

Network Safeworking Rules and Procedures

Train Order Working

Rule Number: 5017

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Document History

Version	Effective Date	Pages updated	Reasons for change
2.02	16 10 23	All	Updated reporting requirements, minor corrections and Glossary terms

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1. Purpose

The purpose of this rule is to describe the operation of the *Train Order Working System of Safeworking* used in the *Network*.

2. General

Train Order Working is a *System of Safeworking* where *Train Orders* are issued as *Movement Authorities* and are delivered, or dictated, over communications equipment, to *Rail Traffic Crews* and recorded in written form on a *Movement Authority* form in accordance with Procedure 9016 Written Authorities and Forms.

The movement of all *Rail Traffic* is controlled by *Authorities Issued* by the *Network Controller*.

The objective of the *Train Order Working* system is to prevent more than one *Rail Traffic* movement being between any two *Authorised Train Order Crossing* or *Non-Crossing Stations* at the same time.

The *Rail Traffic Crew* must have a valid *Authority* before entering a *Section*.

2.1 Network Controller

The *Network Controller* must:

- efficiently manage *Network* activities;
- formulate, *Authorise* and *Issue Authorities*;
- record *Occupancies*; and
- to avoid conflicts when formulating new *Authorities*, refer to the *Network Control Diagram*, the *Network Control* system, where available, and existing *Authorities*.

2.2 Network Control Diagram

The primary tool for operational safety is a *Network Control Diagram*, which details:

- planned, *Authorised* and actual *Rail Traffic Occupancies*;
- planned, *Authorised* and actual *Track Occupancies*; and
- events or conditions that may affect safety.

The *Network Control Diagram* is the primary *Safeworking* tool and should be kept up to date.



NOTE: Electronic *Network* diagrams will be used where available.

The *Network Controller* must refer to the *Network Control Diagram* in order to:

- plan *Rail Traffic* requirements; and
- avoid *Occupancy* conflicts.

3. Authority types

The *Network Controller* Issues the following *Authorities* for *Occupation of Running Lines*:

- *Proceed Authority*;
- *Proceed Authority* in Advance;
- *Joint Authority*;
- *Crossing Authority*;
- *Conditional Authority*;
- *Conditional Authority* in Advance and
- *Shunt Authority*.

4. Station Limits



NOTE: Signs are described in Rule [6007 Signs](#).

The start and end of *Train Order Territory* is identified by signs:

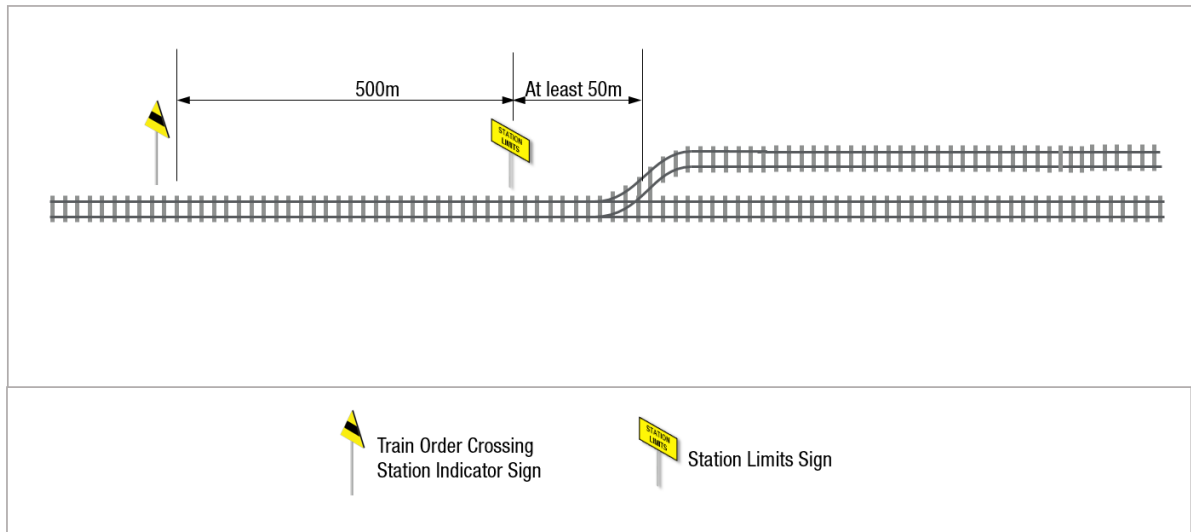
- a commencement of *Train Order Territory* sign will identify the start of *Train Order Territory*; and
- an End of *Train Order Territory* sign will identify the end of *Train Order Territory*.

4.1 Crossing Stations

Crossing Stations are designated by:

- *Crossing Station* indicator signs, located at least 500 metres from the *Station Limits* sign; and
- A *Station Limits* sign, located at least 50 metres before the first *Points*. The *Station* name is displayed on, and below, the *Station Limits* sign.

Figure 5017-1 Example layout of signs designating a *Crossing Station*. Only one end is shown.



The *Track Element* from the *Station Limits* sign to the *Facing Points* is known as the Up Approach or Down Approach. The first *Track Element* the *Rail Traffic* will occupy based on the usual direction of travel.

- For example: *Rail Traffic* Approaching a *Station* in the Up Direction would occupy the Up Approach as it passes the *Station Limits* Sign, and *Rail Traffic* approaching a *Station* in the Down Direction would occupy the Down Approach as it passes the *Station Limits* Sign.

4.2 Non-Crossing Stations

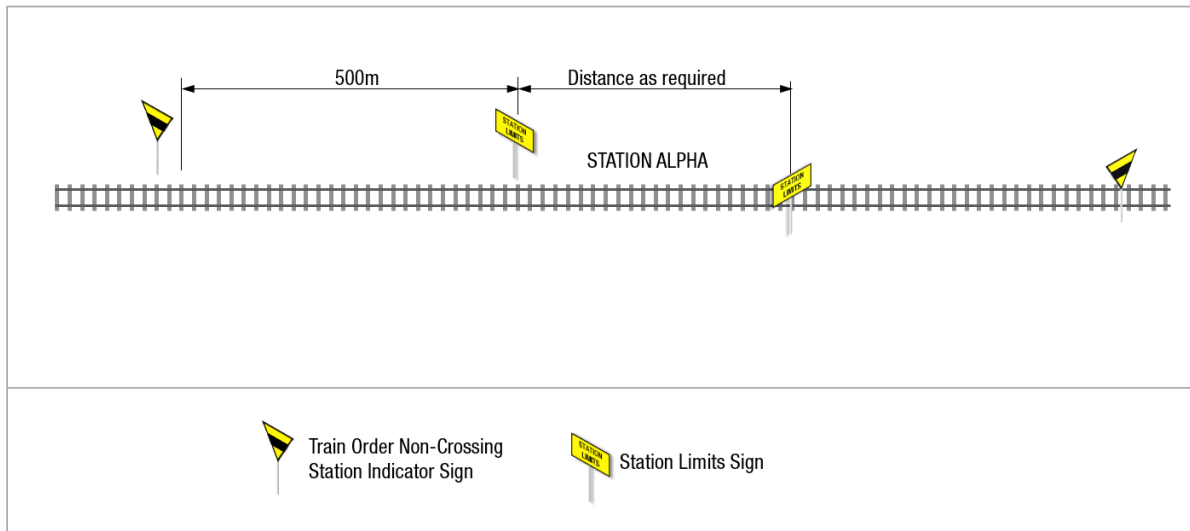
Non-Crossing Stations are designated by:

- Non-Crossing Station indicator signs, located at least 500 metres from the Station Limits sign; and
- the Station name, which will be displayed on the Station Limits sign.



NOTE: The distance between the Station Limits signs at Non-Crossing Stations will be determined by operational requirements, such as the length of Rail Traffic Consists.

Figure 5017-2 Example layout of signs designating a Non-Crossing Station.



5. Designating Limits of Authority

The start and end points of the *Limit of Authority* must be specified.

The *Limit of Authority* must be designated by specifying the *Locations* between which the movement is *Authorised*.

5.1 Limit of Authority Start Point

The start point of a *Train Order* will be:

- the Track element where the *Train Order* is received; or
- in the case of a *Proceed Authority in Advance*, the track element nominated on the *Train Order*.

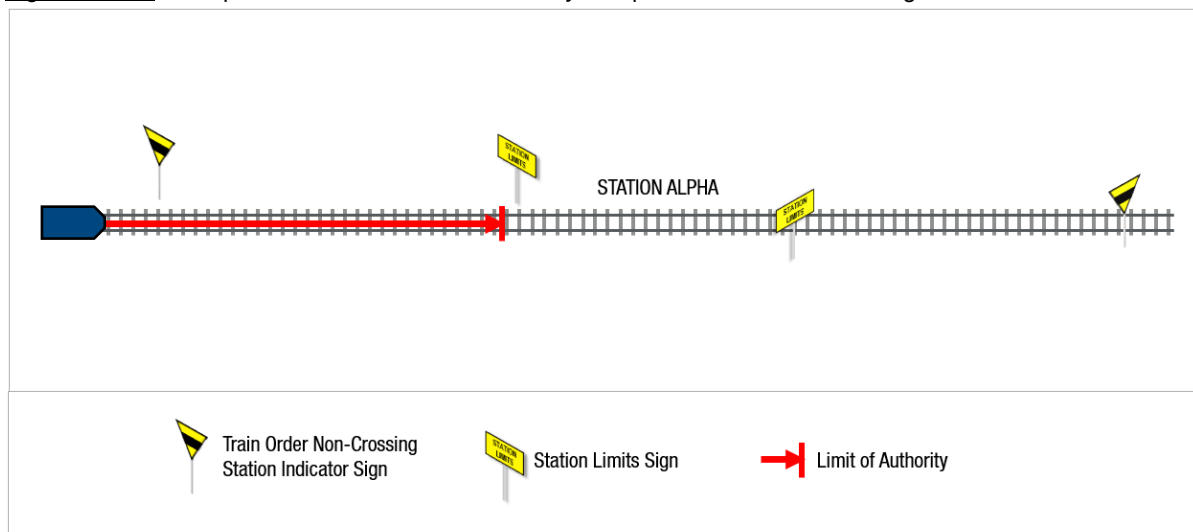
5.2 Limit of Authority End Point

A *Limit of Authority* end point must be designated as follows.

5.2.1 Station limits sign as the end point

If a *Station Limits* sign is designated as the end *Location* of a *Train Order*, the *Limit of Authority* extends to the arrival end *Station Limits* sign at that *Station*.

Figure 5017-3 Example of where the *Limit of Authority* end point is a *Station Limits* sign.



5.2.2 A location within a station as the end point

If a specified *Location* at a *Station*, such as *Main Line*, *Loop* or *CBH Siding*, is designated as the end *Location* of a *Train Order*, the *Limit of Authority* extends to the Clearance Point at the departure end *Points*.

The Clearance Point is defined by a Clearance board or *Catch Points*. Where there is no Clearance board or *Catch Points*, *Rail Traffic Crews* must stop their *Rail Traffic* short of the *Converging* line so other *Rail Traffic* has safe passage onto the *Adjacent* line or, where *Self Restoring Points* are installed, the “NO STANDING BEYOND THIS POINT” sign.

Figure 5017-4 Example of where the *Limit of Authority* end *Point* is a *Main Line*.

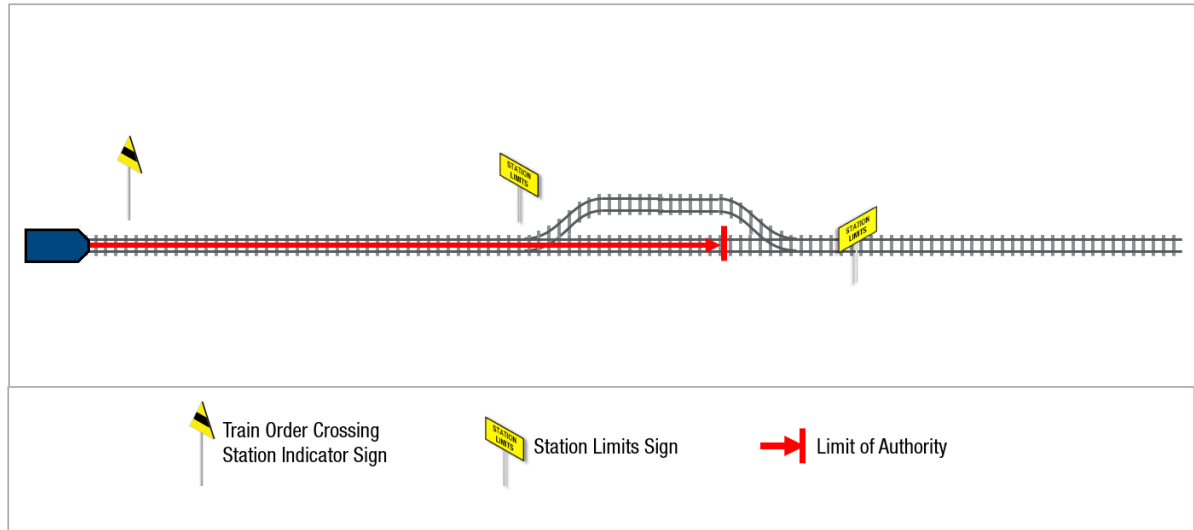
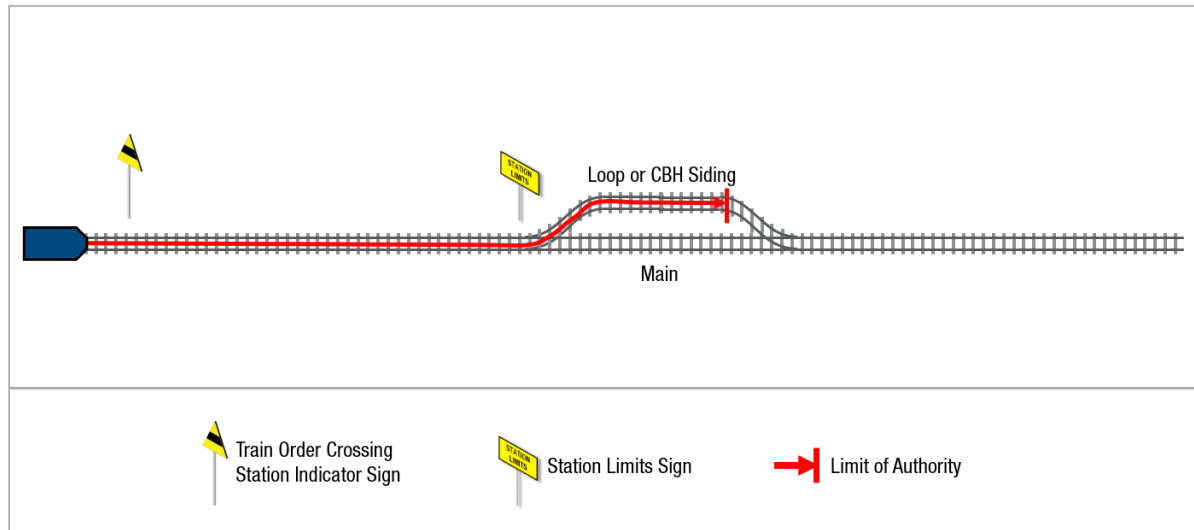


Figure 5017-5 Example of where the *Limit of Authority* end point is a *Loop or CBH Siding*.



6. Operating with Authorities

An *Authority* may be *Issued* for *Rail Traffic* to proceed through more than one single line *Section*.

The *Authority* to enter and *Occupy* a *Section* is:

- possession of the *Train Order*, or
- possession of an *Alternative Movement Authority*.

And where provided, clearing of relevant *Fixed Signals*.

The *Network Controller* must not *Issue* an *Authority* for a following *Rail Traffic* movement until it is confirmed that the previous *Rail Traffic* movement has reported as *Arrived Complete* at the *Station* in advance.

Rail Traffic with an *Authority* issued through a *Station* must only occupy the *Main Line* or other *Track* elements as specified on the *Train Order*.

Where a shunt is required at a *Station*, the *Train Order* must be issued to that *Station* only so that a *Shunt Authority* can be issued or permission to *Shunt* can be given.

Where a *Train Order* is *Issued* to the terminating *Location* of a *Train* service, the *Train Order* shall be *Issued* to *Station Limits* only. The *Network Controller* will then apply *Rail Traffic* blocking within the *Station* on the applicable track elements required for the service to enter and occupy within the *Station* as required.

When required by the *Network Controller*, *Rail Traffic Crews* must confirm their understanding of the *Limit of Authority*.

6.1 Reporting

Reporting in accordance with this rule is a Safety Critical requirement that assist *Rail Traffic Crews* in maintaining Location Awareness, it also alerts the *Network Controllers* and other *Network* users of the presence and position of the *Rail Traffic*.

Location Awareness reporting must occur prior to the *Rail Traffic* departing a *Station*, the *Rail Traffic Crew* are permitted to commence communication with the *Network Controller* once they have passed the *Train Order Crossing* or *Non-Crossing Station Indicator* sign on the approach to a *Station*, being prepared to Stop if communications are not established when operating a *Driver Only Operation*.

Location Awareness reporting is in addition to all other reporting required by this rule.

Where Radio communications are available, the *Rail Traffic Crew* must advise the *Network Controller* over the radio, where radio communications are unavailable *Rail Traffic Crews* must report using alternative on-board *Communications Equipment*.

Where the *Rail Traffic* is operated as a 2-person crew and the *Rail Traffic Crew* is unable to contact the *Network Controller*, before passing the fouling point and departing that *Station* the Driver must confirm with the second person on the *Locomotive*:

- the current *Location*; and
- the *Movement Authorities Limit of Authority*.

After confirming *Location* and *Limit of Authority*, the *Rail Traffic Crew* must record the time of arrival and departure and report these times to the *Network Controller* as soon as possible.

Where the *Rail Traffic* service is a *Driver Only Operation* the Driver must communicate with the *Network Controller* before departing that *Station*.

Where the *Network Controller* has been advised using using alternative on-board *Communications Equipment*, or, in the case of a 2-person crew, *Network Control* has not been advised, a general broadcast must be made by the *Rail Traffic Crew* over the radio of the *Rail Traffic* departure from that *Station*.

6.1.1 Progress

Departure must be reported only after the rearmost vehicle has cleared the departure end *Station Limits* of the specified *Station*.

Rail Traffic Crews must report to the *Network Controller* on departure from the *Station* prior to the *Limit of Authority* end point.

Arrival at a *Station* must only be reported after the *Rail Traffic* has *Arrived Complete* within the specified *Station*.

Rail Traffic Crews must report to the *Network Controller* when *Shunting* at a *Station* is complete, and:

- that the *Siding* is *Secured*; and
- at Annett's locked *Sidings*, that the Annett's key is on the *Locomotive* (AKOL).

6.1.2 Prior to Crossing

When a *Crossing* is *Authorised*, *Rail Traffic Crews* must verify with the *Network Controller* their understanding of the *Crossing* instructions before departure from the *Station* prior to the *Station* where a *Crossing* is *Authorised*.

6.2 Rail Traffic Working Advice

The *Network Controller* must *Issue* a *Rail Traffic Working Advice* which provides relevant information, including:

- any opposing *Rail Traffic*;
- any preceding *Rail Traffic* which has not terminated;
- the next following *Rail Traffic*;
- *LPAs*; and
- *WoTAs*.



NOTE: *Rail Traffic* includes *Track Vehicles*.

6.3 Competent Workers Receiving Authorities

Competent Workers may receive *Authorities* and instructions and deliver them to *Rail Traffic Crews*.

Competent Workers at attended *Stations* must keep copies of *Authorities* received.

If a *Rail Traffic Crew* does not receive an *Authority* directly from the *Network Controller*, the *Rail Traffic Crew* must verify the *Authority*, with the *Network Controller*, before departure.

6.4 Identification Numbers

If the leading *Locomotive* is to be replaced, the *Rail Traffic Crew* must advise the *Network Controller*.

The *Network Controller* must *Cancel* existing *Authorities* that contain references to the replaced *Locomotive* and *Issue* new *Authorities* showing the new *Locomotive*.

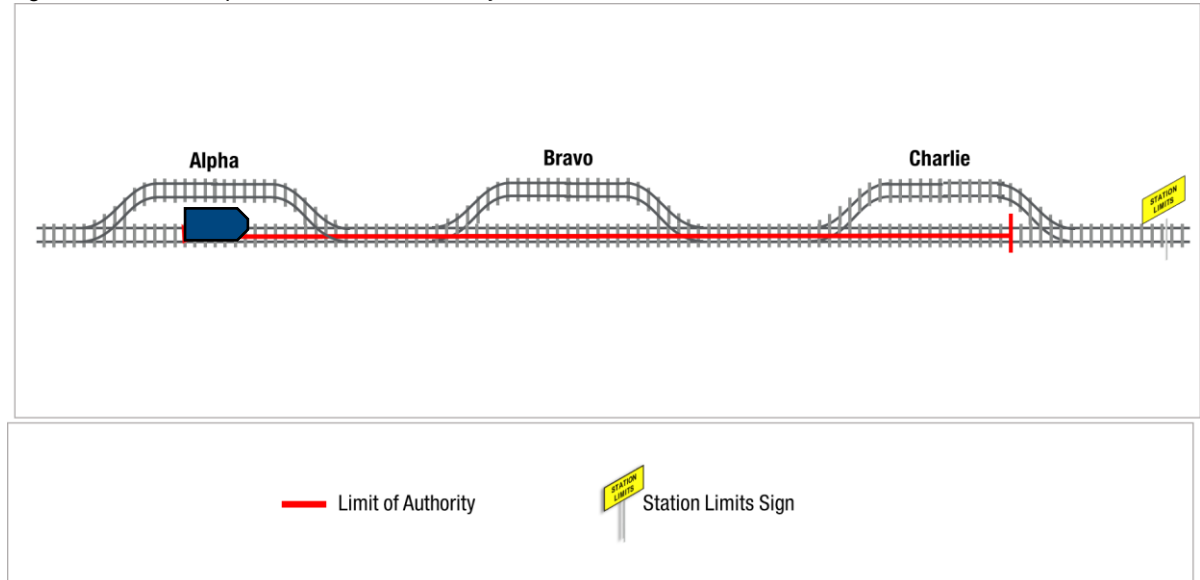
6.5 Challenging an Authority

Competent Workers must challenge an *Authority* if they believe or become aware that the *Authority* is incorrect.

6.6 Proceed Authority

A *Proceed Authority* is a *Train Order* that *Authorises Rail Traffic* to *Occupy* and proceed on the *Main Line* or other designated *Track*, between limits defined on the *Authority*.

Figure 5017-8 Example of a *Proceed Authority*.



6.7 Conditional and Crossing Authorities

A *Conditional Authority* is a *Train Order* that *Authorises Rail Traffic*:

- to proceed to a *Station* in advance in order to *Cross* another *Rail Traffic* movement; and
- after the *Crossing* movement has been completed, proceed to the end limit of the *Authority*.

A *Crossing Authority* is a *Train Order* that *Authorises Rail Traffic* to:

- Proceed to an end point and *Cross* another *Rail Traffic* movement; or
- *Cross* another *Rail Traffic* at the Start Point of a *Train Order*.

All *Rail Traffic Crossings* must be included in the *Authority*.

Only one intermediate *Crossing* may be shown on an *Authority*.



NOTE: An *Authority* may contain more than one *Crossing*. The *Authority's* end point must be the *Station* where the second *Crossing* occurs.

Rail Traffic Crews approaching a *Station* where a *Crossing* is *Authorised* must, where communications are available, confirm with the opposing *Rail Traffic Crew*, the *Crossing* instructions.

Where communications are not available the *Rail Traffic Crew* must proceed in accordance with section 7.2 of this rule.

6.7.1 Failure of Network Control System

Where the *Network Control System* is unavailable, *Conditional Authorities* are not permitted.

Train Orders including a *Crossing* may be issued as *Crossing Authority* only and must not include instructions to Proceed to another *Location* after the *Crossing*.

6.7.2 Crossing instructions

A *Crossing* occurs when:

- opposing *Rail Traffic* movements meet at an *Authorised Crossing Station*; or
- a following *Rail Traffic* movement passes a preceding *Rail Traffic* movement at an *Authorised Crossing Station*.

Rail Traffic must not depart a *Station* at which a *Crossing* has been arranged until:

- the opposing *Rail Traffic* movement has *Arrived Complete*; or
- an *Authority* has been *Issued* for *Rail Traffic* to depart.

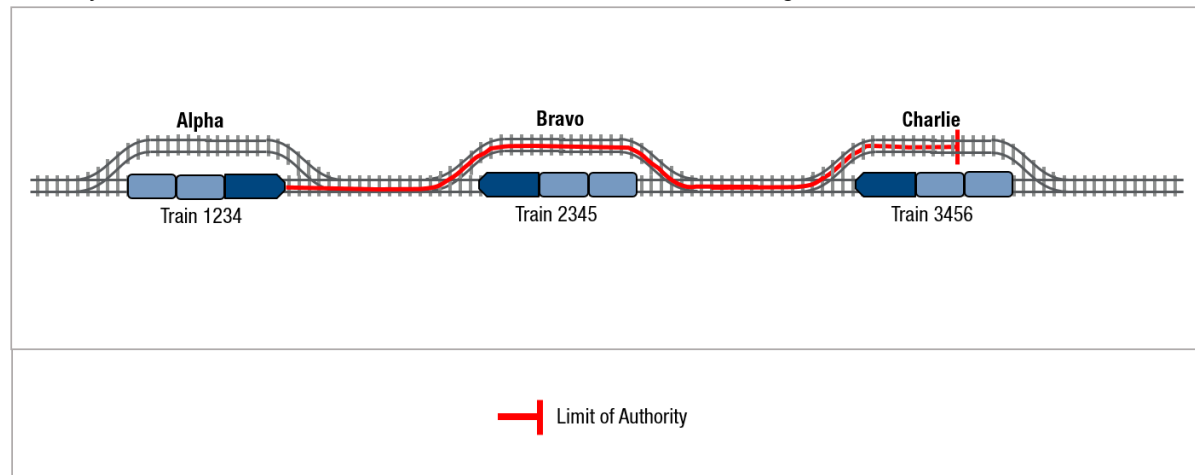
The *Authority* containing the instructions for the *Crossing* movement must include the *Rail Traffic* identification and:

- the leading *Locomotive* identification; or
- all *Track Vehicles* identifications.

Figure 5017-9 *Train* No 1234 has an *Authority* to Proceed to Bravo Loop, *Cross Train* No 2345 then Proceed to Charlie. The condition to depart Bravo is that *Train* No 2345 has arrived *Complete* at Bravo.



Figure 5017-10 *Train* No 1234 has an *Authority* to Proceed to Bravo Loop, *Cross Train* No 2345 (this is the one permitted *Intermediate Crossing*), then Proceed to Charlie Loop, *Cross Train* No 3456. The end point of this *Authority* must be Charlie as this is the *Station* where the second *Crossing* occurs.



6.8 Check of Crossings with the Network Controller

After the read back or confirmation of a *Train Order* including a *Crossing* has been confirmed as correct by the *Network Controller*, the *Rail Traffic Crew*, must:

- ascertain whether the opposing *Rail Traffic* has been *Issued* with a *Train Order* for the intended *Crossings*; and
- request the *Network Controller* to confirm the *Stations* where *Crossings* are to be affected by repeating the particulars of the *Train Order Issued* to the opposing *Rail Traffic*.

The *Network Controller* and the recipient must endorse details of information given on the bottom portion of their *Train Order*.



NOTE: It is not necessary for the *Rail Traffic Crew* to prepare a copy of the *Train Order* that has been *Issued* to the opposing *Rail Traffic*.

6.9 Shunt Authority

Rail Traffic may be authorised to *Travel* on the *Network* by *Issue* of a *Shunt Authority*.

A *Shunt Authority* is a *Train Order* that *Authorises* the *Occupation* of the *Section* and *Track* elements as specified in the *Train Order* for *Shunting* requirements at a *Station*.



WARNING: *Rail Traffic* must not *Occupy* the *Section* beyond the *Limit of Shunt* sign, unless the *Rail Traffic Crew* are in possession of an *Authority* for the *Section*, even where the *Rail Traffic* movement will not go beyond the *Station Limits* sign.

If there is no *Authority Issued* for the shunting *Rail Traffic* to *Occupy* the *Section* in advance, a *Shunt Authority* must be *Issued* for *Shunt* movements beyond the *Limit of Shunt* sign where provided or beyond the *Station Limits* sign where a *Limit of Shunt* sign is not provided.

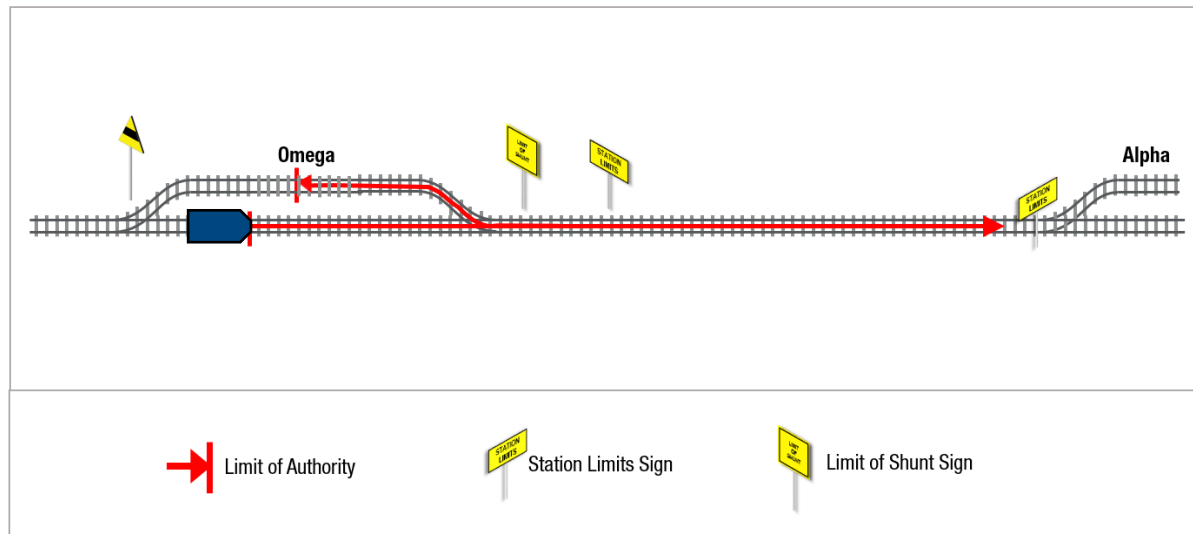
A *Shunt Authority* permits *Rail Traffic* to move in either direction.

Shunt movements within *Station Limits* or, where provided, *Limit of Shunt* signs, must be approved by the *Network Controller*. In this circumstance a *Train Order* is not required. Before approving *Shunting* movements within *Station Limits* the *Network Controller* must ensure that:

- no *Authority* has been *Issued* for other *Rail Traffic* into or through that *Station*;
- where the *Network Control* system is available, *Blocking Facilities* are applied; and
- after giving approval for a *Shunt* movement, not *Issue* other *Rail Traffic* an *Authority* into or through that *Station*.

The approval to *Shunt* and the application of *Blocking Facilities* must be recorded on the *Network Control Diagram*.

Figure 5017-11 Example of a *Shunt Authority* for a *Rail Traffic* movement beyond the *Limit of Shunt* sign or *Station Limits* sign. This *Authority* is for the *Section* but must be *Fulfilled* at Omega.



7. Crossings

The *Network Controller* Issues written instructions about *Crossing* movements, and the *Track* to be *Occupied*, within the *Train Order*.

Rail Traffic Crews set *Points* as required.

7.1 Communications Available

7.1.1 Crossing Rail Traffic

Rail Traffic Crews must:

- comply with instructions provided within the *Authority*; and
- communicate with the *Crew* of the *Rail Traffic* to be *Crossed* and reach agreement on which *Rail Traffic* is to enter the *Station* first.

The crew of the *Rail Traffic* that is to enter first; must:

- set the *Route*, if required, and enter the *Station* on the specified *Track*;
- report arrival to the *Network Controller* when the *Rail Traffic* has *Arrived Complete*;
- set the *Route* for and admit the opposing *Rail Traffic*;
- obtain an *Authority* to Proceed if not in possession of an *Authority*; and
- after the *Crossing* movement has been completed, set the *Route* for departure.

7.1.2 Passing Rail Traffic

Rail Traffic Crews must comply with instructions provided within the *Authority*.

The crew of the *Rail Traffic* that is to arrive first must:

- set the *Route*, if required, and enter the *Station* on the specified *Track*;
- report arrival to the *Network Controller* when the *Rail Traffic* has *Arrived Complete*; and
- set the *Route* for and admit the passing *Rail Traffic* as required.

The passing *Rail Traffic Crew* must:

- confirm with the *Rail Traffic Crew* to be passed that:
 - the instructions within the *Authorities* are not in conflict; and
 - the *Route* is set or needs to be set.
- If the *Route* is not set, set the *Route*;
- arrive on the specified *Track*; and
- obtain an *Authority* to proceed if not in possession of an *Authority* to do so.

7.2 Communications not Available

7.2.1 Crossing Rail Traffic

If communications are not available between *Rail Traffic Crews*, the *Rail Traffic* to *Occupy* the *Main Line* must:

- stop at the arrival end *Station Limits* sign; and
- wait to be admitted by the opposing *Rail Traffic Crew*.

The crew of the *Rail Traffic* to *Occupy* the *Crossing Loop* must:

- set the *Route* and enter the *Station* on the specified *Track*;
- set the *Route* for and admit the opposing *Rail Traffic* to the *Main Line*;
- obtain an *Authority* to proceed if not in possession of an *Authority* to do so; and
- after the *Crossing* movement has been completed, set the *Route* for departure.

7.2.2 Passing Rail Traffic

If communication is not available between *Rail Traffic Crews*, the *Rail Traffic* to arrive first must:

- set the *Route*, if required, and enter the *Station* on the specified *Track*;
- report arrival to the *Network Controller* when the *Rail Traffic* has *Arrived Complete*; and
- set the *Route* for and admit the passing *Rail Traffic* as required.

The passing *Rail Traffic* must:

- wait to be admitted by the preceding *Rail Traffic Crew*; and
- obtain an *Authority* to proceed if not in possession of an *Authority* to do so.

8. Change of Crossing Location

If it is necessary to change a *Crossing Location* specified on current *Authorities*, the *Network Controller* must:

- first, *Cancel* the *Authority* held by the *Rail Traffic* whose journey is being shortened, then *Cancel* the *Authority* held by the *Rail Traffic* whose journey is being extended; and
- then, *Issue* new *Authorities* with altered *Crossing* instructions, with the *Authority* for the *Rail Traffic* whose journey is to be shorten *Issued* first..

9. Issuing a Proceed Authority in Advance

A *Proceed Authority in Advance* is a *Proceed Authority Issued* while *Rail Traffic* is en-route and may be *Issued* while the *Rail Traffic* is in motion.

Where the *Proceed Authority in Advance* is to be *Issued* while *Rail Traffic* is in motion, the *Rail Traffic* must be under the control of more than one crew member.

If there is only one *Rail Traffic Crew* member, then the *Rail Traffic* must be stationary to receive a *Proceed Authority in Advance*.

A *Proceed Authority in Advance* will not come into effect until the *Rail Traffic* arrives at the *Limit of Authority end Point* for the current *Authority*.

10. Cancelling an Authority

An *Authority* that cannot be *Fulfilled* must be *Cancelled*.

An *Authority* may be *Cancelled* and a new *Authority Issued* whilst *Rail Traffic* is in motion, provided that the *Rail Traffic*:

- has not passed the current *Limit of Authority*;
- will not pass the limit of the new *Authority*; and
- is under the control of more than one crew member.

If there is only one *Rail Traffic Crew* member and the *Authority* is a written *Authority*, then the *Rail Traffic* must be stationary before the *Authority* is *Cancelled*.

If there is any doubt as to whether the *Rail Traffic* cannot be prevented from exceeding the proposed *Limit of the Authority*, the *Rail Traffic* must be stopped, and its *Location* determined before an *Authority* is *Cancelled*.

11. Fulfilling an Authority

An *Authority* is *Fulfilled* after all instructions contained within it have been carried out.

12. Keeping records

Network Controllers must keep a *Permanent Record* of relevant details and movements in the *Network*.

13. References

[6007 Signs](#)

[9016 Written Authorities and Forms](#)

14. Effective date

15 October 2023