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# **E&ITS Design Standard 04**

## **Preferred Electrical and ITS Equipment List**

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otherwise.

D22#1248812  
March 2025

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## Document Control

Owner	Manager Electrical Asset Management
Custodian	Principal Electrical Standards Engineer
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## Amendments

Revision Number	Revision Date	Description of Key Changes	Section / Page No.
A	August 2018	Initial Issue	
0	February 2019	Category 5 corrosion treatment, Highway LEDs	4.2.4/5 & 4.13.3/13
1	March 2019	Remove Sicame Piranha, added Sicame WT Henley Compound added Swivelpole options	4.3.5, 4.4.4
3	July 2019	Updated Pit manufacturers and Link manufacturers	4.3.5, 4.6.2
4	January 2020	Auscon Industries pre-cast foundations added	4.4.4
5	January 2020	Logix ITS Cabinets Added	4.2.5
6		General change to format and updating of equipment	All
7	February 2023	Inclusion of Philips Luma and Auscon, deletion of Supplier column	Pg 6, 7 and all
8	March 2023	Amendment to preferred pit suppliers listing	Pg

9	April 2023	Amendment to preferred modem supplier	Pg 8
10	June 2023	Inclusion of new preferred component, Fabric Innerduct Cable Sleeve	Pg5
11	April 2024	Philips Clearflood HIL BVP651 added as per TQ 846, Removed Traffic Signal Processor card with in-built Bluetooth Detector, inclusion of Channell Pits and Pit Lids range into equipment list.	Pg 6, 7, 10, 11
12	May 2024	ELV Dim by Wire equipment inclusion, Bambach Cables and sensavers.	Pg 9,10,11.
13	November 2024	Inclusion of SAGE Automation and TroPacific cabinet.	Pg 5
14	March 2025	Modification to FOBOTs, splice enclosures addition of fibre cleaner.	Pg 8

## 1 PURPOSE

This document provides a guide as to the preferred Electrical and Intelligent Transport System (ITS) equipment to be supplied to Main Roads Western Australia.

Efforts to ensure adherence to this document will assist in providing efficient and effective maintenance outcomes due to:

- More reliable equipment;
- Increased familiarity of field staff with the asset base; and
- Optimised spare stock levels.

This list does not override any requirements of a Contract, nor does it eliminate other potential Suppliers being considered. However, suppliers not listed will require formal approval from Main Roads Electrical Asset Management.

## 2 SCOPE

This document applies to Electrical and ITS equipment procured for the Main Roads Electrical and ITS asset network.

Suppliers of electrical equipment are encouraged to review the list and make contact with the Main Roads Electrical Standards section to recommend additions and/or modifications to the list.

## 3 ROLES & RESPONSIBILITIES

Role	Responsibility
<b>Manager Electrical Asset Management</b>	Owner
<b>Principal Electrical Standards Engineer</b>	Custodian

4    PREFERRED ELECTRICAL AND ITS EQUIPMENT

Product Category	Asset Type	Component	Product Description	Manufacturer/Supplier/ Vendor	Product Identifier / Model Number	Notes and Special Conditions
Electrical - General		Circuit Breaker	Circuit breaker	NHP ABB Schneider Electric Eaton		
Electrical - General		Circuit Breaker	Earth leakage circuit breaker	NHP ABB Schneider Electric Eaton		
Electrical - General		Residual Current Device	Residual current circuit breaker	NHP ABB Schneider Electric Eaton		
Electrical - General		Surge Diverter	230V AC surge diverter	Novaris	SDD1 AC Surge Diverter	
Electrical - General		Surge Diverter	DC surge diverter	Novaris	SDD2 DC Surge Diverter	
Electrical - General		Surge Diverter	PoE surge diverter	Novaris	RJ45-1CAT6	
Electrical - General		Surge Diverter	PoE surge diverter	Citel	MJ8-POE-B	
Electrical - General		PoE Injector	DC-DC PoE injector	Tycon	TP-DCDC-1224	
Electrical - General		Ethernet Extender	PoE power sourcing device	Veracity	Veracity Longspan VLS 1P-B	
Electrical - General		Ethernet Extender	PoE powered device	Veracity	Veracity Longspan VLS 1P-C	
Electrical - General		Power Supply	DC power supply	Mean Well	DR-120-24 DRP-240-24 MDR-60-12 MDR-60-24 MDR-40-12 MDR-40-24 DR-4524	
Electrical - General		Transformer	Step down transformer LV/ELV	Legrand	100 VA Transformer 24-48 V SEC 160 VA Transformer 24-48 V SEC	
Electrical - General		Field Earth Cable	10 mm <sup>2</sup> green/yellow earth cable V-90 16 mm <sup>2</sup> green/yellow earth cable V-90 25 mm <sup>2</sup> green/yellow earth cable V-90			

Product Category	Asset Type	Component	Product Description	Manufacturer/Supplier/ Vendor	Product Identifier / Model Number	Notes and Special Conditions
Electrical - General		Field Active Cable	6 mm <sup>2</sup> SDI cable Red/Red 10 mm <sup>2</sup> SDI cable Red/Red 16mm <sup>2</sup> SDI cable Red/Red 25mm <sup>2</sup> SDI cable Red/Red 6mm <sup>2</sup> SDI cable White/White 10mm <sup>2</sup> SDI cable White/White 16mm <sup>2</sup> SDI cable White/White 25mm <sup>2</sup> SDI cable White/White 6mm <sup>2</sup> SDI cable Blue/Blue 10mm <sup>2</sup> SDI cable Blue/Blue 16mm <sup>2</sup> SDI cable Blue/Blue 25mm <sup>2</sup> SDI cable Blue/Blue			
Electrical - General		Field Neutral Cable	6mm <sup>2</sup> SDI cable Black/Black 10mm <sup>2</sup> SDI cable Black/Black 16mm <sup>2</sup> SDI cable Black/Black 25mm <sup>2</sup> SDI cable Black/Black			
Electrical - General		Cable Sleeve	Fabric Innerduct	Maxcell	<a href="https://www.maxcell.us/en/default.aspx">https://www.maxcell.us/en/default.aspx</a>	
Electrical - General		Cabinet / Building Wire	2.5mm <sup>2</sup> red active wire 2.5mm <sup>2</sup> black neutral wire 2.5mm <sup>2</sup> green/yellow earth wire			
Electrical - General		Cable Direction Marker Disc	One-way MRWA cable marker disc Two-way MRWA cable marker disc	Advanced Electrical Equipment Auscon Industries		
Electrical - General		Cabinet	Roadside ITS cabinet - option 1	Logix Engineering	ITCS180906 181806 - double cabinet	
Electrical - General		Cabinet	Roadside ITS cabinet - option 2	Logix Engineering	RSE 130704	
Electrical - General		Cabinet	Roadside ITS cabinet	SAGE Automation	Rittal / SAGE IP Single Door – 4 Door cabinet – 850mm Wide Rittal / SAGE IP Double Door – 6 Door cabinet – 1650mm Wide	
Electrical - General		Cabinet	Roadside ITS cabinet	TROPAC Industrial Electrical Solutions	TRO-ITS1809060-MRTS226 TRO-A18018062-T33-TMR	
Electrical - General		Flexible Conduits	25 mm orange flex conduit 32 mm orange flex conduit 40 mm orange flex conduit 50 mm orange flex conduit	MM Electrical Mylec Electrical Advanced Electrical Equipment	Flex Conduit 25 mm HD orange Flex Conduit 32 mm HD orange Flex Conduit 40 mm HD orange Flex Conduit 50 mm HD orange	

Product Category	Asset Type	Component	Product Description	Manufacturer/Supplier/ Vendor	Product Identifier / Model Number	Notes and Special Conditions
Electrical - General		Direct Buried Conduits	50 mm HDPVC orange conduit 63 mm mm HDPVC orange conduit 80 mm HDPVC orange conduit 100 mm HDPVC orange conduit 150 mm HDPVC orange conduit	MM Electrical Myelec Electrical Advanced Electrical Equipment	Conduit 50 mm HDPVC orange Conduit 63 mm HDPVC orange Conduit 80 mm HDPVC orange Conduit 100 mm HDPVC orange Conduit 150 mm HDPVC orange	
Electrical - General		Terminals	Earth terminal	Weidmuller	Weidmuller 6 mm WPE6	
Electrical - General		Terminals	240 V AC terminal block	Phoenix Contact	UK 5-MTK-P/P	
Electrical - General		Terminals	24 V DC terminal block	Phoenix Contact	Fuse Modular UT 4-HESI (5x20)	
Electrical - General		Terminals	End bracket	Phoenix Contact	E/NS 35N	
Electrical - General		Terminals	Partition plate	Phoenix Contact	ATP-UK-5-MTK	
Electrical - General		Gel Joint	Cable gel joint kit - up to 16 mm <sup>2</sup> cable	Eazi	Eazi Gel Cable Joint	
Electrical - General		Gel Joint	Cable gel joint kit - 25 mm <sup>2</sup> cable	MOREK	Break 25 Gel Joint Kit	
Electrical - General		Gel Joint	Cable gel joint kit - 30 mm <sup>2</sup> cable	MOREK	Break 30 Gel Joint Kit	
Electrical - General		Gel Joint	Cable gel joint kit - 50 mm <sup>2</sup> cable	MOREK	Break 50 Gel Joint Kit	
Electrical - General		Cabinet Plinth	Cabinet / switchboard / controller concrete plinth	Prompt Engineering		
Electrical - General		Cable Pit	Black plastic pit P1 Black plastic pit P2 Black plastic pit P4 Black plastic pit P8	ACO Australia	Refer to manufacturer's website for details <a href="https://www.acocablemate.com.au/">https://www.acocablemate.com.au/</a>	
Electrical - General		Cable Pit	Black plastic pit P1 Black plastic pit P2 Black plastic pit P4 Black plastic pit P8	Burdens Australia	Refer to manufacturer's website for details <a href="http://burdens.net.au/">http://burdens.net.au/</a>	
Electrical - General		Cable Pit	Black plastic pit P1 Black plastic pit P2 Black plastic pit P4 Black plastic pit P8	Viscount Plastics	Refer to website for details <a href="https://mybranch.middys.com.au/product/search?q=viscount">https://mybranch.middys.com.au/product/search?q=viscount</a>	
Electrical - General		Cable Pit	Black plastic pit P1 Black plastic pit P2 Black plastic pit P4 Black plastic pit P8 Double lid fibre cement pit - FC12 Single lid fibre cement pit - FC18	Auscon Industries	Refer to website for detail <a href="https://www.acindustries.net.au/catalogue">https://www.acindustries.net.au/catalogue</a>	

Product Category	Asset Type	Component	Product Description	Manufacturer/Supplier/Vendor	Product Identifier / Model Number	Notes and Special Conditions
Electrical - General		Cable Pit	Double lid fibre cement pit - FC12 Single lid fibre cement pit - FC18	MPH Construction Pty Ltd	FC12 Cable Pit 760 x 700 x 825 mm(L x W x D) FC18 Cable Pit 800 x 700 x 850 mm (L x W x D)	
Electrical - General		Cable Pit Surround	Cement concrete Surround	Auscon Industries	Refer to website for detail <a href="https://www.acindustries.net.au/catalogue">https://www.acindustries.net.au/catalogue</a>	
Electrical – General		Cable Pit	HDPE PIT/VAULT BULK™ 0 HDPE PIT/VAULT BULK™ 1 HDPE PIT/VAULT BULK™ 2 HDPE PIT/VAULT BULK™ 3 HDPE PIT/VAULT BULK™ 4 HDPE PIT/VAULT BULK™ 5 HDPE PIT/VAULT BULK™ 7 HDPE PIT/VAULT BULK™ 8	Channell	Refer to the manufacturer's website for details. <a href="https://www.channell.com/products/">https://www.channell.com/products/</a> Example: BULK3369072 HDPE Cable Pit/Vault, Size 3 17"x30" (425x750), Depth 36" (900), ID Marked Main Roads WA, Shield™ Class C Composite Cover, Security Bolt-Down,	All Channell pits are sold as a system and come complete with a SHIELD™ Composite Tier 22 150 kN lid
Electrical – General		Cable Pit Lid	SHIELD™ Composite Tier 22 150 kN Lid	Channell	Refer to the manufacturer's website for details. <a href="https://www.channell.com/products/">https://www.channell.com/products/</a>	To be optioned with the pit at the time of purchase
Electrical – General		Cable Pit Lid	SHIELD™ Composite Tier 22 150 kN Padlockable Lid	Channell	Refer to the manufacturer's website for details. <a href="https://www.channell.com/products/">https://www.channell.com/products/</a>	To be optioned with the pit at the time of purchase
Electrical – General		Cable Pit Lid	SHIELD™ Composite Tier 22 150 kN Self-Lock Lid	Channell	Refer to the manufacturer's website for details. <a href="https://www.channell.com/products/">https://www.channell.com/products/</a>	To be optioned with the pit at the time of purchase
Electrical - General		Cable Pit Lid	SUPER BULK™ Ductile Iron 240 kN Lid	Channell	Refer to the manufacturer's website for details. <a href="https://www.channell.com/products/">https://www.channell.com/products/</a>	To be optioned with the pit at the time of purchase
Electrical - General		Cable Pit Lid	Cement concrete lid	ACO Australia	MRWA concrete lid for black polyethylene pit P1 MRWA concrete lid for black polyethylene pit P2 MRWA concrete lid for black polyethylene pitP4 MRWA concrete lid for black polyethylene pit P8	
Electrical - General		Cable Pit Lid	Cement concrete lid	Auscon Industries	Refer to website for detail <a href="https://www.acindustries.net.au/catalogue">https://www.acindustries.net.au/catalogue</a>	
Electrical - General		Cable Pit Lid	Steel lockable lid	ACO Australia	P1 pit PowerLok lid P2 pit PowerLok lid P4 pit PowerLok lid P8 pit PowerLok lid	
Electrical - General		Cable Pit Lid	Steel lockable lid	Auscon Industries	Refer to website for detail <a href="https://www.acindustries.net.au/catalogue">https://www.acindustries.net.au/catalogue</a>	
Electrical - General		Battery	12 V 120 Ah battery	VISION	VISION HF12-560	
Electrical - General		Battery Charge Controller	MPPT smart charge controller	Victron Energy	Blue Solar MPPT	To be sized based on load and backup charge requirements
Electrical - General		Connector	Link line tap connector 16 mm <sup>2</sup> Link line tap connector 35 mm <sup>2</sup>	Schneider Electric	CLIPSAL LINE TAP LINK SUIT 16 mm <sup>2</sup> CABLE BP22 CLIPSAL LINE TAP LINK SUIT 35 mm <sup>2</sup> CABLE BP24	
Electrical - General		Connector	42 mm 4xM8 Allen screw connector 53 mm 4xM10 Allen screw connector	Contact Italia	Refer to supplier website for details <a href="https://www.aldora.com.au/">https://www.aldora.com.au/</a>	
Electrical - General		Connector	Mechanical brass tunnel connector 4 to 60 mm <sup>2</sup> copper	GVKinsman	Refer to manufacturer's website for details <a href="http://www.gvk.com.au/">http://www.gvk.com.au/</a>	

Product Category	Asset Type	Component	Product Description	Manufacturer/Supplier/ Vendor	Product Identifier / Model Number	Notes and Special Conditions
Electrical - General		Connector	Waterproof piercing connector	Sicame Australia	Piranha Muci Series Refer to manufacturer's website for details <a href="https://www.sicame.com.au/">https://www.sicame.com.au/</a>	
Electrical - General		Joint	Jointing compound	WT Henley	Henley Compound HEN-53653-01	
Electrical - General		Connector	Anderson connector - plug and pin	Anderson Connect		
Communications - General		Ethernet Cable	Cat 6 UTP LAN Outdoor GEL Filled Cable			
Communications - General		Flexible Conduits	16 mm white flex conduit 25 mm white flex conduit 32 mm white flex conduit 40 mm white flex conduit 50 mm white flex conduit	Cable Flow	Flex Conduit 16mm HD white Flex Conduit 25mm HD white Flex Conduit 32mm HD white Flex Conduit 40mm HD white Flex Conduit 50mm HD white	
Communications - General		Direct Buried Conduits	20 mm HDPVC white communications conduit, including all couplings, bends and caps 25 mm HDPVC white communications conduit, including all couplings, bends and caps 50 mm HDPVC white communications conduit, including all couplings, bends and caps 100 mm HDPVC white communications conduit, including all couplings, bends and caps	MM Electrical Myelec Electrical Advanced Electrical Equipment		
Communications - General		FOBOT	Fibre optic break out tray	Hexatronic (Corelink)	CLP-1RU-2P-S (48LC) CLP-2RU-4P-S (96LC) CLP-3RU-8P-S (192 LC)	
Communications - General		FOBOT	Fibre optic break out tray	4Cabling (Optotec)	1RU 19 inch Rack Mount Pivot Splice / Patch Shelf (96LC)	
Communications - General		FOBOT	Fibre optic break out tray	4Cabling	1RU Sliding FOBOT Patch Panel Rodent Proof (24-48 LC)	
Communications - General		Splice Enclosure	Fibre splice enclosure	STL (Optotec)	Max Splice Enclosures Max 4 (144F) Max 6 (288F)	
Communications - General		Splice Enclosure	Fibre splice enclosure	Hexatronic (OSA)	Slim Dome Closure – Splice SHDC-AA 144 (288) Splice Capacity	
Communications - General			Fibre Connector Cleaner	CLETOP	Fibre Cleaner for LC (Type B)	
Communications - General			Fibre Connector Cleaner	Fujikura	One Click Cleaner LC Pro	



Product Category	Asset Type	Component	Product Description	Manufacturer/Supplier/ Vendor	Product Identifier / Model Number	Notes and Special Conditions
Communications - General		Network Switch	Core network switch	Cisco	Cisco Catalyst 9500	
Communications - General		Network Switch	Cabinet network switch	Cisco	Cisco IE3400-8T2S-A	
Communications - General		Network Switch	Cabinet network switch	MOXA	MOXA EDS-P510-8POE-2GTXSFP-T	
Communications - General		Network Switch	Network switch expansion module - Ethernet ports	Cisco	Cisco IEM-3400-8T	
Communications - General		Network Switch	Network switch expansion module - SFP ports	Cisco	Cisco IEM-3400-8S	
Communications - General		Modem	4G modem	Cisco	Catalyst IR1101 rugged series router	
Communications - General		Terminal Server	Terminal server	MOXA	MOXA NPort IA5150 MOXA NPort IA5150-S-SC MOXA NPort 5110 MOXA NPort 6250 S-SC	
Communications - General		Media Converter	SFP to Ethernet media converter	MOXA	MOXA IMC-101-S-SC	
ITS Equipment	ESLS	ESLS Unit	Complete ESLS unit	J1-LED		
ITS Equipment	ESLS	Pole	114 mm diameter aluminium fluted pole - powder yellow	Signfix	AFP114/6.5	Powder coated yellow for ESLS
ITS Equipment	CCTV	PTZ Camera	PTZ CCTV camera	Bosch	BOS-MIC7522Z30WR	
ITS Equipment	CCTV	PTZ Camera	PTZ CCTV camera	Pelco	Pelco Esprit Enhanced Standard with Wiper	
ITS Equipment	CCTV	PTZ Dome Camera	PTZ Dome camera	Bosch	Bosch NIN-73023-A3A	
ITS Equipment	CCTV	PTZ Dome Camera	PTZ Dome camera	Panasonic	Panasonic WV-X6511N	
ITS Equipment	CCTV	Washer Nozzle	CCTV washer nozzle	Fast Controls	Refer to manufacturer's website for details <a href="https://www.fastcontrols.com/">https://www.fastcontrols.com/</a>	
ITS Equipment	CCTV	Washer Pump	CCTV washer pump (SEIM 109905 Water Pump 24 VDC)	Fast Controls or any other reputable supplier	Refer to manufacturer's website for details <a href="https://www.fastcontrols.com/">https://www.fastcontrols.com/</a>	
ITS Equipment	CCTV	Washer Pump Controller	CCTV washer controller (BOSCH MIC-ALM-WAS-24) box	Fast Controls	Refer to manufacturer's website for details <a href="https://www.fastcontrols.com/">https://www.fastcontrols.com/</a>	
ITS Equipment	CCTV	Adapter	Deep conduit adapter to suit MIC 7000 PTZ	Bosch		
ITS Equipment	CCTV	Pole	CCTV hinged pole	Ingal EPS Auspole Westpole	CCTV hinged pole 12 m	
ITS Equipment	CCTV	Pole	CCTV and traffic signal combined pole – 1 m	Ingal EPS Auspole Westpole	Traffic Signal Pole Extension TS/CCTV 1 m	
ITS Equipment	CCTV	Pole	CCTV and traffic signal combined pole - 0.5 m	Ingal EPS Auspole Westpole	Traffic Signal Pole Extension TS/CCTV 0.5 m	
ITS Equipment	CCTV	Pole	Standalone CCTV 4.5 m direct buried pole	Ingal EPS Auspole Westpole	CCTV direct buried 4.5m x 115 mm	

Product Category	Asset Type	Component	Product Description	Manufacturer/Supplier/Vendor	Product Identifier / Model Number	Notes and Special Conditions
ITS Equipment	CCTV	Pole	Standalone CCTV 6m direct buried pole	Ingal EPS Auspole Westpole	CCTV direct buried 6m x 220mm	
ITS Equipment	Traffic Signal	Lantern	200 mm vehicle roundel aspect HPSM (high power surface mount) traffic signal lanterns	BRAUMS	Refer catalogue for product codes of vehicle roundel aspect arrangements	
ITS Equipment	Traffic Signal	Lantern	200 mm arrow aspect HPSM (high power surface mount) traffic signal lanterns	BRAUMS	Refer catalogue for product codes of arrow aspect arrangements	
ITS Equipment	Traffic Signal	Lantern	200 mm pedestrian aspect HPSM (high power surface mount) traffic signal lanterns	BRAUMS	Refer catalogue for product codes of pedestrian aspect arrangements	
ITS Equipment	Traffic Signals	Dim by wire ELV Lantern	42 V 200 mm vehicle roundel aspect HPSM (high power surface mount) traffic signal lanterns with DIM by wire functionality with blue boss caps	BRAUMS	Refer catalogue for product codes of vehicle roundel aspect arrangements	
ITS Equipment	Traffic Signals	Dim by wire ELV Lantern	42 V 200 mm arrow aspect HPSM (high power surface mount) traffic signal lanterns with blue boss caps	BRAUMS	Refer catalogue for product codes of vehicle roundel aspect arrangements	
ITS Equipment	Traffic Signals	Dim by wire ELV Lantern	42 V 200 mm pedestrian aspect HPSM (high power surface mount) traffic signal lanterns with blue boss caps	BRAUMS	Refer catalogue for product codes of vehicle roundel aspect arrangements	
ITS Equipment	Traffic Signals	ELV Traffic Signal Controller	ATSC4 Traffic Controller for 42 V dim by wire operation	BRAUMS	Refer catalogue for product codes of vehicle roundel aspect arrangements	
ITS Equipment	Traffic Signals	ELV Traffic Signal Controller	ATSC4 Audio Tactile Driver for 42 V dim by wire operation	BRAUMS	Refer catalogue for product codes of vehicle roundel aspect arrangements	
ITS Equipment	Traffic Signal	Pedestrian Countdown Timer	Double 7-Segment display pedestrian countdown timer	BRAUMS	BTLP22WCDDT	
ITS Equipment	Traffic Signal	Target Board	Three aspect target board Four aspect target board Six aspect target board	BRAUMS	BTB2X3WA BTB2X4WA BTB2X6WA	
ITS Equipment	Traffic Signal	Terminal Blocks	19-point terminal block 29-point terminal block 32-point terminal block	BRAUMS	AA0017 AA0019 AA0020	
ITS Equipment	Traffic Signal	Visor	200 mm open visor 200 mm closed visor	BRAUMS	BPV2X2W BPV2X2CW	
ITS Equipment	Traffic Signal	Push Button	Pedestrian push button with Audio Tactile Transducer	BRAUMS	BPB1001	
ITS Equipment	Traffic Signal	Push Button	Pedestrian push button with Audio Tactile Transducer and LED Call Record	BRAUMS	BPB1003	

Product Category	Asset Type	Component	Product Description	Manufacturer/Supplier/ Vendor	Product Identifier / Model Number	Notes and Special Conditions
ITS Equipment	Traffic Signal	Push Button - Audio Tactile Driver	Audio Tactile Driver Housing complete with driver board, mounted using U-Bolt	BRAUMS	BAT1002	
ITS Equipment	Traffic Signal	Pole	Type 1 - Standard pole with push button 4550 mm	Ingal EPS Auspole Westpole		
ITS Equipment	Traffic Signal	Pole	Type 2 - Standard plain 4550 mm	Ingal EPS Auspole Westpole		
ITS Equipment	Traffic Signal	Pole	Type 3 - Stub post with push button 2500 mm	Ingal EPS Auspole Westpole		
ITS Equipment	Traffic Signal	Cable	19-core traffic signal power cable	MM Electrical Myelec Electrical Advanced Electrical Equipment	19 CORE TRAFFIC SIGNAL ORANGE CABLE	
ITS Equipment	Traffic Signal	Cable	29-core traffic signal power cable	MM Electrical Myelec Electrical Advanced Electrical Equipment	29 CORE TRAFFIC SIGNAL ORANGE CABLE	
ITS Equipment	Traffic Signal	Cable	51-core traffic signal power cable	MM Electrical Myelec Electrical Advanced Electrical Equipment	51 CORE TRAFFIC SIGNAL ORANGE CABLE	
ITS Equipment	Traffic Signal	Controller	Traffic signal controller	Aldridge Traffic Controllers	ATSC4	
ITS Equipment	Traffic Signal	Advanced Warning Sign	Advanced warning sign type B Advanced warning sign type C Advanced warning sign type D Advanced warning sign type D - rail	Corsign	Type B – 1600 mm x 1100 mm Type C – 2000 mm x 1350 mm Type D – 2700 mm x 1800 mm Type D rail – 2700 mm x 1800 mm	
ITS Equipment	ESLS	Pole Footings	ESLS Precast Signfix concrete footing	Cascada	790WSF350	
ITS Equipment	ESLS	Mini Switchboard	ESLS mini roadside switchboard	CPE Switchbaords Price Trandos Engineering DVL Group		
ITS Equipment	Bluetooth	Bluetooth Beacon	Standalone Bluetooth vehicle detection device	SAGE Automation	SAGE Edge	
ITS Equipment	Bluetooth	Bluetooth Beacon	Standalone 4G solar Bluetooth detection device with solar kit	SAGE Automation	SAGE Edge 60 W Solar Kit	
ITS Equipment	Bluetooth	Standalone Pole	Standalone pole for 4G Bluetooth devices	Signfix	Fluted Pole Green 114 mm x 6.5 m	

Product Category	Asset Type	Component	Product Description	Manufacturer/Supplier/ Vendor	Product Identifier / Model Number	Notes and Special Conditions
ITS Equipment	Vehicle Detector	Feeder Cable	Twisted balanced-twin Feeder cable, 1.5 mm <sup>2</sup> (7/0.5 mm) plain annealed copper core conductors each polyethylene insulated, tinned annealed copper drain conductor, all polyethylene insulated and PVC sheathed	Bambach Cables MM Electrical Myelec Electrical Advanced Electrical Equipment		
ITS Equipment	Vehicle Detector	Stud Detector	Wireless magnetometer in-ground sensor	Sensys Networks	VSN-240-F	
ITS Equipment	Vehicle Detector	Housing	In ground stud detector housing (white lid only)	R&A Solution	RAS-SS0001 – specify white lid upon any procurement action	Email <a href="mailto:info@rnasolutions.co">info@rnasolutions.co</a> or contact 0426775383 or 0400032487
ITS Equipment	Vehicle Detector	Loop Slot Sealant	Epoxy sealant	Sensys Networks	VSN 240-EPX-450	
ITS Equipment	Vehicle Detector	Loop Detector Cable	1.5 mm <sup>2</sup> 7/0.5 mm tinned annealed copper polypropylene insulated cable	Bambach Cables MM Electrical Myelec Electrical Advanced Electrical Equipment		
ITS Equipment	Vehicle Detector	Wireless Detector	Wireless vehicle sensor	Sensys Networks	FlexMag VSN240-F-2A	
ITS Equipment	Vehicle Detector	Controller	Inductive loop vehicle detector controller	Clearview Intelligence	Marksman 680	
ITS Equipment	Vehicle Detector	Controller	Inductive loop vehicle detector controller	Excel Technology Co.	XL-1000-C	
ITS Equipment	Vehicle Detector	Access Point	Wireless vehicle detector access point	Sensys Networks	AP240-E	
ITS Equipment	Vehicle Detector	Repeater	Wireless vehicle detector repeater node	Sensys Networks	RP240-B-LL	
ITS Equipment	Roadside Help Phone	Help Phone	Roadside help phones	Clearsonics	Clearsonics - PDC-2BI-S20-12V7-3G-I-MRWA	
ITS Equipment		Antenna	5-in-1 MIMO antenna	Poynting	PA A-PUCK-0005-V1-01	
ITS Equipment		Antenna	5-in-1 MIMO antenna	Taoglas	Pantheon MA750 - A100048 MA750	
ITS Equipment		Antenna	2-in-1 MIMO antenna	Taoglas	Spartan MA600 - A100014 MA600	
Lighting	Road Lighting	Road Light Pole - Direct Buried	Main Roads direct buried roadway light pole	Ingal EPS Auspole Westpole G&S Industries AD Coote		
Lighting	Road Lighting	Road Light Pole - Slip Base	Main Roads slip base roadway light pole	Ingal EPS Auspole Westpole G&S Industries AD Coote		

Product Category	Asset Type	Component	Product Description	Manufacturer/Supplier/ Vendor	Product Identifier / Model Number	Notes and Special Conditions
Lighting	Road Lighting			Swivelpole	F19, G5, G6, G8	The use of this pole will require approval from Main Roads Electrical Asset Management branch.
Lighting	Road Lighting	Road Light Pole - Slip Base	Slip base plate adaptor	Ingal EPS Auspole Westpole G&S Industries AD Coote		
Lighting	Road Lighting	Road Light Pole - Slip Base	Slip base washer	Ingal EPS Auspole Westpole G&S Industries AD Coote		
Lighting	Road Lighting	Road Light Pole - Slip Base Adaptor	Adaptor for slip base light poles	Ingal EPS		
Lighting	Road Lighting	Pole - Structure Mount	Structure mounted light pole	G&S Industries Swivelpole		
Lighting	Road Lighting	Switchboard	Single phase, single door switchboard Three phase, single door switchboard Three phase, double door switchboard	CPE Switchboards Price Trandos Engineering DVL Group		
Lighting	Road Lighting	Gear Tray	Road lighting gear tray	Thorn Lighting		
Lighting	Road Lighting	Luminaire	Road lighting LED luminaire	GE	Evolve Cat V Leopard	
Lighting	Road Lighting	Luminaire	Road lighting LED luminaire	Philips	Luma	
Lighting	Road Lighting	Luminaire	Road lighting LED luminaire	Sylvania	RoadLED Midi	
Lighting	Road Lighting	Luminaire	Underbridge luminaire	Sylvania Schreder	Omnistar	
Lighting	Road Lighting	Luminaire	Underbridge luminaire	Philips	TubePoint	
Lighting	Road Lighting	Luminaire	Road solar LED luminaire	Philips	RoadFlair Gen 4.0	
Lighting	Road Lighting	Luminaire	Road solar LED luminaire	Screentech	LED Solar Street Light System	
Lighting	Road Lighting	Luminaire	Road solar LED luminaire	Philips	Luma gen2 Solar	
Lighting	Road Lighting	Luminaire	Road solar LED luminaire	Greenfrog Systems	GFS-400 Aspire 450 Aspire 675	
Lighting	Road Train Assembly Area Flood Lighting	Luminaire	Road Train Assembly Area LED Flood luminaire	Philips	Clearflood HIL BVP651	
Lighting	PSP Lighting	PSP Light Pole - Direct Buried	PSP tilted pole 7.1m	Ingal EPS Auspole Westpole		
Lighting	PSP Lighting	Service Cutout	Three phase street light cutout	WT Henley	Service Cutout Series 5	
Lighting	PSP Lighting	Service Cutout	Three phase street light cutout	Eaton	Eaton SL3	
Lighting	PSP Lighting	Luminaire	PSP luminaire	Thorn Lighting	Isaro Pro	

Product Category	Asset Type	Component	Product Description	Manufacturer/Supplier/ Vendor	Product Identifier / Model Number	Notes and Special Conditions
Lighting	PSP Lighting	Luminaire	PSP LED Luminaire	Philips	Luma	
Lighting	PSP Lighting	Luminaire	Underpass PSP luminaire	Thorn Lighting	Katona	
Lighting	PSP Lighting	Luminaire	Underpass PSP luminaire	S-Tech	LED Bunker Light	
Lighting	PSP Lighting	Luminaire	Underpass PSP luminaire	Thorlux	Prismalette Pro	
Lighting	PSP Lighting	Luminaire	Underpass PSP luminaire	Aldridge	Resilience LED	