusive Use Of Track

A method of establishing Working Limits on controlled track in which movement authority is withheld or restricted by the Train Dispatcher or Operator, or one or more approaches to the Working Limits are protected by flagmen.

Flagman

An employee designated to direct or restrict the movement of trains at a point on track to provide on track protection for roadway workers. This employee may not perform any other duties.

Form D

See Movement Permit Form D.

Foul Time

A method of establishing Working Limits through exclusive use of the track in which notification is given and recorded by the Train Dispatcher or Operator to an employee that no trains will operate within a specific segment of controlled track during a specific time period, and the required blocking devices have been placed on the control machine to protect the track fouled. Foul time shall

remain in effect until the employee to whom the foul time was issued has reported clear of the track.

Fouling a Track

The location of an individual or equipment in such proximity to a track that the individual or equipment could be struck by a moving train or on-track equipment, or in any case is within 4 feet of the field side of the near running rail.

Gang

See Roadway Work Group.

Hump Yard

See Remotely Controlled Hump Classification Yard.

Inaccessible Track

A method of establishing Working Limits on non-controlled track by preventing access to the Working Limits.

Individual Train Detection (ITD)

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

Interlocking Limits

The tracks between the opposing home signals of an interlocking.

Lone Worker

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.

Movement Permit Form D

A form containing written authorization(s), restriction(s), or instruction(s), issued by the Dispatcher to specified individuals.

Non-Controlled Track

Track upon which trains are permitted by the rules or special instructions to move without receiving authorization from a Train Dispatcher or Operator.

On Track Safety

The state of freedom from the danger of being struck by a moving railroad train or other equipment, provided by operating and safety rules that govern track occupancy by personnel, trains, and on-track equipment.

Operator

The railroad employee in charge of a remotely controlled switch or derail, an interlocking, a controlled point, or a segment of controlled track.

Pilot

An employee assigned to a train or track car when the Engineer, Conductor, or Track Car Driver is not qualified on the physical characteristics or the operating rules of the territory to be traversed.

Qualified Employee

An employee who has successfully completed all required training for, has demonstrated proficiency in, and has been authorized to perform the duties of a particular position or function.

Railroad Bridge Worker

An employee of, or employee of a contractor of, a railroad responsible for the construction, inspection, or maintenance of a bridge whose assigned duties, if performed on the bridge, include inspection, testing, maintenance, repair, construction, or reconstruction of the track; bridge structural members; operating mechanisms and water traffic control systems; or signal, communication, or train control systems integral to that bridge.

Remotely Controlled Hump Classification Yard

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.

Restricted Speed

Prepared to stop within one-half the range of vision—short of a train, obstruction, or switch improperly lined. Be on the lookout for broken rail. Speed must not exceed 20 MPH outside interlocking limits, or 15 MPH within interlocking limits. This speed applies to the entire movement.

In the application of Restricted Speed, trains other than passenger trains and track cars must not exceed 15 MPH.

Roadway Maintenance Machine

Powered equipment, other than by hand, which is being used on or near the track for maintenance, repair, construction, or inspection of track, bridges, roadway, or signal, communication, or electric traction systems. These machines may have road or rail wheels or may be stationary.

Roadway Maintenance Work Train

A train which is being operated within Working Limits in conjunction with roadway maintenance, construction, or repairs, under the direction of a designated employee in charge.

Roadway Work Group

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

Roadway Worker

An employee, or employee of a contractor to Conrail, whose duties include 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.

Three-Step Protection

A procedure used by an engineer to protect employees before they foul equipment. Three-step protection has three basic components:

1. Apply the brake.
2. Center the reverser.
3. Put the generator field switch in the OFF or OPEN position.

Track Barricade

A designated sign or obstruction fastened to a track that prevents access to the track.

Track Centers


The distance from the centerline of one track to the centerline of an adjacent track.

Train Coordination

A method by which a roadway worker can establish Working Limits protection by exercising control over a movement which has proper exclusive authority on a track, to perform materials distribution with a work train, snow duty, or track work at a derailment site.

Warning Tag (S-105)

Tag used to indicate that equipment is out of service and should not be operated.

S 105 Rev 1-93	CON RAIL 
DANGER OUT OF SERVICE	
EQUIPMENT/APPARATUS _____	
REASON _____	
NAME _____	
TIME _____	DATE _____

DO NOT OPERATE
NOTIFY OTHERS
REVIEW PROCEDURE
IDENTIFY ENERGY SOURCES
ELECTRICAL
HYDRAULIC
PNEUMATIC
GRAVITY OR SPRING
NEUTRALIZE ALL ENERGY
LOCK OUT POWER

Watchman (Train Approach Warning)

Employees assigned to warn other employees of the approach of trains, engines, or other equipment to permit the employees to safely clear the track before the train, engine, or equipment reaches the work site.

Working Limits

A segment of track within definite limits, established by NORAC rules, upon which trains and engines may move only as authorized by the employee in charge having control of the track within the Working Limits. Working limits may be established through exclusive use of track, foul time, train coordination or inaccessible track.

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