



Grandstands locations

Cyril Connell Fields

Norridge Park Access Road

Norridge Park Access Road

Norridge Park

Our Ref: 33183-2

6 September 2023

Felton Industries
e. gus@felton.net.au

Attention: Mr. Gus White,

**PROPOSED PORTABLE GRANDSTAND STRUCTURE
STRUCTURAL DESIGN CERTIFICATE**

We advise that Cook and Roe have carried out the structural design of the proposed portable grandstand structure for Felton Industries. This design has been documented on the following drawings prepared by CDE Structures.

Drawing No.	Drawing Title	Revision
S10238-MP100	Perspective View	2
S10238-MP101	Perspective View with Seating	2
S10238-MP102	Plan and Section Views	2
S10238-A100	Plate	1
S10238-B100	Beam	2
S10238-B101	Beam	1
S10238-B102	Beam	2
S10238-B103	Beam	1
S10238-B104	Beam	1
S10238-B113	Beam	1
S10238-B115	Beam	1
S10238-B116	Beam	0
S10238-C100	Column	1
S10238-C101	Column	2
S10238-C102	Column	2
S10238-C103	Column	2

We have carried our structural analysis and design in accordance with the following Australian Standards:

- AS/NZS 1170.0-2002 Structural design actions – General principles
- AS/NZS 1170.1-2002 Structural design actions – Permanent, imposed & other actions
- AS/NZS 1170.2-2021 Structural design actions – Wind actions
- AS/NZS 1170.3-2003 Structural design actions – Snow and ice actions
- AS/NZS 1664.1-1997 Aluminium structures – Limit state design
- AS 3600-2018 Concrete structures
- AS 5216-2021 Design of post-installed and cast-in fastenings in concrete

We certify that the structural design as shown on the abovementioned plans meets the requirements of the National Construction Code (NCC 2022) and the relevant Australian Standards listed above, based on the following assumptions:

1. All welding must be in accordance with AS/NZS 1665-2004 Welding of aluminium structures;
2. Plates are to have a minimum yield stress of 179 MPa and extruded sections are to have a minimum yield stress of 110 MPa;
3. The frame has been checked for Region C wind loading in accordance with AS/NZS 1170.2-2021 (Region C, Terrain Category 2, Shielding Multiplier $M_s = 1.0$, Topographic Multiplier $M_t = 1.0$, Directional Multiplier $M_d = 0.90$ (1.0 for cladding and purlins));
4. The frame has been checked for a maximum ground snow load of $s_g = 1.80$ kPa in accordance with AS/NZS 1170.3;
5. The seating frames must be placed on level ground (preferably a concrete surface);
6. The four corners of the grandstand frame must fixed down to 1m x 1m x 0.7m deep mass concrete pad footings ($f'_c = 25$ MPa). The frame should be fixed with 10mm seating plates and min. 2-M16 ChemSet Anchors at 120mm centres (ChemSet 801 Xtrem XC2 + ChemSet Stud HDG Gr 5.8 M16x190 with = 125mm min. embedment, 150mm min. edge distance). Alternatively, each corner of the grandstand structure can be held down with 1,700kg of ballast.

This certification shall not be construed as relieving any other party of their responsibilities, liabilities or contractual obligations.

We trust that this information meets your requirements. Please do not hesitate to contact the undersigned should you require any further information.

Yours faithfully,
COOK AND ROE



Daniel Cook
Senior Structural Engineer – BE MIEAust CPEng NER
Victorian Building Authority (VBA) Reg. No. EC 65814
Registered Professional Engineer of Queensland (RPEQ) Reg. No. 23753