

# Curriculum Vitae



## CURRENT POSITION

Senior Signalling Engineer (contractor)

## QUALIFICATIONS

Rail Industry Workers Card:

20-00042759

## PROFFESIONAL REGISTRATION AND MEMBERSHIP

Member of the Institution of Railway Signal Engineers (MIRSE)

# Andrew Dawson

## Summary

With over 17 years' experience in rail signalling across the UK and Australia Andrew has played a key role and delivered on projects in many aspects of the industry.

Responsible for the successful delivery of complex and safety critical design, Andrew's experience includes the preparation of tenders, pre-concept and concept design, scheme and detailed design and testing.

A committed and organised team player, Andrew has developed key skills in managing and coordinating design teams to deliver both minor and major signalling design projects.

In his appraisals, Andrew has been commended and recognised as a leader with excellent communication and interpersonal skills, gained from working with individuals at all levels from graduates through to key stakeholders across multi disciplines in each of the roles he has undertaken.

With a strong work ethic and attention to detail, Andrew has ensured all project deliverables have been completed to the highest technical and safety standards and requirements.

Assessed competencies include:

- Queensland Rail Designer Level 2 Competency
- MTM Senior Signalling Engineer Competency
- V/Line Senior Signalling Engineer Competency

## Recent Project Experience

**Metro Trains Melbourne (Western Project Alliance), June 2019 to Present**  
**Senior Signalling Design Engineer (Contractor)**

Key Responsibilities Include:

- Design and checking of Design Management and technical documentation including DEMP, Signalling Funtional Specifications, Staging and T&C strategies
- Checking of all Signalling related design including Bonding plans, Axle couner overview plans, Cable running plans, power calculations, Aspect sequence charts, signal circuit designs, and other deliverables associated with signalling submitted by the alliance design teams.

Key Projects:

- Cranbourne Line Upgrade (CLU)

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<p><b>Cimic (UGL Ltd)</b> <b>(Feb 2019 – Ongoing)</b> <b>Senior Signalling Design Engineer (Contractor)</b></p>
<p><b>V/Line</b> <b>(Dec 2018 – Ongoing)</b> <b>Senior Signalling Design and Review Engineer (Contractor)</b></p>
<p><b>Metro Trains Melbourne (LXRG),</b> <b>(July 2017 to Dec 2018)</b> <b>Senior Signalling Design and Review Engineer (Contractor)</b></p>

Key Responsibilities Include:

- Design checking and auditing of Signalling Arrangement Plans, control tables, signal circuit designs, and other information associated with signalling submitted by design teams.

Key Projects include:

- High Street Level Crossing Removal project for MTM / LXRG (NWPA)
- Aviation Road Level Crossing Removal project for MTM / LXRG (NWPA)

## **Member of V/Line signalling design review team (multiple projects)**

Responsibilities Included:

The technical reviewer must consider the design from the Network Asset Management perspective, in particular the impact on the existing inspection and maintenance regime and future maintenance access requirements.

The aim of the review is to assist the designer to resolve any design deficiencies, errors or omissions and non-compliances in relation to the functional and operational requirements and any deviation or non-compliance to current standards, procedures and maintenance practices.

Key Projects include:

- Ballarat Line Upgrade (BLU)
- Regional Rail Revival (RRR) (incl. Warnambool Line Upgrade)
- RIA ( Metro Tunnel)
- Westgate tunnel

## **Member of MTM signalling design review team (multiple projects)**

Responsibilities Included:

The technical reviewer must consider the design from the Network Asset Management perspective, in particular the impact on the existing inspection and maintenance regime and future maintenance access requirements.

The aim of the review is to assist the designer to resolve any design deficiencies, errors or omissions and non-compliances in relation to the functional and operational requirements and any deviation or non-compliance to current standards, procedures and maintenance practices.

Key Projects include:

- Pakenham East Depot;
- North East Project Alliance Grade Separation and Interlocking Renewals;
- Sky Rail Caulfield to Dandenong (CtD) Project;
- Mernda Rail Extension;
- Western Project Alliance (including Korreroit Creek and Abbots Road Grade Separation and Interlocking Renewal);
- North West Project Alliance (including Skye Road and Camp Road Grade Separation and Interlocking Renewal);

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**Wabtec Control Systems**  
**(May 2016 to July 2017)**  
**Senior Signalling Engineer**

**Contracted to Queensland Rail, September 2016 to July 2017**

**Member of Queensland Rail's internal signalling project development team (multiple projects)**

Responsibilities Include:

- Production and review of pre-concept and concept documentation including;
- pre-concept investigations and reports, Technical Requirement Specifications, Scope Of Works, User Requirement Specifications, Assurance plans, project cost estimates and schedules and concept reports.
- Conduct and facilitate Safety in Design workshops.
- Information gathering and stakeholder consultation.
- Preliminary design including production and checking of Signalling Arrangement plans, Control
- Tables, Bonding plans, power calculations and braking calculations etc.
- Conduct site walkouts for investigation and correlation purposes.

**Other duties and activities at Wabtec:**

Carry out design, design production checking, and independent checking of signalling systems as required.

Provide functional support and guidance to the Design Engineer(s) within the team on all aspects of Signal Design within allocated projects.

Participate in the preparation of technical details, specifications for Signalling projects. Monitor the progress of works and ensure that the development and design requirements are met and effect remedial action when required.

Ensure that the technical and safety standards are maintained in all aspects of design work in order that successful project implementation and future reliability is achieved.

Maintain a continuous communication with contractors and customers in the development and implementation of projects to ensure a uniformity of purpose and common targets.

On allocated projects participate in the planning, programming and monitoring of resources to meet timeline requirements and targets.

Assist in the forecast of resource requirements necessary for allocated projects in sufficient time to ensure that they can be provided.

Interpretation of client requirements and preparation of cost estimates.

Preparation of technical work scopes and project scope of works. Maintaining of design standards for projects. Providing technical advice and mentoring to design team.

Key Projects:

- Queensland Rail Turnout Renewals program 2016/17

Organise and plan the technical aspects of complex signalling projects including the design and preparation of Scope of works, Sub-System Requirement Specifications, signalling arrangements, control tables and circuit designs for new and altered works.

Develop and coordinate technical aspects and strategies for new technology and techniques applicable to signalling systems and equipment.

**Aurizon (May 2011 to May 2016)**  
**Senior Signalling Engineer /**  
**Technical Lead**

# Curriculum Vitae

Design checking and auditing of complex control tables, signal circuit designs, and other information associated with signalling submitted by design teams.

Design of complex signalling designs, control tables, signaling arrangements and bonding plans, etc. including new technologies and techniques.

Organise and prepare the associated documentation and testing plan to function test complex signalling installations including new technologies and techniques prior to commissioning.

Ensure that the signalling designs produced conform to applicable Aurizon standards and industry best practice.

Assist in the mentoring, training and development of design engineers and drafters in the signalling design group.

Key responsibilities and projects:

- Signalling Technical lead for the proposed Pilbara Region Network (ETCS Project), where I was responsible for writing the Scope of works, stakeholder and technical requirements. Also responsible for reviewing and analysing contractor tenders.
- Technical Lead for Wiggins Island Rail Project (WIRP)
- Technical Lead for Gregory Mine Re-signalling and Lilyvale Passing Loop
- Technical Lead for Nebo Yard Extension (For Pacific National)
- Technical Lead for the Turnout Renewals program 2012-16

## **TICS Global LTD (2004 -2011)**

### **Assistant Signalling Design Engineer to Lead Signal Design Engineer**

Organise and plan the technical aspects of complex signalling projects including the design and preparation of Signalling Design Specifications, signalling arrangements, control tables and circuit designs for new and altered works.

Design checking and auditing of complex control tables, signal circuit designs, and other information associated with signalling submitted by design team.

Design of complex signalling designs, control tables, signaling arrangements and bonding plans, etc. including new technologies and techniques.

Organise and prepare the associated documentation and testing plan to function test complex signalling installations including new technologies and techniques prior to commissioning.

Ensure that the signalling designs produced conform to applicable Network Rail standards and industry best practice.

Assist in the mentoring, training and development of designer's in the signalling design group. On-site Test Assistant duties for pre-testing and commissioning's.

Key projects:

- Luton Platform Extensions
- Farrington curve junction Turnout Renewals
- Preston PSB – Barton & Broughton Turnout Renewals and track rationalisation
- Sheffield /Aldwarke – Power Upgrades and Location Renewals
- Crag Hall Double cutting project

## **Halcrow Group LTD (2002-2004)**

### **Assistant Signalling Designer**

Assist in the design and preparation of Signalling Design Specifications, signalling arrangements, control tables and circuit designs for new and altered works.

Design of basic signalling circuits, control tables, signalling arrangements and bonding plans, etc.

# Curriculum Vitae

Assist in the preparation of the associated documentation and testing plan to function test signalling installations including new technologies and techniques prior to commissioning.

Ensure that the signalling designs produced conform to applicable Network Rail standards and industry best practice.

On-site Test Assistant duties for pre-testing and commissioning's.

## Key projects:

- National TPWS project
- Wye to Minster Re-signalling works
- Medway - Provision of AWS and Resignalling works

## Other Training and Qualifications

- Frauscher Axle Counter – 19-22/3/2018, Frauscher
- Westrace II System Design – 2-5/10/2012, Invensys Rail
- THALES Axle Counter Hardware and System Introduction Course – 4/2012
- POSS Points Condition Monitoring System – 4&5/09/2012, Invensys Rail
- AS3000 Practical Electrical Wiring Standards – 18-21/10/2011, IDC Technologies
- PCGE, GSIM & MoviolaW for designers – 12/08/2011, Invensys Rail
- Westrace I System Design – 5/8/2011, Invensys Rail
- Microlok II Hardware & Application Logic – 5-7/7/2011, Ansaldo STS Academy
- Route Relay Interlocking (R.R.I.) – 5-9/10/2009, TICS Ltd
- Intermediate Signalling Technology (I.S.T.) Control Tables – 18-22/8/2008, Catalis
- Intermediate Signalling Technology (I.S.T.) Signalling The Layout & Aspect Sequence Charts – 11-15/8/2008, Catalis
- Testing Module 5 (Test Assistant) – 24-28/3/2003, Catalis
- Basic signalling and Ohms Law A.C. & D.C. – May-June 2002, Halcrow
- IRSE Signalling Designer Licence 1.1.150C Licence No 00059815 (Expired)
- IRSE Signalling Scheme Designer Licence 1.1.150A Licence No 00059815 (Expired)
- IRSE Test Assistant Licence 1.3.150 Licence No 00059815 (Expired)
- OH&S White Card (Queensland): 1486465
- Queensland Trackside Protection Card: 00913
- VictorianTrack Safety Awareness