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Engineering Standard – NSW

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Signalling

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Document Control of Signal Plans and Circuit Books Issued to the Field

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Document Control

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About This Standard

This Standard defines the signalling procedures to be implemented for the control of signalling plans and circuit books issued to the field.

Document History

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List of Amendments –

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1 INTRODUCTION

The purpose of this procedure is to set out the responsibilities and requirements for document control of signal plans and circuit books issued to the field.

The signal plans and circuit books referred to in this procedure include :

- Track Plans and Working Sketches, or combined Signalling Plans
- Track Insulation Plans (track bonding plans)
- Circuit Diagrams
- Circuit Books
- Locking Tables,
- Locking Diagrams,
- Lever Nameplates,
- Modification sheets
- Control Tables (SSI Installations)
- Detailed Site Survey Drawings

2 CONFIGURATION CONTROL

Other than for like-for-like replacement for maintenance purposes, other specified exceptions, or specially authorised cases, the working signalling equipment and circuits are not to be altered, nor new signalling equipment or circuits commissioned into use, except in accordance with approved designs.

The changes are to be inspected and tested and the design drawings certified by suitably accredited signalling personnel. The masters shall be updated and amended drawings issued to replace out of date copies.

3 DOCUMENT CONTROL

3.1 General

All persons given a controlled copy of a signal plan or circuit book for their work are to treat it as a valuable document entrusted to their care. Such persons are called “Copy Holders”. Copy Holders may be responsible for one or more copies of the signal plan or circuit book.

All involved with the production, installation, maintenance, and use of signal plans and circuit books have a responsibility for ensuring that the drawings accurately record and correspond to the requirements and/or to the as-built status, as applicable, and they are to promptly advise any discrepancies and arrange to have them corrected without delay. All copy holders shall ensure that they have the latest version of control documents.

All persons with nominated responsibilities under these procedures are to be able to account for all controlled copies of signal plans and circuit books issued to them and, through them, to their subordinates.

Controlling officers of persons with nominated responsibilities under these procedures have a responsibility to satisfy themselves that the procedures are being followed.

Should the persons with the nominated responsibilities be off duty on sick leave, transfer to other jobs, resign or otherwise be unavailable, the controlling officers are to ensure that those responsibilities are appropriately reassigned and carried out.

Transmittal notices, on standard “Memo of Document Exchange” forms, are to be included with the despatch of signal plans and for circuit books and the recipient must acknowledge receipt on the transmittal notice and promptly forward a copy back to the sender.

For project works, the requirements of ARTC specification SCP 06 “Signalling Documentation and Drawings” are to be complied with as well as ARTC IMS procedures C15P02 “Document Control” and W45P02 “Finalise Archive Project Documentation”. Where approved Configuration Management Plans (CMP) cover particular signal plans and circuit books then the requirements of the CMP shall be complied with.

3.2 Signal Engineer Responsibilities

The Signal Engineer, for his/her area of responsibility, is responsible for :

1. Ensuring that, (except for like-for-like renewals and repairs, other specified exceptions and specially authorised cases) there are no changes to working signalling equipment and circuits without the approved signal plans and circuit books for the alterations.
2. Determining the allocation of controlled copies of signal plans and circuit books for maintenance personnel, and arranging the publication, issue and distribution of the required copies, updated to current arrangements.
3. Maintaining an effective document control system for all the field Maintenance copies of signal plans and circuit books. Checking the field copies versions against the master listing every 12 months and whenever needed. Recording details of copies destroyed.
4. Promptly advising Controlling Officers and arranging for changes to the signal plans and circuit books that are necessary for the correction of any discrepancies found in controlled copies of signal plans and circuit books or arising from maintenance changes due to like-for-like repairs, etc., (eg. cable core numbers, contact or terminal numbers changing because of defective cable cores, contacts or terminals, field parallelling of contacts or terminals) Obtaining acknowledgment of receipt of advice and following up that the corrections have been done by the Signal Design office within a reasonable time.
5. Marking up and signing (preferably in red pen) the Signal Engineer’s copies with the corrections required, where such drawing correction is the obvious remedy to a discrepancy with the “as-built” installation, while waiting for updated copies.
6. Booking out of use any vital signalling equipment or circuit which is not in accordance with the signal plans or circuit books if there is any doubt about the integrity of the particular signalling equipment or circuit.

7. Promptly updating the Signal Engineer's office copies of signal plans and circuit books to the latest copies issued and received, and destroying the superseded copies.
8. Issuing the amended copies to the district staff responsible for them within one week of receipt and following up that they have updated their copies and destroyed the superseded copies.

Note: Where new works or alterations are being carried out, refer also to the responsibilities nominated under 'Project Engineer' and 'Tester in Charge'.

3.3 Particular Responsibilities : The Project Engineer

Refer also to ARTC specification SCP 06 and ARTC IMS procedures C15P02 and W45P02.

The Project Engineer (the person carrying out the role of Engineer In Charge of the installation of the works) is responsible for :

1. Liaising with the Signal Designer and agreeing on the number and distribution of copies of signal plans and circuit books for the construction phase of new and altered works.
2. Maintaining an effective document control system for all copies of signal plans and circuit books (including Modification Instruction Forms) issued to and received by the project staff including those copies of signal plans and circuit books (including Modification Instruction Forms) that the Tester In Charge has accepted responsibility for.
3. Complying with the practices and procedures set out in standard Specifications in relation to signal plans and circuit books for new works and alterations.
4. Ensuring the delivery and receipt of any signal plans and circuit books forwarded from the Project Engineer's office to the Signal Design office.
5. Collecting all copies of signal plans and circuit books issued for the project which are no longer in use and are not required by others, and destroying them at the end of the project. Recording details of the copies destroyed.
6. Liaising with the Signal Engineer and maintaining updated as-built Maintenance copies during new and altered works, particularly between stages. Appointing a person with this specific responsibility where needed to minimise the risk of maintenance staff being misled by signal plans and/or circuit books no longer accurate.
7. Formally advising Controlling Officers, the Plan Room, and the Signal Design office, of any discrepancies noted with the existing signalling plans and circuit books.
8. Formally advising Controlling Officers and the Plan Room, and arranging for the current signal plans or circuit books to be amended where there have been changes carried out to the existing signalling system.
9. Requesting the Signal Design office to provide listings of 'Signal plans and circuit books issued and not returned' for new and altered signalling works on a regular basis and comparing the listings with the Project records and following up any discrepancy with the Signal Design office.

10. Collecting and returning to the Signal Design office all signal plans and circuit books for jobs that have been cancelled, or deferred, or are reprogrammed to a later time because of priority given to other new or altered work which will affect these signal plans and circuit books issued for the original job.

Note : The organisational structures for projects vary and the field person allocated these responsibilities may be designated by titles other than 'Project Engineer'.

3.4 Particular Responsibilities : The Tester In Charge (Commissioning Engineer)

The Tester In Charge (the person carrying out the role of Tester In Charge (Commissioning Engineer)) is responsible for :

1. Liaising with the Signal Designer and agreeing on the number and distribution of copies of signal plans and circuit books for the correlation, testing and commissioning phases of new and altered works. Advising the Project Engineer accordingly.
2. Advising the Project Engineer of the distribution of field copies which are the responsibility of the Tester In Charge so that the Project Engineer's document control system can be updated. This advice is to include advice of field copies returned to the Signal Design Office.
3. Ensuring that all copies of signalling plans and circuit books that carry certification inspection and testing markings and signatures are secured and forwarded via the Principal engineer signals design, for permanent retention in the ARTC Plan Room.
4. Completing the certification of the signal plans and circuit books immediately after commissioning and ensuring they are delivered to and received by the Signal Design office within one month of the commissioning.
5. Ensuring the Interim Maintenance copies are available for maintenance staff as soon as the work is commissioned into operational use including a copy for the Plan Room. (Agreeing the number of copies required with the Signal Engineer and the Signal Designer).
6. Formally advising Controlling Officers, the Plan Room, and the Signal Design office, of discrepancies noted with the existing signal plans or circuit books.
7. Prime responsibility for formally advising Controlling Officers and the Plan Room, and arranging for the current signal plans or circuit books to be amended where there have been changes carried out to the existing signalling system.

3.5 Signalling Maintainer's Responsibilities (and Copy Holders Generally)

Signalling maintainers (and Copy Holders generally, as applicable) are responsible for :

1. Maintaining the copies of signal plans and circuit books allocated to their area of responsibility in a satisfactory condition, ready for use, and updated with the latest amendments.

2. Retaining the signal plans and circuit books, when not in use, in their nominated location and available for reference by authorised persons for failure attendance, emergencies, etc.
3. Keeping circuit books bound and secure, except when required to insert or remove sheets for authorised amendments.
4. Requesting the controlling Signal Engineer to arrange replacement copies of plans or circuit book sheets that have become illegible or dilapidated.
5. Advising the controlling Signal Engineer in writing of any discrepancies between the signal plans and circuit books and the 'as built' installation.

Marking up and signing (preferably with a red pen) the corrections required to the Copy Holder's copies of signal plans or circuit book sheets, where such drawing correction is the obvious remedy to a discrepancy with the 'as built' installation, while waiting for updated copies.

Where the remedy should be to alter the 'as built' installation to match the signal plan or circuit book, promptly contacting the Signal Engineer for instruction.

Should the discrepancy bring to notice an imminent risk to the safety of the system, booking the vital signalling equipment concerned out of use until instructions are received.

6. Promptly advising the Signal Engineer, in writing, of any change needed to details in the signal plans or circuit books because of like-for-like repairs, eg. cable core numbers changed, contact numbers changed, or because a relay has had to be changed for one of a different type, or because contacts have been paralleled. Attaching copies of the advice to the Copy Holder's copies. Marking up and signing (preferably in red pen) the Copy Holder's copies with the corrections required while waiting for the updated copies.
7. Within one week of receipt of amended signal plans and circuit books, checking the amended plans and sheets for obvious discrepancies and for an understanding of what has been changed, replacing the affected plans and circuit book sheets with the new copies, inserting and completing associated control pages, destroying superseded copies, and returning the transmittal notices to the controlling Signal Engineer's office advising details of the copies of the plans and circuit books that have been updated and the copies of superseded plans and circuit books that have been destroyed.

For copies that are kept in locations remote from the depot location, updating those as soon as practical and not later than the next scheduled maintenance visit.

8. When a new or alteration job is installed and commissioned and it is still necessary to retain the existing maintenance plans and/or circuit books, making a handwritten field note on the existing signal plan or circuit book control pages describing its status, noting that part has been superseded by job no. " ", titled " " and referring to any interim maintenance, construction or commissioning copies purposely left on the site until the existing signal plans and/or circuit books are updated.
9. Ensuring that copies of signal plans and circuit books, which are superseded by new or amended copies, are destroyed or, if they need to be temporarily retained, binding the superseded sheets together and clearly marking each sheet and plan as 'superseded'.

Destroying these superseded copies as soon as practical and advising details of the copies destroyed to the controlling Signal Engineer's Office. Before destruction, the superseded copies should first be checked for any relevant markups and these transferred with signatures to the new copies if the correction has not been made. In such case, written advice of the continuing discrepancy is to be forwarded to the Signal Engineer who is to follow it up in writing with Controlling Officers and the Plan Room.

10. Reporting the circumstances and returning to the controlling Signal Engineer any signal plans or circuit books that are not in use or of unknown origin.
11. Ensuring that uncontrolled copies of signal plans or circuit books are marked 'Uncontrolled Copy' and are dated, and that they are destroyed as soon as they have served their purpose.