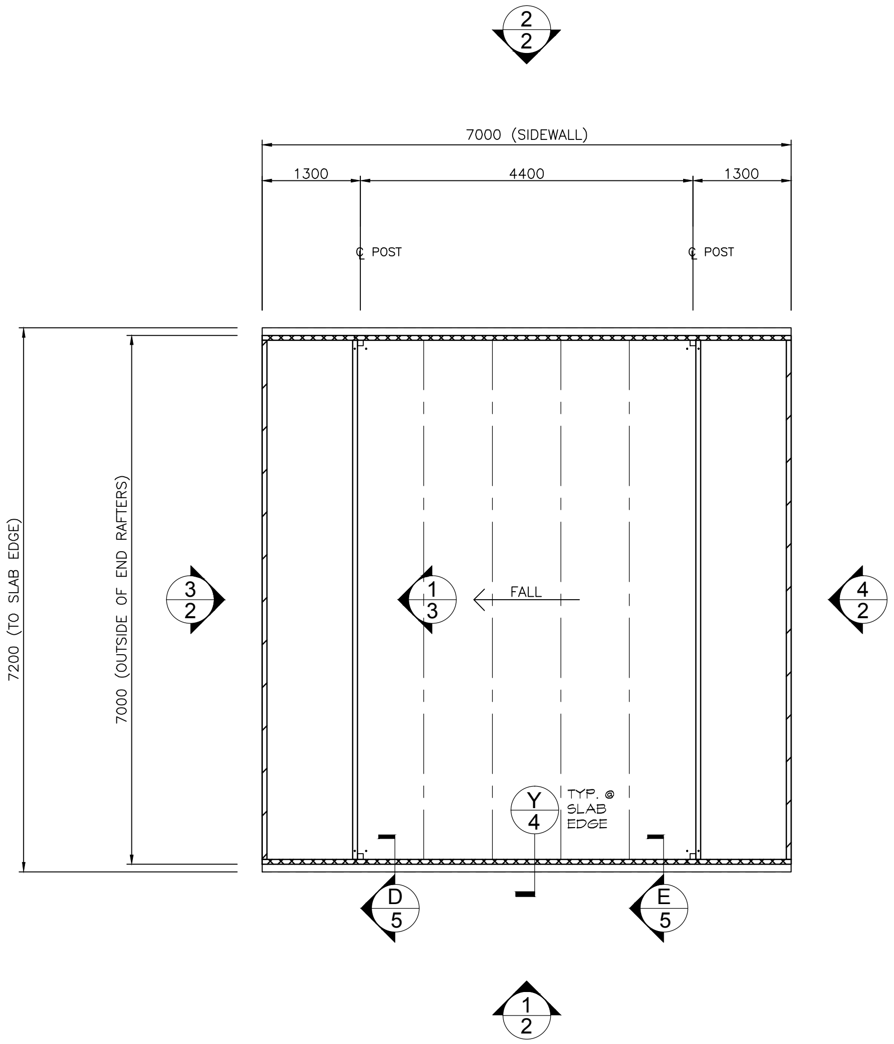


1/1 FOUNDATION PLAN
SCALE: 1:100

LEGEND:
- — ROOF PURLIN
- — BEAM
- — RAFTER
- — EAVE PURLIN

SHEET	JOB NO.	DATE	CHECKED	DRAWN	
1 OF 5	MAST37926		TM	FDS	

STEEL BUILDING BY (CONTACT)
MA STEEL
02 6382 4387

FOR
MARK O'CONNOR

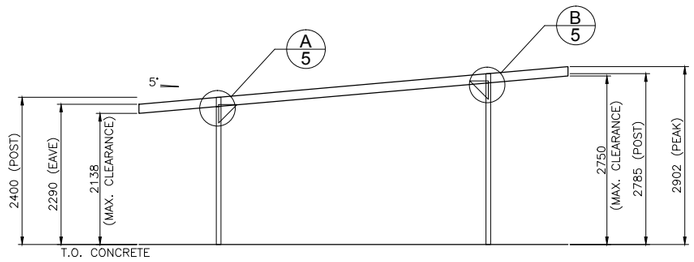
AT
3 LANDSDOWN STREET
YOUNG

SHED SAFE™ accredited

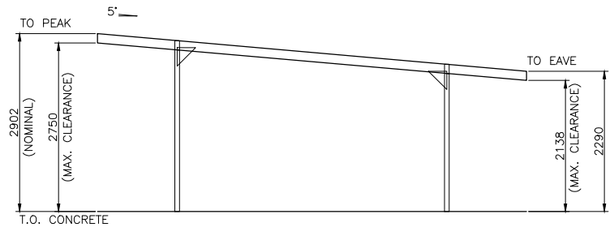
NORTHERN CONSULTING engineers
Civil & Structural Engineers
50 Punari Street
Currajong, Qld 4812
Fax: 07 4725 5850
Email: design@nceng.com.au
ABN 341 008 173 56

Registered Chartered Professional Engineer	Regn. No. 2558980
Registered Professional Engineer (Civil & Structural) QLD	Regn. No. 9985
Registered Certifying Engineer (Structural) N.T.	Regn. No. 116373ES
Registered Engineer - (Civil) VIC	Regn. No. PE0002216
Registered Engineer - (Civil) TAS	Regn. No. CC5648M

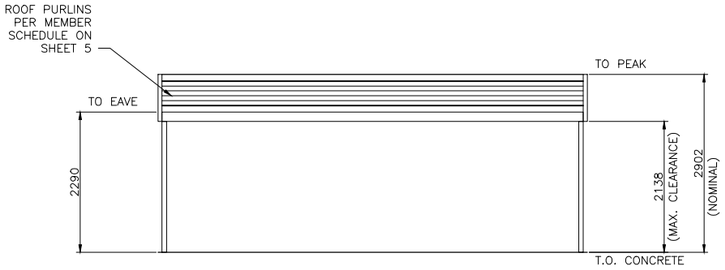
Mr Timothy Roy Messer BE MIEAust RPEQ
Signature .... T. Messer ....
Date .... 20/3/2025 ....
Registered on the NPER in the areas of practice of Civil & Structural National Professional Engineers Register



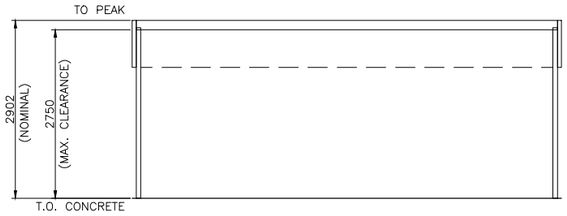
1/2 SIDEWALL EXTERIOR ELEVATION
SCALE: 1:100



2/2 SIDEWALL EXTERIOR ELEVATION
SCALE: 1:100



3/2 ENDWALL EXTERIOR ELEVATION
SCALE: 1:100



4/2 ENDWALL EXTERIOR ELEVATION
SCALE: 1:100

SHEET 2 OF 5
JOB NO. MAST37926
DATE
CHECKED TM
DRAWN FDS

STEEL BUILDING BY (CONTACT)
MA STEEL
02 6382 4387
FOR
MARK O'CONNOR
AT
3 LANDSDOWN STREET
YOUNG

SHED SAFE™ accredited

NORTHERN CONSULTING engineers
Civil & Structural Engineers
50 Punari Street
Currajong, Qld 4812
Fax: 07 4725 5850
Email: design@nceng.com.au
ABN 341 008 173 56

Registered Chartered Professional Engineer	Regn. No. 2558980
Registered Professional Engineer (Civil & Structural) QLD	Regn. No. 9985
Registered Certifying Engineer (Structural) N.T.	Regn. No. 116373ES
Registered Engineer - (Civil) VIC	Regn. No. PE0002216
Registered Engineer - (Civil) TAS	Regn. No. CC5648M

Mr Timothy Roy Messer BE MIEAust RPEQ
Signature .....
Date 20/3/2025
Registered on the NPER in the areas of practice of Civil & Structural National Professional Engineers Register

1/3 INTERNAL FRAME SECTION
SCALE: 1:50

(Refer to Sheet #4 for concrete specification).

SHEET 3 OF 5

JOB NO. MAST37926

DATE

CHECKED TM

DRAWN FDS

STEEL BUILDING BY

(CONTACT)
MA STEEL
02 6382 4387

FOR
MARK O'CONNOR

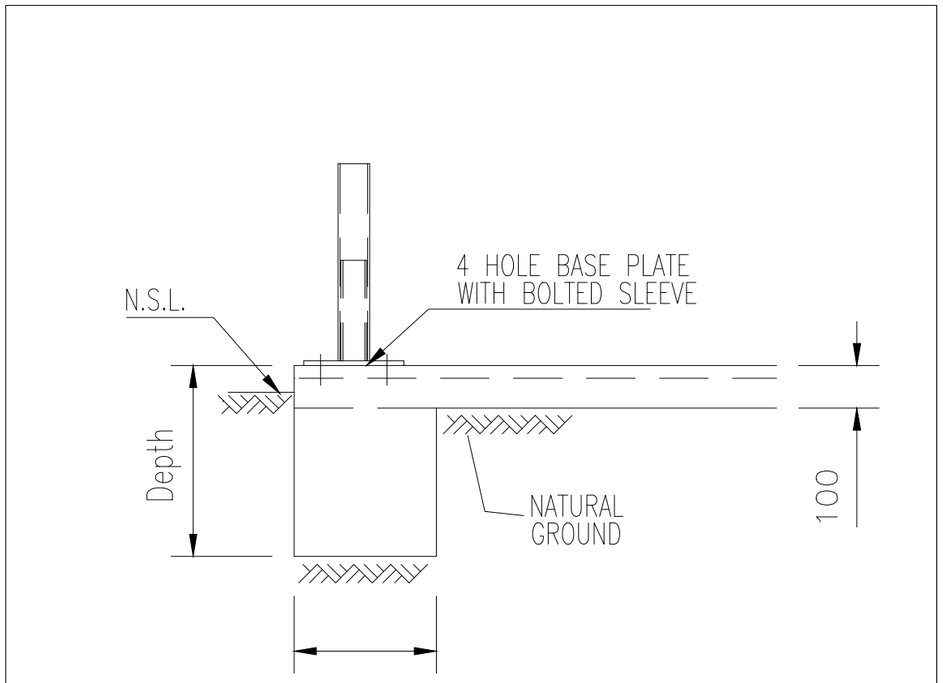
AT
3 LANDSDOWN STREET
YOUNG

SHED SAFE accredited

NORTHERN CONSULTING engineers
Civil & Structural Engineers
50 Punari Street
Currajong, Qld 4812
Fax: 07 4725 5850
Email: design@nceng.com.au
ABN 341 008 173 56

Registered Chartered Professional Engineer — Regn. No. 2558980
Registered Professional Engineer (Civil & Structural) QLD — Regn. No. 9985
Registered Certifying Engineer (Structural) N.T. — Regn. No. 116373ES
Registered Engineer - (Civil) VIC — Regn. No. PE0002216
Registered Engineer - (Civil) TAS — Regn. No. CC5648M

Mr Timothy Roy Messer BE MIEAust RPEQ
Signature T. Messer
Date 20/3/2025
Registered on the NPER in the areas of practice of Civil & Structural National Professional Engineers Register



300 x 300 x 300
length x width x depth (mm)

Y	LOCAL THICKENING DETAIL	SCALE: NO SCALE

STRUCTURAL GENERAL NOTES

1. **GOVERNING CODE** : BUILDING CODE OF AUSTRALIA (BCA), LOADING TO AS1170 - ALL SECTIONS.
2. **DRAWING OWNERSHIP** :
THESE DRAWINGS REMAIN THE PROPERTY OF AG&S BUILDING SYSTEMS PTY. LTD (AG&S). ENGINEERING SIGNATURE AND CERTIFICATION IS ONLY VALID WHEN BUILDING IS SUPPLIED BY A DISTRIBUTOR OF AG&S. DRAWINGS ARE PROVIDED FOR THE DUAL PURPOSE OF OBTAINING BUILDING PERMITS AND AIDING CONSTRUCTION. ANY OTHER USE OR REPRODUCTION IS PROHIBITED WITHOUT WRITTEN APPROVAL FROM AG&S.
3. **DRAWING SIGNATURE REQUIREMENTS** :
THESE DRAWINGS ARE NOT VALID UNLESS SIGNED BY THE ENGINEER. THE ENGINEER ACCEPTS NO LIABILITY OR RESPONSIBILITY FOR DRAWINGS WITHOUT A SIGNATURE. EACH TITLE BLOCK CONTAINS A WATER MARK UNDER THE CUSTOMERS NAME CONTAINING THE DATE OF PRODUCTION OF THE DRAWINGS; THE DRAWINGS ARE TO BE SUBMITTED TO COUNCIL WITHIN 21 DAYS OF THIS DATE. THIS IS TO ENSURE THAT ONLY CURRENT DRAWINGS ARE IN CIRCULATION.
4. **CONTRACTOR RESPONSIBILITIES** :
CERTIFIER AND CONTRACTOR TO CONFIRM [ON SITE] THAT THE WIND LOADINGS APPLIED TO THIS DESIGN ARE TRUE AND CORRECT FOR THE ADDRESS STATED IN THE TITLE BLOCK.
CONTRACTOR SHALL VERIFY AND CONFIRM ALL EXISTING CONDITIONS AND DIMENSIONS. ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES BETWEEN DRAWINGS AND EXISTING CONDITIONS PRIOR TO START OF WORK.
CONTRACTOR MUST NOT MAKE ANY DEVIATION FROM THE PROVIDED PLANS WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM ONE THE UNDERSIGNING ENGINEERS. THE ENGINEER / AG&S TAKE NO RESPONSIBILITY FOR CHANGES MADE WITHOUT WRITTEN APPROVAL.
CONTRACTOR IS RESPONSIBLE FOR ENSURING NO PART OF THE STRUCTURE BECOMES OVERSTRESSED DURING CONSTRUCTION.
BUILDING IS NOT STRUCTURALLY ADEQUATE UNTIL THE INSTALLATION OF ALL COMPONENTS AND DETAILS SHOWN IS COMPLETED IN ACCORDANCE WITH THESE DRAWINGS.
THE INDICATED DRAWING SCALES ARE APPROXIMATE. DO NOT SCALE DRAWINGS FOR CONSTRUCTION PURPOSES.
FOR FUTHER DIRECTIONS ON CONSTRUCTION THE CONTRACTOR SHOULD CONSULT THE APPROPRIATE INSTRUCTION MANUAL.
5. **ENGINEERING** :
THE ENGINEER / AG&S ARE NOT ACTING AS PROJECT MANAGERS FOR THIS DEVELOPMENT, AND WILL NOT BE PRESENT DURING CONSTRUCTION.
THE UNDERSIGNING ENGINEERS HAVE REVIEWED THIS BUILDING FOR CONFORMITY ONLY TO THE STRUCTURAL DESIGN PORTIONS OF THE GOVERNING CODE. THE PROJECT MANAGER IS RESPONSIBLE FOR ADDRESSING ANY OTHER CODE REQUIREMENTS APPLICABLE TO THIS DEVELOPMENT.
THESE DOCUMENTS ARE STAMPED ONLY AS TO THE COMPONENTS SUPPLIED BY AG&S. IT IS THE RESPONSIBILITY OF THE PURCHASER TO COORDINATE DRAWINGS PROVIDED BY AG&S WITH OTHER PLANS AND/OR OTHER COMPONENTS THAT ARE PART OF THE OVERALL PROJECT. IN CASES OF DISCREPANCIES, THE LATEST DRAWINGS PROVIDED BY AG&S SHALL GOVERN.
6. **INSPECTIONS** :
NO SPECIAL INSPECTIONS ARE REQUIRED BY THE GOVERNING CODE ON THIS JOB. ANY OTHER INSPECTIONS REQUESTED BY THE LOCAL BUILDING DEPARTMENT SHALL BE CONDUCTED AT THE OWNER'S EXPENSE.
7. **SOIL REQUIREMENTS** :
SITE CLASSIFICATION TO BE A, S OR M ONLY. SOIL SAFE BEARING CAPCITY VALUE INDICATED ON DRAWING SHEET 4 OCCURS AT 100mm BELOW FINISH GRADE, EXISTING NATURAL GRADE, OR AT FROST DEPTH SPECIFIED BY LOCAL BUILDING DEPARTMENT, WHICHEVER IS THE LOWEST ELEVATION. REGARDLESS OF DETAIL Y ON SHEET 4 THE MINIMUM FOUNDATION DEPTH SHOULD BE 100MM INTO NATURAL GROUND OR BELOW FROST DEPTH SPECIFIED BY LOCAL COUNCIL.
ROLLED OR COMPACTED FILL MAY BE USED UNDER SLAB, COMPACTED IN 150mm LAYERS TO A MAXIMUM DEPTH OF 900mm.
CONCRETE FOUNDATION EMBEDMENT DEPTHS DO NOT APPLY TO LOCATIONS WHERE ANY UNCOMPACTED FILL OR DISTURBED GROUND EXISTS OR WHERE WALLS OF THE EXCAVATION WILL NOT STAND WITHOUT SUPPLEMENTAL SUPPORT, IN THIS CASE SEEK FURTHER ENGINEERING ADVICE.
8. **CLASS 10a FOOTING DESIGNS:**
THE FOUNDATION DOCUMENTED IS APPROPRIATE FOR CLASS 10a BUILDING DESIGNS ON 'M-D', 'H', 'H-D' OR 'E' CLASS SOILS, IF TOTAL SLAB AREA IS UNDER 100m/sqr AND THE MAXIMUM SLAB DIMENSION (LENGTH AND WIDTH) IS LESS THAN 12m.
PLEASE BE AWARE THAT THE SLAB DESIGN FOR H & E CLASS SOILS IN THESE INSTANCES ARE DESIGNED TO EXPERIENCE SOME CRACKING. THIS CRACKING IS NOT CONSIDERED A STRUCTURAL FLAW OR DESIGN ISSUE, AND IS SIMPLY COSMETIC IN NATURE. IF THIS IS A CONCERN TO THE CLIENT IT IS ADVISED THEY DISCUSS OTHER OPTIONS WITH THE RELEVANT DISTRIBUTOR PRIOR TO THE POURING OF THE SLAB.
FOR PAD ONLY DESIGNS BUILDING DIMENSION PREVAILS OVER SLAB DIMENSIONS.
9. **CONCRETE REQUIREMENTS** :
ALL CONCRETE DETAILS AND PLACEMENT SHALL BE PERFORMED IN ACCORDANCE WITH AS2870 AND AS3600.CONCRETE SHALL HAVE A MIN. 28-DAY STRENGTH OF 20MPa FOR EXPOSURE A1, 25MPa FOR EXPOSURE A2, 32MPa FOR EXPOSURE B1, 40MPa FOR EXPOSURE B2 AND 50MPa FOR EXPOSURE C, IN ACCORDANCE WITH SECTION 4, AS3600. CEMENT TO BE TYPE A. MAX AGGREGATE SIZE OF 20mm. SLUMP TO BE 80mm +-15mm. SLABS TO BE CURED FOR 7 DAYS BY WATERING OR COVERING WITH A PLASTIC MEMBRANE, AFTER WHICH CONSTRUCTION CAN BEGIN, DUE CARE GIVEN NOT TO OVER-TIGHTEN HOLD DOWN BOLTS. GIVEN ALLOWABLE SOIL TYPES 1 LAYER OF SL72 REINFORCING MESH IS TO BE INSTALLED ON STANDARD SLABS WITH A MINIMUM 30MM COVER FROM CONCRETE SURFACE. CONCRETE REINFORCING TO CONFORM TO AS 1302, AS1303 & AS 1304. ALL REINFORCING COVER TO BE A MINIMUM OF 30mm.
10. **STRUCTURAL STEEL REQUIREMENTS** :
ALL STRUCTURAL STEEL, INCLUDING SHEETING THOUGH EXCLUDING CONCRETE REINFORCING, SHALL CONFORM TO AS 1397 (GAUGE <= 1mm fy = 550MPa, GAUGE > 1mm < 1.5mm fy = 500MPa, GAUGE >= 1.5mm fy = 450MPa).
NO WELDING IS TO BE PERFORMED ON THIS BUILDING.
ALL STRUCTURAL MEMBERS AND CONNECTIONS DESIGNED TO AS4600. ALL BOLT HOLE DIAMETERS TO STRAMIT GENERAL PUNCHINGS.

PROJECT DESIGN CRITERIA

ROOF LIVE LOAD: 0.25 kPa
BASIC WIND SPEED: VR 45 m/s
WIND REGION: Reg A
TERRAIN CATEGORY: TCat 2
SEISMIC ZONE: 4
SOIL SAFE BEARING CAPACITY: 100 kPa
IMPORTANCE LEVEL: 2

SHEET 4 OF 5 | JOB NO. MAST37926 | DATE | CHECKED TM | DRAWN FDS

STEEL BUILDING BY

FOR

AT

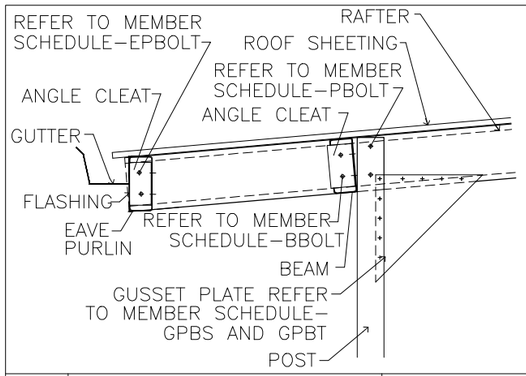
(CONTACT)
MA STEEL
02 6382 4387
MARK O'CONNOR
3 LANDSDOWN STREET
YOUNG

SHED SAFE accredited

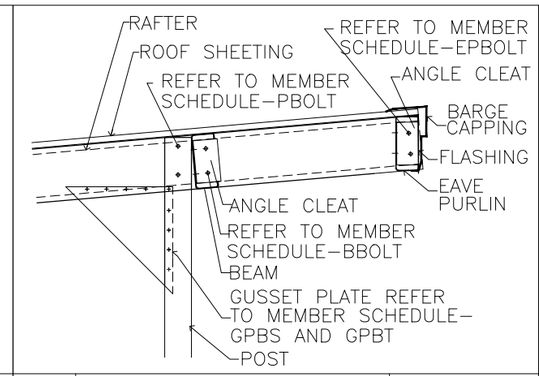
NORTHERN CONSULTING engineers
Civil & Structural Engineers
50 Punari Street
Currajong, Qld 4812
Fax: 07 4725 5850
Email: design@nceng.com.au
ABN 341 008 173 56

Registered Chartered Professional Engineer	Regn. No. 2558980
Registered Professional Engineer (Civil & Structural) QLD	Regn. No. 9985
Registered Certifying Engineer (Structural) N.T.	Regn. No. 116373ES
Registered Engineer - (Civil) VIC	Regn. No. PE0002216
Registered Engineer - (Civil) TAS	Regn. No. CC5648M

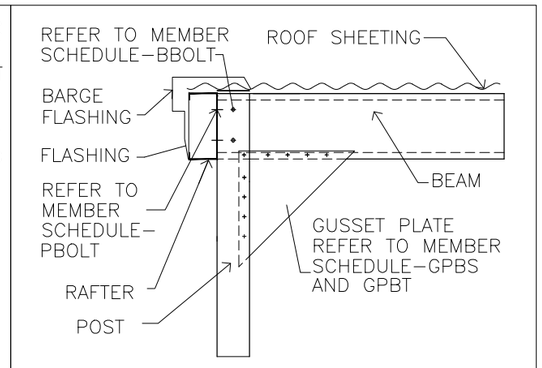
Mr Timothy Roy Messer BE MIEAust RPEQ
Signature .....
Date 20/3/2025
Registered on the NPER in the areas of practice of Civil & Structural National Professional Engineers Register



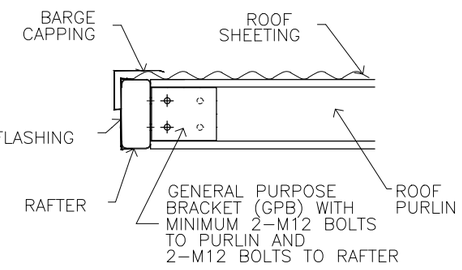
A | HAUNCH CONNECTION AT LOW END | DWG NO FBHL



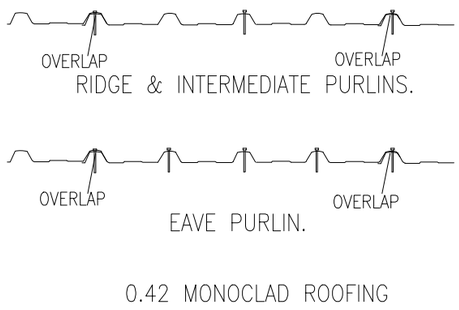
B | HAUNCH CONNECTION AT HIGH END | DWG NO FBHH



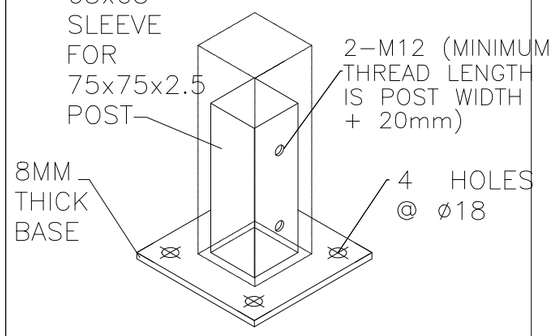
D | POST CONNECTION | DWG NO FBPC



E | ROOF PURLIN CONNECTION–END–BOLT | DWG NO FBRP1



G | ROOF SHEETING PROFILE | DWG NO R1



R | BASE CONNECTION DETAIL | DWG NO CBC18

MEMBER AND MATERIAL SCHEDULE

1	C.S. FRAME RAFTER	Single C15024
2	C.S. FRAME POST(LOW)	Single Post 75x75x2.5 SHS 2.40m stock length
3	POST(LOW) CUT LENGTH	2.4m
4	C.S. FRAME POST(HIGH)	Single Post 75x75x2.5 SHS 2.95m stock length
5	POST(HIGH) CUT LENGTH	2.78m *
6	ANCHOR BOLTS (# PER DETS.)	Sleeve Anchor 16.0x110 G/Y
7	POST SLEEVE BOLTS	Hex 4.6 Gal M12x100
8	EAVE PURLIN	C15024
9	BEAMS	C15024
10	ROOF PURLIN	C15024
11	ROOF PURLIN SPACING	0.911 m. (1.5m Max.)
12	ROOF CLADDING	Monoclad TCT 0.47, CB
13	ROOF CLADDING FASTENERS	12–14x45 H/Grip C/S CB
14	FRAME SCREW FASTENERS	14–13x22 Hex C/S (SP HD 5/16' Hex Drive)
15	FRAME BOLT FASTENERS	Purlin Assy M12x30 Z/P
16	GUSSET PLATE BRACKET SIZE (GPBS)	300 x 300
17	GUSSET PLATE BRACKET TEKS (GPBT)	8x14–13x22 Hex C/S (SP HD 5/16' Hex Drive)
18	POST BOLTS (PBOLT)	2xHex 4.6 Gal M12x100
19	ROOF PURLIN BOLTS (RPBOLT)	4xPurlin Assy M12x30 Z/P
20	EAVE PURLIN BOLTS (EPBOLT)	4xPurlin Assy M12x30 Z/P
21	BEAM BOLTS (BBOLT)	4xPurlin Assy M12x30 Z/P
22	ROOF COLOUR	COLORBOND
23	DOWNPIPE COLOUR	COLORBOND
24	GUTTER COLOUR	COLORBOND
25	BARGE COLOUR	COLORBOND

C.S. = CLEARSPAN
* MID POSTS TO BE CUT TO SUIT ACTUAL HEIGHT USING THE CUT LENGTH OF THE HIGH POSTS

SHEET 5 OF 5
JOB NO. MAST37926
DATE
CHECKED TM
DRAWN FDS

STEEL BUILDING BY
(CONTACT)
MA STEEL
02 6382 4387
FOR
MARK O'CONNOR
AT
3 LANDSDOWN STREET
YOUNG

SHED SAFE accredited

NORTHERN CONSULTING engineers
Civil & Structural Engineers
50 Punari Street
Currajong, Qld 4812
Fax: 07 4725 5850
Email: design@nceng.com.au
ABN 341 008 173 56

Registered Chartered Professional Engineer — Regn. No. 2558980
Registered Professional Engineer (Civil & Structural) QLD — Regn. No. 9985
Registered Certifying Engineer (Structural) N.T. — Regn. No. 116373ES
Registered Engineer - (Civil) VIC — Regn. No. PE0002216
Registered Engineer - (Civil) TAS — Regn. No. CC5648M

Mr Timothy Roy Messer BE MIEAust RPEQ
Signature .....
Date .....20/3/2025.....
Registered on the NPER in the areas of practice of Civil & Structural National Professional Engineers Register

COMPLIANCE CERTIFICATE FOR BUILDING DESIGN

Property Description
Street address (include number, street, suburb/locality & postcode)

3 LANDSDOWN STREET

YOUNG Postcode : 2594

Description of Component/s Certified
Clearly describe the extent of work covered by this certificate.

Steel Portal Frame Structure.

7m span x 7m O/A length x 2.4m eaves height.

Consisting of 1 bays at 4.4m spacing.

Basis of Certification
Detail the basis for giving the certificate and the extent to which tests, specifications, rules, standards, codes of practice and other publications, were relied upon.

Australian Standards (list) AS/NZS 4600-2018, AS/NZS 1170.0,.1-2002, 1170.2-2021, 1170.3-2003, 1170.4-2007, AS2870-2011, AS3600-2018, AS5216-2021

2022 National Construction Code of Australia	NCC Building Classification: Class 10a
Region AS1170.2 = Reg A	Factor for Region = NA
NCC Importance Level = 2	NCC Equivalent Wind class = N2
Annual Probability Exceedance wind = 1:500	Design Roof Live Load = 0.25 kPa

Regional 3 s Gust Wind Speed for annual probability of exceedance V_R = 45 m/s

Wind directional multipliers for the 8 cardinal directions Md = 1

Terrain/Height multiplier (Mz, Cat) = 0.91	Shielding Multiplier Ms = 1
Topographic multiplier Mt = 1	Design Wind Speed = 40 m/s
Ext. Pressure Coefficient cpe = −0.4 & +0.4	Int. Pressure Coefficient cpi = N/A

Reference Documentation
Clearly identify any relevant documentation, e.g numbered structural engineering plans

Drawing Nos: 'Fair Dinkum Sheds' Structural Design Drawing

To be read in conjunction with Pages 1 to 5

For Job Number: MAST37926 DATED : 20/3/2025

Specifications:

Computations:

Test Reports:

Other Documentation:

Competent Person Details
A competent person for building work, means a person who is assessed by the building certifier for the work as competent to practise in aspect of the design, building or inspection of the building work because of the person's skill and experience in the aspect. The competent person must also be registered or licensed under a law applying in the state to practice the aspect.

A COPY OF A CURRENT CV AND PROFESSIONAL REGISTRATION DETAILS MUST BE PROVIDED WITH THE CERTIFICATE

Name:	Timothy Roy Messer
Company Name (If applicable):	Northern Consulting Engineers
Postal Address:	50 Punari Street, Currajong 4812
Contact Person:	Timothy Roy Messer
Telephone Number:	07 4725 5550
Mobile Number:	N/A
Fax Number:	07 4725 5850
Email Address:	design@nceng.com.au
License or Registration Number:	2558980

Copy of CV Attached: Tick Box Y ☐ or N ☒

Signature of Competent Person
This form may be used by competent persons to certify the design of a material, system, method of building, building element design or other thing.

If the competent person is a licensed company the authorised person of the company is to sign the form.

I certify that the item/s described above, if installed or carried out in accordance with the information contained in this certificate, including any referenced documentation, will comply with the National Construction Code of Australia/relevant Australian or International Standard.

Signature of competent person: T. Messer Date: 20/3/2025

LOCAL GOVERNMENT USE ONLY

Date received		Reference Number/s		