

PART S55 BRIDGEWORKS SUNDRIES

CONTENTS

1. TRAFFIC AND PEDESTRIAN BARRIERS
2. MISCELLANEOUS CONCRETE WORK
3. BRIDGE LIGHTING
4. PLAQUE
5. HOLD POINTS

1. TRAFFIC AND PEDESTRIAN BARRIERS

General

- .1 This Clause specifies the requirements for the fabrication and erection of steel barrier components and extruded aluminium alloy railings.
- .2 The fabrication and erection must be undertaken in accordance with the following references:

AS 1553	Covered Electrodes for Manual Welding, Part 1 and 2
AS 1554.1	Welding of Steel Structures
AS 2205	Methods of Destructive Testing of Welds in Metal
AS 1956	Anodic Oxidation Coatings on Aluminium for Decorative and Automotive Applications

Materials

- .3 Materials and parts used in fabrication of components must comply with the requirements of the Australian Standards as shown on the Drawings.

Fabrication

- .4 Fabrication of steel barrier components must be undertaken in accordance with Part 430 "Fabrication and Erection of Structural Steelwork" and the requirements of this Part. All welds must be prequalified in accordance with Clause 4.3 of AS 1554.1 and subject to visual inspection of work in accordance with Clause 6.2 of AS 1554.1.
- .5 At least 7 days notice must be given of commencement of fabrication of the traffic and/or pedestrian barrier.
- .6 Provision of the notice and weld prequalification supporting information shall constitute a **HOLD POINT**.
- .7 Dimensions shown on the Drawings are specified at 20°C. Posts and splice connections in rails must be jig fabricated; all post base plates must be drilled using the same template. Post to base plate welds must comply with the SP Category of AS 1554.1. All other welds must comply with the GP Category of AS 1554.1. Welds must be subject to approval.
- .8 Electrodes must comply with and be classified in accordance with AS 1553 "Covered Electrodes for Welding". Welds must be finished as smooth as practicable. Where the finish on an exposed weld is not as smooth as practicable, the weld must be ground to a smooth shape.
- .9 Corners on exposed edges of steel plates must be rounded to a radius of approximately 2 mm. All burrs on aluminium components must be removed. Fabrication must be completed and all welds cleaned before galvanizing.

Protective Treatment

- .10 The contractor must provide at least 7 days prior notice of the application of protective treatment.
- .11 Provision of the notice shall constitute a **HOLD POINT**.
- .12 Steel components must be galvanized in accordance with Part S37 "Galvanizing".
- .13 The protective treatment of aluminium components must comply with the following:
 - (a) components must be anodized after fabrication;

- (b) the anodised film must have a minimum thickness of 25 µm (AA 25) and must provide the maximum hardness and scratch resistance;
 - (c) the properties of the finish must comply with AS 1956 "Anodic Oxidation Coatings on Aluminium for Decorative and Automotive Applications";
 - (d) Handrails, handrail spigots and end caps must be medium bronze colour; and
 - (e) Crash rail components and handrail fixing clamps must be a natural silver colour.
- .14 Six weeks before ordering aluminium extrusions, the Contractor must supply at least two samples of each anodised aluminium extrusion. The colour of extrusions used in the works must match the colour of the samples.
- .15 Provision of the samples shall constitute a **HOLD POINT**.

Transportation, Handling and Storage

- .16 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.
- .17 Posts, rails and panels must be stored under cover and above ground and must be protected against damage. At least 7 days notice must be given prior to transport of the components to site.
- .18 Provision of the notice shall constitute a **HOLD POINT**.

Erection

- .19 Anchor bolts and shear nuts must be cast into the kerbs using rigid templates temporarily secured in position to kerb formwork. Posts and panels must be erected as detailed on the Drawings; railing must be erected true to grade of the structure.
- .20 Deviation from the correct alignment of the posts, rails and panels must not exceed 3 mm. The Contractor must allow for the final adjustments of gaps between rails after completion of erection.

2. MISCELLANEOUS CONCRETE WORK

- .1 Unless shown as non-structural concrete on the Drawings or the **Contract Specific Requirements** miscellaneous concrete work (such as concrete drains, sumps and edge beams) must be constructed as shown on the Drawings and in accordance with Part CC20 "Supply of Concrete".

3. BRIDGE LIGHTING

- .1 Unless shown otherwise on the Drawings or in the **Contract Specific Requirements**, the Contractor must:
- (a) supply lighting components in accordance with Part R50 "Supply of Lighting Components"; and
 - (b) carry out electrical work for bridge lighting in accordance with the relevant clauses of Part R52 "Installation of Road Lighting".

4. PLAQUE

- .1 The Contractor must supply and fix plaque(s) at the location(s) shown on the Drawings. The plaques must comply with the following:
- (a) be cast from gunmetal (85% Cu, 5% Pb, 5% Sn, 5% Zn) and be bronze oxidised;
 - (b) have a raised margin with bright finish 3 mm above the recessed surface;
 - (c) the recessed surface must have a dull bronze finish;
 - (d) runners must be ground off after casting;
 - (e) read the year (in numerals) in which construction is to be completed; and
 - (f) have letters with a clean, regular, sharp edges and bright finish, raised 3 mm above the recessed surface of the plate and the width of the component strokes of each letter must be 5 mm.

- .2 A copy of the style of legend proposed by the Contractor must be submitted, full size, 4 weeks before manufacture commences.
- .3 Provision of the copy of the style of legend proposed shall constitute a **HOLD POINT**.

5. **HOLD POINTS**

- .1 The following is a summary of Hold Points referenced in this Part:

CLAUSE REF.	HOLD POINT	RESPONSE TIME
1.6	Notification of commencement of fabrication and weld prequalification information	2 working days
1.11	Notification of application of protective treatment	2 working days
1.15	Provision of anodised aluminium extrusion samples	7 working days
1.18	Notification of transportation of the components to site	2 working days
4.	Copy of the style of legend proposed for plaque	7 working days