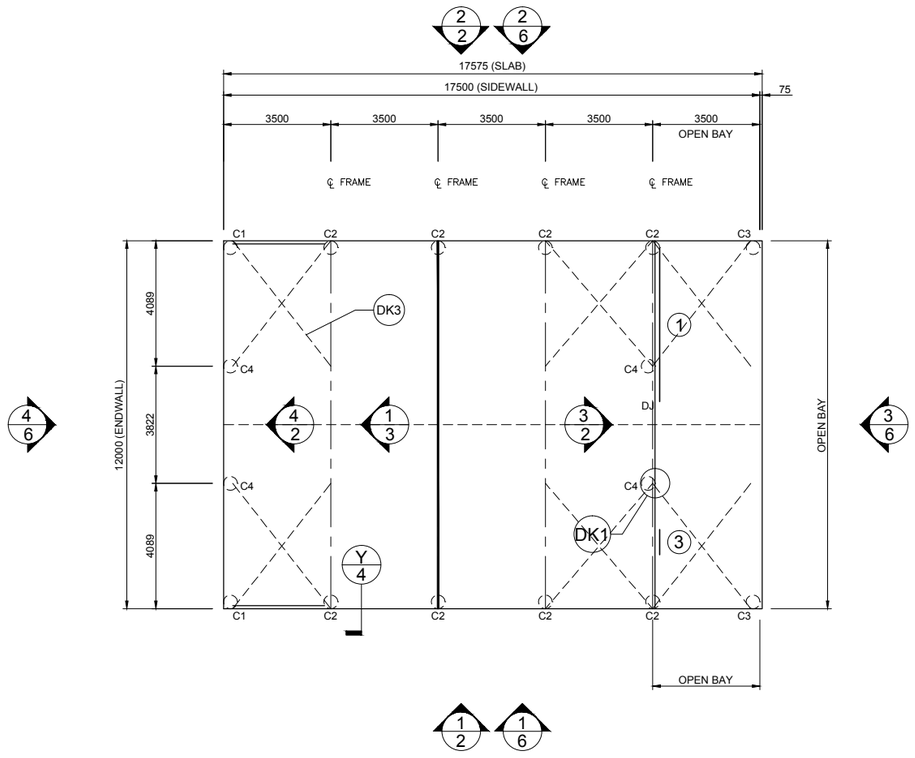
IF IN DOUBT, ASK.



1/1 FOUNDATION PLAN AND MEMBER LAYOUT
SCALE: 1 = 200

ROOF STRAP BRACING TO BE CONNECTED TO THE PURLIN CLOSEST TO THE LINE OF THE END WALL MULLION
FOR INTERNAL WALLS USE MULLION SPECIFICATIONS
SEE MULTIBUILD LAYOUT SCREEN FOR INTERNAL OPENING POSITIONS
DJ - INDICATES DOOR JAMBS AT THESE LOCATIONS. REFER TO SHEET #4 ON THE DOOR SCHEDULE FOR SIZES

MEMBER LEGEND

C1	C20015
C2	C20024
C3	C20019
C4	C15012

DO NOT SCALE THIS DRAWING. USE FIGURED DIMENSIONS ONLY. ALL DIMENSIONS TO BE VERIFIED ON SITE.

SHEET 1 OF 7
JOB NO. MAST33076
NCC 2019
DATE 30/11/2021
CHECKED TM
DRAWN FDS

STEEL BUILDING BY (CONTACT)
M.A. STEEL PTY. LTD. (LIC 225516C)
02 6382 4387
FOR TERRY METCALFE
AT 102 CLARKE STREET
HARDEN

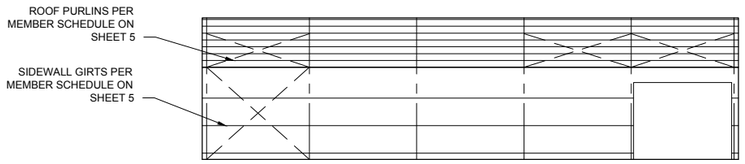
SHED SAFE accredited

fairdinkum SHEDS

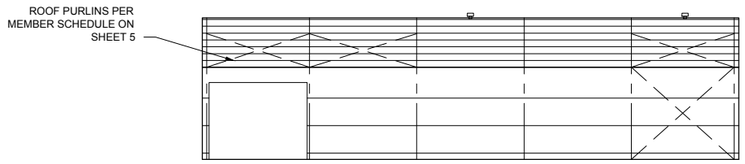
NORTHERN CONSULTING engineers
Civil & Structural Engineers
50 Punari Street
Currajong, Qld 4812
Fax: 07 4725 5850
Email: design@nceng.com.au
ABN 341 008 173 56

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. EC36692
Registered Engineer - (Civil) TAS — Regn. No. CC5648M

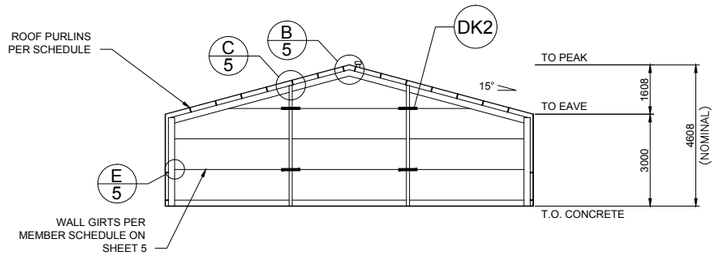
Mr Timothy Roy Messer BE MIEAust RPEQ
Signature .....
Date 30/11/2021
Registered on the NPER in the areas of practice of Civil & Structural National Professional Engineers Register



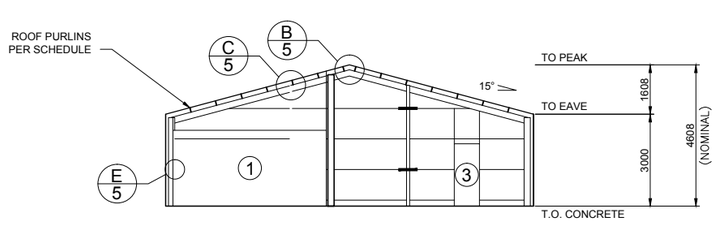
1/2 SIDEWALL EXTERIOR ELEVATION
SCALE: 1 = 200



2/2 SIDEWALL EXTERIOR ELEVATION
SCALE: 1 = 200



4/2 ENDWALL INTERIOR ELEVATION
SCALE: 1 = 200



3/2 ENDWALL INTERIOR ELEVATION
SCALE: 1 = 200

X BRACING IS REQUIRED IN 2 SIDE BAY(S) AND 2 ROOF BAY(S) (BOTH SIDES).
BRACING IS NEEDED ON THE ROOFS ON BOTH SIDES OF THE GARAPORT ENDWALL. FLY BRACING IS INCLUDED TO BE PLACED ON EVERY SECOND PURLIN AND GIRT ON ENDWALL MULLIONS, INTERNAL COLUMNS AND INTERNAL RAFTERS.

SHEET 2 OF 7
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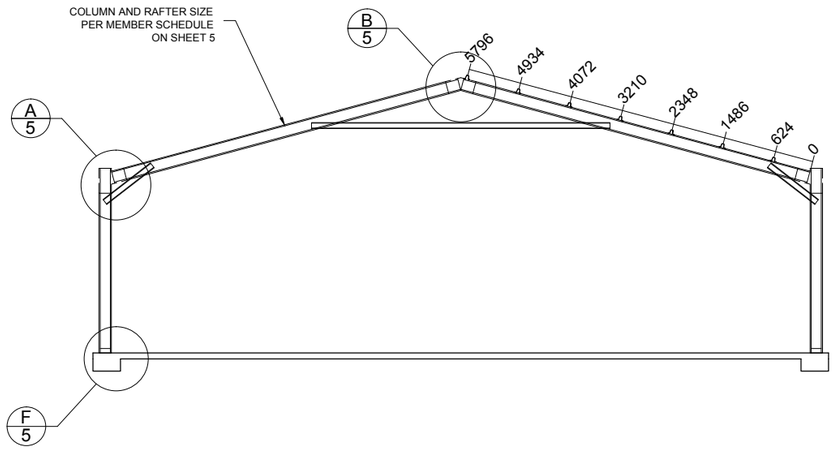

1/3 INTERNAL FRAME SECTION
SCALE: 1 = 100

Refer to Sheet #4 for concrete specification.

SHEET 3 OF 7

JOB NO. MAST33076
NCC 2019

DATE 30/11/2021

CHECKED TM

DRAWN FDS

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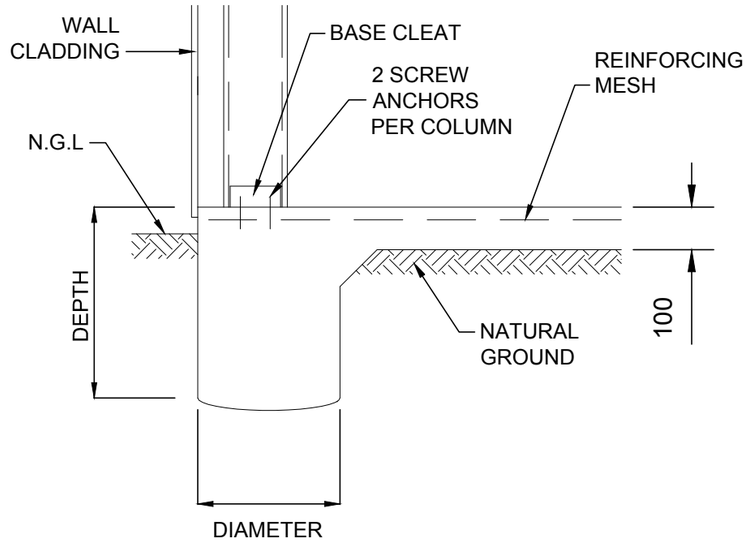

450 x 300

Diameter x Depth (mm)

N.G.L - NATURAL GROUND LINE

Y	BORED LOCAL THICKENING DETAIL	DWG NO: SBOMA

STRUCTURAL GENERAL NOTES

1. **GOVERNING CODE** : NATIONAL CONSTRUCTION CODE (NCC), LOADING TO AS1170 - ALL SECTIONS. BUILDING SUITABLE AS EITHER A PRIVATE GARAGE CLASS 10A, OR A FARM SHED (CLASS 7 OR 8),UNLESS OTHERWISE SPECIFICALLY NOTED. FOR USE AS A FARM SHED, IT MUST MEET THE FOLLOWING REQUIREMENTS:
   - BE LESS THAN 2000 SQM IN AREA (INCLUSIVE OF ANY MEZZANINE FLOOR AREA).
   - MUST BE LOCATED ON A FARM AND USED IN CONNECTION WITH FARMING PURPOSES.
   - BUILDING IS NOT TO BE OCCOUPIED FREQUENTLY NOR FOR EXTENDED PERIODS BY PEOPLE, WITH A MAXIMUM OF 1 PERSON PER 200 SQM OR 2 PERSONS MAXIMUM IN TOTAL WHICHEVER IS THE LESSER.
2. **DRAWING OWNERSHIP** :
   THESE DRAWINGS REMAIN THE PROPERTY OF FBHS (AUST) PTY LIMITED. ENGINEERING SIGNATURE AND CERTIFICATION IS ONLY VALID WHEN BUILDING IS SUPPLIED BY A DISTRIBUTOR OF FBHS. 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 FBHS.
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 / FBHS 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 / FBHS 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 FBHS. IT IS THE RESPONSIBILITY OF THE PURCHASER TO COORDINATE DRAWINGS PROVIDED BY FBHS WITH OTHER PLANS AND/OR OTHER COMPONENTS THAT ARE PART OF THE OVERALL PROJECT. IN CASES OF DISCREPANCIES, THE LATEST DRAWINGS PROVIDED BY FBHS SHALL GOVERN.
   NO ALTERATIONS TO THIS STRUCTURE (INCLUDING REMOVAL OF CLADDING) ARE TO BE UNDERTAKEN WITHOUT THE CONSENT OF THE CERTIFYING ENGINEER.
   OPENINGS SUCH AS WINDOWS AND DOORS NEED TO BE INSTALLED AS PER THE PRODUCT MANUFACTURER'S INFORMATION/DETAILS.
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 CAPACITY 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 or Class 7 FOOTING DESIGNS:**
   THE FOUNDATION DOCUMENTED IS ALSO APPROPRIATE FOR CLASS 10a or CLASS 7 BUILDING DESIGNS ON 'M-D', 'H', 'H-D' OR 'E' CLASS SOILS, IF TOTAL SLAB AREA IS UNDER 100m SQUARE AND THE MAXIMUM SLAB DIMENSION (LENGTH AND WIDTH) IS LESS THAN OR EQUAL TO 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.
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 & B1, 25MPa FOR EXPOSURE A2 & B2 AND 32MPa 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.
11. **FOOT TRAFFIC** :
    FOR ERECTION AND MAINTENANCE PLEASE NOTE THE FOLLOWING DEFINED FOOT TRAFFIC ZONES:
    - CORRUGATED: WALK ONLY WITHIN 200MM OF SCREW LINES. FEET SPREAD OVER AT LEAST TWO RIBS.
    - MONOCLAD: WALK ONLY IN PANS, OR ON RIBS AT SCREW LINES.

PROJECT DESIGN CRITERIA

ROOF LIVE LOAD:	0.25 kPa
BASIC WIND SPEED:	VR 45 m/s
SITE WIND SPEED:	VsitB 32.9 m/s
WIND REGION:	Reg A
TOPOGRAPHY FACTOR, Mt:	1
SHIELDING FACTOR, Ms:	0.91
MAX GROUND SNOW LOAD:	N/A
MAX ROOF SNOW LOAD:	N/A
SITE ALTITUDE:	N/A
TERRAIN CATEGORY:	TCat 2.79
SOIL SAFE BEARING CAPACITY:	100 kPa
RETURN PERIOD:	1:500
LIMITING CPI 1:	-0.455
LIMITING CPI 2:	0.49
IMPORTANCE LEVEL:	2

DETAIL KEYS

DK1	ENDWALL VERTICAL MULLION (SEE DETAIL C/5 FOR TOP CONN. AND F/5 FOR BASE CONN.)
DK2	FLYBRACING PER DETAIL L/5
DK3	X-BRACING IN ROOF ABOVE (SEE DETAIL M/5)
DK4	DOUBLE X-BRACING IN ROOF ABOVE (SEE DETAIL M/5)

SCHEDULE OF OPENINGS

DOOR	OPENING SIZE MAX WIDTH	OPENING SIZE MAX HEIGHT	OPENING TYPE	HEADER GIRT	OPENING JAMBS	WIND RATED
1	5000	2480*	2.50H X 5.10 CB *SERIES AA #	SINGLE	C20015P	NO
2	4200	3100*	3.10H X 4.30 CB *SERIES AA	SINGLE	C20015P	YES
3	820	2040	EXTERNAL PA DOOR 180 DEG	SINGLE		NO

NOTES: 1) SEE SHEET 5 FOR DOOR OPENING FRAMING INFORMATION.
2) ALL DOOR SCHEDULE MEASUREMENTS ARE ACTUAL DOOR/WINDOW SIZE NOT OPENING SIZE.

* ROLLER DOOR OPENING HEIGHT DEPENDENT ON FINAL BUILD LOCATION.

DOOR WARNINGS:
END ROLLER DOOR IN BAY 3 OF RIGHT WALL MAY BE TOO BIG TO FIT IN BAY.
END ROLLER DOOR IN BAY 3 OF RIGHT WALL MAY BE TOO BIG FOR JAMBS. PLEASE CHECK JAMBS BEFORE ORDERING.
END ROLLER DOOR IN BAY 2 OF BDIVIDERL2 WALL MAY BE TOO BIG TO FIT IN BAY.
END ROLLER DOOR IN BAY 2 OF BDIVIDERL2 WALL MAY BE TOO BIG FOR JAMBS. PLEASE CHECK JAMBS BEFORE ORDERING.

SHEET 4 OF 7
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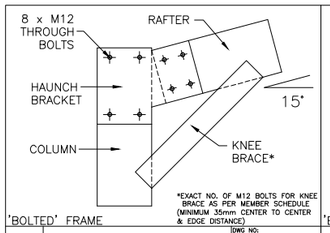
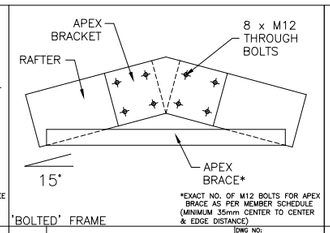
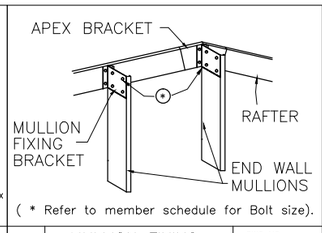


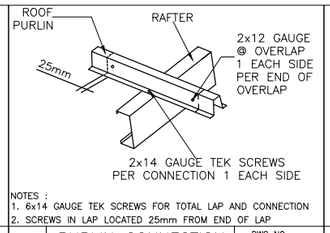
A	HAUNCH CONNECTION	DWG NO: K32BB



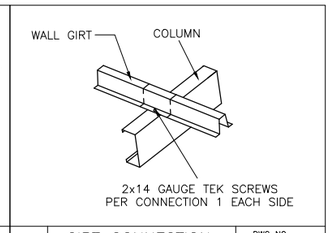
B	APEX CONNECTION	DWG NO: AP32BB



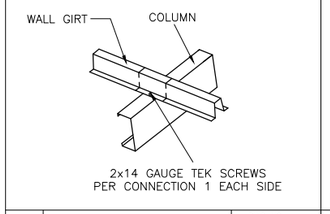
C	MULLION FIXING ANGLE BRACKET	DWG NO MFA4



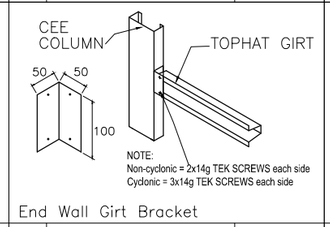
DP	PURLIN CONNECTION DETAIL	DWG NO PCON2L



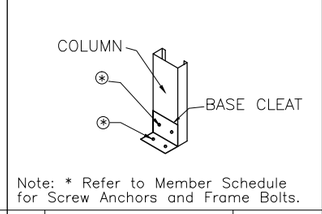
DG	GIRT CONNECTION DETAIL	DWG NO GCON2N



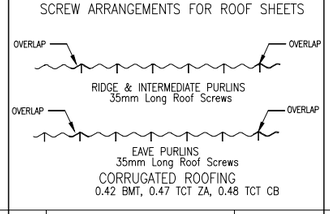
EG	ENDWALL GIRT CONNECTION DETAIL	DWG NO EGCON2N



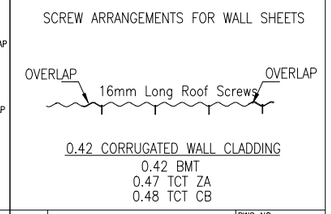
E	END WALL GIRT CONNECTION	DWG NO EG2-PH



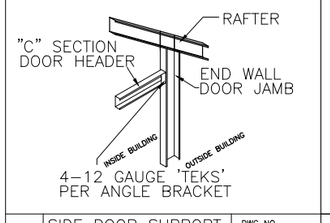
F	BASE CONNECTION	DWG NO BC10



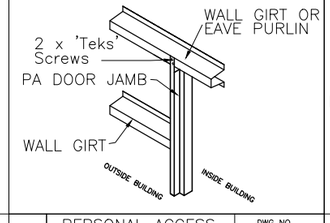
G	ROOF SHEETING PROFILE	DWG NO R0NC5



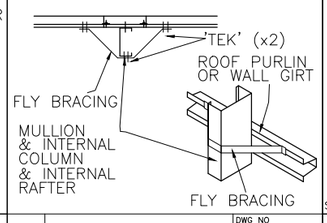
H	WALL SHEET PROFILE	DWG NO W0NC3



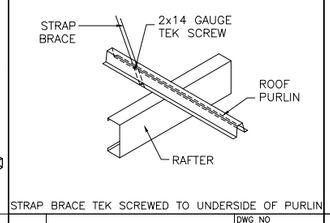
J	SIDE DOOR SUPPORT CONNECTION	DWG NO DFRG



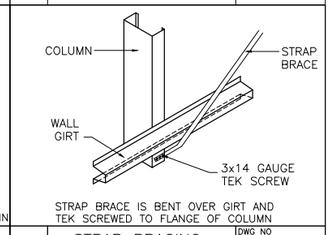
K	PERSONAL ACCESS DOOR	DWG NO PADD1



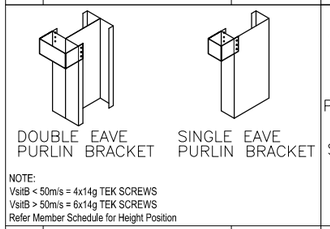
L	FLYBRACING	DWG NO FBRT



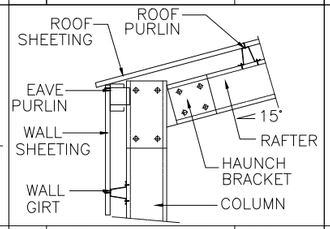
M	STRAP BRACING	DWG NO PTSB



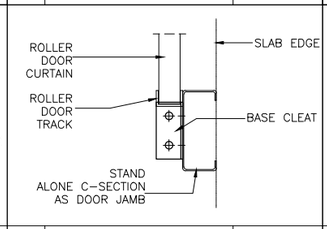
M	STRAP BRACING (UNLESS NOTED OTHERWISE)	DWG NO GTSB



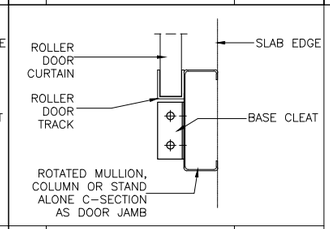
O	EAVE PURLIN BRACKET	DWG NO EPB-PH



U	OPEN BAY HEADER SHEET DETAIL	DWG NO OBH22



U	SINGLE DOORS TO SINGLE ROLLER DOOR JAMB	DWG NO SDSRM



U	SINGLE DOORS TO SINGLE ROLLER DOOR JAMB	DWG NO SDSRMWL

MEMBER AND MATERIAL SCHEDULE

1	END WALL RAFTER	Single C20015
2	C.S. FRAME RAFTER	Single C20019
3	END FRAME COLUMN (C1)	Single C20015
4	END FRAME OPEN CORNER COLUMN (C3)	Single C20019
5	C.S. FRAME COLUMN (C2)	Single C20024
6	MULLION (C4)	Single C15012
7	DOOR (#2) JAMB	C20024
8	C.S. FRAME KNEE BRACE	Single C10015 @ 1.15 LONG 3 bolts each end
9	KNEE BRACE HEIGHT UP COLUMN	2.42m
10	KNEE BRACE LENGTH UP RAFTER	0.74m
11	C.S. FRAME APEX BRACE	Single C10015 @ 4.87 LONG 2 bolts each end
12	APEX POSITION FROM RAFTER END	2.48m
13	ANCHOR BOLTS (# PER DETS.)	Screw Anchor 16mm x 100 Galv
14	EAVE PURLIN	C10015 (Eave Purlin Bracket 29mm down from top of column)
15	TYP. ROOF PURLIN SIZE	Tophat 64 x 1.0
16	MAIN BLDG. PURLIN SPACING	0.862 m. (7 rows) (Max Allow. 1.000m)
17	MAIN BLDG. PURLIN LENGTH	3.85 m. (0.35m Overlap)
18	TYP. SIDEWALL GIRT SIZE	Tophat 64 x 1.0
19	MAIN BLDG. SIDEWALL GIRT SPACING	0.899 m. (3 rows) (Max Allow. 1.100m)
20	MAIN BLDG. SIDEWALL GIRT LENGTH	3.6 m. (0.1m Overlap)
21	TYP. ENDWALL GIRT SIZE	Tophat 64 x 1.0
22	MAIN BLDG. ENDWALL GIRT SPACING	0.997 m. (4 rows) (Max Allow. 1.085m)
23	BAY DIVIDER GIRT SPACING	0.997 m. (4 rows) (Max Allow. 1.085m)
24	MAIN BLDG. ENDWALL GIRT LENGTH	3.92 m. (0.1m Overlap)
25	FRAME SCREW FASTENERS	14-13x22 Hex C/S (SP HD 5/16' Hex Drive)
26	FRAME BOLT FASTENERS	Purlin Assy M12x30 Z/P
27	X-BRACING STRAP AND FASTENERS	Single Bracing Strap Per Roll Light
28	WALL COLOUR	CLASSIC_CREAM
29	ROOF COLOUR	CLASSIC_CREAM
30	ROLLER DOOR COLOUR	MANOR_RED
31	P.A. DOOR COLOUR	CLASSIC_CREAM
32	ROOF VENT COLOUR	CLASSIC_CREAM
33	DOWNPIPE COLOUR	CLASSIC_CREAM
34	GUTTER COLOUR	MANOR_RED
35	CORNER FLASHING COLOUR	CLASSIC_CREAM
36	BARGE FLASHING COLOUR	MANOR_RED
37	OPENING FLASHING COLOUR	MANOR_RED
38	OPEN BAY HEADER HEIGHT	0.5

"C.S." = CLEARSPAN "L." = LEFT "R." = RIGHT

SHEET 5 OF 7
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02 6382 4387
FOR TERRY METCALFE
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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. EC36692
Registered Engineer - (Civil) TAS	Regn. No. CC5648M

Mr Timothy Roy Messer BE MIEAust RPEQ
Signature .....
Date 30/11/2021
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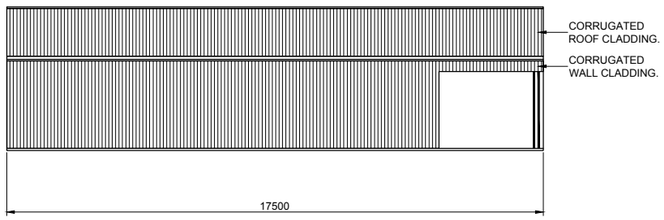
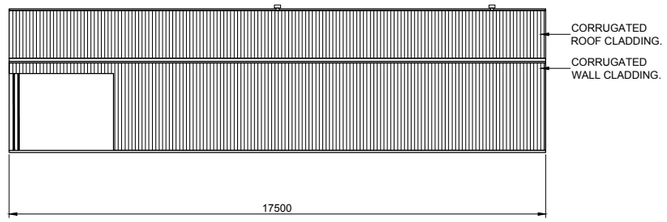
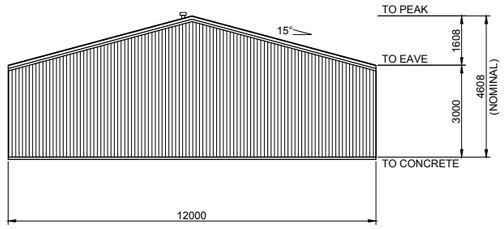


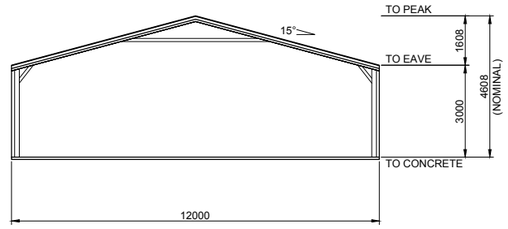
1/6 SIDEWALL EXTERIOR ELEVATION
SCALE: 1 = 200



2/6 SIDEWALL EXTERIOR ELEVATION
SCALE: 1 = 200



4/6 ENDWALL EXTERIOR ELEVATION
SCALE: 1 = 200



3/6 ENDWALL EXTERIOR ELEVATION
SCALE: 1 = 200

BUILDING COLOURS

WALL	CLASSIC CREAM
ROOF	CLASSIC CREAM
ROLLER DOOR	MANOR RED
P.A. DOOR	CLASSIC CREAM
ROOF VENT	CLASSIC CREAM
DOWNPIPE	CLASSIC CREAM
GUTTER	MANOR RED
CORNER FLASHING	CLASSIC CREAM
BARGE FLASHING	MANOR RED
OPENING FLASHING	MANOR RED

SHEET 6 OF 7
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GUIDE TO THE INSTALLATION OF TEMPORARY BRACING

(REFER TO INSTALLATION GUIDE MANUAL FOR THE TWO METHODS OF CONSTRUCTION)

NOTES:

BRACING MATERIALS - THE SHED ERECTOR TO SUPPLY SPECIFIC BRACING. SUITABLE RIGID MEMBERS CAPABLE OF TENSION AND COMPRESSION OR OPPOSING CHAINS OR OPPOSING LOAD RATED RATCHET STRAPS TO BE USED. (RIGID BRACING AS SHOWN ON DIAGRAM) ROPE BRACING SUITABLE ONLY FOR SMALLER STRUCTURES IN IDEAL CONDITIONS.

BRACING LOCATION - TEMPORARY BRACING TO BE ERECTED AS CLOSE TO 45 DEGREE ANGLE AND FIXED TO THE TOP OF THE COLUMN OR MULLION TO ACHIEVE THE OPTIMUM EFFECTIVENESS. IF THERE IS NOT ENOUGH SPACE FOR A 45 DEGREE ANGLE, THEN 20 DEGREE ANGLE IS TO BE THE MINIMUM ANGLE ALLOWED (REFER TO DIAGRAM). RIGID TEMPORARY BRACING MEMBER TO BE BOLTED TO HEAVY ANGLE PEGS HAMMERED INTO THE GROUND OR TO A BRACKET, MASONRY ANCHORED TO THE SLAB.

BRACING REMOVAL - TEMPORARY BRACING TO REMAIN IN PLACE UNTIL CLADDING IS FULLY INSTALLED WHERE POSSIBLE. IN NO CASE SHOULD TEMPORARY BRACING BE REMOVED UNTIL ALL PURLINS, GIRTS (AND PERMANENT CROSS BRACING WHERE USED) ARE FIXED.

SITE SAFETY - DUE CONSIDERATION TO BE GIVEN TO SITE SAFETY IN REGARD TO LOCATIONS OF BRACING AND PEGS.

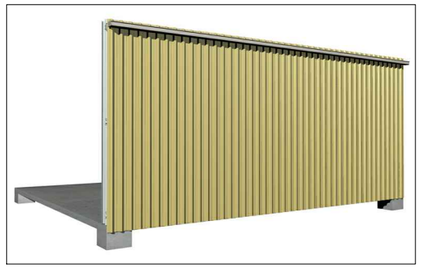
GUIDE APPLICATION - TEMPORARY BRACING AS DESCRIBED IS A MINIMUM REQUIREMENT FOR AN AVERAGE, STANDARD SITE CONDITION. PROVIDE ADDITIONAL BRACING FOR MORE SEVERE AND/OR HIGH EXPOSURE SITE CONDITIONS.
ADDITIONAL BRACING TO BE USED AS AND WHERE NECESSARY TO ENSURE THAT ENTIRE FRAME IS RIGID THROUGHOUT CONSTRUCTION.
RESPONSIBILITY FOR ENSURING STABILITY OF STRUCTURE REMAINS WITH THE BUILDER.

TILT UP METHOD
FOR STRUCTURES UNDER 9M SPAN, LESS THAN 3M HIGH AND LESS THAN 12M LONG

A. ASSEMBLE THE FIRST SIDEWALL FRAME (COMPLETE WITH WALL SHEETING, BRACING AND GUTTER) ON THE GROUND AND LIFT ASSEMBLED SIDEWALL FRAME INTO POSITION. FIX OFF TEMPORARY SIDE BRACING TO EACH END (REFER TO DIAGRAM). FIX BASE CLEATS.
B. ASSEMBLE THE SECOND SIDEWALL FRAME AS PER FIRST SIDEWALL FRAME. LIFT INTO POSITION. FIX OFF TEMPORARY WALL BRACING TO EACH END (REFER TO DIAGRAM) FIX BASE CLEATS.
C. FIX GABLE END RAFTERS TO COLUMNS TO TIE WALLS. PROP APEX UNTIL ENDWALL MULLION AND APEX TEMPORARY BRACE ARE FIXED OFF. IF NO MULLION IS REQUIRED THEN PROP AND BRACE APEX UNTIL CLADDING IS COMPLETE.
D. INSTALL REMAINING RAFTERS. AS EACH RAFTER PAIR IS INSTALLED, AT LEAST ONE PURLIN PER 3M OF RAFTER LENGTH IS TO BE INSTALLED TO SECURE RAFTERS.
E. INSTALL REMAINING PURLINS
F. INSTALL KNEE AND APEX BRACES IF AND WHERE APPLICABLE.
G. REPEAT FOR LEANTO'S.

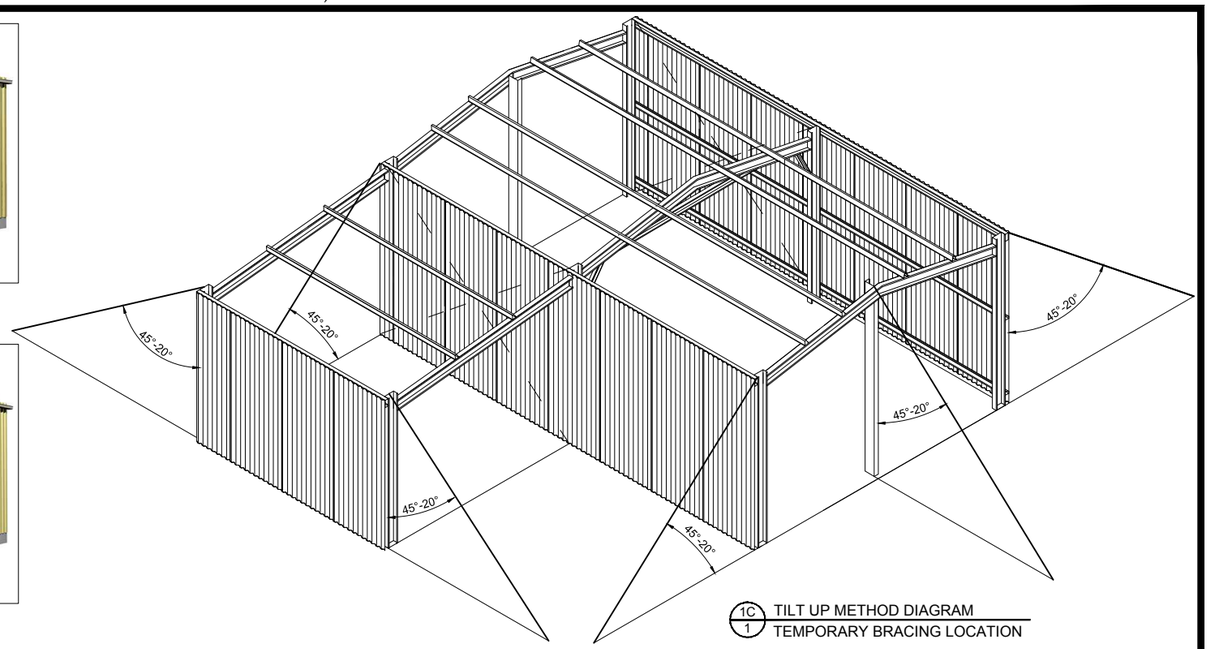
FRAME FIRST METHOD
FOR STRUCTURES OVER 9M SPAN, GREATER THAN 3M HIGH AND GREATER THAN 12M LONG

A. ASSEMBLE PORTAL FRAMES ON THE GROUND (WITH KNEE AND APEX BRACES IF AND WHERE APPLICABLE). LIFT THE FIRST PORTAL FRAME ASSEMBLY INTO POSITION. FIX OFF TEMPORARY END BRACING (REFER TO DIAGRAM). FIX BASE CLEATS.
B. PROP APEX UNTIL ENDWALL MULLION AND APEX TEMPORARY BRACE ARE FIXED OFF. IF NO MULLION IS REQUIRED THEN PROP AND BRACE APEX UNTIL CLADDING IS COMPLETE.
C. THE SECOND PORTAL FRAME ASSEMBLY TO BE LIFTED INTO POSITION. FIX EAVE PURLINS AND AT LEAST ONE PURLIN PER 3M OF RAFTER TO SECURE FRAME ASSEMBLY. FIX BASE CLEATS. FIX TEMPORARY SIDEWALL BRACING.
D. STAND REMAINING PORTAL FRAME ASSEMBLY AS PER STEP C, FIXING TEMPORARY SIDE WALL BRACING TO EVERY SECOND BAY. BRACE OTHER END PORTAL FRAME AS PER FIRST PORTAL FRAME.
E. INSTALL REMAINING PURLINS AND GIRTS.
F. REPEAT FOR LEANTO'S.



1A/1 FIRST SIDEWALL FRAME
REFER 1C FOR TEMPORARY BRACING LOCATION

1B/1 SECOND SIDEWALL FRAME
REFER 1C FOR TEMPORARY BRACING LOCATION

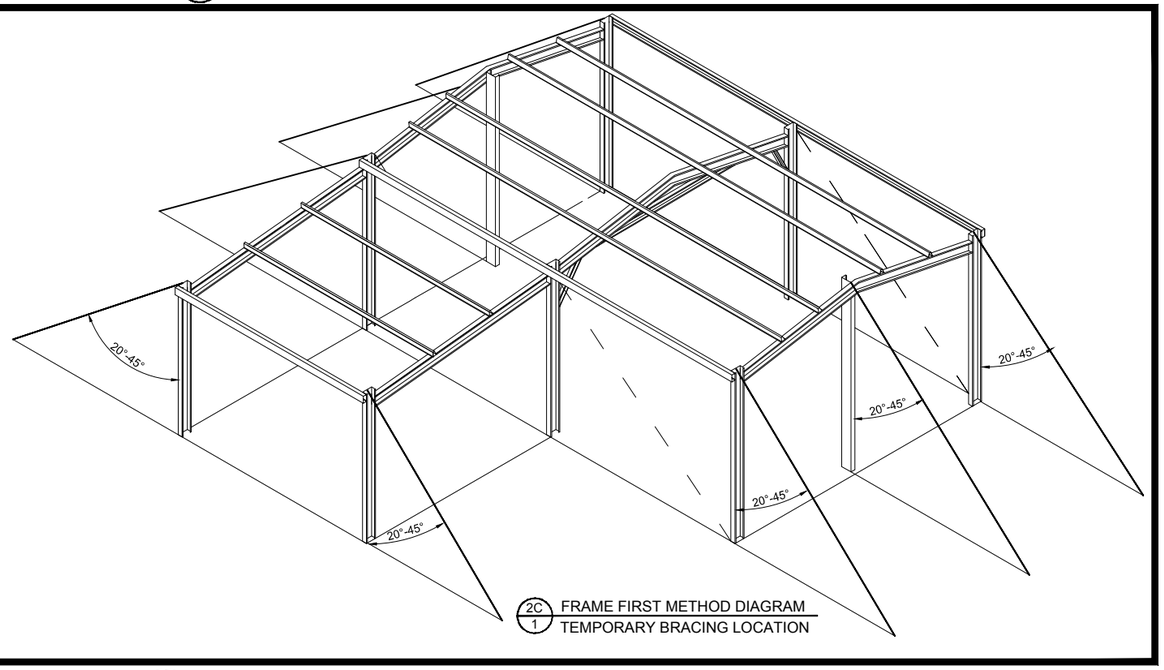


1C/1 TILT UP METHOD DIAGRAM
TEMPORARY BRACING LOCATION

1/1 TILT UP METHOD DIAGRAM
SCALE: NTS

2A/1 FIRST & SECOND PORTAL FRAME ASSEMBLY
REFER 2C FOR TEMPORARY BRACING LOCATION

2B/1 COMPLETE PORTAL FRAME ASSEMBLY
REFER 2C FOR TEMPORARY BRACING LOCATION



2C/1 FRAME FIRST METHOD DIAGRAM
TEMPORARY BRACING LOCATION

2/1 FRAME FIRST METHOD DIAGRAM
SCALE: NTS

SHEET 7 OF 7
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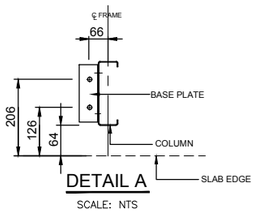
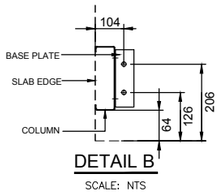
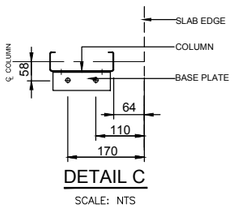


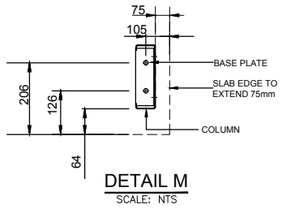
DETAIL A
SCALE: NTS



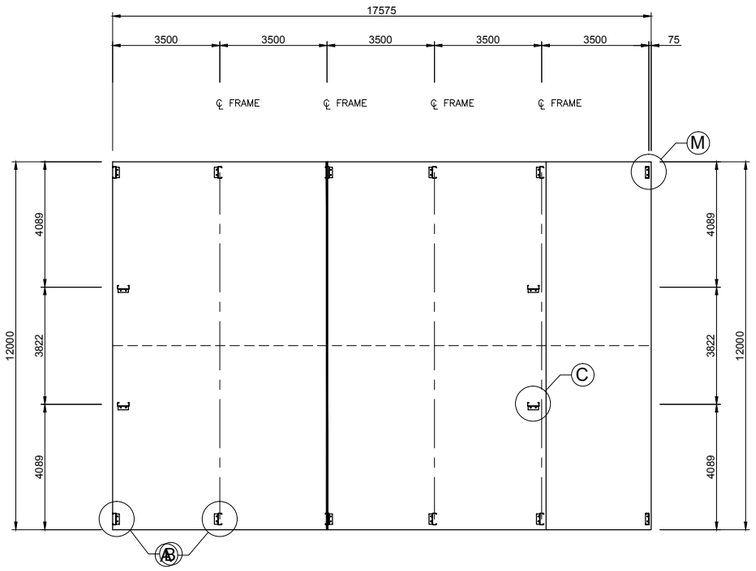
DETAIL B
SCALE: NTS



DETAIL C
SCALE: NTS



DETAIL M
SCALE: NTS



1/1 BOLT LAYOUT PLAN
SCALE: 1 = 200

IF YOU HAVE A ROLLER DOOR IN THE GABLE END OF YOUR SHED, CONTACT YOUR DISTRIBUTOR TO SEE IF MULLION NEEDS TO BE ROTATED FOR USE AS A DOOR JAMB.

NOT PART OF COUNCIL APPLICATION DOCUMENTATION

JOB NO. MAST33076
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02 6382 4387
FOR
TERRY METCALFE
AT
102 CLARKE STREET
HARDEN

30/11/2021

SHED SAFE accredited

fairdinkum SHEDS

BOLT LAYOUT PLAN

COMPLIANCE CERTIFICATE FOR BUILDING DESIGN

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

102 CLARKE STREET
HARDEN Postcode : 2587

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

Steel Portal Frame Structure.
12m span x 17.5m O/A length x 3m eaves height.
Consisting of 5 bays at 3.5m 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, 1170.2-2011, 1170.3-2003, 1170.4-2007, AS2870-2011, AS3600-2018

2019 National Construction Code of Australia Amendment 1	NCC Building Classification: Class 10
Region AS1170.2 = Reg A	Factor for Region = NA
NCC Importance Level = 2	NCC Equivalent Wind class = N/A
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 = 0.95

Terrain/Height multiplier (Mz, Cat) = 0.85	Shielding Multiplier M_s = 0.91
Topographic multiplier Mt = 1	Design Wind Speed = 32 m/s
Ext. Pressure Coefficient cpe = −1.14, 1.16	Int. Pressure Coefficient cpi = −0.455, 0.49

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 7
For Job Number: MAST33076 DATED : 30/11/2021
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 conatined 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: 30/11/2021

LOCAL GOVERNMENT USE ONLY

Date received		Reference Number/s		