DOCUMENT TRANSMITTAL NOTICE

connetics
ALL WAYS CONNECTING
DESIGN + ENGINEERING

Project Broadfield Grange Sub-Division - Phase 2 - Stage 15-16-17

Project No 4017097

Discipline Lighting Design

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	Date of Issue											
Year	26	26	26									
Month	4	4	4									
Day	1	14	16									

Doc. No.	Document Title	Rev	Issue										
400459	Broadfield Grange Sub-Division - Stage 15-16-17 - Sheet 1	B	A	B	B								
400459	Broadfield Grange Sub-Division - Stage 15-16-17 - Sheet 2	B	A	B	B								
	Pole Offset drawing	A		A									
400459	Autocad DWG Format	B	A		B								
	Producer Statement	A		A									
	Design Report	A		A									
	Street Lighting Specification	A		A	A								
	15 .0m Road - Amberech Road - Single Sided	A		A									
	16.5m Road - Willow Wood Street - Single Sided	A		A									
	16.5m Road - Willow Wood Street - Staggered	A		A									
	17.0m Road - Kennebrook Road - Single Sided	A		A									
	17.0m Road - Kennebrook Road - Staggered	A		A									
	20.0m Road - Scout Street - Single Sided	A		A									
	20.0m Road - Scout Street - Staggered	A		A									
	20.0m Road - Scout Street - 33.8W - Single Sided	A		A									
	25.0m Road - Scout Street - 7.1m Offset - Staggered	A		A									
	25.0m Road - Scout Street - 7.5m Offset - Staggered	A		A									
	AGI Compliance PLot	A		A									
	Windsor Urban Drawing - Pole L1-L2-L3	A		A									
	Windsor Urban - Pole Producer Statement	A		A									
	Pole Structural Compliance Certificate - Windsor Urban	A		A									

LIGHTING SCHEDULE

L1 Supply and install new luminaire on new column. (See Luminaire & Column Notes 1 to 6)
Luminaire: AEC Techlight ITRON Micro 5P5 STA 7040.040-2M (2 Module LED) 16W luminaire, Color: Black
Column: 7.5m MH Standard Decorative Stepped C Column complete with Tuhinga base and mid casting and **Single** 1.0m 90° outreach + arm, Color: Black.
Connection: Connect to U/G SLN.

L2 Supply and install new luminaire on new column. (See Luminaire & Column Notes 1 to 6)
Luminaire: AEC Techlight ITRON Micro 5P5 STA 7040.060-2M (2 Module LED) 23W luminaire, Color: Black
Column: 7.5m MH Standard Decorative Stepped C Column complete with Tuhinga base and mid casting and **Single** 1.0m 90° outreach + arm, Color: Black.
Connection: Connect to U/G SLN.

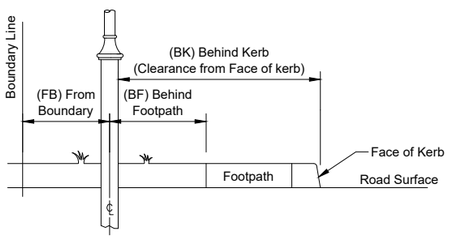
L3 Supply and install new luminaire on new column. (See Luminaire & Column Notes 1 to 6)
Luminaire: AEC Techlight ITRON Micro 5P5 STA 7040.090-2M (2 Module LED) 33.8W luminaire, Color: Black
Column: 7.5m MH Standard Decorative Stepped C Column complete with Tuhinga base and mid casting and **Single** 1.0m 90° outreach + arm, Color: Black.
Connection: Connect to U/G SLN.

MAXIMUM DESIGN SPACING

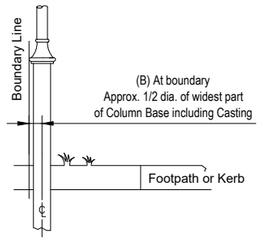
Street Name	Width	Arrangement Type*	Max Spacing
Amberech Street	15.0m	Single Sided	55.5m
Willow Wood Street - 3.8m Offset	16.5m	Single Sided	61.5m
Willow Wood Street - 3.8m Offset	16.5m	Staggered	61.7m
Willow Wood Street - 4.8m Offset	16.5m	Single Sided	60.2m
Willow Wood Street - 4.8m Offset	16.5m	Staggered	61.5m
Kennebrook Road	17.0m	Single Sided	60.7m
Kennebrook Road	17.0m	Staggered	61.2m
Scout Street - 4.5m Offset	20.0m	Single Sided	56.0m
Scout Street - 4.5m Offset	20.0m	Staggered	58.2m
Scout Street - 5.2m Offset	20.0m	Single Sided	57.9m
Scout Street - 5.2m Offset	20.0m	Staggered	58.8m
Scout Street - 7.1m Offset - 33.8w	20.0m	Single Sided	37.2m
Scout Street - 7.1m Offset - 33.8w	25.0m	Staggered	37.2m
Scout Street - 7.5m Offset - 33.8w	25.0m	Staggered	45.6m

* = Arrangement type as per AS/NZS 1158.2:2020 Fig. 5.1

TYPICAL COLUMN POSITION:



Column to be installed from Boundary Line, Behind Footpath or from Face of Kerb



Column to be installed at Boundary Line

SYMBOLS:

E Existing column, outreach arm and luminaire to remain.

Lx New column, Single outreach arm and luminaire.

SYMBOLS LEGEND:

LX Lighting Schedule Reference
XXW Original Luminaire Wattage
P1 Column Identification
0.0m-XX Column offset
X° Luminaire Tilt from the horizontal (See Adjustment Table)

Offset Descriptions

B At Boundary
BK Behind Kerb

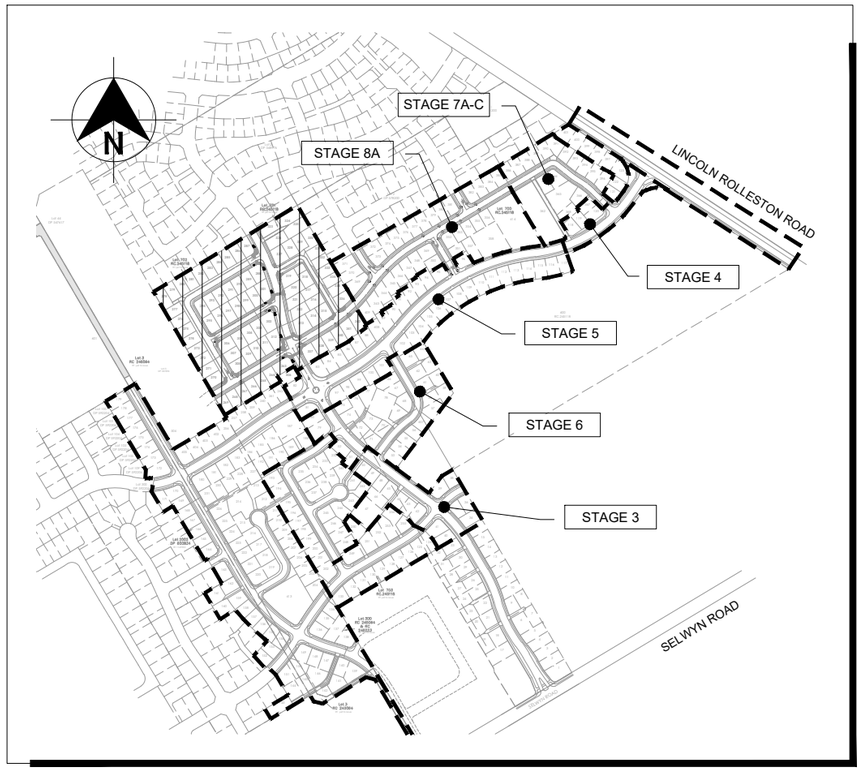
For Decorative Tubular and Octagonal Column

With Decorative Arms and 0° Spigot*

Value Shown on Plan	Adjustment on Luminaire
10°	10°
5°	5°
0°	0°
-5°	-5°

* As per CCC and SDC Standard Column Requirements

KEY PLAN



LUMINAIRE & COLUMN NOTES:

1. Luminaire to be fitted with mounting bracket to fit 42mm spigot.
2. Luminaire to be supplied with an integral TMS compatible dimmable DALI driver suitable for operating at the specified load and a prewired 7 pin NEMA Socket and complete with shorting cap.
3. Luminaire to have an IP rating of IP66 unless stated otherwise.
4. Luminaire colour temperature to be 4000K
5. Luminaire to have Identification label applied at time of installation.
6. The attached Luminaire Tilt Table is for reference only, it is the installer responsibility to verify during their QA after installation that the luminaire tilt reflect the requested tilt to the horizontal as shown on the design.

NOTES:

1. Road illumination is designed to comply with AS/NZS 1158; subcategory PR4, SDC "Code of Practice (ECOP) Part 12" and NZTA M30. Refer to lighting specification for lighting installation requirements.
2. Consult the designer for any lighting installation works that conflict on site. eg. recorded or unrecorded services.
3. On completion documentation, record GPS location of all new Lighting columns.
4. All redundant recovered streetlight poles and lanterns shall be removed to the store of the SDC Maintenance Contractor (Connetics Ltd, 11 Islington Avenue, Islington - Contact: Scott Millar).
5. New column location to be marked by the main contractor surveyor.
6. Existing Services Identified in this design are indicative only and it is the contractor responsibility to locate any existing services by contacting BeforeUdig at https://www.beforeudig.co.nz before the start of any underground work.

SPUNLITE NOTE:

The use of this **FREE** Lighting design, is authorised by Windsor Urban Ltd and Spunlite Poles Ltd, and is conditional upon the specified lighting items(columns and luminaires), being purchased directly from Windsor Urban Ltd and Spunlite Poles Ltd, or our nominated agents. All nominated installing agents are to contact Windsor Urban Ltd and Spunlite Poles Ltd, to obtain product prices related to this project.

Any use of alternative manufacturer's products, differing from those listed in this design, and installed by any contractor, will automatically forfeit the right to use this intellectual property (lighting design).

Windsor Urban Ltd and Spunlite Poles Ltd hold all copyrights to any of our designs and manufactured products in accordance with the Berne Convention.

The lighting designer reserves the right to request that any alternative products, sourced from a non-listed manufacturer, be removed and replaced with the specified products, prior to any audit being conducted.

ISSUED FOR CONSTRUCTION
Thursday, 16 April 2026 6:07:09 am

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Rev	Description	Date	Des	Dn	Chk	Apd	Or Acp	Contractor
A	Issued to Client for Comments	01/04/26	RSD	RSD	·	·	·	·
B	Issued for SDC Final Approval	13/04/26	RSD	RSD	·	·	·	·
B	Issued for Construction	16/04/26	RSD	RSD	·	·	·	·

Designed	R. St-Denis / Conn	March 26
Drawn	R. St-Denis / Conn	March 26
Checked	J. Lim / Conn	April 26
Approved	B. Hayman for SDC	15/04/26
Connetics	-	-

Scale 1:1000
Revision B

STREETLIGHTING LAYOUT

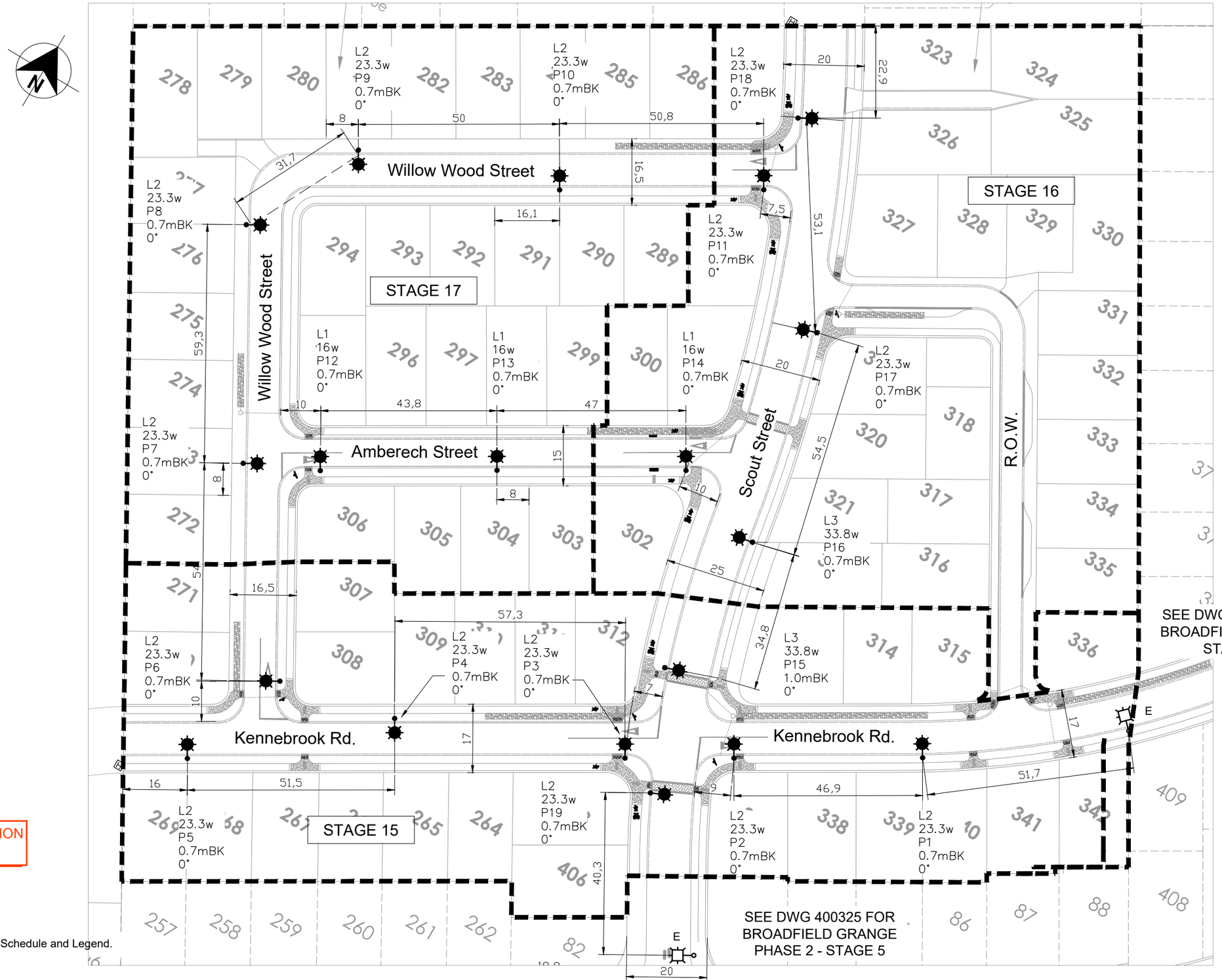
Broadfield Grange Sub-Division
Phase 2 - Stage 15-16-17
East Rolleston

windsorurban LIGHTING FURNITURE
611 Halswell Junction Rd, Hornby, Christchurch, NZ
(03) 349-7853 fax (03) 349-6529 freeph (0800) 845-845

Size A3 | Drawing Number 400459 | Sheet 2/2

1 : 1500

1 : 1000



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Thursday, 16 April 2026 6:06:52 am

NOTES:

1. Refer to Sheet 1 for Luminaire Schedule and Legend.

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Approved	B. Hayman for SDC	15/04/26
Connetics	-	-

Scale 1:1000
Revision B

STREETLIGHTING LAYOUT

Broadfield Grange Sub-Division
Phase 2 - Stage 15-16-17
East Rolleston

windsorurban LIGHTING FURNITURE
611 Halswell Junction Rd, Hornby, Christchurch, NZ
(03) 349-7853 fax (03) 349-6529 freeph (0800) 845-845

Size	Drawing Number	Sheet
A3	400459	2/2

SPECIFICATION FOR ROAD LIGHTING

ROAD LIGHTING DESIGN AT:

Broadfield Grange Sub-Division - Phase 2
Stage 15-16-17

Rolleston

Selwyn District Council

Connetics Ltd
Design + Engineering
11 Islington Avenue
Islington
Christchurch
(03) 353 7320

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1. PRELIMINARY AND GENERAL

The Principal for this project is Windsor Urban Ltd.

The Engineer's representative for this project is Robert St-Denis, Connetics Ltd., Design and Engineering.

Telephone: 03 353 7230 E-mail: Robert.St-Denis@connetics.co.nz Facsimile: 353 7201

2. SCOPE OF WORK

A complete and fully functional road lighting system is required and the work shall include:

- Supply, installation, testing and commissioning of new Road Lighting equipment, including new columns, arms, fuse panels, luminaires and cables, etc. as detailed on the drawings and specified herein.
- Liaison with Orion including application for any permissions or approvals, etc. as detailed in Orion's Network Standards.
- Liaison with the Engineer's representative throughout.
- Preparation and supply to the Engineer's representative of Test Certificates for individual road lights and "M" or "EL" Type Certificates of Compliance as detailed in Orion Network Standard NW 21 72 01.
- Preparation and supply to the Engineer's representative of all "As Built" documentation including drawing(s). (see Appendix 1)
- Record GPS location of all new, removed and existing lighting poles / columns.
- Preparation and supply of Road Lighting Valuation schedules for all new and removed equipment. These schedules shall be submitted with all other completion paperwork requirements.
- Preparation and supply of a completed Schedule of Prices using the Asset code summary. This asset code summary shall be submitted with the tender / quotation.

3. DRAWINGS AND DOCUMENTS

The following drawings and documents form part of this specification:

Connetics Drawings numbered 400459 sheets 1 to 2, Rev-B.
Appendix 1: Lighting Construction Completion Form

4. STANDARDS, SPECIFICATIONS AND CODES

All parts of the installation shall comply with the following:

- Selwyn District Council (SDC) Infrastructure Design Standards and SDC Construction Standard Specifications (CSS);
- Electricity act, the Electricity Regulations and Codes of Practise (current edition);
- Orion Standard "Connecting Equipment to Orion's Street Lighting Network" - NW21.72.0;
- Health and Safety in Employment Act.
- Code of Practice for Temporary Traffic Management.
- Utility Access Act 2010 (National Code of Practice for Utilities Access to Corridors)

5. COMPETENT PERSONNEL

The specified work is to be undertaken by Orion and/or SDC competent / approved contractors. Any and all Subcontractors employed on this project must work under the supervision of a competent (approved) person.

Works on the Orion Network can only be carried out by or under the direct supervision of Orion's approved personnel.

The contractor is responsible for ALL safety procedures throughout the work site(s) and must use and maintain appropriate safety barriers, warning signs etc. to protect all workers and the public from all hazards and hazardous situations.

An onsite Management Plan and record sheet must be available to all personnel at all times

6. START WORK NOTICES (FOR COUNCIL WORK ONLY)

If required, a Start Work Notice for the intended work shall be distributed to the affected area. An electronic copy of the master Start Work Notice can be requested from the design engineer. This form shall be filled by the Contractor or simply to the successful contractor for them to copy and deliver to ALL residents, business and SDC representatives affected by the new lighting.

The Start Work Notices are to be delivered (by the successful contractor) two weeks prior to the commencement of any work on site

7. REMOVAL OF EXISTING ROAD LIGHTNG EQUIPMENT – (IF REQUIRED)

Disconnect and carefully remove from Orion Network; columns, luminaires, outreach arms, mounting hardware, cables, etc. as detailed on the drawings.

All of the disconnected and removed materials and equipment remain the property of the Principal. They must be handled carefully so as to avoid damage, vandalism or contamination.

An inventory of the removed materials and equipment shall be made by using the SDC's standard document - "Road lighting Valuation – Removed equipment" (see Appendix 1).

All of the disconnected and removed materials and equipment shall be temporarily stored at a suitable location at the Contractor's cost pending inspection by the Engineer's representative. An inspection request will require at least 2 working days' notice.

On satisfactory completion of the inspection (to the Engineer's representative's satisfaction) all of the inspected materials and equipment suitable for reuse shall, as soon as practicable, be delivered to the local authority nominated Street Lighting Maintenance Depot.

All transport costs to be allowed for by the Contractor. Materials and equipment shall *NOT* be delivered to the depot until the Engineer's representative has inspected them.

Materials and equipment not suitable for reuse shall be correctly disposed of at the contractor's cost.

Attention is drawn to various publications (Ministry of Health, etc.) regarding the identification, safe handling and storage of equipment containing polychlorinated biphenyls (PCBs). All removed equipment shall be examined. If any equipment is found that contains (or is suspected of containing) PCBs, the Engineer's representative shall be notified immediately.

All lamp disposals are to be carried out in accordance with SDC and/or NZ Ministry of Health recommendations.

8. NEW ROAD LIGHTING COLUMNS AND OUTREACH ARMS

The columns and outreach arms shall be as specified on the drawings and guaranteed by the columns manufacturer (and/or supplier).

Columns shall be fitted with a standard SDC fuse panel and installed to meet all requirements specified in CSS. (Refer to Appendix 5 for clarification of behind kerb and at boundary).

Base compartment door must face towards the footpath, or any other appropriate direction that allows clear and safe access. Door shall be secured by at least one mushroom head, stainless steel, 6mm Allen Key bolt. The bolt(s) threads shall be coated with a suitable (long life) grease to prevent seizing.

Proposed locations of all columns shall be clearly marked on the ground by the project surveyor. It is the contractor responsibility to contact the project surveyor. Excavations must not be made in the ground, nor columns installed, until the surveyor has approved the proposed location of each column. A minimum of three working days' notice is required for the surveyor to mark new column locations. Column mark out to be completed 2 weeks prior to any construction commencement.

Supply and install all equipment necessary to complete the installation and/or as documented on the drawings.

Columns shall be installed as documented in accordance with the manufacturer's instructions and recommendations. They shall be vertical (+ or - 1˚ from vertical) after compacting, and shall remain so (except for fair wear and tear) until the end of the defects liability period. The disturbed ground around the

column shall be reinstated to match the (undisturbed) surrounding ground. The ground line identification mark shall be +/- 100mm from the finished ground level.

If any outreach arms being recovered for relocation or identified as suitable for reuse within the works are to be checked and confirmed as being suitable for reuse. The Engineer's representative is to be advised of any item identified for recovery that is not suitable for relocation/reuse.

9. LUMINAIRES AND LAMPS

Road lighting luminaires and lamps/LEDs shall be as specified on the drawings and guaranteed by the luminaire manufacturer's (and/or supplier). All luminaires shall be installed in accordance with the manufactures instructions and recommendations. They shall be of an approved type as indicated in NZTA M30 luminaire approved list.

The luminaire label must be permanent, remain on the luminaire throughout its life and identify the type and wattage of lamp used. LEDs should be labelled as per AS/NZS1158 Part 6.

If any luminaire being recovered for relocation or identified as suitable for reuse within the works are to be checked and confirmed as being suitable for reuse. The Engineer's representative is to be advised of any item identified for recovery that is not suitable for relocation/reuse.

10.CONTROL GEAR

New control gear/electronic drivers used shall be supplied and guaranteed by manufacturer (and/or supplier).

The electronic Control Gear/Driver shall be matched to the LEDs to provide reliable and efficient operation (i.e. Driver current, system wattage etc.)

The power factor of each luminaire (when stable operation at a supply voltage of 230V is established) shall be greater than 0.90 lagging.

If any Control Gear being recovered for relocation or identified as suitable for reuse within the works is to be checked and confirmed as being suitable for reuse. The Engineer's representative is to be advised of any item identified for recovery that is not suitable for relocation/reuse.

11.CONDUCTORS, WIRES AND CABLES

A new switchboard is to be installed within the base compartment of every new column.

To maintain the IP rating of all luminaires all internal cabling from the switchboard protection device to the luminaire shall be either a minimum of 1.5mm² circular 3 core TPS cable or a minimum of 1.5mm² 2C neutral screen cable, continuous throughout the entire length.

If flat 1.5mm² 2C+E TPS cable is used from the switchboard to the luminaire, the termination to the luminaire shall occur within a suitable IP65 (or higher) connector within 300mm of entering the luminaire. The IP rating of the luminaire is not to be compromised in any way.

Flat TPS cable is **NOT** to be used for direct connection into an IP rated luminaire unless an IP66 gland suitable for flat TPS cable is used. Particular care shall be taken to ensure that the TPS cable is not damaged as it is drawn into the column or outreach arm.

All terminations in the base compartment shall be in accordance with Orion standard and Selwyn District Council Construction Standards.

12. TEMPORARY LIGHTING – (AS REQUIRED)

Existing lighting levels (at a minimum) must be maintained at all time. If existing luminaires must be disconnected or removed before adjacent new lighting has been commissioned, then temporary lighting shall be provided.

If temporary lighting is required, the Engineer's representative shall approve the temporary lighting proposals. Existing lighting arrangements must not be altered or disconnected until the approval has been obtained, and the temporary lighting is fully operational.

Any temporary lighting is to comply with AS/NZS1158 and any Local Authority lighting requirements.

Temporary asymmetrical floodlights mounted on low height columns attached to mobile trailers are unacceptable.

All costs associated with temporary lighting is to be included within the tender sum.

13. TESTING, COMMISSIONING AND DOCUMENTATION

All equipment shall be tested and the road lighting system commissioned in accordance with Orion Network Standard.

Originals of Test Certificates for Individual Road Lights shall be supplied to the Engineer's representative within 48 hours of commissioning or livening of the road light. All certificates shall be completely filled out (all fields completed) in a legible manner. Copies of certificates will not be accepted. Refer to Orion Network Standard for details of the Test Certificate for Individual Road Lights.

The original of the Certificate of Compliance ("M" or "EL" Type) shall be supplied to the Engineer's representative within 48 hours of commissioning or livening of the last luminaire.

Records of the installation shall be maintained as the work proceeds, and copies of "as built" drawings shall be supplied to the Engineer's representative within 48 hours of commissioning the last of the works. Data shall be recorded in accordance with Orion's standards & SDC's construction standards.

The completed Road Lighting Valuation - New Equipment schedule shall be supplied to the Engineer's representative together with the tender documents at time of tender.

The completion certificate and approval to the Council for all new subdivision lighting is subject to the completion of ALL paperwork and the livening of all lighting.

14. MAINTENANCE AND GUARANTEES

All work, materials and equipment shall be guaranteed against defect or failure of any kind (excepting fair wear and tear) for a period of twelve months starting from the installation is livened. Refer to NZS 3910 for details of liability with respect to defects arising during this period. The maintenance and guarantee liabilities shall be vested in the SDC as owners of the road lighting system for all SDC owned equipment.

15. HEALTH AND SAFETY

- The requirements of Health and Safety in Employment Act plus and amendments shall be met at all times;
- A site safety management plan is to be implemented and a record sheet kept on site at all times
- Any accidents, near miss and remedial actions are to be reported in writing to the Engineer's representative as soon as possible;
- The Transit NZ Code of Practise for Temporary Traffic Management (COPTTM) are to apply to all activities within the road reserve or adjacent to and affecting the road reserve users;

16.A BUILT DRAWING, MAINTENANCE AND WARRANTIES

The contractor shall provide clear marked up drawings of the completed installation along with Test Certificates and Certificates of Compliance for all lights/columns/cable as the installation progresses and is livened.

As more column location are marked by the principal surveyor it is the responsibility of the Surveyor to advise the design engineer if the marking doesn't reflect the column location shown on the construction drawings.

The contractor shall provide a 12 months warranty on the street lighting installation. Any defects shall be rectified within 1 week of notification. The warranty shall commence on the date the full (or part) installation is connected to the Orion network and commissioned.

Following completion of the installation the contractor shall supply completed as-built information, including marked up drawings, all information required for updating the SDC database and a Lighting Construction Completion Form.

The information required for the database is as follows:

Type	Inventory Data	Location (incl GPS)	Property Address	Other Fields
Streetlight	Wattage, material, surface treatment, supply, type, bulk circuit	Yes	Yes	Height, offset from kerb, date tested, date completed
Column	Type, mount			Owner, purpose

APPENDIX 1: Road Lighting Construction Completion Form

CONSTRUCTION COMPLETION FORM

To: The Engineer's Representative
Connetics Design & Engineering
P O Box 2237
CHRISTCHURCH

Attention: Robert St-Denis

From: _____ (Contractor's Name)
_____ (Address)

Dear Sir,

Road Lighting Works at: Broadfield Grange Sub-Division - Phase 2 - Stage 15-16-17

has been completed. All work has been carried out in accordance with the Project Specifications

After all the tests were successfully completed, the entire lighting project was commissioned on _____ and the Defects Liability Period should commence from this date.

The following documentation is enclosed:

- ☐ Test Certificate for each Lighting Column
- ☐ Certificate of Compliance for the complete Installation
- ☐ As Built Drawings

_____ _____
Print Name *Signed*

Date: _____