

Master Specification

Part ST-BF-C4

Bridgework Sundries

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ST-BF-C4 Bridgework Sundries

1 General

This Master Specification Part specifies the requirements for bridgework sundries, including:

- a) the requirements for steel barrier components and aluminium screens and alloy railings, as set out in section 2;
- b) the requirements for miscellaneous concrete work components, as set out in section 3;
- c) the requirements for bridge light components, as set out in section 4; and
- d) the Hold Point and Witness Point requirements, as set out in section 5.

2 Steel barrier components and aluminium screens and alloy railings

2.1 General

This section 2 specifies the requirements for the fabrication and erection of the following components installed on bridges:

- a) steel barrier components excluding proprietary components supplied as part of a barrier system compliant with GD 300 Accepted Safety Barrier Products;
- b) aluminium screens; and
- c) extruded aluminium alloy railings.

2.2 Fabrication

- a) Fabrication of steel barrier components must be undertaken in accordance with ST-SS-S1 "Fabrication of Structural Steelwork" and comply with the requirements of this section 2.2.
- b) Posts and splice connections in rails must be jig fabricated.
- c) All post base plates must be drilled using the same template used for the jig fabrication in section 2.2b).
- d) All burrs on aluminium components must be removed.

2.3 Protective treatment

- a) The Contractor must provide notice prior to the application of protective treatment, which will constitute a **Witness Point**. The protective treatment must not be applied until the Contractor has proceeded past the Witness Point.
- b) Steel components must be galvanized in accordance with ST-SS-S3 "Galvanizing".
- c) The protective treatment of aluminium components must comply with the following:
 - i) components must be anodised after fabrication;
 - ii) the anodised film must have a minimum thickness of 25 µm (AA 25) and must provide the maximum hardness and scratch resistance;
 - iii) handrails, handrail spigots, and end caps must be medium bronze colour; and
 - iv) where unspecified, crash rail components and handrail fixing clamps must be a natural silver colour.
- d) The Contractor must supply at least 2 samples of each anodised aluminium extrusion to be used for the protective treatment of barrier components and railings, accompanied by all relevant documentation.

- e) The provision of the samples required in section 2.3d) must be provided at least 30 Business Days before ordering aluminium extrusions and will constitute a **Hold Point**. The Contractor must not proceed with ordering aluminium extrusions until the Hold Point has been released.
- f) The colour of anodised aluminium extrusions must match the colour of the samples required by section 2.3d).

2.4 Transportation, handling, and storage

- a) Components must be packed, supported, transported, handled, and stored so that the components are kept clean and free from damage to the material or finish.
- b) Posts, rails, and panels must be stored under cover and above ground and protected against damage.
- c) Notice must be provided to the Principal prior to transport of the components to site, which will constitute a **Witness Point**. Transport of components to site covered by this section 2 must not occur until the Contractor has proceeded past this Witness Point.
- d) For the steel barrier components covered by this section 2, the notification Witness Point requirement in ST-SS-S1 “Fabrication of Structural Steelwork” does not apply.

2.5 Erection

- a) Anchor bolts and shear nuts must be cast into kerbs using rigid templates which are temporarily secured to the kerb formwork.
- b) Railing must be erected true to the grade of the structure.
- c) Deviation from the correct alignment of the posts, rails, and panels must not exceed 3 mm.
- d) The Contractor must allow for final adjustments of gaps between rails after completion of erection.

3 Miscellaneous concrete work components

Miscellaneous concrete work on bridges (such as concrete drains, sumps, and edge beams) must be constructed in accordance with ST-SC-S7 “Supply of Concrete”, unless the concrete work is non-structural.

4 Bridge light components

In relation to bridge light components, the Contractor must:

- a) supply lighting components in accordance with RD-EL-S1 “Supply of Luminaires and Lighting Components”; and
- b) carry out electrical work for bridge lighting in accordance with RD-EL-C1 “Installation of Road Lighting”.

5 Hold Points and Witness Points

- a) Table ST-BF-C4 5-1 details the review period or notification period, and type (documentation or construction quality) for each Hold Point referred to in this Master Specification Part.
- b) Table ST-BF-C4 5-2 details the review period or notification period, and type (documentation or construction quality) for each Witness Point referred to in this Master Specification Part.

Table ST-BF-C4 5-1 Hold Points

Section reference	Hold Point	Documentation or construction quality	Review period or notification period
2.3e)	Provision of anodised aluminium extrusion samples	Documentation	10 Business Days review

Table ST-BF-C4 5-2 Witness Points

Section reference	Witness Point	Documentation or construction quality	Review period or notification period
2.3a)	Notification of application of protective treatment	Construction quality	7 days notification
2.4c)	Notification of transportation of the components to Site	Construction quality	7 days notification