

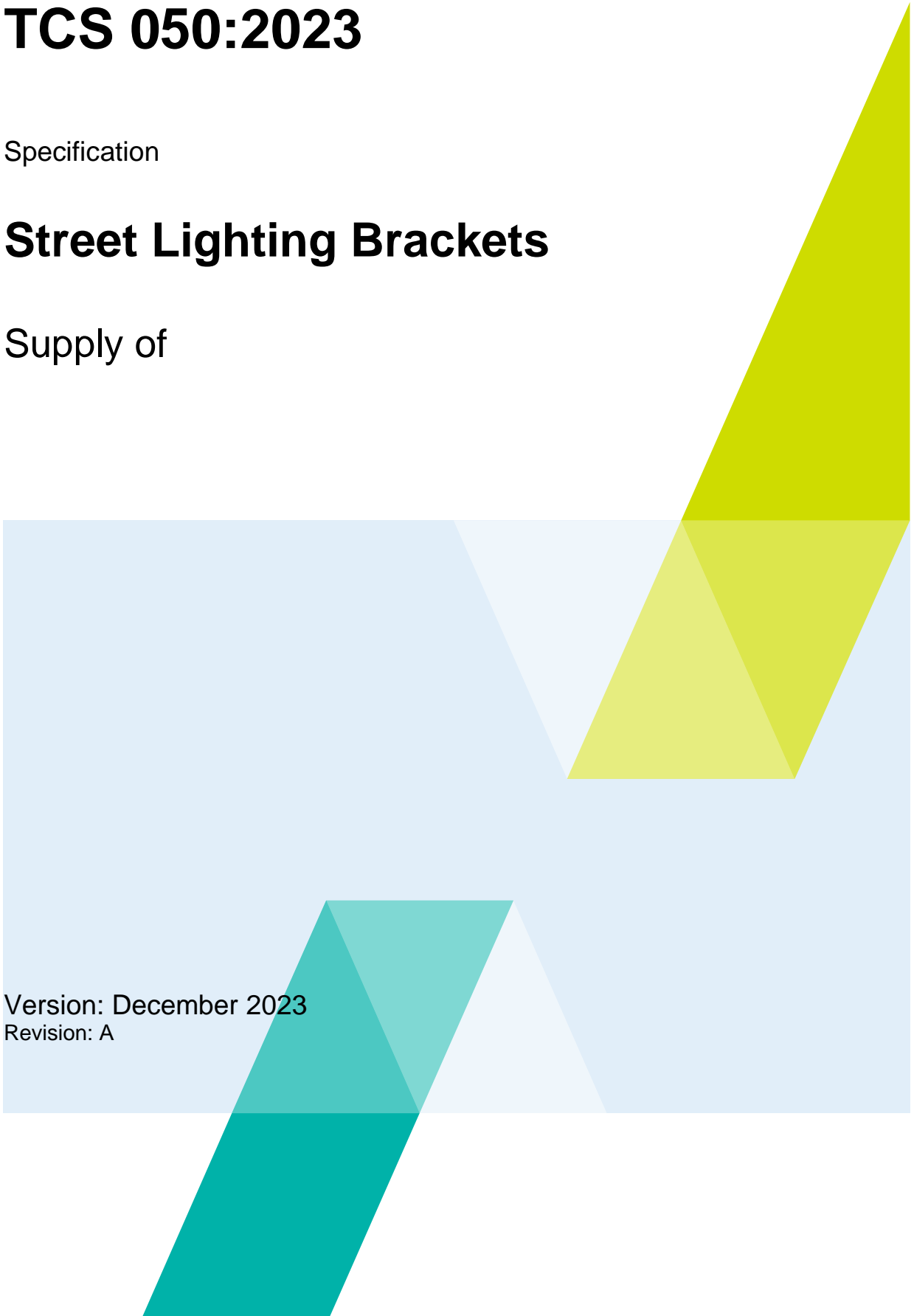
# TCS 050:2023

Specification

## Street Lighting Brackets

Supply of

Version: December 2023  
Revision: A





## Foreword

This specification has been developed by Department of Transport and Planning. It is one of a number of technical specifications, and associated standard drawings, which set out the requirements for roadside ITS devices, traffic signal equipment and other electrical equipment and associated devices and control systems.

This specification is intended for use in all relevant works undertaken by or on behalf of DTP.

DTP Standard Drawings, Specifications and Guidelines are available for downloading from the VicRoads website:

<https://www.vicroads.vic.gov.au/business-and-industry/technical-publications/electrical-and-intelligent-transport-systems>

**Specification updates.** DTP specifications and associated standard drawings are subject to periodic review. To keep the specifications up to date, amendments or new editions are issued as necessary. It is therefore important for users of DTP specifications to ensure that they have the latest version and associated amendments.

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## COPYRIGHT

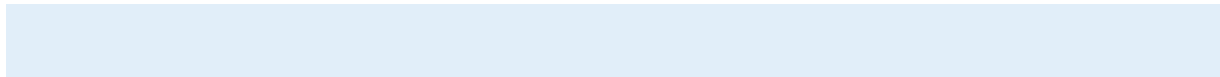
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### Revision History

Version	Revision	Date	Author	Description
2002		May 2002	TRUM	First release
2023	A	December 2023	ITS	Template update Remove Type 1. Type 2 used for all applications. Remove obsolete references.





# Contents

<b>SECTION 1 – SCOPE AND GENERAL</b> .....	<b>5</b>
1.1 SCOPE .....	5
1.2 GENERAL.....	5
1.3 STREET LIGHTING BRACKETS.....	5
1.4 ACRONYMS.....	5
<b>SECTION 2 – RELATED SPECIFICATIONS AND DRAWINGS</b> .....	<b>6</b>
2.1 AUSTRALIAN STANDARDS.....	6
2.2 DTP SPECIFICATIONS AND DRAWINGS .....	6
2.2.1 DTP Specifications.....	6
2.2.2 DTP Standard Drawings .....	6
<b>SECTION 3 – GENERAL MECHANICAL AND PHYSICAL REQUIREMENTS</b> .....	<b>7</b>
3.1 GENERAL.....	7
3.2 MATERIALS AND CONSTRUCTION.....	7
3.3 PHYSICAL ARRANGEMENT AND DIMENSIONS.....	7
3.3.1 Bracket Length.....	7
3.3.2 Cable Support Bolt.....	7
3.3.3 Clamp .....	8
3.3.4 Weather Cap.....	8
<b>APPENDIX A – REQUIREMENTS FOR TYPE APPROVAL</b> .....	<b>9</b>
<b>APPENDIX B – GUIDELINES FOR PURCHASING</b> .....	<b>11</b>



## SECTION 1 – SCOPE AND GENERAL

### 1.1 SCOPE

This specification covers the requirements for the design, manufacture, and supply of street lighting brackets for use on DTP Projects.

### 1.2 GENERAL

- 1.2.1 A DTP street lighting bracket comprises the riser, outreach arm(s), stiffening plate, weather cap, cable support bolt, and clamp.
- 1.2.2 Street lighting brackets supplied to DTP shall hold current DTP Type Approval (See Appendix A).
- 1.2.3 All street lighting brackets supplied shall conform to a sample previously supplied to, and formally approved by DTP.
- 1.2.4 Reference to “approved” within this specification shall mean individual components or methods that have been previously accepted by DTP and documented in DTP ITS Approved Consultant List and ITS Type Approval List.
- 1.2.5 For information regarding rigid street lighting poles refer to TCS 001.
- 1.2.6 For information regarding frangible street lighting poles refer to TCS 014.

### 1.3 STREET LIGHTING BRACKETS

- 1.3.1 All street lighting brackets shall be Type 2.
- 1.3.2 Street lighting brackets may have either a single outreach, or a double outreach.

### 1.4 ACRONYMS

The acronyms used in this document shall be interpreted as follows:

AS	Australian Standard
DTP	Department of Transport (Roads)
ITS	Intelligent Transport Systems
LED	Light Emitting Diode
NZS	New Zealand Standard



## SECTION 2 – RELATED SPECIFICATIONS AND DRAWINGS

### 2.1 AUSTRALIAN STANDARDS

2.1.1 Subject to the following clauses, the fabrication and supply of all components for all distribution cabinets shall comply fully with the most recent issue of the Australian Standards listed below, together with any amendments to these standards.

2.1.2 The following related Australian Standards are referenced:

AS 1074	Steel Tubes and Tubulars for Ordinary Service
AS 1163	Structural Steel Hollow Sections
AS/NZS 1554.1	Structural Steel Welding – Welding of Steel Structures
AS/NZS 4680	Hot-Dip Galvanized (Zinc) Coatings on Fabricated Ferrous Articles

### 2.2 DTP SPECIFICATIONS AND DRAWINGS

The fabrication, supply, and general installation of all components shall conform to the relevant DTP specifications, and related specifications and standards, as indicated throughout this document.

#### 2.2.1 DTP Specifications

The following DTP Specifications are referenced:

TCS 001	Traffic Signal Poles, Mast Arms, Rigid Street Lighting Poles, and Attachments
TCS 014	Frangible Street Lighting Poles

#### 2.2.2 DTP Standard Drawings

The following DTP Standard Drawings are referenced:

TC-1061	Street Lighting Bracket-Type 2
TC-1067	Street Lighting Bracket Stiffening Plate
TC-1069	Street Lighting Clamping plate- Bracket to Pole Spigot
TC-1108	Weather Cap



## SECTION 3 – GENERAL MECHANICAL AND PHYSICAL REQUIREMENTS

### 3.1 GENERAL

Street lighting brackets shall be designed and manufactured in accordance with the requirements of this section.

### 3.2 MATERIALS AND CONSTRUCTION

- 3.2.1 Street lighting brackets are to be manufactured in accordance with DTP Standard Drawings TC-1061 and TC-1067.
- 3.2.2 All tubular work shall comply with AS 1074 and AS 1163.
- 3.2.3 Steel grade shall be as specified on the drawings.
- 3.2.4 All sharp edges and burrs shall be removed.
- 3.2.5 Unless otherwise specified, all welds shall meet the requirements of AS/NZS 1554.1 Category SP, comply with Table 4.5.1(A) therein, and shall be 6mm fillet.
- 3.2.6 All parts shall be galvanized after fabrication to AS/NZS 4680. Excess galvanizing shall be removed.

### 3.3 PHYSICAL ARRANGEMENT AND DIMENSIONS

#### 3.3.1 Bracket Length

Bracket length is to be measured from the centre line of the bracket riser to the centre of the mounting spigot. Single and double street lighting bracket nominal arm lengths are 3, 4, 4.5 and 5 metres as specified on standard drawing TC-1061.

#### 3.3.2 Cable Support Bolt

All brackets are to be supplied complete with a M12 cable support bolt and nut, and installed in accordance with DTP Standard Drawings TC-1061.



### **3.3.3 Clamp**

All brackets are to be supplied complete with a clamp for fixing to a standard bracket mounting spigot on a street lighting pole. The clamp is to be in accordance with standard drawing TC-1069.

### **3.3.4 Weather Cap**

3.3.4.1 All brackets are to be supplied complete with a galvanized steel weather cap manufactured in accordance with DTP Standard Drawing TC-1108.

3.3.4.2 The weather cap is to be installed on the bracket after galvanizing and de-burring of the bracket.





## APPENDIX A – REQUIREMENTS FOR TYPE APPROVAL

(Normative)

### A1 GENERAL

- A1.1 Street lighting brackets supplied to DTP shall hold current DTP Type Approval.
- A1.2 To enable assessment for the purposes of granting Type Approval, the manufacturer / supplier is to submit a formal, written request for Type Approval to DTP, for each unique bracket supplied, accompanied by the following for each unique bracket:
- (a) Documentation to demonstrate that the submitted product conforms to the requirements of DTP Specification, as detailed in the relevant section of this Appendix.
  - (b) An outline drawing showing the general presentation and overall dimensions of the submitted product, detailed in the relevant section of this Appendix.
  - (c) Specific submissions detailed in the relevant section of this Appendix.
  - (d) A complete working sample of the product for inspection purposes as detailed in Appendix A3; and
  - (e) Documentation to demonstrate that the submitted product has been manufactured and supplied under an approved quality assurance system.

### A2 REVIEW PROCESS

- A2.1 The information submitted by the supplier will be reviewed by DTP to determine whether the submitted product complies with DTP specification.
- A2.2 The decision to grant a Certificate of Type Approval is at the sole discretion of DTP.
- A2.3 DTP may require additional information or testing to be carried out as part of its evaluation of the product.
- A2.4 If the product is approved, a Certificate of Type Approval will be provided to the supplier. Until such time as this Certificate is issued, the product is not to be used for DTP works.
- A2.5 The manufacturer shall advise DTP in writing of any changes in relation to the Type Approved product, DTP reserves the right to review and approve / reject the design changes at DTP' discretion.



### A3 PRODUCT SAMPLES

- A3.1 A sample product shall be designed and manufactured in accordance with this specification and shall be representative of the products supplied to DTP.
- A3.2 The supplier shall provide a DTP representative access to the suppliers premises for the purpose of viewing the sample outreach.
- A3.3 As an alternative to A3.2, DoT may accept photometric evidence demonstrating compliance of the sample outreach.
- A3.4 The supplier shall submit to DTP evidence of any previous sample testing or equivalent satisfactory checks for the product design. If evidence to support satisfactory performance of previous sample testing or equivalent satisfactory performance is neither available, nor acceptable to DTP, a sample of the product shall be subject to compliance testing as detailed in the relevant section of this Appendix.

### A4 STREET LIGHTING BRACKETS

#### A4.1 General

The supplier shall submit the following for street lighting brackets:

- Detailed workshop drawings of the bracket including cross-sections and dimensions, material details, weld details, finish details.
- An inspection report by a suitable qualified consultant providing details of the manufacture of each bracket fabricated in accordance with this specification.
- A product specification sheet detailing the finish for each bracket. This sheet shall demonstrate that the finish fully conforms to the requirements detailed in this specification.

#### A4.2 Summary

Table A.1 summarises the submissions for Type Approval of street lighting brackets from this section.

**Table A.1 – Summary of Submissions – Street Lighting Brackets**

Submission	Format	Reference	Clause
Details of conformance to this specification	Report	TCS 050	All
Design and manufacturing details	Fully detailed drawings		All
Details of manufacturing	Inspection report		All
Details of finish	Product specification sheet		All



## APPENDIX B – GUIDELINES FOR PURCHASING

(Informative)

### **B1 GENERAL**

The following information, as appropriate, shall be supplied with an order for street lighting brackets complying with this specification:

- (a) Single or double outreach
- (b) Length of outreach
- (c) The number of each required.