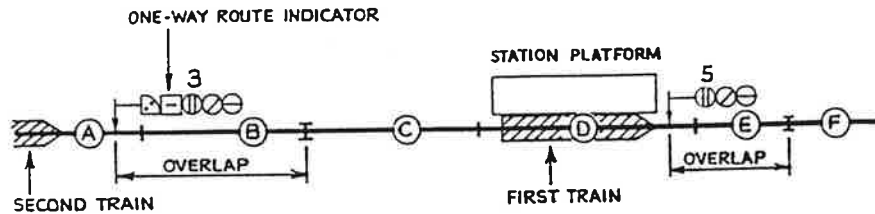


DIRECTOR OF S & T ENGINEERING.
WEST MIDLANDS PROJECTS GROUP.

*SIGNALLING PRINCIPLE
AWARENESS*



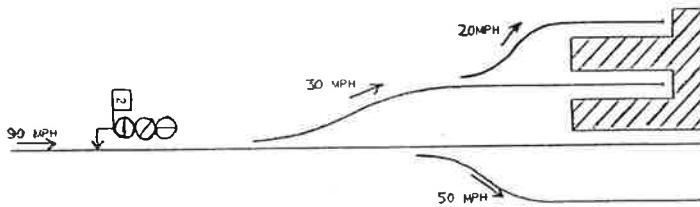
Automatic
Signal



Intermediate
Block Home
Signal



Controlled
Signal



STANDARD SIGNALLING PRINCIPLE No 2 Dec 1989

GROUND SHUNTING SIGNALS

The position light signal showing one lunar-white and one red or one yellow light disposed horizontally for the 'ON' aspect and two lunar-white lights at an angle of 45° for the 'OFF' aspect. to be used in all power signalled areas.

Ground shunting signals in all areas should be located at approximately 6-feet from the first points over which they apply unless they are required to be set further back in order to ensure adequate clearance, e.g. at slip connections.

A back light to be provided for the PIVOT light only.

When a position light signal is elevated to a position at or above drivers eye level then each light shall be fitted with a long hood.



Semi
Automatic
Signal

SIGNALLING PRINCIPLE AWARENESS

In this module we will look at some selected Standard Signalling Principles (SSP's) to give you an appreciation of the comprehensive information contained within them.

Some of the principles will be given in full others will only "highlight" areas of interest to you at this basic stage of your learning, therefore **do not** use these notes as a substitute for the SSP's.

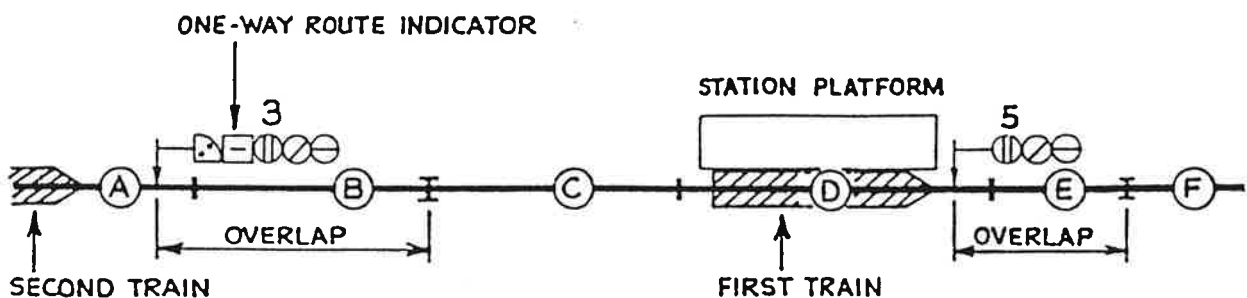
Also Standard Signalling Principles can be revised fairly frequently and whilst the principles in this module are current at time of printing they may have been superseded by the time you read these notes, so always refer to the SSP's held in the Technical Library.

STANDARD SIGNALLING PRINCIPLE No. 1

April 1984

POSITION LIGHT SIGNALS ASSOCIATED WITH A MAIN ASPECT

1. The only form of signal to be used in association with a colour light signal is the position light with no 'ON' aspect but showing two white lights inclined at 45° for the 'OFF' aspect.
2. In order to ensure that the appropriate interlocking safeguards are established when movements of passenger trains are made under permissive conditions, the position light aspect is to be cleared by the operation of the same device as that used for the main aspect, selection being made according to the occupancy or otherwise of the appropriate track circuits. When the position light aspect is to be cleared for a shunting movement to a destination for which the main aspect also applies then the condition will be established by the Signaller operating a device different from that used for the main aspect.



SIGNALLING PRINCIPLE AWARENESS

STANDARD SIGNALLING PRINCIPLE No. 2

Dec 1989

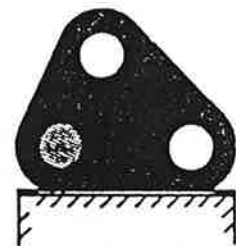
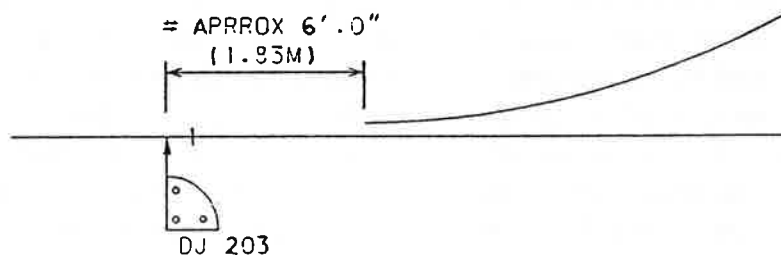
GROUND SHUNTING SIGNALS

The position light signal showing one lunar-white and one red or one yellow light disposed horizontally for the 'ON' aspect and two lunar-white lights at an angle of 45° for the 'OFF' aspect, to be used in all power signalled areas.

Ground shunting signals in all areas should be located at approximately 6 - feet from the first points over which they apply unless they are required to be set further back in order to ensure adequate clearance, eg. at slip connections.

A back light to be provided for the PIVOT light only.

When a position light signal is elevated to a position at or above drivers eye level then each light shall be fitted with a long hood.



THIS MEASUREMENT WILL HAVE TO BE INCREASED IN CERTAIN CASES IN TRACK CIRCUITED AREAS TO CATER FOR STOCK RAIL FRONT JOINT OR WHERE THE CIVIL ENGINEER WILL ALLOW THE FIRST JOINT TO BE POSITIONED.

SIGNALLING PRINCIPLE AWARENESS

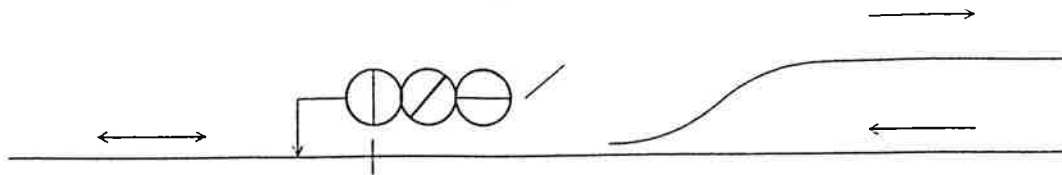
STANDARD SIGNALLING PRINCIPLE No. 6 (PART)

March 1987

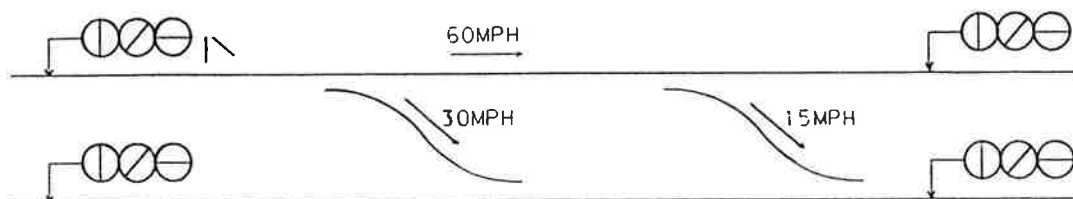
JUNCTION SIGNALLING

1. Provision of Route Indications

- 1.1 Route indications shall be provided in accordance with the Rule Book, Section C.
- 1.2 Where a signal applies to one route only, a route indication shall not normally be provided even though there may be a speed restricted turnout in the route. Similarly, at a converging junction there being no choice of route or speed, no approach release of the signal is to be provided.
- 1.3 Where circumstances exist which might lead a Driver into proceeding at a speed in excess of that permissible (eg. at the end of a 'reversibly' signalled line) the route(s) shall be regarded and signalled as a junction.

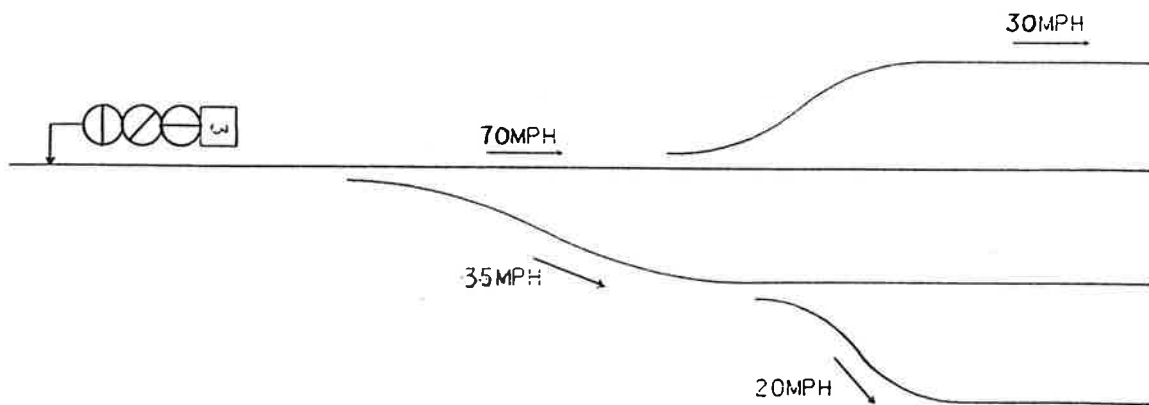


- 1.4 Where alternative routes are available to the same destination and the permissible speeds over these routes differ by more than 10 mph, separate route indications must be given. Where, however, the speed difference between the alternative routes does NOT exceed 10 mph, a common route indication is permissible unless other considerations (eg. long distance between the turnouts) require separate route indications.



SIGNALLING PRINCIPLE AWARENESS

- 1.5 Where the provision of a junction indicator is not practicable or permissible but the speed of the main route exceeds 40 mph, a multi-lamp type route indicator may be used provided:-
- (a) an indication is not provided for the main route;
 - (b) the route indication is proved to be displayed before a proceed aspect is exhibited for which an indication is required and;
 - (c) the maximum speed over any diverging route (to which an indication applies) does not exceed 40 mph.

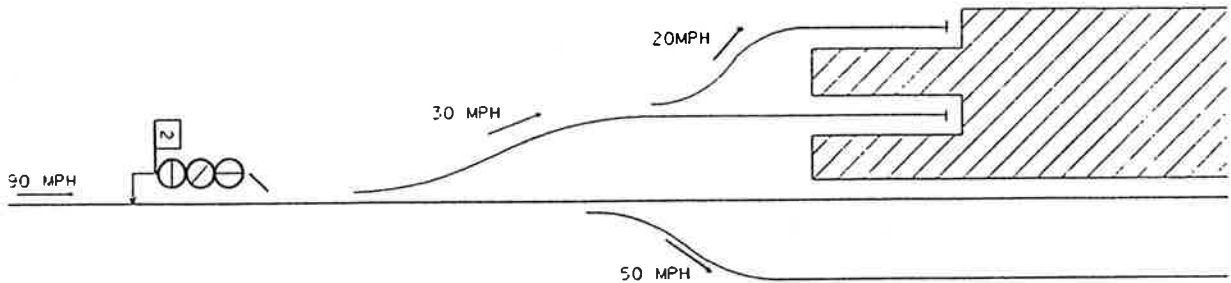


- 1.6 Where the permissible speed ahead of a signal is 40 mph or less, a multi-lamp route indicator, capable of displaying an indication for every route, is to be used. In this case, provided the permissible speed over **all** routes is the same it will not be necessary to prove the route indicator is alight before a proceed aspect is exhibited except as required by Clause 2.2.
- 1.7 Where there is no difference in speed between diverging routes a junction indicator may be provided for each route where confusion might otherwise arise.

SIGNALLING PRINCIPLE AWARENESS

1.8 Generally, the use of junction indicators and multi-lamp indicators on the same signal is prohibited except:-

- (a) Where routes give access to terminal platforms/sidings only, the use of junction indicators is prohibited. Such routes are to be indicated by multi-lamp/stencil indicators and other routes from the same signal may, if necessary, use junction indicators.



- (b) Where turnout speeds require the use of junction indicators but insufficient indications can be provided for all available routes, a junction indicator and multi-lamp indicator may be utilised together.

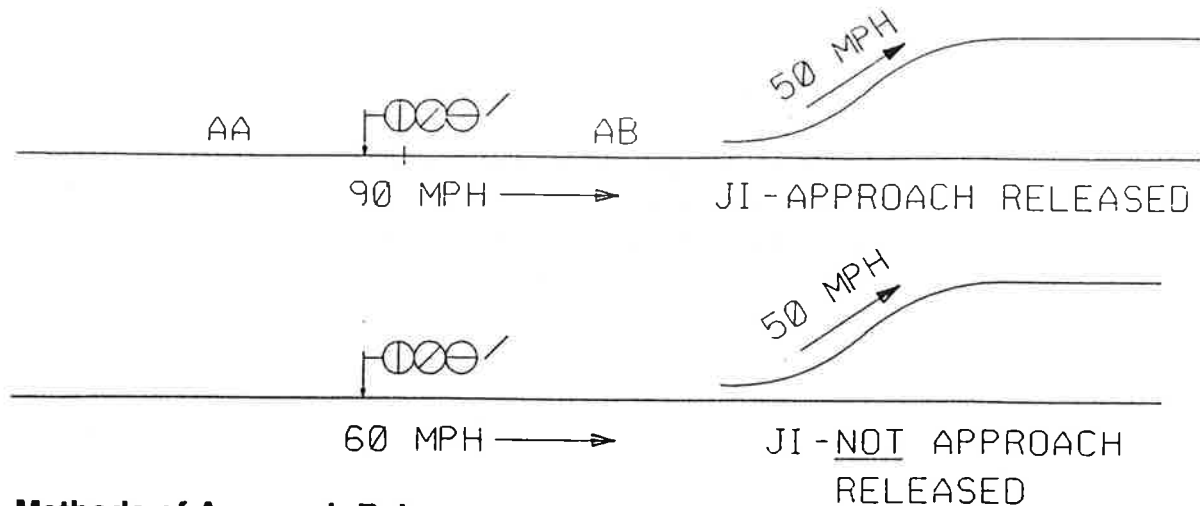
2. Display of Incomplete or Mutilated Indication

- 2.1 When a route is set which requires a junction indicator to be exhibited, the associated signal must not display a proceed aspect unless at least three of the lamps in the junction indicator are alight.
- 2.2 Where a multi-lamp type route indicator is used, the associated signal must not display a proceed aspect if the route indication is mutilated by the failure of a portion in such a way as to produce a display which could be read as applying to any other route than that for which the route is set.

3. Approach Release of Colour Light Signals at Junctions

- 3.1 A junction signal shall normally be 'approach released' (in the majority of cases from RED) for the divergence. Approach release is not required when the maximum permissible speed of a turnout and the main route is the same or the difference between them is not greater than 10 mph.

SIGNALLING PRINCIPLE AWARENESS



4. Methods of Approach Release

4.1 Approach Release from RED

4.1.1 The approach release of the junction signal from RED for the divergence to the least restrictive aspect permitted by line occupation conditions ahead, may take effect at any time after the approaching train has passed the signal next in rear, provided that such 'proceed' aspect does not become visible to the Driver before the route indicator. If however the junction signal is visible for more than 800 yards where a junction indicator can be exhibited or for more than 250 yards where a multi-lamp type indicator can be exhibited, the approach release should not take effect until the approaching train is within that distance.

See Figure 1, Sketch "A"

4.1.2 Such release can most conveniently be effected from the end of the overlap at the signal next in rear of the junction signal, but it may be delayed by time control or other suitable means where necessary.

4.2 Approach Release from YELLOW

4.2.1 Where approach release from RED, as described in Clause 4.1 would **not** enable the permissible speed to be achieved, then when required and justified by the Operations Department the junction signal may display an unrestricted YELLOW aspect to the highest speed diverging route(s) ahead and the signal next in rear a FLASHING YELLOW aspect. In 4 aspect territory the signal second in rear shall display TWO FLASHING YELLOWS. The junction signal may be released from YELLOW to a less restrictive aspect in the same manner as described in Clause 4.1.

See Figure 1, Sketch "B"

continued

SIGNALLING PRINCIPLE AWARENESS

STANDARD SIGNALLING PRINCIPLE No. 12

Feb 1988

SIGNAL POST IDENTIFICATION SIGNS

The following signal post identification signs will be used in the future:-

1. At signals equipped with a telephone communicating with the signal box, the telephone will be identified by a box or plate having diagonal black and white stripes. Where it is not obvious that the telephone is associated with the signal, a black and white striped plate shall be attached to the signal. A white diamond sign shall not also be provided. Where the telephone is located between two lines and clearance is restricted a yellow diamond sign may be provided in accordance with The Code of Practice For Signal Sighting CP8.
2. Lineside telephones other than those identified as in 1 above and which require to be distinguished, especially by drivers or guards, will be fitted with a plate carrying a black diagonal cross on a white ground.
3. At a signal not provided with a telephone in accordance with the above, a white diamond sign shall be provided when there is a track circuit in rear of the signal or an equivalent device, which either places and maintains the block at "Train on Line" or prevents the clearing of the running signal (or signals) next in rear.
4. An automatic signal shall be identified by a rectangular sign having a central horizontal black band on a white background.
5. A semi-automatic signal shall be identified by a rectangular sign having a central horizontal black band on a white background, with the word "SEMI" printed above the black band.
6. An intermediate block home signal shall be identified by a rectangular sign carrying a central vertical black band on a white background.

SIGNALLING PRINCIPLE AWARENESS

7. Signal number plates shall be combined with identification signs in accordance with Standard Signalling Principle No. 32.



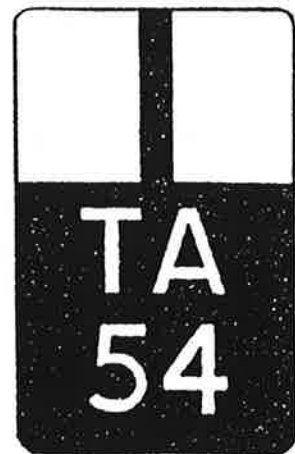
Controlled
Signal



Automatic
Signal



Semi
Automatic
Signal



Intermediate
Block Home
Signal

STANDARD SIGNALLING PRINCIPLE No. 19

June 1988

APPROACH LOCKING

The purpose of approach locking is to prevent the change of route ahead of a signal once the driver has seen a proceed aspect at the signal or has seen an aspect at a previous signal that would indicate to him that the former signal is displaying a proceed aspect. Provision must, however, be made for such locking to be released provided a reasonable assurance can be given that any movement, the driver of which has sighted a proceed aspect, will in the event of the signal being replaced to danger, either have come to a stand at the signal or will have run past the signal onto the track circuits which lock the points or level crossing.

See Figure 2

continued

SIGNALLING PRINCIPLE AWARENESS

Approach locking shall be provided in accordance with the following principles:-

Running Signals - Main and Subsidiary

To become approach locked once a proceed aspect has been displayed **and** an approaching train has reached the sighting point of the outermost signal in the rear which would change from a green to a cautionary aspect in the event of the approach locked signal being replaced to danger in the following circumstances:-

- (i) Where re-routeing is likely to occur frequently enough for enforced time delays to be detrimental to the working.
- (ii) Where the signal can be set to operate automatically.
- (iii) Where approach locking is provided in connection with a signal protecting a level crossing.

At locations where the sole function of the signal is to protect the crossing and continuous track circuiting does not exist from the point at which a driver could first become aware that it is displaying a proceed aspect, the approach locking to become effective immediately a proceed aspect has been displayed.

At locations where re-routeing will only occur infrequently and enforced time delay can be tolerated eg. at signals protecting ground frames controlling emergency crossovers, the approach locking to become operative immediately a proceed aspect has been displayed.

Shunting Signals

To become approach locked once a proceed aspect has been displayed and any berth track circuit, where provided, is occupied within a distance of 50 yards.

All Signals

Where the application of approach locking is dependent on the occupation of track circuits by an approaching train it is not necessary to inhibit the application of the approach locking when the track circuits are occupied by a train moving away from the signal.

SIGNALLING PRINCIPLE AWARENESS

Releasing of Approach Locking

After the signal aspect has been restored to danger the approach locking is to be released either:-

- (i) When the train passes the signal, by the positive operation of train detecting equipment or clearing of all approach track circuits as appropriate, or
- (ii) by the operation of an automatic time release for which the following settings should be used:-
 - (a) On mixed traffic lines, where signal post to post distance is:-
 - Not more than 900 yards - 2 minutes
 - 901 to 1800 yards - 3 minutes
 - Over 1800 yards - 4 minutes
 - (b) On lines normally carrying only passenger traffic, where the signal post to post distance is:-
 - Not more than 1600 yards - 2 minutes
 - Over 1600 yards - 3 minutes
 - (c) At terminal or bay platform starting signals:-
 - (i) Usually - one minute
 - (ii) Exceptionally where signals can be cleared with long trains standing ahead - 2 minutes.

SIGNALLING PRINCIPLE AWARENESS

- (d) At major through stations and critical junctions where justified by operating considerations:-
- (i) An **additional** release after occupation of the berth track circuit (maximum length 300 yards) - 1 minute.
 - (ii) An **alternative** release after the restoration of a signal which has been displaying:-
 - a main aspect approach released from red - 2 minutes
 - a "delayed yellow" aspect - 1 minute
 - a position light aspect associated with a main aspect - 30 seconds
- (e) At all shunting signals - 30 seconds

Where shunting signals can be cleared automatically as part of a main route, route locking to be maintained ahead of the shunting signal until the approach locking of the main running signal is released.

NOTE

In (a) and (b) above, where there is no separate overlap track circuit the length of the overlap must be added to the signal-to-signal distance to determine the equivalent signal spacing on which to base the length of time delay.

Where the normal equipment of the signal box does not provide a means of indicating the expiry of the time delay, a special indication is to be provided.

SIGNALLING PRINCIPLE AWARENESS

STANDARD SIGNALLING PRINCIPLE No. 20

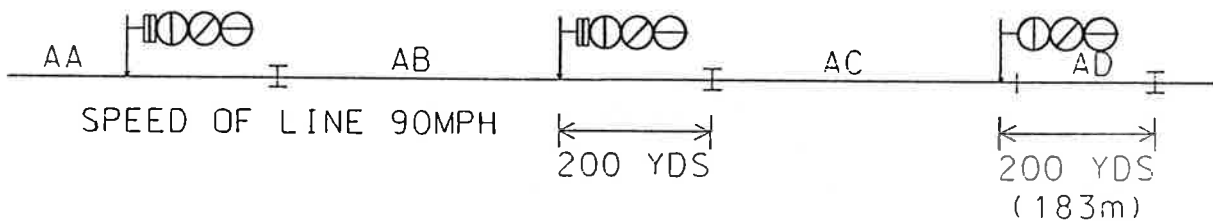
May 1978

OVERLAPS

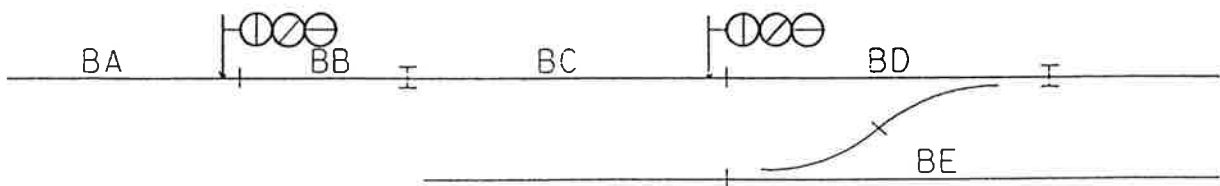
In colour light signalling territory overlaps shall be provided and controls effected in accordance with the following:-

1. Separate overlap track circuits to be provided except at automatic signals where the berth and overlap track circuits may be combined.
2. The overlap length shall be 200 yards for running signals on passenger lines, reduced as necessary on account of line speed in accordance with the following table:-

Speed not exceeding	Overlap Distance
15 mph	50 yards
45 mph	100 yards
60 mph	150 yards

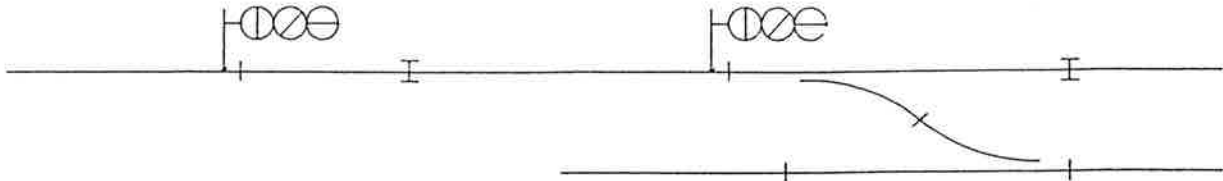


3. Trailing points in the overlap and opposing signals applying to the overlap, must be locked until the route is cancelled.

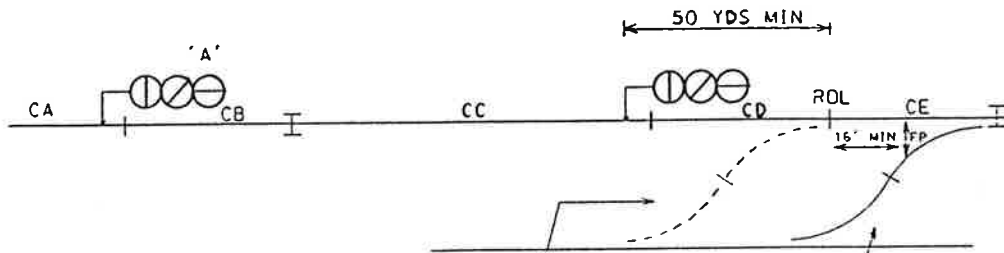


SIGNALLING PRINCIPLE AWARENESS

4. Facing points in the overlap shall only be moved if they have time to complete their movement and an alternative overlap is available.



5. Where restricted approach (delayed yellow aspect) arrangements are required for operating purposes, points within a minimum distance of 50 yards beyond the next signal to be locked to prevent a crossing movement taking place.
6. Where restricted approach arrangements are in operation, non-reciprocal locking between trailing points and signal shall be provided so that trailing points may be restored to the "clear overlap" position but not altered again after the aspect has cleared.



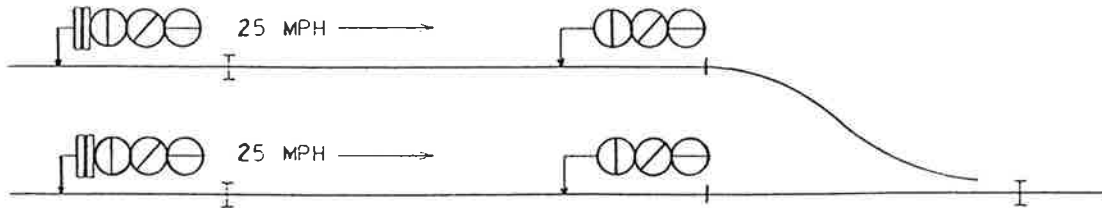
THESE POINTS MUST BE LOCKED WHEN SIGNALLING A TRAIN FROM 'A' UNDER THE WARNING ARRANGEMENT

NON RECIPROCAL LOCKING APPLIED TO THESE POINTS POINTS NOT LOCKED AGAINST CROSSING MOVING UNDER WARNING ARRANGEMENT BUT ONCE RESTORED NORMAL MUST NOT BE ALLOWED TO MOVE AGAIN AFTER THE ASPECT HAS CLEARED

7. The restricted approach arrangement shall be subject to both proximity and speed considerations.

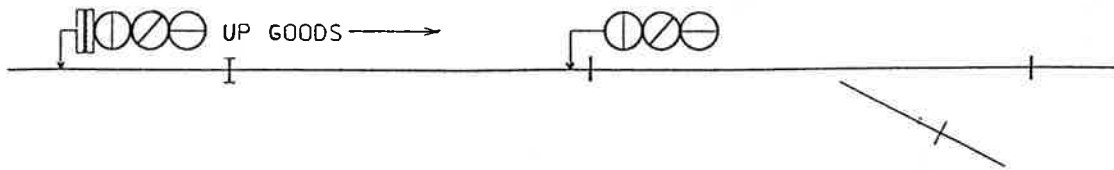
SIGNALLING PRINCIPLE AWARENESS

8. Shared overlaps are permitted where the approach line speed of both movements is not more than 25 mph considered individually.



9. **Goods Lines**

Normally no overlaps shall be provided but there may be operating circumstances that require special application.



STANDARD SIGNALLING PRINCIPLE No. 24

June 1988

ANNUNCIATORS WORKING IN CONJUNCTION WITH TRACK CIRCUITS AT STOP SIGNALS

Audible annunciators for the purpose of drawing a signalman's attention to the arrival of a train at a stop signal should only be provided when conditions are such that their provision would result in the avoidance of undue delay.



SIGNALLING PRINCIPLE AWARENESS

STANDARD SIGNALLING PRINCIPLE No. 28

May 1975

NOMENCLATURE OF RUNNING SIGNALS

In order that the correct procedure may be applied in the case of failure or emergency, it is important that controlled, intermediate block home, automatic and semi-automatic signals should be correctly defined and identified; the following definitions therefore shall apply:-

Controlled Signals

A controlled signal is a signal which is controlled to Red (other than by emergency replacement) from a signal box or ground frame and is not used for automatic working when the controlling point is unattended.

NOTE

A controlled signal does not necessarily require to be operated by the signalman for every train.

A facility for manual selection of unrestricted or delayed clearance of a signal does not of itself constitute a control to Red.

Intermediate Block Home Signals

An intermediate block home signal is a controlled signal, having an individual distant signal, which divides the portion of the line between consecutive signal boxes into two block sections.

NOTE

More than one intermediate block home signal may be provided between two consecutive signal boxes.

Automatic Signals

An automatic signal is a signal which cannot be replaced to Red (other than by emergency replacement) by manual control from a signal box or ground frame.

SIGNALLING PRINCIPLE AWARENESS

Semi-automatic Signals

A semi-automatic signal is a signal which is:-

- (i) controlled to Red from a signal box or ground frame but which works automatically during the time that the controlling point is not in use, or
- (ii) controlled to Red from a signal box but protects only functions worked from a ground frame and can be set to work automatically when the ground frame is not in use.

SIGNALLING PRINCIPLE AWARENESS

STANDARD SIGNALLING PRINCIPLE No. 35 (PART)

April 1984

SHUNTING SIGNALS

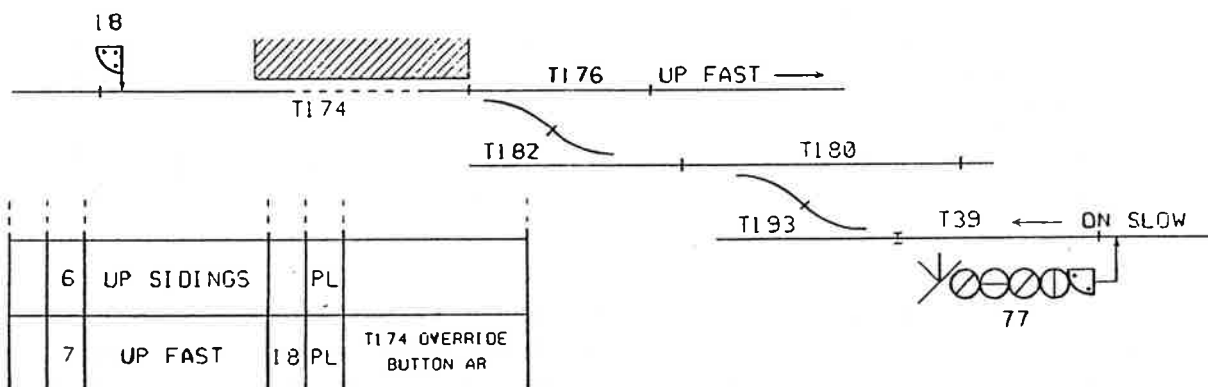
The term "shunting signals" shall include "position light signals" operated for shunting purposes whether separate or associated with a main aspect.

The control of shunting signals shall incorporate the following principles:-

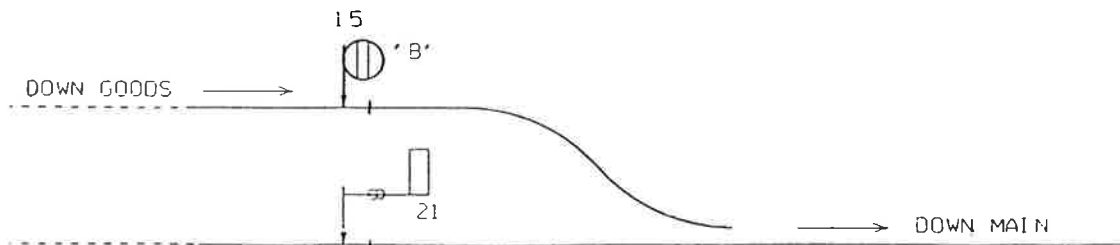
1. In Track Circuit Block areas shunting signals, when leading to running lines other than permissive lines, must be controlled by track circuits clear in the route ahead up to the next main running signal.

Where it is necessary to make shunting movements, eg. for attaching or detaching ahead of a shunting signal, with the track circuits occupied, a special "button" shall be provided on the panel; pulling this button after the route has been set will over-ride the track circuit control for a single movement.

Provision of the over-ride facility must be kept to a minimum and be confined to particular routes at which its necessity has been established by the Operations Department.



5. In Absolute Block areas shunting signals shall not normally be controlled by track circuits in the route but such signals leading into the block section must be provided with a "line clear" release where this control is a requirement of the main running signal. In all cases, operation of the shunting signal must cancel any "line clear" release that has been given for signals leading into the same block section, unless this feature is covered by other means.



continued

SIGNALLING PRINCIPLE AWARENESS

STANDARD SIGNALLING PRINCIPLE No. 36

May 1983

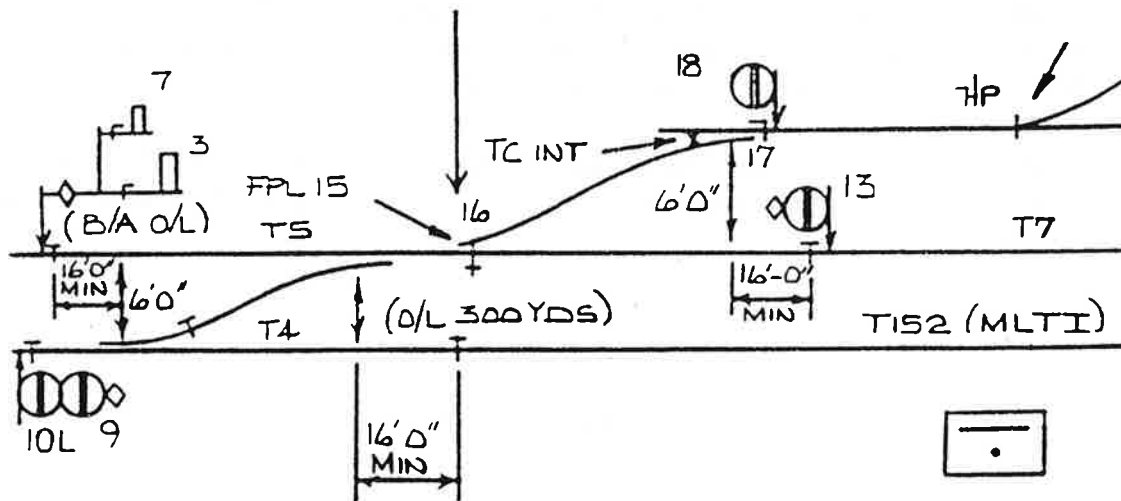
TRACK CIRCUIT CLEARANCE POINTS AND TRACK CIRCUIT MINIMUM LENGTH

(A) Track Circuit Clearance Points

Foreword

This principle establishes the minimum distance from points and crossings at which track circuits having the function of proving clearance may be terminated to ensure a passing clearance of at least 1' - 6" (457 mm) between vehicles in all circumstances.

Generally the first convenient rail joint beyond the minimum distance should be used.



Except in the case of a right-angle crossing, the fouling point as referred to in this principle is defined as the position at which the distance between the outside edges of the rails, measured at right-angles to the track in which the track circuit clearance point is being determined, is 6' - 0" (1.829 m).

At a right-angle crossing the fouling point is taken as 6 feet (1.829 m) from the crossing nose measured along the track in which the track circuit clearance point is being determined.

SIGNALLING PRINCIPLE AWARENESS

Provisions

1. Where trap points are provided, the track circuit termination shall be not closer than the first rail joint beyond the toe of such trap points (usually the 5' - 5" (1.651 m) joint).
2. Where trap points are not provided, the track circuit termination shall, as a general rule, be not less than 16 ft. (4.877 m) beyond the fouling point.

NOTE In the case of a right-angle crossing, the clearance track circuit termination must be not less than 22 ft. (6.706 m) from the crossing nose.

3. In places where the application of the general rule would cause a clearance track circuit to infringe upon essential standage, the distance beyond the fouling point may be reduced as far as is necessary, relative to the characteristics of the particular track layout. Detailed calculations must be made to ensure that a passing clearance of at least 1' - 6" (457 mm) between vehicles is maintained in all circumstances and for this purpose a maximum vehicle overhang of 11 ft. (3.353 m) beyond the centre line of the last wheel shall be allowed.

See Figure 3

4. The distances quoted in provisions 2 and 3 do not include any tolerance for easing back of vehicles after they have passed clear and, where necessary, an allowance must be added to cover this possibility. The importance of the allowance for easing back increases as the crossing angle approaches a right-angle.

(B) Track Circuit Minimum Length

To prevent a vehicle bridging a short track circuit, thus giving a false clear condition, the minimum length of track circuit shall be 60 ft. (18.288 m).

NOTES

- (i) In this Signalling Principle account has been taken of the characteristics of all types of rolling stock at present in being or under consideration ie. a maximum distance between inner wheel centres of 57 ft - 5 1/4 in. (17.51 m) and a maximum overhang beyond the last wheel centre of 10 ft - 7 in. (3.226 m).
- (ii) Where the rail surface is particularly liable to become coated so as to create a risk of a "false clear" condition of a track circuit, special precautions such as the provision of welded stainless steel strip may have to be taken.

continued

SIGNALLING PRINCIPLE AWARENESS

STANDARD SIGNALLING PRINCIPLE No. 45

July 1985

LIMIT OF SHUNT INDICATOR

A Limit of Shunt Indicator shall consist of a position light signal displaying two red horizontal lights and numbered as a shunting signal in accordance with SSP32. Where appropriate an unworked mechanical disc signal may be used.

See Figure 4

STANDARD SIGNALLING PRINCIPLE No. 54 (PART)

June 1988

IDENTIFICATION OF TRACK CIRCUITS

1. This Standard Signalling Principle is provided to standardise the method used to identify track circuits on scheme plans; control tables and for relay and SSI/IECC nomenclature.
2. Track circuits shall be identified by using two capital letters, a primary group letter and a progressive secondary letter ie. AA, AB, AC etc. and BA, BB, BC etc. To avoid confusion the letters I and O should not be used.
3. The identities should be allocated in a rational manner eg. one group to be applicable per line in alphabetical order.

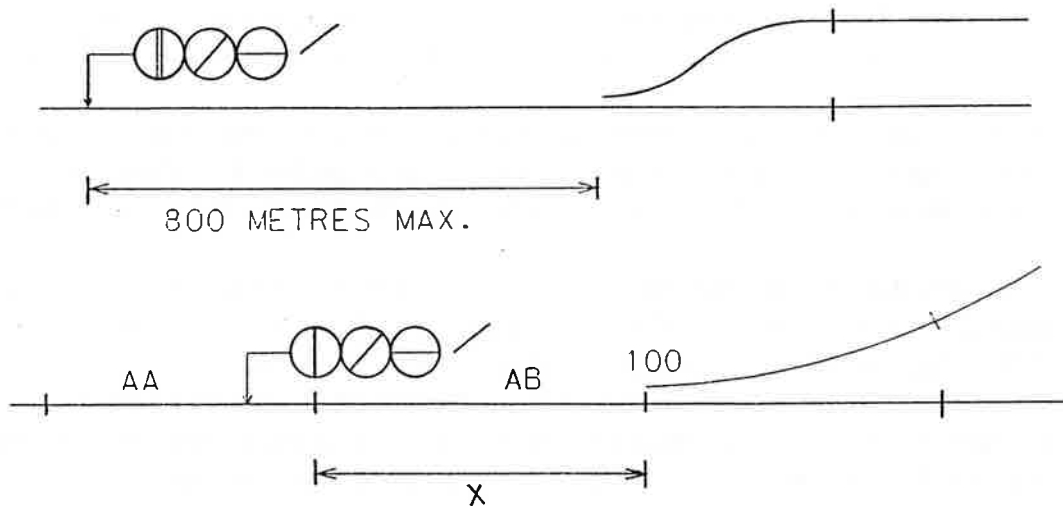
SIGNALLING PRINCIPLE AWARENESS

STANDARD SIGNALLING PRINCIPLE No. 57

Dec 1989

SIGNALS LEADING OVER FACING POINTS

1. A signal which reads over facing points must be positioned not more than 880 yards (800 metres) from those facing points. This does not apply to facing points operated from a ground or shunting frame.
2. On running lines where facing points are positioned not more than 22 yards (20 metres) beyond the first track circuit block joint ahead of a main signal then time of operation locking shall be applied.
3. Time of operation locking requires that to move the facing points in either direction the signal berth track circuit must be proved clear or occupied for a time sufficient to ensure that an approaching train has come to a stand at the signal. On bi-directional lines this control shall not apply for movements away from the points concerned.
4. Time of operation locking is provided to ensure that should a train pass the protecting signal at danger it will not reach the facing points whilst they are moving.



100 POINTS REQUIRE
(AA, AB CLEAR OR AA OCC FOR T) WHERE x IS <20 m.

SIGNALLING PRINCIPLE AWARENESS

Earlier in the course we referred to Engineering Instruction S/F/17 in connection with Track Circuit bonding.

The Engineering Instructions are written at Regional Level as opposed to the SSP's which are targeted at the whole of the British Rail S & T Organisation.

Engineering Instructions give details on Regional practices how to design, what equipment to use, how to apply principles etc. The EI's are another valuable source of information that you should become familiar with.

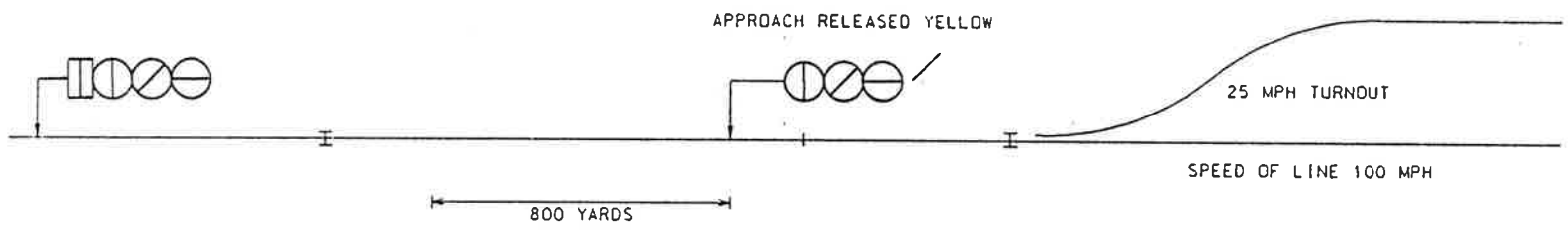
Another example of an Engineering Instruction follows:-

BRITISH RAILWAYS LONDON MIDLAND REGION S & T DEPARTMENT ENGINEERING INSTRUCTIONS	INTERNAL WIRING FOR USE WHERE THERE IS RISK OF MECHANICAL DAMAGE.
CSTE Ref. 43362 Date Sept. 1977	
Issue No. 1 Circulation C	
	Instruction No. S/E/004

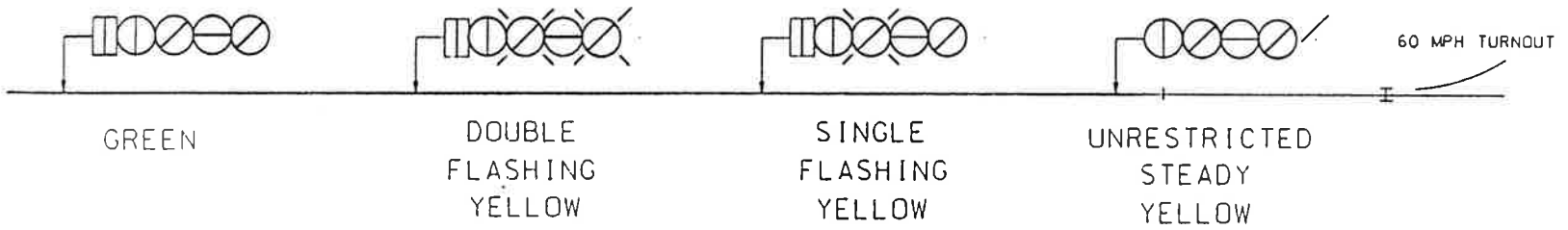
1. In future, all internal wiring that may be exposed to the risk of mechanical damage - for example the wiring run to the lever locks of a mechanical signal box - is to be carried out in single 16/0.30 taped, braided and lacquered black type MC2 wire.
2. It is essential that this type of wire is always terminated in a crimp applied with the appropriate crimping tool. Wire of this size is not suitable for crimping onto GEC - G.S 'Z' type or W.B.S 'QC' type spades. Where a circuit is run to a BRB miniature relay, the 16/0.30 wire shall be terminated on a disconnection board using a ring tongue terminal or on a screw type terminal block using a wire pin terminal. The circuit will continue in MC1 9/0.30 via a suitably protected route.
3. The material and tools to be used are shown in Appendix 'A'.

SIGNALLING PRINCIPLE AWARENESS

SKETCH "A"



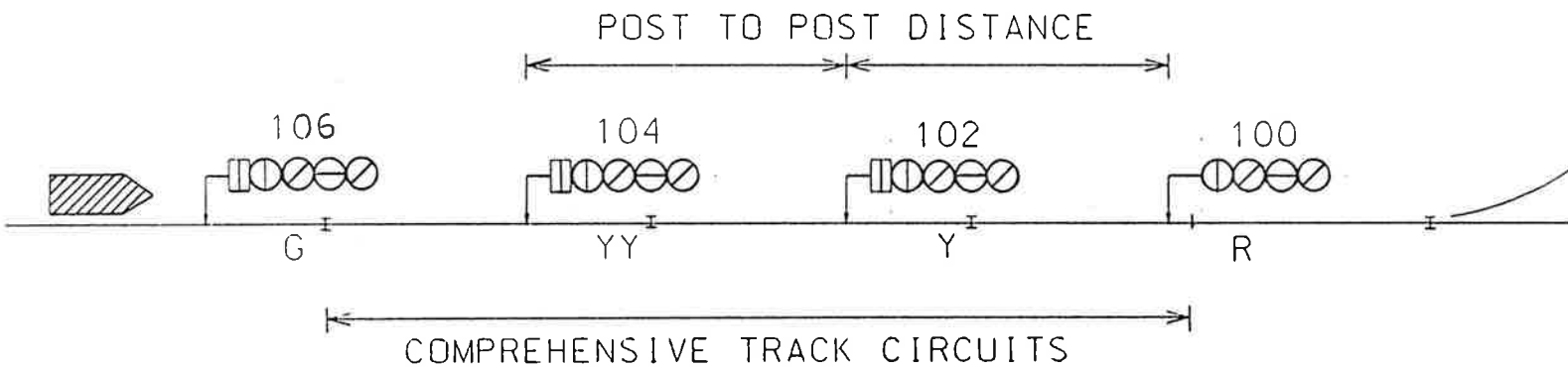
SKETCH "B"



SSP 6

FIGURE 1.

continued



COMPREHENSIVE APPROACH LOCKING

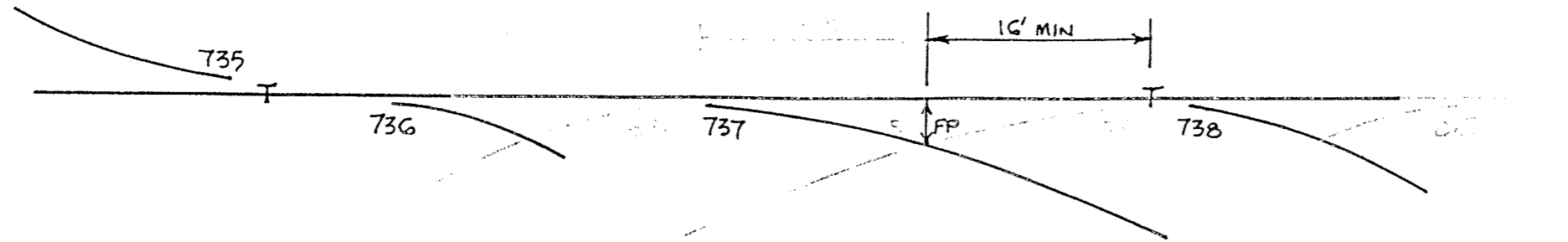
IF THE SIGNALMAN REPLACES SIGNAL 100 BEFORE THE DRIVER HAS SIGHTED A SIGNAL WHICH WOULD BE AFFECTED BY THIS SIGNAL REPLACEMENT THE SIGNAL APPROACH LOCKING WOULD BE RELEASED IMMEDIATELY.

FIGURE 2.

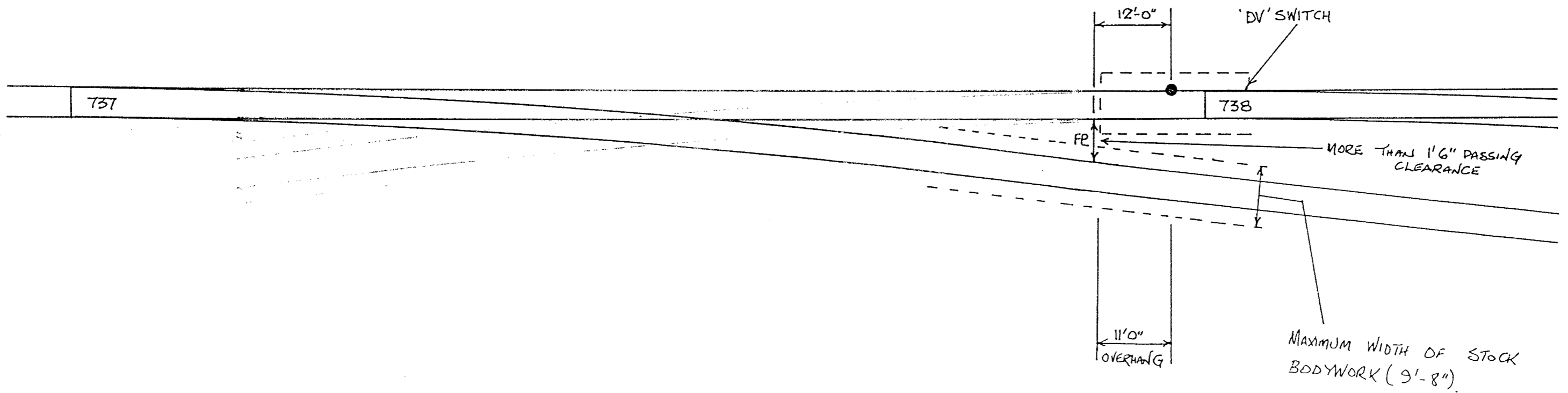
continued

SIGNALLING PRINCIPLE AWARENESS

SSP 36 (Provision 3 Explanation)



Signalling Plan Extract



Extract of RCE's 1:200 Scale Plan

FIGURE 3.

continued

SIGNALLING PRINCIPLE AWARENESS

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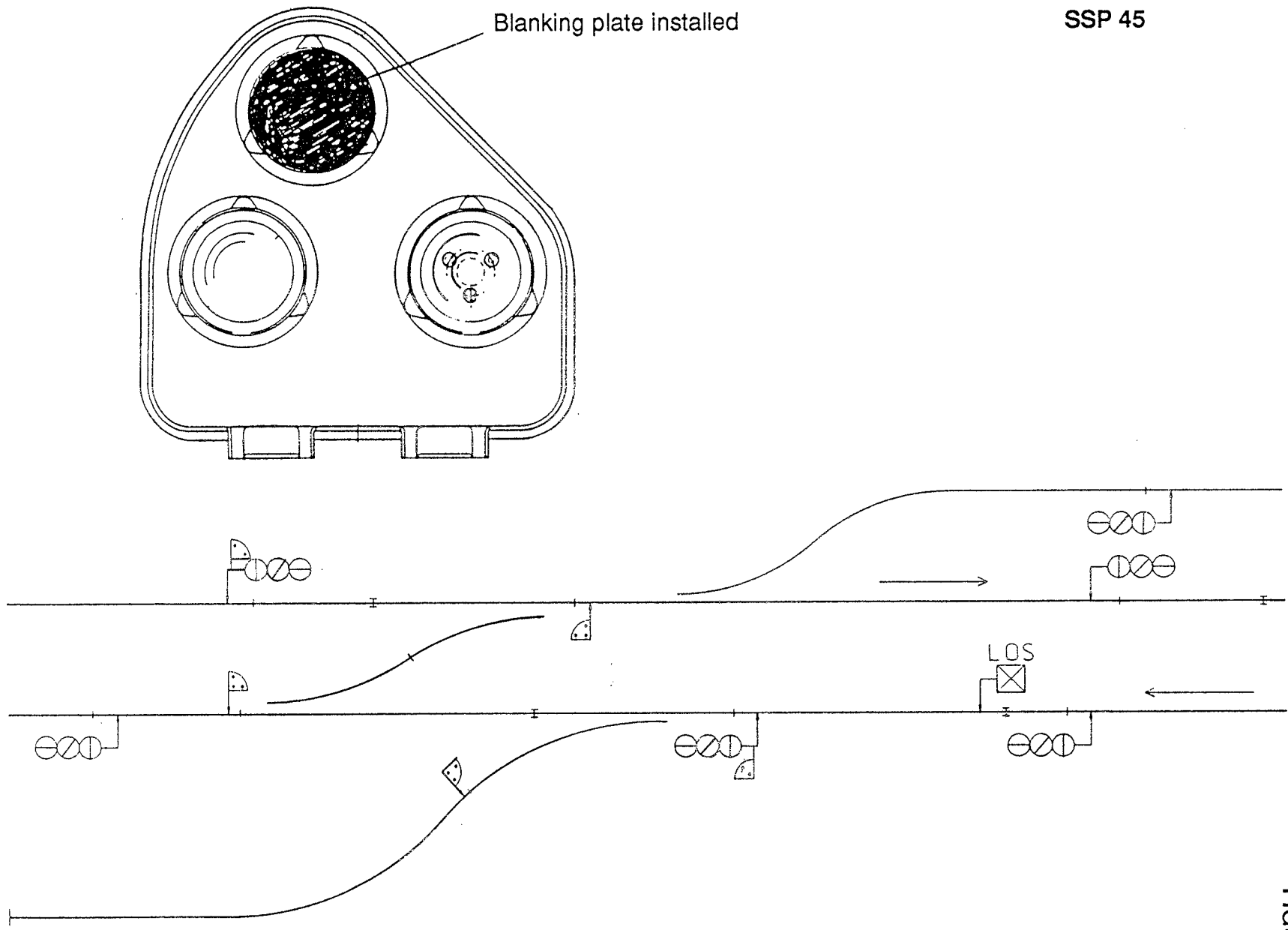


FIGURE 4.

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