Keolis Commuter Services

Roadway Worker Protection Manual

Effective January 1, 2015

RWP REVISIONS

Your comments on the Roadway Worker Protection Manual are invited. Please send all suggestions to:

RWP Rewrite Committee
Chief Engineer
32 Cobble Hill Rd.
Somerville, MA 02143

Please include with each suggestion:

Part # _____

Subpart _____

Subsection _____

Page # _____

Recommended Changes, Corrections or Questions

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Submitted by:

Name _____

Address _____

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ROADWAY WORKER PROTECTION MANUAL

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ROADWAY WORKER DISPUTE RESOLUTION PROCEDURE

The purpose of this procedure is to establish the right of the employees to:

A. Demand that the rules of the Carrier for the protection from trains are properly applied at all job sites, and that

B. Prior to going to work on the track, the work unit meets to discuss all aspects of the work to be performed and specifically the methods by which protection from trains will be provided. Prior to beginning each assignment, the employee in charge will hold a meeting with all employees to review the on track protection requirements. When more than one craft is working, the work groups will designate one employee to be in charge of on track protection arrangements. This employee will discuss both required and provided protection from trains, and at this time, all employees have the right to participate, raise concerns, and specifically demand that the rules for protection from trains are properly applied. If conditions change after work has commenced, it is understood that the protection arrangements may need to be reconsidered.

Should there be a disagreement on the application of these rules, the employee or employees will state their specific concerns to the employee in charge to reach a consensus, if possible. If no solution is found, the employee or employees who dispute the application will have the right to not commence the assignment without fear of retribution or retaliation.

The employee in charge will then require the employee or employees to state in writing the specific rules and applications that are in dispute on Keolis' Good Faith Challenge Form. The next level of supervision is then contacted to mediate or resolve the concern. If the employee or employees still disagree with the provided protection, they have a no fault right to refuse to participate in the assignment.

This next level of supervision will then contact his/her supervisor who will set up a Protection from Trains Dispute Panel for prompt review and resolution of the dispute. The panel will consist of the following personnel: a manager from the Engineering Safety Committee, an RWP rules trainer, and one member from the Transportation Rules Department.

The panel will examine the dispute, review documentation and other information as needed to make an informed decision. The panel will produce a written finding as to the correct application of the rules for the situation in question. (Their decision does not have to support either side of the dispute and may differ from both). The panel's decision will be binding and will be presented to the individuals involved, and the Chief Engineer's office for reference. In the event the panel determines that this policy is being abused, it will advise the Chief Engineer and the Organization representative of this finding. At this time, the panel may issue recommendations to resolve this situation. The rights and obligations of this procedure apply equally to management and agreement personnel.

RWP DEFINITIONS (214.301)

Definitions are particularly important to the understanding of this program.

Adjacent controlled track: A controlled track whose track center is spaced 19 feet or less from the track center of the occupied track.

Adjacent Tracks: A controlled or non-controlled track whose track center is spaced less than 25 feet from the track center of the track where the authority to occupy is issued**.**

Control Operator: The railroad employee in charge of a remotely controlled switch or derail, an inter-locking, a controlled point, or a segment of controlled track.

Controlling Switch: A switch that is either hand or power operated, that can be lined to prevent trains or equipment from entering a track or tracks.

Controlled Track: A track upon which the railroad's operating rules requires that all movements of trains must be authorized by a train dispatcher or a control operator.

Coupled Equipment: Could be a flat car, a gondola, hopper, etc., or it could be a push cart being towed by a spiker or other machine utilizing a tow bar.

Effective Securing Device: A device when used in relation to a manually operated switch or derail means one which is:

A. Vandal resistant

B. Tamper resistant; and

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

Employee: An individual who is engaged or compensated by a railroad or by a contractor to a railroad to perform any of the duties defined in this part.

Employee Responsible for Providing On-Track Protection: Any Employee qualified in RWP, Operating Rules, and Physical Characteristics designated on the Job Briefing Form to provide on-track safety for a particular workgroup.

Employer: A railroad or a contractor to a railroad, that directly engages or compensates individuals to perform any of the duties defined in this manual.

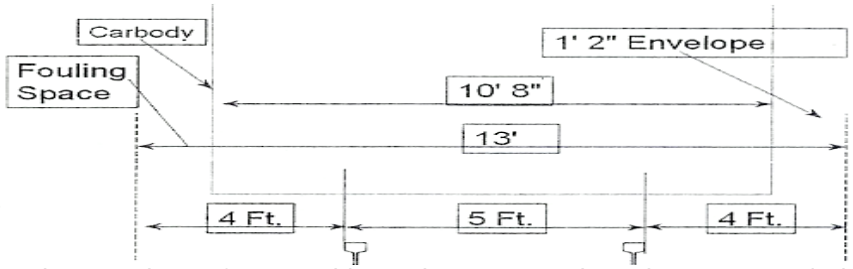
Exclusive Track Occupancy: A method of establishing working limits on controlled track in which movement authority of trains and other equipment is withheld by the train dispatcher or control operator, or restricted by flagman, as prescribed in 321 and 214.321.

An Employee When Used as a Flagman: When used in relation to roadway worker safety, means an individual designated by the railroad to direct or restrict the movement of trains past a point on a track to provide on-track safety for roadway workers, while engaged solely in performing that function.

Foul Time: A method of establishing working limits on controlled track in which a roadway worker is notified by the train dispatcher or control operator that no trains will operate within a specific segment of controlled track until the roadway worker reports clear of the track, as prescribed in Part 323 and 214.323.

Fouling a Track: The placement of an individual or item of 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 four feet of the field side of the near running rail.

Gang/Advance Watchmen: An employee who has been annually trained and qualified to provide



warning to roadway workers of approaching trains or on-track equipment. Gang/Advance watchmen shall be properly equipped as required in Part 329 to provide visual and auditory warning. The watchman's sole duty is to look out for approaching trains/on-track equipment and provide at least fifteen seconds advanced warning to employees before arrival of trains/on-track equipment.

Inaccessible Track: A method of establishing working limits on non-controlled track by physically preventing entry and movement of trains and equipment.

Individual Train Detection (ITD): A procedure by which a lone worker acquires on-track safety by seeing approaching trains and leaving the track before they arrive and which may be used only under circumstances strictly defined in this manual.

Inter-track barrier: A continuous barrier of a permanent or semi-permanent nature that spans the entire work area, is at least four feet tall and is of sufficient strength to prevent a roadway worker from fouling the adjacent track.

Lone Worker: An individual roadway worker who is not being afforded on-track safety by another roadway worker, who is not a member of a roadway work group, and who is not engaged in a common task with another roadway worker.

Mechanical Foreman (Yard or Shop Foreman): A mechanical department employee in charge of mechanical work and employees in a mechanical facility or station.

Minor correction: one or more repairs of a minor nature, including, but not limited to, welding, spiking, anchoring, hand tamping, and joint bolt replacement, that are accomplished with hand tools or handheld, hand-supported, or hand-guided power tools. The term does not include machine spiking, machine tamping, or any similarly distracting repair.

Multiple locking Devices: A scissors type locking device, which will allow multiple locks to be applied to a common point.

Non-controlled Track: A track upon which trains are permitted by railroad rule or special instruction to move without receiving authorization from a train dispatcher or control operator.

Occupied track: A track on which on-track, self-propelled equipment or coupled equipment is authorized or permitted to be located while engaged in a common task with a roadway work group with at least one of the roadway workers on the ground.

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

On-track Self-propelled equipment: *On-track self-propelled equipment* would include hi-rail equipped on/off machines such as a Speedswing while they are on the rail exclusively.

Qualified: A status attained by an employee who has successfully completed any required training for, has demonstrated proficiency in, and has been authorized by the employer to perform the duties of a particular position or function.

Railroad Bridge Worker or Bridge Worker: Any employee of a railroad, or of a contractor of a railroad, 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 and communication, or train control systems integral to that bridge.

Relevant Physical Characteristics: The qualifications necessary to place Gang/Advanced Gang Watchmen. Roadway workers must be familiar with the geographic layout of the territory in which they work.

Roadway Maintenance Machine: A device powered by any means of energy other than hand power which is being used on or near railroad track for maintenance, repair, construction or inspection of track, bridges, roadway, signal, communications, or electric traction systems. Roadway maintenance machines may have road or rail wheels or may be stationary.

Roadway Work Group: Two or more roadway workers organized to work together on a common task.

Roadway Worker: Any employee of a railroad, or a contractor to a railroad, whose duties include and who is engaged in the inspection, construction, maintenance or repair of railroad track, bridges, roadway,

signal and communication systems, electric traction systems, roadway facilities or roadway maintenance machinery on or near track or with the potential of fouling a track, and flagman and Gang/Advance Gang Watchmen as defined in this manual.

RWP Job Briefing: A briefing by the qualified designated person providing on-track safety for a roadway work group that informs each roadway worker of the on-track safety procedures to be used and followed during the performance of the work at that time and location.

Train Approach Warning: (Gang/Advanced Gang Watchmen) A method of establishing on-track safety by warning roadway workers of the approach of trains in ample time for them to move to or remain in a place of safety in accordance with the requirements of this manual.

Train Coordination: A method of establishing Working Limits on a track, which only one train holds exclusive authority to move.

Train Dispatcher: The railroad employee assigned control and issue orders governing the movement of trains on a specific segment of railroad track in accordance with the operating rules of the railroad that apply to that segment of track.

Working Limits: A segment of track with definite boundaries established in accordance with this manual upon which trains, engines and on track equipment may move only as authorized by the roadway worker having control over that defined segment of track. Working limits may be established through "exclusive track occupancy," "inaccessible track," "foul time," or "train coordination" as defined in this section.

Yardmaster: A terminal services employee in charge of Train and Engine Crews and rolling equipment movements within Yards. Yardmasters cannot provide on-track protection to roadway workers.

NORAC DEFINITIONS AND ABBREVIATIONS

Automatic Block Signal System (ABS): A block signal system governed by an automatic block signal, cab signal, or both.

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

Current of Traffic: The assigned direction of movement on a Rule 251 main track, as specified in the Timetable.

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.

Form D Control System (DCS): A block system, signaled or non-signaled, in which the movement of trains outside of yard limits is authorized by Form D.

Home Signal: A fixed signal governing the entrance to an interlocking or controlled point.

Interlocking (Int.): An interconnection of signals and signal appliances such that their movements must succeed each other in a predetermined sequence, assuring that signals cannot be displayed simultaneously on conflicting routes.

Interlocking Limits: The tracks between the opposing home signals of an interlocking.

Interlocking Signals: The fixed signals of an interlocking.

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

Normal Speed: The maximum authorized speed.

Northeast Corridor (NEC)

Restricted Speed: In the application of rule 80, movements made at Restricted speed must apply the following three requirements as the method of operation:

A. Control the movements to permit stopping within one half the range of vision short of:

   1. Other trains or railroad equipment occupying or fouling the track,

2. Obstructions,
3. Switches not properly lined for movement,
4. Derails set in the derailing position,
5. Any signal requiring a stop signal.

AND

B. Look out for broken rail and misaligned track.

AND

C. Do not exceed 20 MPH outside interlocking limits and 15 MPH within interlocking limits. This restriction applies to the entire movement.

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

Track Car (TC): Equipment, other than trains, operated on a track for inspection or maintenance. Track cars might not shunt track circuits.

Train: An engine with or without cars.

GENERAL INFORMATION

301. PURPOSE & SCOPE (214.301)

The understanding and compliance with the rules contained in this manual will afford Keolis' greatest resource, its employees, the safest work environment possible and to prevent its employees from being struck by trains, locomotives, or maintenance equipment. Keolis has adopted more stringent standards than required by the FRA; however, these standards are always consistent with the federal regulations.

303. KEOLIS'S ON-TRACK SAFETY PROGRAM (214.303)

Keolis has adopted and implemented a program that will afford on-track safety for all roadway workers whose duties are performed on Keolis operated property. Keolis' program will provide specific levels of protection required by federal law. Keolis' policy will include procedures to monitor the effectiveness and compliance with the program.

304. KEOLIS VISIBILITY PROTECTION

All employees while working on or near tracks, roadways and the Right-of-Way, in yards and other designated areas must wear approved high visibility vests or clothing fixed with retro reflective striping as outlined in the Personal Protective Equipment (PPE) program.

309. KEOLIS'S ON-TRACK SAFETY PROGRAM (214.309)

Rules and operating procedures governing track occupancy and protection will be maintained together in one manual and be readily available to all roadway workers. Each roadway worker responsible for the on-track safety of others, and each lone worker will be provided with and will maintain a copy of the on-track safety program.

311. KEOLIS'S RESPONSIBILITY (214.311)

Keolis is responsible for the understanding and compliance by its employees with its rules and the requirements of this on-track safety program. Keolis will guarantee each employee the absolute right to challenge in good faith whether the on-track safety procedures to be applied to the job location comply with the rules of Keolis' Roadway Worker Protection Program, and to remain clear of the track until the challenge is resolved. Keolis has a procedure to achieve prompt and equitable resolution of good faith challenges.

313. INDIVIDUAL ROADWAY WORKER RESPONSIBILITIES (214.313)

Each roadway worker is responsible for following the Keolis on-track safety program when working on Keolis operated property. A roadway worker will not foul a track except when necessary for the performance of duty. Each roadway worker is responsible to ascertain that on-track safety is being provided before fouling a track. A roadway worker must refuse any directive to violate Keolis' On-Track Safety Program. A roadway worker will inform the employer in accordance with Part 311 whenever the roadway worker makes a good faith determination that on-track safety to be applied at the job location does not comply with Keolis' On-Track Safety Program.

315. SUPERVISION AND COMMUNICATION (214.315)

General

When Keolis employees or contractors are assigned duties that require fouling a track, a documented RWP Job Briefing, see Appendix E, must be provided prior to starting any work. This RWP Job Briefing must include information on the means by which on-track safety is to be provided, instruction on the on-track safety procedures to be followed and information about any adjacent track, on-track safety for such tracks, if required by this subpart or deemed necessary by the roadway worker in charge, and identification of any roadway maintenance

machines that will foul such tracks; and a discussion of the nature of the work to be performed and the characteristics of the work location to ensure compliance with this subpart.

Each roadway worker must be informed any time the on-track safety procedures change during a work period. Such information must be given to all roadway workers before the changes are enacted. In the case of a change in protection all affected roadway workers will be notified as soon as possible. Each roadway worker must be instructed to leave the fouling space until on-track safety is reestablished by evidence of an additional RWP Job Briefing. An RWP Job Briefing for on-track safety shall be deemed complete only after each roadway worker has acknowledged understanding of the on-track safety procedures and instructions presented.

Always consider the following when participating in an RWP Job Briefing:

Everyone's Attention and Participation

Type of On-Track protection

Working Limits

Track Speeds

251/261 Direction of Train Traffic

Where to Clear

Hot Spot Areas

Placement of Watchmen

Rotation & Relief Policy

Weather Conditions / Visibility

Inspect Watchmen's Equipment

Brief New Arrivals

Re-Brief when Changes Occur

Complete Understanding

Documentation

Work Groups

Every Keolis or contractor work group assigned duties that require fouling a track, must have one roadway worker designated by Keolis, as the employee in charge, to provide on-track safety for all members of the work group. The designated person must be qualified under Part 353, training and qualifications for roadway worker responsible for on-track protection. The roadway worker responsible for on-track protection may be designated generally or specifically for a particular work situation. Before any member of a roadway work group fouls a track, the roadway worker responsible for on-track protection must conduct and document for the work group an RWP Job Briefing. This RWP Job Briefing must be conducted and documented at the work location and include the means by which on-track safety will be provided, and instructions for the on-track safety procedures to be followed.

Each roadway worker must be informed any time the on-track safety procedures change during a work period. Such information must be given to all roadway workers before the changes are effected. In the case of an emergency, any roadway worker who cannot be notified in advance must be notified as soon as possible. Each roadway worker must be instructed to leave the fouling space until on-track safety is re-established by evidence of an additional RWP Job Briefing. An RWP Job Briefing for on-track safety shall be deemed complete only after each roadway worker has acknowledged understanding of the on-track safety procedures and instructions presented.

Lone Worker

Each Lone Worker shall communicate at the beginning of each duty period with a qualified designated employee, to advise him or her of his or her planned itinerary and the procedures he or she intends to use for on-track safety. Each lone worker must properly complete the RWP Job Briefing Form. When communication channels are disabled, the RWP Job Briefing shall be conducted as soon as possible after the beginning of the work period when communications are restored.

RWP Job Briefing Form

All "Safety" and "RWP" job briefing form books will be retained for a calendar month or until all forms are utilized and then submitted to the Chief Engineer's office for review.

PROCEDURES

317. GENERAL KEOLIS ON-TRACK SAFETY PROCEDURES (214.317)

Keolis has adopted a program that contains specific rules for protecting roadway workers that comply with provisions of CFR 214.319-214.337.

319. GENERAL KEOLIS WORKING LIMITS (214.319)

Working limits established on controlled track shall conform to the provisions of Part 321 Exclusive Track Occupancy, Part 323 Foul Time or Part 325 Train Coordination. Working limits established on non-controlled track shall conform to the provisions of Part 327 Inaccessible Track. Working limits established on controlled or non-controlled track by the use of flagman must conform to the provisions of Part 351 training and qualifications of flagman. Working limits established under any procedure must, in addition, conform to the following provisions:

A. Only one qualified roadway worker who is providing on-track protection shall establish and have control of the working limits on any one segment of track.

B. All affected roadway workers shall be notified before working limits are released for the operation of trains. Working limits shall not be released until all affected roadway workers have either left the track or have been afforded on-track safety through train approach warning in accordance with Part 329.

321. EXCLUSIVE TRACK OCCUPANCY (214.321)

The following rules govern the establishment of exclusive track occupancy on controlled tracks. Exclusive track occupancy may be established by Form D line 4 (removing a track from service), Form D line 5 (obstructing an in service track), a C&S employee taking local control of an interlocking, or a Form D line 2 authority issued for a track car to operate in both directions. The dispatcher/operator shall make a written or electronic record in accordance with NORAC Rules 160 through 169 when issuing a Form D.

☐ PROTECTION WHEN FOULING OR WORKING ON A TRACK; PROTECTION IN UNFORESEEN CONDITIONS (NORAC RULE 132)

Trains must be fully protected against any known conditions 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:

A. If the work involves on-track equipment or will disturb the track structure so that it would be unsafe for Normal speed, Form D line 4 or Form D line 5 must be issued.

B. If the work will not disturb the track structure, the Dispatcher may verbally authorize foul time in accordance with 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 Rule 130, paragraph (b) “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.

☐ MAINTENANCE WORK — WORK TRAINS (SI 132-S1)

After obtaining permission from the Dispatcher, work trains, single unit rail grinding track cars may perform work without a Form D Line 4, but only under the conditions listed below. Movements will be governed by Interlocking Rules:

A. The work is confined to interlocking limits,

AND

B. No other MW equipment is involved,

AND

C. The track structure is not disturbed to the extent that a restriction on movements would be required if it were necessary to clear the work train.

If necessary to make shifting movements outside of interlocking, the applicable rules will apply.

☐ 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 Rule 134, paragraph (a). “Movement in the Direction of the Out-of-Service Track.”

B. Addresses

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 at the following physical features:

1. A Timetable location
2. A whole mile post

3. A track barricade or flagman at a designated location

D. Operations 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 the out-of-service limits.

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 shown or read 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 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. He must notify the Dispatcher or Operator of any restrictions necessary for the safe passage of trains,

AND

2. He must 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 Rule 261, permission must include direction of movement.

☐ PROTECTION OF OUT-OF-SERVICE TRACKS(SI 133-S1)

When a track governed by block signal system or interlocking rules is removed from service by Form D Line 4, the Foreman receiving the Form D must ensure at least one of the following safeguards prescribed below are taken prior to beginning work. When C&S assistance will be required as prescribed below, the Foreman must request this assistance prior to obtaining the Line 4.

Exception: When work is performed exclusively with the following equipment, the safeguards prescribed below are not required—Work Trains, Sperry Cars, and Rail Grinding Trains.

When a crew is working under the authority of a Form D Line 4, the employee-in-charge must ensure signals governing movement toward the work area must be set to display their most restrictive aspect by one of the following methods:

If not working within a crossing circuit, apply shunting device(s). The employee-in-charge must verify that the track is shunted by either contacting the Train Dispatcher who must observe the shunt on the model board, or by contacting a qualified signal employee.

Or,

If working within a crossing circuit at crossings equipped with automatic gates, remove the plug from the gates normal position in the emergency control box at the crossing for the track to be protected.

Or,

Open or reverse a hand throw switch at the work site. This option does not apply to hand throw crossovers, or when switch is within a crossing circuit.

Or,

If no cars or equipment are stored on the siding at the work site, remove the derail at that siding, if available. This option does not apply when the siding is within a crossing circuit.

A qualified signal employee must be contacted if none of the above methods can be used, or if working within interlocking limits, or if shunting equipment is to be used within a crossing circuit.

A non-shunting barricade consisting of two crossed ties or a non-shunting barricade sign may be substituted for a shunting barricade when only a portion of a track within interlocking limits is removed from service. When only a portion of a track within interlocking limits is removed from service, a C&S employee must approve the location of the barricades and must remain available to establish desired routes, if necessary.

Prior to cancellation of Form D, the employee-in-charge must ensure that all supplemental protection has been removed.

☐ ADMITTING ADDITIONAL EQUIPMENT (SI 133-S2)

When authorizing additional equipment to enter an out-of-service track, the Foreman named on Form D Line 4 must advise the employee in charge of the additional equipment of all conditions affecting movement on the out-of-service track, including the location of barricades, roadway workers, equipment and the condition of the track structure.

The Foreman must ensure that any barricades removed to admit the additional equipment are reapplied, and their shunt verified, as soon as the equipment enters the work area.

Track cars and trains that clear an out-of-service track must obtain permission from the Foreman before re-entering the out-of-service track.

☐ PROTECTION BY STOP SIGNS (NORAC RULE 135)

Whenever Form D line 5 is to be issued in accordance with Item 1 of Rule 132, “Protection When Fouling or Working on a Track,” the following procedures will apply. The “Working Limits” refers to the area designated by Form D line 5 or Bulletin Order, which must be identified by a whole mile post, station, or other physical characteristic location.

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 Working Limits are published by Bulletin Order, issuance of Form D to approaching trains is not required.

B. Required Use of 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.

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

A train must not enter the Working Limits until permission has been received from the employee in charge, unless a Working Limits Speed Limit Sign is displayed. The employee in charge must not authorize a train to enter the Working Limits or display a Working Limits Speed Limit Sign until he has been assured that the track through the Working Limits is not obstructed, and all roadway workers have been notified. 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.

Must operate at Restricted Speed.

Must not leave the Working Limits without proper authority.

E. Interlocking Switches within Working Limits

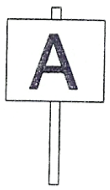
Dispatchers or Operators controlling interlocking switches within the Working Limits must line such switches for movements within the Working Limits and must apply blocking devices to the controls of those switches. These blocking devices must not be removed without permission of the employee in charge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

Before displaying a signal for a train to divert into the Working Limits, the Dispatcher must confirm with the Engineer that the train has permission to enter the Working Limits.

Trains in the Working Limits when Bulletin Order Item Becomes Effective

Any train that is in the Working Limits when the Bulletin Order item becomes effective may continue at Normal Speed through the Working Limits. The Dispatcher must not issue Form D line 5 until the limits are clear of movements that are not part of the work group.

☐ APPROACH SIGN (NORAC RULE 297)



Name: Approach Sign

Indication: 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.

Aspect: Black letter “A” on a yellow background

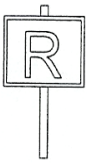
☐ STOP SIGN (NORAC RULE 297A)

Name: Stop Sign

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

Aspect: The word “STOP” in white letters on a red background

☐ WORKING LIMITS RESUME SPEED SIGN (NORAC RULE 297C)



Name: Working Limits Resume Speed Sign

Indication: Resume speed after the entire train has passed the Working Limits Resume Speed Sign.

Aspect: Green letter “R” on a white background with a green border

☐ LOCAL CONTROL OF INTERLOCKINGS BY C&S EMPLOYEE (SI 601-S1)

F. General Requirements

C&S employees may take local control of interlocking to assist the Dispatcher when remote control is lost, or to expedite switch, signal or track circuit testing. C&S Employees who take local control must be qualified on the operating rules and the Operation of the local control panel (i.e., operation of switch controls, signal controls, and blocking devices). They must be qualified on the physical characteristics of the interlocking if they will be providing exclusive track occupancy protection for employees working within interlocking limits.

C&S employees must obtain permission from the Dispatcher before taking local control and must follow the Dispatcher's instructions while the interlocking is in local control. Except in an emergency, permission to take local control must not be given when a track within interlocking limits is out of service by Form D line 4.

G. Blocking Devices Applied or Ordered Applied by Dispatcher

C&S employees must obtain permission from the dispatcher before removing any blocking devices applied by, or ordered applied by the Dispatcher. C&S employees must keep a written record of these blocking devices to ensure compliance. The record must include the identification of each blocking device, the time it was applied, and the time the Dispatcher authorized its removal. Once control of the interlocking is returned to the Dispatcher, the C&S employee must draw an "X" through the blocking device, then retain the record for seven days.

H. Displaying Signals

The C&S employee must not display a signal for a train movement unless authorized by the Dispatcher, and the two employees have discussed the position of all switches involved in the route.

I. Permission by Stop Signals

While an interlocking is in local control, the Dispatchers must not issue Rule 241 permission for a train to pass a Stop Signal, they must contact the C&S employee in control of the interlocking to confirm the position of all switches involved in the route, and to advise the C&S employee of the move to be made.

J. Roadway Worker Protection

In the application of Keolis and Federal roadway worker protection rules, a C&S employee who has local control of an interlocking may, with permission of the Dispatcher, use opposing Stop Signals to establish exclusive track occupancy protection for employees working within interlocking limits (not between interlockings). In such case, the C&S employee must not display any signal, or give control of the interlocking back to the Dispatcher, until all employees authorized to foul the track have cleared the affected track(s), or the employees have established alternate protection. The C&S employee must not authorize any work that involves on-track equipment or will disturb the track structure so that it would be unsafe for Normal Speed.

☐ FORM D LINE 2 TO OPERATE IN "BOTH" DIRECTIONS (NORAC RULE 809)

A track car with Form D authority to operate in "both" directions may operate in either direction. When authority for movement in "both" directions is authorized, the Dispatcher must not authorize additional movements within the specified limits.

Note: A "both" directions Form D line 2 authority may be used to provide protection for track car occupants that have to get out of their track car to perform minor repairs or inspections, to the front or rear of the track car. A "specified" direction Form D line 2 authority provides protection against opposing movements only, since following movements are permitted at Restricted Speed. Protection to the rear must be provided by Watchman, Individual Train Detection when appropriate, or Foul Time.

323. FOUL TIME (214.323)

The following rules govern the establishment of working limits on controlled tracks, using Foul Time. See NORAC Rule 140 and related special instructions.

Foul Time may be issued only by the Dispatcher, or Operator when authorized by the Dispatcher.

Before issuing or authorizing foul time, the Dispatcher must determine that no trains have been authorized to occupy the track segment to be fouled. In signaled territory, the Dispatcher must ensure

that Stop Signals have been displayed and blocking devices applied to controls of switches and signals leading to the affected track. When trains are to be held at a TBS where blocking devices cannot be applied, the Dispatcher must issue Form D line 13 instructing the Operator to hold trains clear of the affected track.

Permission to foul the track must include the following information:

1. Title and name of employee receiving foul time,
2. Track designation,
3. Track limits (between/at),
4. Time limits.

The receiving employee must repeat this permission and the Dispatcher or Operator must then confirm it before the Foul Time becomes effective.

Once protection has been provided, it must be maintained until the employee who was granted the foul time has reported clear of the track.

☐ FOUL TIME (SI 140-S1 & SI 140-S2)

In the application of Rule 140, Foul Time information must be recorded by the Dispatcher or Operator issuing the foul time, and the employee requesting the foul time. The employee must use the prescribed form. This form must be retained for 7 days. If other employees are going to foul, then they must be shown or read a copy of the foul time.

When a track governed by block signal system or interlocking rules is fouled and foul time is issued by the Train Dispatcher for time limits greater than 30 minutes, the Foreman receiving the foul time must ensure at least one of the following safeguards prescribed below are taken prior to beginning work. When C&S assistance will be required as prescribed below, the Foreman must request this assistance prior to obtaining foul time.

When a crew is working under the authority of foul time for more than 30 minutes, the employee-in-charge must ensure signals governing movement toward the fouling area must be set to display their most restrictive aspect by one of the following methods:

1. If not fouling within a crossing circuit, apply shunting device(s). The employee-in-charge must verify that the track is shunted by either contacting the Train Dispatcher who must observe the shunt on the model board, or by contacting a qualified signal employee.
   Or,
2. If fouling within a crossing circuit at crossings equipped with automatic gates, remove the plug from the gates normal position in the emergency control box at the crossing for the track to be protected.
   Or,
3. Open or reverse a hand throw switch at the fouling site. This option does not apply to hand throw crossovers, or when switch is within a crossing circuit.
   Or,
4. If no cars or equipment are stored on the siding at the work site, remove the derail at that siding, if available. This option does not apply when the siding is within a crossing circuit.

A qualified signal employee must be contacted if none of the above methods can be used, or if fouling within interlocking limits.

Prior to releasing foul time, the employee-in-charge must ensure that all supplemental protection has been removed.

☐ 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.

A. Secure Flagging Equipment

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

B. 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.

C. 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.

D. 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.

E. 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 Rule 130, paragraph (b), “Flag Protection Against Trains on Adjacent Tracks.”

325. TRAIN COORDINATION (214.325)

Working limits established by a roadway worker through the use of train coordination shall comply with the following requirements:

A. Working limits established by train coordination shall be within the segments of controlled track or tracks upon which only one train holds exclusive authority to move.

B. The roadway worker who establishes working limits by train coordination shall communicate with a member of the crew of the train holding the exclusive authority to move, and shall determine that:

1. The train is visible to the roadway worker who is establishing the working limits.
2. The train is stopped.
3. Further movements of the train will be made only as permitted by the roadway worker in charge of the working limits while the working limits remain in effect, and
4. The crew of the train will not give up its exclusive authority to move until the working limits have been released to the train crew by the roadway worker in charge of the working limits.

327. INACCESSIBLE TRACK (214.327)

The following rules govern the establishment of working limits on non-controlled tracks by making the track physically inaccessible to trains.

A. Working limits on non-controlled track shall be established by rendering the track within working limits physically inaccessible to trains and equipment at each possible point of entry by one of the following physical features:

1. A flagman with instructions and capability to hold all trains and equipment clear of the working limits.
2. A switch or derail with RWP flag aligned to prevent access to the working limits and secured with an M/W lock and RWP tag by the roadway worker in charge of the working limits.
3. A discontinuity in the rail that precludes passage of trains or engines into the working limits.
4. Working limits on controlled track that connects directly with the inaccessible track, established by the roadway worker in charge of the working limits on the inaccessible track.

5. A remotely controlled switch aligned to prevent access to the working limits and secured by the control operator of such remotely controlled switch by application of a locking or blocking device to the control of that switch, when:
    - The control operator has secured the remotely controlled switch by applying a locking or blocking device to the control of the switch;
    - The control operator has notified the roadway worker who has established the working limits that the requested protection has been provided; and
    - The control operator is not permitted to remove the locking or blocking device from the control of the switch until receiving permission to do so from the roadway worker who established the working limits.

B. Trains and roadway maintenance machines within working limits established by means of inaccessible track shall move only under the direction of the roadway worker in charge of the working limits, and shall move at restricted speed.

C. No operable locomotives or other items of on-track equipment, except those present or moving under the direction of the roadway worker in charge of the working limits, shall be located within working limits established by means of inaccessible track.

☐ INACCESSIBLE TRACK (NORAC RULE 141)

Roadway workers may establish working limits on a track not controlled by the Dispatcher or Operator, by making the track inaccessible at each possible point of entry through one of the following means:

A. A switch or derail aligned to prevent access to the working limits and secured with an effective securing device, and properly tagged. The effective securing device and tag may be removed only by direction of the employee in charge of the working limits.

B. 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.

C. A disconnected rail.

D. A flagman assigned to hold trains and equipment clear of the working limits. Movements within working limits may be made only with permission of the employee in charge.

☐ RWP FLAGS AND TAGS (SI 36-S3)

RWP flags and tags are used in conjunction with certain Roadway Worker Protection (RWP) safety procedures. An RWP flag is a reflectorized orange flag with black letters “RWP.” An RWP tag is a fluorescent orange tag with the words “RWP PROTECTION. DO NOT REMOVE” on one side, and “DO NOT REMOVE. EMPLOYEE AT WORK” on the reverse side.

RWP flags are erected at derails applied to prevent entrance to track segments fouled by roadway workers to make the derail more visible to approaching trains.

RWP tags are fastened to locks or other securing devices applied to switches or derails positioned to prevent entrance to track segments fouled by roadway workers, to prevent unauthorized employees from removing the Securing device.

RWP tags are also attached to the controls of unattended engines that are located within a track segment fouled by roadway workers, to prevent unauthorized movement. Engines with an RWP tag attached to the controls must not be moved.

RWP flags and tags may be removed only by the roadway worker in charge of the working limits, or by another roadway worker who has been authorized by the roadway worker in charge of the working limits.

328. RWP PROCEDURES FOR WORKING ON OR ABOUT TRACKS IN TERMINALS, YARDS AND MECHANICAL FACILITIES

RWP and Blue Signal protection cannot be shared; Engineering and Mechanical Departments must provide their own protection.

Responsibility

The RWP employee in charge will be responsible for ensuring the following procedures are in effect prior to starting work.

Procedures

A. WORKING ON NON-CONTROLLED TRACKS WITH NO ROLLING EQUIPMENT OR LOCOMOTIVES IN WORKING LIMITS

1. The RWP employee in charge will notify the Mechanical Foreman and/or Yardmaster of the intended work. A Job Briefing covering the type and duration of work to be performed and the type of on-track protection to be used must be conducted prior to starting work.
2. The RWP employee in charge will set the derails in the derailing position, and lock and tag with effective RWP securing device. The RWP employee will erect an RWP flag at the derail.
3. If a derail and RWP flag are not available, then the switches leading into the working limits must be lined, tagged with an appropriate RWP tag and locked with an effective securing device to prevent entry. Where applicable, remotely controlled switches must be lined to prevent entry, with appropriate blocking device applied by the Train Dispatcher or Control/Block Operator.
4. If none of the above on-track protection is available, protection must be established by the use of Flagman (preventing entry to working limits) or Watchmen (warning of movement) providing the minimum 15 second clear time.
5. Before on-track protection can be removed, all employees, tools, equipment, and materials must be clear of working limits. The RWP employee in charge will then remove their effective securing devices, and notify the Mechanical Foreman and/or Yardmaster that the working limits are clear.
6. When working at platform level or below platforms, and not fouling the track, the four foot foul space must be maintained in order to be able to work without RWP protection.

B. WORKING ON NON-CONTROLLED TRACKS WITH ROLLING EQUIPMENT/ LOCOMOTIVES OCCUPYING THE WORKING LIMITS. (Procedures in Paragraph A., #1 through #6 in effect with the following additions)

1. Mechanical Foreman will ensure that any rolling equipment not attached to a Locomotive(s) is secured against movement (hand brakes, chocks, etc.).
2. Locomotive(s) with or without cars attached with no train crew present will be secured by the RWP employee in charge, utilizing RWP tags attached to the Operator's console on controlling unit(s).
3. Locomotive(s) with or without cars attached with train crew present will be secured by the RWP employee in charge utilizing the following:
    - Request engineer to apply engine brake and or train brake.
    - Request train crew to set hand brakes.
    - Attach RWP tags to the Operator's Console on controlling unit(s).
4. The RWP employee in charge will apply all RWP effective securing devices. If working in conjunction with Mechanical Department employees, the Mechanical Foreman will apply all Blue Signal protection securing devices. If a multiple locking device is available, both departments must use it. This applies to both derails and switches. If remotely controlled switch protection is required, both departments must contact the Train Dispatcher or Control/Block Operator for protection.

5. Before rolling equipment in the working limits can be moved, the RWP employee in charge and the MECHANICAL Foreman and/ or Yardmaster must ensure that all employees, tools, equipment, and materials are clear of the working limits. All effective securing devices must be removed before releasing the track to the Yardmaster or Train Dispatcher/Control/Block Operator. Before work is permitted again on the same track, the working limits must be reestablished and effective securing devices reapplied.

C. WORKING ON CONTROLLED TRACKS IN TERMINALS

1. An RWP Job Briefing covering the type and duration of work to be performed and the type of on-track protection to be used must be conducted prior to starting work. Work on controlled tracks in terminals must be protected by the use of Train Approach Warning, Foul Time, or Exclusive Track Occupancy. Existing Blue Signal Protection must be removed.

D. If rolling equipment is present, work will be performed as stated in Section B, Items 1, 2 & 3.

1. Before equipment can be moved, Engineering Department employee in charge must ensure all personnel and equipment are clear prior to returning control of track.

329. TRAIN APPROACH WARNING PROVIDED BY GANG WATCHMEN/ADVANCE WATCHMEN

Roadway workers who are required to work on and foul any track must be afforded train approach warning as a means of on-track safety unless working limits have been established on the fouled track.

Roadway workers must be provided train approach warning in a time sufficient to secure all equipment and be in the clear a minimum of 15 seconds prior to the arrival of a train at the point where walking, working, and/or fouling (See Appendix A).

Roadway workers using train approach warning for on-track safety shall maintain a position that will enable them to receive warning by gang watchmen or advance gang watchmen.

Gang watchmen and advance gang watchmen must:

A. Give their entire attention to watching for trains, engines, and maintenance machinery, and warning roadway workers and must not perform, even momentarily, any other duties.

B. Stay in position until instructed, by the employee in charge, that on-track safety is no longer necessary or relieved by another watchman, in place and ready to warn of approaching trains. If for any reason a gang watchman or advance gang watchman must leave their position, they must first provide warning to clear all roadway workers from the tracks.

C. Be relieved, rotated, or provided a 15-minute break every 2 to 4 hours.

D. Communicate the approach of train or equipment by sounding an audible warning with a whistle or an air horn and/or tapping the roadway worker. Warning by raising an orange disc by day or an approved light by night at arm's length above the head may be used by watchmen in addition to the audible and/or tapping warning and must be used by advance watchmen. When signaling by orange disc or approved light and it is safe to resume work, lower the orange disc or approved light horizontally at arm's length toward the point of work, hold this position momentarily, then lower to rest position.

E. Acknowledge and/or repeat train approach warning received from other watchmen or advance watchmen. If train approach warning is not acknowledged, advance watchmen will attempt to stop train by using red flag or fuses provided for that purpose.

F. Be stationed at a point where they will have the best view of approaching trains or equipment in both directions and a sufficient distance from the roadway worker or work group to prevent attention from being distracted by the work, but not further than their warning whistle can be distinctly heard.

G. Signal the approach of train or equipment by tapping the roadway worker when noisy machinery or equipment is in use or outside noise may interfere with detecting train approach warning.

H. Gang watchmen and advance gang watchmen must have the equipment listed below when providing advanced warning for 7 or more workers. This equipment must be in good working order and readily accessible. Warning whistles must be worn on the outside of clothing. All Foreman and Assistant Foreman must also be equipped and wear on the outside of their clothing a warning whistle.

1. Equipment: Warning whistle, orange disc, air horn, high visibility safety attire, and a red flag.

I. When working in a tunnel or in poor visibility a white light and 2 red fusees must be carried as well.

Gang watchmen providing advance warning for less than 7 workers must be equipped with a warning whistle and high visibility safety attire as a minimum. Additional equipment may be necessary depending on working conditions.

330. INCIDENTAL CROSSING OF TRACKS

A roadway worker may cross tracks under the following circumstances:

- The sole purpose is to get from one side of the tracks to the other side.
- No work or inspection is allowed during the crossing.
- Do not cross tracks closer than 10 feet from standing equipment.
- Stop and look both ways before crossing and take the shortest route. When crossing more than one track, stop and look both ways before crossing each track.

334. RADIO REQUIREMENTS

☐ RADIO TRANSMISSION AND RECEPTION PROCEDURES

Before transmitting by radio, the employee must listen to ensure that the channel on which he intends to transmit is not in use.

All transmissions must be repeated by the employee receiving them except:

A. Transmissions used in yard switching operations.

B. Those transmissions that do not contain any information, instruction or advice that could affect the safety of a railroad operation.

Employees must ensure that radio contact with the proper persons has been made and must not take action until certain that all conversation with them has been heard, understood and acknowledged.

Any radio communication that is not fully understood or completed in accordance with the requirements of these rules shall not be acted upon and shall be treated as though not sent. Emergency communications are an exception.

An employee receiving a radio call must acknowledge the call immediately unless doing so would interfere with safety.

☐ REQUIREMENTS FOR TRACK CARS AND ROADWAY WORKERS

Each employee assigned to provide on-track safety for roadway workers and each lone worker must have immediate access to a working radio. When immediate access to a working radio is not available, the employee must be within hearing range of a radio capable of monitoring transmissions from train movements in the vicinity. These requirements do not apply when the work location is physically inaccessible to trains, or has no through traffic or traffic on adjacent tracks during the period when roadway workers are present. See NORAC Rule 702.

335. ON-TRACK SAFETY PROCEDURES FOR ROADWAY WORK GROUPS

No Keolis employee and/or contractor who is a member of a roadway work group shall foul a track unless on-track safety is established.

No roadway worker who is a member of a roadway work group shall foul a track without having been informed by the roadway worker responsible for the on-track safety of the roadway work group that on-track safety is established.

Roadway work groups engaged in a common task performing maintenance or construction consisting of 7 or more workers, not fouling adjacent tracks, and not using on-track self-propelled equipment or coupled equipment shall be provided with a form of on-track protection on the adjacent track(s) that are not included within working limits.

Whenever it becomes necessary to clear for the passage of a train, track car or roadway maintenance machine on an adjacent track. The following will apply:

1. All work must stop.
2. Roadway workers will clear all main line tracks to the predetermined place of safety.
3. Roadway workers will be vigilant in their observation of the passing of the train, track car or roadway maintenance machine.

336. ON-TRACK SAFETY PROCEDURES FOR WORKERS WORKING WITH ON-TRACK EQUIPMENT IN ADJACENT TRACK TERRITORY (214.336)

On-track safety is required for each adjacent controlled track when a roadway work group with at least one of the roadway workers on the ground is engaged in a common task with on-track, self-propelled equipment or coupled equipment on an occupied track. The required on-track safety shall be established through Working Limits or Train approach warning provided by watchmen/lookouts and as specifically described in this section.

A. Special Circumstances Arising in Territories With at Least Three Tracks If an Occupied Track is Between Two Adjacent controlled tracks:

If an occupied track has two adjacent controlled tracks, and either adjacent controlled track has movements authorized or permitted at a speed over 25 MPH (or over 40 MPH for one or more passenger trains or other passenger on-track equipment movements, the procedures in paragraph (B) of this section apply.

B. Procedures for adjacent-controlled-track movement over 25 MPH (or over 40 MPH if passenger movements)

If a train or other on-track equipment is authorized to move on an adjacent controlled track at a speed greater than 25 MPH, or a speed greater than 40 MPH for a passenger train or other passenger on-track equipment movement, each roadway worker in the roadway work group that is affected by such movement must comply with the following procedures:

1. Ceasing work and occupying a predetermined place of safety

   Except for the work activities listed in section D below, each affected roadway worker shall cease all on-ground work and equipment movement that is being performed and occupy a predetermined place of safety upon receiving either a watchman/lookout warning or, a notification that the roadway worker in charge intends to permit one or more train or other on-track equipment movements through the working limits on the adjacent controlled track.

2. Resuming work

   a. An affected roadway worker may resume on-ground work and equipment movements (on or between the rails of the occupied track or on one or both sides of the occupied track only after the trailing end of all trains or other on-track equipment moving on the adjacent controlled track has passed and remains ahead of that roadway worker.

   b. If the train or other on-track equipment stops before its trailing end has passed all affected roadway workers in the roadway work group, the work to be performed (on or between the rails of the occupied track or on one or both sides of the occupied track) ahead of the trailing-end of the train or other on-track equipment on the adjacent controlled track may resume only:

      i. If on-track safety through train approach warning has been established on the adjacent controlled track, or:

      ii. After the roadway worker in charge has communicated with a member of the train crew or the on-track equipment operator and established that further movements of such train or other on-track equipment shall be made only as permitted by the roadway worker in charge.

C. Procedures for adjacent-controlled-track movements 25 MPH or less (or 40 MPH or less if passenger movements)

If a train or other on-track equipment is authorized or permitted to move on an adjacent controlled track at a speed of 25 MPH or less, or at a speed of 40 MPH or less for a passenger train or other passenger on-track

equipment movement, each roadway worker in the roadway work group that is affected by such movement must comply with the procedures listed in paragraph (B) of this section, except the equipment movement on the rails of the occupied track and on-ground work performed exclusively between the rails (*i.e., not breaking the plane of the rails)* of the occupied track may continue, provided that no on-ground work is performed within the areas 25 feet in front of and 25 feet behind any on-track, self-propelled equipment or coupled equipment permitted to move on the occupied track.

D. ***Discretion of roadway worker in charge.*** Nothing in this policy prohibits the roadway worker in charge from establishing on-track safety on one or more adjacent tracks as he or she deems necessary consistent with both the purpose and requirements of this policy.

E. Exceptions to the requirements for adjacent controlled track

No on-track safety is required for adjacent controlled track if one of the following conditions is met:

1. A roadway work group with all of the on-ground roadway workers performing work on a side of occupied track with no adjacent track.
2. A roadway work group with all of the on-ground roadway workers performing work on side with one or more adjacent tracks which the closest track has working limits equal to or greater than the limits established on the working track and no movements are permitted within working limits by the roadway worker in charge.
3. A roadway work group with all of the on-ground roadway workers performing work on side with one or more adjacent tracks, provided that there is an inter-track barrier between the occupied track and the closest adjacent track on that side.
4. One or more roadway workers is performing maintenance or repairs alongside a roadway maintenance machine or coupled equipment, provided the equipment effectively prevents the worker from fouling the adjacent controlled track and the work is being performed on the side with no adjacent track. If adjacent track exists, on-track protection is to be established on adjacent track.
5. A hi-rail vehicle (other than a catenary maintenance tower vehicle) or other rail bound equipment being used for inspection purposes, provided that such hi-rail vehicle or other rail bound equipment is not coupled to one or more railroad cars. In accordance with § **214.315(a)**, where multiple hi-rail vehicles being used for inspection are engaged in a common task, the on-track safety job briefing shall include discussion of the nature of the work to be performed to determine if adjacent-controlled-track on-track safety is necessary.

337. ON-TRACK SAFETY PROCEDURES FOR LONE WORKERS (214.337)

A lone worker retains an absolute right to use on-track safety procedures other than individual train detection if he or she deems it necessary, and to occupy a place of safety until other forms of on-track safety can be established.

A lone worker who fouls a track while performing routine inspection or minor correction may use individual train detection to establish on-track safety. A lone worker using individual train detection for on-track safety while fouling a track may not occupy a position or engage in any activity that would interfere with that worker's ability to maintain a vigilant lookout for and detect the approach of a train moving in either direction.

Individual train detection must not be used inside the limits of a manual interlocking, a controlled point, or a remotely controlled hump yard facility.

Individual train detection may be used when the lone worker is able to visually detect the approach of a train moving at the maximum authorized speed on that track, and move to a previously determined place of safety, not less than 15 seconds before the train would arrive at the location of the lone worker (see Appendix A, Speed Distance Chart). The place of safety to be occupied by a lone worker upon the approach of a train may not be on a track, unless working limits are established on that track.

Individual train detection must not be used where power-operated tools or roadway maintenance machines are in use within the hearing of the lone worker; and where the ability of the lone worker to hear

and see approaching trains and other on-track equipment is impaired by background noise, lights, precipitation, fog, passing trains, or any other physical conditions. See Appendix D which lists identified Hot Spots that can be used as a guide to help identify where ITD may not be used.

A lone worker using Individual Train Detection for On-Track Safety while fouling a track may not occupy a position or engage in any activity that would interfere with that worker's ability to maintain a vigilant lookout for and detect the approach of trains and/or equipment moving in either direction.

A lone worker who uses individual train detection to establish on-track safety shall first complete the written Statement of On-track Safety. The Statement shall designate the limits of the track for which it is prepared and the date and time for which it is valid. The statement shall show the maximum authorized speed of trains within the limits for which it is prepared, and the sight distance that provides the required warning of approaching trains. The lone worker using individual train detection (see Appendix B, Keolis Individual Train Detection Statement) to establish on-track safety must carry the Statement of On-track Safety and provide it when requested. This statement must be retained for seven days.

339. AUDIBLE WARNING FROM TRAINS (214.339)

Keolis operating rules require that the locomotive whistle be sounded, and the locomotive bell be rung, by trains approaching roadway workers on or about the track. Such audible warning shall not substitute for on-track safety procedures.

340. MISCELLANEOUS SIGNALS

The following rules prescribe miscellaneous signals and signaling equipment that govern the approach of trains to roadway workers.

☐ HAND SIGNALS (NORAC RULE 13)

Hand signals must be given from a point where they may be plainly seen, in a manner that can be understood, and sufficiently ahead of time to permit the train to comply. Any object waved violently by anyone on or near the track is a signal to stop. Hand signals, with or without a flag or lamp, must be given as follows:

- STOP Swung horizontally at right angle to the track.

341. ROADWAY MAINTENANCE MACHINES (214.341)

Keolis has included in its on-track safety program specific provisions for the safety of roadway workers who operate or work near roadway maintenance machines. These provisions address:

A. Operators' training and qualification.

B. General and specific safety procedures for each piece of equipment.

C. Job Briefing between machine operators and roadway workers assigned to work near or on roadway maintenance machines.

D. When two or more pieces of equipment are working together, they must maintain a fifteen (15) foot clearance between each other unless otherwise instructed by the employee in charge.

E. While equipment is in working mode, roadway workers must stay fifteen (15) feet from its working area unless otherwise specified by the operator.

F. Operate equipment, machinery, or vehicle on track not exceeding the speed indicated below. If the track on which the equipment is being operated is restricted by Timetable Bulletin or Train Order, such equipment must not be operated in excess of the speed so specified:

Rail Detectors, Geometry Cars and Other Maintenance of Way Equipment as Authorized in the Operating Rules: 50 MPH or not to exceed Maximum Freight Train Speed

Rail Detectors, Geometry Cars and Other Maintenance of Way Equipment as Authorized in the Operating Rules: 50 MPH or not to exceed Maximum Freight Train Speed	
Highway Rail Cars: Passenger Type: Forward Backward	 50 MPH or not to exceed maximum freight train speed 10 MPH
Truck Type: Forward Backward	 30 MPH 10 MPH
All Other Track Cars: Forward Backward	 30 MPH 10 MPH
All types: Through crossovers and turnouts, and when passing standing trains on adjacent tracks	10 MPH
When pulling or pushing track cars or trailers	10 MPH
When operating through self-guarded frogs	1 MPH; make sure all wheels are properly on the rail.
When diverting over spring frogs	STOP; then proceed at 1 MPH; make sure all wheels are properly on the rail.
When being passed by a train on an adjacent track	STOP

It must be understood that the above speeds are for ideal operating conditions only. Speeds must be reduced when weather, rail, or other conditions require.

A. Instructions for the safe operation of each roadway machine shall be provided and maintained with each machine large enough to carry the instruction document.

1. No roadway worker shall operate a roadway maintenance machine without having been trained and qualified or under the direct supervision of a qualified employee.
2. No roadway worker shall operate a roadway maintenance machine without having complete knowledge of the safety instructions applicable to that machine.
3. Supervision shall not assign roadway workers to work near roadway machines unless the roadway worker has been informed of the safety procedures applicable to persons working near the roadway machines and has acknowledged full understanding.

B. Roadway maintenance machine components shall be kept clear of trains and equipment passing on adjacent tracks. Where operating conditions require roadway maintenance machine components to foul an adjacent track, the employee in charge must establish working limits on the track to be fouled. Train movement will not be authorized or permitted until roadway maintenance machine component no longer fouls the track.

Precautions indicated opposite the following situations must be observed before operating equipment, machinery or vehicle over highway grade crossing.

Situation At Crossings	Precautions to be Taken

Situation At Crossings	Precautions to be Taken
All crossings	Approach prepared to stop and sound warnings.
Crossings at which vehicle is stopped or near which an approaching vehicle is so close that there is not sufficient time to safely move car or equipment over the crossing.	Stop equipment, machinery or vehicle and allow vehicle to pass over the tracks, if necessary, signaling the driver to do so.
Crossings protected by attended gates.	See that gates are lowered.
Crossing protected by watchman. See that stop signal for highway traffic is displayed by watchman.	
Crossing protected by automatic gates, light or bell. Stop equipment, machinery or vehicle and assign an employee, one on each side of the tracks, if necessary, to take position where they will have a clear view of highway in both directions. Stop highway traffic with red flag or light and signal when it is safe to move car or equipment over crossing and continue to protect the crossing until all of the equipment or machinery has passed over it. (Stop one-man vehicle clear of such crossing and move over after making sure there is time to safely complete movement.)	
Crossing that is unprotected or is protected only by crossing sign, and it is impossible to see highway traffic a sufficient distance to insure that vehicles are not too close to crossing. Stop equipment, machinery or vehicle and assign employees as necessary on each side of tracks to take a position where they will have a clear view of highway in both directions. Stop highway traffic with red flag or light and signal when it is safe to move car or equipment over crossing. (Stop one-man vehicle clear of such crossing and move over after making sure there is time to safely complete movement.)	

342. ROADWAY WORKER PROCEDURES FOR UNATTENDED TRACK CARS AND OTHER M/W ON-TRACK EQUIPMENT

Controlled Track

A. Obtain permission to leave the equipment unattended from the train dispatcher or control operator in charge of the track.

B. Chain and lock wheels of first and last piece of equipment to rail.

C. Apply a shunting barricade at one or both ends of the stored equipment, depending on access to the track. This applies to all equipment except the TLM.

D. Interlocking Exception use a non-shunting barricade when equipment will be stored within interlocking limits.

Non-Controlled Track

E. Obtain permission from Yardmaster, Back Shop Foreman or employee in charge of track to leave the equipment unattended and secured properly.

F. Make the track inaccessible by physically preventing the entry and movement of train and rolling stock at all entry switches with effective securing device.

G. Chain and lock wheels of first and last piece of equipment to rail.

H. Install, tag and lock portable derails with RWP sign (flag) in the derailing position on the side away from controlled track.

I. Derail should not be less than 50' from end or ends of equipment.

TRAINING AND QUALIFICATIONS

343. TRAINING AND QUALIFICATIONS, GENERAL (214.343)

A. Keolis supervision must not assign an employee to perform the duties of a roadway worker and no employee shall accept such assignment, unless that employee has received Roadway Worker Protection training associated with the assignment to be performed, and that employee has demonstrated the ability to fulfill the responsibilities for on-track safety that are required of an individual roadway worker performing that assignment.

B. Keolis will provide Roadway Worker Protection training to all roadway workers once every calendar year.

C. Railroad employees other than roadway workers, who are associated with on-track safety procedures, and whose primary duties are concerned with the movement and protection of trains, shall be trained to perform their functions related to on-track safety through the training and qualification procedures prescribed by the operating railroad for the primary position of the employee, including maintenance of records and frequency of training.

D. Keolis Engineering Department Training Group shall maintain written or electronic records of each roadway worker qualification in effect. Each record must include the name of the employee, the type of qualification made, and the most recent date of qualification. These records shall be kept available for inspection and copying by the Federal Railroad Administration during regular business hours.

345. RWP TRAINING FOR ALL ROADWAY WORKERS (214.345)

Keolis RWP training of all roadway workers includes, as a minimum, the following:

A. Not fouling a track unless it is necessary in the performance of duty.

B. Making sure that protection is provided before fouling a track.

C. Recognition of railroad tracks and the space around them within which on-track safety is required.

D. Know the functions and responsibilities of various persons involved with on-track safety procedures.

E. Understand and agree with on-track safety instructions given by persons performing or responsible for on-track safety functions.

F. Understand signals given by gang watchman and advance gang watchman, and the proper procedures for clearing tracks after receiving a train approach warning from a gang watchman or advance gang watchman.

G. Be aware of the hazards associated with working on or near railroad tracks, including review of safety rules and procedures.

H. Understand and participate in an RWP Job Briefing prior to performing any task or when conditions change after an initial RWP Job Briefing.

347. RWP TRAINING AND QUALIFICATION FOR LONE WORKERS (214.347)

Each lone worker shall be trained and qualified by Keolis to establish on-track safety in accordance with the requirements of this section and must be authorized to do so by the railroad that operates train operations on those tracks.

A. The training and qualification for lone workers shall include:

1. Detection of approaching trains and prompt movement to safety upon their approach.
2. Determination of the distance along the track at which trains must be visible in order to provide warning time (see Appendix A).
3. Keolis Rules and Procedures for Individual Train Detection (ITD) and establishment of working limits.
4. On-track safety procedures to be used in the territory on which the employee is to be qualified and permitted to work alone.
5. Physical Characteristics.

B. Initial and periodic qualification of a lone worker shall be evidenced by demonstrated proficiency to the Engineering Department Training Group by successfully achieving a passing grade on the RWP exam.

349. RWP TRAINING AND QUALIFICATION FOR WATCHMEN/ADVANCE

C. The training and qualification for roadway workers assigned the duties of watchmen/lookouts shall be as follows:

1. Employee must have a minimum of 90 days of railroad service.
2. Employee must receive field training and demonstrate proficiency in the proper watchman/lookout procedures to the documented approval of an RWP qualified manager. The proper procedures include the ability to detect and recognize approaching trains, determine the distance along the track at which trains must be visible to provide proper warning times, effectively warn employees of approaching trains, and know the rules and procedures for train approach warning.

D. Records of all qualifications issued or denied, will be maintained by the Engineering Department Training Group.

351. RWP TRAINING AND QUALIFICATION FOR FLAGMEN (214.351)

E. The training and qualification for roadway workers assigned the duties of flagmen shall include:

1. Operating Rules of the railroad pertaining to giving the proper stop signals to trains and holding trains clear of working limits.
2. Physical Characteristics

F. Initial and periodic qualification of a flagman shall be evidenced by demonstrated proficiency to the Engineering Department Training Group.

353. RWP TRAINING AND QUALIFICATIONS FOR ROADWAY WORKERS RESPONSIBLE FOR PROVIDING ON-TRACK SAFETY (214.353)

G. Roadway workers who provide for on-track safety through the establishment of working limits by exclusive track occupancy (Exclusive Track Occupancy, Part 321), the use of foul time (Foul Time, Part 323) or the assignment, placement and supervision of gang watchmen (Train Approach Warning, Part 329) must have, as a minimum, the following qualifications:

1. Operating Rules
2. Physical Characteristics
3. Demonstrated proficiency to the Engineering Department Training Group by successfully achieving a passing grade on the RWP exam.

H. Records of all annual qualifications issued or denied, will be maintained by the Engineering Department Training Group.

355. RWP TRAINING AND QUALIFICATION FOR OPERATORS OF ROADWAY MAINTENANCE MACHINES (214.355)

I. The training and qualification of roadway workers who operate roadway maintenance machines shall include:

1. Procedures to prevent a person from being struck by the machine when the machine is in motion or operation.
2. Procedures to prevent any part of the machine from being struck by a train or other equipment on another track.
3. Procedures to provide for stopping the machine short of other machines or obstructions on the track.
4. Procedures for each machine that the operator is expected to operate.

J. Initial and periodic qualification of a roadway worker to operate roadway maintenance machines shall be evidenced by demonstrated proficiency.

360. HOT SPOTS

Definition: Hot spots are locations on the railroad where additional Roadway Worker Protection is required! These physical locations include a variety of conditions.

A. Curves with limited visibility.

B. Tunnels with limited and close clearance.

C. Track locations with heavy outside noise.

D. Track locations with limited or no clearance.

E. Bridge locations with limited or no clearance.

F. Track locations with limited or no visibility due to obstructions.

G. Refer to Appendix D: Hot Spot Locations for the list of identified hot spots. There may be other unidentified hot spot locations. Roadway workers are responsible for determining if their work location is a hot spot.

Potential Other Unidentified Hot Spots

H. Bridges — overhead, undergrade and movable — walkways, hand railings, and clearing bays.

I. Curves — simple (sharp/high degree of curvature) reverse, compound, broken back, and vertical (grades).

J. Roadbed — fill section (elevated) and cut section (rock cut).

K. Tunnels — manholes (cut outs) and bench walls (ladders and handholds).

L. Fencing — right of way, intertrack and high level platforms.

M. Overbuilts — manholes (cut outs) and clearing bays.

Hot Spot Examples

N. When a lone worker requires positive protection or a watchmen to work safely at a given location.

O. When a roadway work group (gang) requires positive protection or advance gang watchman to work safely.

P. When you have less than 15 seconds to clear the work limits (location) safely.

Q. When your working limits (location) require more than 15 seconds to clear safely because of limited or no clearance areas nearby.

Appendix A: Speed Distance Chart

Miles per Hour	Feet per Second	Feet in 15 Seconds	Miles per Hour	Feet per Second	Feet in 15 Seconds	Miles per Hour	Feet per Second	Feet in 15 Seconds
10	14.7	220	65	95.3	1430	120	176	2640
15	22	330	70	102.7	1540	125	183.3	2750
20	29.3	440	75	110	1650	130	191	2865
25	36.7	550	80	117.3	1760	135	198	2970
30	44	660	85	124.7	1870	140	205	3075
35	51.3	770	90	132	1980	145	213	3195
40	58.7	880	95	139.3	2090	150	220	3300
45	66	990	100	146.7	2200	155	227	3410
50	73.3	1100	105	154	2310	160	235	3520
55	80.7	1210	110	161.3	2420	170	250	3740
60	88	1320	115	169.6	2530			

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Appendix B: Keolis Individual Train Detection Statement

Individual Train Detection Statement Illustration (side 1)

Keolis Individual Train Detection Statement

Date _____ Time _____

Subdivision _____

Supervisor _____

_____

Territory _____

Track _____ From _____ To _____

Speed _____ *Distance _____

Track _____ From _____ To _____

Speed _____ *Distance _____

Track _____ From _____ To _____

Speed _____ *Distance _____

Track _____ From _____ To _____

Speed _____ *Distance _____

Other Locations

_____

_____

_____

Speed _____ *Distance _____

Checklist

- ☐ Conducted Job Briefing
- ☐ Listed All Work Locations
- ☐ Discussed Protection Used
- ☐ I Will Comply with Roadway Worker Regulations

Signature _____

In order to use Individual Train Detection, Keolis requires this permit be completed, discussed with a designated employee and carried on your person. (A lone worker retains an absolute right to use on-track safety procedures other than individual train detection if he or she deems necessary, and to occupy a place of safety until another form of on-track safety can be established.)

Individual Train Detection Statement Illustration (side 2)

214.335 On-track Safety Procedures for Lone Workers

A. Only routine inspection or minor correction
B. Right to use other on-track safety procedures
C. Requirements for individual Train detection
    1. Trained, qualified, and designated
    2. Same as A.
    3. Only outside manual interlocking or controlled point
    4. Able to visually detect Train 15 seconds before train arrives
    5. Not permitted where power tools or on track machines are in use
    6. Not permitted where hearing or vision is impaired
D. Must clear entirely or into protected area
E. Cannot engage in any activity that interferes with ITD
F. Complete permit and discuss with designated employee

*15 Second Sight Distance

160 mph –	3520 ft	150 mph –	3300 ft
140 mph –	3075 ft	135 mph –	2970 ft
125 mph –	2750 ft	110 mph –	2420 ft
90 mph –	1980 ft	80 mph –	1740 ft
60 mph –	1320 ft	50 mph –	1100 ft
30 mph –	600 ft	15 mph –	330 ft

Comments _____

_____

_____

_____

_____

Appendix C: Territories

Amtrak New England Division Shoreline

- Attleboro Line (NEC)

Keolis MBTA Commuter Rail Services

- New Hampshire Route Main Line (Lowell Line)
- Wildcat Branch
- Western Route Main Line (Haverhill Line)
- Eastern Route Main Line (Newburyport Line)
- Gloucester Branch (Gloucester Line)
- Fitchburg Route Main Line (Fitchburg/South Acton Line)

Boston Commuter Rail Old Colony

- Plymouth Branch (Plymouth Line)
- Kingston Branch (Kingston Line)
- Middleboro Main Line (Middleboro Line)

Boston Commuter Rail South Side

- Dorchester Branch (Fairmount Line)
- Stoughton Branch (Stoughton Line)
- Franklin Branch (Franklin Line)
- Needham Branch (Needham Line)
- Framingham/Worcester Line

Appendix D: Hot Spots

The following is a list of Hot Spots, it is only a guide, the employee in charge is responsible for identifying if the working area is a hot spot.

COMMUTER RAIL NORTH SIDE		
New Hampshire Main Line(Lowell Line)		
Mile Post	**Physical Location**	**Conditions**
0.0 to 1.0	North Sta. To Tower A Interlocking	Noise
1.13 to 1.90	Hi-Line Bridge/ Mystic Jct. Curve Yard 10 Lead	Limited Visibility
2.24 to 2.37	Walnut St. to Medford St. Curve	Limited Visibility
2.57 to 3.06	Central St. to Somerville Jct. Curve	Limited Visibility
4.0 to 5.0	Tufts Curve	Limited Visibility
6.0 to 7.4	North end Wedgemere Sta. - Reverse Curve	Limited Visibility
9.0 to 9.6	Montvale Yard to Freight Track (Gravel Pit)	Noise (Rock Crusher)
9.8 to 10.1	North end Montvale Yard Curve	Limited Visibility
10.45 to 11.65	Woburn SW. to Mishawum Sta. - Reverse Curve	Limited Visibility
12.25	Mishawum Int. Curve	Limited Visibility
13.0 to 14.0	Curve	Limited Visibility
15.45 to 16.0	Old Sweetheart Crossing Curve	Limited Visibility
16.7 to 17.5	Silver Lake Reverse Curve	Limited Visibility
20.03 to 21.8	Shop Int. to Billerica Sta. - Reverse Curve	Limited Visibility
23.3 to 23.79	South Lowell Int. to Concord River Bridge Curve	Limited Visibility
25	CP FBY Int. to Lowell Sta. (ST Yard)	Noise (Frt. Make ups)
25.9	CP Flo 1 & 2 track. Lowell Sta. To Western Ave. Curve	Limited Visibility
Wildcat Branch		
Mile Post	**Physical Location**	**Conditions**
15.20 to 15.40	Wilmington Int. to Main St. Crossing Curve	Limited Visibility
17.5	Salem St. Crossing to CPW-WJ Curve	Limited Visibility
Western Route Main Line (Haverhill Line)		
Mile Post	**Physical Location**	**Conditions**
0.0 to 2.0	North Sta. To Reading JCT Curves	Noise/ Limited Visibility
2.20 to 5.70	Reading JCT to Fells Int. Curve (Orange Line)	Noise & Close Clearance
6.50 to 7.20	Wyoming Sta. Reverse Curve	Limited Visibility
8.0 to 8.3	Greenwood St. Crossing Curve	Limited Visibility
8.5 to 9.4	Forest St. x-ing to Broadway St. x-ing Curve	Limited Visibility
10.1 to 10.59	Prospect St. x-ing to Winn St. - OH Bridge Curve	Limited Visibility
12.3 to 12.6	East of Mineral St. OH Bridge Curve	Limited Visibility
13.4 to 13.6	Curve	Limited Visibility
16.7 to 17.7	Salem St. Curve	Limited Visibility
19.0 to 19.5	Curve	Limited Visibility
19.57 to 21.2	CPF-LJ Reverse Curve	Limited Visibility
23.55 to 23.86	CPF-FY Int. to Frye Village Curve	Limited Visibility
24.74 to 25.65	South Union St. to CPF-AS ST Yard Lawrence	Noise
25.65 to 26.3	CPF-AS to Lawrence Sta. Curve	Limited Visibility

27.0 to 27.92	Reverse Curve	Limited Visibility
28.0 to 28.70	Curve	Limited Visibility
29.7 to 30.0	Curve	Limited Visibility
30.88 to 31.67	Curve	Limited Visibility
32.05 to 32.68	Layover Fence and Curve	Close Clearance
32.68	Merrimac River Bridge & Parallel Road Bridge	Noise/ Limited Visibility
33.06 to 33.40	Factory Curve	Noise/ Limited Visibility
34.00 to 34.45	Curve	Limited Visibility
34.90 to 35.16	Curve	Limited Visibility
35.5 to 35.9	Curve	Limited Visibility
36.0 to 36.1	Curve	Limited Visibility
Eastern Route Main Line (Newburyport Line)		
Mile Post	**Physical Location**	**Conditions**
1 to 3	Reading JCT to Everett JCT Curve & Grade	Limited Visibility
3	East and Everett Jct. Curve	Limited Visibility
3.8	Second St. Chelsea - X-ing Curve	Limited Visibility
5	Broadway to Eastern Ave. Curve	Limited Visibility
6.28	East Boston Branch Winthrop Ave. Curve	Limited Visibility
10.1 to 10.59	West Lynn Curve	Limited Visibility
13.3 to 14.15	Bridges & Curves	Limited Clearing/ Visibility
14.5	Pickman Park Curve	Limited Visibility
15.8 to 17.0	Salem Tunnel to Northey Point Road	Noise
17.33	March St. Bridge	Limited Clearing
18.7	Beverly Jct. Road	Noise
25.63	Appletons Bridge	Limited Clearing
26.11	Underhill Bridge	Limited Clearing
27.4 to 27.8	Bagley Int. to Washington Street - Crossing Curve	Limited Visibility
28.2 to 29.5	Liberty Street to Mitchell's Crossing Curve	Limited Visibility
36.06	Bridge 36.06 State US1 Curve	Limited Visibility
Gloucester Branch (Gloucester Line)		
Mile Post	**Physical Location**	**Conditions**
18.9 to 19.6	Beverly JCT Eliot St. Curve	Limited Visibility
20.7 to 21.0	Paradise Cove	Limited Visibility
21.62 to 22.0	Curve	Limited Visibility
24.30 to 25.0	Bridges & Curves	Limited Clearance/ Visibility
26	Curve	Limited Visibility
26.3 to 27.1	Curves	Limited Visibility
29.0 to 30.0	Curves	Limited Visibility
30.55	Curves	Limited Visibility
31.20 to 32.0	Curves	Limited Visibility
32.28	Route 128 Bridge Curve	Close Clearance
33.0 to 33.6	Curves	Limited Visibility
34.0 to 35.0	Curves	Limited Visibility

Fitchburg Main Line (Fitchburg/South Acton Line)		
Mile Post	**Physical Location**	**Conditions**
0.0 to 1.32	North Station to Bridge 1.32	Noise/ Limited Visibility
1.4	Swift Int.	Noise
2.0 to 3.0	Curve	Limited Visibility
3.4 to 3.5	Porter Square Tunnel Curve	Limited Visibility
4.5 to 5.0	West Cambridge Curve	Limited Visibility
6.3 to 7.5	West of Belmont Sta. Curve	Limited Visibility
9.17 to 9.70	Curve	Limited Visibility
11.22 to 12.0	Roberts Sta. Curve	Limited Visibility
12.5 to 12.69	Central Mass Overhead Bridge Curve	Limited Visibility
14.3 to 14.7	Conant Road Curve	Limited Visibility
15.6 to 15.9	Tower Road to Wayland Road Curve	Limited Visibility
16.0 to 16.2	Curve West of Great Road	Limited Visibility
19.7 to 20.5	Concord Crossover Curve	Limited Visibility
24.5 to 25.0	South Acton Interlocking Curve	Limited Visibility
25.6	Martin Street Curve	Limited Visibility
27.19	Mass. Ave. Curve	Limited Visibility
27.62 to 27.83	Curve	Limited Visibility
28.6	Curve	Limited Visibility
29.6	Curve	Limited Visibility
31.1	Very Fine Plane	Noise
33.0 to 33.72	CPF-WL Ford Plant Yard Curve	Noise/ Limited Visibility
35.75 to 36.0	CPF-AY	Noise
39.2 to 40.1	Shirley Station to Slab City	
40.4 to 40.9	Curve East North East Cement	Noise
41.38 to 41.90	Keating Cement & Curve	Noise/ Limited Visibility
42.17	Curve	Limited Visibility
43.0 to 44.5	Derby Curve to Lawrence Street, Bridge	Limited Visibility
45	North Leominster Grade	Limited Visibility
46.3	Curve	Limited Visibility
47.60 to 48.0	Curve	Limited Visibility
48.50 to 50.0	Fitchburg Sta. Curve	Limited Visibility

COMMUTER RAIL SOUTH SIDE		
Plymouth Branch (Plymouth Line)		
Mile Post	**Physical Location**	**Conditions**
11.5 to 12.0	Pearl St. to Plain St. Curve	Limited Visibility
12.4 to 13.6	Curve	Limited Visibility
14.8 to 15.0	Randolph St. to Pond St. Curve	Limited Visibility
15.6 to 15.7	Main St. OH Bridge Curve	Limited Visibility
16.6 to 17.1	Shapiro Crossing Curve	Limited Visibility
18.6 to 18.8	Central Street Undergrade Bridge Curve	Limited Visibility
20.7 to 20.9	Curve	Limited Visibility
22.7 to 23.3	Franklin St. to North Washington St. Curve	Limited Visibility
24.5 to 24.6	Main St. Curve	Limited Visibility
29.3 to 29.6	Curve	Limited Visibility
30.8 to 31.0	Grove St. OH Bridge Curve	Limited Visibility
32.0 to 32.3	Pembroke St. OH Bridge Curve	Limited Visibility
33.4 to 33.9	Summer St. Curve	Limited Visibility
33.8	Seaside & Kingston Bridge Route 3 Overhead	Limited Visibility/Noise
Kingston Branch (Kingston Line)		
Mile Post	**Physical Location**	**Conditions**
33.7 to 33.9	Seaside Int. No. #1 & No. 2 Track Curves	Limited Visibility
33.9 to 34.7	Tunnels & Curves	Limited Visibility/ Clearance
Middleboro Main Line (Middleboro Line)		
Mile Post	**Physical Location**	**Conditions**
1.0 to 11.3	Cabot Int. to Pearl Int. Curves	Noise/ Close Clearance
11.3 to 11.9	Pearl St. to Plain St. Curve	Limited Visibility
12.3 to 12.7	Route 37/Washington St. OH Bridge Curve	Limited Visibility
13.25 to 13.5	South of Randolph Industrial SW Curve	Limited Visibility
15.1 to 16.1	Garvey SW to South St. Reverse Curve	Limited Visibility
16.9 to 17.2	Spring St. Curve	Limited Visibility
18.1 to 18.5	Howard St. to Montello Sta. Curve	Limited Visibility
18.87 to 19.3	Ames St. to East Battle St. on Bridge Curve	Limited Visibility
20.7 to 21.0	Lebaron Foundry OH	Noise
21.35 to 21.7	Perkins St. OH Bridge Curve	Limited Visibility
24.1 to 24.5	Westdale Interlocking Curve	Limited Visibility
25.05 to 25.2	West St. to E/W Bridgewater Line	Limited Visibility
25.6 to 25.7	Stanley Interlocking Curve	Limited Visibility
26.1 to 26.9	Wall St. to Broad St. Reverse Curve	Limited Visibility
27.8 to 28.5	Bridgewater Sta. To Laurel St.	Limited Visibility
33.7 to 33.9	Mid Interlocking	Limited Visibility
34.4 to 34.8	Pilgrim Interlocking Curve	Limited Visibility
34.9 to 35.9	Pilgrim to Ocean Spray SW	Limited Visibility

Greenbush Branch (Greenbush Line)		
Mile Post	**Physical Location**	**Conditions**
10.20 to 10.97	Adams Jct. to Shipyard Curve	Limited Visibility
11.43 to 12.22	Allen to Commercial St./Gibbons St. Curves	Limited Visibility/Close Clearance/Grades
12.52 to 13.09	Curve	Limited Visibility
13.33 to 13.60		Limited Visibility
14.00 to 14.30	Curve	Limited Visibility
14.56 to 14.98	Wharf St. to Commercial St./Suwanee St. Curve	Limited Visibility
15.85 to 17.80	Fort to Rt. 3A OHBR MP 17.8 Curve	Limited Visibility/Close Clearance/Tunnel
19.00 to 19.78	MP 19 to North Main St. Curves	Limited Visibility
21.50 to 23.49	MP 21.5 to Country Way Curve	Limited Visibility
24.00 to 24.32	MP 24 to Hollet St. Curve	Limited Visibility
24.70 to 26.62	MP 24.7 to First Parrish Rd. Curves	Limited Visibility/Grade
26.85 to 27.64	Parich to Greenbush Curves	Limited Visibility
Dorchester Branch (Fairmount Line)		
Mile Post	**Physical Location**	**Conditions**
226.50 to 226.28	Uphams Corner Curve	Limited Visibility
225.89 to 225.70	Curve	Limited Visibility
225.25 to 224.9	Curve	Limited Visibility
224.86 to 224.30	Curve	Limited Visibility
223.92 to 223.23	Talbot Ave. Bridge to Norfolk St. Bridge	Limited Visibility/ Clearing
223.05 to 222.80	Morton St. Station Curve	Limited Visibility/ Clearing
222.49 to 222.25	Curve	Limited Visibility
222.19 to 222.00	Curve	Limited Visibility
221.55 to 221.25	Curve	Limited Visibility
221.05 to 220.80	Fairmont Curve/Fence	Limited Visibility/ Clearing
220.60 to 220.45	Fairmont Curve/Fence Dana	Limited Visibility/ Clearing
220.00 to 219.00	Curve	Limited Visibility
Stoughton Branch (Stoughton Line)		
Mile Post	**Physical Location**	**Conditions**
15.54 to 15.75	Curve	Limited Visibility
16.0 to 16.16	Curve	Limited Visibility
16.55 to 17.0	Curve	Limited Visibility
17.6 to 18.11	Curve	Limited Visibility
18.6 to 18.8	School St. to Porter St. (downtown traffic) Curve	Noise/ Limited Visibility
19.0 to 20.0	Stoughton Sta. To Brook St.	Limited Visibility
Franklin Branch (Franklin Line)		
Mile Post	**Physical Location**	**Conditions**
10.36 to 10.97	Readville Curve (Chestnut St. Overhead)	Limited Visibility
11.94 to 12.50	Islington Curve	Limited Visibility
13.50 to 13.80	Norwood Curve	Limited Visibility

13.80 to 14.30	Railroad Ave. Crossing Curve	Limited Visibility
15.19 to 15.36	Winslow's Curve	Limited Visibility
19.10 to 19.60	Walpole Curve	Limited Visibility
20.60 to 20.70	Walpole Curve	Limited Visibility
23.40 to 24.43	Norfolk Curve/ Grade	Limited Visibility
24.80 to 25.08	City Mills Curve	Limited Visibility
26.90 to 27.30	Franklin Curve	Limited Visibility
28.10 to 29.30	Curve	Limited Visibility
29.40 to 30.02	Forge Park Curve	Limited Visibility
Needham Branch (Needham Line)		
Mile Post	**Physical Location**	**Conditions**
5.20 to 5.30	Forest Hills Curve	Limited Visibility
5.60 to 6.50	Curves	Limited Visibility
7.30 to 7.72	Curves	Limited Visibility
7.90 to 8.40	West Roxbury Curve	Limited Visibility
8.87 to 9.02	Curve	Limited Visibility
11.95 to 12.30	Needham Jct. Curves	Limited Visibility
13.02 to 13.20	Curve	Limited Visibility
13.7 to 13.8	CP Heights to CP Land (Layover Rd. Traffic)	Noise/Limited Visibility
Framingham/Worcester Line		
Mile Post	**Physical Location**	**Conditions**
1.29 to 1.74	Back Bay Tunnel	Tunnel
2.5	Yawkey Station	Limited Visibility/ Noise
8.1	Newtonville Station	Limited Visibility/ Noise
10.2	Auburndale Station	Limited Visibility
12.5	Wellesley Farms Station	Limited Visibility
13.5	Wellesley Hills Station	Limited Visibility
14.7	Wellesley Square Station	Limited Visibility
19.9	West Natick Station	Limited Visibility
21.4	Framingham Station	Limited Visibility
27.5	Southboro Station	Limited Visibility
33.9	Westboro Station	Limited Visibility
36.6	Grafton Station	Limited Visibility
Attleboro Line (NEC) (Responsible for Stations Only)		
Mile Post	**Physical Location**	**Conditions**
229.1 to 223.5	So. Sta. To Forest (So. West Corr.)	Limited Visibility/ Close Clearance
220.7	Hyde Park Sta. (Intertrack Fence)	Limited Clearing
212.7	Canton Junction Sta. (Intertrack Fence)	Limited Clearing
210.76	Sharon Sta. (Intertrack Fence)	Limited Visibility/ Clearing
204.1 to 203.9	Mansfield Sta. (Intertrack Fence)	Limited Clearing
197.6 to 197.1	Attleboro Sta. (Intertrack Fence)	Limited Clearing

Appendix E: RWP Job Briefing Documentation Form

Keolis Commuter Services

RWP JOB BRIEFING DOCUMENTATION FORM

Safety Briefing on front must be filled out before starting any work

Date:	Time:	Gang Number(s):	Work Location:
Description of Work Assignment:			

- Maximum Track Speed _____ Is this track a: ☐ *Controlled Track* **OR** ☐ *Non-Controlled Track?*
- On-track safety is provided by:
  - □ Train Approach Warning
  - □ Working Limits by Exclusive Track Occupancy (Form D Line 4 or 5)
    - □ Barricades up? □ Yes □ No
  - □ Working Limits by Foul Time
  - □ Working Limits by Train Coordination
  - □ Working Limits by Inaccessible Track
  - □ Individual Train Detection
  - □ Form D Line 2
- For Working Limits:
  - □ Working Limits are from _____to_____ on track(s) _____
  - □ Time limit _____
  - □ Supplemental protection needed? ❒ Yes ❒ No
  - □ If yes, what is the supplemental protection? _____
- For Train Approach Warning:
  - □ Is this location considered a hot spot? ❒ Yes ❒ No
  - □ If yes, why? ❒ Visibility ❒ Noise ❒ Clearance
  - □ If yes, what extra precautions have been taken?_____
  - □ Do all watchmen have the proper gear? ❒ Yes ❒ No

    Remember a whistle/horn test must be done after the watchmen are in place.
- Are there adjacent tracks? ❒ Yes ❒ No, if yes, will it require adjacent track protection? ❒ Yes ❒ No
- Will equipment be fouling adjacent track? ❒ Yes ❒ No, If yes, what on track protection will be established on adjacent track? _____
- For Individual Train Detection:
  - □ Conducted RWP Job Briefing with_____
  - □ Completed Individual Train Detection Statement
- Where will we clear? _____
- Have operators of work equipment been reminded that they must discuss with workers the dangers of the equipment, spacing requirements and speeds? ❒ Yes ❒ No ❒ N/A
- Are there any adjacent tracks? If yes, what is the additional protection? _____
- Has everyone been reminded that no one is permitted to foul a track until he/she fully understands and agrees that the type of protection being provided complies with Keolis's Roadway Worker Protection Program?

Signature of Employee in Charge below confirms that all employees have acknowledged full understanding of the work, all safety concerns have been addressed, the on-track safety provided is fully comprehended and there are no good faith challenges.

Employee in Charge of providing on-track protection:_____

This Form must be retained for 10 working days.
After 10 days, this form must be submitted to the Chief Engineer's Office

Keolis 3044 back **Revised 10/20/14**