

ROADS AND MARITIME SERVICES (RMS)

QA SPECIFICATION TS200

REGISTER OF ITS FIELD EQUIPMENT

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REVISION REGISTER

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Ed 1/ Rev 2	TS200/A	Corrected supplier for PAT DAW 100	Andrew Mehaffey	2-Oct-2014
Ed 1/ Rev 3	TS200/A	Added approved AEI LED Lanterns Removed prototype "FCG-VMS"	Andrew Mehaffey	27-Nov-2014
Ed 1/ Rev 4	TS200/A	Aligned with "TES-REG-001" content	Andrew Mehaffey	12-Mar-2015
Ed 1/ Rev 5	various	Clarifications to "OEM" status Multiple Updates to Appendix A	Andrew Mehaffey	11-Aug-2015
Ed 2/ Rev 0	various	Significant changes; New approval classes replace "Compliant" and "OEM". Multiple Updates to Appendix A	Andrew Mehaffey	29-Sep-2016

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Ed 2/ Rev 1	Annex A, A4 Annex B	Traffic detection and monitoring equipment register updated. ITS Equipment: Supplier Details updated.	Andrew Mehaffey	12-Oct-2016



REGISTER OF ITS FIELD EQUIPMENT

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IC-QA-TS200

<p>VERSION FOR: All Supply of ITS Devices to RMS</p>
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FOREWORD

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REVISIONS TO PREVIOUS VERSION

All revisions to the previous version (other than minor editorial and project specific changes) are indicated by a vertical line in the margin as shown here, except when it is a new edition and the text has been extensively rewritten.

PROJECT SPECIFIC CHANGES

Project Specific changes are **not allowed** to this Register.

This Register of ITS Field Equipment should only be changed by RMS (Principal Manager – ITS).

Projects that are nominally required to supply ITS Field Equipment that are currently not listed within this Register must obtain approval from RMS (Principal Manager – ITS) before using such equipment as outlined in RMS TS202

Requests for clarifications, re-issue, or other questions regarding this Register should be directed to: ITShelpdesk@rms.nsw.gov.au

RMS QA SPECIFICATION TS200

REGISTER OF ITS FIELD EQUIPMENT

1 GENERAL

1.1 SCOPE

Transport for NSW (TfNSW) and Roads and Maritime Services (RMS) have deployed a large variety of ITS Field Equipment throughout the NSW road network to enable the operation of Intelligent Transport Systems.

This specification is intended to assist RMS staff and service providers in their selection of ITS Field Devices for new installations, as well as for the maintenance or replacement of existing equipment, by identifying acceptable suppliers of equipment currently in operation.

There are three (3) categories of suitable ITS equipment for supply by contractors:

- **“Type Approved”** ITS Equipment (Section 2.1.1)
- **“Acceptable”** ITS Equipment (Section 2.1.2)
- **“Provisional”** ITS Equipment (Section 2.1.3)

These categories are defined in detail in Section 2 below.

Items excluded from the scope of this register include:

- RMS Approved hardware and mounting structures supporting ITS Equipment installation (other than for Traffic Control Sites).
- Supporting ITS power and communications equipment (where not otherwise specified)

These hardware elements are generally either identified in detailed RMS Technical Specifications, shown within standard RMS drawings, or are sourced from nominated suppliers of ITS Equipment.

In all cases, supplied ITS Field equipment and all associated devices must be suitable for their required purpose and installation environment.

1.2 STRUCTURE OF THE SPECIFICATION

This Specification includes a series of annexures that detail additional requirements.

1.2.1 Project Specific Requirements

All projects must select ITS Field Equipment from the Register as shown in Annexure TS200/A or seek approval from RMS (Principal Manager – ITS) before using such equipment as outlined in RMS TS202. Project Specific changes to this Register are **not allowed**.

1.2.3 Referenced Documents

Standards, specifications and test methods are referred to in abbreviated form (e.g. AS 2350). For convenience, the full titles are given in Annexure TS200/M.

1.3 DEFINITIONS AND ACRONYMS

1.3.1 Definitions

The terms “you” and “your” mean “the Contractor” and “the Contractor’s” respectively.

The following definitions apply to this Specification:

Intelligent Transport System (ITS)	An integrated technology solution using computer-based control systems which communicate with field devices (at one or more sites) to provide a functional outcome designed to improve journeys through the transport network.
ITS Field Equipment	ITS Equipment or Devices supporting the required functionality of an Intelligent Transport System, associated with a nominated ITS Field Site
ITS Field Site	Nominated location of ITS Equipment, as shown on project plans and as required site for installation of devices.
Principal Manager – Intelligent Transport Systems	RMS representative responsible for approvals over design documentations and additions to this Register.
ITS REGISTER	The listing of ITS Equipment suitable for supply to RMS via maintenance contractors and projects, located in Annexure TS200/A of this document.

1.3.2 Acronyms

The following abbreviations apply to this Specification:

RMS	Roads and Maritime Services
TfNSW	Transport for New South Wales
tbd	To be determined
tbc	To be confirmed

2 REGISTER OF ITS FIELD EQUIPMENT

2.1 OVERVIEW

This specification is intended to assist service providers in their maintenance of ITS Field Devices by identifying acceptable suppliers of equipment currently in operation.

There are three (3) categories of suitable ITS equipment available for supply by contractors:

- **“Type Approved”** ITS Equipment - - evaluated as compliant to RMS specifications and supplied with an awarded RMS Type Approval Certification Number .
- **“Acceptable”** ITS Equipment – evaluated by RMS and considered acceptable for typical intended use.
- **“Provisional”** ITS Equipment – considered provisionally acceptable, but requiring **mandatory** consultation with ITS prior to supply or use (RMS QA TS202).

This register is not intended to replace the need for projects and ITS maintainers to ensure that their ITS equipment or system operate in compliance with RMS specifications, nor does nomination in this register imply that all devices nominated are specifically compliant to current RMS specifications.

From a contractual supply perspective all ITS Devices listed in TS200/Annexure A of this document may be considered as “RMS Approved”, as long as the supply conditions applied to their listed approval classification can be proven to be met (and demonstrated).

The RMS process for general evaluation of ITS Devices (and associated equipment) is described in specification RMS QA TS201, which also establishes the applicant gateway via the [ITS Helpdesk](#).

The process for evaluation of ITS solutions proposed for supply by projects (potentially incorporating supply of provisionally approved equipment) is described in specification RMS QA TS202.

2.1.1 “Type Approved” ITS Equipment

Type Approval is the highest level of RMS validation for supply of ITS Equipment, and is typically associated with safety-critical systems and functions.

Type Approved ITS Equipment shall be submitted by the manufacturer for detailed analysis and review by RMS ITS Engineers. The technical review shall incorporate review of independent test reports, break-down examinations of sample equipment, and extensive field trials.

This detailed review is to ensure that the ITS Equipment is not only compliant with the associated RMS specification(s), but also designed to be reliable and to operate correctly with the host ITS.

After detailed review, a “Type Approval Certification Number” is awarded to the manufacturer, and devices shall only be supplied with documented proof of RMS “Type Approval Certification”.

Examples of Type Approved ITS Equipment within this document are:

- (a) Traffic Signal Controller for traffic lights at intersections (e.g.: Tyco TSC-4);

2.1.2 “Acceptable” ITS Equipment

The mid-level approval category is “Acceptable” that identifies ITS equipment that RMS deems acceptable for typical use.

Information submitted by the manufacturer/supplier shall be reviewed by RMS to determine if the functional objectives of the ITS device are demonstrated for typical use. Other information sources may also be used by RMS. Such information includes:

- Compliance with mandatory regulatory requirements (Safety,EMC), as applicable
- Compliance with specifications or parts thereof, as relevant.

- Information on prior use/installations.

If deemed necessary RMS may require the manufacturer/supplier to install a trial site/s or system for evaluation by RMS prior to RMS awarding approval for the nominated equipment.

A system integration test may also be required to validate correct operation with specific ITS host systems, if relevant to the equipment type.

This approval category should be used for ITS equipment for which RMS does not currently have an equipment specification, but where there is either an appropriate Australian or International Standard.

Examples of “Acceptable” ITS Equipment within this document are:

- (a) Video Surveillance Camera Site equipment “Accepted” as equivalent to TS106 default supply.

2.1.3 “Provisional” ITS Equipment

“Provisional” ITS equipment is the lowest level of RMS suitability for supply of ITS Equipment.

A listing of equipment as “Provisional” may indicate that the equipment:

- Is evaluated as suitable for a particular application, but may not be suitable for typical use
- Has been partially evaluated, with results to date sufficient to indicate the device is suitable for some applications, but it is not yet established whether it is suitable for typical use.
- Was compatible with a prior ITS Host System, but may not suit typical systems, or has not been evaluated to confirm as compatibility with the typical systems
- Was compliant with prior specifications, but may not be compliant with current specifications such that usage may be limited to maintenance of existing ITS field sites.
- Has been used in a trial or limited deployment, with performance acceptable for some applications.
- Is currently being evaluated by RMS for either “Type Approved” or “Acceptable” approval categories.

Consultation with RMS ITS is **mandatory** prior to supply of “Provisional” equipment in RMS projects, via the process described in Specification RMS TS202.

Examples of “Provisional” ITS Equipment within this document are:

- (a) Monochrome Variable Message Sign equipment provisionally acceptable to RMS TS105
- (b) Traffic Flow Monitoring equipment provisionally acceptable to RMS TS104

ITS Equipment with “Provisional” approval must only be supplied to RMS by projects as described in RMS TS202.

3 DESIGN REQUIREMENTS

ITS Field Equipment and local control systems not listed within this document must not be supplied to RMS as part of maintenance or via new project works without direct approval of the RMS Principal Manager – ITS.

Where projects identify a need for unknown systems and devices, consultation with ITS Engineering and Device Evaluation teams is required and a Systems Engineering approach must be followed. Fundamental to such a consultation is the provision of a “Concept of Operations” that clearly shows the intended business objective and the planned ITS System functional design (including device functions).

Proposals for approval to supply of “alternative” ITS Field Equipment nominally meeting RMS requirements shall be submitted in writing to RMS Principal Manager – ITS as described in RMS TS201 and RMS TS202.

4 EQUIPMENT REQUIREMENTS

ITS Field Equipment currently nominated on this register (or proposed for inclusion on this register) must be functionally compatible with their relevant host ITS (control systems) so as to ensure that the complete integrated Intelligent Transport System (control system, communications links, and field devices) perform their required operational functions correctly.

An overview of a complete integrated Intelligent Transport System is shown in *Figure 1*.

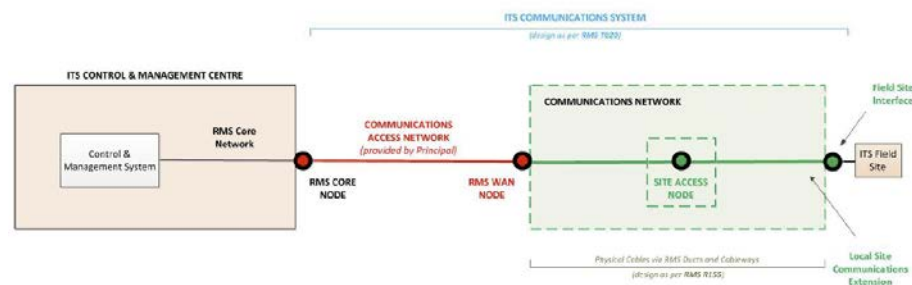


Figure 1 – Overview of a complete integrated Intelligent Transport System

“ITS Field Equipment” is installed at an “ITS Field Site” with location(s) determined by Traffic Engineering placement guidelines (and consideration of constructability/maintenance issues).

For example, the Video Surveillance Camera control and management system (core ITS) will specify requirements for Cameras compatible with the system needs (ITS Field Equipment) at strategic traffic monitoring locations (ITS field sites).

In the event that new ITS Field Equipment is required to be supplied along with new core ITS control systems (providing new or enhanced traffic system capabilities), the complete Intelligent Transport System “concept design” for the proposed solution must be submitted for approval to RMS Principal Manager – ITS prior to commencement of works to supply non-standard ITS Equipment.

ANNEXURE TS200/A – ITS FIELD EQUIPMENT REGISTER**A1 ADAPTIVE TRAFFIC CONTROL***“Traffic Signal Controller”*

Supplier	Model / Type	Supply
Tyco	Eclipse (ground mount, 24 signal group)	RMS Type Approved
Tyco	Eclipse EA1 (pole mount)	RMS Type Approved
QTC	Hadron (ground mount, 24 signal group)	RMS Type Approved
ATC	ATSC-4 (ground mount, 24 signal group)	RMS Type Approved
ATC	P-4 (post mount, 4 signal groups)	RMS Type Approved

“Traffic Signal Controller - Communications Modem”

Supplier	Model / Type	Supply
Micro Connect	DIAL LCM	RMS Type Approved
Dataplex	DPX 213 iPS DPX-3890-01	RMS Type Approved

“Traffic Signal Site – Portable Traffic Signals”

Supplier	Model / Type	Supply
A1 Roadlines	Portable Traffic Signals	RMS Type Approved
Aldridge Electrical Industries	Portable Traffic Signals	RMS Type Approved
Data Signs	Portable Traffic Signals	RMS Type Approved
Bartco	Portable Traffic Signals	RMS Type Approved

“Traffic Signal Lantern”

Supplier	Model / Type	Supply
Aldridge Traffic Systems	Quartz Halogen Lamp	Acceptable
Aldridge Traffic Systems	LED 200mm/300mm Roundel, 200mm : Arrow, Pedestrian, Bicycle, Bus	RMS Type Approved
Aldridge Electrical Industries	LED 200mm Roundel/Arrow, Pedestrian	RMS Type Approved
Braums	LED 200mm/300mm Roundel, 200mm : Arrow, Pedestrian, Cross, Bicycle, Bus, “T” Symbol, “E” Symbol ... <i>(per RMS T/A cert # 1505-R3452-01)</i>	RMS Type Approved
Tyco	LED 200mm/300mm, Roundel, 200mm : Arrow, Ped, Three aspect Bicycle, Bus	RMS Type Approved

“Traffic Signal Lantern – Target Boards”

Supplier	Model / Type	Supply
Aldridge Traffic Systems	Target Boards, Visors	Acceptable
Aldridge Electrical Industries	Target Board, Single / Dual 3 aspects (200mm)	Acceptable
Braums	Target Board, Single / Dual 3 aspects 200mm/300mm	Acceptable
Tyco	Target Boards, Visors	Acceptable

“Traffic Signal Lantern – Special Body”

Supplier	Model / Type	Supply
Aldridge Electrical Industries	200mm body - 1 & 4 aspects	Acceptable
Aldridge Traffic Systems	200mm body - 1 & 4 aspect	Acceptable
Braums	200mm /300mm body - 1 & 4 aspects	RMS Type Approved
Tyco	200mm body - 1 & 4 aspect	Acceptable

“Traffic Signal Site – Posts & Mast Arms”

Supplier	Model / Type	Supply
Hayman Industries	Post Type 2-7, and 9-13, Offset and Shallow Type 2 base plate	Acceptable
Wieland Engineering	Post Type 2-7, and 9-13, Offset and Shallow Type 2 base plate	Acceptable
Taperline	Post Type 5 only	Acceptable

“Traffic Signal Site – Top Assembly and Low Mounting Bracket”

Supplier	Model / Type	Supply
Aldridge Electrical Industries	Top assembly, Low mounting bracket, and associated hardware	Acceptable
Aldridge Traffic Systems	Top assembly, Low mounting bracket, and associated hardware	Acceptable
Braums	Top assembly, Low mounting bracket, and associated hardware	Acceptable
CNJ Electrical Services	Top assembly, Low mounting bracket, and associated hardware	Acceptable
Tyco	Top assembly, Low mounting bracket, and associated hardware	Acceptable

“Traffic Signal Site – Audio Tactile Units”

Supplier	Model / Type	Supply
Aldridge Electrical Industries	Audio Tactile (Housing Only)	RMS Type Approved
Aldridge Traffic Systems	Audio Tactile	RMS Type Approved
Braums	Audio Tactile	RMS Type Approved
QTC	Audio Tactile (Card Only)	RMS Type Approved

“Traffic Signal Site – Push Button Assembly”

Supplier	Model / Type	Supply
Aldridge Electrical Industries	Push Button Assembly	RMS Type Approved
Aldridge Traffic Systems	Push Button Assembly	RMS Type Approved
Braums	Push Button Assembly	RMS Type Approved

“Traffic Signal Site – Pit Covers and Frames”

Supplier	Model / Type	Supply
ACO	Pit Covers/frames	Acceptable
Durham	Pit Cover/frame	Acceptable
ICON	Pit Covers/frames	Acceptable
Mascot Engineering	Pit Cover/frame	Acceptable

“Traffic Signal Site – Pre-formed and pre-fabricated Loops”

Supplier	Model / Type	Supply
Traffic Tech	“Ezy Loops” (pre- formed, stick down)	Acceptable
Thermapp	“Thermapp” (pre- formed stick down)	Acceptable
Juvana	“Patriot” (pre-fabricated, enclosed tube)	Acceptable
Traffic Tech	“De-Tech”(pre-fabricated, enclosed tube)	Acceptable

“Traffic Signal Site – Inductive Loop and other Cables”

Supplier	Model / Type	Supply
Bambach	Loop, Loop Feeder, and 29 core cable	Acceptable
Cable Accessories	Jointing Kits and Crimps	Acceptable
Channell	Crimps and Terminals	Acceptable
General Cable (Australia)	Loop, Loop Feeder, and 29 core cable	Acceptable
Gripset Industries	“Gripset B26” (Loop Sealant)	Acceptable
Madision Technology	Loop, Loop Feeder, and 29 core cable	Acceptable
Olex	Loop, Loop Feeder, and 29 core cable	Acceptable
Scott Technology	“Scotec” (Loop Sealant)	Acceptable

“Traffic Signal Site - Terminal Boxes (mast arm / wooden pole)”

Supplier	Model / Type	Supply
Aldridge Traffic Systems	Terminal Boxes	Acceptable
Aldridge Electrical Industries	Terminal Boxes	Acceptable
Braums	Terminal Box (for Mast Arms)	Acceptable
CNJ Electrical Services	Terminal Box (for Mast Arms)	Acceptable

“Traffic Signal Site – PJ Box”

Supplier	Model / Type	Supply
Powercast	PJ Box	Acceptable

“Traffic Signal Site - Fuse Box”

Supplier	Model / Type	Supply
Aldridge Traffic Systems	Post-Mounted Fuse Box	Acceptable
Regal	Underground Fuse Box	Acceptable

“Traffic Signal Site – Facility Key”

Supplier	Model / Type	Supply
John McGain	Facility Key	Acceptable

A2 TIDAL LANE CONTROL*“Lane Control Equipment”* (asset # 0500.0001)

Supplier	Model / Type	Supply
ESDR Electronics	SERNIS SR-45 Unidirectional In-Pavement Light (white)	Acceptable
Traffic Tech	SWARCO MLK v5.0 In-Pavement Light (white/white)	Acceptable
ESDR Electronics	ADB In-Pavement Light	PROVISIONAL
Clearview Traffic	Astucia In-Pavement Light	PROVISIONAL
RTS Constructions	Smart Stud In-Pavement Light	PROVISIONAL
RMS - ITS Manufacturing	Movable Median	PROVISIONAL
Magnetic Automation	Boom Gates	PROVISIONAL
Traffic Control Supplies	Controller	PROVISIONAL
SAGE Automation	Controller	PROVISIONAL
Kenshaw Electrical	Cummins Generator	PROVISIONAL

A3 ELECTRONIC MESSAGE SIGNS***“Monochrome VMS” (asset # 0200.0001)***

Supplier	Model / Type	Supply
Aldridge Electrical Industries	Monochrome (Amber LED) VMS400-B Type B (3 x 18) VMS400-B Type C (3 x 18)	PROVISIONAL
J1-LED	Monochrome (Amber LED) Type B (3 x 18) Type C (3 x 18)	PROVISIONAL
RMS - ITS Manufacturing	Monochrome Mode Only (RGBA) Type A (4 x 18) FCGSRATxxP20 and FCGSMATxxP20 Type B (3 x 18) FCGSRBT96P25 and FCGSMBT96P25	PROVISIONAL

“VSLS” (asset # 0300.0001)

Supplier	Model / Type	Supply
RMS - ITS Manufacturing	VSLS Type A/B/C/D, Sign Controller	PROVISIONAL
Compu sign	VSLS Type A/B/C/D, Sign Controller	PROVISIONAL

“Vehicle Activated Warning Sign”

Supplier	Model / Type	Supply
J1-LED	VAS # JT-D-0193 – Type A, B, C	PROVISIONAL

“Changeable Message Signs” (asset # 2000.0001)

Supplier	Model / Type	Supply
RMS - ITS Manufacturing	Tri-Vision signs, Optical Fibre, LED Shutter signs	PROVISIONAL

“Flashing Arrow Signs”

Supplier	Model / Type	Supply
A1 Roadlines	FAS Type A & B (Single & Double sided) Type C	RMS Type Approved
Arrow Emergency Systems	FAS Type A, B	RMS Type Approved
Aldridge Electrical Industries	FAS Type A, B, C	RMS Type Approved
Aldridge Traffic Systems	FAS Type B	RMS Type Approved
Data Signs	FAS Type C	RMS Type Approved
Global Traffic Equipment	Giga Signs FAS Type B (Single & Double sided)	RMS Type Approved
J1-LED	FAS Type B & C	PROVISIONAL
Magnum MFG	FAS Type B	RMS Type Approved
Road Runner Parts	FAS Type A, B	RMS Type Approved
Traffic Signals Sales & Service	FAS Type A, B	RMS Type Approved

“Colour VMS”

Supplier	Model / Type	Supply
various	Currently under evaluation	tbd

“ISLUS”

Supplier	Model / Type	Supply
various	Currently under evaluation	tbd

“Regulatory and Warning Sign”

Supplier	Model / Type	Supply
tbd	Currently under development	tbd

A4 TRAFFIC DETECTION AND MONITORING***“Vehicle Classifiers and Counters” (asset # 1300.0001)***

Supplier	Model / Type	Supply
CEOS	TIRTL (IR Smart Classifier)	Acceptable
Excel Technology Group	XL 500 / 1000 LL / LPL / PLP (Inductive Loop Classifier)	Acceptable
Nortech	IR100 / IR200 (Inductive Loop Classifier)	PROVISIONAL
TCS Products	Trafficorder Tube Counter	Acceptable
Aldridge Electrical Industries	Wavetronix Smart Sensor HD (Side-Fire Doppler Radar Smart Classifier)	PROVISIONAL
Armatage	FLIR VIP-IP Video Incident Detection / Classifier	PROVISIONAL
Braums	Navtech Pulse-Doppler Radar / IP camera	PROVISIONAL
Central Weighing	Sensys Networks SN240 Wireless Magnetometer Classifier	PROVISIONAL
Clearview Traffic	Golden River M210 Wired Magnetometer Classifier M500 (Side-Fire) Doppler Radar Classifier	PROVISIONAL
Microcom	MetroCount MC-5710 Piezo Counter MC-5600 Tube Counter	PROVISIONAL
RMS - ITS Manufacturing	Trafficorder Dual Loop Classifier	PROVISIONAL
Sick	TIC (Over-head) LMS Laser Scan	PROVISIONAL

“Over-Speed Detection” (asset # 1100.0001 and # 1200.0001)

Supplier	Model / Type	Supply
RMS - ITS Manufacturing	Detector, Controller, Display	PROVISIONAL

“Traffic Detector/Traffic Flow Monitor” (asset # 0400.0001)

Supplier	Model / Type	Supply
Nortech	IR100 / IR200 (Inductive Loop)	Acceptable
Excel Technology Group	XL 1000 (Inductive Loop) Traffic Monitor	PROVISIONAL
ELWC	Falcon LC (microwave) Traffic Detector	Acceptable

“Weigh in Motion Site” (asset # 2100.0001)

Supplier	Model / Type	Supply
Kistler Instruments	Kisler 9154G Piezo, 5204AC WIM	PROVISIONAL
Central Weighing	Mikros Systems RAKTEL 8000	PROVISIONAL
Applied Traffic	Viper Pentagon	PROVISIONAL
AARB	Culway WIM	PROVISIONAL
ELWC	IRD PAT DAW 100	PROVISIONAL

A5 TRAFFIC INCIDENT VERIFICATION**TS106 - “Video Surveillance Cameras – IP Digitised Analogue Video – Type A”**

Supplier	Model / Type	Supply
tbc	Camera - Bosch LTC 0630/11	Acceptable
tbc	Zoom Lens - Fujinon 128a-e2	Acceptable
tbc	PT Mount - Pelco Esprit ES3012	Acceptable
tbc	Video Encoder - Bosch VIP X1 XF E	Acceptable

TS106 - “Video Surveillance Cameras – IP Digitised Analogue Video – Type B”

Supplier	Model / Type	Supply
tbc	Camera - Pelco SE DD429-X	Acceptable
tbc	Camera - Sony SNC-WR632	Acceptable
tbc	Video Encoder - Bosch VIP X1 XF E	Acceptable

TS106 - “Video Surveillance Cameras – Native IP Digital Video – Type A”

Supplier	Model / Type	Supply
tbd	< currently under review >	tbd

TS106 - “Video Surveillance Cameras – Native IP Digital Video – Type B”

Supplier	Model / Type	Supply
tbd	< currently under review >	tbd

A6 OTHER APPROVED DEVICES***“Outdoor Equipment Cabinets”***

Manufacturer	Model / Type	Supply
Aldridge Electrical Ind.	Traffic Monitoring Cabinet	PROVISIONAL
Boval Engineering	Standard Roadside Cabinet	Acceptable
Logix Engineering	Standard Roadside Cabinet	PROVISIONAL
Mercury Innovation	Hardened Roadside Cabinet High Security with Thermal Management (enforcement grade /double skin)	Acceptable

“Street Lighting- LED Luminaires”

Supplier	Model / Type	Supply
Gerard Lighting	Sylvania RoadLED Cat V	PROVISIONAL
Aldridge Traffic Systems	ALS VLED 162	PROVISIONAL

“Road Weather Information” (asset # 0800.0001)

Supplier	Model / Type	Supply
RMS – ITS Manufacturing	Detector, Controller, Display	PROVISIONAL
Manly Hydraulic	Flood Warning Sensor	Acceptable

“Emergency Telephones” (asset # 2300.0001)

Supplier	Model / Type	Supply
RMS – ITS Manufacturing	3G / 4G, PSTN - Solar/Mains power	Acceptable
Dallas Delta	3G / 4G, PSTN - Solar/Mains power	Acceptable
KJ Precision	Dritel 3G / 4G, PSTN - Solar/Mains power	Acceptable
tbd	< Satellite versions under evaluation >	tbd

ANNEXURE TS200/B – ITS EQUIPMENT: SUPPLIER DETAILS

Supplier	Address	Phone 1
A1 Roadlines Pty Ltd	89 Rushdale Street, Knoxfield VIC 3180	03 9765 9400
ACO	134-140 Old Bathurst Road, Emu Plains. NSW 2750	02 47474000
Aldridge Electrical Industries Pty Ltd	U10 / 16 Sir Joseph Banks Drive, Kurnell NSW 2231	02 9540 9966
Arrow Emergency Systems	14 Pinnacle Street, Brendale QLD 4500	07 3881 3302
Applied Traffic Pty Ltd	6 /42 Smith Street, Capalaba Queensland 4157	07 3245 5505
Armitage Group Pty Ltd	31/65 Marigold Street, Revesby, NSW 2212	02 9771 2364
ARRB	500 Burwood Hwy, Vermont South VIC 3133	03 9881 1555
Aldridge Traffic Controllers (BRAUMS)	Unit N, 10-16 South St, Rydalmere NSW 2116	02 8846 5599
Aldridge Traffic Systems	12 – 14 Leeds Street, Rhodes NSW 2138	02 9736 3677
Bambach Wires & Cables	102 Old Pittwater Road, Brookvale NSW 2100	02 9938 5622
Bartco Visual Information Systems	1 Westside Avenue, Port Melbourne VIC 3207	1300 306 106
Boval Engineering	13 Coombes Dr, Penrith NSW 2750	02 4728 4909
BRAUMS (ATC)	Unit N, 10-16 South St, Rydalmere NSW 2116	02 8846 5599
Cables Accessories (Australia) Pty Ltd	8 Distribution Place, Seven Hills NSW 2147	02 97355000
Central Weighing Australasia Pty Ltd	PO Box 682, Mooloolaba, Queensland. 4557	07 5444 2910
CEOS Pty Ltd	3/17 Burgundy St, Heidelberg, Victoria 3084	03 9458 4955
Ceva Logistics	Unit 3/9 Ferndell Street, Guildford NSW	1300 363 382
Channell (previously Egerton)	3 Healey Circuit, Huntingwood NSW 2148	02 8884 4111
Clearview Traffic / Astucia Australia	28 Freeman Street, Campbellfield, Victoria 3061	0404 004 162
CNJ Electrical Services	8 Enterprise Drive, Glendenning NSW 2761	02 9625 6822
Compu sign Pty Ltd	8 / 10 Clarice Road Box Hill VIC 3128	03 9890 3400
Dallas Delta Corporation Pty Ltd	102 Albert Street, East Brunswick VIC 3057	03 9387 7388
Data Signs Pty Ltd	5 Grace Court, Sunshine West VIC 3020	03 9312 2177
Dataplex Pty Ltd	Level 4, 16-18 Cambridge St Epping NSW 2121	02 9869 2500
Durham	Lot 103 Curtis Road, Mulgrave NSW 2756	02 4587 7011
ELWC Australia	PO Box142, Castle Hill NSW 1765	02 9899 3468
ESDR Electronics	Unit 7/ 30 Perry St, Matraville	02 9700 1050
Excel Technology Group	18 Staple Street, Seventeen Mile Rocks, QLD 4073	07 3279 4322

Supplier	Address	Phone 1
Gerard Lighting Pty Ltd	96-112 Gow Street, Padstow NSW 2211	1300 799 300
Global Traffic Equipment Pty Ltd (Giga Signs)	27 Gibbs Street, Arundel QLD 4214	07 5631 4444
Gripset Industries Pty Ltd	30 Park Ave, Woodville North SA 5012	08 8124 7300
Hayman Industries	119 Airds Road, Minto NSW 2566	02 8796 2600
ICON	2 Field Close, Moorebank NSW2170	02 96125800
RMS ITS Manufacturing	129A Orchardleigh Street, Yennora NSW 2150	02 9794 4754
J1-LED	10 Production Street, Beenleigh Qld 4207	07 3807 6272
John McGain Products	3 Production Ave, Kogarah NSW 2217	02 9587 0232
Juvana Pty Ltd	PO Box 5522, Brendale QLD 4500	07 3203 6556
Kenshaw Electrical Pty Ltd	9 Belford Place, Cardiff NSW 2285	02 4903 1500
Kistler Instruments Australia Pty Ltd	U1.23 L1, 202 Jells Rd, Wheelers Hill VIC 3150	03 9560 5055
KJ Precision Engineering	16/388 Newman Rd, Geebung Qld Australia 4034	07 3265 3240
Logix Engineering	28 Spine Street, Summer Park. QLD 4074	0434 034 703
Madison Technology Cables	149 Beaconsfield Road, Silverwater NSW 2128	02 97481911
Magnetic Automation Pty Ltd	U1, 24 Prince William Drv, Seven Hills, NSW 2147	02 9421 8800
Magnum MFG Pty Ltd	45 Holland St, Northgate QLD 4013	07 3266 1000
Manly Hydraulics Laboratory	110b King Street, Manly Vale NSW 2093	02 9949 0200
Mascot Engineering	37 Tarlington Place, Smithfield NSW 2164	02 9828 2600
Micro Connect Pty Ltd	22 Gardenia Place FOREST GLEN 4556	02 8002 1987
Mercury Innovation	Unit 1 179/183 Woodpark Rd, Smithfield NSW 2164	0403 997878
Microcom Pty Ltd (MetroCount)	15 O'Connor Close, North Coogee WA 6163	08 9430 6164
Navtech Radar Ltd	Ardington Wantage Oxfordshire UK OX12 8PD	+44 (0)1235 832 419
Nortech Detection Pty Ltd	5 / 49 Frenchs Forest Rd, Frenchs Forest NSW 2086	02 8977 4047
Olex Cables	29 Davis Road, Wetherill Park NSW 2164	1300 556 555
PJ's Loop Services Pty Ltd	30 Medway Road, Bringelly NSW 2556	02 4774 9747
Powercast Pty Ltd	27/13 Swaffham Road, Minto NSW2566	02 87313301
Quick Turn Circuits Pty Ltd	14 Leeds Street, Rhodes NSW 2138	02 9896 5702
Regal Switchboards	9 / 28 Vore Street, Silverwater NSW 2128	02 9748 7888
Road Runner Parts	U4/48 Riverside Rd, Chipping Norton NSW 2170	02 9728 3443
RTS Constructions Aust Pty Ltd	Unit 1, 2 Stoddart Road, Prospect NSW 2148	02 9636 1233
SAGE Automation	L1 1, 3 Richardson Place, North Ryde NSW 2113	02 9878 9600
Scott Technology Pty Ltd	Unit 1, 28 Lee Holm Road, St. Marys NSW 2760	02 9623 6444
SICK Pty Ltd	Unit 1 , 17 Stanton Rd Seven Hills NSW 2147	03 9457 0600

Register of ITS Field Equipment

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Supplier	Address	Phone 1
Taperline	2 Caruso Court, Maddington WA 6109	08 9493 1414
Traffic Control Supplies	59 Moreton Street Heathwood QLD 4110	07 3278 8022
TCS Products Pty Ltd	5 / 24 Vore Street Silverwater NSW 2128	1 800 506 706
Traffic Signals Sales & Service Pty Ltd	133 Arcadia Road, Arcadia NSW 2159	02 9736 3677
Traffic Tech	2 /26 Leighton Place, Hornsby NSW 2077	02 9477 7262
Tyco Traffic & Transportation	137 McCredie Street, Guildford NSW 2161	02 8718 2000
Wieland Engineering	19 Wellington Street, Riverstone NSW 2765	02 9627 4400

ANNEXURES TS200/C TO TS200/L – (NOT USED)

ANNEXURE TS200/M – REFERENCED DOCUMENTS

RMS Specifications

RMS Q	Quality Management System
RMS TS201	Approval of ITS Field Equipment
RMS TS202	Project Approval of ITS Solutions for Projects
RMS TSxxx	RMS “Traffic Systems” (ITS) specifications 001 to 299