CANADIAN NATIONAL RAILWAY

U.S. OPERATING RULES, No. 15

Effective 0001 on

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USOR

GENERAL RULES

A. Safety

Safety and a commitment to obey the rules are the most important elements in performing duties. If in doubt, the safe course must be taken.

B. REPORTING AND COMPLYING WITH INSTRUCTIONS

Employees will report to and comply with instructions from supervisors who have the proper jurisdiction. Employees will comply with manager-issued instructions applying to their duties.

C. ALERT AND ATTENTIVE

Employees must be alert and attentive when performing their duties, taking care to prevent injury to themselves or others.

Watch your step, and always be alert of your walking conditions. Be on the lookout for ties, rail, or other railroad related equipment laying or staged in your work areas. Ensure you pay close attention to your ground conditions (e.g ., uneven ballast, mud, or ice) and transitions from bridge walkway ends to the ballast.

Note: When a bridge walkway end is found with an embankment drop of 24 inches or more in the transition from bridge to ballast. A GBO will be issued to identify the “Watch your Step” location.

D. REPORTING INJURIES AND DEFECTS.

CN is committed to the complete and accurate reporting of all accidents, incidents, injuries, and occupational illnesses arising from the operation of the railroad. All employees are required to report all accidents, unsafe conditions, incidents, injuries or occupational illnesses to a supervisor prior to leaving company property, as required by CN Rules.

The harassment or intimidation of any employee, or retaliation against any employee, calculated to discourage or prevent such person from receiving proper medical treatment or from reporting an accident, unsafe condition, incident, occupational illness, or injury, will not be permitted, or tolerated. Any employee who has sustained injury or occupational illness and believes that action was taken to prevent or discourage him or her from receiving proper medical treatment or reporting the accident, unsafe condition, incident, occupational illness, or injury may report that occurrence in accordance with CN’s Internal Control Plan PolicyStatement and Complaint Procedure, which can be found under “Policies and Guidelines” in the Employee Self Service section of ePortal.

Off-duty injuries that will impair the work performance of an employee, in any way, must be reported to the proper authority as soon as possible.

Threatening conditions including, but not limited to, mechanical failures, defects in track, bridges, or signals, must be reported immediately, (preferred train handling methods, refer to ABTH 317). Any practices or episodes of misconduct or negligence that may threaten the safety of employees, impair the operation of trains, or may affect the interest of the railroad must also be reported by the first available means of communication.

Before trying to use any track or structure endangered by flood, fire, or other cause, qualified employees must make a personal inspection and take all precautions to avoid an accident.

E. HOURS OF SERVICE

Covered employees must:

- be familiar and comply with the Federal Hours of Service Act,
- not work more hours than is permitted without proper authority, and
- notify the proper authority early enough to be relieved before they exceed the hours of service.

Train and engine service employees must record the following information when preparing hours of service documents:

- actual time off duty up to 99 hours and 59 minutes;
- actual time on duty, regardless of job's assigned hours;
- the beginning and endings times waiting for transportation and spent in transportation (i.e., dead-head) from the point of duty assignment, or from point relieved from an assignment to point of going off duty (i.e., limbo time);
- mode of transportation must be indicated (e.g., train, cab, bus, motor vehicle, or personal auto).

F. ALERT TO TRAIN MOVEMENT

Employees must at any time, on any track and in any direction, expect the movement and remain clear of trains, engines, cars or other moveable equipment. Be aware of structures or obstructions creating close clearances. Close clearance locations are:

- Identified by Close Clearance Signs
- Specified in Timetable Special Conditions, or
- Other locations when visually identified

When a close clearance exists on the same side of equipment where the employee is riding, as identified above, employees are prohibiting from riding equipment in these locations and must stop and dismount the equipment prior to passing. From the ground, employees must also remain clear of these locations. Riding equipment on the other side, if no close clearance exists, is permitted.

G. DRUGS AND ALCOHOL

The use or possession of alcoholic beverages while on duty, on company property, or while occupying facilities paid for or furnished by the company is prohibited. Employees must not have any measurable alcohol in their breath or in their bodily fluids when reporting for duty, while on duty, or while on company property.

While on duty or on company property, the use or possession of intoxicants, over-the-counter or prescription drugs, narcotics, controlled substances, or medication that may adversely affect safe performance is prohibited. Employees must not possess, sell, use, or have in their bodily fluids any illegal drug or controlled substance while on or off duty.

Employees covered by the Federal Hours of Service Act must consent to breath, urine, and blood testing and the release of information required in connection with these tests, under circumstances specified in federal regulations (49 CFR Part 219). When there is evidence of violation of this rule, the employee will be immediately removed from service.

H. FURNISHING INFORMATION AND CONDUCT

Dishonesty, disloyalty, insubordination, willful neglect, gross carelessness, desertion from duty, making false reports or statements, concealing facts concerning matters under investigation, immoral conduct, including but not limited to conduct of any employee leading to the conviction of any felony, and serious violations of the law are prohibited. Employees must not be quarrelsome, vicious or enter into disputes, arguments, or fights with any person, regardless of provocation. Any incidents are to be reported to the proper authority.

As a CN employee, you are expected to be familiar with, read and be governed by the Company's Code of Business Conduct and policies, and understand how they apply to you and your job. Company policies are accessible on CN's electronic portal (ePortal) in the Employee Self-Service section under Policies and Guidelines.

Any employee convicted of a felony or other serious violation of the law must notify their supervisor no later than the end of the first day immediately following the day the employee received notice of the conviction.

Employees must not withhold information, or fail to provide all the facts to those authorized to receive information regarding accidents, injuries, rule violations, breaches of company security, or unusual events. This duty to furnish information includes but is not limited to accident and injury reports, recorded statements, full cooperation in injury investigations, and safety rules violations. Employees must also take all reasonable measures to protect and preserve evidence where it is within their control and ability to do so.

I. DUTY-REPORTING OR ABSENCE

Employees must report for duty at the designated time and place with the necessary equipment ready to perform their duties. Employees subject to call must provide necessary contact information to those required to call them and be available to accept the call.

Employees must not engage in other business, be absent, allow others to fill their assignment, or exchange duties with others, unless authorized to do so.

Employees must immediately give change of address and telephone number to their supervisor and those required to call them to duty. Employees must call for their mail regularly and answer correspondence promptly.

Employees are required to work regularly and without excessive layoffs or absences. An employee who is permitted to lay off is expected to mark up promptly within 24 hours or less of the mark-off time, unless the employee requests and receives permission to be off for a specific period of time longer than 24 hours.

J. ACCIDENTS, INJURIES, AND WITNESSES.

1) Protect the movement of cars and immediately advise the Transportation Supervisor. However, if operating outside of yards, advise the Rail Traffic Control Center.

   Note: When notified of a yard incident, the Transportation Supervisor is responsible for immediately notifying the Rail Traffic Control Center.

2) As required, communicate with the CN Police Communication Center (1-800- 465-9239). If deemed necessary, notify directly the municipal responders (e.g., Fire, Police, Emergency Medical Services (EMS)) by calling 911. EMS and ambulance shall be notified when there are injuries or suspected injuries and the fire department shall be notified if there is a potential for, or an actual fire.

3) Keep clear of the incident scene and take immediate action to warn the public and other employees. Take reasonable precautions to avoid exposure to or contact with blood or other remains from the accident.

4) Avoid any exposure to smoke or fumes, and keep all open flames, including cigarettes, pipes, etc. away from the incident scene.

5) If the locomotive is not directly involved in the incident, cut the movement as close as possible to the incident location, and remove the remaining cars to a safe distance.

6) If a fire or vapor cloud is present and/or dangerous goods/hazardous materials are known to be involved, employees shall move to a safe distance up wind. Bring the shipping papers and emergency response information.

   Determine the status of the train from this point and advise the appropriate contact.

Before approaching the cars, identify the products involved by referencing any of the following:

- train journal / consist (confirm accuracy with latest AEI reading and records of cars picked up/set off en route),
- shipping documents / Waybill,
- switch lists and any other available documentation,
- emergency response information (i.e., Emergency Response Guidebook), and
- appropriate resources to obtain critical information (e.g., SRS-HAZ, or MSDS).

Once safe to do so, CN employees shall secure information of any possible witnesses to the incident.

K. EQUIPMENT INSPECTION

Employees must observe the condition of equipment and tools they use. Defective equipment must be reported to the proper authority, and not used.

If an injury occurs as a result of an accident involving equipment or tools, the employee in charge must make an immediate inspection, and report it to the proper authority. The inspection must be made at the first

opportunity, before equipment leaves the location where the accident occurred. A qualified employee must make a further inspection of the equipment or tools.

L. COMMUNICATION AND ELECTRONIC DEVICES

The use of railroad supplied or personal electronic devices must not interfere with operating employees covered by the Federal Hours of Service law during performance of safety related duties. This rule does not apply to railroad radios.

Electronic devices may be used to respond to an emergency involving railroad operations. They also may be used in place of the radio, when radio failure occurs, however all radio rules will apply to electronic devices.

When operating company vehicles or off-track equipment, hands-free technology must be utilized unless vehicle is stopped.

Railroad Supplied Electronic Devices

Railroad operating employees may use the digital storage and display function of a railroad supplied electronic device to refer to a railroad rule, special instruction, timetable, or other directive if that use does not interfere with any employee's performance of safety related duties.

Except as listed above, the use of railroad supplied electronic devices by Engineers is prohibited:

- on a moving train,
- when any crew member is working on the ground, or riding equipment during a switching operation, or
- during any time when another employee of the railroad is assisting in the preparation of the train, i.e., utility employees.

The use of railroad supplied electronic devices by other employees is prohibited:

- On a moving train or on-track equipment, unless authorized for company business, and
  - (a) a safety briefing is conducted, and all agree it is safe to do so, or
  - (b) within the body of a passenger train or business car.
- Outside the locomotive cab or on-track equipment, unless
  - (a) not fouling the track, and
  - (b) all crew members agree that it is safe to use the device.
- May use railroad supplied electronic devices to send or receive work related information with:
  - Railroad supervisors.
  - Railroad customers.
  - Railroad RTC's.
  - Railroad customer service employees.
  - Other railroad employees as necessary in the performance of their duties.

Railroad operating employees must not use a railroad supplied electronic device for purposes other than which it was intended or while:

- On the ground foul of any track or in control of moving equipment during switching operations.
- Riding rolling equipment, other than in the cab of a locomotive or other on track equipment.
- Verbally obtaining or releasing mandatory directives when railroad radio communication is available.

Other Electronic Devices

1) Railroad Supplied Devices may be used to take a photograph of a safety hazard or violation of a rail safety law, regulation, order, or standard, provided
   - it is only used for business purposes,
   - the camera is turned off immediately after the documentation has been made, and

- if used in the cab of a moving train, it is not used by the locomotive engineer.

2) Stand-alone calculators may be used for authorized business purposes.

3) Computerized wristwatch with functionality that is enhanced beyond timekeeping, i.e.Samsung Smart Watch, Apple Watch, Google Watch, and similar devices are prohibited while on duty.

4) Stand-alone medical devices such as hearing aids or blood sugar monitors prescribed by a medical professional are permitted.

Operating Employees use of Personal Electronic Devices

Except as otherwise authorized by the company or in an emergency, operating employees are prohibited from possessing, on their person, any electronic communications device, such as cellular phone, personal entertainment device, or any other similar device while on duty. In a Yard or Terminal, these devices are to be left in your personal vehicle, locker or other location where they will not be readily accessible while on duty. Employees working on over-the-road trains, locals, road switchers or any movement operating outside the limits of a Yard or Terminal may take their personal electronic devices with them, however, these devices must be powered off and placed in your work bag or grip and only used in the case of an emergency. This does not apply when employees are relieved of responsibility for the train during a break or other duties, and the train is properly secured or is in the responsibility of another crew.

Operating Employees in Deadhead Status

Unless otherwise restricted in this rule, employees in deadhead status and not inside the cab of a controlling locomotive may use an electric device only if the employee is not using the device in such a way that interferes with any railroad operating employee's personal safety or performance of safety-related duties. If deadheading inside the cab of a controlling locomotive, electronic devices must be turned off with any earpiece removed from the ear:

- when on a moving train
- when any member of the crew is on the ground or riding rolling equipment during a switching operation, or
- when any railroad employee is assisting in the preparation of the train for movement.

M. RAILROAD PROPERTY

In case of danger to the railroad's property, employees must protect it.

Railroad property must:

- be properly used and cared for,
- be returned when leaving company service or requested by proper authority, and
- not be used for personal use.

Employees must:

- not remove any material from the property unless authorized to do so,
- report or turn in to the proper authority, any articles of value that are found,
- keep railroad premises neat and orderly, and
- operate company vehicles according to state and local traffic laws.

Switch keys issued to employees must be kept in their possession or control and must not be used by unauthorized persons.

N. CREDIT

Unless specifically authorized, employees must not use the railroad's credit and must not receive or pay out money on the railroad's account.

O. EMPLOYEE JURISDICTION

Employees are under the jurisdiction of the supervisors of the railroad upon which they are operating. When operating on another railroad, unless otherwise instructed, employees will be governed by the following:

- Safety, Air Brake & Train Handling, and Hazardous Materials Rules of their employer.
- The operating rules and timetable/special instructions of the railroad upon which they are operating.

P. EMPLOYEE CONDUCT

While on duty, employees must not engage in non-railroad activities, which may in any way distract their attention from the full performance of their duties, including

- playing games,
- being involved in horseplay, and
- reading magazines, newspapers or other literature not concerned with their duties.

Q. DIVULGING INFORMATION

Employees who make reports, waybills, or other records of the railroad, or who are entrusted with the care and custody of those documents, must not let unauthorized persons have access to the documents or to the information they contain.

Information concerning railroad affairs, operations, or procedures, or any railroad accident or incident must not be disclosed to anyone except a representative of a government agency that has jurisdiction in the case, unless authorized to be disclosed by a supervisor of the railroad.

Information about facts concerning a work-related injury or death of another employee, or an incident involving the railroad may only be given to, an authorized representative of the railroad, an officer of the law, emergency medical personnel or as otherwise required by law.

R. TIMESLIPS AND OTHER TIME REPORTING DOCUMENTS

Timeslips and other time reporting documents must be printed and signed by employees whose time on duty is being recorded. Timeslips of train and engine crews must be signed by the ranking crew member and filed at the tie up location. Each employee listed on the document must make certain that entries pertaining to them are accurate and complete, inappropriate comments are prohibited.

When entering all required information would cause a violation of the Hours of Service, employees must report only their tie-up time in the computer.

FRA electronic reporting is currently being implemented in the Eastern Region through the CATS system, once your reporting location has been implemented and you've been trained in the new system - printing, signing, and filing of the timeslips will no longer be required.

However, each member of the crew is required to tie themselves up in CATS and do their own FRA Reporting. One member of the crew will not be allowed to tie up fellow crew members.

S. NOT PERMITTED ON EQUIPMENT

Railway operations can be dangerous places for people who do not have a railroad background such as contractors, sub-contractors, visitors and other non-company personnel. Additionally there have been cases of fraudulent impersonation by railway buffs and others with improper agendas who have attempted to gain access to railway operations. The following guidelines are to be followed by train crews in its dealing with access to locomotives:

- *Regulatory Inspectors/Investigators*: Must present pertinent ID card (Federal Railroad Administration, Department of Transportation, Homeland Security).
- *Visitors (Non-CN)*: Must have a signed "release of liability form" on file with CN and be introduced to the operating crew by means of a message or direct contact from the RTC or a CN Officer.
- *CN Employees*: Must be either known to the crew, carrying proper CN ID, or be identified and authorized by the RTC for access to the locomotive.

- *Emergency Situations*: The RTC will contact the train crew and allow and arrange for the identification and pickup of passengers.

NOTE: In all cases the RTC must be notified as soon as practicable of any passengers present in the locomotive, including CN Employees who are not members of the crew.

T. SLEEPING

Employees must not sleep while on duty, this includes when operating on another railroad where it is allowed. Employees slouched or reclined with their eyes closed or concealed will be in violation of this rule.

U. WATCH REQUIREMENT

While on duty, all employees who do not work in an office with a clock must have a watch. The watch must:

- be in good working condition and reliable, and
- accurately display hours, minutes and seconds.

V. ALTERING RAILROAD EQUIPMENT

Without proper authority, employees must not alter, nullify, change the design of, or in any manner restrict or interfere with the normal function of any device or equipment on railroad property, except in the case of an emergency. Employees must report to the proper supervisor changes made in an emergency.

W. JOB BRIEFINGS/ PEER TO PEER COMMUNICATIONS

Job Briefings and Peer to Peer Communications are held among employees to ensure understanding of safety related issues which may include, but is not limited to the following:

- duties and responsibilities of each employee,
- method of communication to be used,
- type of protection or authority required,
- position of switches and derails,
- movements on non-main tracks,
- overlapping limits on controlled tracks,
- methods of securement, including communication between crew members of how many handbrakes were applied each time any equipment is to be secured and left unattended,
- securement of Key Trains, and
- unusual or particular conditions that are known to at least one employee that might not be obvious to all involved employees.
- review of TGBO's/DOB's,
- advance warning of restrictions and identifying signals,
- speed,
- mobile and/or locomotive radio testing,
- repeating instructions and mandatory directives,
- going in-between equipment,
- transfer between crews

When engaged in safety related duties during switching operations, i.e., shoving movements and handling switches and/or derails, Peer to Peer Communication is to be used to verbally announce such activities to all crewmembers, reminding one another of the rules and application related to switching operations which may include, but are not limited to the following:

- USOR Rule 104: Duties of Train and Engine Crew Members,

- USOR Rule 201: Radio Testing,
- USOR Rule 404: Radio and Voice Communication,
- USOR Rule 501: Speed,
- USOR Rule 502: Shoving Movements,
- USOR Rule 602: Handbrakes,
- USOR Rule 700 Hand Operation of Switches,
- USOR Rule 701: Position of Switches and Derails,
- USOR Rule 702: Main Track Switches,
- USOR Rule 712: Derail Location and Position, and
- LIFE Book T-2: Coupling and Uncoupling Equiment.

When Job Briefing is conducted over the radio, all instructions must be repeated, and confirmed with “that is correct,” before movement or task begins.

Employees must reference the verbiage under the PEER TO PEER GUIDELINES listed under each rule that applies when conducting Peer to Peer Communications. The verbiage for the tasks outlined under the PEER TO PEER GUIDELINE content must be used when conducting Job Briefings and Peer to Peer Communication to comply with safety requirements and understanding of all tasks to be performed.

X. WEATHER WARNINGS

When weather warnings are received, the RTC will notify all trains and terminals in the warning area. Quick and precise communication by all employees is absolutely necessary during severe weather conditions.

Excessive High Winds - The following applies to empty double stack container trains only as identified on the work order under Train Specific instructions as:

** Wind Restrictions – Double Stack Containers ** TRN Contains DBL Stacked Light Weight Containers – Wind Restrictions Applicable.

If the work order contains this the following applies:

- When notified of forecasted wind alerts or actual observed wind speeds are greater than or equal to 55 mph, all empty double stack container trains must reduce their speed to 20 mph.
- When notified of forecasted wind alerts or actual observed wind speeds are greater than or equal to 65 mph, all empty double stack container trains must be moved to a staging location not exceeding 20 mph, and must not proceed until wind speeds have decreased below 65 mph.

Tornado Warnings – If a tornado has been observed in the immediate area yard activity must cease and all employees take cover. If an employee in a yard observes a funnel cloud, take cover immediately and notify other employees and the RTC. Train operations may continue prepared to stop short of obstructions only if local weather conditions are not as severe as the warning indicated. If a train must stop because of weather conditions, avoid stopping on a bridge, across railroad and highway crossings at grade, or anywhere the presence of a train could obstruct emergency operations. After the warning has been canceled, if the path of a tornado has crossed a main track, the RTC will notify all trains in the area to proceed prepared to stop short of obstructions until it can be ascertained that the track is OK for normal speed.

Flash Flood Warnings – At locations specified by the RTC, Timetable or Operating Bulletin, trains will operate prepared to stop short of obstructions. Trains in affected area are reminded to report to the RTC any unusual built up, high or turbulent water activity adjacent to track, any evident bank erosion or rough spot.

Note: When weather warnings are present and conditions require, track/bridge inspections may be conducted by a Roadway Worker ahead of the train’s movement. When these inspections occur, the Roadway Worker will notify the affected trains either directly or via the RTC if and restrictions apply or if track is safe for maximum authorized speed. When an on-track inspection ahead of the movement is authorized by the RTC, Joint Mandatory Directives will apply per USOR 1004, Trains joint with Roadway Workers.

Y. SAFETY OBSERVATIONS

The Federal Railroad Administration requires operational observations of specific groups of railroad employees. Divulging information to other employees about observation activities or any other information that would interfere with or affect the outcome of these observations is prohibited. Supervisors conducting Safety Engagements must be qualified on the observations as well as the applicable rules.

Z. GOOD FAITH CHALLENGE

Federal Regulations allow an employee the right to challenge a directive from a supervisor that the employee feels would violate a railroad operating rule regarding the following:

- shoving movements,
- leaving unattended equipment foul of an adjacent track, or
- handling switches or derails.

When making a challenge, an employee will notify a supervisor issuing a directive that a good faith determination has been made that the directive violates a rule concerning one of the three bullets above. The employee will not comply with the directive until the challenge has been resolved. However, the supervisor may

- require the employee to perform other tasks not related to the challenge until the challenge is resolved, or
- require a different employee to perform the challenged task before the challenge is resolved. This employee must be informed of the challenge, and determine that the challenged task does not violate a rule.

Challenges made in good faith will be resolved by one of the following:

- the supervisor may accept the employee’s challenge,
- the employee may accept the directive, or
- the supervisor and employee agree to a compromise directive.

If the challenge cannot be resolved, one of the following will take place:

- it will be reviewed by at least one other supervisor, who cannot be the supervisor who issued the directive or a subordinate, or
- resolve the challenge using the same options as above.

If the reviewing supervisor agrees that the challenged directive does not violate any of the rules listed above, that decision is final, and not subject to additional review. The employee must be informed that Federal law may protect them from retaliation, as long as the refusal to do the work is a lawful, good faith act.

The employee will be given an opportunity to document in writing or electronically, any protest to the final decision, before the end of the employee’s tour of duty, and may retain a copy of the protest.

If requested in writing at the time of the challenge, the employee has the right for further review by the Designated Review Officer. The review must be done within 30 days after the end of the month in which the challenge occurred. The Designated Review Officer will notify the employee in writing with the decision as to whether the rule was properly applied.

100. DUTIES AND QUALIFICATIONS OF EMPLOYEES

100. RULES, REGULATIONS, AND INSTRUCTIONS

Employees must be familiar with and obey all rules, regulations and instructions. They must attend required classes with current rule book, timetables and instructions, and must pass the required examinations. Employees must cooperate and assist in carrying out the rules and instructions. They must promptly report any violations to the proper supervisor.

Employees must ask their supervisor for an explanation of any rule, regulation, or instruction of which they are unsure.

Prior to beginning each shift or tour of duty, all engineers, conductors and trainmen must ensure their Engineer or Conductor Certification is in their possession and it is valid. If there is any doubt about the validity of the certificate, contact a supervisor prior to going on duty. Do not work past the expiration date shown on the certificate.

101. DUTIES OF RAIL TRAFFIC CONTROLLERS

Rail Traffic Controllers (RTC) supervise the movement of trains and on-track equipment, and any employees connected with those movements. RTC's duties may include that of control operator.

102. DUTIES OF CONTROL OPERATORS

Control operators operate CTC and interlocking control machines, or authorize movements on a segment of controlled track.

103. DUTIES OF YARDMASTERS

Yardmasters have jurisdiction over trains, engines, and employees in yards. When yardmasters are employed at locations with Yard Limits, they may direct movements or give routing instructions, but do not authorize movements or work by Roadway Workers on the main track.

104. DUTIES OF TRAIN AND ENGINE CREW MEMBERS

Engineers and conductors must ensure their subordinates are familiar with their duties, determine the extent of their experience and knowledge of the rules, and instruct them, when necessary, how to perform their work properly and safely. Unless required by rule, or authorized by a company officer, crew members on the head end of freight trains must ride in the cab of the controlling locomotive.

Employees assigned a trainee must be in a position which provides continuous monitoring of the trainee and allows for immediate intervention and corrective action of any noncompliant or unsafe activities observed.

Engineer (References to locomotive engineers in these rules also apply to remote control operators.)

- Engineers are responsible for safely and efficiently operating the engine. A student engineer or other qualified employee may operate the engine under close supervision of the engineer.
- Engineers must check with the conductor to determine if any cars or units in the train require special handling.

Conductor

- Conductors supervise the operation and administration of trains, and are responsible for the freight carried by their train. They are responsible for ensuring the freight is delivered with any accompanying documents to its destination or terminal. Freight conductors must maintain any required records. All persons employed on trains must obey the conductor's instructions, unless the instructions endanger safety or violate rules.
- Conductors must advise the engineer and RTC of any restriction placed on equipment being handled.
- Conductors must compare the total number of cars and locomotives shown on their Train Journal with Defective Equipment Detectors and AEI Readers at each opportunity, especially after

    (a) train departs Initial Terminal,

(b) crew first takes charge of train, or

(c) set-outs and pick-ups on line.

All Crew Members

- Crew Members in Cab of Controlling Locomotive

  Crew members in the cab of the controlling locomotive must communicate to each other of all restrictions, in sufficient time, and required actions that affect the safe operation of their train to allow the engineer to take proper action. They must:

  (a) communicate to each other the names of signals affecting their train as soon as signals become visible or audible,

  (b) continue to observe signals and announce any change of aspect until the train passes the signal, and

  (c) clearly communicate to each other the speed of the train as it passes a signal with an indication that is less than Clear.

If proper action is not being taken, crew members must remind the engineer of the conditions and required action.

What is a Critical Focus Zone?

Critical Focus Zone (CFZ) is an environment you create in the cab of the controlling locomotive that allows the employee controlling the locomotive to focus on controlling the speed of the movement while approaching upcoming restrictions. The purpose of the CFZ is to reduce/eliminate distractions while approaching a potentially hazardous situation.

When required to apply 'Critical Focus Zone (CFZ)' while moving, employees located in the cab of the controlling locomotive must cease any communication or other duties unrelated to the train's immediate tasks/operation. When practical, all other duties, such as but not limited to the broadcast of restrictions at five-mile intervals that will not interfere with safe operation of the movement, or when prompted to review, confirm or acknowledge GBOs on the CDU such as upcoming speed restrictions or Rule 529A/B or C should be performed while in the CFZ. However, the priority is complying with the provisions of the CFZ and the upcoming restrictions.

When operating with Trip Optimizer in auto control, unless approaching a Rule 1102 or 1103 the locomotive engineer, must take manual control of the train.

For the duration of the CFZ, the Locomotive Engineer will only make radio communications required for the task at hand (switching, car counts), the Conductor or a crew member other than the locomotive engineer will make all other required radio communications when in the CFZ. When a crew is contacted by another employee, concerning a matter unrelated to the upcoming restriction or the safe operation of their movement, the crew must respond with the following: 'in a CFZ, standby'. Upon hearing this, if there is an emergency, the caller must state so and the movement that is in the CFZ must stop.

The following applies when approaching stop signals, end of operating limits or approaching restrictions where permission to enter has not yet been obtained:

- Not less than one mile from the location, the Locomotive Engineer must advise the conductor of the stopping plan.
- If the Locomotive Engineer does not advise the Conductor of the stopping plan, the Conductor must immediately ascertain what the stopping plan is.

The stopping plan must include the following:

- The way the train will be stopped e.g., airbrakes, dynamic brake etc.
- The location where the train will stop e.g., 300' from the signal or clear of the crossing etc.

CFZ is to be applied when approaching:

1) Stop Signal - CFZ commences three miles from the stop signal or the moment the advanced signal is observed (if it is within 3 miles) until movement has stopped for the stop signal or the next signal has been identified to be permissive.

2) Restricted Speed – CFZ is applicable when operating at restricted speed.

3) USOR 1102 - CFZ is applicable 3 miles from the location of the red sign until instructions have been received from and acknowledged by the EIC authorizing the movement through their entire limits without restrictions or until the restrictions have been complied with.

4) "Joint with" Track Authority - CFZ is applicable when 3 miles from the limits specified on the "Joint with" Track Authority until instructions have been received and acknowledged by the EIC and/or movement.

5) USOR 1103 - CFZ is applicable until the speed restriction is achieved to comply with the Rule 1103.

6) Track Authority Limits - CFZ is applicable 3 miles from the end of the Track Authority limits until the following:

- Movement is stopped at the end of limits
- Additional authority has been obtained
- Entering CTC with a permissive signal
- Entering non-main track

Train handling / planning:

- All crew members in the cab must confirm approaching restrictions, i.e. stop signal indication or yellow over red sign.
- Not less than one mile from the planned stopping location, the conductor must confirm that the locomotive engineer is aware of the location where the train must stop and is able to comply.

PEER TO PEER GUIDELINES FOR IDENTIFYING SIGNALS

Crew members in the cab of the controlling locomotive are required to communicate with each other, as outlined in this rule, USOR 104, the names of signals and speed affecting their trains as soon as they become visible or audible.

EXAMPLE 1:
1. Employee 1: "Clear Nopeming Jct."
2. Employee 2: "Clear Nopeming Jct."

EXAMPLE 2:
1. Employee 1: "Approach Nopeming Jct, our speed is 45 MPH."
2. Employee 2: "Approach Nopeming Jct, our speed is 45 MPH."

ALL PASSENGER CREWMEMBERS ONLY- Communicating items listed above may be made verbally between the engineer and crew member outside cab of controlling locomotive. If communicated over the radio, all transmissions must be repeated and confirmed with "that is correct"

NOTE: If movement is traversing or within 150 feet of a detector, DO NOT make a radio transmission until the entire train has passed, and message received.

Radio Transmission

Crew members in the cab of the controlling locomotive must communicate to each other of all restrictions, in sufficient time, to ensure compliance.

Except in a Critical Focus Zone (CFZ), or when switching, in an emergency, or when movement is traversing or within 150 feet of a defect detector a broadcast by a member of the crew must be made to the airwaves when:

1) Entering the main track and at each mile post location ending in (5) stating any restriction(s) from that mile post to the next milepost ending in (5). If more than 2 restrictions fall within this 10 mile area just state "Multiple Restrictions", or If NO restrictions just broadcast "No Restrictions". All broadcast must include designation (initial and number of locomotive), direction and specific track (at multiple main track locations).

   "Restriction" refers to any of the following:

   - Planned Work, (USOR 1102)

- Speed Restriction, (USOR 1103)

  Note: Transmission NOT required when train's authorized speed is equal to or less than speed restriction approaching.

- USOR 529 (A, B or C)
- Track Authority when:

  (a) Switch warning identified in box 9,

  (b) Approach to end of limits identified by either box 2 or 6, or

  (c) Joint with identified by box 8

2) Passes a signal at a control point or at a signal that is the approach to a control point that requires:

   (a) being prepared to stop at the next signal,

   (b) being prepared to pass the next signal at Restricted Speed, or

   (c) Restricted Speed.

3) Stops for a signal that requires stopping. Signals in items 2 and 3 are to be broadcasted when the signal is observed from the head end of the train and broadcast must include:

   (a) Initial & Engine number,

   (b) Direction, location, and

   (c) Signal name

NOTE: In all cases, if movement is traversing or within 150 feet of a defect detector, DO NOT make a radio transmission until the entire train has passed, and message received.

PEER TO PEER GUIDELINES FOR ADVANCE RADIO BROADCAST OF RESTRICTIONS

"CN 5600 North, MP 125, Rule 1102 at MP 133, Rule 1103 at MP 134, out"
"CN 5600 North, MP 135, 529A at MP 139.4, "joint with" limits with EIC Jones at MP 142, out"
"CN 5600 North, MP 145, Multiple Restrictions, out"
"CN 5600 North, MP 155, No restrictions, out"
"CN 5600 North, MP 165, Switch Warning, Box 9, at MP 170.9, out"
"CN 5600 North, MP 175, end of Track Authority Limits, MP 184, out"

- Proper Action

If the engineer and/or conductor fail to comply with a signal indication or take proper action to comply with a restriction or rule, crew members must immediately take action to ensure safety, using the emergency brake valve to stop the train, if necessary.

105. CERTIFICATION AND QUALIFICATION

Conductors, Locomotive Engineers and Remote Control Operators must obtain, complete and return the required periodic medical examination forms (physical, vision, hearing, urinalysis), as well as, drivers license check forms at least 90 days prior to their certification expiring through their respective managers or SLE, to avoid delay in the recertification process. Driver's license check forms must be returned to the CN Certification Department by mail, fax or email for Locomotive Engineers/Remote Control Operators and either by mail, fax or email for Conductors. CN Certification Department mailing address is 17650 S. Ashland Ave, Homewood, IL 60430 and fax is (708) 332-4473. CN certification Dept. email address is: CN_certification@cn.ca.

Periodic Medical Examination Forms must be returned to CN Medical Services by either one of the following methods for Locomotive Engineer/Remote Control Operators and Conductors:

1) Scan and email completed form to: USMEDICALSERVICES@CN <USMEDICALSERVICES@CN> .CA (Preferred Method)

2) Snail mail completed form to: CN Medical Services, 17641 Ashland Ave, Homewood, IL 60430

3) Fax completed form to: (514) 399-7140

The Manager of Operating Practices, in compliance with 49 CFR 242, will administer the Conductors Certification program and CN will maintain an updated list of Certified Conductors.

CN has contracted CHS (Comprehensive Health Services) for Recertification examinations. Should you require a medical exam for recertification after the date of this bulletin, you should receive:

1) An automated phone call by CHS approximately 90 days before the expiration of your medical. The number you will be contacted at is based on the information on record in CATS. This notification will inform you that a request for an exam has been made.

   (a) The automated call provides you with a web address (<https://eas.chsmedical.com>), requires CHS provided passcode, and a phone contact (888-881-1950) if you do not have internet access.

2) After notification the employee must go to the web address (<https://eas.chsmedical.com>) and follow the instructions to set up an account, and provide availability for scheduling the examination.

   (a) If internet access is unavailable, the employee must call (888-881-1950). If you cannot speak to a person, leave a message requesting a call back.

      i Your message must include: name, pin, company you work for (CN) and a phone number where you can be contacted.

3) CHS and the employee will work together to schedule the examination to least interfere with the employee's work obligations.

4) The employee will attend the scheduled appointment. For any other exams that may be required, please contact CN US Medical Services via email at usmedicalservices@cn.ca or call the Medical Services Administrative Assistant at 888-807-6777.

PLEASE NOTE - CN Medical Services will not pay for any medical examinations that have not been scheduled through CHS. The employee will be financially responsible for any examinations performed by any medical provider that has not been scheduled through CHS.

If you have not been contacted by CHS 90 days prior to the expiration of your medical, it is your responsibility to notify Medical Services at (888)-807-6777.

Driving Records: Certified Conductor, Locomotive Engineers and Remote Control Operators must report incidents to CN within 48 hours or before accepting a call to duty, of complete state action to cancel, revoke, suspend, or deny a motor vehicle drivers license or violation pertaining to the operation of a motor vehicle under influence of drugs or alcohol.

Certification Training: While training new employees, whether it be a Conductor, Locomotive Engineer, RTC, Engineering or Mechanical employee, the trainer must continually monitor the trainee to ensure they are not placed in a situation where they cannot be immediately removed from should an unsafe action take place. The trainee must be monitored by the trainer whenever performing a task that may, if done incorrectly, create a safety risk to the trainee or others. A trainee requires this supervision until qualified for their position.

Q1. What is the distance the trainee must stay to the trainer? What distance should separate the trainee and the trainer?

A1. The Trainer should in close enough proximity to visually observe and give audible instructions or warnings to the Trainee. A radio must not be used to provide instructions or warnings to the Trainee.

Q2. Can any employee, other than the employee assigned to the role of the trainer, take on the role as the trainer?

A2. Yes, provided the employee taking on the role of the Trainee is qualified in the task(s), there is a clear understand of who the Trainer will be, and the employee assigned the role is able to continuously monitor the Trainee.

Conductor Certification: All conductors must be certified for the class of service for which they are performing duty. All CN Conductors are Certified Freight Conductors must be certified for the class of service they are to perform. Certified Conductor is the crewmember in charge of a train or yard crew as defined in 49 CFR Part 218, and is required to have the certificate on his/her possession while on duty. A new Conductor may operate only under the direct and immediate supervision of a Certified Conductor. Each Conductor will be operationally monitored and efficiency tested minimally once each calendar year as prescribed in 49 CFR 242. Violation of Operating Rules and Practices will be reported to the Manager of Operating Practices. He/she will review for purposes of determining appropriate action under 49 CFR 242.

Territory Qualifications: Conductors not qualified/familiar on a specific territory must not accept a call unless being provided a familiarization trip. Additional trips as determined by the OJT Coordinator / Manager who is qualified on the territory may be provided. Additionally each newly qualified conductor must pass a territorial qualification examination before being deemed qualified as well as all Certified Conductors at a minimum of every 36 months. Each Conductor must be familiar with the territory in which they are required to operate and the following applies:

- Signalized methods of operation - Conductors who have not made a trip over a specific territory annually must make a minimum of one familiarization trip and must then be deemed qualified by the Field Placement Coordinator/ Manager before the Conductor may operate over the territory.
- Non-signaled methods of operation - Conductors who have not made a trip over a specific territory biennially must make a minimum of one familiarization trip and then be deemed qualified by the Field Placement Coordinator/Manager before the conductor may operate on the territory.
- Within a Terminal - Conductors who do not have experience in terminal operations will either be assisted by a Certified Conductor that is familiar with the terminal operations and/or given Job Aids and/or Maps as needed.

Conductor Pilots: If a conductor lacks territorial qualification on main track physical characteristics as noted in the above bullet point list, he or she shall be assisted by a person who meets the territorial qualification requirements for main track physical characteristics:

A For a conductor who has never been qualified over the territory on which he or she is to serve as a conductor, the assistant shall be a person who is certified as a conductor and meets the territorial qualification requirements for main track physical characteristics, and is not an assigned crew member.

B For a conductor who was previously qualified over the territory on which he or she is to serve as a conductor, but whose qualification have been expired for one year or less (per Territory Qualifications bullet 1 and 2 above), and who regularly traversed the territory prior to the expiration of the qualification, the assistant may be any person, including an assigned crewmember, who meets the territorial qualification requirements for main track physical characteristics.

C For a conductor who was previously qualified over the territory on which he or she is to serve as a conductor, and whose qualification have been expired for one year or less (per Territory Qualifications bullet 1 and 2 above) but who has not regularly traversed the territory prior to the expiration of the qualification, or a conductor whose territorial qualification have been expired for more than a year, the assistant may be any person, including an assigned crewmember other than the locomotive engineer so long as serving as the assistant would not conflict with that crewmember’s other safety sensitive duties, who meets the territorial qualification requirements for main track physical characteristics.

D Pilot is not required if the movement is on a section of main track with an average grade of less than 1% over 3 continuous miles, and

(a) the maximum distance the locomotive or train will be operated does not exceed one mile,

(b) maximum authorized speed for any operation on the track does not exceed 20 miles per hour, or

(c) operations are conducted under operating rules that require every locomotive and train to proceed at a speed that permits stopping within one half the range of vision of the locomotive engineer.

If a conductor lacks territorial qualification on other than main track physical characteristics, where practicable, he or she shall be assisted by a person who is a certified conductor and meets the territorial qualification requirements for other than main track physical characteristics. Where not practicable, the conductor shall be provided an appropriate up-to-date job aid.

Locomotive Engineers/Remote Control Operators: The Sr. Supervisor of Locomotive Engineers & the Assistant Program Administrator, in compliance with 49 CFR 240, will administer the Engineers Certification program and CN will maintain an updated list of Certified Engineers & Remote Control Operators.

Territory Qualifications: Each Engineer must be familiar with the territory in which they are required to operate and the following applies:

• Signalized methods of operation - Engineers who have not made a trip over a specific territory annually must make a minimum of one familiarization trip and must then be deemed qualified by SLE before the Engineer may operate over the territory.

• Non-signaled methods of operation - Engineers who have not made a trip over a specific territory biennially must make a minimum of one familiarization trip and then be deemed qualified by the SLE before the Engineer may operate on the territory.

Engineer Pilots: A pilot is required when a locomotive engineer has not observed a specific territory based on the following:

1. previous 12 months when operating involves signalized methods of operation, or

2. previous 24 months when operation involves non-signalized territory for the entire route, or

3. Engineers who have never qualified over a territory on which he or she is to serve as an engineer, must be assisted by an engineer pilot who is qualified on the territory.

Engineer Pilots: A pilot is required when a locomotive engineer has not observed a specific territory based on the following:

1. previous 12 months when operating involves signalized methods of operation, or

2. previous 24 months when operation involves non-signalized territory for the entire route, or 3. Engineers who have never qualified over a territory on which he or she is to serve as an engineer, must be assisted by an engineer pilot who is qualified on the territory.

Unless the average grade is greater than 1% over 3 continuous miles, a pilot is not required when: • operating on Non-Main Track, or

• the maximum distance to be traveled is 1 mile or less, or

• the maximum speed for any operation on the track does not exceed 20 MPH, or

• operating rules require every movement to proceed prepared to stop within one half the range of vision of the locomotive engineer, or

• Before acceptance of a call to duty in these situations, the engineer must make the fact known to the person making the call to service.

Pilots cannot be members of the same crew with the engineer requiring a pilot. Student Engineers: Per FRA regulations, Student Engineers are not permitted to operate a locomotive unless they are under the direct supervision of a Locomotive Engineer who has at least 1 year of service working as a Locomotive Engineer. Locomotive Engineers with less than 1 year of service working as a Locomotive Engineer are not permitted to allow Student Engineers to operate the locomotive at any time.

106. TAKING CHARGE OF A TRAIN

When first taking charge of a train, the crew must be informed of the following:

- total weight and length of the train,
- any special weight distribution that would cause the need for special train handling procedures,
- the number and location of any cars with the air cut out or otherwise inoperative. Instruction must include the location where repairs will be made,
- information concerning a requirement to perform a Class I or Class IA Brake test before the next crew change point, and
- any known brake system problems encountered by the previous crew.

This information may be given to the crew in any manner, however a written or electronic copy must be maintained in the cab of the controlling locomotive.

If the crew change is direct from one crew to another, the crew being relieved must inform the outbound crew concerning the movement of the train, including

- defective equipment detector readings,
- defective cars,
- equipment requiring special handling,
- locomotive requiring inspection, and
- consists and air slip.

When an engineer, conductor or both are relieved before a trip is finished, they must deliver all authorities and other instructions to the relieving crew. If they cannot be personally delivered, be governed by the RTC's instructions.

Verbal instructions received from an EIC must not be transferred between crews.

The relieving crew must contact the EIC and obtain the necessary authority and/or instructions before moving the train.

The relieving engineer and conductor must compare authorities and other instructions with each other and RTC before proceeding.

Note: In all cases, Trains or Locomotives prior to entering controlled track, must contact RTC/ Control Operator to give mark up of Train before accepting any signal indication or entering Track Authority limits to ensure new restrictions are received, if any. Once this communication has been established all Trains must continue to monitor the RTC/Control Operator or CN assigned road channel on secondary radio i.e. handheld, to ensure RTC/Control Operator has the ability to contact your train if needed to provide further restrictions or instructions.

200. RADIO RULES

200. REQUIRED EQUIPMENT

Each occupied locomotive on every train and any roadway worker that fouls a track must be equipped with an operative radio or have a company-authorized cell phone available. The radio or cell phone must be capable of reaching the RTC or control operator. In addition, trains must have a second means of communication, which may include any of the following:

- an operative radio in another locomotive in the consist,
- portable radio equipped with a touch pad, or
- other wireless communication device

201. RADIO TESTING

Mobile radios must be tested as soon as possible before beginning work assignment to confirm the quality of the radio's transmission.

Testing must include an exchange of voice transmissions with another radio.

PEER TO PEER GUIDELINES FOR RADIO TESTING

Intra-crew test of mobile and/or locomotive radios must be done as soon as possible before beginning work assignments to confirm quality of the radio's transmissions as follows:

> Employee with Mobile Radio: "(insert initials and number of locomotive) how does the radio sound?"
> Receiving Employee: "Loud and clear for the (insert initials and number of locomotive)."

202. TRANSMITTING

Any employee operating a radio must listen long enough to make sure the channel is not being used before transmitting. After initial transmission, do not proceed until receiving employee has acknowledged.

203. REQUIRED IDENTIFICATION

Employees transmitting or answering a radio communication must begin with the required identification. This must include the following in this order:

- Base Radios:
  - "CN", name, location, or other unique designation
- Trains and Engines
  - Initials and number of the engine
- On-Track Equipment:
  - "CN" and name of the operator or precise identification of the on-track equipment.

Locomotive Identification – Locomotives must be identified by initials and number.

Some locomotives in CN paint are owned by subsidiary companies, i.e. "IC" "WC" "DMIR" and will have those reporting marks on the cab sides below the engine number, and those initials are the proper identification of the locomotive. Those in CN paint without initials shown are identified as "CN" locomotives. If uncertain, refer to the inspection card inside the locomotive cab.

204. REPETITION

An employee who receives a transmission must repeat it to the person transmitting the message, except when the communication

- concerns switching operations, except as required by Rule 211, 701 and 712;
- is a message from an automatic alarm device; or
- is general and does not contain any information that could affect the safety of a railroad operation.

205. ENDING TRANSMISSIONS

OVER: Except when transmissions relate to switching operations, when the communication is complete and a response IS expected, the transmitting employee must say “Over.”

OUT: Except when transmissions relate to switching operations, when the communication is complete and **NO** response is expected, the transmitting employee must say, “(the required identification)” followed by “Out.”

206. COMMUNICATION NOT UNDERSTOOD OR INCOMPLETE

An employee who does not understand a radio communication or who receives a communication that is incomplete must not act upon the communication and must treat it as if it was not sent.

EXCEPTION: An employee who receives information that may affect the safety of employees or the public or cause damage to property must take the safe course. When necessary, stop movement until the communication is understood.

207. ATTENDING RADIO

When radios are attended, they must be turned to the appropriate channel with the volume loud enough to receive communications.

Employees attending base or mobile radios must acknowledge all transmissions directed to them immediately unless doing so would interfere with safety.

208. EMERGENCY CALLS

Emergency calls begin with the words, “Emergency, Emergency, Emergency,” and are used for emergency stops, severe slack action while stopping, initial reports of derailments, collisions, storms, washouts, fires, track obstructions, property damage, or injury to employees or the public.

All employees must give absolute priority to an emergency communication.

Unless they are answering or aiding the emergency call, employees must not send any communication until they are certain no interference will result.

209. PROHIBITED TRANSMISSIONS

Employees must not transmit a false emergency, unnecessary, or unidentified communication or use profane or indecent language over the radio.

210. TRANSMITTING SIGNAL INFORMATION

Employees must not use the radio to give information to a train or engine crew about the name, position, aspect, or indication displayed by a fixed signal, unless the information is given between members of the same crew or the information is needed to warn of an emergency. Except as provided for in Rules 857 and 858, instructions may not be issued over the radio that would have the affect of overriding the indication of a fixed signal.

211. DIRECTING SHOVING MOVEMENTS VIA RADIO

When radio communication is used to direct shoving movements, do not move until instructions, including distance and direction, are received. Each time a new instruction is given, the engineer will acknowledge the distance or information, except when the distance remaining to move is 4 cars or less, acknowledgement is not required. When the movement will stop within 4 car lengths, the employee directing the movement is not required to use the engine number as long as there is no possibility of confusion with another movement. **EXAMPLE:** “CN 2641 3 cars- --2 cars---1 car---half car---10 feet; that will do.”

Stop within one half the distance specified unless additional instructions are received before reaching that point. If stop has been made before reaching the end of the shoving movement, engineer must verify point protection is still being provided before resuming movement.

212. ASSIGNED FREQUENCIES

Employees are prohibited from using other radio frequencies not assigned to that particular territory.

Obtain the RTC’s permission before using the radio to call the Diesel Doctor/ MSREP or NOC Support Desk.

213. MALFUNCTIONING RADIO

Malfunctioning radios must not be used. As soon as possible, notify each crew member and the RTC or other affected employees that the radio is not working. If a radio on the controlling locomotive fails en route, the train may continue until the earlier of

- next calendar day inspection, or
- nearest forward location where the radio can be repaired or replaced.

214. DIRECTING KICKING OPERATIONS VIA RADIO

Employee directing kicking movements will use the initial and engine number for identification to start the movement, but is not required to use it to stop the movement. **EXAMPLE:** “CN 2641 kick------that will do.”

300. RULE BOOKS, TIMETABLES & INSTRUCTIONS

300. RULE BOOKS & TIMETABLES

Each employee is responsible to obtain new rule books, timetables, and other documents when issued. They must maintain a current copy of the following to refer to while on duty:

- U.S. Operating Rules (USOR)
- Timetable and System Special Instructions
- Air Brake & Train Handling Rules (Transportation, Mechanical and RTC)
- On-Track Safety Rules (Engineering and RTC)
- U.S. Safety Rule Book (L.I.F.E.)
- U.S. Hazmat Handling Instructions
- RTC/ Control Operator Manual (RTC/ Control Operator only)
- Efficiency Tests and Inspections Manual (Managers required to perform tests)
- CN Positive Train Control (PTC) Procedure Guide (Locomotive Engineers)
- Trip Optimizer/ PTC Interface Procedure Guide (Locomotive Engineers)

A current copy is one shown in effect by Operating Bulletin, and containing all subsequent changes as required by Operating Bulletin(s). Employees supplied with electronic operating manuals or access to the electronic version must use these in place of hard copies.

301. TIMETABLE INSTRUCTIONS

Track Chart and Sidings column is shown as a reference for those who are unfamiliar with the territory. For exact locations, refer to OPERATING CHARACTERISTICS of the Timetable Instructions of each subdivision. Bold lines indicate main track(s) and lighter lines indicate Non-Main Track. Lighter lines with the initials of another railroad, indicates the CN operates on that railroad’s trackage.

Station names and timetable instruction information shown in italics with gray background indicates the station or instruction is on the main track of another railroad. Station names in light print indicate there is no main track at the station sign.

The Method of Operation column gives instructions as to where CTC, TA, ABS, etc. are in effect. Tracks that are in-service for Roadway Maintenance Machines only, and out of service to trains are identified in the timetable as “RMM only.”

Radio Channels/Call Ins column gives assigned radio channel(s) for that territory, RTC Desk along with the RTC radio tone. PTC Doctor Radio tone is also provided for reporting any issue related to PTC. Diesel Doctor Radio tone is to be used for mechanical issues enroute. (TSC)- Transportation Service Clerk DTMF Tone provided for real time reporting.

302. NEW TIMETABLES

At least 24 hours before a timetable goes into effect, notification will be made by Operating Bulletin. A GBO will also be issued at least 24 hours before the timetable goes into effect and continue for 6 days after the effective date. The moment a new timetable goes into effect, it replaces the previous one, which must be discarded.

303. OPERATING BULLETINS, SYSTEM & PTC NOTICES.

System Operating Bulletins contain only information and instructions related to rules and operating practices, Division Operating Bulletins contain only information and instructions relating to permanent conditions on that Division that will affect the timetable, and System Notices & PTC Notices contain only general information. All are issued over the signature of the Manager of Operating Practices.

Updates will be issued as an operating bulletin, system or Division depending on the information to be updated. Operating Bulletins and Notices are numbered consecutively and remain in effect until canceled.

When Operating Bulletins are received on CN Electronic Operating Manual an acknowledgement by the employee is required. They are also available on the Eastern Region Bulletins site on the CNiNet. When Operating Bulletins and System Notices are canceled, they must be removed from employee's rulebooks for non-electronic manual users and website.

Before beginning each day's work or trip, employees whose duties require, must review System and Division Operating Bulletins, System notices & PTC Notices that apply to the territory on which they will work. When employees are assigned a corporate electronic device with CN Electronic Operating Manual, before each tour of duty the employee must read, understand and acknowledge any new Operating Bulletins on their device.

304. MODIFYING INSTRUCTIONS

Timetable and Special Instructions replace any rule or regulation with which they conflict. Operating Bulletins replace any rule, regulation or timetable and special instruction with which they conflict. General Bulletin Orders replace any operating bulletin, rule, regulation, or timetable and special instructions with which they conflict. System PTC Notice applies only to employees who operate in PTC territory and the most current copy of the System PTC Notice must be kept until such time the document is canceled or changed.

If an Operating Bulletin includes changes to the items listed in Rule 300, the change must be made to that document, or a copy of the change from both System and/ or Division Operating Bulletin must be kept with that document, and discarded when canceled or changed. System PTC Notice applies only to employees who operate in PTC territory and the most current copy of the System PTC Notice must be kept until such time the document is canceled or changed. This is not required for employees using CN Electronic Operating Manual. This is not required for CN employees using CN Electronic Operating Manual.

400. SIGNALS

400. RECEIVING AND GIVING SIGNALS

Employees who give signals must make sure they can be plainly seen and clearly understood by those who receive them. Use a lantern or fusee when visibility requires.

Employees must always be on the lookout for signals, and comply with the intent of the signal. No action should be taken when the signal is not understood or may be intended for another movement.

401. HAND SIGNALS

Hand signals for a train or engine to stop, proceed, or back-up.

Description of Signal		Indication
(1)	Swung at right angle to the track	STOP
(2)	Raised and lowered vertically	PROCEED
(3)	Swung vertically in a circle at a right angle to the track.	BACK UP
(4)	Any object waved violently by anyone on or near the track	STOP

Except as required in Transportation L.I.F.E. Safety Rules, employees may use other hand signals only if all crew members understand the signals. When employees are not giving hand signals, they must not make any gestures or movements that may resemble a hand signal.

402. SIGNAL DISAPPEARANCE

If the hand signal given by a person controlling a shoving movement disappears, movement must stop, unless employee on leading end can control the air brakes with a brake valve designed for that purpose.

403. ACKNOWLEDGE STOP SIGNAL

When any signal except a fixed signal is given to stop a train, it must be acknowledged as prescribed by whistle signal 410(4) or radio communication.

404. RADIO AND VOICE COMMUNICATION

Employees may use radio and other means of voice communication to give information instead of using hand signals.

When changing between radio and hand signals, crew members must communicate the change to the engineer. The engineer must acknowledge the change.

PEER TO PEER GUIDELINES FOR METHOD OF COMMUNICATION USED

Before changing between radio and hand signals, crew members must communicate the change to the engineer as follows:

Crew Member states via radio: "(insert initials and number of locomotive) switching to (insert either radio or hand signals)."
Engineer states via radio: "(insert initials and number of locomotive) switching to (insert either radio or hand signals), understood."
Crew Member states via radio: "(insert initials and number of locomotive) that is correct."

405. IMPERFECTLY DISPLAYED SIGNALS

If a signal or sign is imperfectly displayed or is absent from the place usually shown, it must be regarded as the most restrictive indication it can give.

EXCEPTION: When one or more lower lights of a color light signal aspect is dark, treat that dark aspect as if it was red.

Report imperfectly displayed signals to the RTC as soon as possible.

406. FUSEE

If a train approaches an unattended fusee burning on or near its track, the train must immediately be brought to a stop consistent with good train handling.

Stop before passing the fusee when operating in accordance with Rule518 (Movement at Restricted Speed) or Rule 520 (Movement on Non-Main Track).

After stopping, the train must proceed at restricted speed until the head end is 1 mile beyond the fusee.

If an unattended burning fusee is beyond the first rail of an adjacent track, the fusee does not apply to the track on which the train is moving.

Fusees must not be used wastefully and in any case not placed where they may cause fires.

407. ENGINE NUMBER

Trains will be identified by engine number (initials and number), adding direction when required. When multiple units make-up the engine, illuminate only the number lights of the designated unit; use the lead unit when practical.

408. RINGING ENGINE BELL

Engine bell must be rung when:

- beginning movement, except when switching requires frequent stopping and starting after initial movement;
- approaching and passing Roadway Workers;
- approaching public crossings at grade including those in Locomotive Whistle Quiet Zones, and begin no later than the whistle post and continue until the crossing is occupied;
- passing standing equipment on an adjacent track when locomotive is leading the movement;
- passing station platforms when passengers are present; or
- moving in mechanical department areas.

If an engine bell on the lead locomotive fails en route and no other unit can be used as the lead unit, the train may continue until the earlier of

- next calendar day inspection, or
- nearest forward location where the engine bell can be repaired or replaced.

409. WHISTLE POST

Where a whistle post governs more than one crossing, a numeral on the post will indicate the number of crossings.

410. SOUNDING WHISTLE

The required whistle signals are illustrated by “o” for short sounds and “-“ for longer sounds:

SOUND	INDICATION
(1) Succession of short sounds	Use when an emergency exists, or persons, vehicles or livestock are on or near the track.
(2) —	Air brakes are applied, pressure equalized.
(3) — —	Release brakes and proceed.
(4) o o	Acknowledgement of any signal not otherwise provided for.
(5) o o o	When stopped, back up.
(6) — o	Approaching Roadway Workers or roadway equipment on or near the track, regardless of any whistle prohibition. After the initial warning, sound whistle signal (4) intermittently until the head end of the train has passed the Roadway Workers or equipment.
(7) — — o —	Approaching public crossings with engines leading sound signal as follows: • At speeds in excess of 60 MPH, start signal at the whistle post, but not more than 1/4 mile before the crossing. • At speeds of 60 MPH or less, start signal at least 15 seconds but no more than 20 seconds before entering the crossing. • If movement starts less than ¼ mile from the crossing, signal may be sounded less than 15 seconds before entering the crossing when it is seen crossing gates are in the fully lowered position or no traffic is approaching, or traffic is stopped at the crossing. • Prolong or repeat signal 410 (7) until the crossing(s) is completely covered.

EXCEPTION: Whistle signals 410(3) and 410(5) do not apply during switching movements.

Other forms of communication may be used in place of whistle signals, except signals 410(1), 410(6), and 410(7); and for passenger trains only signal 410(3).

For all required whistle signals (1) - (7), engineer must fully pull whistle handle or fully depress whistle button to ensure maximum warning is provided. Improper use of the whistle is prohibited.

If the whistle fails to operate and no other unit can be used as the lead unit, continue movement with the bell ringing continuously. Stop the train before each public crossing, so a crew member on the ground can provide warning until the crossing is occupied, unless

- crossing gates are in the fully lowered position, or
- no traffic is approaching or stopped at the crossing.

411. LOCOMOTIVE WHISTLE QUIET ZONES

At locations designated in the timetable, whistle signal 410(7) must not be sounded for public grade crossings except when:

- emergency or dangerous situations exist, or
- rule 529is in effect, or
- meeting or passing the head end or rear end of a train in the vicinity of a grade crossing.

If Roadway Workers are on or near a crossing in a quiet zone, use whistle signal 410(6).

When the whistle is sounded, a member of the crew must notify RTC with the following information:

- When,
- Where, and
- Why.

All Locomotive Whistle Quiet Zones are in effect 24 hours unless otherwise noted in Timetable Instructions. Locomotive Whistle Quiet Zones that are not 24 hours must be equipped with both a standard Whistle sign and No-Whistle sign on each post.

412. HEADLIGHTS

Turn the headlight on bright to the front of every moving train. It may be turned off when the train is not moving. Engines working in yards will have headlight displayed at all times, however, it may be turned off on the end coupled to cars.

Except when approaching (whistle post or location whistle post is normally located) and passing over a public crossing at grade, the headlight may be dimmed:

- approaching or being approached by an opposing train or engine,
- approaching stations where passengers are received or discharged,
- at other times to permit passing of hand signals or when the safety of employees requires,
- facing oncoming vehicles at night which may be affected on adjacent roadways, or
- when inclement weather conditions such as blowing snow or fog cause the headlight to be reflected into the cab, impairing the vision of the crew.

Display ditch lights at the front of a train when the headlight of the lead locomotive is required to be on bright. Ditch lights are not required when shoving equipment, including snowplows, ahead of the locomotive.

Locomotives must not be operated as the lead unit out of a train's initial terminal unless both ditch lights are operating. However, if no units are equipped with ditch lights, the train may proceed not exceeding 20 MPH while head-end passes over public grade crossings.

413. HEADLIGHT/DITCHLIGHT FAILURE

HEADLIGHT

This rule applies to lead locomotives equipped with dual-lamp headlights. If one lamp of the dual-lamp headlight is not working, the locomotive will not leave the location when an Initial Terminal Inspection is

required for the entire train, If one lamp fails en route, ditch lights will be illuminated continuously until the headlight lamp is repaired or the locomotive is moved to trailing position. If the other headlight lamp or either ditch light fails en route, the locomotive may continue to operate to the earlier of the next calendar day inspection or the nearest forward location where necessary repairs can be made. The Diesel Doctor and RTC must be notified of the failure.

DITCHLIGHT

If one ditch light fails en route, the train may proceed, but repairs must be made by the next Daily Inspection. If two ditch lights fail en route, the train may proceed not exceeding 20 MPH while head-end passes over public grade crossings, but must not travel beyond the first point where repairs may be made or until the next Daily Inspection, whichever happens first. A non-complying locomotive tag must be filled out and placed on the isolation switch stating, “BO Ditch Lights” and show “20 MPH maximum speed over public grade crossings” as the speed restriction

414. Reserved for Future Use

415. MARKERS

A marker must be displayed on the trailing end of the rear car to indicate the rear of the train, and that the train is complete. When an engine is operating without cars, or is at the rear of the train, use one of the following as a marker:

- trailing headlight is illuminated on dim, or
- marker lights equipped on the locomotive.

Markers are not required for movements on Non-Main Track or within Yard Limits, unless a Two-Way Telemetry Device is required by Air Brake & Train Handling Rule 511.

Display a reflector, red flag, or EOT device at the rear of the train as the marker when

- a highly visible marker is not required,
- a defective car must be placed at the rear for movement to a repair point, or
- the rear portion of the train is disabled and cannot be moved, and a highly visible marker cannot be displayed on the rear of the portion to be moved.

Display a highly visible marker at the rear of every train, from 1 hour before sunset to 1 hour after sunrise, and when weather conditions restrict visibility to less than 1/2 mile.

When a highly visible marker is required, a qualified employee must inspect it at the initial terminal and at each crew change point. To determine if the marker is functioning properly, the employee will inspect it by observation or by telemetry display in the cab of the engine.

If the highly visible marker becomes inoperative en route, move the train to the next forward location where the highly visible marker can be repaired or replaced.

Except for light engine consists, when the engineer is the only crew member on a train, it must be equipped with a functioning and armed two-way telemetry device out of its initial terminal.

416. BLUE SIGNAL PROTECTION OF WORKERS

This rule outlines the requirements for protecting railroad workers who are inspecting, testing, repairing, and servicing rolling equipment. In particular, because these tasks require the workers to work on, under, or between rolling equipment, workers are exposed to potential injury from moving equipment.

As used in this rule, the following definitions apply:

Workers - Railroad employees assigned to inspect, test, repair, or service railroad rolling equipment or components, including brake systems. Train and yard crews and employees assigned to a specific train or yard crew as a Utility employee are excluded, except when they perform the above work on rolling equipment not part of the train or yard movement they are handling or will handle.

- “Servicing” does not include supplying cabooses, engines, or passenger cars with items such as ice, drinking water, tools, sanitary supplies, or stationery.

- "Testing" does not include an employee making visual observations while on or alongside a caboose, engine, or passenger car. Also, testing does not include repositioning the activation switch or covering the photo-electric cell of the marker when the rear of the train is on the main track. The employee inspecting the marker must contact the employee controlling the engine to confirm the train will remain secure against movement until the inspection is complete.

Group of Workers - Two or more workers of the same or different crafts who work as a unit under a common authority and communicate with each other while working.

Rolling Equipment - Engines, cars, and one or more engines coupled to one or more cars.

Blue Signal - During the day, a clearly distinguishable blue flag or light, and at night, a blue light. The blue light may be steady or flashing. The blue signal does not need to be lighted when it is attached to the operating controls of an engine and the inside of the engine cab area is lighted enough to make the blue signal clearly distinguishable.

Effective Locking Device - When used in relation to a manually operated switch or a derail, a lock that can be locked or unlocked only by the craft or group of workers applying the lock.

Car Shop Repair Area - One or more tracks within an area where rolling equipment testing, servicing, repairing, inspecting, or rebuilding is controlled exclusively by mechanical department personnel.

Engine Servicing Area - One or more tracks within an area where engine testing, servicing, repairing, inspecting, or rebuilding is controlled exclusively by mechanical department personnel.

Switch Providing Direct Access - A switch that if used by rolling equipment could permit the rolling equipment to couple to the equipment being protected.

A **What a Blue Signal Signifies.**

A blue signal signifies that workers are on, under, or between rolling equipment and the following applies:

1) Rolling equipment must not be coupled to or moved, except as provided in Movement in Engine Servicing Area and Movement in Car Shop Repair Area of this rule.

2) Rolling equipment must not pass a blue signal on a track protected by the signal.

3) Other rolling equipment must not be placed on the same track so as to block or reduce the view of the blue signal. However, rolling equipment may be placed on the same track when it is placed on designated engine servicing area tracks or car shop repair area tracks, or when a derail divides a track into separate working areas.

4) Rolling equipment must not enter a track when a blue signal is displayed at the entrance to the track.

5) Controls or devices on rolling equipment that could affect equipment movement (i.e., MU connections, handbrakes, angle cocks) must not be changed or operated unless directed by individuals who placed the blue signals or by the employee in charge of workers.

   Blue signals or remote control blue signals must be displayed for each craft or group of workers who will work on, under, or between rolling equipment.

   Blue signals may be removed only by the craft or group who placed them.

   Remote control display may be discontinued when directed by the craft or group that requested the protection. When blue signal protection has been removed from one entrance of a double-ended track or from either end of rolling equipment on a main track, that track is no longer under blue signal protection.

B **How to Provide Protection**

When workers are on, under, or between rolling equipment and exposed to potential injury, protection must be provided as follows:

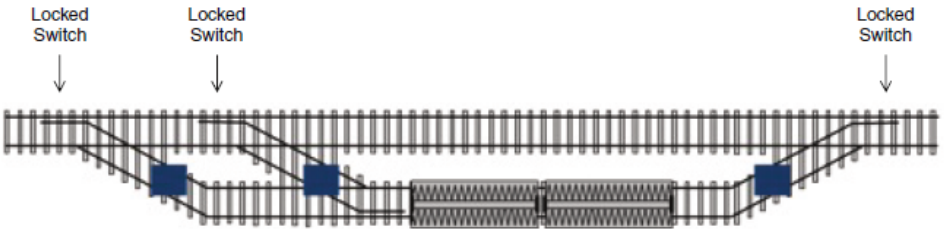
On a Main Track a blue signal must be displayed at each end of the rolling equipment.

On Non-Main Track one of these three methods of protection or a combination of these methods must be provided:

1) Each manually operated switch that provides direct access must be lined against movement onto the track and secured by an effective locking device. A blue signal must

be placed at or near each such switch. In addition, any facing point crossover switch must be lined against movement and secured by an effective locking device.

Diagram A.



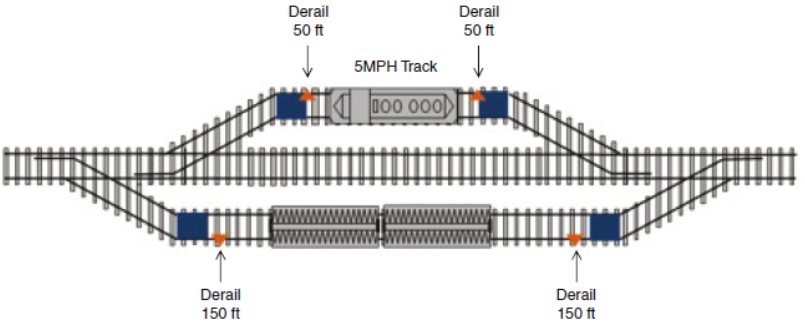
2) A derail capable of restricting access to the track where work will occur must be locked in derailing position with an effective locking device and

(a) positioned at least 150 feet from the rolling equipment to be protected, or

(b) positioned at least 50 feet from the end of rolling equipment on a designated engine servicing track or car shop repair track where speed is limited to not more than 5 MPH.

A blue signal must be placed at in advance of each derail.

Diagram B.



3) Where remote control switches provide direct access, the employee in charge of the workers must tell the switch operator what work will be done. The switch operator must then be governed by the following:

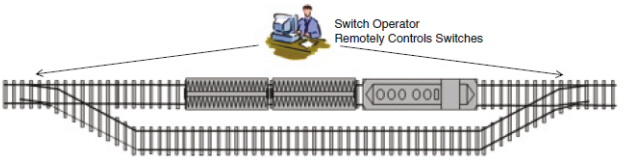
(a) Inform the employee in charge of the workers that the switches have been lined against movement onto the track and devices controlling the switches have been secured.

(b) Not remove the locking devices unless the employee in charge of the workers says it is safe to do so.

(c) Maintain for 15 days a written record of each notification that includes:

- Name and craft of the employee in charge of the workers requesting protection.
- Identification of track involved.
- Date and time the employee in charge of workers is notified that protection was provided.
- Date, time, name, and craft of the employee in charge of workers who authorized removal of the protection.

Diagram C.



C **Blue Signal Readily Visible to Engineer**

In addition to providing protection as required in “On a Main Track” and “On Non- Main Track,” when workers are on, under, or between an engine or rolling equipment coupled to an engine:

1) Blue signal must be attached to the controlling engine, and visible to the engineer or employee controlling the engine.

2) Engines equipped for remote control must be placed in Manual Mode.

3) Engine must not be moved.

D **Protection for Workers Inspecting Markers**

Blue signal protection must be provided for workers when they are

1) replacing, repositioning, or repairing a marker, and the rear of the train is on any track, or

2) inspecting a marker by repositioning the activation switch or covering the photo-electric cell, and the rear of the train is on other than a main track.

E **Protection for Emergency Repair Work**

If a blue signal is not available for employees performing emergency repairs on, under, or between an engine or rolling equipment coupled to an engine, the employee controlling the engine must be notified and appropriate measures taken to provide protection for the employees.

F **Movement in Engine Servicing Area**

An engine must not enter a designated engine servicing area until the blue signal protection is removed from the entrance. The engine must stop short of coupling to another engine.

An engine must not leave a designated engine servicing area unless the blue signal is removed from the engine and the track in the direction of movement.

Blue signal protection removed to let engines enter or leave the engine servicing area must be restored immediately after the engine enters or clears the area.

An engine protected by blue signals may be moved on a designated engine servicing area track based on the following:

1) An authorized employee operates the engine under the direction of the employee in charge of workers.

2) The blue signal has been removed from the controlling engine to be repositioned.

3) Workers have been warned of the movement.

G **Movement in Car Shop Repair Area**

When rolling equipment on car shop repair tracks is protected by blue signals, a car mover may reposition the equipment if

(a) workers have been warned of the movement, or

(b) an authorized employee operates the car mover under the direction of the employee in charge of workers.

417. UTILITY EMPLOYEES

A Utility Employee is a railroad employee assigned as a temporary member of a train or yard crew, and is qualified on these rules.

Utility Employees may work without blue signal protection when they are assigned to a crew, and are performing work with that crew.

A utility employee may start work as a member of only one train or yard crew at a time. No more than three utility employees may work with one train or yard crew at the same time.

A utility employee may become a member of a train or yard crew under the following conditions:

- the utility employee communicates directly with the engineer of the train or yard crew before starting work,
- the engineer identifies the utility employee to each member of the crew, and each crew member acknowledges the utility employees presence, or
- the engineer authorizes the utility employee to work as a temporary member of the crew.

Before a utility employee may work on, under, or between rolling equipment, the following applies:

- All members of the crew must communicate with each other to understand the work to be done.
- The engineer must be in control of the assigned controlling locomotive.

  However, another member of the same crew may replace the engineer when the locomotive is stationary.

A utility employee is released from a train or yard crew when

- the utility employee notifies the engineer that the work is completed,
- the engineer notifies each crew member that the utility employee is being released, or
- the engineer releases the utility employee from the train or yard crew after each crew member acknowledges this notice.

Utility employees may go on, under, or between rolling equipment without blue signal protection to perform the following duties:

- Set or release handbrakes.
- Couple or uncouple air hoses, electrical, and mechanical connections
- Prepare equipment for coupling.
- Perform air brake tests, including cutting air brakes in or out and positioning retaining valves.
- Inspect, test, install, remove, or replace rear end marker or end of train device.

418. INTERMODAL FACILITIES

All intermodal ramp tracks will be protected by derails and red signs with white letter reading “MEN WORKING.” Red signs and associated derail locks may be applied and removed only by intermodal facility employees.

When a red “MEN WORKING” sign with or without a derail is displayed protecting a track or cars at an intermodal facility:

- rolling equipment must not be coupled to or moved,
- rolling equipment must not pass the red sign, and
- other equipment must not be placed blocking or reducing the view of the red sign.

NOTE: A red sign may be displayed on an intermodal track to protect lift equipment or other devices, even while the track is not occupied by rail equipment.

When intermodal facility employees work on equipment that is attached to a locomotive with train and engine crew, the use of derails and red signs is not required.

Before intermodal employee works on, between or at the end of equipment with a crew and locomotive and attached:

(a) Job Briefing will be performed so all employees have a thorough understanding of work to be done.

(b) Locomotive and cars must be stopped.

(c) DO NOT BEGIN WORK if other movements are on the same track.

(d) Follow these steps:

i Conductor will state via radio, “Intermodal going in-between, (insert initials and number of locomotive)”.

ii Engineer must:

i fully apply the independent brake,

ii center the reverser, and

iii state via radio, “Set and Centered (insert initials and number of locomotive)”.

iii Brakes must remain applied, and reverser centered until conductor states via radio, “Intermodal is in the clear (insert initials and number of locomotive)”.

500. MOVEMENT OF TRAINS, ENGINES AND ON-TRACK EQUIPMENT

500. REPEAT INSTRUCTIONS

Except as provided in Rule 204, employees who receive verbal instructions or information about train or engine movements must repeat them.

501. SPEED

Speeds indicated are maximum authorized speeds between locations named, but do not modify any rule or instruction that may require a lower speed. Maximum speed must be maintained to the extent possible, consistent with safety and efficiency. Conductors and engineers are responsible for knowing and not exceeding maximum speed for their train or territory. Unnecessary delays must be avoided.

Passenger speed is applicable to trains consisting entirely of passenger equipment. Where no passenger speed is shown, passenger trains will be governed by speeds prescribed for freight trains.

Intermodal Speed is applicable to trains consisting solely of TOFC/COFC/ multi-level auto rack equipment and/or an Autonomous Track Inspection (ATI) car. These trains are authorized to operate at intermodal speeds as indicated in the timetable.

Crew members must notify the RTC promptly of any condition that will delay or prevent their train from making the usual speed. When a controlled signal displays a proceed indication, notify the control operator immediately if movement cannot occur promptly.

Speed restrictions apply to the entire train or movement, unless the restriction is identified as Head End Restriction (HER). Some permanent speed restrictions will show the reason for the restriction, however the speed restriction is still applicable between the mile post locations shown.

PEER TO PEER GUIDELINES FOR SPEED

Crew Members must clearly communicate to each other (as outlined in this rule, USOR 501) the maximum authorized speed for their train or territory and are responsible to not exceed the maximum authorized speed.

1. Crew Member: "Approaching (insert speed restriction) at (insert milepost location)."
2. Engineer: "Approaching (insert speed restriction) at (insert milepost location)."

If speed requirements are, or may be exceeded, crew members must remind one another of such requirements:

1. Crew Member 1: "Maximum Authorized speed is 50 MPH; our current speed is 55, we need to slow down."
2. Locomotive Engineer: "Understood, appropriate action is being taken."

502. SHOVING MOVEMENTS

Before shoving equipment, unless the engineer is positioned to visually protect the point of movement such as lite locomotive consist with a slug on the leading end, a job briefing must be conducted between the engineer and the employee directing the shove which will include:

- Means of communication to be used (only required when using non-radio communication),
- Type of point protection to be provided, and
- Specified distance and direction

At Prohibited Spotting Distance locations, employee providing point protection must ensure movement stops a minimum of 25 feet from derails in derailing position or end of track locations.

Be vigilant when operating in customer tracks looking out for debris or other items which may foul or be on the track.

When protecting the shove movement, employee must be prepared to stop the movement within half the range of vision short of Train, Engine, Railroad car, Roadway Workers or equipment fouling the track, stop signal, derail or switch lined improperly.

Point protection must be provided by one of the following methods:

1) Employee riding the leading end of the movement positioned to observe the track to be used.

2) Employee, taking a stationary position on the ground in advance of the movement and not inside a vehicle, who can see the point of the movement and track to be used during the duration of the shove.

3) Employee monitoring a camera or other technology when:
    - Portion of track has no intervening switches/derails, and
    - Visibility is not restricted

The employee directing the shoving movement must not be involved in any unrelated tasks for the duration of the shove, and must give signals or instructions to control the movement.

These instructions do not apply to the following:

- cars that have been kicked, humped or dropped,
- push-pull operations when operated from the leading end of the movement,
- manned helper service or distributed power locomotives when operated from the leading end of the movement,
- snow plow operations,
- while performing roadway maintenance work under the direction of an EIC, or
- movements as prescribed by Rule 503.

When cars are shoved on a signaled main track, controlled siding, or any track where CTC is in effect, permission of the RTC or control operator is not required when the movement will remain within a block, and Restricted Speed applies. Point protection must be provided by methods 1 or 2 above.

Unless further restricted, movements not headed by a locomotive, cab control car, self propelled car or snow plow are restricted to a maximum of 20 MPH.

Shoving Movements Inside Intermodal Terminals

When available, employees should ask for assistance through the use of a company vehicle when shoving into a pad track with crossings for the purpose of compliance with USOR 504.

When providing point protection in this manner, employees must:

- Provide point protection as a passenger in a vehicle (this applies to both RCL and non RCL movements),
    - The employee may be driven to a location when there is continuous sight of the track to be used, Once vehicle is stopped, and the employee has exited the vehicle, the equipment can be moved towards the location of the employee provided the movement can be observed for the entire duration move, once movement is stopped,

  The employee can then be driven to the next location where they will have continuous sight of the track to be used and repeat the step above.

No vehicle available, recommended procedures

- Take up a position on the point of the movement, on the side opposite where the chassis and containers are placed if possible,
- In addition to the requirements of USOR 520, when employees are riding equipment, they must also operate at a speed to stop within ½ the range of vision, short of objects such as truck chassis, containers or vehicles which are potentially left foul of the track.
- Manually protect crossings where vehicular traffic is evident per USOR 504.

PEER TO PEER GUIDELINES FOR SHOVING MOVEMENTS Conduct a job briefing between the engineer and crew member directing the shove and agree how the shoving movement will be made. Communication must include means of communication to be used, type of point protection, specified distance, and direction.

Crew Member states via radio: “CN 2641, conductor is on the point, you’re lined for track CS31 and okay to shove 20 cars.”

Engineer states via radio: “CN 2641, conductor is on the point, lined for CS31, and we’re okay to shove 20 cars.”

Crew Member states via radio: “that is correct.”

NOTE: This does not apply to kicking cars. Please reference verbiage outlined in USOR 214. DIRECTING KICKING OPERATIONS VIA RADIO.

503. SHOVING MOVEMENTS AUTHORIZED BY THE RTC

The requirements of Rule 502 do not apply to shoving movements authorized by the RTC on main tracks, controlled sidings, or any track where CTC is in effect.

1) Obtain permission from the RTC. Permission must not be given:
   - until it has been verified there are no authorities or Planned Work limits in effect behind the shoving movement, unless conflicting movements have been protected, or
   - if the track to be used has been removed from service in the same or overlapping limits.

2) When authorized under these conditions:
   - movement does not extend beyond train’s authority to the main track,
   - movement will not be made into or within yard limits, automatic interlocking limits, or drawbridges,
   - movement must not exceed 20 MPH,
   - movement must not enter or foul a highway-rail grade crossing or pedestrian crossing except as provided by Rule 504, and
   - movement does not exceed the train’s length.

3) When a shoving movement is made into or within a control point or manual interlocking limits:
   - signal governing movement must display an indication more favorable than RESTRICTING. (If Restricting is displayed, point protection must be provided under Rule 502 Item 1 or 2),
   - each signal affecting the movement must be continuously observed by a member of the crew who can determine that the signal changes to its most restrictive indication after the movement has passed it, and
   - movement does not exceed the train’s length.

504. SHOVING OVER CROSSINGS

Do not shove or kick into or through a highway-rail crossing or pedestrian crossing until

- crossing gates are fully lowered, or
- a qualified employee is positioned at the crossing, and is able to communicate with the train, or
- At crossings not equipped with crossing gates, when no traffic is approaching or stopped at the crossing, and the leading end of the movement does not exceed 15 MPH through the crossing. If traffic is approaching or stopped at the crossing, stop and proceed over the crossing only as directed by employee on the ground at the crossing.

Flangeways at Crossings and Emergent Conditions

When shoving equipment, employees MUST ALWAYS be particularly vigilant to ensure flangeways at crossings are not filled with snow or ice, or any material that can be firmly packed into the flangeway (e.g., dirt, mud, stone, or debris) caused by the passage of vehicular traffic or where freezing and thawing conditions exist. Regardless if such emergent conditions are considered passable, employees MUST detrain and walk ahead of their movement to determine if the locomotive(s) can move through the conditions without derailing until these conditions are passed. Crew members must use good judgment when determining if locomotive(s) should first be operated over flangeways at crossings. If in doubt whether the locomotive(s) could safely clear the track of these conditions, crew member(s) must avoid entering the area.

Special precautions may need to be taken under emergent conditions when visibility is poor (e.g., night or fog), which can make ice, snow or other material difficult to see. This is especially important when employee(s) are riding equipment. If such conditions exist, movements may need to reduce their speed or stop if required, to better assess the condition.

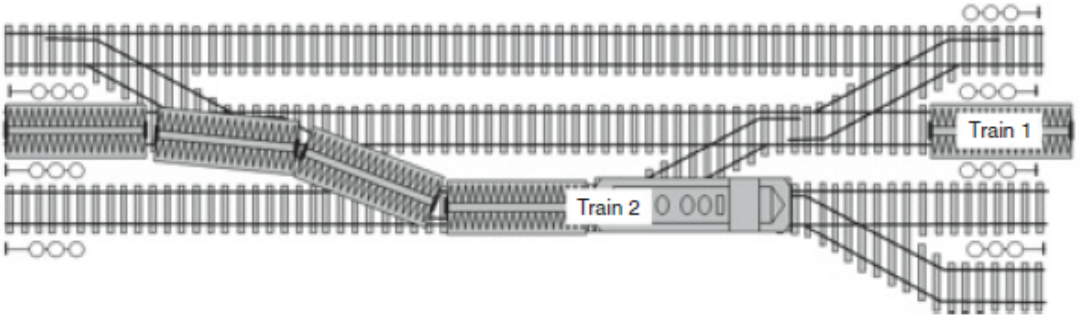
Any employee discovering ice, snow or other material which may make a flangeway at crossings impassible, must immediately report the condition(s) to the appropriate Supervisor or Rail Traffic Controller (RTC), so corrective action can be taken and to advise other movements of these condition(s).

505. CHANGING DIRECTION WITHIN CONTROL POINTS OR INTERLOCKINGS

Obtain permission from the control operator before changing direction if the trailing end of the movement is between the outer opposing absolute signals, unless operating with Track Authority.

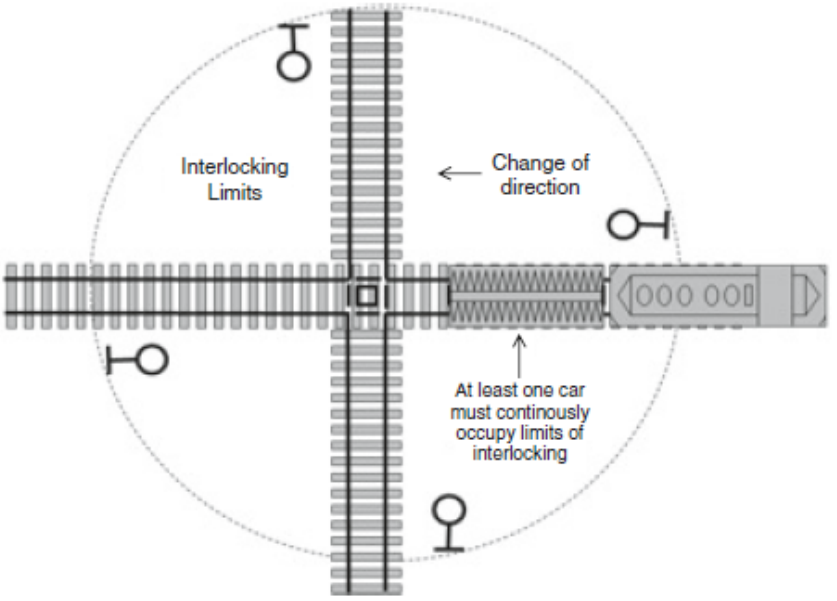
Train #1 must not change direction without permission from the control operator. In this example, train #2 can be lined through the crossover behind Train #1.

Dia. A.



At an automatic interlocking, the movement may change direction within the limits of the interlocking if it continuously occupies at least one car length of the limits.

Diagram B.



506. HANDLING SNOWPLOW AHEAD OF ENGINE

When shoving a snowplow on the main track, an absolute block must be maintained in advance of the train.

The train must proceed with caution when meeting or being passed by a moving train. Maximum speed for wedge snowplows is 40 MPH unless otherwise authorized by supervisor in charge. Reduce speed, if necessary, when employees are visible near the track, and sound whistle signal 410(7) frequently.

507. MEETING OR PASSING PRECAUTIONS

A train standing on the main track to meet an opposing train must, if possible, line the switch for the opposing train to leave the main track. However, within ABS, do not line the switch until the opposing train has entered the block in advance.

508. TRAIN LOCATION BEFORE LEAVING

Employees who receive authority to occupy the track after the arrival of a train or to follow a train must not occupy the track until they determine the train has arrived or left the location by one of the following methods:

- direct communication with a crew member of the train, or
- receiving information about the train from the RTC or control operator.

When employees are granted authority behind a train, the train must be informed by the EIC, unless they are beyond radio range, then information must be relayed by the RTC. The train must not make a shoving movement without permission of the EIC.

509. PUSH-PULL PASSENGER TRAINS

On passenger trains operating in pushpull service, the engineer must communicate verbally an Approach or a less favorable signal indication to

1) a promoted crew member, or

2) a rules qualified employee in the control compartment.

Each transmission must be acknowledged by the designated crew member. If acknowledgement is not received, the engineer must determine the reason prior to leaving the next scheduled passenger stop. Communication must include the following:

- train identification,
- name or aspect of signal,
- location of signal, and
- track designation if in multiple track territory.

The designated employee must repeat the information and determine if the train is operating in accordance with the signal indication. If the next signal in advance changes to a more favorable indication, the engineer must communicate the Name or Aspect to the designated employee.

If the train stops for any reason or speed is reduced below 10 MPH in the block immediately preceding an Interlocking or Absolute Signal, proceed prepared to Stop at the next signal, not exceeding 40 MPH until it can be seen that the next signal indicates proceed and the track is clear to that signal.

510. YARD LIMITS

Yard Limits are in effect on main tracks only and are designated by Yard Limits signs and listed in the timetable.

In Yard Limits, trains and engines are authorized to use the main track, however, Timetable Instructions may require contacting an employee for routing instructions, when working limits are established by the Roadway Worker, the employee providing routing information must document the working limits in the prescribed format listed below, Non-Controlled Track Working Limits. On-Track equipment traveling through Yard Limits will move as the way is known or seen to be clear.

When establishing working limits, Roadway Workers must provide protection as prescribed by On-Track Safety Rules Section 5.

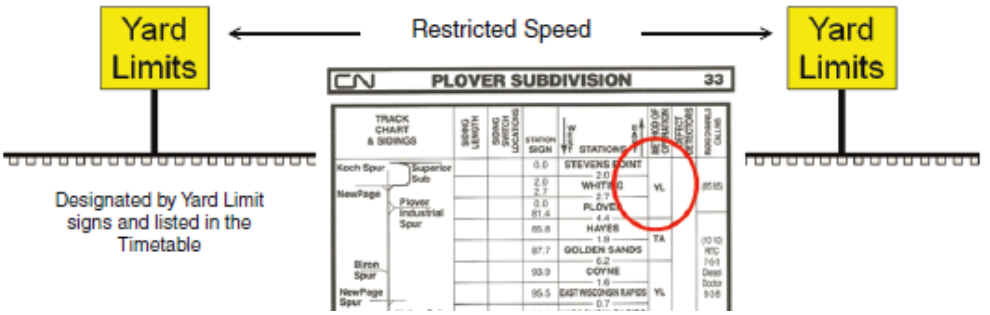
All trains and engines entering or moving within Yard Limits or ABS Yard Limits, regardless of signal indication, must move at restricted speed.

Movements against the current of traffic must not be made unless authorized and protected by the designated employee.

Example of prescribed format

NON-CONTROLLED TRACK WORKING LIMITS
Date: _____ Employee In Charge _____
Protection Established on Tracks: _____
Switches Out of Service: _____
Location of Derails (if applicable): _____
Time Released: _____

Diagram A.



511. FRA EXCEPTED TRACK

On a track designated as FRA Excepted Track the following will govern:

- maximum speed must not exceed 10 MPH,
- no occupied passenger train will be operated, and
- movement will handle no more than five cars placarded according to Hazardous Material Regulations.

512. MOVEMENT IN DESIGNATED TERRITORY

A On tracks designated in the timetable, trains will operate with the current of traffic if the RTC gives verbal authority or a controlled signal indicates proceed. Except for movements covered by Rule 503 Shoving Movements Authorized by the RTC, trains moving against the current of traffic or to "Work Between" two points must be authorized by Track Authority. Roadway Workers must be authorized by Planned Work or Track Authority.

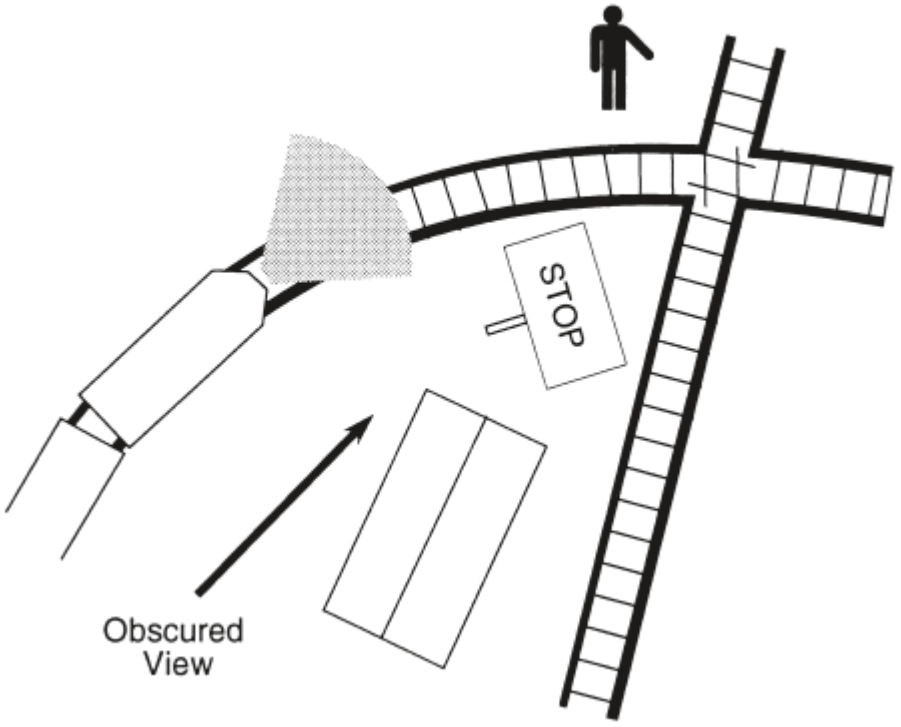
B On tracks designated in the timetable, trains will operate by block signal indication for both following and opposing movements on the same track, if the RTC gives verbal authority or a controlled signal indicates proceed. Roadway Workers must be authorized by Planned Work or Track Authority. Conflicting movements must not be authorized until a thorough understanding has been made between the crew members of the conflicting movements and the RTC. Instructions issued by the RTC must be repeated by those receiving them, and confirmed with "that is correct" before movements are made.

513. APPROACHING RAILROAD CROSSINGS, DRAWBRIDGES, AND END OF MULTIPLE MAIN TRACK

Trains approaching junctions or railroad crossings at grade must move prepared to stop, unless the switches are properly lined, the signals indicate proceed, and the track on the conflicting route is clear. If stop signs protect these areas, the train must stop before any part of the train or engine passes the stop sign. At drawbridges, be governed by signal indication or instructions at the bridge.

If a train must stop before entering a railroad crossing at grade and the view on the conflicting route is obscured, a crew member must go ahead of the train and signal from the crossing when it is safe to proceed.

Diagram A.



514. STOPPING CLEAR OF CROSSINGS AND JUNCTIONS

If possible, unless authorized, a train or engine must not stop or be left standing at a railroad crossing or junction where it could interfere with movements on other tracks.

Engines, cars, or equipment must not be left standing entirely between the opposing absolute signals that govern movements at a railroad crossing at grade.

515. PORTION OF TRAIN LEFT ON MAIN TRACK

When a portion of a train is left on the main track, provide protection against movements that may enter the main track between the detached portion and the returning front portion. This is not required when verbally relieved by the RTC or the return movement is otherwise authorized.

Make the return movement prepared to stop within one half the range of vision short of the detached portion. When governed by block signals, an engine without cars may return according to signal indication.

516. PRECAUTIONS AGAINST UNUSUAL CONDITIONS AND DEFECTS

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

If any crew member believes that the train or engine has passed over a dangerous defect, the crew member must immediately notify the RTC and provide protection if necessary.

517. EMERGENCY STOP OR SEVERE SLACK ACTION

If an adjacent main track or controlled siding may be obstructed when a train or engine is stopped by an emergency application of the brakes or severe slack action occurs while stopping, immediately warn other trains by radio in this manner:

“Emergency, Emergency, Emergency, (Train) is in emergency moving (direction) on (track) at MP ___.”

Following the emergency transmission, the RTC must be notified.

All train and engine movements on adjacent tracks must pass the stopped train at Restricted Speed. If information is received from the RTC or crew members of the train in emergency that adjacent tracks are not fouled, restricted speed will not apply.

If the brake pressure on the rear car has been restored as indicated by rear car gauge or EOT device and there is no visible damage, the train may proceed without providing inspection. If brake pipe pressure cannot be restored or if the train requires excessive power to start after being stopped, then inspect both sides of the train before proceeding. When emergency stop results in a drawbar or knuckle separation, train must not proceed until the drawbar/knuckle or any other broken car parts are removed from between the rails where they could cause damage to effected train or any subsequent passing trains or on-track equipment.

518. MOVEMENT AT RESTRICTED SPEED

When a train or engine is required to move at restricted speed, it must proceed prepared to stop within one-half the range of vision short of

- Train,
- Engine,
- Railroad car,
- Roadway Workers or on-track equipment fouling the track,
- Stop Signal, or
- Derail or switch lined improperly.

The crew must keep a lookout for broken rail and not exceed 20 MPH.

Comply with these requirements until the leading wheels reach a point where movement at restricted speed is no longer required.

519. MOVEMENT AGAINST THE CURRENT OF TRAFFIC

When moving against the current of traffic, approach block signals prepared to stop unless the track is clear or signals indicate proceed.

520. MOVEMENT ON NON-MAIN TRACK

Except when moving on a track where CTC is in effect, trains, engines and on-track equipment must move on Non-Main Track, at a speed that allows them to stop within one half the range of vision short of

- Train,
- Engine,
- Railroad car,
- Roadway Workers or equipment fouling the track,
- Stop signal, or
- Derail or switch lined improperly.

On-Track equipment that is traveling will move as the way is known or seen to be clear. When establishing working limits, Roadway Workers must provide protection as prescribed by On-Track Safety Rules Section

5. Trains, engines, and on-track equipment within working limits established by means of inaccessible track may move only under the direction of the EIC.

521. TRAIN COORDINATION

Train Coordination is a method of establishing working limits for a Roadway Worker on a controlled track upon which only one train holds exclusive authority to move, whereby the train crew yields their authority to the Roadway Worker. To establish, train must be stopped, and visible to the EIC.

- Further movements will only be made under the direction of the EIC. Train is not required to remain in view of the EIC during the time Train Coordination is in effect.
- Train crew must not report their exclusive authority clear until the working limits have been released to them by the EIC.

522. VERBAL PROTECTION

Working limits may be established for a Roadway Worker by Verbal Protection within manual interlocking or control points. It will be issued and protected by the RTC or control operator, after withholding authority to trains or other on-track equipment to enter or move within the limits and may be issued between specific switches or signals. Issue Verbal Protection as follows:

1. State track number/name, track limits and the words “until released.”

2. EIC will repeat all the information to the RTC or control operator, who will check and if correct will respond, “that is correct.”

3. The RTC or control operator shall not permit the movement of trains or other on-track equipment into working limits protected by Verbal Protection until the EIC who obtained the Verbal Protection has reported clear of the track.

523. INSPECTING PASSING TRAINS

When duties and terrain permit, both sides of a passing train must be inspected.

- Engineer will inspect from the cab of the locomotive
- Conductor must perform an inspection from the ground. If possible, stop the train at a location that allows the inspection from the opposite side of the track. Where no safe location is present on the other side of the track, the Conductor will stand on the ground by their standing train.

At locations where trains will meet, the train to arrive second must notify the first train when they pass the approach to the siding, to allow crew members to be in position for inspection. If adequate time is not provided for crew members to get safely into position prior to the arrival of any train, attempt to perform inspection of as much of the passing train as possible.

Other employees along the right of way must inspect passing trains.

Look especially for the following conditions:

- overheated journals,
- sticking brakes,
- sliding wheels,
- wheels not properly positioned on the rail,
- dragging equipment,
- insecure contents,
- signs of smoke or fire,
- headlight or marker improperly displayed, and
- any other dangerous condition.

Report the results of the inspection to a crew member of the passing train. If a defect is observed and communication cannot be established, immediately notify RTC.

524. TRAIN INSPECTIONS BY CREW MEMBERS

While their train is moving, crew members must inspect it frequently and look for indications of defects in the train listed in Rule 523 (Inspecting Passing Trains), especially when rounding curves.

Crew members who discover or when notified of defects while the train is moving must stop the train promptly consistent with good train handling, notify the RTC, and correct any defects, if possible.. If the defective car must be set out, they must not attempt to move the car to the set out point unless it is safe to do so.

Any defective car set out, must be left in a location that is accessible to mechanical department employees.

525. CARS OR EQUIPMENT LEFT ON SIDING

Do not leave cars or equipment on sidings unless authorized by the RTC.

526. BLOCKED PUBLIC CROSSINGS

A public crossing must not be blocked longer than 10 minutes unless it cannot be avoided. If possible, do not allow head end of the train to stand closer than 200 feet from a road crossing when there is an adjacent track.

Whenever an emergency vehicle is observed or reported being blocked at a public crossing, employees must, when possible, clear the crossing.

527. AUTOMATIC WARNING DEVICES ACTIVATED BY A CONTROLLED SIGNAL

Public crossings equipped with lights or gates activated by a controlled signal will be identified in the timetable. When the controlled signal displays Stop indication, the devices will not function automatically. After receiving permission to pass the Stop indication, approach the crossing prepared to stop, unless warning devices have been seen to be operating for at least 20 seconds.

528. AUTOMATIC WARNING DEVICES

A crossing equipped with automatic warning devices must not be fouled until devices have been operating long enough to provide 20 seconds warning, and the crossing gates, if equipped, are fully lowered when the movement:

- is on Non-Main Track or a siding,
- is closely following another movement,
- has been stopped within 3,000 feet of the crossing,
- enters the main track or siding within 3,000 feet of the crossing, or
- is within 3,000 feet of the crossing and speed has increased by more than 5 MPH.

Do not actuate automatic warning devices unnecessarily by leaving switches open or permitting equipment to stand within the controlling circuit.

When notified that commercial power is out to a crossing equipped with Automatic Warning Devices, but no report has been received of an Activation Failure or False Activation of the devices, RTC will notify all trains in the affected area requiring that trains do not foul crossings protected by these devices until the devices have been operating long enough to provide 20 seconds warning, and the crossing gates, if equipped, are fully lowered.

When AC power indicating light is flashing or extinguished, notify the RTC immediately.

If crossing protection does not operate, be governed by the first paragraph of rule 529which reads: Employees must observe all automatic crossing warning devices and report any that are malfunctioning to

the RTC or proper authority by the first available means of communication. RTC will issue instructions for the malfunction and these instructions will remain in effect until repairs are completed.

529. ACTIVATION FAILURE/FALSE ACTIVATION/CROSSBUCK DOWN

Employees must observe all automatic crossing warning devices and report any that are malfunctioning to the RTC by the first available means of communication. RTC will issue instructions for the malfunction and these instructions will remain in effect until repairs are completed.

A **ACTIVATION FAILURE**. When notified of an activation failure:

1) Stop before entering the crossing.

2) Employee must dismount equipment and ensure all lanes of traffic are stopped

3) Proceed only on signal from employee at the crossing

EXCEPTIONS: If Crossing is protected by Flagman, proceed into the crossing only after receiving verbal or hand signal from the employee at the crossing. If there is one properly equipped flagman available, speed must not exceed 15 MPH until the crossing is completely occupied. Then proceed at normal speed. If there is a properly equipped flagman available to provide warning for each direction of vehicular traffic or at least one uniformed law enforcement officer, movement may proceed through the crossing at normal speed.

Flagman is defined as a person other than a train crewmember who is equipped with a vest, shirt, or jacket of a color appropriate for daytime flagging such as orange, yellow, strong yellow green or fluorescent versions of these colors or other generally accepted high visibility colors. For nighttime flagging, similar outside garments shall be retro reflective. Acceptable hand signal devices for daytime flagging include “STOP/SLOW” paddles or red flags. For nighttime flagging, a flashlight, lantern, or other lighted signal shall be used.

B**. FALSE ACTIVATION**. When notified of a false activation:

1. Proceed into the crossing not exceeding 15 MPH until the crossing is completely occupied. Then proceed at normal speed.

2. If shoving, crossing must not be occupied until warning has been provided to vehicular traffic by an employee on the ground at the crossing.

EXCEPTION: If there is a properly equipped flagman available to provide warning for each direction of vehicular traffic or at least one uniformed law enforcement officer, movement may proceed through the crossing at normal speed after receiving verbal or hand signal from employee at the crossing.

Flagman is defined as a person other than a train crewmember who is equipped with a vest, shirt, or jacket of a color appropriate for daytime flagging such as orange, yellow, strong yellow green or fluorescent versions of these colors or other generally accepted high visibility colors. For nighttime flagging, similar outside garments shall be retro reflective. Acceptable hand signal devices for daytime flagging include “STOP/SLOW” paddles or red flags. For nighttime flagging, a flashlight, lantern, or other lighted signal shall be used.

C**. CROSSBUCK DOWN**. When notified that crossbucks are knocked down at a crossing not protected by automatic warning devices:

1. Stop before entering crossing.

2. Proceed only on signal from employee at the crossing.

EXCEPTION: If Crossing is protected by Flagman, proceed into the crossing only after receiving verbal or hand signal from the employee at the crossing. If there is one properly equipped flagman available, speed not to exceed 15 MPH until the crossing is completely occupied. Then proceed at normal speed. If there is a properly equipped flagman available to provide warning for each direction of vehicular traffic or at least one uniformed law enforcement officer, movement may proceed through the crossing at normal speed.

Flagman is defined as a person other than a train crewmember who is equipped with a vest, shirt, or jacket of a color appropriate for daytime flagging such as orange, yellow, strong yellow green or fluorescent versions of these colors or other generally accepted high visibility colors. For nighttime flagging, similar

outside garments shall be retro reflective. Acceptable hand signal devices for daytime flagging include “STOP/SLOW” paddles or red flags. For nighttime flagging, a flashlight, lantern, or other lighted signal shall be used.

In either case of Activation Failure, False Activation, or Crossbuck Down, whistle signal 410(7) must be sounded regardless of any Locomotive Whistle Quiet Zone.Anytime an employee is on the ground providing warning, employee must be positioned in a safe location to avoid injury. Do not cross or stand in traffic lanes when warning traffic.

When advised by signal employee at the crossing, “Repairs have been completed at the crossing at MP ____, the instructions in GBO No. ___ no longer apply.” Crew member will repeat the instructions to the signal employee, who will state, “that is correct, (the signal employee’s name) and the time.” Crew member will write signal employee’s name, time, and mark an “X” on the GBO.

Known Rule 529 Conditions

When it is known that Rule 529 protection will be required at a crossing equipped with automatic warning devices due to scheduled maintenance or construction, the request must be received by the RTC no later than 1800 hours the previous day.

530. INFREQUENTLY USED AUTOMATIC WARNING DEVICES

On tracks that are used infrequently, trains must approach automatic warning devices prepared to stop, until it is known the devices are operating. Do not occupy a crossing if the warning devices have not been operating for at least 20 seconds, except on signal from an employee on the ground at the crossing.

If crossing protection does not operate, be governed by the first paragraph of rule529 which reads: Employees must observe all automatic crossing warning devices and report any that are malfunctioning to the RTC or proper authority by the first available means of communication. RTC will issue instructions for the malfunction and these instructions will remain in effect until repairs are completed.

Main Track locations where this rule applies will be shown in the timetable. When operating on Non-Main Track, be governed by Rule 528.

531. RECEIVING OR DISCHARGING PASSENGERS

A train or engine must proceed with extreme care when moving alongside a passenger train receiving or discharging passengers. Before allowing passengers to entrain or detrain, crews of passenger trains must ascertain the location of other trains that could pass either side of their train while stopped unless tracks are separated by a physical barrier.

532. PROHIBITED SPOTTING DISTANCE

Unless required for loading or unloading purposes, equipment must be left a minimum of 25 feet from the end of track, stop block or other device used to indicate the end of track. When equipment must be left within this 25 ft restricted area to facilitate loading or unloading, a stop must first be made 25 ft from end of track. Before coupling to equipment which has been left within this restricted area, a stop must be made prior to coupling, between 12 and 6 feet.

533. SECUREMENT OF KEY TRAINS

Key Trains are defined as a train with the following cars:

A One (1) or more tank car loads of any one or any combination of poisonous/toxic by inhalation as defined in 49 CFR 171.8, anhydrous ammonia (UN 1005), or ammonia solutions (UN 3318);

B One (1) or more loads of spent nuclear fuel (SNF) or high level of radioactive waste (HLRW) moving under the following Hazardous Materials Response Codes 4929142, 4929143, 4929144, 4929147; or

C Twenty (20) car loads or intermodal portable tank loads of any combination of hazardous material.

Key Trains must never be left unattended outside of a yard or terminal, except under the following circumstances:

- crew hours of service expired or no crew available,
- train is unsafe to move due to locomotive failure or defective railcar in train,
- route impassable or unsafe to traverse, examples include
    (a) derailment;
    (b) mechanical defect, e.g., overheated equipment, dragging equipment, engine failure, shifted load, failed knuckle or drawbar, broken/cracked wheel or axle;
    (c) maintenance or structural defect, e.g., signal, track, ties, ballast, bridge, tunnel, or other man-made structure including those adjacent to railroad right of way;
    (d) pedestrian, vehicle, or equipment including emergency responder(s) on/near railroad right of way;
    (e) weather condition, e.g., flood, snow, high wind, extreme temperature;
    (f) natural or man-made disaster, e.g., earthquake, slide, fire.
- train staged due to terminal or yard congestion,
- train held in siding due to main track capacity limitations,
- trains staged for interchanges,
- unable to interchange due to track capacity limitations, and
- customer track full or staged for loading/unloading.

Whenever a Key Train is to be left unattended in accordance with the above circumstances, a job briefing must be held with the RTC to include at a minimum the following:

- locomotive reverser(s) removed from all locomotive cabs, and taken by engineer;
- number of handbrakes applied;
- tonnage and length of train;
- grade and/or terrain features of track where train will be left;
- relevant weather conditions, e.g., high winds, heavy rain, blowing snow; and
- type of equipment being secured, e.g., unit train, intermodal train, manifest train.

RTC must verbally confirm with the train crew that the securement information received from train crew has been confirmed and verified as meeting the requirements of USOR 602, i.e., verify the number of handbrakes applied against the handbrake chart for the grade where train will be left unattended. Capturing these 6 bullet statements on the RTC's radio voice recording is sufficient; written recording will not be required.

However the SRS Line number and Car Numbers of handbrakes applied must be noted on the cover of Trains Work Order clearly and legibly for the next crew to easily read and understand where all the handbrakes are applied.

Exception: Equipment may be cut away with an emergency application to the cars to be left standing and properly secured per USOR 602, and left unattended without performing the above job briefing with the RTC under the following circumstances, provided the on-duty crew is actively engaged in one of the following operations (i.e., not on break):

- picking up, setting off, or repositioning cars at an industry;
- assembling cars from several tracks adjacent to the main track;
- adding, removing, or swapping locomotives; and
- moving part of the train when doubling a hill or cutting crossings.

534. EMERGENCY RESPONDERS

Railroad employee's, when made aware, must inspect or confirm inspection by a qualified railroad employee of all equipment that any emergency responder has been on, under, or between for proper securement prior to leaving that equipment unattended.

600. SWITCHING

600. SWITCHING SAFELY AND EFFICIENTLY

While switching, employees must work safely and efficiently, avoiding delay and damage to lading, equipment, structures or other property. Precautions must be taken to prevent unintended rollbacks that can foul other tracks or equipment.

NOTE: COUPLING SPEED FOR ALL RAILROAD EQUIPMENT MUST NOT EXCEED 4 MILES PER HOUR.

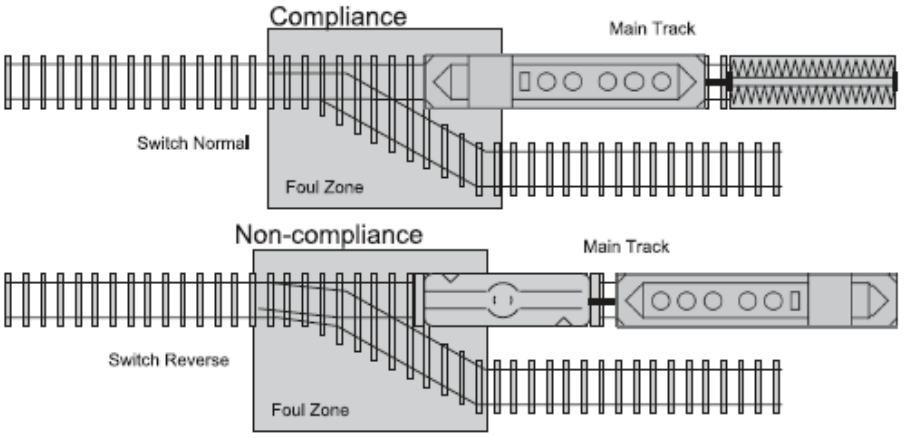
Before working, a job briefing must be conducted covering the following:

- movements to be made,
- movements of other crews switching in the area, and
- type of point protection required for shoving movements.

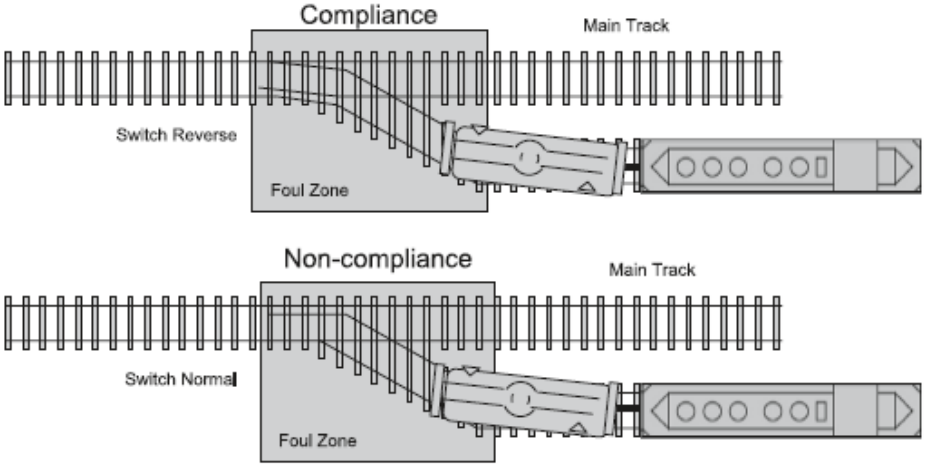
601. LEAVING EQUIPMENT IN THE CLEAR

Equipment must not be left where it will foul another track or cause injury to employees riding on the side of cars or engines. Equipment may be left as follows:

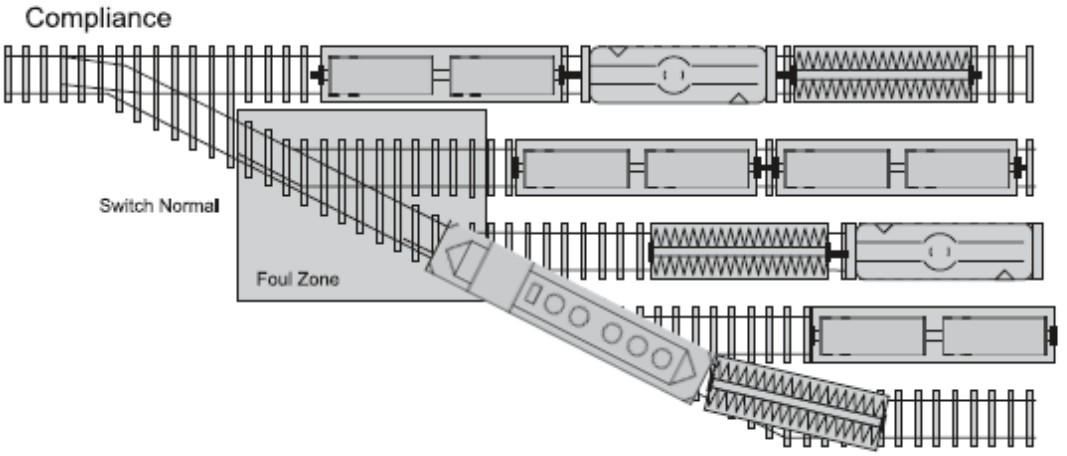
On a Main Track fouling a siding switch when the switch is lined for the main track.

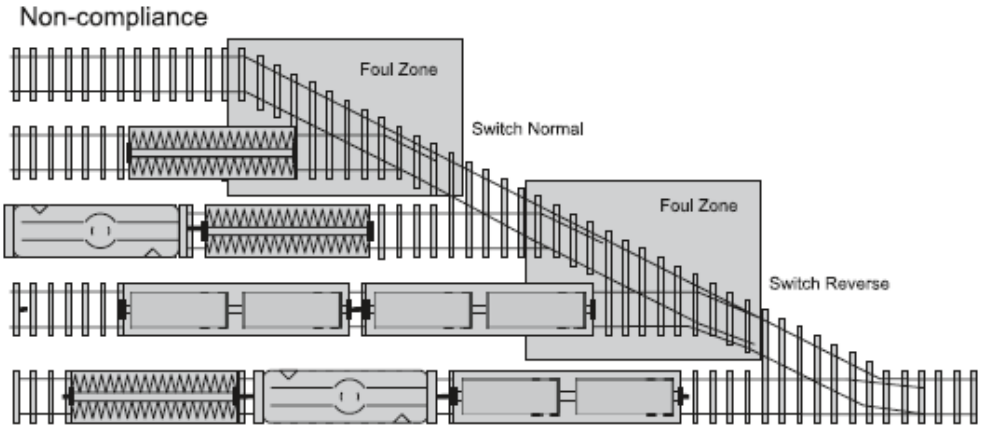


On a siding fouling the main track when the switch is lined for the siding.

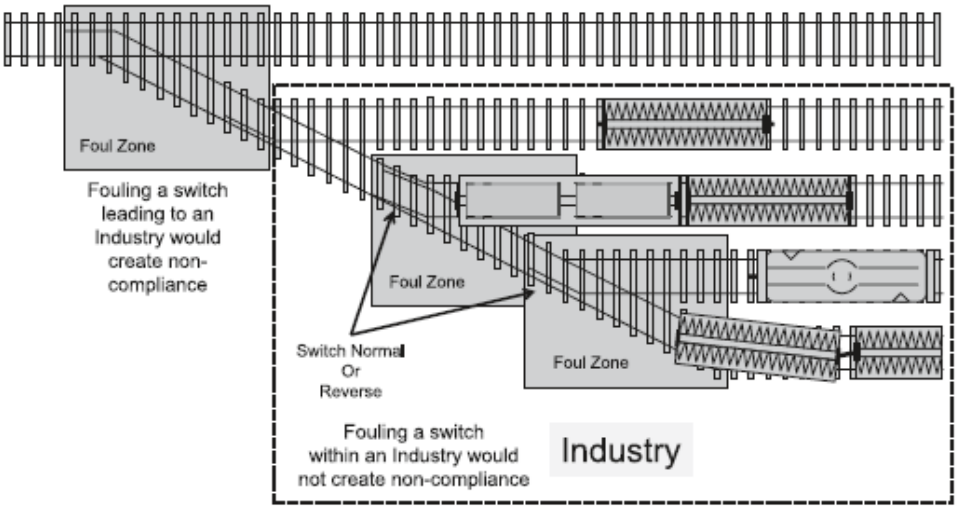


On a lead fouling a yard track when the switch is lined for the lead.





On an industry track beyond the clearance point of the switch leading to the industry track.



Note: When required to service an industry, employees must verify the equipment on all tracks are clear of the switching lead prior to providing service.

Where the clearance point is indicated, equipment must be left beyond that point. In yard tracks where cars are switched or staged the clearance point is identified by bright green paint along the tie and both sides of the web and head of rail for the width of the tie. Where there is no indication of the clearance point,

employees will determine if the equipment is clear of an adjacent track by taking a position on the end of the tie and close to the near rail of the adjacent track and raise their arm to shoulder height to the end of the car that is to be left. If the car is clear of the fingertips of the raised arm it is clear of the adjacent track.

602. HANDBRAKES

Air brakes must never be depended upon to secure unattended equipment. In yard tracks where cars are switched or staged, apply a sufficient number of handbrakes, with a minimum of one, and one additional handbrake for every ten cars left unattended, up to a total of five handbrakes before testing the effectiveness of the handbrakes as prescribed by ABTH Rule 503, applying additional handbrakes as needed to secure; the following examples apply:

e.g.,

- 1 car – 1 handbrake,
- 2 cars – 1 handbrake,
- 10 -19 cars – 2 handbrakes,
- 20- 29 cars – 3 handbrakes

NOTE: The above required number of handbrakes must be applied, unless timetable special conditions specify a minimum number of handbrakes at a specific location.

This is also required when moving cars from a track to prevent any remaining cars from moving. If handbrakes are not sufficient, block the wheels. Do not move cars with handbrakes applied, except when testing the effectiveness of the brake.

Do not use extreme physical force when applying or releasing handbrakes. When handbrakes must control or prevent movement, test the brakes to ensure they are operating before depending on them. When the engine is coupled to a train or cars standing on a grade, do not release the handbrakes until the air brake system is charged sufficiently to prevent movement.

If in doubt of securement requirements, a Transportation Supervisor must be contacted immediately.

Every effort must be made, including pre-planning by the Rail Traffic Control Centers to avoid leaving equipment on main tracks or sidings unattended on grades of 0.8% or greater.

If unusual circumstances make it necessary to leave equipment unattended with or without locomotives attached on a track with grades of 0.8% or greater, the RTC must be advised and included in the decision.

When securing equipment without a source of air attached on main track, sidings and spur tracks the minimum number of handbrakes required will be determined based on the chart contained below.

Procedures for securing unattended equipment on main track and siding with locomotives attached regardless of grade:

i When stopping to secure equipment, the lightest air brake application possible must be used to stop and hold the equipment at rest.

ii Locomotives must be left attached with brake pipe continuity throughout the equipment and air brakes left applied.

iii When applying handbrakes, do not bleed off cars.

iv Apply sufficient handbrakes starting from the head end regardless of whether the equipment is being secured on descending or ascending grade. Use the chart below to determine the minimum number of handbrakes required:

Minimum Handbrakes Chart for Securing Equipment Left Unattended on Main Track/Sidings and Spur Tracks

Minimum Required Handbrakes for Securing Movements / Equipment Left Unattended

Total Tons			Maximum Grade:													
			0.20%	0.40%	0.60%	0.80%	1.00%	1.20%	1.40%	1.60%	1.80%	2.00%	2.20%	2.40%	2.60%	2.80%	3.00%
0	–	2000	2	2	2	4	6	6	8	10	10	12	12	14			
2001	–	4000	2	2	4	6	8	12	14	16	18	20	22	26			
4001	–	6000	2	6	6	10	14	18	20	24	28	30	34	38			
6001	–	8000	4	6	8	12	18	22	26	32	36	42	48	52			
8001	–	10000	4	6	10	16	22	28	34	40	46	52	58	66			
10001	–	12000	4	8	12	20	26	34	40	48	56	64	72	80			
12001	–	14000	6	8	14	22	30	40	48	58	66	76	84	96			
14001	–	16000	6	10	16	26	36	46	56	66	76	88	98	110			
16001	–	18000	8	10	18	28	40	50	62	74	86	100	112	126			
18001	–	20000	8	12	20	32	44	58	70	84	98	112	128	146			
20001	–	22000	8	12	22	36	50	64	78	94	110						
22001	–	24000	8	12	24	38	54	70	86	104	122						
24001	–	26000	10	14	26	42	58	76	94	112	134						
26001	–	28000	10	14	28	46	64	82	104	124	148						
28001	–	30000	12	16	30	50	68	90	110	136	162						
30001	–	32000	12	16	34	52	74	98	120	148	172						
32001	–	34000	14	16	36	56	80	104	128	156	186						
34001	–	36000	14	18	38	60	84	110	138	170							
36001	–	38000	16	18	40	64	90	118	148	182							

100 % of cars

Note 1: If in doubt as to track gradient and/or handbrakes required contact the RTC or Yard/Terminal supervisor. Where circumstances or the chart requires the application of more than 18 handbrakes, the RTC must be contacted to determine if alternative action should be taken.

i Note 2: Should the handbrake chart minimum requirements exceed the number of cars in the movement, requirements are considered fulfilled by applying handbrakes on all (100%) cars.

ii Note 3: Handbrake requirements in the above table apply to rail cars. Locomotive handbrake application is not to be counted.

iii Note 4- When the grade is less than 0.20% as shown in table above, use the 0.20% column to determine the required number of handbrakes based on tonnage.

i Test the effectiveness of the handbrakes as prescribed by ABTH Rules 503.

If conditions do not permit safely performing the handbrake effectiveness test, then the number of handbrakes in the table shall be considered sufficient. Crews must exercise caution and consider possible rollback, block or interlocking signals, switches, public crossings at grade or similar features which are in close proximity to the equipment when testing the effectiveness of the handbrakes applied.

ii In the application of peer to peer communication between crew members, all crew members must, before leaving the location, confirm through radio communication or personal contact the number and location of handbrakes applied, to ensure compliance with these instructions.

iii On grades of 0.8% or greater, the number of handbrakes applied must be:

(a) reported to the RTC, and

(b) recorded on the Brake Status Report which must be left on the controlling locomotive. In the absence of the brake status report, a written record must be left on the control stand of the controlling locomotive.

iv Secure locomotives and apply air brakes as per ABTH 411.

PEER TO PEER GUIDELINES FOR NUMBER OF HANDBRAKES APPLIED

All crew members must, before leaving the location, confirm through radio communication or personal contact the number and location of handbrakes applied, to ensure compliance with these instructions.

Crew Member will job brief with other crew members before task begins.

Crew member 1: "(insert initials and number of locomotive) we are setting out 20 cars on track 2. We will need to apply 3 handbrakes to secure before we test."

After task is completed:

1. Crew Member 1: "(insert initials and number of locomotive), good test on the 3 hand brakes applied on the 20 car set out on Track 2."
2. Crew Member 2: "(insert initials and number of locomotive), good test on the 3 hand brakes applied on the 20 car set out on Track 2, is that correct."
3. Crew Member 1: "(insert initials and number of locomotive), that is correct."

PEER TO PEER GUIDELINES FOR SECURING DP REMOTE UNIT(S) FROM UNINTENTIONAL MOVEMENT

Switching: Crew members must communicate to one another, the status of a DP Remote Unit when it is being cut away. Prior to the cut being made, the Conductor must advise the Locomotive Engineer when a DP Remote Unit(s) is to be set-out or will remain with the portion of the train being left. The Locomotive Engineer must place the remote unit(s) in the appropriate mode to protect against unintentional movement. DP remote status must be confirmed by the engineer with the employee making the cut.

Conductor: CN 5434, I will be making a cut and leaving behind the DP Remote Unit, let me know once the DP Remote is secured.
Engineer: CN 5434, DP remote in set-out mode, OK to make the cut.
Conductor: CN 5434, DP Remote is secure and OK to make the cut.
Engineer: CN 5434, that is correct.

603. COUPLING/UNCOUPLING PRECAUTIONS

When coupling to equipment, verify it is properly secured and can be coupled to safely. Before moving the equipment:

1) stretch the slack to ensure all couplings are made, and

2) check cars for handbrakes that are applied.

Do not cut-off or leave equipment in curves and turnouts where couplers may by-pass when re-coupling. When coupling to equipment in any other than straight track, use caution, stopping if necessary, to ensure couplers are properly aligned.

604. KICKING OR DROPPING CARS

Kicking cars is prohibited unless within the confines of a classification yard where normal switching operations occur, when it will not endanger employees, equipment, or contents of cars. Kicking uphill or dropping of any equipment, utilizing the locomotive or gravity, is prohibited. Classification yards where kicking is prohibited will be identified by timetable, special conditions.

The following equipment must not be cut off in motion or struck by any car moving under its own momentum:

- passenger cars,
- restricted dimensional loads,
- engines,
- cars loaded with maintenance of way equipment,
- scale test cars, and

- any placarded rail car restricted by US Hazmat Handling Instructions.

605. TRACKS WHERE CARS ARE BEING LOADED OR UNLOADED

Before coupling to or moving cars on tracks where cars are being loaded or unloaded, crew members must be sure that all of the following have been removed or cleared:

- persons in, on or about cars,
- platforms or boards,
- tank car couplings and connections,
- conveyors,
- spouts and similar connections,
- vehicles, and
- other obstructions.

In addition:

- Be careful to avoid damage to lading in partially loaded cars.
- Do not handle cars that are improperly or unevenly loaded if load could shift or fall from the car, or if the car could derail or overturn.
- Return any car placed for loading or unloading to the location it was found if it has not been released for movement.
- Do not pull cars from any loading or unloading facility until any major accumulation of debris is removed.
- Plug and swinging door cars must not be moved until the doors are closed or secured, except when necessary to position for repairs. However, crew members must not attempt to close those doors. If plug door is found open en route, car may continue in the train to the next location where mechanical forces are available to close the door.

606. MOVING EQUIPMENT THROUGH GATES/DOORWAYS, BUILDINGS and DESIGNATED SHOP TRACKS

Before initial movement of equipment through gates, doorways, or similar openings, stop to ensure the openings are completely opened and secured. When overhead or side clearances are close, make sure movement is safe. Subsequent movements need not stop after completing initial verification.

Employees are prohibited from riding on the side of a car, engine or other equipment anytime inside of buildings or when operating on designated shop tracks. Shop tracks are designated either by signs positioned at the entrance to the track(s) or specified by local instructions in the timetable.

607. SWITCHING PASSENGER CARS

When switching passenger cars, couple the air hoses, charge the brake system, and use the automatic brake valve to avoid any rough handling. When coupling passenger cars, couplers must be stretched to ensure that knuckles are locked.

608. PROTECTING YARD TRACKS EQUIPPED WITH REMOTELY CONTROLLED SWITCHES

Before a crew member goes in-between equipment in a yard equipped with remotely controlled switches that are operated by an employee other than a member of the crew:

1) Contact employee in charge of the remotely controlled switches, stating name, assignment number, and track that will be fouled.

2) After determining that no equipment is moving in the track to be protected, the employee will line the remotely controlled switch away from that track and place protection on the switch.

3) Once protected, the employee will authorize the crew member to enter and go in-between equipment on that track.

4) Crew member will follow the procedures outlined in L.I.F.E. Safety Rule T-2.

Protection will remain in place until the crew member fouling the track reports in the clear to the employee controlling the switch.

When it cannot be visually determined there is no moving equipment in the track to be protected, the employee will wait 5 minutes after the last car was allowed to go into that track before following this procedure and advise the crew member that cars may still be moving in that track.

Individual Train Detection may not be used for on-track protection for Roadway Workers in yard tracks where remotely controlled switches are operated by employees other than crew members.

NOTE: This rule does not apply at locations equipped with hydra switches that are operated by a crew member at the switch or control panel along the lead.

700. SWITCHES AND DERAILS

700. HAND OPERATION OF SWITCHES AND DERAILS

Job briefings will be conducted before employees use hand operated switches and derails, each time a work plan is changed, and at the end of the work. It will include:

- name of employee responsible for operating the switch or derail,
- the work to be performed, and
- the position in which the switch or derail is to be left.

When spring or dual control switches are operated by hand, all rules governing hand-operated switches apply to them, except cars must not be dropped over them.

701. POSITION OF SWITCHES AND DERAILS

The employee handling a switch or derail is responsible for the position of the switch or derail being used and must:

- be qualified on the operating rules pertaining to handling switches and derails,
- visually check to see that switches and derails are properly positioned for the intended movement, the points fit properly, and the target, if equipped, corresponds to their position, and
- not operate a switch while equipment is standing or moving over it, except as provided by the 3rd paragraph of Rule706.

On tracks equipped with a derail in derailing position, equipment must stop at least 25 feet from the derail and no further movement is to be made until the derail is placed in non-derailing position and locked if equipped.

Equipment must not enter the Foul Zone of an adjacent track until the hand-operated switch is properly lined. Employees must not line or foul the switch if a conflicting movement is approaching. Do not line the switch away from equipment that enters a track until the movement has passed the clearance point in that track.

When possible, crew members on the engine must see that the switches and derails near the engine are properly lined.

On switches equipped with Switch Point Indicators, the following applies:

Aspect	Indication
Green	Switch Points fit properly in normal position.
Yellow	Switch Points fit properly in reverse positions.
*Red or Dark	Stop and inspect switch.

Note: *DTMF Switches equipped with switch point indicators displaying a red or dark aspect must be operated by hand per USOR Rule 714 PROCEDURE TO HAND-OPERATE DUAL CONTROL SWITCHES AND DERAILS.

PEER TO PEER GUIDELINES FOR POSITION OF SWITCHES

Employee at the switch, unless hand signals are being utilized, must communicate the switch position and track designations to the engineer prior to beginning movement, communicating with each other as follows:

1. Crew Member states via radio: “(insert initials and number of locomotive), switch(es) (insert Name or Number) are lined for (specify track).”
2. Engineer states via radio: “Understood (insert initials and number of locomotive), switch(es) (insert Name or Number) are lined for (specify track).
3. Crew Member states via radio: “that is correct.”

PEER TO PEER GUIDELINES FOR POSITION OF HAND-OPERATED DERAILS

Before movement is made within 25 foot of a derail in derailing position or past a derail, the employee lining the derail will notify the engineer as follows:

1. Employee at the location: "CN 5726, I am at the derail location, the derail is off, rail is clear of derail on track AF44, ok to come ahead 10 cars"
2. Second employee comunicated to : "CN 5726, you are at the location of the derail, and derail is off, rail is clear of the derail on track AF44, ok to come ahead 10 cars, is that correct?"
3. Employee at the location: "Yes, that is correct"

When all work is complete and the last piece of equipment has cleared the derail, the employee will notify the engineer derail is on as follows:

1. Crew member states via radio: "(insert initials and number of locomotive), derail is on and locked."
2. Engineer states via radio: "Understood (insert initials and number of locomotive), derail is on and locked."
3. Crew member states via radio: "That is correct for (insert initials and number of locomotive)."

If required to operate over the location of a hand operated derail, a radio broadcast must be made when approaching to include the location and position of the derail. When in derailing position, must include the word "stopping."

- "CN 5726, derail at Dow in the derailing position."
- "CN 5726, derail at Dow in the derailing position, stopping."

702. MAIN TRACK SWITCHES

The normal position of a main track switch is for main track movement, and it must be lined and locked in that position when not in use.

However, the main track switch may be left open under the following:

- in CTC territory within Track Authority limits,
- within Planned Work limits when authorized by the EIC,
- when attended by a crew member, switch tender, or EIC,
- during switching operations when it is certain that no other train or engine will pass over the switch,
- for another train or engine when the switch is attended by a member of that crew, or
- when specifically authorized by timetable Instructions, RTC, control operator, or another person assigned to handle switches.

Except when switching or attended by an employee, main track switches left in the reverse position must be locked.

Engineering employees using Train Approach Warning or Individual Train Detection for on-track safety must contact the RTC before operating a main track switch and notify the RTC when that switch is returned to normal position.

Before leaving the location where a hand operated main track switch was used, train crew members must verbally confirm the position of the switch with each other. Roadway Workers must confirm the position of the switch with the EIC or a designated employee who will notify the EIC.

703. RELEASING AUTHORITY IN NON-SIGNALED TERRITORY

Except in Yard Limits, before releasing main track authority, and departing the location where a hand-operated switch was used to clear the main track, follow these instructions:

1) Comply with the last paragraph of Rule 702.

2) Report to the RTC when switch is in its normal position, unless authorized to leave it in the reverse position.

3) RTC will acknowledge the position of the switch.

4) Employee releasing the authority will confirm with “that is correct.”

704. STANDING CLEAR OF MAIN TRACK SWITCHES

Except when switching, when a movement is closely approaching or passing over a main track switch, other than a dual control switch, employees must keep at least twenty (20) feet from the switch stand, and must, when practicable, stand on the opposite side of the switch stand.

705. SWITCHES/DERAILS EQUIPPED WITH LOCKS OR HOOKS

When not in use, switches and derails must be locked or hooked if so equipped. Before making movements in either direction over these switches, make sure the switch is latched or secured by placing the lock or hook in the hasp. However, when making train movements in facing point direction and the switch will not be continuously attended, lock switches equipped with a lock.

After locking or hooking a switch or derail, test the lock or hook to make sure it is secured. Report any missing or defective switch locks or hooks at once to the RTC, yardmaster, or supervisor in charge.

706. MOVEMENT OVER SPRING SWITCHES

Approach the facing points of a spring switch prepared to stop unless

- switch point indicator shows that the switch is properly lined,
- block signal indicates proceed, or
- distant signal displays Clear.

If the block signal governing movement over the switch indicates Stop, Restricted Proceed, or Restricting, and the lunar marker on the signal is displayed, or the switch point indicator is illuminated, the spring switch is in the normal position and testing is not required. If the lunar marker is not displayed or the switch point indicator is not illuminated, the train must stop and a crew member must test the switch.

To test the switch, line it over and back by hand and examine the switch points to see that they fit properly, However, testing is not required if the switch has been lined for their diverging movement, or written instructions advise the crew that the spring switch has been spiked.

A movement trailing through and stopping on a spring switch must control the slack. Do not change direction or take slack until a crew member has lined the switch by hand.

During snow or ice storms or other conditions that may prevent a spring switch from functioning properly, avoid making a trailing movement through the switch until it has been lined by hand.

707. SPRING SWITCHES EQUIPPED WITH KEY RELEASE

Operate the key release when making a trailing point movement through a spring switch governed by signals with a key release under the following conditions:

- signal on the track being used indicates Stop,
- signal on the adjacent track indicates proceed,

- it is known that main track ahead is not occupied, and
- no train or engine is approaching on the adjacent track.

After waiting the prescribed time, if signal does not clear, be governed by Rule 861 Entering Main Track at Hand-Operated or Spring Switch.

If signals on the track being used and the adjacent track display Stop indication, use of the key release is unnecessary, and Rule 858 Stop Indications in ABS Territory will govern.

708. CROSSOVER SWITCHES

Both switches of a hand-operated crossover must be lined before a crossover movement starts, and movement must be complete before either switch is returned to original position, except when one crew is using both tracks connected by the crossover during continuous switching operations.

Switches must be left in corresponding position when not in use, either both lined for straight movement or both lined for crossover movement. If either switch of the crossover is connected to a main track or siding, it must be left lined for through movement on the main track or siding.

EXCEPTION: Switches may be left out of corresponding position when one end of a crossover must be lined to prevent access because of the following:

- Blue Signal Protection,
- On-Track Safety, or
- During maintenance, testing or inspection of hand-operated crossovers in CTC.

Switches must be immediately restored to corresponding position after protection is no longer required.

709. SCALE TRACK SWITCHES

When scales are not in use, line switches for dead rails where provided.

710. SWITCHES RUN THROUGH

Do not run through switches, other than spring switches. If a switch is run through, it must be protected by spiking the switch, unless a trackman or other qualified employee takes charge. An engine or car that partially runs through a switch must control the slack and not change direction over a damaged switch until it has been spiked or repaired.

711. DAMAGED OR DEFECTIVE SWITCHES

A switch that requires excessive force to operate, must not be lined. To ensure other employees do not attempt to line the switch, it must be tagged and reported for repair.

1) Out of service tag is applied by the employee directly to the switch lock, keeper/hook. If a tag is not available a b/o tag can be used.

2) Employee reports to RTC on CN Radio who will report to the S&C Call Desk

   Report to Include – Sub, Mile, Station, Switch ID, Defect, Reporting employees Name, position.

Note: Terminals where yardmaster is on duty 24/7 – report directly to yardmaster or terminal coordinator.

712. DERAIL LOCATION AND POSITION

Employees must know the location of all permanent derails. Stop and do not make a movement over a derail in derailing position. Unless allowed by Timetable Instructions, derails must be kept in the derailing position and if equipped locked, except when placed in non-derailing position to permit movement. If equipped, derails must be locked in either position left.

Immediately notify the RTC if the lock is found to be broken or missing.

Before shoving movement is made within 25 foot of a derail in derailing position or past a derail, the employee lining the derail will notify the engineer, “Derail is off.” The engineer will repeat the instruction, and if repeated correctly, the employee at the derail will respond, “that is correct.” Portable derails placed on a

track to provide protection for work to be performed may only be removed by employees of the class or craft for whom the protection is being provided.

When all work on a track equipped with a derail has been completed, immediately after the last piece of equipment has cleared the derail, such derails must be placed and secured in the derailing position

When permanent derails are used in conjunction with Blue Signals for Mechanical Employees, Red Track Signs for Engineering Employees, and Red “Men Working” Signs for Intermodal employees, derail may be left in the non-derailing position when protection is not required and signs are not displayed.

Note: At locations in CTC where a derail equipped to communicate with the signal system, employees must not place the derail in non-derailing position until the movements is ready to proceed out onto the main track. Doing so in advance would negatively affect the signal system of any passing movement you are waiting for in an after arrival situation.

While switching at a location where a hand operated derail protects the main track or siding from uncontrolled moving of equipment from that track(s), the derail may only be left in the non-derailing position if equipment not coupled to is otherwise protected.

Otherwise protected can be accomplished by:

- The switching move continually blocks access from that equipment to the main track or siding
- Other derail(s) protect that equipment from uncontrolled moves
- A qualified employee is in position to take effective action
- Grade prohibits the possibility of an uncontrolled move toward main track or siding

713. HAND OPERATION OF DUAL CONTROL SWITCHES AND DERAILS

If the control operator cannot line the dual control switch or derail to the desired position, or the control machine does not indicate that the switch or derail is lined and locked in the proper position, the control operator must authorize movement past the Stop indication and instruct the employee to operate the switch or derail by hand. Movement may then proceed, not closer than 25 feet to that switch or derail to operate by hand.

Before passing over the switch or derail, the train must stop and the employee must operate the switch or derail by hand as outlined in Rule 714 (Procedure to Hand- Operate Dual Control Switches and Derails). The indications of signals governing movement over the switch or derail are considered suspended while switches and/or derails are in hand position. Movements will be made as directed by the employee operating the switch and/or derail.

714. PROCEDURE TO HAND-OPERATE DUAL CONTROL SWITCHES AND DERAILS

An employee must get permission from the control operator to operate a dual control switch or derail by hand. Operate the switch or derail as follows:

1) Unlock the switch lock.

2) Place the selector lever in the HAND position or remove the hand crank from the holder.

3) Operate the hand throw lever until the switch or derail points move with the movement of the hand throw lever, and then line the switch or derail points for the route to be used.

4) After all wheels of at least one unit or car have passed over the switch or derail points, return the switch or derail to power (unless otherwise instructed by the control operator) by restoring the selector lever to the POWER or MOTOR position and lock. When operating on-track equipment that does not shunt the track, do not restore the switch or derail to power until all equipment has cleared the switch.

For other types of switch or derail machines, follow the instructions for operation posted at the switch or by Timetable Instructions.

When necessary for a locomotive engineer to hand operate a dual control switch without assistance from another employee, after hand operating the switch, it may be returned to power, provided all wheels of at least one unit of the locomotive consist are standing entirely between the opposing absolute signals that govern movement over the switch. If the switch does not operate after being returned to power, movement

may then proceed over the switch. This procedure does not apply to Dual Control Powered Derails, all the wheels of at least one unit or car must have passed over the derail before placing back on power.

715. ELECTRICALLY LOCKED SWITCHES

Instructions governing the operation of electrically locked switches are posted at or near the switch.

To enter a track within a control point or CTC, employees must not unlock the box or unlock an electrically locked switch without Track Authority or permission from the control operator. Switches and derails connected with the movements must not be operated until the electric locking device has been unlocked and the lever moved to Unlock position, When that has been done, switches and derails may be lined for the movement desired.

When movement through the switch is complete, return the handle to the normal position, close and lock the door.

If the electric lock includes an emergency release, do not break the seal on the release or operate the release without permission from the control operator or RTC. Notify the control operator or RTC if the seal is found to be broken or missing.

716. SWITCHES IN SIDINGS

The normal position of switches connecting any track, except the main track, to a siding is lined and locked or secured for movement on the siding.

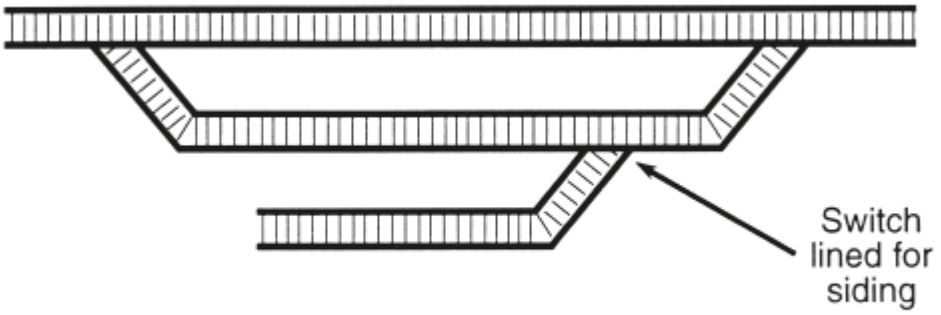


Diagram A.

717. DTMF DUAL CONTROL SWITCHES

When a train is within 2 miles of the location, crew will transmit the DTMF code for the correct position of the switch. When DTMF request is received, the system will do the following:

1) Move the switch to the requested position.

2) Lock the switch for the requested route.

3) Indicate the position of the switch via radio broadcast and the switch-point indicator.

   When switch point indicator displays a red or dark aspect the switch must be operated by hand per USOR Rule 714- PROCEDURE TO HAND-OPERATE DUAL CONTROL SWITCHES AND DERAILS.

Once requested, the switch will remain locked in that position for 10 minutes. If train is delayed more than 10 minutes, crew member must make a new request. Message will be transmitted via radio informing the crew when the switch is properly lined.

After the switch has been occupied, and then movement clears, the switch will return to normal position, lined for the main track. All following movements must transmit the DTMF code for the intended route to ensure the correct position of the switch once the proceeding train has cleared. Failure to request the switches position could result in the switch returning to normal position immediately after the initial train has cleared.

If performing switching movements over these switches, they must be placed in handoperation. When switching is complete, line the switch for the original position, and then make a DTMF request for the switch to remain in that position.

Permission of the RTC is not required to hand-operate these switches.

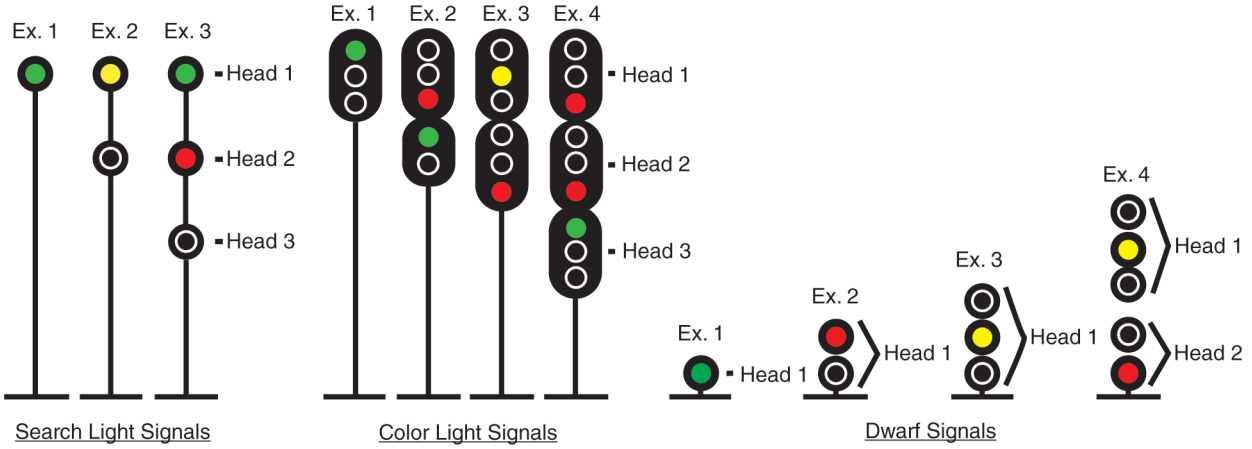
800. SIGNAL SYSTEM RULES

800. SIGNAL ASPECTS AND INDICATIONS

Signal aspects are identified by the position of semaphore arms, color of lights, flashing of lights, or any combination.

Aspects may be qualified by number plate, letter plate, or marker light.

Below are some examples of how signal aspects are displayed on CN. Each head in the examples will only display 1 color at a time as defined in USOR Rules803- 849 regardless of whether the aspect is a searchlight, colored light or dwarf signal with only a few exceptions. These exceptions are identified in each specific signal aspect and indication column in the rule.



Searchlight Signal - One or more heads with single light on each head that can display different colors .

Color Light Signal - One or more heads with 3 separate color lenses on each head, that will display only one color at a time .

Dwarf Signal - One or more heads with one or more lenses per head displaying only one color lenses at a time .

801. POSITION OF SIGNALS

When viewed from an approaching train, block and interlocking signals are adjacent to or directly above the track they govern.

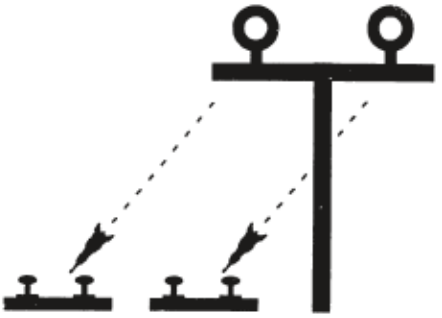


Diagram A.
However, when signals are located on a bracket post to display aspects for two tracks, the signal to the right governs the track to the right, and the signal to the left governs the track to the left.

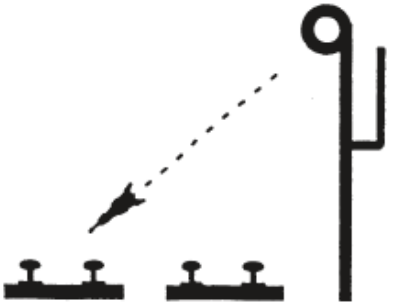


Diagram B.
When a track is located between the signal and the track governed by that signal a dummy mast with or without a light will be placed to the right of the signal.

802. SYMBOLS

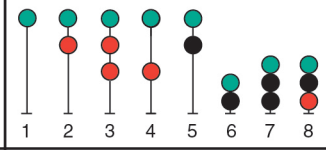
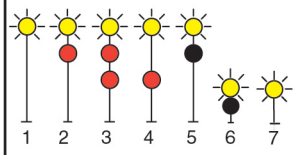
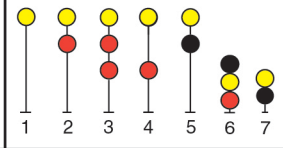
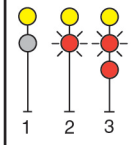
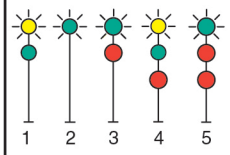
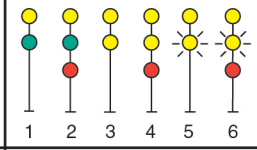
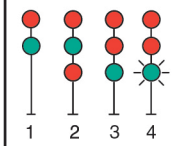
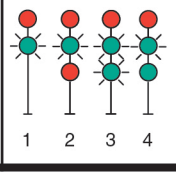
The following symbols are used with signal aspects to indicate:

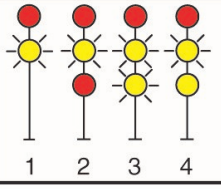
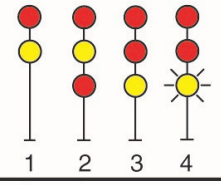
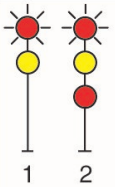
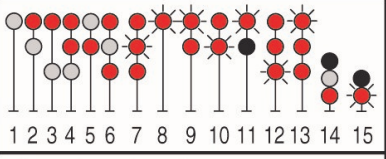
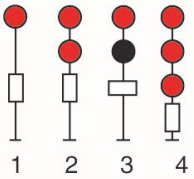
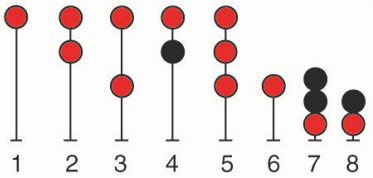
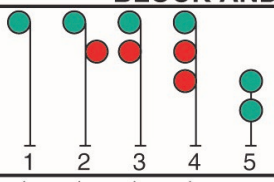
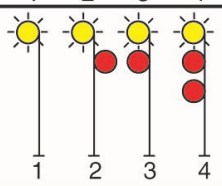
Flashing light

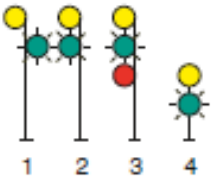
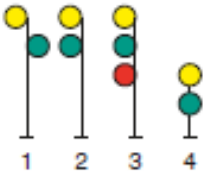
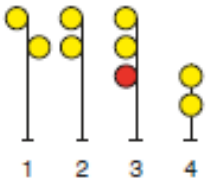
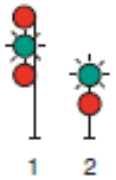
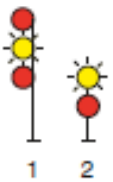
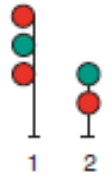
Number plate

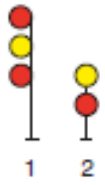
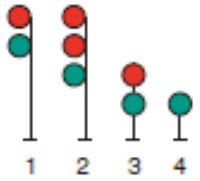
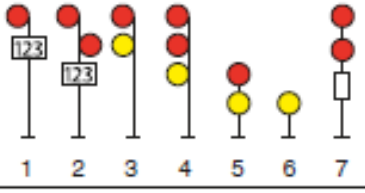
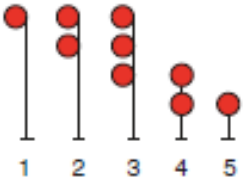
NOTE: Refer to individual subdivision timetable instructions for information concerning signal rules in effect.

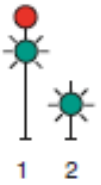
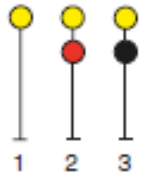
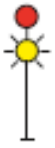
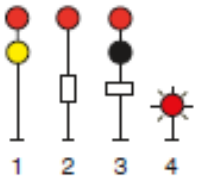
BLOCK AND INTERLOCKING ROUTE SIGNALS (803 to 849)

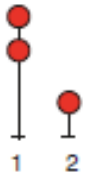
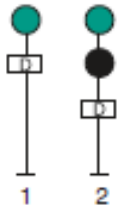
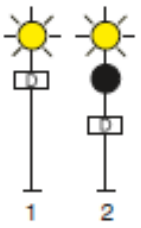
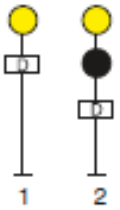
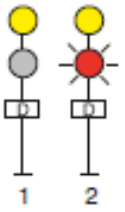
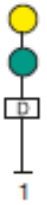
BLOCK AND INTERLOCKING ROUTE SIGNALS			
RULE	**ASPECTS**	**NAME**	**INDICATION**
803.		Clear	Proceed
804.		Advance Approach	Proceed prepared to stop at second signal.
805.		Approach	Proceed prepared to stop at next signal.
806.		Approach Restricting	Proceed prepared to pass next signal at restricted speed.
807.		Advance Approach Diverging	Proceed prepared to enter diverging route at second signal at prescribed speed.
808.		Approach Diverging	Proceed, prepared to enter diverging route at next signal at prescribed speed. Proceed prepared to stop at second signal.
809.		Diverging Clear	Proceed on diverging route at prescribed speed.
810.		Diverging Clear Approach Diverging	Proceed on diverging route at prescribed speed prepared to enter diverging route at next signal at prescribed speed. Proceed prepared to stop at second signal.

RULE	ASPECTS	NAME	INDICATION
811.		Diverging Advance Approach	Proceed on diverging route at prescribed speed prepared to stop at second signal.
812.		Diverging Approach	Proceed on diverging route at prescribed speed prepared to stop at next signal.
813.		Diverging Approach Restricting	Proceed on diverging route at prescribed speed prepared to pass next signal at restricted speed.
814.		Restricting	Proceed at restricted speed.
815.		Restricted Proceed	Proceed at restricted speed.
816.		Stop	Stop
BLOCK AND INTERLOCKING SPEED SIGNALS			
817.		Clear	Proceed.
818.		Advance Approach	Proceed, prepared to stop at second signal.
818.1.		Medium Advance Approach	Proceed not exceeding 25 MPH through turnouts, then proceed prepared to stop at second signal.
818.2.		Limited Advance Approach	Proceed not exceeding 40 MPH through turnouts, then proceed prepared to stop at second signal.

RULE	ASPECTS	NAME	INDICATION
819.		Approach	Proceed, prepared to stop at next signal.
820.		Approach Limited	Proceed approaching next signal not exceeding 40 MPH.
821.		Approach Medium	Proceed approaching next signal not exceeding 25 MPH.
822.		Approach Slow	Proceed, approaching next signal not exceeding 15 MPH.
823.		Limited Clear	Proceed, not exceeding 40 MPH through turnouts.
824.		Limited Clear Limited	Proceed, not exceeding 40 MPH through turnouts, then proceed approaching next signal not exceeding 40 MPH.
825.		Limited Approach	Proceed, not exceeding 40 MPH through turnouts; then proceed prepared to stop at next signal.
826.		Medium Clear	Proceed, not exceeding 25 MPH through turnouts.

RULE	ASPECTS	NAME	INDICATION
827.		Medium Clear Medium	Proceed, not exceeding 25 MPH through turnouts, then proceed approaching next signal not exceeding 25 MPH.
828.		Medium Approach	Proceed, not exceeding 25 MPH through turnouts; then proceed prepared to stop at next signal.
829.		Slow Clear	Proceed, not exceeding 15 MPH through turnouts.
830.		Slow Approach	Proceed, not exceeding 15 MPH through turnouts; then proceed prepared to stop at next signal.
831.		Restricting	Proceed at restricted speed.
832.		Stop	Stop.
Rules 833 - 844 - The following block signal aspects and indications are in effect on the Bessemer and Greenville Subdivisions only:			
833.		Clear	Proceed
834.		Approach Limited	Proceed approaching next signal at 35 MPH.

RULE	ASPECTS	NAME	INDICATION
835.		Limited Clear	Proceed at 35 MPH through crossovers and turnouts.
836.		Approach Medium	Proceed approaching next signal at 30 MPH.
837.		Medium Clear	Proceed at 30 MPH through crossovers and turnouts.
838.		Medium Approach Medium	Proceed at 30 MPH through crossovers and turnouts approaching next signal at 30 MPH.
839.		Approach	Proceed prepared to stop at next signal.
840.		Medium Approach	Proceed at 30 MPH through crossovers and turnouts, prepared to Stop at the next signal.
841.		Slow Clear	Proceed at 20 MPH through crossovers and turnouts.
842.		Slow Approach	Proceed at 20 MPH through crossovers and turnouts, prepared to Stop at next signal.
843.		Restricting	Proceed at Restricted Speed

RULE	ASPECTS	NAME	INDICATION
844.		Stop	Stop
DISTANT SIGNALS (D marker attached to mast)			
RULE	**ASPECTS**	**NAME**	**INDICATION**
845.		Distant Signal Clear	Proceed
846.		Distant Signal Advance Approach	Proceed prepared to stop at second signal.
847.		Distant Signal Approach	Proceed prepared to stop at next signal.
848.		Distant Signal Approach Restricting	Proceed prepared to pass next signal at restricted speed.
849.		Distant Signal Approach Diverging	Proceed prepared to enter diverging route at next signal at prescribed speed. Proceed prepared to stop at second signal.

850. WHERE STOP MUST BE MADE

At a signal displaying Stop indication, the stop must be made before any part of a train passes the signal. If a train overruns any block signal that requires it to stop, the crew must:

1) Warn other trains at once by radio,

2) Stop the train immediately, and

3) Immediately contact the RTC or Control Operator.

851. CHANGE OF SIGNAL INDICATION

If a signal displaying a proceed indication changes to Stop, the train must stop at once. Use the emergency brake only when conditions require. Immediately report signal change to the RTC.

852. FALSE PROCEED SIGNAL INDICATION

When a block is occupied, or when a switch protected by a signal is changed from its normal position and that signal fails to display its most restrictive indication, regard the signal as displaying Stop. The train must stop immediately, and employees must warn others by radio of the exact location and status of the train. Contact the RTC or control operator and do not move the train without permission.

853. MOVEMENT FROM SIGNAL REQUIRING RESTRICTED SPEED

When a train passes a signal requiring movement at restricted speed, the train must move at restricted speed until its leading wheels have passed the next governing signal or the end of signaled territory.

854. NEXT GOVERNING SIGNAL

A train may comply with the next signal's indication when its aspect can be clearly seen and the signal governs the track where movement will be made. This does not apply when a rule or previous signal indication requires movement at restricted speed.

855. TRAIN DELAYED WITHIN A BLOCK

If a train has entered a block on a proceed indication that does not require restricted speed, and the train stops or its speed is reduced below 7 MPH the train must:

In ABS proceed at restricted speed until the next signal is visible, that signal displays a proceed indication, and the track to that signal is clear. Passenger trains making regular station stops will proceed prepared to stop in one half the range of vision until the next signal is visible, that signal displays a proceed indication, and the track to that signal is clear.

In CTC proceed prepared to stop at the next signal until the next signal is visible and that signal displays a proceed indication.

856. INITIATING MOVEMENT BETWEEN SIGNALS

Move at restricted speed until the leading wheels pass the next governing signal or the end of signaled territory when

- a train enters a block with no governing signal,
- the previous signal indication is unknown, or
- a change of direction is made within a block.

857. STOP INDICATIONS AT CONTROL POINTS

At a signal displaying Stop, if no conflicting movement is evident, be governed as follows:

1) Unless the train has received Track Authority including Switch Yes on the track governed by that signal, immediately contact the control operator.

2) Before authorizing the train to proceed, the control operator must know the route is properly lined and no conflicting movement is occupying or authorized to enter the track between that signal and the next absolute signal governing movement, or the end of the signal system where applicable.

3) Control operator will verbally or electronically authorize movement, “After stopping, (train) at (location) has authority to pass signal displaying Stop Indication,” specifying route where there is more than one possible route.

4) If the route cannot be lined, control operator will verbally authorize movement, “After stopping, (train) at (location) has authority to pass signal displaying Stop indication and operate ALL switches and derails by hand for your route,” specifying route only where applicable. Movement will then be governed by USOR Rule 713 and 714.

5) Crew member will repeat the instructions to the control operator, who will check, and if correct, will respond, “that is correct.”

6) If the stop signal governs movement over a drawbridge, a crew member must verify that the bridge is in the proper position for the train to pass.

7) If the stop signal governs movement over a Dual Control Power Derail, a crew member must verify that the derail is in the non-derailing position. If the derail is in the derailing position, it must be hand operated in accordance with USOR 713 and USOR 714.

8) The train will proceed at restricted speed.

EXCEPTION 1-Opposing Movement:

The control operator must instruct the engineer of an opposing movement to operate at restricted speed. Upon being advised by the engineer of the opposing movement that the train is operating at restricted speed, the control operator may then authorize the train at the Stop indication to proceed into the same limits, advising both crews of movements to be made. The opposing movement must move at restricted speed until notified by the control operator that the other train is no longer in the same limits, and its leading wheels have passed the next governing signal.

EXCEPTION 2-Conflicting Movement:

At a railroad crossing at grade, when a movement has stopped, but is clear of the conflicting route, the control operator may authorize another train to proceed, advising both crews of movement to be made. The stopped movement may make no movement until authorized by the control operator.

EXCEPTION 3-Closed Station:

When a manual interlocking station is closed, movement at restricted speed may be made after:

1) All switches have been lined for the route to be used.

2) The train has occupied the track within interlocking limits, clear of any conflicting route, for 10 minutes.

858. STOP INDICATIONS IN ABS TERRITORY

At a signal displaying Stop outside interlocking limits, the train will be governed as follows: After stopping, a train authorized beyond the signal (by Track Authority or Rule 520) must comply with one of the following procedures:

1) If authority beyond the signal is joint with other trains or employees, proceed at restricted speed.

2) Proceed at restricted speed to permit an engine, with or without cars, to couple to its own train or to a standing cut of cars, if the track between the engine and cars is clear.

3) Proceed at restricted speed when a crew member has contacted the RTC and obtained permission to pass the Stop indication. However, if the RTC cannot be contacted, move 100 feet past the signal, wait 5 minutes, then proceed at restricted speed.

859. STOP INDICATIONS AT AUTOMATIC INTERLOCKINGS

At a signal displaying Stop, the crew will first be governed by instructions in the release box or timetable instructions. Then follow these instructions:

- If signal does not change its indication at expiration of time-release interval, the train may then proceed on hand signal from an employee at the crossing if there is no train approaching on conflicting routes.
- If a train is approaching on a conflicting route, hand proceed signal must not be given until that train's movement has been completed over the crossing, or has stopped at the governing signal.
- If a train is standing between the absolute signals on a conflicting route, the proceed signal must not be given until a thorough understanding has been reached with the crew of that train.
- When the engineer is alone on the train unless remote control equipped, if signal does not change its indication at expiration of time release interval, pull past the signal, but clear of conflicting routes. Wait 5 minutes, and if there is no conflicting movement, the train may proceed.

860. AUTOMATIC INTERLOCKING NOT EQUIPPED WITH APPROACH SIGNALS

At an automatic interlocking that is not protected by an active approach signal, a movement must approach the absolute signal prepared to comply with a signal indicating Stop.

861. ENTERING MAIN TRACK AT HAND-OPERATED OR SPRING SWITCH

In ABS territory, when authorized to enter the main track, or when crossing from one main track to another, a crew member must open the switch and wait 10 minutes at the switch to establish block signal protection. Should a movement approach during the 10 minutes, switch must immediately be restored for Main track to allow passage. If at the end of 10 minutes the employee does not hear or see a movement approaching, the train may enter the main track or begin crossover movement.

Waiting 10 minutes or operating a spring switch by hand is not required under any of the following conditions:

- switch is equipped with an operative electric lock,
- block signal governing movement to main track indicates proceed,
- block signals governing movements on the main track indicate that no train is approaching from either direction,
- block to be entered is occupied by a train, engine, or car that is standing or moving away from the switch to be used,
- main track between siding switches is occupied by a train that has been met or a standing train that will be passed,
- train is entering a main track outside of yard limits for authorized movement against the current of traffic, or
- track Authority authorized "Work Between" two specific points, and it does not include Line 8, JOINT AUTHORITY.

862. CLEAR TRACK CIRCUITS

Equipment left standing on sidings or other tracks must be clear of insulated joints at clearance points.

863. SUSPENSION OF SIGNAL SYSTEM

When absolutely necessary, the signal system or sections of it may be suspended by GBO. Prior to suspending the signals, all trains in the affected area must be stopped, and track inspected before resuming movement.

If the train dispatching system is in service, track inspection must be completed by an EIC with a Track Authority issued by the RTC in accordance with Rules 1003 (TRACK AUTHORITY in CTC Territory) and1004, (Joint Mandatory Directives).

If the train dispatching system is out of service, track inspection must not be performed until any other Track Authorities in effect within the affected territory are manually canceled. The RTC must then manually issue a Track Authority in accordance with Rule 1003, (TRACK AUTHORITY Outside CTC Territory).

Joint Authority must not be issued except between Roadway Workers. The EIC must not pass any control point until the way is seen and known to be clear. All dual control switches must be placed and locked in hand position for Main Track movement unless otherwise instructed by the control operator.

A written record of all authorities issued or canceled must be maintained when the system has failed. When the system is restored, all authorities issued during the outage must be entered into the dispatching system before any further movement can be made.

After the inspection is complete, and it is safe to do so, signal system may be suspended and further movement made in accordance with USOR Rule 864.

864. PROCEDURES WHILE SIGNAL SYSTEM IS SUSPENDED

When the signal system or sections of it are suspended, the following procedures govern:

1) Employees must follow rules that apply to non-signaled territory.

2) Trains must receive a general bulletin order prescribing speed restrictions that do not exceed 59 MPH for passenger trains or 49 MPH for other trains.

3) Trains will disregard extinguished or illuminated block and interlocking signals except where

    - signals govern movements over railroad crossings at grade, drawbridges, or
    - signals are connected with trackside warning detectors.

Trains must approach the block and interlocking signals excepted above and each end of the suspended limits prepared to stop. Trains that leave the limits and move into signal system territory must move at restricted speed until they reach the first signal in service beyond the limits. Signals that govern movement over railroad crossings at grade and drawbridges must be regarded as displaying a Stop indication, regardless of the aspect displayed, unless the general bulletin order specifies that the signals are in service.

- On multiple main tracks, a general bulletin order will designate the track or tracks the signal system is suspended on. A general bulletin order that specifies the track to be used will be issued to each train.
- Where automatic crossing warning devices have been affected, action to be taken will be stated in the general bulletin order.
- Dual control switches on the main track will be lined and locked for main track movement. Switches equipped with selector levers will be locked in the HAND position. All other dual control switches will be spiked. All concerned will be notified. Unless otherwise instructed by the RTC, trains must stop and inspect dual control switches, foul the circuit, and make sure the switch is properly lined before passing over it. A general bulletin order must be issued that specifies which position dual control switches at the end of double track or multiple main tracks are to be left lined. If a crew member receives notification from the RTC of the position of dual control switches, leave those switches in that position after use.
- Spring switches that will be removed from service must be spiked and those concerned notified. If spring switches are left in service, trains making facing point movements must be prepared to stop, unless it is known that the switch is properly lined.

900. CENTRALIZED TRAFFIC CONTROL (CTC)

900. AUTHORITY TO ENTER CTC LIMITS

A train must not enter or foul any track where CTC is in effect unless a controlled signal displays a proceed indication or the control operator authorizes the following:

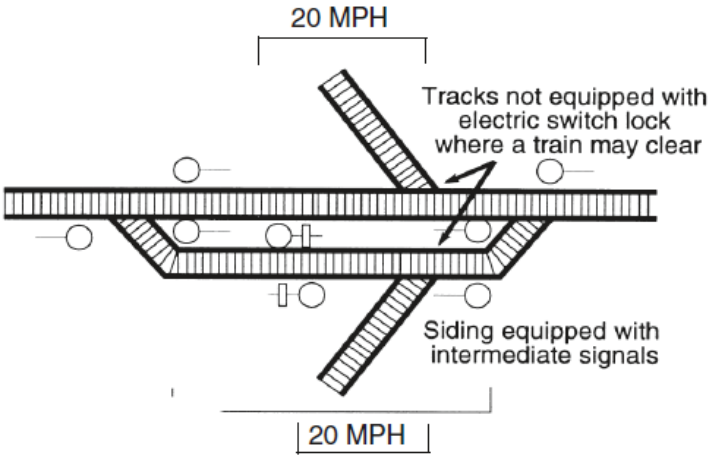
- movement past a Stop Indication;
- a train to enter a track between block signals as follows, “(Train) at (location) has authority to enter (track) and proceed (direction.)” After entering the track, the train is authorized to move only in the direction specified; or
- track authority.

901. CLEARING THROUGH HAND-OPERATED SWITCHES

Where CTC is in effect, a train must not clear in any track at a hand-operated switch not equipped with an electric switch lock, except under one of the following conditions:

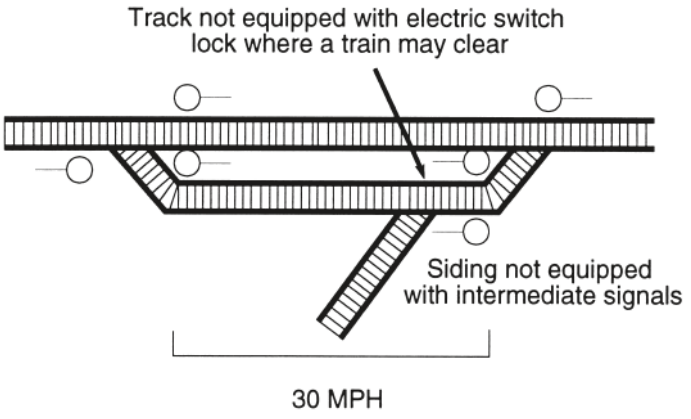
- where the maximum authorized speed does not exceed 20 MPH,

Diagram A.



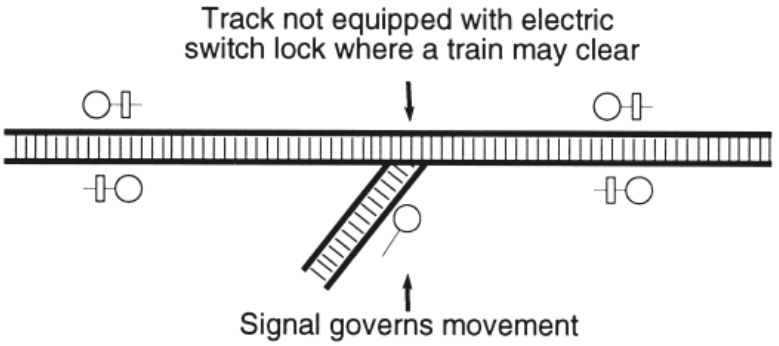
- where the maximum authorized speed does not exceed 30 MPH on a controlled siding not equipped with an intermediate signal,

Diagram B.



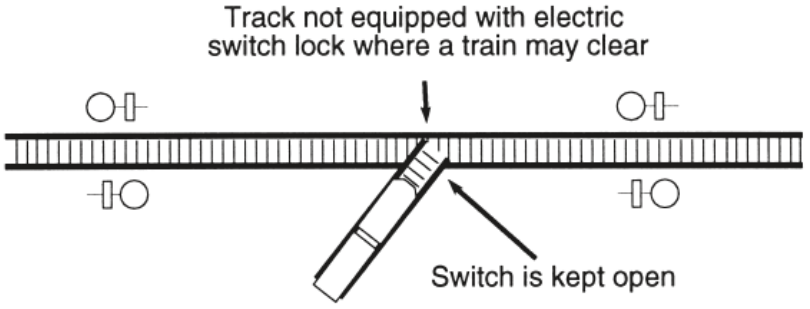
- where a signal governs movement to a track where CTC is in effect, or

Diagram C.



- where there is an entering signal.

Diagram D.



902. ENTERING SIGNAL AT A HAND OPERATED SWITCH

At a hand-operated switch where an Entering Signal is located:

1) Obtain authority from the RTC to open the switch and enter CTC.

2) Line switch, and if signal indicates proceed, movement may be made to the main track.

3) If signal does not indicate proceed after switch is opened, train must wait in the clear of the main track 10 minutes after switch is opened to establish block protection before movement may, after stopping, pass the Entering Signal displaying Stop, or until signal changes to a proceed indication, whichever comes first. Should a movement approach during the 10 minutes, switch must immediately be restored for Main track to allow passage.

However, if the block to be entered is occupied by its own standing train, or when the hand-operated switch is kept open, the movement may, after stopping, pass the Entering Signal displaying Stop without waiting 10 minutes.

EXAMPLE: TRACK AUTHORITY FORM

TRACK AUTHORITY

No._____ Date_____, 20_____

To_____ At_____

1. ☐ Track Authority Number _____ is void

2. ☐ Proceed from _____ Switch Yes No to_____ Switch Yes No on _____

Proceed from _____ Switch Yes No to_____ Switch Yes No on _____

3. ☐ Clear Main Track at_____.

4. ☐ **AFTER THE ARRIVAL OF** _____ at_____

Proceed from _____ Switch Yes No to_____ Switch Yes No on _____

5. ☐ Clear Main Track at _____.

6. ☐ Work between _____ Switch Yes No and _____ Switch Yes No on_____

Work between _____ Switch Yes No and _____ Switch Yes No on_____

Track released by _____between _____and _____at _____

Track released by _____between _____and _____at _____

7. ☐ DO NOT SET ON AHEAD OF OR PASS PRECEDING TRAIN(S) _____; _____

8. ☐ JOINT AUTHORITY between_____ Switch Yes No and_____ Switch Yes No

with_____between_____ Switch Yes No and_____ Switch Yes No

with_____between_____ Switch Yes No and_____ Switch Yes No

with_____between_____ Switch Yes No and_____ Switch Yes No

with_____between_____ Switch Yes No and_____ Switch Yes No

with_____between_____ Switch Yes No and_____ Switch Yes No

9. ☐ Be prepared to Stop at _____until known the switch is in the normal position.

Be prepared to Stop at _____until known the switch is in the normal position.

Be prepared to Stop at _____until known the switch is in the normal position.

Be prepared to Stop at _____until known the switch is in the normal position.

10. ☐ PERMISSION to leave following switch(es) in reverse position_____,

_____,_____,_____

11. ☐ Additional Instructions _____

_____

12. ☐ This authority requires a meet with another train(s) at _____

This authority has _____ boxes marked: ___, ___, ___, ___, ___, ___

OK_____ RTC _____ Copied by _____

Limits Reported Clear at _____ By_____

1000. MANDATORY DIRECTIVES

1000. MANDATORY DIRECTIVES

Mandatory Directives are:

- Track Authority (TA)
- General Bulletin Order (GBO)
- Pass Stop Signal (PSS)
- Enter Main Track (EMT)

Exception: Pass Stop Signal (PSS) and Enter Main Track (EMT) will be verbally or electronically (EDMD). When issued verbally by the RTC, comply with the requirements as outlined in USOR 857.

Note: Temporary Speed Restrictions without a GBO item will also be issued as a Mandatory Directive.

As soon as practicable or before being acted upon, ALL crewmembers must each have a copy of all Mandatory Directives issued for their train. On a Track Authority or when a GBO is issued individually, the copying employee, once directive has been OK'd by the RTC, will provide all crew members a completed copy of the directive issued. A Job briefing must be completed verifying each "line" of the handwritten portion of the directive to ensure it reflects same as the copy verified by the RTC. In the LEFT margin, initial each line where a hand written entry exists once verified and sign bottom after job briefing is completed.

When a Track Authority contains a "Joint with" EIC or when USOR 1102, Planned Work, is indicated by GBO item on TGBO or DOB. All crewmembers must in the RIGHT margin initial and write the time permission was granted by the EIC to enter the joint or planned work limits next to that line item on the copy in your possession.

Note: Making any annotations (initials/ time) inside the body of the track authority that would interfere with the legibility of the authority is prohibited.

When a GBO is included in a TGBO or DOB, instructions under USOR Rules1105, Tabular General Bulletin Order (TGBO) and 1106, Daily Operating Bulletin (DOB) will apply.

PEER TO PEER GUIDELINES FOR TYPE OF PROTECTION OR AUTHORITY REQUIRED

Once received, the Protection or Mandatory Directive document must be made available, read, and understood by all crew members as outlined under this rule, USOR 1000. If this information is conveyed via radio, it must be confirmed with **"that is correct."**

1. Crew Member 1: "CN 2200 South has GBO 567 to not exceed 10 MPH over switch at MP 44.8 at Holly."
2. Engineer or other Crew Member: "CN 2200 South with GBO 567 to not exceed 10 MPH over switch at MP 44.8 at Holly, understood."
3. Crew Member 1 (if on radio): "that is correct."

1001. ALL EMPLOYEES ISSUING, COPYING, AND REPEATING MANDATORY DIRECTIVES ELECTRONIC DELIVERY MANDATORY DIRECTIVE (EDMD) PTC

When transmitted by radio or other means of communication, RTC or control operator must issue Mandatory Directives according to applicable operating rules and the following:

1) State what type of mandatory directive will be transmitted.

2) Receiving employee will state when ready to copy. An employee operating the controls of moving equipment, either on-track or off-track, may not copy a mandatory directive but can initial each line and sign once job briefing has been completed.

3) Issuing employee must state all preprinted and applicable portions and write on the appropriate form as the mandatory directive is being issued, not written ahead of time.

4) The receiving employee must copy it in writing as transmitted, current date must be entered on the Authority at the time it is being issued but not required to be transmitted by RTC. When Switch-Yes or Switch-No is selected, circle the appropriate portion of the form.

5) When verbally transmitting and repeating numbers, they must first be pronounced, then stated by individual digit. On single digit numbers, they must first be pronounced, then spelled out by individual letter. Identify decimal points as “point”, “dot”, or “decimal”.

6) When transmitting and copying, the spelling of each station name must be shown exactly as in the timetable.

7) After the mandatory directive has been received and copied, the employee must repeat all applicable portions. After verifying the accuracy of the repeat, the issuing employee will say, “OK” and give the time and initials. The employee copying will acknowledge by repeating the time and initials of the issuing employee. If additional handwritten copies are required, a job briefing must be completed between crew members to ensure accuracy.

8) Mandatory directive is not in effect until the “OK” time and initials are shown on it. If the mandatory directive restricts authority that had previously been issued to the receiving employee, it must not be considered in effect by the issuing employee until acknowledgement of the “OK” has been received.

Once issued, repeated, and “OK” has been received, Track Authority may not be altered, added to or changed in any manner.

Exception:

- Box 8 may be marked, indicating the entire authority limits within the top line of Box 8, should a train or roadway worker request to be joint in the overlapping limits. The information in the lower lines of Box 8 “with ___ between ____ and __, should be completed with the joint overlapping limits requested.
- Employees must update number of boxes marked, along with applicable boxes, as required.
- Employees may also record release of a portion of the limits to the RTC. Track release lines below Box 6 are to be used when releasing authority limits.

ELECTRONIC DELIVERY MANDATORY DIRECTIVE (EDMD) PTC AND EDMD TERRITORY

EDMD Territory will be identified in the timetable and EDMD rules apply. Trains equipped with mission capable PTC, are to initialize the PTC system in EDMD Territory. Mandatory Directives will be issued to train via the PTC onboard and the requirement of RTC verbal read and repeat is not required. RTC verbal read and repeat is required for trains which are not PTC mission capable or equipped. PTC enforcement protection is unavailable. The map will display a gray trackline. Conductor is required to copy the MD from the PTC CDU screen.

Mandatory Directives (MD) which are transmitted to the train via the PTC on-board system, the following will apply:

- RTC read of MD to the train crew, will not be required. Once a MD is created, it will automatically be sent to PTC trains operating on the subdivision.
- Authorities will not be prompted but can be reviewed in the mandatory directives section on the CDU, this includes Pass Stop Signal (PSS) and Enter Main Track.
- When a MD is received on the CDU, crewmembers will review and discuss. If an Authority/MD is incorrect, the Authority/MD is to be verbally issued to the train and immediately reported to the NOC Support Desk.

A prompt for the crew to review will be displayed when a new GBO has been issued, or made void, indicating “BULLETIN CHANGE RECEIVED PRESS KEY TO REVIEW”. When a GBO Void prompt is displayed, upon engineer acknowledgement of the GBO Void, the GBO will be removed from the CDU. If PTC fails enroute, or the Engineer’s PTC CDU display fails enroute:

- Stop the train consistent with good train handling, contact the RTC to verbally receive the Authority/MD information.
- Once the RTC has delivered the necessary MD contact the NOC Support Desk to report failure.

Train crews are responsible for complying with electronically transmitted MD as indicated on the CDU. This includes when operating in Restricted and/or Disengaged State where PTC will not enforce.

NOTE: Subdivisions where only portions with EDMD activated will be identified in the Timetable.

TGBO Issued to Train Enroute A train which receives a new TGBO via the PTC system enroute or the train is at a location where a paper copy of the TGBO cannot be obtained for territory the train will operate on which is not included with the train's original TGBO, the following will apply:

- RTC will assign new TGBO to train. RTC will then notify engineer to initialize with new TGBO number.
- Once notified by RTC of new TGBO, engineer will initialize PTC with the new TGBO.
- RTC will verbally issue GBOs which will be on the train's route.
- When RTC issues GBOs verbally, receiving employee will state when ready to copy and must copy it in writing as transmitted.

1002. TRACK AUTHORITY COMPUTERIZED (TAC)

Track Authority may be issued electronically to employees equipped with approved computers. When this is done, writing the authority and repeating the information to the RTC as prescribed by Rule 1001 and the requirement to draw an "X" across each copy as prescribed by Rule 1009 are not required.

Requesting Authority-

Employee will request specific limits from the RTC. If the RTC is in agreement, the limits will be accepted and Track Authority will be transmitted. A PDF copy of the Track Authority will be visible on the computer screen. It must be read, understood, and be the same as what was requested. It must contain all of the following:

- Authority No. _____ .
- Date: _____ .
- To: (Address).
- At: (Location).
- Box(es) Marked: _____ must be displayed and correctly match number of boxes in body of Authority.
- OK (time).
- RTC (initials).
- Copied by (Name) filled in with same name listed in the 'Authority To' line.

If any of these are missing or not correct contact the RTC for further instructions before occupying the track.

The authority must remain available to the employee while it is in effect.

Canceling Authority-

Before releasing the authority, the EIC must know all employees and equipment are clear of the limits, and all switches handled are lined for main track movement.

After requesting to release Track Authority from the computer, a Release Confirmation window appears on the screen stating, "ARE YOU SURE ALL EMPLOYEES AND EQUIPMENT ARE CLEAR OF THE LIMITS, AND ALL SWITCHES ARE LINED FOR MAIN TRACK MOVEMENT. RELEASE AUTHORITY: XXXX" "No" is the default but if "Yes" is selected, the track authority will be considered released at the moment "Yes" is selected. An approval confirmation of the release will appear on the screen with void printed over the top of the Track Authority. If this screen does not appear, contact the RTC to insure the authority was released.

If the RTC manually releases the Track Authority without a computer request from the employee, the Track Authority is void, however it must not be considered void by the RTC until acknowledged by the employee. If the word "VOID" appears on the Track Authority pdf that has not been requested to be made void, immediately contact the RTC.

1003. TRACK AUTHORITY

In CTC Territory:

The control operator may authorize a train, roadway worker, or on-track equipment to occupy a track or tracks within specified limits in CTC. Authority must include track designation and limits. **Authority issued to train movements will receive a Box 6, Work between, and movement may be made in either direction within specified limits, until the Track Authority is released.**

When a Track Authority in CTC Territory includes the instruction SW-Y, the control point is included in the limits. SW-N means the control point is not included in the limits.

Track Authority between East Anna, Switch Yes, and West Bess, Switch No.

In

Diagram 1

Trains may enter limits without further authority at a location that includes the instruction Switch Yes (SW-Y). Movement must be made at Restricted Speed until leading wheels have passed the next signal.

Track Authority between East Anna, Switch Yes, and West Bess, Switch No.

Diagram 2

With "Switch Yes" at East Anna, verbal authority **is not** required to enter the limits. After stopping, train must proceed at restricted speed until leading wheels have passed the next signal.

However, when coming up to a control point in CTC where you have a switch Yes (SW-Y) which is the end of your limits as in Diagram 2.1. You have authority to occupy the control point "ONLY", you will need additional authority from the Control Operator to occupy the Main Track or Controlled Siding between the control points and Anna.

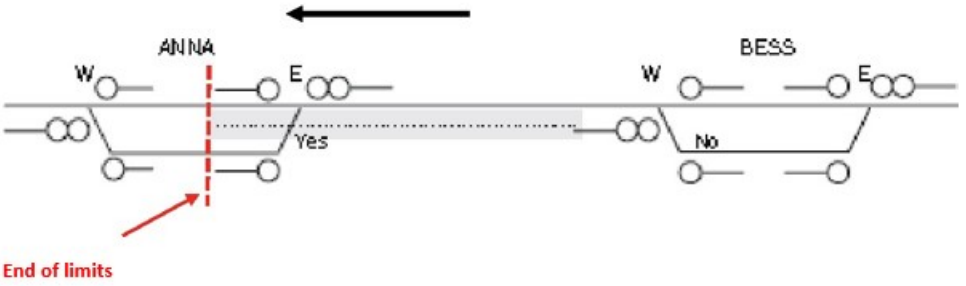


Diagram 2.1

Trains must obtain verbal authority from the control operator to enter the limits at a location that includes the instruction Switch No (SW-N).

Track Authority between East Anna, Switch Yes, and West Bess, Switch No.

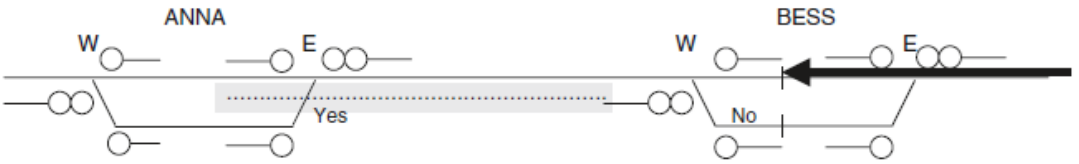


Diagram 3

With "Switch No" at West Bess, verbal authority **is** required to enter the limits.

Except at railroad crossings at grade, trains granted Track Authority may, after stopping, pass a Stop indication without further authority while within the limits. Movements must be made at Restricted Speed until leading wheels have passed the next signal.

Track Authority between West Anna, Switch No, and East Bess, Switch No.

Diagram 4

Train **will not** require verbal permission from the control operator to pass the absolute signals at East Anna or West Bess. After stopping, train must proceed at restricted speed until leading wheels have passed the next signal.
Track Authority between West Anna, Switch No, and East Bess, Switch No.

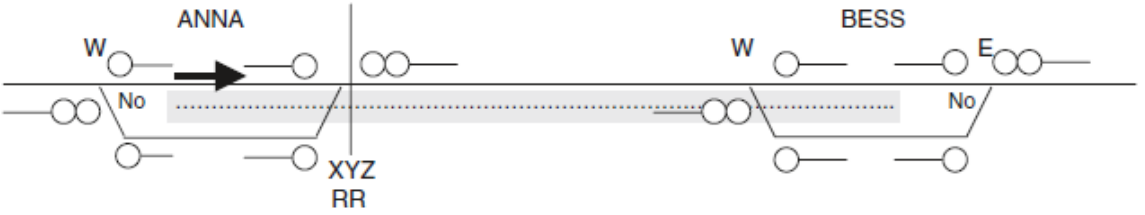


Diagram 5

Because of the railroad crossing at East Anna, the train will require verbal permission from the control operator to pass the absolute signal.

When entering Track Authority limits at a control point, Roadway Workers must obtain Verbal Protection in that control point, or the Track Authority must include the instruction Switch Yes (SW-Y).

Track Authority between East Anna, Switch Yes, and West Bess, Switch No.

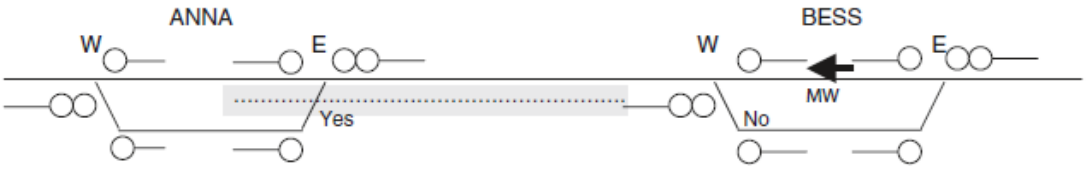


Diagram 6

With “Switch No” at West Bess, Verbal Protection would be required over the control point at West Bess to enter the limits.

Diagram 7

With “Switch Yes” at East Anna, verbal authority **is not** required to enter the limits.

Track Authority does not authorize occupancy of the main track within automatic interlockings.

Outside CTC Territory:

Track Authority in ABS and Non-Signaled Territory must include track to be used and exact locations of the following clearly identifiable points:

- Switches
- Method of Operation signs
- Station signs
- Mile posts
- Signal

Note: Method of Operations signs are those which indicate beginning or ending location of ABS, CTC and Yard Limits.

Authority on the main track begins at the station sign where there is no siding at that station. At stations where there is a siding, the Track Authority will specify which siding switch the movement is authorized to or from, i.e. East Anna, West Cora, etc., and occupancy of the foul zone will be designated by the instruction “Switch Yes” or “Switch No.”

When Track Authority includes the instruction Switch Yes (SW-Y), the foul zone of the switch is included. Switch Yes (SW-Y) must not be issued at either end of the limits when an opposing movement will use the same switch to clear the main track. Switch No (SW-N) indicates authority to occupy the foul zone is not included.

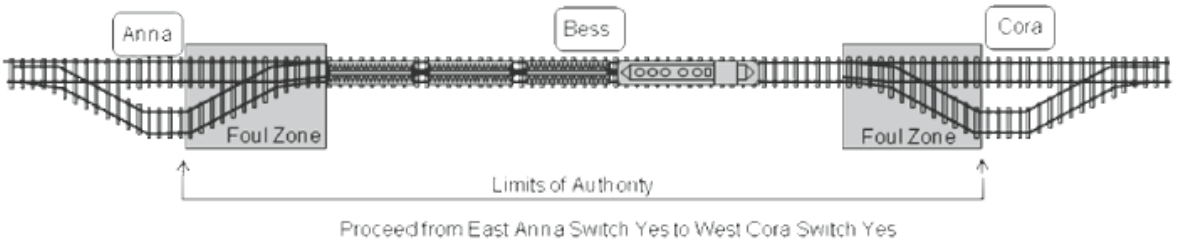


Diagram A

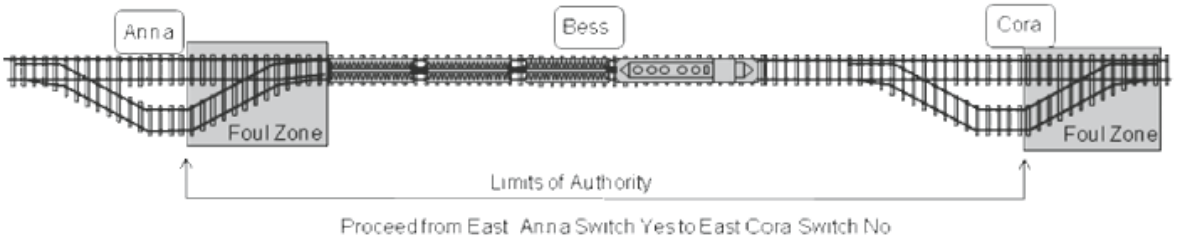


Diagram B

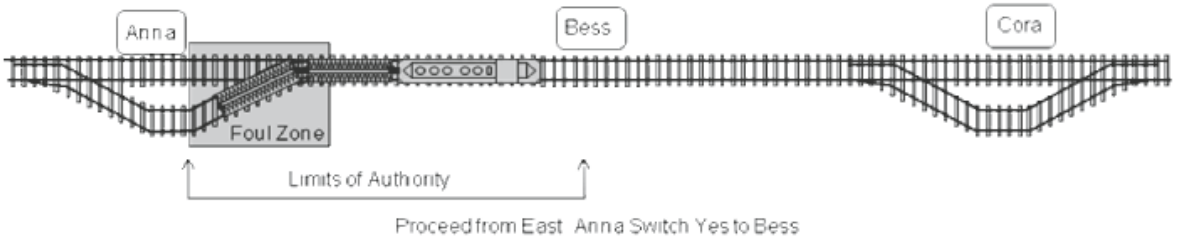


Diagram C

When Track Authority includes the instruction Switch No (SW-N), the foul zone of the switch is not included.

A movement authorized to proceed from one location to another, must move only in the direction specified. Notify the RTC if the main track is cleared before reaching the last named location. When authorized to Work Between two locations, movement may be made in either direction.

Non CTC territory to or from CTC:

When a Track Authority is issued for movement in Non-CTC territory that begins or ends at a CTC control point, the following will govern:

- SW-N will be shown at the CTC control point.
- Signal indication or verbal authority from the control operator will be required to pass the control point to enter or leave the Track Authority limits stated.

1004. JOINT MANDATORY DIRECTIVES

Whenever Joint Authority will be issued for multiple movements, all subsequent movements authorized into the overlapping limits will be authorized with Box 8 and the lower lines “with ____ between ___ and ___,” and must contact the train(s) and/or EIC(s) listed, before entering the limits. If contact cannot be made, RTC will relay instructions. If the initial Train or Roadway Worker does not have a “Box 8 Joint Authority” and they receive a request from a Train or Roadway Worker to become “joint with” on their authority, they are authorized to mark Box 8, and indicate their entire authority limits on the first line of Box 8. Lower lines of Box 8 must contain employee name/Engine ID, along with the joint overlapping limits. The crew will update the number of boxes marked section, as well as specific boxes, on their Track Authority Form.

All movements authorized into the overlapping limits will be authorized with Box 8 and the lower lines “Joint Authority with ____ between ___ and ___,” and must contact the train(s) and/or EIC(s) listed, before entering the limits. If contact cannot be made, RTC will relay instructions.

Trains joint with Trains:

All trains authorized in the overlapping limits after the first train, will receive the identification of all previous trains authorized in the limits on their Track Authority Form.

1) A job briefing must be conducted between the train and any subsequent trains before the subsequent trains occupy the overlapping limits. The job briefing will consist of

- location of both trains,
- movements to be made, and
- radio channels to be used.

2) Once notified of other movements, all trains in non-signaled territory must make all movements at Restricted Speed, until

- train has left the overlapping limits, or
- train has received a new Track Authority without lowers lines of box 8 Joint Authority indicated.

Helper service: If joint between a Train and a Helper only (Train versus Train), once coupled and the provisions of ABTH 331 have been met, restricted speed will no longer apply to this movement while they remain coupled. Once complete and helper uncouples, restricted speed will apply to both until item 2 of USOR 1004 is satisfied by each.

In signaled territory, Restricted Speed is required, except when

- operating under a block signal indication more favorable than APPROACH, and
- switches on the route to be used are lined for the movement.

3) Before releasing authority, a job briefing must be conducted with any trains that will remain in the limits. The job briefing will consist of

- location where train will clear the limits, and
- position of any main track switches that were used.

4) If contact cannot be made, RTC will relay instructions.

Trains joint with Roadway Workers:

When a train is issued Joint Authority, and a Roadway Worker will be authorized into the overlapping limits, the EIC must contact the train to determine its location and movements being made. All subsequent movements must be made under the direction of the EIC.

When a Roadway Worker is issued Joint Authority, and a train will be authorized into the overlapping limits, a crew member of the train must contact the EIC, and be governed by the EIC's instructions.

All movements must be made at Restricted Speed unless otherwise authorized by the EIC. All instructions from the EIC must be repeated, and confirmed with "that is correct."

Once a train is issued a Joint Authority with any EIC(s) listed on the lower lines of a Box 8, all instructions through the joint limits, including if the EIC voids his/her authority, will be communicated from the EIC(s) to the train.

If direct communication with the train(s) is not possible, the RTC must:

- relay instructions from the EIC to the train(s), or
- re-issue a new track authority that is not joint.

When a Roadway Worker receives a Track Authority containing a Box 7 "DO NOT SET ON AHEAD OF OR PASS PROCEEDING TRAIN". Employees who receive authority to occupy the track after the arrival of a train or to follow a train must not occupy the track until they verify the train has arrived or left the location by one of the following methods:

• direct communication with a crew member of the train, or

• receiving information about the location of the train from the RTC or control operator

Once verified the Roadway Worker must record the time, along with initials, and engine number of affected train(s) on either the Track Authority or Job Briefing Book.

Note: When a separated work group afforded on-track safety by the EIC is located away from the EIC, they must not occupy the track until receiving permission from the EIC. In addition, the separated work group must independently comply with the train(s) location verification process outlined above.

Roadway Workers joint with Roadway Workers:

When given the same or overlapping limits with other Roadway Workers, all movements must be made under the direction of the EIC. All instructions from the EIC must be repeated, and confirmed with “that is correct.”

The RTC or control operator will designate the foreman of the first work group as the EIC. Before releasing authorities, the EIC will conduct a job briefing with any remaining work groups to establish a new EIC. When authority is released, the name of the new EIC must also be given to the RTC or control operator.

1005. FOLLOWING MOVEMENTS OUTSIDE CTC

Track Authority must not be issued to a train to follow another train within the same or overlapping limits, unless

- operating in ABS, or
- radio blocking has been authorized.

Roadway Workers must not be issued Track Authority to follow a train within the same or overlapping limits, unless

- the train is proceeding in one direction only, and
- track Authority Line 7, “DO NOT SET ON AHEAD OF OR PASS PRECEDING TRAIN(S) is selected on the form.

Radio Blocking

In non-signaled territory, one train may be instructed to follow another train within the same or overlapping limits by Track Authority Lines 7 and 11. Both trains must be operating with “Proceed” Track Authorities.

The following train must notify the train ahead that radio blocking has been authorized, stating the limits. The following train must not proceed beyond the last location the train ahead has reported to have passed. This information must only be received directly from the train ahead or relayed by the RTC.

All instructions between the trains must be written, repeated, and acknowledged with “that is correct” before being acted upon. These instructions must be retained until the end of tour of duty.

When the train ahead has left the location to which the following train is authorized, this procedure will no longer apply.

In the application of Rule 503, the train ahead must not back beyond the last specific location reported to the following train.

NOTE: Radio Blocking is prohibited where PTC is in effect.

1006. (Not Used)

(Not Used)

1007. (Not Used)

(Not Used)

1008. REPORTING CLEAR OF MANDATORY DIRECTIVES

A train without a crew member on the rear end may report clear of the limits or report having passed a specific location only when it is known the train is complete. This must be determined by one of the following ways:

- Rear end brake pipe pressure is indicated on the HOT device.
- Rear end brake pipe pressure is indicated from remote Distributed Power consist.
- An employee verifies the marker is on the rear car of the train.
- Rear car of the train can be observed by a crew member, or

- Accurate axle count is transmitted by second consecutive defective equipment detector.

When a train operating with a “Proceed” Track Authority reports having passed a specific location to the RTC, the authority is considered void up to that point. A train, roadway worker, or on-track equipment operating with a “Work Between” Track Authority in CTC, ABS or Non-Signaled Territory, may release a portion of the limits to the RTC filling in the appropriate information on the Track Authority form. Movement must not re-occupy tracks in those limits once they have been released.

NOTE: Crew may leave a train or cars occupying the main track and report clear of limits when notified by the RTC that GBO Blocking Protection is in effect. Crew will write “GBO Blocking” on the Track Authority when practicable .

1009. VOIDING MANDATORY DIRECTIVES

A crew member must draw an “X” across each copy of a mandatory directive after the limits have been verbally reported clear or the directive has been verbally made void. Train crew members must retain mandatory directives during the entire tour of duty on which they were received. Employee in charge of roadway workers must retain mandatory directives while they are in effect.

1100. TRACK SIGNS AND TRACK CONDITIONS

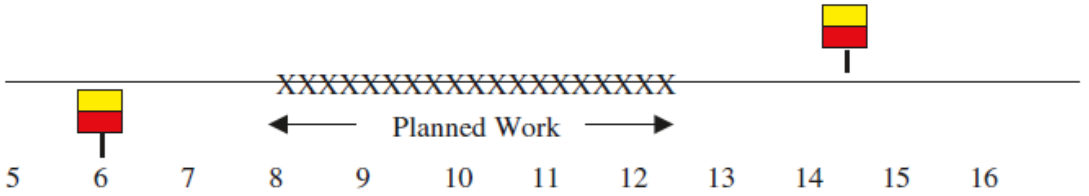
1100. DISPLAY OF YELLOW-RED SIGN

Yellow-red signs warn trains about Planned Work limits, and must be displayed:

- On the right side of track, however, Yellow-Red Signs may be displayed on either side of the track to account for close track centers of Multiple Main Tracks or Siding Locations (see example No. 2)
- Two miles in advance of limits, and
- During the hours Planned Work is in effect.

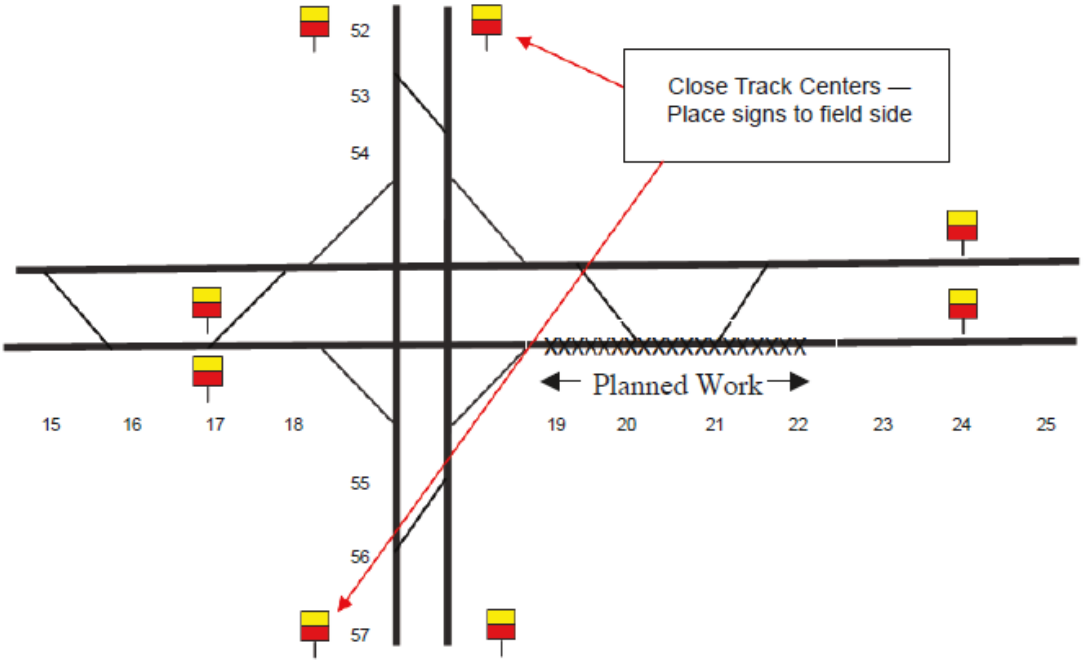
Example No. 1

Planned Work in Effect Between MP 8 and MP 12.4.

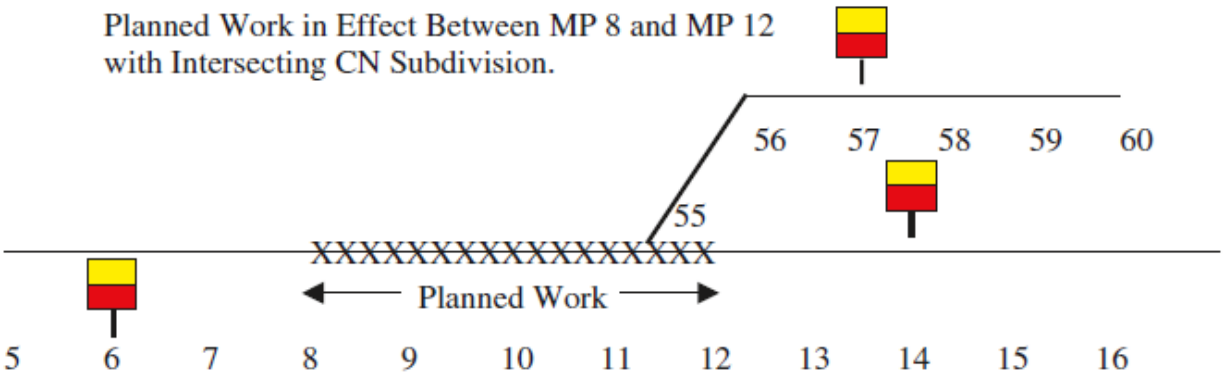


Example No. 2

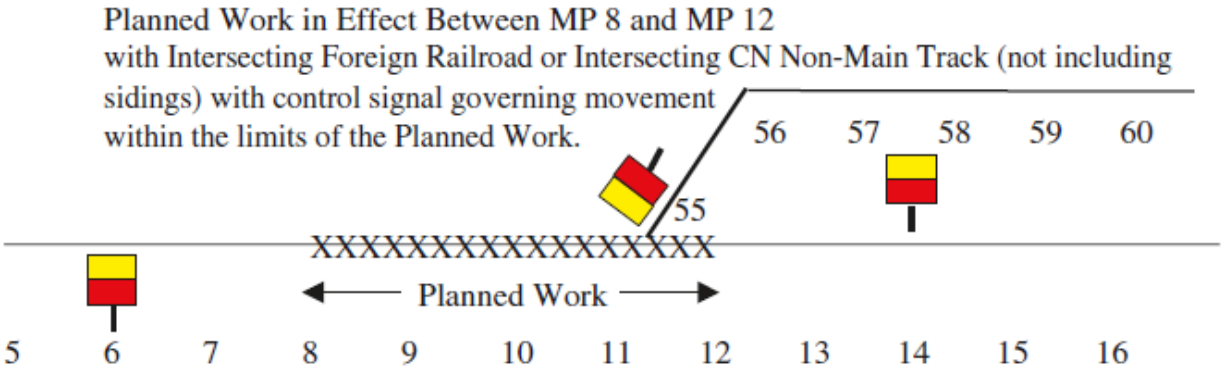
Planned Work in Effect Between MP 19 and MP 22 with Intersecting CN Subdivision.



Example No. 3



Example No. 4



When a Foreign main track or CN Non-Main track (not including sidings) equipped with controlled signal intersects within the limits, follow the diagram above. Yellow-red signs will not be displayed on other tracks entering the main track within Planned Work limits. Yellow-red signs may be displayed at the beginning of the limits.

The location of a yellow-red sign must be shown on a GBO only when it is physically impossible to place the yellow-red sign 2 miles from the limits (e.g., on bridge, close clearances such as a tunnel, or any location where the yellow-red sign cannot be physically placed). Placement of yellow-red sign other than 2 miles due to expediency or convenience is not allowed.

Yellow-red signs may be displayed from one hour before the Planned Work takes effect until one hour after it expires. This does not extend the time limits beyond those listed in the GBO. During the hour before and the hour after Planned Work is in effect, attempt to contact the EIC for instructions. When a yellow-red sign is encountered without a corresponding GBO item, the train must proceed prepared to stop 2 miles beyond the yellow-red sign. If a red sign is displayed, be governed by Rule 1101 (Display of Red Sign). If there is no red sign, the train may proceed at Restricted Speed until the RTC confirms that no Planned Work is in effect at that location.

1101. DISPLAY OF RED SIGN

Red Signs must be displayed to the right of the track for Planned Work limits and at other locations on main tracks and controlled sidings, where trains must stop. Once stopped do not proceed unless the EIC gives verbal permission, including the location of the sign. If permission is received before the train stops, the train may pass the red sign without stopping.

NOTE: Red Signs may be displayed on either side of the track to account for close track centers of Multiple Main Tracks or Siding locations.

When used with Planned Work they must be displayed:

- At the beginning of the limits. They will not be displayed on tracks that enter the main track within the limits.
- If conditions require Yellow-Red Sign to be displayed at the same location as the Red Sign, the Red Sign will be displayed closest to the rail, with the Yellow-Red Sign to the outside.

- In the direction of the first train to arrive at the limits after the Planned Work takes effect. If the Red Sign in the opposite direction cannot be placed at the same time, it must be displayed as soon as possible after the first sign.

Track may not be fouled by Roadway Workers until both Red Signs are displayed.

When a red sign is encountered without a corresponding GBO item, the train must stop consistent with good train handling. Contact the RTC, and be governed by the RTC's instructions.

On Non-Main Track, red signs will be displayed between the rails of tracks, and movements must not pass the sign until an employee of the class that placed it has removed it. Additionally, if the red sign is displayed beyond the first rail of an adjacent track, it does not apply to the track on which the train is moving.

Equipment must not be placed on the track being protected, which will block a clear view of the red sign.

1102. PLANNED WORK

Planned Work is the preferred method of protecting track work on a controlled track, and issued on a GBO. Planned Work may also be used to protect track work on Main Tracks in Yard Limits (with the exception of Remote Control Zones where they MUST NOT be used), either signaled or nonsignaled by issuance of a GBO. Red signs (beginning of the limits) must identify the work limits, and yellow-red signs must identify the 2-mile advance warning for the work limits. All affected tracks must be identified on the GBO. Planned Work Limits must not overlap with:

- Other Planned Work Limits

No forward or shoving movement of a train may be made into or within Planned Work limits during the effective time without permission of the EIC. Once cleared for movement by the EIC, if the train stops or is delayed, EIC must be informed.

A train within the limits at the time Planned Work takes effect must stop unless otherwise instructed by the EIC. Before arriving at the limits, a crew member must attempt to contact the EIC to avoid delay.

Roadway Workers authorized by Track Authority may not enter or move within Planned Work limits without permission of the EIC of the Planned Work.

All instructions from the EIC must be repeated and confirmed with "that is correct" and all movements made at Restricted Speed unless otherwise specified by the EIC. Instructions from the EIC may only be relayed by the RTC or control operator.

If the EIC must leave Planned Work limits before expiration of time, a new EIC will be designated. The new EIC will communicate the change to the RTC, and to train crew members when giving instructions.

If Planned Work limits must be canceled before the expiration time, the following will apply:

1) EIC will notify the RTC.

2) If RTC is able to notify all affected trains, the limits will be canceled. EIC will then remove Red Signs first, and Yellow-Red Signs next.

3) If RTC is not able to notify all affected trains, EIC must remain at the Planned Work limits to communicate with trains entering the limits until either released by the RTC or time limits expire.

PEER TO PEER GUIDELINES FOR PLANNED WORK

Before entering or movement is made within Planned Work Limits employees must receive permission from the EIC. *Note: All communication is transmitted via radio.*

1. **Crew Member: CN 1234 South calling EIC Smith.**
2. **EIC Smith: EIC Smith answering CN 1234 South**
3. **CN 1234, South, approaching GBO item 6734, on the Waukesha Subdivision**
4. **EIC Smith in charge of GBO item 6734 between MP 112.0 and MP 112.5 Waukesha Sub gives the CN 1234 South permission past the red sign at MP 112.5 without stopping and thru my entire limits, no further restrictions (or list EIC instructions if applicable) All men and equipment are in the clear.**
5. **CN 1234, South, without stopping, has permission past the red sign, MP 112.5 and permission through your entire limits, no further restrictions (or list EIC instructions if applicable), all men and equipment are in the clear, is that correct?**
6. **EIC Smith: "That is correct", EIC Smith, out.**

1103. TEMPORARY SPEED RESTRICTIONS

When necessary, GBO or other written instructions will be used by the RTC to protect temporary speed restrictions.

Employee requesting the speed restriction must provide protection until RTC confirms that instructions will be issued to all affected movements.

1104. GENERAL BULLETIN ORDER (GBO)

GBO will be issued by the RTC, either individual, electronically through the PTC system, (EDMD), or included in a TGBO or DOB. It will contain information on all conditions that affect the safe movement of trains, engines, and on-track equipment, including:

- temporary speed restrictions,
- planned Work by Roadway Workers,
- tracks removed from service,
- tracks that are normally clear which are blocked with equipment, and
- highway/rail crossing protection that has malfunctioned.

When a GBO protects track removed from service, do not use the track unless the GBO states the name or title of an employee who may authorize its use, and that person directs all movement.

When a GBO is issued to modify a rule, regulation, or timetable instruction, it must remain in effect until the Operating Bulletin that contains the change is posted.

1105. TABULAR GENERAL BULLETIN ORDER (TGBO)

All trains and the EIC of Roadway Workers that operate outside of Daily Operating Bulletin (DOB) limits must have a Tabular General Bulletin Order in their possession unless authorized by RTC and given the GBO's individually. TGBO will be addressed to a train symbol number, engine number, or name of crew member. Trains must confirm with RTC that they have proper TGBO prior to entering controlled track. When EIC requires TGBO, secure MOW TGBO which does not require confirmation from the RTC.

Check TGBO for:

- Correct address.
- Coverage over entire route that train will operate.
- Item numbers are consecutive.
- Each item has a GBO number. This will be used when voiding an item.

- Total number of items received corresponds with the number of items listed.

All train and engine crew members must ensure that their train or engine is properly addressed on their TGBO, that the number of pages and the number of items in the TGBO compare with that shown on the last page of the TGBO and that the “APPLICABLE ON” portion covers the specific routing for the entire trip. To indicate that this check has been completed, each crew member will, initial each page except the last page, initial the “APPLICABLE ON” portion, initial the Address (TO:) and sign the last page.

If a TGBO is addressed to a train, it is only in effect to the crew while they are on that train unless otherwise authorized by the RTC.

Contact the RTC if TGBO:

- is incorrect or is intended for another train,
- is not received, or
- is needed to be retained for the next tour of duty. However before initiating movement on the next tour of duty, verify with RTC that no additional GBOs are required.

PEER TO PEER GUIDELINES FOR REVIEWING TGBO’S

Before initiating movement on the next tour of duty, crew members must verify with each other that the TGBO has been read and understood per this rule, USOR 1105. During the time crew members give their normal markup to the RTC prior to departing their initial terminal or a location where they first got on their train.

Trains operating active PTC, train will initialize then call the RTC when ready to depart. The RTC will confirm the crew, consist and TGBO. Crew members must compare TGBO with CDU for any additional or voided items and be governed by the CDU.

The confirmation of the TGBO will go as stated below:

TGBO XXXX is the correct TGBO associated with your train and be governed by your CDU Mandatory Directives for any changes.

1. Crew member states via radio: “RTC, this is (insert initials and number of locomotive), we are in possession of TGBO (insert Number) dated
2. (insert Date), are there any exceptions, over?”
3. If No, RTC will state via radio: “No exceptions on TGBO (insert Number) dated (insert Date) for (insert initials and number of locomotive), over.”
4. Trains operating active PTC the RTC will say “TGBO XXXX is the correct TGBO associated with your train and be governed by your CDU Mandatory Directives for any change.”

If Yes, RTC will state via radio GBO number and read the exception.

1. RTC: “GBO Number 2345, 30 MPH at MP 100.4 on Manistique Subdivision, over.”
2. Crew Member: “GBO Number 2345, 30 MPH at MP 100.4 on Manistique Subdivision, over.”
3. RTC: “That is Correct, GBO Number 2345 is OK at 1045, (insert RTC initial), over.”
4. Crew member: “GBO Number 2345 OK at 1045, (insert RTC initial), over.”
5. RTC: “That is Correct, (insert RTC I.D.), out.”

1106. DAILY OPERATING BULLETIN (DOB)

Daily Operating Bulletin limits are designated in the timetable instructions. Movements must have the current DOB when operating in DOB limits, except if in possession of a TGBO that covers the entire limits over which the movement will operate, or authorized by RTC and given the GBO’s individually. Trains must confirm with RTC that they have proper DOB prior to entering controlled track. DOB will take effect at 0200 daily, and will remain in effect for 24 hours unless extended by the RTC. Each crew member must verify to ensure it is properly dated and contains the correct number of pages and items as listed on the last page and indicate on their copy of the DOB the comparison has been completed by signing the last page and initial all other pages once verified. At the expiration time of the current DOB, movement must stop if unable to:

- Clear DOB limits,

- Obtain a copy of the new DOB, or
- Contact the RTC

PEER TO PEER GUIDELINES FOR REVIEWING DOB'S

Before initiating movement on the next tour of duty, crew members must verify with each other that the DOB has been read and understood per this rule, USOR 1106. During the time crew members give their normal markup to the RTC prior to departing their initial terminal or a location where they first got on their train, they must also verify with the RTC their DOB is current and that no additional GBO's are required.

4. Crew member states via radio: "RTC, this is (insert initials and number of locomotive), we are in possession of DOB (insert Number) dated
5. (insert Date), are there any exceptions, over?"
6. If No, RTC will state via radio: "No exceptions on DOB (insert Number) dated (insert Date) for (insert initials and number of locomotive), over."

If Yes, RTC will state via radio GBO number and read the exception.

6. RTC: "GBO Number 2345, 30 MPH at MP 100.4 on Manistique Subdivision, over."
7. Crew Member: "GBO Number 2345, 30 MPH at MP 100.4 on Manistique Subdivision, over."
8. RTC: "That is Correct, GBO Number 2345 is OK at 1045, (insert RTC initial), over."
9. Crew member: "GBO Number 2345 OK at 1045, (insert RTC initial), over."
10. RTC: "That is Correct, (insert RTC I.D.), out."

1107. RESERVED FOR FUTURE USE

1200. REMOTE CONTROL OPERATION

1200. REMOTE CONTROL OPERATORS (RCO)

Operator Control Units (OCU) may only be operated by certified operators or students who have been trained in remote control operations. At the start of each shift a fully charged battery must be replaced in the OCU. An RCO may control only one engine at a time, and the OCU must not be operated at any time while inside the locomotive cab or while operating another motorized vehicle. The RCO is prohibited from taking off the (OCU) at anytime during operation. RCOs, except those working in a tower, must have an operative holstered hand-held radio. Handheld radios will be equipped with either a wired microphone or the RCO uses an upper body mounted holster that would not require removal for transmitting.

1201. REMOTE CONTROL LOCOMOTIVES (RCL)

The RCO must ensure that remote control locomotives are properly set up and tested before operating. When two OCU's are used with one engine, both OCU's must be tested. Either display Remote Control sign on the control stand or insert Remote Control Reverser Plug in the reverser slot while operating in remote.

Whenever an OCU is placed into remote mode, or at the beginning of each shift, each OCU must be tested. Start up test must include the following:

- Full Reset Safety Control (RSC) safety feature,
- Tilt test,
- Locomotive brake system test, and
- RCL Man-Down feature listed under USOR Rule 1206.

Locomotives that utilize a positive train stop system, such as remote control pullback protection, shall perform a conditioning run over a track that the positive train stop system is being utilized on to ensure that the system functions as intended when:

- Each time an RCL is placed in service, or
- The start of each shift, at the first practical time after but no more than 2 hours after the start of that shift.

1202. REMOTE CONTROL ZONES (RCZ)

RCZs are locations designated in the timetable where remote control operators are relieved of providing point protection for movements when the locomotive is leading. Rule 518 on main track and Rule 520 on non main track, requirements to stop within one half the range of vision will not apply. When the RCZ is activated, equipment or employees that are not part of the remote control crew must not operate switches or foul track(s) within the zone until it is deactivated. Only one remote control crew may operate within an RCZ while activated.

Before equipment or employees foul a RCZ it must be determined if the zone is activated.

Employees will determine the zone's status by receiving information from the RCO of the zone or other employee designated by timetable instruction.

Jointly occupied movements within non-active RCZ must be protected under USOR Rule 518 on Main Tracks and USOR Rule 520 on Non-Main Tracks until the zone is no longer jointly occupied. The last jointly occupying crew must directly communicate, i.e., not through a third party, to a remote control crewmember, that they are clear of the zone and all switches are lined back. This will meet the requirements for track is clear and visual determination by RCO is not required to reactivate the zone.

Activation/Deactivation of Remote Control Zones

After the RCZ is activated and before initial pullout movement, the RCO or crew member must visually determine the tracks are clear of:

- trains, engines, railroad cars;
- roadway workers or equipment;
- red signs;
- blue signals and portable derails; and

- switches improperly lined.

This must be repeated each time the RCZ is activated by the RCO.

Exception: When the RCO is being relieved and the RCZ is directly transferred to the relieving RCO by current RCO or when the RCZ is jointly occupied when last jointly occupying crew must directly communicates, i.e., not through a third party, to a remote control crewmember that they are clear of the zone and all switches are lined back. This will meet the requirements for track is clear and visual determination by RCO is not required.

The RCZ must be deactivated at the end of work except when:

- a positive hand-off of the OCU with relieving crew, or
- timetable Instructions specify the hours the RCZ is activate.

1203. REMOTE CONTROL MOVEMENTS

All remote control movements are considered shoving movements, except when the RCO controlling the movement is riding the leading end of the leading locomotive able to observe conditions ahead of the movement.

In addition to the requirements for shoving movements in Rule 502, the controlling RCO must be positioned to visually protect the point of movement. Only at locations where cameras are used or one OCU is used during multiple crew member operations may another crew member make the observation, and confirm with the controlling RCO. If no confirmation is received, the movement must be stopped immediately.

1204. GOING BETWEEN EQUIPMENT

When the RCO who is controlling a remote control locomotive is to go between or in front of stationary equipment attached to that locomotive:

- Reverser must be in the neutral position.
- OCU speed selector must be in the stop position.

If the RCO does not have control of the remote control locomotive, follow the above steps plus the requirements of LIFE Safety Rule T-2.

The speed selector, reverser, and air brakes must not be repositioned on the OCU or control of the OCU transferred to another RCO while the employee is inbetween equipment.

1205. UNATTENDED EQUIPMENT

When leaving equipment unattended for a meal period, etc., the remote control operator will secure the equipment as required per ABTH 411 and turn the OCU power off, (Enabling sleep mode on GE technology). When ending tour of duty, the RCO must place the locomotive in manual mode unless transferring immediately to another RCO. Leave the OCU at a secured location designated by local instructions.

1206. REMOTE CONTROL LOCOMOTIVE MAN-DOWN FEATURE

During Remote Control Locomotive Operations all RCO’s must leave their hand held radio’s powered on at all times, on their respective working channels to monitor for the Operator Down/Tilt Time Out feature.

Whenever radio message “operator down” or “tilt time-out” is received; all employees monitoring the radio frequency must immediately locate the RCO and provide any assistance needed.

EXCEPTION: During the testing of RCL equipment, the RCO performing the test must transmit via radio the name of the person responsible for the message, and that the message was for testing purposes only, no other action is required.

1300. POSITIVE TRAIN CONTROL (PTC)

1300. POSITIVE TRAIN CONTROL

The Positive Train Control System (PTC) is a safety enhancement system designed to monitor and stop train movement before the train:

- Moves into a section of track for which the train does not hold an authority;
- Moves into a section of track under the control of a maintenance employee in charge without permission;
- Operates over an improperly lined main track switch, or;
- Exceeds the maximum permissible speed.

Conductors and Trainmen are qualified to crew a PTC trip if the Engineer is qualified, and you have completed the on-line PTC Transportation Video course in the My360 website. This is required to fulfill FRA regulations.

Anyone who qualifies Engineers on a PTC check ride is required to complete the PTC electronic qualification form on the TEF site. If this is not done, qualification in CATS will not be updated to reflect the qualification correctly.

PTC establishes no authority or restrictions for train movement. Only existing USOR methods of authorizing movement will be used. Conductors are still responsible for all paperwork required for train movement including but not limited to Track Authority, Consist, High/Wide Clearances etc...

PTC Limits are specified in the Timetable. Within PTC limits, trains and engines must be equipped with an operable PTC system unless otherwise authorized by special instructions or RTC.

The PTC system is used in addition to block signals to govern the use of blocks.

However, employees must continue to observe rules which govern the use of block signals as well as other rules.

PTC requirements apply to PTC equipped trains only.

1301. FALSE INFORMATION

Any discrepancy between information on the PTC display versus what is actually conveyed by signal aspects must be reported immediately to the RTC or Control Operator.

After initialization, if the Mandatory Directives TGBO screen shows zero (0) GBO listed, contact RTC or Control Operator.

If consist screen has all asterisks (****) instead of correct totals, contact the RTC or Control Operator.

1302. PTC ENFORCEMENT BRAKING

Locomotive Engineers are responsible for proper control of the train consistent with good train handling to prevent unnecessary PTC enforcement or delay. Responses to PTC prompting are to be acted upon in a timely manor to prevent a PTC Penalty Brake Application. Locomotive Engineers must not rely on PTC as a means of speed control or braking. When the PTC system determines enforcement is necessary, PTC will apply the train's brakes with a Penalty Brake Application. When PTC display indicates Braking in Progress, notify the NOC Support Desk. Be governed by their instructions before proceeding.

1303. TRAINING/QUALIFICATION

Only PTC qualified employees are authorized to utilize PTC equipment.

1304. PEER TO PEER/JOB BRIEFING

PTC qualified train crews are required to conduct a job briefing at the beginning of each tour of duty regarding their PTC equipment and at any time PTC is initialized, re-initialized or cut out en route.

The job briefing will include, but is not limited to, the following:

- Verify PTC Status.

- Verify the PTC and MCC circuit breakers are in the ON position when the controlling locomotive is PTC equipped and the train is operating where PTC is in effect.
- Verify that PTC safety devices have not been cut out. (Crew members must not cut out, tamper with, or defeat a safety device without permission from the proper authority.)
- Review PTC requirements and functionality.
- Crew members need to understand each other's knowledge and experience with the PTC System.

1305. DEPARTURE TEST

A PTC departure test must be performed at Initialization when:

- The DEPART flag is displayed, or
- When instructed to do so by the proper authority.

NOTE: Close the brake pipe anglecock between the lead locomotive in the consist and cars.

Apply handbrakes on cars if necessary to prevent movement.

NOTE: On DP trains, follow procedure in the PTC Procedure Guide for Departure Test.

Once Departure Test is complete, return DP Remote consist(s) back to normal operation.

1306. ENSURING PTC IS INITIALIZED

When taking charge of an engine in PTC territory, the engineer must verify the PTC circuit breaker and cut-out switches are on and properly sealed. If the PTC circuit breaker or any of the cut-out switches is off or the seals are missing, the PTC system must pass another departure test and the NOC Support Desk notified of the missing seals. The condition must be recorded by the engineer on the Locomotive Engineer Report form 538D. If device was previously tested and fails to function properly upon entering or while within PTC territory, the RTC and NOC Support Desk must be notified. The PTC system on the lead locomotive must be initialized:

- Before departing the train's initial terminal, when entering or while operating within PTC territory.
- A PTC equipped locomotive (or cab control car in passenger service) is placed in the lead position.
- When instructed by the RTC or NOC Support Desk.
- Yard assignments, Road Switcher, Locals, Shover/Helper and Lite Power.
- A train with multiple locomotives, which will operate to an intermediate location where a trailing locomotive will then be placed into the Lead, prior to departing the initial terminal, the trailing locomotive is to be initialized to verify PTC is operational. Once verification is complete, return the trailing locomotive to a Cut-Out state. If Mechanical preforms a PTC Pre-Trip/Departure Test, then the locomotive is considered as having meet the initialization requirement. This does not apply to Distributed Power trains.

The RTC shall not authorize movement onto PTC track until the train has initialized PTC or instructions have been verbally relayed to the crew to depart only after the train is in an Active state. PTC status can be verified through PDS indications, verbal communication with the crew or through the NOC Support Managers.

If not initialized, or the locomotive is not PTC mission capable or unable to initialize, the Engineer must contact NOC Support Desk prior to contacting the RTC and before entering PTC track, detailing as to why PTC cannot be initialized.

No train shall be allowed to depart the initial terminal without operative PTC initialized unless approval is granted from both the Divisional General Manager and the Senior Director Network Automation, unless covered by the exceptions below.

The following exceptions may be granted by the RTC:

- Non-equipped locomotive or non-PTC mission capable locomotive yard assignment making headroom or cross yard moves only.

- At Port Huron, trains with Canadian crews pulling west past Tappan control point for the purpose of clearing 16th St.
- Trains in Restricted Mode requiring headroom moves to complete work online.

The following exceptions may be granted by the NOC Support Manager:

- Trains when PTC fails enroute will be allowed to continue to the next designated PTC repair facility.
- Trains departing location in a Disengaged state requiring entering PTC tracks in order to transition to an Active state.
- Trains that are not indicating the correct PTC status in PDS.

*These moves will still require PTC to be initialized if operating with a PTC mission capable locomotive.

1307. INITIALIZING PTC

Verify the PTC and MCC circuit breakers are in the ON position. When PTC screen is illuminated, select the “INIT” button to initialize the system. Prompts will display advising of the progress of the initialization.

After successfully initializing, confirm that the most current information regarding the train’s consist is displayed by the PTC system. Verify the following:

- Total number of locomotives in the consist(s), status, orientation and position in train.
- Total number of loaded and empty cars in the train
- Train’s tonnage and length
- Total braking force (ensure value is not zero) and operative brake count
- Lowest (if any) speed restriction imposed on equipment in the train

If initialization fails after one (1) attempt or confirmation that any of the above information is incorrect, inform the RTC and be governed by their instructions.

NOTE: When prompted by the on-board system of “New software is available” during the Initialization Process, the engineer is to select “YES”. If install fails or the system does not go Active, contact NOC Support Desk and be governed by their instructions.

NOTE: Once an engine has been Initialized for PTC operation, do not cut-out the Automatic Brake Valve on the control stand unless instructed to do so by the NOC Support Desk.

NOTE: Trains which operate PTC Active on CN territory must use a TGBO. Use of a DOB is prohibited by a PTC train.

1308. SET-OFF/PICK-UP ENROUTE

After setting out or picking up cars or a combination of the two, the RTC must be notified and the trains consist updated in the On-board System for proper PTC operation. Verify the following:

- Total number of locomotives in the consist(s), status, orientation and position in train.
- Total number of loaded and empty cars in the train
- Train’s tonnage and length
- Total braking force (ensure value is not zero) and operative brake count
- Lowest of any speed restriction imposed on equipment in the train.

If confirmation that any of the above information is incorrect, inform the RTC and be governed by their instructions.

Note: When running around a train to make a change of direction, the correct locomotive orientation must be entered.

1309. RESTRICTIONS AND AUTHORITIES

When received enroute, the engineer will acknowledge GBO and Authorities in the On-board System once received. Any discrepancies between the paper copy and On-Board System must be reported to the RTC before acknowledgement.

NOTE: When initializing, the assigned TGBO for the train and/or crew member, must be entered in the On-Board System.

1310. PTC FAILURE ENROUTE

PTC must not be placed in Cut Out mode while train is en-route without permission from the RTC or MSREP.

When permitted by RTC or MSREP, PTC may be cut out for, but not limited to, the following reasons:

- It becomes defective, or
- It prohibits train movement which should be allowed

When cutting out PTC, the locomotive engineer must:

- Stop the train/locomotive
- Place PTC in Cut-out Mode
- Record the date, time, reason and who authorized the system to be cut out on the 538D report

1311. BREAKERS AND SWITCHES

The PTC breakers are not to be cut out without proper authority. Seals on the PTC Cut-out toggle switches and box, are not to be removed except under the direction of proper authority. NOC Support Desk must be notified when PTC breakers or toggle switches are cut out.

1312. REPORTING TO THE RTC/NOC SUPPORT DESK

The engineer must report the following conditions and occurrences to the NOC Support Desk:

- Any time PTC indicates train braking in progress
- The train is stopped due to a PTC enforcement, or
- PTC is suspected of not providing a warning when it should have

When making a report to the NOC Support Desk, include the following information:

- Locomotive or control cab car initials/number
- Time and location of occurrence, and
- Any unusual occurrence, which may have attributed to the problem

1313. UNUSUAL CONDITIONS

When information displayed by PTC and aspect of the wayside signal system do not correspond, the following will apply:

- The engineer must operate according to the most restrictive information presented by PTC or the signal system.
- The engineer must promptly report the following to the RTC/NOC Support Desk:
    - current time and location.
    - signal identification (i.e. number plate on intermediate signal).
    - location when PTC initially provided conflicting information related to the wayside signal aspect.

NOTE: When a train visually encounters a “PROCEED” signal but the PTC On-borad system is indicating signal as “STOP”, the On-board will prompt the engineer as to authority of the train to pass the signal.

1314. SOUNDING OF HORN

Sounding the horn remains the responsibility of the engineer in PTC territory. If the horn malfunctions and remains continuously on during PTC operation, the engineer is to manually cut-out the horn in the PTC switch box located in the cab of the engine.

1315. LOSS OF ELECTRONIC DISPLAY FUNCTIONALITY

Should the Engineer PTC electronic display become inoperable,

- immediately contact the RTC or NOC Support Desk and be governed by their instructions.

Trains must not continue movement until:

- The electronic display returns to normal operation for the PTC on board system. Normal would be that the PTC device shows “Cut In” or “Active” on the display screen and the granted authority text becomes viewable and correct, or
- RTC or NOC Support Desk gives permission for the train to proceed with PTC cut out.

NOTE: Conductors PTC screen is for information only. No operating restriction if functionality is lost.

1316. RESTRICTED MODE

The use of Restricted Mode as a means to approach a signal indicating STOP required, circumventing the ability of PTC to enforce a stop, is PROHIBITED.

Trains operating on tracks where PTC is in effect, are to be in the active state until reaching the location where work will be performed.

Prior to performing work events requiring setting-out or picking-up enroute and when returning to the rear portion of the train, the engineer must place the PTC system in Restricted Mode.

After the work events are completed and prior to departing the location, Restricted Mode must be exited. Upon exiting Restricted Mode, the engineer is to update the train consist and select location to return the PTC system to an active state.

1317. RESTRICTED SPEED

PTC will enforce a 19 MPH maximum speed when entering a location requiring restricted speed. Once the train has entered the location, 20 MPH maximum speed will be enforced. The actual speed which allows trains to stop within 1/2 the range of vision will not be enforced by PTC. The crew is still responsible to comply with the requirements of USOR 518. PTC will not prevent train to train collisions while operating at restricted speed.

1318. RELIEF OF CREW DURING TRIP IN PTC TERRITORY

The relieving engineer will compare Track Authorities and TGBO held with those shown on the PTC display and report to the RTC. The inbound engineer will log-off from the PTC onboard system utilizing the “Crew Log Off” function. The relieving crew will then log on to the on board system through the “INIT” log-on function.

1319. AUTHORITY TO OCCUPY MAIN TRACK FROM RTC OR EIC

When required to receive verbal authority to occupy the main track from the RTC or an EIC, do not press the “RECEIVED” or “PROTECTED” soft-key until authority has been received and “OK’D” by the RTC or EIC.

This also applies to work zones, crossing protection or permission to pass a signal indicating Stop.

1320. LOCOMOTIVES NOT-EQUIPPED WITH PTC

When operating in freight switching service or freight transfer train service, a locomotive consist, or train may operate without PTC on-board systems installed or operational in PTC territory only if all of the following requirements are met:

1) The speed of the locomotive consist, or train shall not exceed RESTRICTED SPEED on PTC territory as identified in timetable.

2) Approval has been granted by the NOC Support Desk.

3) A locomotive consist, or train must be engaged in freight switching service or freight transfer train service, including yard, local, industrial, and hostler service, assembling or disassembling of trains, and work trains.

4) The movement must originate either in a yard or within 20 miles of a yard with the yard as the final destination point.

5) The locomotive consist, or train shall not travel to a point in excess of 20 miles from its point of entry onto the PTC track.

Emergency rerouting of trains not equipped with PTC

In the event of an emergency such as derailment, flood, fire, tornado, hurricane, earthquake, or other similar circumstance outside of the railroad's control, which would prevent usage of the normal scheduled route.

A train not equipped with a PTC system, prior to being rerouted on track equipped with a PTC system, the below applies

- Approval must have been granted by the NOC Support Desk
- The speeds as outlined in USOR 1321 PTC Failure Enroute will apply.

1321. PTC Failure Enroute

PTC is considered failed when the PTC system is not in the ACTIVE state. PTC must not be placed in Cut Out while train is enroute without permission from the NOC Support Desk or MSREP.

If PTC fails enroute, slow the train to 15 MPH or less consistent with good train handling and reselect location. If PTC does not return to an Active state, stop the train consistent with good train handling, contact the RTC to verbally receive the Authority/MD information. After receiving Authority/MD information, trains are to proceed not exceeding the below maximum authorized speeds:

Passenger train……..59 MPH

Freight/Intermodal train transporting one or more loaded cars containing PIH/TIH materials.....40 MPH

Freight/Intermodal train.....49 MPH

Where the failure or cut-out is a result of a defective onboard PTC apparatus, the train may continue no farther than the next forward designated location for the repair or exchange of onboard PTC apparatuses.

NOTE: When permitted by NOCSD or MSREP, PTC may be cut out for, but not limited to, the following reasons:

* It becomes defective, or

* It prohibits train movement which should be allowed

When cutting out PTC, the locomotive engineer must:

* Stop the train/locomotive consistent with good train handling

* Place PTC in Cut-out Mode

* Record the date, time, reason and who authorized the Cut-Out on the 538D report.

1322. PTC Suspension Bulletin

Prior to the issuance of any PTC Suspension Bulletin, authorization must first be received from the Senior Manager Operations Support. In locations where a PTC Suspension Bulletin has been issued, PTC enforcement protection is unavailable. The PTC onboard system is required to be initialized prior to and while operating through the limits of the PTC suspension. In the suspension limits, trains are to operate at

the FRA reduced speeds as listed in the System Special Instructions for PTC Failure Enroute. Crews are still responsible to operate under applicable rules, timetable instructions and TGBO items.

DEFINITIONS

Abbreviations

Abbreviations and acronyms may be used provided there is no misunderstanding of their meaning.

Absolute Block

A length of track that no train is permitted to enter while the track is occupied by another train.

Absolute Signal

A signal without a number plate.

Automatic Block Signal System (ABS)

A series of consecutive blocks governed by block signals that are activated by a train or by certain conditions that affect the use of the block.

Automatic Interlocking

An interlocking activated by the approach of a train. Most are equipped with release boxes, however some, identified in the timetable, are also equipped with Maintenance of Way lock boxes.

Back Office Server (BOS)

A storehouse for speed restrictions, track geometry and signaling configuration databases.

Block

A length of track between consecutive block signals or between a block signal and the end of signaled territory.

Block Signal

A fixed signal at the entrance of a block that governs trains entering and using that block.

Centralized Traffic Control (CTC)

A signal system that uses block signal indications to authorize train movements. CTC territory is designated in the timetable.

Clearance Point

Location on the track closest to a switch where equipment may be left standing and an employee riding the side of equipment will not be struck by equipment on an adjacent track.

Close Clearance

The close proximity of obstructions (utility pole, buildings, equipment, etc.) to railroad tracks whereby they create a dangerous situation for persons working on/ near tracks.

Color Light Signal

A fixed signal that conveys an indication by the color of a light, or lights only.

Communications Network Component

A redundant wired and wireless communication network to connect components of the locomotive, BOS, base stations and wayside interface units.

Control Point

The location of absolute signals controlled by a control operator.

Controlled Siding

A siding within CTC where a signal indication authorizes the siding’s use. Rules applicable in CTC apply on these sidings.

Controlled Track

Main Tracks and controlled sidings under the control of an RTC or control operator. This includes any track where CTC rules are in effect.

Critical Focus Zone (CFZ)

An environment you create in the cab of the controlling locomotive that allows the employee controlling the locomotive to focus on controlling the speed of the movement while approaching upcoming restrictions. The purpose of the CFZ is to reduce/eliminate distractions while approaching a potentially hazardous situation.

Crossover

A track connection between two adjacent tracks that will hold no more than one car in the clear, and used primarily for crossing from one track to the other. Corresponding position of switches is when both switches are lined either for straight movement or lined for crossover movement.

Current of Traffic

The movement of trains on a main track, in one direction, as specified by the rules or special instructions.

Diamond

Track structure that allows two railroad tracks to cross each other at grade.

Distant Signal

A fixed signal outside a signal system that governs the approach to a block signal, interlocking signal, or switch point indicator. A distant signal does not indicate conditions that affect track use between the distant signal and block or interlocking signals. A distant signal may be identified by a “D.” Dual Control Switch (DCS) A power-operated switch or derail that can also be operated by hand.

Dual Control Switch (DCS)

A power-operated switch or derail that can also be operated by hand.

Dwarf Signal

A low controlled interlocking or block signal.

EDMD TERRITORY

Area of subdivision identified in timetable which Electronic Delivery Mandatory Directive (EDMD) rules apply. Trains, when equipped and mission capable are required to initialize the PTC onboard system.

Electric Switch Lock

An electrically controlled lock that restricts the use of a hand-operated switch or derail.

Employee

Also applies to contract employees and employees of other companies and railroads operating and/or performing other rules related duties on CN trackage.

Employee in Charge (EIC)

Employee qualified to be in charge of the protection of track work and on-track equipment.

Engine

A locomotive(s) or a cab control car, operated from a single control used in train, transfer or yard service.

Equipment

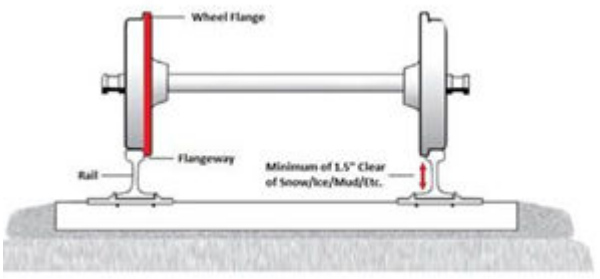
Locomotives, railroad cars, and on-track equipment.

Fixed Signal

A signal or sign at a fixed location indicating a condition affecting the operation of trains and on-track equipment.

Flangeway

The flangeway is the continuous path or channel adjacent to the inside of the head of each running rail travelled by the flange of every rail wheel. The flangeway has to be kept clear to a minimum depth of 1 1/2 inches below the top of rail and a minimum width of 1 1/2 inches to allow for an unobstructed passage of every rail wheel. Unobstructed flangeways are essential for safe operation over the entire length of track, including thru crossings and switches.



Be especially aware at crossings as these are more prone to these types of conditions. At a minimum, flangeways must be cleared to a depth of 1 1/2 inches and width of 1 1/2 inches.

Foul Zone

A segment of track between the switch points and clearance point of a switch.

Highway-Rail Grade Crossing

An at-grade crossing where a public highway, road, street, or private roadway, including associated sidewalks and pathways, crosses one or more railroad tracks at grade, and is identified by a U.S. DOT National Highway-Rail Grade Crossing Inventory Number, or is marked by crossbucks, stop signs, or other appropriate signage indicating the presence of an at-grade crossing.

Interlocking

Railroad Crossing at Grade governed by signal indication. Interlockings may be operated manually (by a control operator) or automatically (by the approach of a train).

Interlocking Limits

The tracks between outer opposing absolute signals of an interlocking.

Intermediate Signal

A signal identified by a number plate.

Intermodal Train

A train consisting solely of TOFC/COFC/ multi-level auto rack equipment, Distributed Braking Car (DBC), and/or Autonomous Track Inspection (ATI) car. These trains are authorized to operate at intermodal speeds as indicated in the timetable.

Main Track

A track extending through yards and between stations that must not be occupied without authority or protection.

Manual Interlocking

An interlocking operated manually.

Medical Device

An instrument, apparatus, implement, machine, contrivance, implant, or other similar or related article (including a component part), or accessory that is intended for use in the diagnosis of disease or other conditions, or in the cure, mitigation, treatment, or prevention of disease or other conditions.

Multiple Main Tracks

Two or more main tracks that are used according to the timetable.

Non-Main Track

All tracks other than Main Tracks and controlled sidings where Rule 520 governs movements.

Onboard System

A combination of software and hardware which monitors and controls train movement if the engineer fails to respond to the audible/visual warnings.

Pilot

An employee assigned to a train to assist an engineer or conductor who is unfamiliar with the rules or the portion of railroad the train will operate on.

Positive Train Control (PTC)

A safety overlay system which enforces limits of authority and restrictions pertaining to train movement. PTC does not grant any authority for train movement.

Predictive Speed Enforcement

The onboard segment determines when to warn the engineer of a pending speed restriction or maximum allowable speed.

Radio Blocking

A method to establish an absolute block for a following train in non-signaled territory by direct communication with a preceding train.

Railroad Crossing at Grade

Location where railroad tracks cross other railroad tracks at grade by means of a diamond.

Railroad Supplied Electronic Device

Electronic Device provided by the railroad that serves for operational purposes. The Device can contain a digital copy of the operating manual or other operational documents as well as different applications to perform work.

Reactive Speed Enforcement

Displays prior to or inside of a speed restriction for which the track color is shown as other than green.

Remote Control Zone

A designated area containing tracks on which remote control crews may operate without an employee on the leading end of movements. Remote control zones will be designated in the timetable.

Restricted Speed Enforcement

Enforcement of maximum speed of 20 mph but does not allow for the relief from “Half the Range of Vision” requirements of USOR 518. PTC will NOT prevent train to train collisions when operating at restricted speed.

Roadway Maintenance Machines

A vehicle or machine capable of on-track operation utilized for track inspection, track maintenance and other railroad activities.

Roadway Worker

Any employee of a railroad, or of 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, roadway facilities, or roadway machinery on or near the track or with the potential of fouling a track.

Shoving Movement

A movement without an occupied engine on the leading end.

Siding

A track connected to the main track and shown in the timetable, used for meeting or passing trains.

Signal Aspect

The appearance of a fixed signal.

Signal Indication

The action required by the signal aspect.

Spring Switch

A switch equipped with a spring mechanism to return the switch points to normal position after having been trailed through. They are identified by the letters SS on the target.

Station

A location identified by a station name sign and designated by that name in the timetable.

Switch Point Indicator

An indicator light used to show that switch points fit properly on those equipped.

Timetable

A publication containing instructions relating to the movement of trains and other essential information.

Track Authority

A method to authorize trains, roadway workers, or on-track equipment on a main track within specified limits. Track Authority Verbal (TAV) is issued by the RTC via radio or phone. Track Authority Computerized (TAC) is requested by an employee and issued by the RTC utilizing an approved computer system.

In CTC, Track Authority may be used to allow trains, roadway workers, or on-track equipment to work within a block or multiple blocks either exclusively or joint with other trains, roadway workers, or on-track equipment.

Outside CTC, Track Authority is used to authorize trains, roadway workers or ontrack equipment to occupy a main track. These locations will be designated in the timetable.

Train

One or more engines coupled, with or without cars, displaying a marker, and authorized to operate on a main track. When used in connection with speed restrictions and the observance of all signals and signal rules, also applies to engines.

Unattended Equipment

Equipment is considered unattended when no qualified employee is close enough to the equipment to take safe and effective action to control its movement, or is not supervised by a qualified person acting for the Company.

Verbal Protection

A method of providing protection to a roadway worker within the limits of a control point.

Yard

A location with one or more tracks where normal freight switching activities can occur.