

ANGE 216

## Level Crossings

### Applicability

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| NSW |
| SMS |

### Publication Requirement

|               |
|---------------|
| External Only |
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### Document Status

| Issue/Revision # | Effective from  |
|------------------|-----------------|
| 3.1              | 22 October 2017 |

## Purpose

To prescribe the rules for using *level crossings* in the Australian Rail Track Corporation (ARTC) NSW Network.

## General

Level crossings are high risk areas where *rail traffic* crosses paths with road and pedestrian traffic at the same level.

*Competent Workers* in charge of level crossings *must* ensure the safety of rail, road and pedestrian traffic.

Missing, damaged or faulty equipment or gates at a level crossing must be reported to the *Network Control Officer*.

The Network Control Officer must:

- treat the report as a *Condition Affecting the Network (CAN)*, and
- arrange for the *Maintenance Representative* to be told about the CAN.

If *active control* warning equipment at a road or pedestrian level crossing is faulty, the Network Control Officer must arrange, as necessary, for *Handsignallers* to protect the level crossing.

## Types of level crossings

Road and pedestrian traffic is warned by active or *passive control* warning equipment.

Passive control uses only signs to warn about the presence of a level crossing.

Active control uses one or more of lights, booms, gates, *audible warning devices* or lit signs to warn that rail traffic is approaching a level crossing.

The following types of level crossings are used in the ARTC Network:

- Type B level crossings with GIVE WAY roadside warning signs immediately before the level crossing
- Type D level crossings with STOP roadside warning signs immediately before the level crossing
- Type F level crossings, with roadside flashing lights and audible warning devices, and with or without booms
- level crossings with manually operated gates
- Network access level crossings
- pedestrian level crossings
- private level crossings.

### Pedestrian level crossings

Pedestrian traffic is controlled by one or more of:

- walkway warning signs
- crossing approach mazes
- audible warning devices
- lit DON'T WALK displays
- lit STOP displays
- lit arrows showing the direction of approach of rail traffic
- automatically or manually controlled gates or booms.

Pedestrian level crossings might be associated with road level crossings.

## Level crossing speed signs

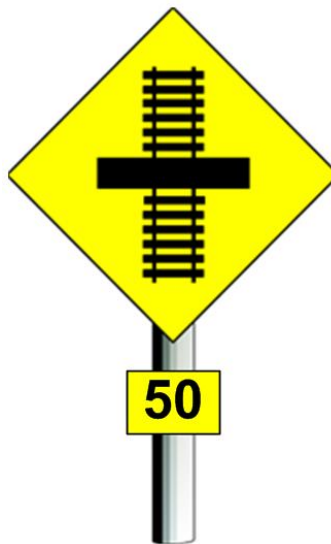
Where a level crossing speed sign is placed on the approach to a level crossing with either active or passive control warning equipment, the rail traffic must not exceed the indicated speed during approach to the level crossing.

After the leading motive power unit has fully cleared the level crossing, rail traffic may resume the normal speed allowed by the previous permanent *track speed* sign.

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Figure ANGE 216-1

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Example: Trackside sign before a level crossing with reduced restricted visibility

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## Conditional level crossing speed signs

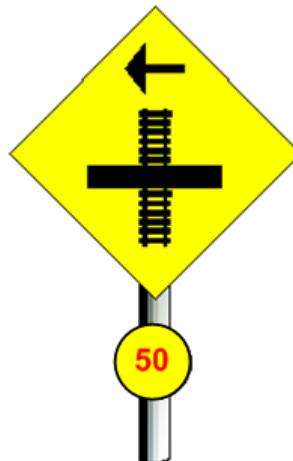
Where Conditional level crossing speed signs are placed on the approach to a passive level crossings, rail traffic must not exceed the indicated speed during approach to the level crossing when the adjacent track before the level crossing is occupied by rail traffic as indicated by the direction of the arrow.

After the leading motive power unit has fully cleared the level crossing, rail traffic may resume the normal speed allowed by the previous permanent track speed sign.

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Figure ANGE 216-2

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Example: Trackside sign before a level crossing with conditionally restricted visibility. The arrow shows which side may be affected.

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## Type F level crossings

Type F level crossing roadside warning equipment *may* be operated automatically by *track-circuit*, or be controlled by Competent Workers.

Some Type F level crossings are equipped with predictor circuitry that senses and responds to the speed of approaching rail traffic.

### Type F level crossing trackside signs

Trackside signs before standard Type F level crossings mark the start of controlling track-circuits.

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Figure ANGE 216-3

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Example: Trackside sign before standard Type F level crossing

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Rail traffic must not accelerate between the trackside sign advising approach to a Type F level crossing fitted with predictor circuitry and the level crossing.

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Figure ANGE 216-4

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Example: Trackside sign before standard Type F level crossing with predictor

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### If rail traffic stops within predictor circuitry

If rail traffic stops in the controlling track-circuit of a Type F level crossing fitted with predictor circuitry, the level crossing warning equipment may stop operating after a period of time.

When rail traffic again proceeds towards the level crossing, the level crossing warning equipment is designed to begin operation.

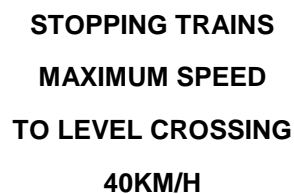
Rail Traffic Crews must:

- not exceed 25km/h until the leading vehicle of the rail traffic has passed over the level crossing, or
- not exceed the speed indicated on the advisory sign until the leading vehicle of the rail traffic has passed over the level crossing where rail traffic is required to stop at a platform, and
- check whether the warning equipment is operating correctly, and
- proceed over the level crossing only if it is safe to do so.

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**Figure ANGE 216-5**

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**STOPPING TRAINS  
MAXIMUM SPEED  
TO LEVEL CROSSING  
40KM/H**

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Example: Trackside sign where rail traffic is required to stop at a platform before a standard Type F level crossing with predictor

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### **Type F level crossing roadside warning equipment**

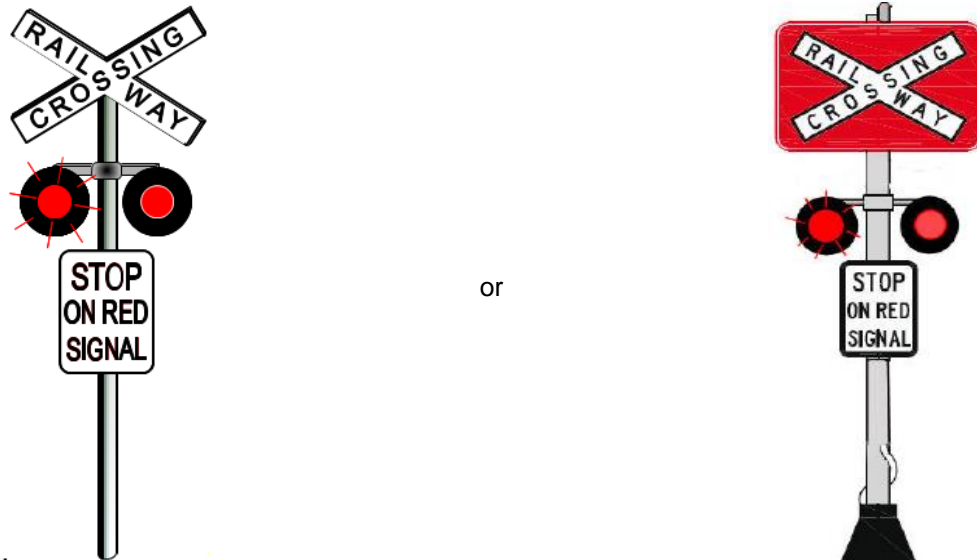
Type F level crossing roadside warning equipment includes:

- advance warning signs
- bells or other audible warning devices
- flashing lights.

The warning equipment might also include:

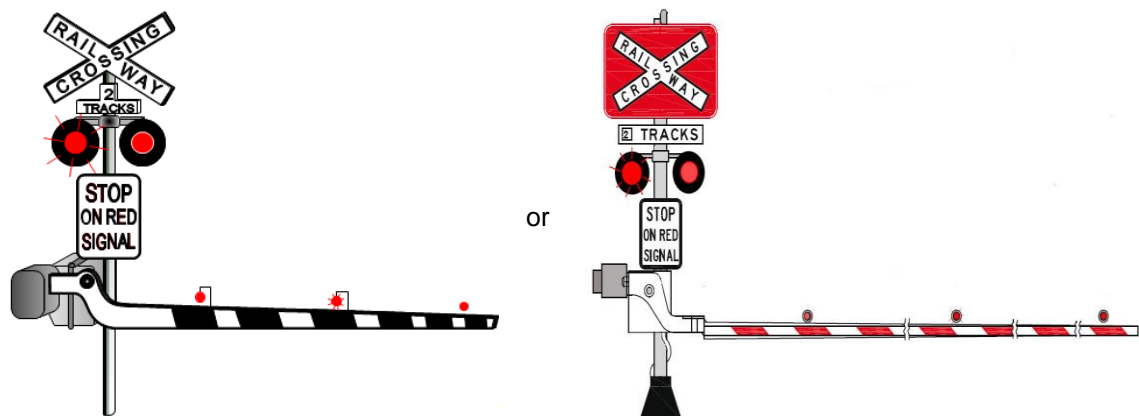
- advance warning lights for road users
- half-booms or full-booms for road users
- booms or gates for pedestrians
- warning lights for pedestrians.

Figure ANGE 216-6



Example: Type F roadside warning equipment with lights flashing alternately

Figure ANGE 216-7



Example: Type F roadside warning equipment with boom and lights



## Level crossings with manually operated gates

Manually operated gates close across the *track*, the road or the walkway.

Roadside warning signs warn road and pedestrian traffic.

### Unattended locations

At *unattended locations* other than private level crossings, Competent Workers, *Train Crews* or *track vehicle crews* must make sure that manually operated gates are:

- closed across roads and walkways before rail traffic uses the level crossing, and
- re-opened to road and pedestrian traffic only after rail traffic has fully cleared the level crossing.

### Attended locations

Gates at *attended locations* must have a steady red light during darkness and in conditions of *low visibility*.

*Signallers* must clear signals allowing approach to a level crossing with manually operated gates only after making sure that the gates have been closed across roads and walkways.

*Signallers* must *authorise* the re-opening of gates to road and pedestrian traffic.

Before leaving a *location* unattended, *Signallers* must make sure that signals protecting level crossings with manually operated gates are set at STOP.

## Network access level crossings

Network access level crossings are usually permanent crossings provided at authorised locations for Network maintenance.

Some Network access level crossings have passive or active control warning equipment.

Temporary level crossings may be established for Network maintenance.

*Possession Protection Officers* and *Protection Officers* are responsible for the safety and *protection* of temporary level crossings used during maintenance work.

## Private level crossings

Private level crossings allow private access across ARTC Network tracks. Private level crossings may have:

- manually operated gates
- roadside signs.

Competent Workers who notice open gates at private level crossings must tell the Network Control Officer.

The Network Control Officer must tell a Maintenance Representative.

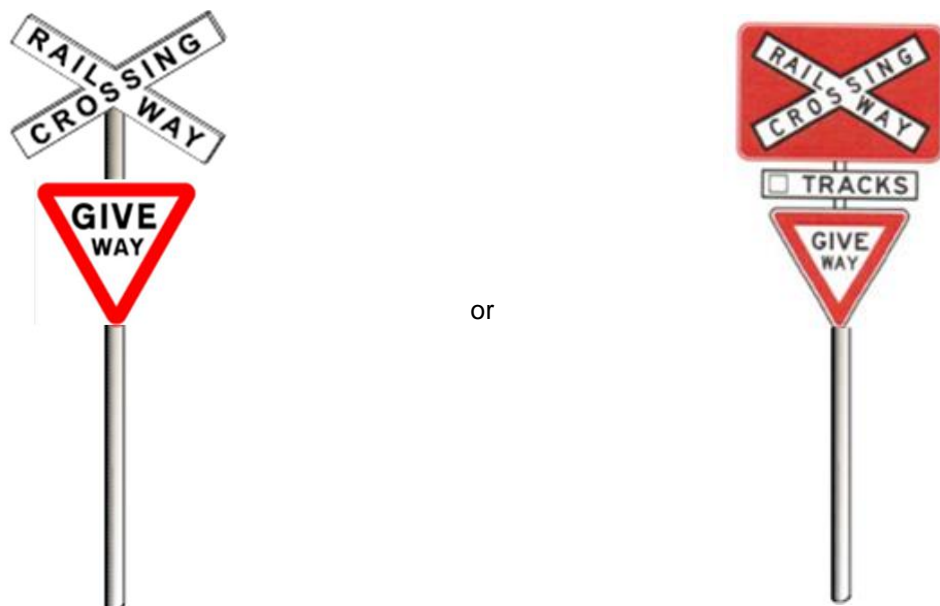
## Roadside warning signs

The following signs warn road users and pedestrians about level crossings.

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Figure ANGE 216-8

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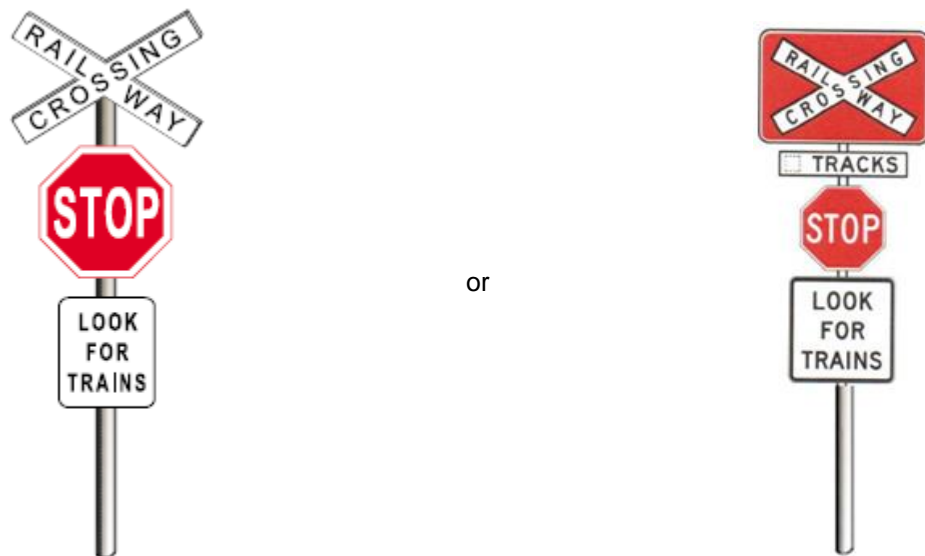
Example: Type B level crossing GIVE WAY sign

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**Figure ANGE 216-9**

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Example: Type D level crossing STOP sign

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## Related ARTC Network Procedures

|                 |   |
|-----------------|---|
| <b>ANPR 715</b> | Protecting Type F level crossings                             |
| <b>ANPR 716</b> | On-site testing of Type F level crossings                     |
| <b>ANPR 717</b> | Using emergency roadside warning equipment                    |
| <b>ANPR 718</b> | Remote monitoring of Type F level crossings warning equipment |

## Effective Date

22 October 2017