

Applying for Signals Competency

EST-20-03

Applicability

ARTC Network Wide SMS

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Amendment Record

Amendment Version #	Date Reviewed	Clause	Description of Amendment
2.0	09 Mar021		Updates include removed requirement for signals competency ID (RIW number to be used), replaced references to Extranet online tool with Kineo (e3) Portal, removed reference to withdrawn form, updated file naming requirements, removed email type and size restrictions, removed requirement to submit to ARTC Endorser, added requirements around updating RIW system, replaced screen shots of forms with link to forms, removed App 5 – Statutory Declaration and document rebranded.

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1 Introduction

ARTC has been issuing Signalling Certificates of Competency for signals staff for all work performed on ARTC infrastructure.

All signals staff working on ARTC Signalling Infrastructure must take action to gain a Statement of Competency. This covers all staff working on design (including checking and updating), construction, testing and commissioning and maintenance. Those involved in project management or design management of signalling project work also require the appropriate Statement of Competency.

The process is based on documentation of your training and work experience. These are verified and used to assess and confirm your competencies and experience. Typically, greater experience will enable a person to progress from Level 1-Training to Level 2-Independent Action to Level 3-Independent Action on Complex Tasks. You need to keep your records of work experience and training up to date to reflect the tasks that you have performed. These are verified by your supervisor.

The assessment is undertaken by qualified Workplace Assessors who may be from within ARTC or within your own organisation or independent. In all cases electronic records are submitted to ARTC and your Statement of Competency is issued back to you.

You need to have this Statement of Competency with you when you are working on ARTC signalling infrastructure tasks. A copy of the Statement of Competency shall also be included for each signals worker in the Installation and Testing Work Package and the Commissioning Work Package for new works.

If you do not have a **current** Statement of Competency, you **cannot** work on ARTC infrastructure.

Any person working on ARTC signals infrastructure must have a current ARTC Statement of Competency.

If you do not have an ARTC Statement of Competency, then you shall not perform work on the ARTC signals infrastructure until you have a valid Statement of Competency.

2 Process Steps for Issue of an ARTC Signals Statement of Competency

The following outlines each of the steps in the Competency Assessment process.

□ Step 1 –ID Verification

All requests for Signals Competency are to be verified by a 100 Point Identification Check as per HR04-002 Rail Safety Worker Competency Management using form PEO-FM-023.

If you already have a Statement of Competency, then you will be requested over time to provide the 100 Point ID Check.

□ Step 2 – ARTC Signalling Standards Induction

Whether you have worked on ARTC signalling infrastructure or have gained your signalling experience on other rail networks, you are required to know and understand the ARTC Signalling Standards, Engineering Standards and their supporting documentation. These standards, procedures and information is accessible via the ARTC Engineering Extranet at <http://extranet.artc.com.au/>.

To assist you in becoming familiar with this information, ARTC has produced a Signalling Standards Induction. This is organised as a self-paced training aid. This is completed online via the [ARTC Kineo \(e3\) Portal](#). Satisfactory completion of this is a pre-requisite to a Competency Assessment being undertaken.

A Certificate will be issued to you on satisfactory completion of the Assessment.

□ Step 3 – Work Experience Record

Your Competency is assessed on the basis of your formal training by training organisations and industry-based training and your practical experience in applying the knowledge. This practical experience must be documented in your work experience record. This Work Experience Record is the basis for you to elevate your Competency ratings from Level 1 (Trained) to Level 2 or Level 3 (see section 8).

The Work Experience Record template EST2002F-25 or one with equivalent information must be used to record this experience. Please note that some forms may seem equivalent but may not put the appropriate emphasis on the information to be provided.

Your Work Experience must be recorded to show the work that you have performed, the role and responsibility, the type of technology and the level of complexity of the task. A simple description of the project or task does not meet this requirement.

The descriptions that are not specific to your role and responsibility will be considered at the lowest level of involvement in the activity of a team. For example, “maintenance of signal equipment” – will be considered as the assistant to the team leader for the tasks detailed. For example, “design of crossing loop” will be considered as a team member only responsible for detailing of non-vital information for the design. For example, “construction of signal infrastructure” will only be considered assistant within team performing general tasks with no defined responsibility.

Similarly, with the above items you would not gain recognition for specific tasks such as “maintenance of point machine type xxx or maintenance of track circuit type xxx or design of signal plan, design of track insulation plan, design of control tables or testing of

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infrastructure. You must be specific in terms of the tasks performed and refer to the same terms as are detailed on the statements of competency.

See examples of a good work experience record write up in Appendix 1.

Each work experience record entry must be verified by your Supervisor. The Supervisor in verifying your work experience is certifying the performance of the tasks in accordance with the respective procedures and practices for the infrastructure manager. To confirm that this responsibility has been correctly performed, the Supervisor must sign the declaration on page 1 of the Work Experience Record and provide details regarding his/her position and organisation. Alternate templates for this page 1 are not permitted.

□ **Step 4 – Training & Education Record**

Formal training includes Certificate IV in Electro Technology Rail Signalling or Electrical Engineering Degree. Industry based training includes training by a supplier for equipment or systems. The training organisation must issue a certificate of attainment for the course. A certificate of attendance does not demonstrate that you have gained a skill. It is acknowledged that courses prior to 2008 often gave only a Certificate of Attendance and this may be used to indicate training has been completed.

You need to keep a record using the ARTC template or one with equivalent information to record your training. Please ensure that the record indicates the name of the course and identification number if available, when the course was undertaken and the duration of the course.

Scan this and your certificates or statements of attainment into one pdf file. This is to be named in the following format:

<RIW number>-<first name>-<surname>-training records.pdf

e.g. 20-000XXXX - Fred Tester – training records.pdf

□ **Step 5 – Referenced Certificates**

There are prerequisites for working on ARTC Signals infrastructure. These are:

ARTC Signals Standards Induction

Track Safety Awareness or Rail Industry Safety Induction

Rail Medical Assessment

Construction Industry OHS Induction

ARTC Contractor Site Induction

You need to attain the above certificates prior to your request for Signals Competency Assessment. Scan these cards and certificates into one pdf file, ensuring the use of colour scan.

This is to be named in the following format:

<RIW number>-<first name>-<surname>-induction certificates.pdf

e.g. 20-000XXXX - Fred Tester – induction certificates.pdf

□ **Step 6 – Competency Statement and Competency Assessment Checklist**

There are a number of different Statements of Competency for the different training and skill levels. You need to choose the appropriate level at this step. They are:

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Form Competency Category	Medical Category with Safeworking	Medical Category without Safeworking
F1 - Senior Signal Engineer	Cat 1	Cat 3
F2 - Signal Design	Cat 1	Cat 3
F3 - Signal Maintenance & Construction Engineer/Manager	Cat 1	Cat 3
F4 - Signal Technician/Maintainer	Cat 1	Cat 3
F5 - Signal Electrical and Mechanical	Cat 1	Cat 3
F6 - Signal Installer/Tester	Cat 1	Cat 3
F7 - Signal Mechanical	Cat 1	Cat 3
F8 - Control Systems / Communications Engineer	Cat 1	Cat 3
F9 - Control Systems / Communications Technician	Cat 1	Cat 3
F10 - Trades and Assistants	Cat 1	Cat 3

Within each “statement” there are drop down options to choose. Please choose the appropriate option when completing your details on the Draft Statement of Competency.

There is a different Competency Assessment Checklist for each of the Competency Statements. For F4 the corresponding Checklist is F14 etc.

Firstly, the Statement of Competency for the applicant is drafted. This includes all details regarding the person on page 2.

The default Rail Medical requirement is a Category 3 Medical Assessment in accordance with the NTC National Standard for Health Assessment of Rail Safety Workers. Individual persons may require a higher-level medical assessment for additional skills such as Hi-Rail driver, plant operator, track protection officer etc. Higher level Medical Assessment is required for particular tasks. Where these apply to all staff in the Competency Category, these have been listed above. The organisation is responsible to assess the position and determine the Medical Assessment Category. Similarly, the organisation would need to risk assess the activities of a position/competency category if it proposed that the Medical Category rating was lower than that indicated above.

The ARTC Category 4 medical rating may be applied to signals staff who do not require access to the rail corridor.

Step 7 – Filling out the Competency Assessment Checklist

The Competency Assessment Checklist is completed by the applicant in conjunction with the Work Experience Record and Training Record. The Assessment Checklist must clearly show the correlation of the work experience and training to the competency. This correlation will not be undertaken by the Assessor who is responsible for many assessments. The applicant best knows which of their work experiences and training activities adequately demonstrates

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their competency level. If this correlation is not shown the Request for Assessment will be returned to the applicant for rework and resubmission. The costs for resubmission in section 4 will apply.

The individual entries in the Work Experience Record are marked with a sequential reference number (ID) preferably numbered 1 on the most recent through to 2, 3, etc. Similarly mark the training record as T1 onwards.

Then the applicant completes information in the respective Assessment Checklist. Against each of the competency items in the checklist, the applicant must indicate the reference ID for work experience and training. The applicant shall indicate multiple work experience items for each competency. The number, level, complexity and type of experience is evaluated to determine the competency level.

If you do not complete work experience or training record references against a competency then you cannot receive a competency rating for that particular competency item. If you only show a few work experience activities against a competency, then you may be down rated. See section 8 for an adequate level of work experience for a particular competency level.

For an example see:

[EST2002F-25 Signalling Work Experience Record - worked example.pdf](#).

Step 8 – Competency Assessment Request Form

This form must be completed by the applicant and signed and witnessed at all the nominated positions. All sections and details must be completed.

Step 9 – Submission of Request for Competency Assessment

When you have completed all of the above steps and have the documents scanned, you then submit to your nominated assessor. ARTC will approve some organisations to have approved internal assessors, in these cases submit your assessment to your approved internal assessor.

In all cases the applicant must submit the following documents/files as detailed above:

- Request for Assessment signed (scanned file);
- Photo of person as a jpg file;
- Previous Certificates of Competency provided (scanned file);
- Training Records provided for National Certified Competencies (scanned file);
- Training Records provided for Industry or Equipment Training (scanned file);
- Work Experience Record with reference ID to Assessment Checklist (scanned file);
- Assessment Checklist with reference ID to Work Experience (scanned file);
- Draft MS Word version of the Statement of Competency (MS Word file);
- Signalling Standards Induction certificate (pdf file);
- Track Safety Awareness certificate, OHS Induction certificate, ARTC Contractor Site Induction, Health Assessment for Rail Safety Workers (scanned file);
- Other supporting information that is referenced in the Assessment Checklist (scanned file).

These should be submitted as separate files in accordance with the above groups.

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The applicant's name and RIW number shall be included in the title of the email.

Only one applicant per email.

□ **Step 10 – ARTC Competency Assessment**

The approved assessor receives all the information. For an approved external assessor, the submitted files are to be stored and recorded in accordance with the organisation's procedure for signal competency assessment. For ARTC assessors, there is an approved recording process.

The assessor then reviews all the information for its completeness, accuracy and consistency. The assessor then reviews the training record and work experience record against the competency as detailed in the Assessment Checklist and based on the reference ID provided by the applicant. The assessor may request the applicant provide more information to support a competency level for a specific competency. Otherwise, the assessor will rate the applicant on the basis of the information provided in the application. If no training or work experience is indicated in the Checklist, then a rating of "0" will be given.

Where the information is not provided in the above format then the applicant will be requested to resubmit. Where the information submitted is incomplete then the applicant will be requested to resubmit.

□ **Step 11 – Issue of Statement of Competency**

When the Assessor has completed the assessment, the Draft Statement of Competency is signed by the applicant and the Assessor.

The applicant is responsible for providing the Statement of Competency to each work supervisor for whom work is being undertaken.

Internal applicants are responsible for providing their Statement of Competency to the People Team for upload into the RIW system in accordance with [PEO-GL-001 Business Rules for Working in ARTC Rail Corridor](#).

The Organisation for the external applicant is responsible for maintaining a record of the competency of the person, including uploading into the RIW system. The Organisation is responsible that the person is only allocated to work for which they have a current competency.

3 Competency Validity and Annual Performance Review

The nominal period for the validity of a Statement of Competency is 4 years from the date of assessment. The applicant is responsible to ensure that the Competency is renewed prior to the expiry of the valid date.

To ensure that the person continues to work at the nominated competency levels, then the organisation shall undertake an annual performance review of the person. Results of this performance review shall be documented and kept by the organisation. ARTC may request to audit these documents.

For persons not working within an organisation, then they shall request the performance review from ARTC or other organisation for whom they have been performing work.

4 Competency Upgrade or Change of Organisation

Your Statement of Competency details the organisation that you are working for when the assessment was undertaken. This organisation provides the structures for your work supervision, performance reviews, quality systems and safety systems. If you transfer to another organisation, then you must apply to have your Competency Statement recorded against that organisation.

If you gain new competencies or attain higher levels of skill through training and work experience, then you may upgrade your statement of competency for those specific competencies. Complete the appropriate form and submit with supporting information. The Valid To date does not change for an upgrade to competency.

[EST2002F-24 Signals Competency Upgrade Request](#)

5 ARTC Competency Assessment Levels

There are four competency rating levels for each competency as follows:

LEVEL 0	No certified knowledge on the subject.
LEVEL 1	Training Exposure. Basic skill level attained but requires coaching. Has knowledge & Understanding of the Standards. Person when performing the competency must be under supervision.
LEVEL 2	Certified as being able to perform the identified competency independently and without supervision in routine activities. Also competent to perform complex activities under supervision of a level 3 person.
LEVEL 3	Certified as being able to perform the identified competency independently and without supervision in all activities.

6 Work Experience Requirements for Competency Levels

Level 1

There are two ways to prove that you have a level 1 competence, these are;

- Successfully completed training in the activity, proved by a Certificate of Attainment.
- Verified work experience showing on job training covering as much supervised experience as would be gained by attending a training course.

Level 2

To attain a Level 2 competence an individual must be able to demonstrate by means of verified work experience that they have carried out the activity a **minimum of four** times, independently, in a simple or routine task.

Where a competence is a broadening of a similar well experienced activity, then it is acceptable to gain a level 2 by providing evidence of carrying out the activity a **minimum of two** times, independently, in a simple or routine task.

An example would be where an individual has 4 verified experiences in DC track circuits and has 2 verified experiences on HVI track circuits. The individual would be able to gain a Level 2 in both activities due to the similarity in technologies.

Level 3

Level 3 can only be gained through verified experience gained including experience within the ARTC Network.

To attain a Level 3 competence an individual must be able to demonstrate by means of verified work experience that they have carried out the activity a **minimum of five** times, independently, in a complex task.

Where a competence is a broadening of a similar well experienced activity, then it is acceptable to gain a level 3 by providing evidence of carrying out the activity a **minimum of three** times, independently, in a complex task.

An example would be where an individual has 5 verified experiences in DC track circuits and has three verified experiences on HVI track circuits. The individual would be able to gain a Level 3 in both activities due to the similarity in technologies.

Half of these minimum number of work experience activities shall be performed on the ARTC network in accordance with ARTC Signalling Standards applied to demonstrate the high level of understanding of ARTC standards and practices.

7 Assessment Application and Support Information – electronic copy

The ARTC standard provides in section 7.2 for the files to be provided in the following format.

“All documents are to be provided to ARTC in electronic format. It is important that configuration management is practiced in the naming of these files. Generally files shall be in scanned pdf format. Photos shall be in jpg format. Where the ARTC form is completed and submitted as a draft, then the word template format shall be submitted.

In all these cases the file shall be named with the following structure <RIW number>-<first name>-<surname>-<file subject>-<file type>.

Separate files shall be provided for each separate file subject e.g. Work Experience, Training qualifications, Track Safety Awareness details, Medical Assessment etc.”

8 Appendix 1 – Examples for Work Experience Records

8.1 Example for Maintainer

For a maintainer the entries in the Work Experience Record should cover a period not exceeding 3 months. If the same work is repeated each 3 months, it is acceptable to copy and paste the entry for each period. Each entry needs to be verified by the Supervisor.

Comment on level of information

Good Work Experience Record

Maintenance Team leader (3 people) maintaining Bullamanka, Bourke, Dunnedoo crossing loops. Maintenance service schedules for monthly and 3 monthly cycle for points, signals, track circuits, interlocking equip, telemetry system, equipment cupboards, ground frame. Equipment comprising M84 points, DC and coded tracks and predictor tracks, Microlok OCS interlocking, AC, DC and solar supplies, LED signals.

This clearly shows the responsibility and role of the person. It shows the range of systems that have been worked on, the type of equipment and where it is located. The reference to the crossing loop is considered as a straightforward task and will only be adequate for a level 2 rating.

Just Acceptable – limited to Level 2

Maintenance team maintaining 4 crossing loop locations on Kangaroo line. CTC signal equipment with LED signals, relay interlocking and M3A point machines.

This indicates only participation in a team without directly indicating the role. It will be considered as a team member only. It indicates the range of systems but not the individual equipment types and will limit the competency rating for equipment types. The reference to the crossing loop is considered as a straightforward task and will only be adequate for a level 2 rating.

Poor example –no rating

Maintenance on Kangaroo line of points, track circuits, signals, level crossings, interlockings and power supplies.

This does not show the role or responsibility of the person doing the maintenance. It does not indicate the complete range of signalling systems nor the actual equipment. The reference to the crossing loop is considered as a straightforward task and will only be adequate for a level 2 rating.

8.2 Example for Construction staff

For construction staff the entries in the Work Experience Record should cover a period not exceeding 3 months and for each project worked on. If the same work is repeated each 3 months it is acceptable to copy and paste the entry for each period. Each entry needs to be verified by the Supervisor.

Good Work Experience Record

Construction Team member (3 people) for four crossing loops at Bullamanka, Bourke, Dunnadoo and Palm Springs. Installation of location cases (pre-wired), cables and f/o cables, signals (LED), point machines (D84M), track circuits (microtrax, overlay and DC in loop line) and 2 predictor (GCP) level crossings. Team leader for inspection and testing of the above including cable megger testing, relay bell testing and wire count, null count, signal focusing. Compiled DSS for location cases and cable routes and signals. Commissioning team leader including set to work of microtrax, DC track circuits, predictor tracks, power supplies and LED signals to CWP.

Comment on level of information

This clearly shows the responsibility and role of the person. It shows the range of systems and tasks that have been worked on, the type of equipment and where it is located. The reference to the crossing loop is considered as a straightforward task and will only be adequate for a level 2 rating.

Just Acceptable – limited to Level 2

Construction team for four CTC loops with Microlok, kingfisher, microtrax, f/o cables, LED signals and predictor LX. Inspection and Test team member to ITP. Commissioning team member to CWP of track circuits and signals (microtrax, DC and overlay tracks).

This indicates only participation in a team without directly indicating the role. It will be considered as a team member only. It indicates the range of systems and tasks but not all the individual equipment types and will limit the competency rating for equipment types. The reference to the crossing loop is considered as a straightforward task and will only be adequate for a level 2 rating.

Poor example –no rating

Kangaroo line CTC of four crossing loops with Microlok. Construction, Testing and Commissioning

This does not show the role or responsibility of the person doing the maintenance. It does not indicate the complete range of signalling tasks nor the actual equipment. The reference to the crossing loop is considered as a straightforward task and will only be adequate for a level 2 rating.

8.3 Example for Signal Design staff

For a signal designer the entries in the Work Experience Record should cover a period not exceeding 3 months and for each project worked on. If the same work is repeated each 3 months, it is acceptable to copy and paste the entry for each period. Each entry needs to be verified by the Supervisor.

Comment on level of information

Good Work Experience Record

Signal designer responsible for signal arrangement plan and control table design up to review level. Also responsible for design of Microlok interface circuits at Bullamanka, Bourke, Dunnedoo crossing loops.

Design Engineer responsible for conducting the Signal Sighting and resolving issues arising. Updated control tables and design from issues arising from the Microlok simulator testing. Produced circuit mod sheets during commissioning for minor issues. Checking of updating to As- Built for circuits, control tables and signal plan.

To be updated

This clearly shows the responsibility and role of the person. It shows the range of systems that have been worked on, the type of equipment and where it is located. The reference to the crossing loop is considered as a straightforward task and will only be adequate for a level 2 rating.

Just Acceptable – limited to Level 2

Four CTC crossing loops on Kangaroo line. Signal designer team member responsible for Microlok interface circuits and microtrax circuits. Conducted Signal Sighting with driver representatives.

Updating of As-Built interface circuits.

This indicates only participation in a team without directly indicating the role. It will be considered as a team member only. It indicates the range of systems. and will limit the competency rating for equipment types. The reference to the crossing loop is considered as a straightforward task and will only be adequate for a level 2 rating.

Poor example –no rating

Designer Four crossing loops on Kangaroo line with Microlok and LED signals.

This does not show the role or responsibility of the person doing the maintenance. It does not indicate the tasks performed within the design process. The reference to the crossing loop is considered as a straightforward task and will only be adequate for a level 2 rating.

9 Appendix 2 – Forms

The competency forms and templates are available at:

https://extranet.artc.com.au/eng_signal_form.html#training