A1 SHEET

GENERAL NOTES

G1. THESE STRUCTURAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANTS' DRAWINGS AND SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ANY DISCREPANCY SHALL BE REFERRED TO THE STRUCTURAL ENGINEER BEFORE PROCEEDING WITH THE WORK.

G2. DO NOT COMMENCE CONSTRUCTION USING THESE STRUCTURAL DRAWINGS UNTIL A CONSTRUCTION CERTIFICATE IS ISSUED BY THE PRINCIPAL CERTIFYING AUTHORITY.

G3. ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE RELEVANT CURRENT STANDARDS AUSTRALIA CODES AND WITH THE BUILDING CODE OF AUSTRALIA.

G4. ALL SET OUT DIMENSIONS SHOWN ON THESE STRUCTURAL DRAWINGS SHALL BE VERIFIED BY THE BUILDER ON SITE. DO NOT SCALE THESE STRUCTURAL DRAWINGS FOR DIMENSIONS.

G5. UNLESS NOTED OTHERWISE ALL LEVELS ARE IN METRES AND ALL DIMENSIONS ARE IN MILLIMETRES.

G6. THE METHOD OF CONSTRUCTION AND THE MAINTENANCE OF SAFETY DURING CONSTRUCTION ARE THE RESPONSIBILITY OF THE BUILDER. IF ANY STRUCTURAL ELEMENT PRESENTS DIFFICULTY IN RESPECT OF CONSTRUCTABILITY OR SAFETY, THE MATTER SHALL BE REFERRED TO THE STRUCTURAL ENGINEER FOR RESOLUTION BEFORE PROCEEDING WITH THE WORK.

G7. DURING CONSTRUCTION THE STRUCTURE SHALL BE MAINTAINED IN A STABLE CONDITION AND NO PART SHALL BE OVERLOADED. THE BUILDER SHALL PROVIDE TEMPORARY BRACING, SHORING AND PROPPING IN ORDER TO KEEP THE BUILDING WORKS AND EXCAVATIONS STABLE AT ALL TIMES.

G8. THE BUILDER IS RESPONSIBLE FOR THE ADEQUACY OF ALL TEMPORARY WORKS INCLUDING SHORING, PROPPING AND BRACING AND WHERE NECESSARY IS TO ENGAGE A STRUCTURAL ENGINEER TO DESIGN AND CERTIFY HIS TEMPORARY WORKS.

G9. IF THERE IS A DISCREPANCY IN MEMBER SIZES FOR ANY COMPONENT, ASSUME FOR PRICING PURPOSES ONLY THAT THE LARGER OR MORE EXPENSIVE SIZE IS CORRECT. REFER TO STRUCTURAL ENGINEER FOR DECISION BEFORE DETAILING OR CONSTRUCTION.

G10. DETAIL AND SECTION IDENTIFICATION

—— DETAIL OR SECTION REFERENCE
—— DRAWING REFERENCE

G11. THE RLs. SHOWN IN THESE DRAWINGS ARE APPROXIMATE AND ARE FOR THE SOLE PURPOSE OF ASSISTING THE STRUCTURAL DOCUMENTATION. THEY MUST NOT BE USED FOR CONSTRUCTION. REFER TO THE ARCHITECTS DRAWINGS FOR ALL CONSTRUCTION RLs.

FOUNDATIONS

F1 FOOTINGS HAVE BEEN DESIGNED FOR AN ALLOWABLE BEARING INTENSITY OF 150 kPa ON B1 HORIZON/GREY SILTY SANDY CLAY IN ACCORDANCE WITH

GEOTECHNICAL REPORT No.: COTTON GIN AT CARRATHOOL

PREPARED BY: BANNAN PASTORAL Co.

IF A GEOTECHNICAL INVESTIGATION HAS NOT BEEN MADE, THE FOUNDATION CONDITIONS ARE AN ASSUMPTION AND MUST BE CONFIRMED BY TRIAL EXCAVATIONS BY THE BUILDER.

FOUNDATION MATERIAL SHALL BE APPROVED FOR THIS BEARING PRESSURE BEFORE PLACING MEMBRANE, REINFORCEMENT OR CONCRETE.

F2 FOOTINGS SHALL BE PLACED CENTRALLY UNDER WALLS AND COLUMNS UNLESS NOTED OTHERWISE.

F3 RESIDENTIAL SLABS AND FOOTINGS HAVE BEEN DESIGNED FOR A REACTIVITY CLASS 'H1-D' TO AS2870.

F4 FOR CONTRACT PURPOSES ONLY THE FOOTING LEVEL SHALL BE ACTUAL CONSTRUCTION DEPTHS TO BE VERIFIED BY OTHERS.

F5 BEARING MATERIAL AT BASES OF PIERS TO BE CONFIRMED BY AN EXPERIENCED GEOTECHNICAL ENGINEER OR ENGINEERING GEOLOGIST ENGAGED BY THE BUILDER.

STRUCTURAL DESIGN LOADINGS

L1. THE STRUCTURAL COMPONENTS DETAILED ON THESE STRUCTURAL DRAWINGS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE RELEVANT STANDARDS AUSTRALIA CODES AND THE BUILDING CODE OF AUSTRALIA FOR THE FOLLOWING LOADINGS. REFER TO ARCHITECTURAL DRAWINGS FOR PROPOSED FLOOR USAGE.

L2. SUPERIMPOSED LOADS

FLOOR USAGE	LIVE LOAD		SUPERIMPOSED DEAD LOAD (kPa)
	UDL (kPa)	POINT (kPa)	
ROOF	0.25		
GENERAL FLOOR AREA	10.0		

L3. WIND LOADS IN ACCORDANCE WITH AS1170.2

REGION	A0
STRUCTURAL IMPORTANCE LEVEL AS DEFINED IN BCA - PART B1	2
REGIONAL WIND SPEED Vr (Ultimate) Vr (Servicability)	45 m/s 37 m/s
TERRAIN CATEGORY	2.5
TERRAIN/HEIGHT MULTIPLIER Mz.cat	1.01
SHIELDING MULTIPLIER Ms	1.0
TOPOGRAPHIC MULTIPLIER Mt	1.0
HILL-SHAPE MULTIPLIER Mh	1.0

L4. EARTHQUAKE DESIGN PARAMETERS TO AS1170.4

STRUCTURAL IMPORTANCE LEVEL AS DEFINED IN BCA - PART B1	2
PROBABILITY FACTOR kp	1.0
HAZARD FACTOR Z	0.09
SITE SUB-SOIL CLASS	Ce
EARTHQUAKE DESIGN CATEGORY	II

ICF BLOCKS

DC1. ALL CONCRETE ICF BLOCKS FORMWORK SHALL COMPLY WITH AS3600.

DC2. REFER TO ICF FORMWORK MANUFACTURER'S MANUAL FOR ALL INSTALLATION AND GUIDANCE.

DC3. VERTICAL STARTER BARS TO WALLS SHALL BE POSITIONED WITH TEMPLATES. TIE VERTICAL BARS TO STARTERS.

DC4. COVER TO BARS AS SHOWN ON DETAILS IS FROM EXTERNAL FACE OF PVC FORMWORK AND ASSUMES 10MM PVC WALL THICKNESS.

DC5. FILL ALL CORES WITH SELF-COMPACTING CONCRETE (SCC)
STRENGTH GRADE 32
AGGREGATE 10MM MAXIMUM SIZE (NOT MORE THAN 30% BY VOLUME OF GROUT)
SLUMP 650 ± 50.
MINIMUM CEMENT CONTENT 320 kg/m³

ALL CONCRETE SPECIFICATIONS TO BE CHECKED WITH ICF SUPPLIER TO CONFIRM IF SUITABLE.

DC6. BACKFILL FOR RETAINING WALLS SHALL BE FREE-DRAINING GRANULAR MATERIAL.

DC7. TEMPORARY PROPPING OF PVC FORMWORK IS REQUIRED, FORMWORK TO BE DESINED AND CONFIRMED BY THE CONTRACTORS TEMPORARY WORKS ENGINEER.

CONCRETE

C1. ALL WORKMANSHIP AND MATERIALS SHALL COMPLY WITH AS3600 EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS

C2. CONCRETE QUALITY
* C2.1 ALL CONCRETE SHALL COMPLY WITH AS1379.
* C2.2 NO BRECCIA TYPE AGGREGATE IS TO BE USED
* C2.3 COMPRESSIVE STRENGTH GRADES

ELEMENT	STRENGTH GRADE (MPa)	CEMENT TYPE TO AS3972	SLUMP (mm)	MAXIMUM AGGREGATE SIZE (mm)
FOOTINGS & PIERS,	32	A	80	20
GROUND FLOOR SLAB	40	SL	80	20
SUSPENDED/BONDEK SLAB	32	SL	80	20
ICF BLOCK WALLS	32 (SCC)	SL	650 ± 50 (SPREAD)	10

SPECIAL CLASS CONCRETES (PREFIXED S IN THE TABLE) SHALL HAVE THE PROPERTIES OF NORMAL CLASS CONCRETE WITH THE FOLLOWING THE FOLLOWING SPECIAL REQUIREMENTS:
CLASS S - SHRINKAGE STRAIN SHALL NOT EXCEED 750 10-6 AT 56 DAYS IN ACCORDANCE WITH AS1012
- CEMENT SHALL BE TYPE SL TO AS 3972

C3. CONCRETE PROFILES
* C3.1 SIZES OF CONCRETE ELEMENTS DO NOT INCLUDE THICKNESS OF APPLIED FINISHES.
* C3.2 BEAM DEPTHS ARE WRITTEN FIRST AND INCLUDE THE SLAB THICKNESS.
* C3.3 NO HOLES, CHASES, OR EMBEDMENT OF PIPES OTHER THAN SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE IN CONCRETE MEMBERS WITHOUT THE PRIOR WRITTEN APPROVAL OF THE ENGINEER.
* C3.4 CANTILEVERS - PROVIDE UPWARD CAMBER IN FORMWORK FOR REINFORCED CONCRETE CANTILEVERS OF L/120, WHERE L IS THE PROJECTION BEYOND THE COLUMN OR WALL FACE. MAINTAIN THE SLAB AND BEAM DEPTHS SHOWN.
* C3.5 PROVIDE DRIP GROOVES AT ALL EXPOSED EDGES. CHAMFERS, DRIP GROOVES, REGLETS, ETC TO BE TO ARCHITECT'S DETAILS. MAINTAIN COVER TO REINFORCEMENT AT THESE DETAILS.
* C3.6 CONSTRUCTION JOINTS NOT SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE TO THE WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER.
* C3.7 CONDUITS, PIPES ETC. SHALL ONLY BE LOCATED IN THE MIDDLE ONE THIRD OF SLAB DEPTH AND SPACED AT NOT LESS THAN 3 DIAMETERS. DO NOT PLACE PIPES OR CONDUITS WITHIN THE COVER TO THE REINFORCEMENT.

C4. COVER TO REINFORCEMENT

CONDITION	MINIMUM COVER
SURFACES IN CONTACT WITH GROUND: WITHOUT MEMBRANE	50mm
WITH MEMBRANE: * SLABS	30mm
* FOOTINGS	50mm
SURFACES ABOVE GROUND -EXPOSED	30mm

C5. THE FINISHED CONCRETE SHALL BE A DENSE HOMOGENEOUS MASS, COMPLETELY FILLING THE FORMWORK, THOROUGHLY EMBEDDING THE REINFORCEMENT AND FREE OF STONE POCKETS. COMPACT ALL CONCRETE WITH MECHANICAL VIBRATORS, INCLUDING FOOTINGS AND SLABS ON GROUND.

C6. CURING OF CONCRETE
CURE ALL CONCRETE AS FOLLOWS:
- KEEP SURFACES CONTINUOUSLY WET FOR 3 DAYS, FOLLOWED BY
- PREVENT MOISTURE LOSS FOR THE NEXT 4 DAYS, USING POLYTHENE SHEETING OR WET HESSIAN PROTECTED FROM WIND AND TRAFFIC, AND THEN
- ALLOW GRADUAL DRYING OUT

CURING COMPOUNDS MAY BE USED, PROVIDED THAT THEY COMPLY WITH AS3799, AND DO NOT AFFECT FLOOR FINISHES.
PVA BASED CURING COMPOUNDS ARE NOT ACCEPTABLE.

C7. SLIP JOINTS TO BE USED ON ALL LOAD-BEARING MASONRY WALLS. USE 2 LAYERS OF GALVANISED FLAT STEEL WITH GRAPHITE GREASE BETWEEN.

C8. SLAB REINFORCEMENT AT SUPPORTING WALLS
SLAB BARS SHALL EXTEND 70MM ONTO SUPPORTING WALLS, WITH 50% OF BOTTOM BARS COGGED TO ACHIEVE ANCHORAGE AT SIMPLY SUPPORTED ENDS.
MESH IN SLABS SHALL EXTEND 70MM ONTO SUPPORTING WALLS WITH A CROSS WIRE.

C9. MESH LAPPED SPLICES
LAPS IN MESH (FABRIC) SHALL COMPLY WITH AS3600. THE TWO OUTERMOST TRANSVERSE WIRES OF ONE SHEET SHALL OVERLAP THE TWO OUTERMOST TRANSVERSE WIRES OF THE SHEET BEING LAPPED.

REINFORCEMENT FOR CONCRETE

R1. REINFORCEMENT QUALITY AND NOTATION

* R1.1 BAR REINFORCEMENT

SYMBOL	BAR SHAPE	STRENGTH GRADE (MPa)	DUCTILITY CLASS	TO COMPLY WITH AUST. STANDARD
N	DEFORMED RIBBED BAR	500	NORMAL	AS 4671
R	PLAIN ROUND BAR	250	NORMAL	AS 4671
*Y	DEFORMED BAR *SEE NOTE -SUPERSEDED	400	NORMAL	AS 1302

ALL REINFORCING BARS SHALL BE GRADE D500N TO AS4671 UNO.
REINFORCEMENT NOTATION IS AS FOLLOWS:
NUMBER OF BARS IN GROUP, BAR GRADE, NOMINAL BAR SIZE IN mm, SPACING IN mm
E.G. 17 N16-250, WHERE N16 DENOTES A DEFORMED RIBBED BAR, OF GRADE 500MPa NORMAL DUCTILITY STEEL, WITH A NOMINAL 16mm DIAMETER, AT 250 SPACING.
NOTE: Y BARS MAY BE REPLACED WITH N BARS OF SAME SIZE, I.E. DEFORMED RIBBED BAR OF GRADE 500, NORMAL DUCTILITY STEEL.

* R1.2 Mesh reinforcement

SYMBOL	BAR SHAPE	STRENGTH GRADE (MPa)	DUCTILITY CLASS	TO COMPLY WITH AUST. STANDARD
RL	RECTANGULAR MESH OF DEFORMED RIBBED BARS	500	Low	AS 4671
SL	SQUARE MESH OF DEFORMED RIBBED BARS	500	Low	AS 4671
L12TM	TRENCH MESH	500	Low	AS 4671

ALL MESH SHALL BE GRADE 500L TO AS4671 UNO.
THE NUMBERS FOLLOWING THE SYMBOL DENOTE THE PRODUCT CODE. FOR EXAMPLE, SL92 DENOTES A SQUARE MESH OF 9mm (NOMINAL DIAMETER) DEFORMED RIBBED BARS AT 200mm CENTRES, OF GRADE 500MPa LOW DUCTILITY STEEL.

R2. COVER TO REINFORCEMENT
COVER TO REINFORCEMENT FOR DURABILITY SHALL BE AS FOLLOWS UNO.

CONDITION	COVER (mm)
SURFACES IN CONTACT WITH GROUND: WITHOUT MEMBRANE	50 mm
WITH MEMBRANE: * SLABS	30 mm
* FOOTINGS	50 mm
SURFACES ABOVE GROUND -INTERIOR •SLABS & BEAMS	30 mm
•COLUMNS	40 mm
SURFACES ABOVE GROUND -EXPOSED •SLABS & BEAMS	30 mm
•COLUMNS	40 mm

COVER SHALL NOT BE LESS THAN THE SIZE OF THE AGGREGATE OR THE MAIN BARS.
PIPES OR CONDUITS SHALL NOT BE PLACED WITHIN THE COVER TO REINFORCEMENT.
COVER MAY NEED TO BE INCREASED TO SUIT FIRE RATING -SEE DRAWINGS.
SUPPORT REINFORCEMENT ON MILD STEEL PLASTIC TIPPED CHAIRS, PLASTIC CHAIRS OR CONCRETE CHAIRS AT NOT GREATER THAN 1 METRE CENTRES BOTH WAYS.
IN EXPOSURE CONDITION B2 OR C (TO AS3600) USE ONLY PLASTIC OR CONCRETE CHAIRS.
TIE BARS AT ALTERNATE INTERSECTIONS.

R3. REINFORCEMENT REPRESENTATION
REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY, AND NOT NECESSARILY IN TRUE PROJECTION.
BARS SHOWN ARE INDICATIVE ONLY AND LENGTHS MAY VARY.
BEAM ELEVATIONS TAKE PRECEDENCE OVER SECTIONS. SLAB PLANS TAKE PRECEDENCE OVER SECTIONS. REFER TO SECTIONS FOR EXTRA BARS THAT MAY BE REQUIRED.

R4. REINFORCEMENT LAYERS:
B1 DENOTES BOTTOM BARS LAID 1st
B2 DENOTES BOTTOM BARS LAID 2nd
T1 DENOTES TOP BARS LAID 1st
T2 DENOTES TOP BARS LAID 2nd

R5. DISTRIBUTION REINFORCEMENT
PROVIDE DISTRIBUTION REINFORCEMENT OR TIE BARS IF NOT SHOWN. USE N12 AT 400, SPLICE 400mm WHERE NECESSARY, AND LAP 400mm WITH MAIN BARS

R6. REINFORCEMENT LAPPED SPLICES:
SPLICES IN REINFORCEMENT SHALL BE MADE ONLY IN POSITIONS SHOWN ON THE STRUCTURAL DRAWINGS OR AS OTHERWISE APPROVED IN WRITING BY THE STRUCTURAL ENGINEER.
LAPS SHALL BE IN ACCORDANCE WITH AS3600 AND NOT LESS THAN THE DEVELOPMENT LENGTH FOR EACH BAR.

REINFORCEMENT FOR CONCRETE (Cont'd)

SLAB AND BEAM REINFORCEMENT
LAP SPLICES IN SLAB AND BEAM REINFORCEMENT SHALL COMPLY WITH THE TABLE BELOW:
- UNLESS SHOWN OTHERWISE ON THE DRAWINGS, OR
- UNLESS CALCULATED IN ACCORDANCE WITH AS3600, AND APPROVED IN WRITING BY THE STRUCTURAL ENGINEER.

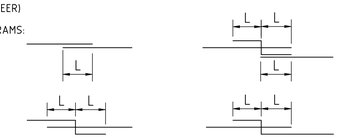
FULL STRENGTH LAPS FOR SLAB AND BEAM BARS

BAR DIA.	LENGTH L (mm) -SEE DIAGRAMS BELOW	
	Bar with 300mm or less depth of conc. below the bar	Bar with more than 300mm depth of conc. below the bar
N10	500	700
N12	650	800
N16	900	1100

LAP LENGTHS ARE TO BE INCREASED BY 30% WHEN SLIP FORMS ARE USED

BARS IN SLABS MAY BE IN STOCK LENGTHS WITH FULL STRENGTH STAGGERED LAPS. (SUBJECT TO APPROVAL FROM THE STRUCTURAL ENGINEER)

DIAGRAMS:



COLUMNS - COMPRESSION LAPS
UNLESS SHOWN OTHERWISE ON THE STRUCTURAL DRAWINGS:

BAR DIA.	LAP LENGTH (mm)
N12	500
N16	650
N20	800
N24	1000

MESH LAPPED SPLICES
LAPS IN MESH (FABRIC) SHALL COMPLY WITH AS3600. THE TWO OUTERMOST TRANSVERSE WIRES OF ONE SHEET SHALL OVERLAP THE TWO OUTERMOST TRANSVERSE WIRES OF THE SHEET BEING LAPPED.

R7. SLAB REINFORCEMENT AT SUPPORTING WALLS
SLAB BARS SHALL EXTEND 70mm ONTO SUPPORTING WALLS, WITH 50% OF BOTTOM BARS COGGED TO ACHIEVE ANCHORAGE AT SIMPLY SUPPORTED ENDS.
MESH IN SLABS SHALL EXTEND 70mm ONTO SUPPORTING WALLS WITH A CROSS WIRE.

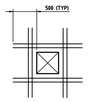
R8. CRANK THE REINFORCEMENT IN THE BEAM THAT IS TERMINATING AT AN INTERSECTION UNDER/OVER THE BEAM THAT IS CONTINUING. WHERE BOTH BEAMS TERMINATE, CONSIDER THE SHORTER SPAN AS THE TERMINATING BEAM.

R9. JOGGLES
JOGGLES IN BARS TO BE 1 BAR DIAMETER OVER A LENGTH OF 12 BAR DIAMETERS

R10. WELDING OF REINFORCEMENT DO NOT WELD REINFORCEMENT (UNLESS SHOWN ON THE STRUCTURAL DRAWINGS) WITHOUT WRITTEN APPROVAL FROM THE STRUCTURAL ENGINEER. APPROVAL FOR WELDING WILL DEPEND ON THE TYPE OF BAR AND ITS LOCATION.

R11. SITE BENDING OF REINFORCEMENT
SITE BENDING OF DEFORMED BARS (N OR Y) SHALL BE DONE WITHOUT HEATING, USING MECHANICAL BENDING TOOLS AND A MANDREL OR FORMER WITH A DIAMETER OF 5 TIMES THE BAR SIZE.
HEATING OF N OR Y BARS REDUCES THEIR STRENGTH.

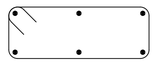
R12. TRIMMER BARS
PENETRATIONS (DENOTED T.P. ON PLAN).
(FOR PENETRATIONS UP TO 600X600 U.N.O.)



2N12 (T & B) EXTRA.

R13. INSPECTION BY STRUCTURAL ENGINEER
GIVE AT LEAST 24 HOURS NOTICE TO THE STRUCTURAL ENGINEER FOR INSPECTION OF REINFORCEMENT.
DO NOT HAVE CONCRETE DELIVERED UNTIL FINAL APPROVAL IS OBTAINED FROM THE STRUCTURAL ENGINEER.

R14. ALL BEAM TIES ARE TO HAVE BAR ANCHORAGES LOCATED ON THE TOP FACE OF THE BEAM UNO.



Revision	Amendment or reason for issue	Issue date	Drawing Completed by	Designed & dwg. checked by	Verified by X = Not verified	Issue authorised (*)
A	ISSUED FOR CC	20.12.24	K.S.	D.S.	X	D.S.
1	ISSUED FOR DISCUSSION	30.11.24	K.S.	D.S.	X	

* Drawing Status
Warning: Unless there is an authorised Shutte & Kennard Consulting Engineers signature at * , this drawing is not authorised for issue.

Notes

North

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Project: RIVCOTT COTTON GIN ADDITIONS
CONARGO ROAD
CARRATHOOL NSW

Drawing Title: GENERAL NOTES - SHEET 1

Client: RIVCOTT

Scales: NTS

Client Project No.:

Architect / Project Manager:

Drawing No.: 24S105-GN01

Sheet: 1 or 14

Revision: A

A1 SHEET

300mm

200mm

100mm

0

STRUCTURAL STEELWORK

S1 ALL WORKMANSHIP AND MATERIAL SHALL BE IN ACCORDANCE WITH AS4100 EXCEPT WHEN VARIED BY THE CONTRACT DOCUMENTS. FABRICATION SHALL BE CARRIED OUT IN ACCORDANCE WITH SECTION 14 OF AS4100. ERECTION SHALL BE CARRIED OUT IN ACCORDANCE WITH SECTION 15 OF AS4100.

S2 UNLESS NOTED OTHERWISE ALL STEEL SHALL BE OF THE FOLLOWING GRADE IN ACCORDANCE WITH THE FOLLOWING AUSTRALIAN STANDARDS

Type of steel	Australian Standard	Grade
Universal beams & columns, parallel flange channels & large angles	AS/NZS 3679.1	300
Welded sections	AS/NZS 3679.2	300
Hot milled plates, flats, floor plates, Small angles and slabs	AS/NZS 3678	250
Hollow sections - square & rectangular	AS 1163	C350 or C450 according to Section designation
Circular hollow sections	AS 1163	C350 or C250 according to Section designation
Cold formed purlins and girts	AS 1397	G450 Z350

PROVIDE CERTIFICATES OF COMPLIANCE FOR ALL STEELWORK TO THE STRUCTURAL ENGINEER BEFORE ORDERING.

S3 WELDING
ALL WELDING SHALL COMPLY WITH AS1554.
FILLET WELDS SHALL BE 6mm CONTINUOUS, CATEGORY GP USING E48XX ELECTRODES OR EQUIVALENT, UNLESS NOTED OTHERWISE.
BUTT WELDS SHALL BE COMPLETE PENETRATION BUTT WELDS CATEGORY SP TO AS 1554.1
WHERE WELDS ARE NOT OTHERWISE SPECIFIED THEY ARE TO ACHIEVE THE FULL STRENGTH OF THE MEMBERS JOINED.

S4 WELD TESTING
THE EXTENT OF NON-DESTRUCTIVE WELD EXAMINATION SHALL BE AS NOTED BELOW. RADIOGRAPHIC OR ULTRASONIC EXAMINATION SHALL BE TO AS1554.1, AS2177.1 AND AS2207 AS APPROPRIATE.

Type of weld and Category	Examination Method	Extent (% of total Length of weld type)
Fillet welds, GP+SP	Visual inspection	100%
Butt welds, GP	Visual inspection	100%
Butt welds, SP	Visual inspection	100%
	Radiographic or Ultrasonic Inspection	10%

S5 BOLTS SHALL BE M20 UNLESS NOTED OTHERWISE.
BOLTS SHALL BE 8.8/S UNLESS NOTED OTHERWISE.
ALL BOLTS, NUTS AND WASHERS SHALL BE GALVANISED TO AS1214. COLUMN HOLDING DOWN BOLTS, CAST IN PLACE, SHALL BE 4.6/S UNLESS NOTED OTHERWISE.

Column HD bolt	Embed in concrete	Cog	Concrete edge distance minimum
M16 4.6/S	250	50	160
M20 4.6/S	300	75	200
M24 4.6/S	400	100	260

FOR DRILLED-IN BOLTS SEE S24

S6 BOLTS DENOTED 4.6/S ARE COMMERCIAL BOLTS OF STRENGTH GRADE 4.6 TO AS1111, SNUG-TIGHT.

S7 BOLTS DENOTED 8.8/S, 8.8/TF AND 8.8/TB ARE HIGH STRENGTH STRUCTURAL BOLTS OF STRENGTH GRADE 8.8 TO AS 1252.
- 8.8/S DENOTES BOLTS SNUG-TIGHT
- 8.8/TF AND 8.8/TB DENOTES BOLTS FULLY TENSIONED TO AS 4100
- 8.8/TF DENOTES FRICTION JOINT
- 8.8/TB DENOTES BEARING JOINT

S8 LOAD INDICATOR WASHERS SHALL BE USED UNDER THE BOLT HEAD FOR ALL 8.8/TF AND 8.8/TB BOLTS. PROVIDE A 75mm COLOUR FLASH AT THESE CONNECTIONS.

S9 BOLT HOLES AND WASHERS - TYPICAL FOR UP TO M24 (UNLESS SHOWN OTHERWISE ON DRAWINGS)

STEELWORK CONT'D

S9.1 TYPICAL CONNECTIONS

Connection type	Bolt holes shall be round. Size = bolt diameter plus:	Washers	
		Bolt type	Washers - HD Galvanised to AS1214
Steel to steel	2mm	4.6/S	To AS1111 (37 OD x 3mm thick for M20)
		8.8/S	To AS1252 (39 OD x 4mm nominal thick for M20)
		8.8/TF	To AS1252 (39 OD x 4mm nominal thick for M20)
		8.8/TF	Plus load indicator washers under bolt head
Steel to concrete	4mm		Minimum 4mm thick plate washer
Column baseplates	6mm	M20 4.6/S	45x45x4mm plate washer
		M24 4.6/S	50x50x5mm plate washer

S9.2 CONNECTIONS TO TILT UP CONCRETE WALL PANELS
FOR CONNECTIONS TO CAST IN FERRULES IN TILT UP WALL PANELS, BOLT HOLES SHALL BE 6mm OVERSIZE WIDE X LONG SLOTTED HOLES -(UNLESS SHOWN OTHERWISE ON DRAWINGS).

Bolt	Hole size	Washer - to completely cover slotted hole
M20 8.8/S	26 wide x 50 mm	75 x 75 x 8mm plate washer

S9.3 SLOTTED HOLES FOR STEEL TO STEEL CONNECTIONS

Type	Hole size		Washers
	Width	Length	
Short slotted holes	2mm oversize	Bolt diameter + 10mm	Provide hardened or plate washer under both bolt & nut
Long slotted holes	2mm oversize	2.5 x bolt diameter	Minimum washer thickness 8mm Washer shall completely cover the long slotted hole. Provide washer under both bolt and nut

S9.4 HOLES OUT OF POSITION
IF HOLES ARE OUT OF POSITION, ADVISE ENGINEER BEFORE ENLARGING HOLES.

S10 CONNECTIONS
CONNECTION DETAILS SHOWN ON STRUCTURAL DRAWINGS ARE TYPICAL ONLY. WHERE A DETAIL IS NOT SHOWN THE FABRICATOR/SHOP DETAILER SHALL PREPARE DETAILS IN ACCORDANCE WITH AS4100 AND THE AISC PUBLICATIONS "DESIGN OF STRUCTURAL CONNECTIONS" AND "STANDARDISED STRUCTURAL CONNECTIONS". THESE DETAILS SHALL TAKE DUE ACCOUNT OF ARCHITECTURAL AND SERVICE REQUIREMENTS AND SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. CONNECTIONS SHALL HAVE AT LEAST TWO BOLTS. THE ENGINEER WILL ADVISE DESIGN LOADS AS REQUIRED. ALL COSTS AND THE IMPLICATIONS ASSOCIATED WITH THESE WORKS ARE TO BE ALLOWED FOR BY THE CONTRACTOR.

S11 ALL PLATES AND STIFFENERS SHALL BE 10mm THICK UNLESS NOTED OTHERWISE.
- PURLIN CLEATS SHALL BE 8mm THICK UNLESS NOTED OTHERWISE
- GIRT CLEATS SHALL BE 10mm THICK UNLESS NOTED OTHERWISE

S12 CO-ORDINATION
THE CONTRACTOR SHALL MAKE THE NECESSARY ALLOWANCES FOR CO-ORDINATING ALL ARCHITECTURAL AND STRUCTURAL ELEMENTS IN THE PREPARATION OF STRUCTURAL STEELWORK SHOP DRAWINGS AND SUBSEQUENT FABRICATION AND ERECTION.

S13 PROVIDE ALL NECESSARY PURLIN, GIRT AND TRIMMING ELEMENTS AS REQUIRED TO SUPPORT ALL ROOF AND WALL SHEETING/CLADDING EDGES, VALLEYS, HIPS AND PENETRATIONS.

S14 PURLIN AND GIRTS SHALL BE "LYSAGHTS" OR "STRAMIT" OR APPROVED, INSTALLED IN ACCORDANCE WITH MANUFACTURER'S WRITTEN DIRECTIONS. USE WASHERS UNDER BOLT HEAD AND NUT OR SPECIALLY SHAPED BOLTS AND NUTS. PURLIN BOLTS SHALL BE
- M12 4.6/S FOR SECTIONS UP TO 250 DEEP UNLESS NOTED OTHERWISE
- M16 4.6/S FOR SECTIONS OVER 250 DEEP UNLESS NOTED OTHERWISE

S15 CORROSION PROTECTION
THE FOLLOWING ARE THE MINIMUM REQUIREMENTS FOR PROTECTIVE TREATMENT. REFER TO THE ARCHITECTURAL SPECIFICATIONS FOR EXTRA FINISH COATS AND COLOURS. ALL COATINGS TO BE COMPATIBLE WITH APPLIED FINISHES INCLUDING TOP COAT AND ANY FIRE PROTECTION COATING.
PAINT REPAIRS SHALL BE CARRIED OUT TO GIVE THE SAME LEVEL OF PROTECTION AS THE ORIGINAL TREATMENT. ALL PAINT AND REPAIRS SHALL COMPLY WITH ANY SPECIFIED WARRANTY.

STEELWORK CONT'D

INTERNAL ENVIRONMENTS (EXCLUDING SPECIAL ENVIRONMENTS)

Member	Surface Preparation To AS1627	Primer	Top coat
All U.N.O.	Power Tool Class 1 or Abrasive Blast class 1	Red Oxide Zinc Phosphate 75µm	To Architect's Specifications

External environments * Delete if not required *

Member	Paint System to AS/NZS 2312 Table 6.3	
- -	Corrosivity Category	Life span
	-	-

HOT-DIP GALVANISING
UNLESS SPECIFIED OTHERWISE, UNDER ALL EXTERNAL ENVIRONMENTS ALL STRUCTURAL STEELWORK WHICH IS EXPOSED, OR IS IN CONTACT WITH EXPOSED BRICKWORK, AND ALL LINTELS SHALL BE HOT-DIP GALVANISED AFTER FABRICATION TO AS4680

Member	Hot-dip galvanised to AS4680
-	Normal finish
-	Architectural grade finish

ALL BOLTS, NUTS AND WASHERS, INCLUDING HOLDING-DOWN BOLTS SHALL BE GALVANISED TO AS1214.

S16 CONCRETE-ENCASED STEELWORK TO BE WRAPPED WITH F41 MESH HAVING 50mm MINIMUM COVER OF CONCRETE GRADE N25 TO AS3600.

S17 LOCATION OF PURLINS AND GIRTS TO BE OBTAINED FROM ARCHITECT'S DRAWINGS OR ROOFING CONTRACTOR.

S18 PROVIDE SEAL PLATES TO ENDS OF ALL HOLLOW SECTIONS (WITH VENT HOT-DIP HOLES IF TO BE GALVANISED.

S19 GRAVITY AND/OR GAUGE LINES TO INTERSECT, UNLESS NOTED OTHERWISE.

S20 ROOF BRACING TO BE HOOK BOLTED TO EVERY SECOND PURLIN, OR SIMILAR, SO THAT BRACING IS STRAIGHT. BOLTS FOR HANGING DUCTS AND PIPES ETC FROM PURLINS SHALL BE ATTACHED TO THE WEB OF THE PURLIN, NOT THE FLANGE.

S21 BASE PLATES SHALL BE GROUTED BEFORE MEMBER IS SUBSTANTIALLY LOADED. GROUT SHALL HAVE MINIMUM STRENGTH f'c OF 20 MPa AND SHALL BE DRYPACK MORTAR, RAMMED IN OR AN APPROVED NON-SHRINK GROUT.

S22 ALL STEELWORK IS TO BE TEMPORARILY BUT SECURELY BRACED UNTIL ALL FINAL BRACING, CLADDING AND STABILISING BRICK OR BLOCKWORK HAS BEEN COMPLETED.

S23 SHOP DRAWINGS SHALL BE PREPARED BY THE FABRICATOR FOR ALL STRUCTURAL STEELWORK. SUBMIT ALL WORKSHOP DRAWINGS TO STRUCTURAL ENGINEER FOR STRUCTURAL REVIEW AT LEAST FOURTEEN DAYS PRIOR TO FABRICATION. DO NOT FABRICATE STEELWORK UNTIL WORKSHOP DRAWINGS ARE APPROVED.

S24 ALL FLASHING AND WATERPROOFING ELEMENTS SHALL BE AS SPECIFIED IN ARCHITECTURAL DOCUMENTS.

S25 DRILLED-IN ANCHORS

S25.1 DETAILS
DRILLED ANCHORS SHALL BE USED WHERE SHOWN ON THE DRAWINGS, OR WHERE PERMITTED IN WRITING BY THE ENGINEER. SUBMIT DETAILS OF PROPOSED ANCHORS, BEFORE USE, IN WRITING, TO THE ENGINEER FOR REVIEW. INSTALL ANCHORS IN ACCORDANCE WITH MANUFACTURER'S WRITTEN DIRECTIONS. TEST ANCHORS AS SPECIFIED IN 24.4

S25.2 SPACING AND EDGE DISTANCES SHALL BE AS SHOWN, OR IN ACCORDANCE WITH THE MANUFACTURERS DIRECTIONS, AND SHALL BE APPROPRIATE FOR THE LOAD ON THE ANCHOR. UNLESS SHOWN OTHERWISE OR ALLOWED BY THE MANUFACTURER, THE FOLLOWING MINIMUMS SHALL BE USED FOR M20 CHEMICAL ANCHORES IN CONCRETE: SPACING=150mm, EDGE DISTANCE=150mm.

S25.3 FOR ATTACHMENT TO HOLLOW MASONRY OR CONCRETE PANELS, USE HILTI HIT HY20 OR EQUIVALENT.

S25.4 HOLES IN STEELWORK SHALL BE:
- 2mm OVERSIZE WHEN THE STEEL IS TO BE USED AS A DRILLING TEMPLATE, OR
- 6mm MAXIMUM OVERSIZE WHERE THE BOLTS ARE INSTALLED BEFOREHAND.

S25.5 DRILLED-IN ANCHOR TESTING
ANCHOR TESTING
TESTING LOAD TO BE 150% OF SAFE WORKING LOAD OR 100% OF ULTIMATE LOAD, TO MANUFACTURER'S PRODUCT SPECIFICATION. TESTS TO BE CARRIED OUT BY N.A.T.A. REGISTERED LABORATORY AT THE CONTACTOR'S EXPENSE.
CHEMICAL ANCHORS
NUMBER OF CHEMICAL ANCHORS TO BE TESTED IS AS FOLLOWS:
INSTALLATION FROM ABOVE AND SIDE = 20% OF TOTAL NUMBER IS TO BE TESTED.
INSTALLATION FROM BELOW = 100% OF TOTAL NUMBER IS TO BE TESTED
MECHANICAL ANCHORS
TEST 10% OF MECHANICAL ANCHORS
FAILURE
IF ONE ANCHOR IN A GROUP FAILS UNDER TESTING THEN ALL ANCHORS SHALL BE TESTED, AS SPECIFIED ABOVE, AT THE CONTRACTOR'S EXPENSE. ALL ANCHORS THAT FAIL ARE TO BE REPLACED AND RETESTED.

SLABS ON BONDEK

BONDEK SLAB NOTES:

B1. SLABS NOTED ON STRUCTURAL DRAWINGS AS 'BONDEK' SLABS ARE TO BE POURED ON PROFILED STEEL SHEETING FORMWORK, SUCH AS
- BONDEK II AS MANUFACTURED BY ONESTEEL, OR
- CONDECK HP AS MANUFACTURED BY STRAMIT INDUSTRIES, OR
- AN EQUIVALENT APPROVED IN WRITING.

SEE STRUCTURAL DRAWINGS FOR:
- BMT OF STEEL SHEETING,
- SLAB THICKNESS,
- DIRECTION OF SPAN OF BONDEK, WHICH IS INDICATED THUS:

B2. THE PROFILED STEEL SHEETING FORMWORK SHALL BE ROLL-FORMED FROM GALVANISED STEEL CONFORMING TO AS1397 GRADE G550-Z200 (550 MPa MINIMUM YIELD STRESS WITH COATING MASS OF 20g/m^2 MINIMUM)

B3. BONDEK PANELS SHALL BE 1.0mm BMT (UNLESS NOTED OTHERWISE)

B4. PRIOR TO CONCRETING, BONDEK PANELS ARE TO BE SECURELY FIXED OR HELD DOWN, TO PREVENT DISPLACEMENT DUE TO CONSTRUCTION LOADING OR WIND UPLIFT.

B5. FIX BONDEK PANELS TO STEELWORK BY PUDDLE WELDING, DRIVE PINS OR OTHER SUITABLE METHODS. SLIP JOINTS SHALL BE LOCATED AS SHOWN.

B6. BONDEK TO HAVE 50mm MINIMUM BEARING ON BRICKWORK. FIXING TO MASONRY IS NOT NECESSARY PROVIDED CONCRETE IS PLACED IMMEDIATELY AFTER PANELS ARE LAID. TOP COURSE OF BRICKWORK IS TO BE STRAIGHT AND LEVEL. IF REQUIRED, PROVIDE LAYER OF SMOOTH HARD MORTAR. SLIP JOINTS SHALL BE PROVIDED AT ALL MASONRY SUPPORTS UNLESS NOTED OTHERWISE.

B7. PROVIDE RL818 MESH (MINIMUM) PLACED WITH MAIN BARS IN TOP AND AT RIGHT ANGLES TO DIRECTION OF BONDEK. WHERE DIRECTION SPAN OF BONDEK CHANGES, LAP MESH 450mm MINIMUM IN DIRECTION OF MAIN BARS.

B8. BEFORE CONCRETE IS PLACED, REMOVE ANY ACCUMULATED DEBRIS, GREASE OR ANY OTHER SUBSTANCE, TO ENSURE CLEAN BONDING SURFACE. ANY PONDED RAINWATER SHALL BE REMOVED.

B9. FASTENING OF SIDE LAP JOINTS OF BONDEK SHALL BE IN ACCORDANCE WITH MANUFACTURER'S PUBLICATIONS. GENERALLY ONE NO.10-24X16MM SELF-DRILLING TAPPING SCREW IS REQUIRED MID-SPAN FOR SUPPORT SPACING OF 2750mm OR GREATER. FOR POINT LOAD RATINGS OR EXPOSED SOFFITS, ADDITIONAL FIXINGS MAY BE REQUIRED.

B10. UNLESS NOTED OTHERWISE, PROPPING OF THE BONDEK SHALL BE IN ACCORDANCE WITH MANUFACTURER'S PUBLICATIONS.

B11. PROPS SHALL NOT BE REMOVED UNTIL CONCRETE HAS REACHED SUFFICIENT STRENGTH.

CONCRETE WALL PANELS

CW1. CONCRETE WALL PANELS SHALL COMPLY WITH AS3850.1 AND AS3850.2 AND AS3600.

CW2. WALL PANEL DESIGN SHOWN ON THESE DRAWINGS IS FOR INSITU LOADING CONDITIONS ONLY.

CW3. THE FABRICATOR IS TO DESIGN THE PANELS FOR CONDITIONS DURING FABRICATION, LIFTING, TRANSPORT, ERECTION, AND BRACING, AND PROVIDE ANY ADDITIONAL REINFORCEMENT, STRONGBACKS, FITTINGS, AND FIXINGS.

CW4. THE FLEXURAL TENSILE STRESS IN THE PANEL DURING HANDLING AND ERECTION SHALL NOT EXCEED 0.4XSQRT(FCM), WHERE FCM IS THE COMPRESSIVE STRENGTH OF THE CONCRETE AT THE RELEVANT AGE.

CW5. THE BOND BREAKER BETWEEN THE CASTING SURFACE AND THE PANEL SHALL BE COMPATIBLE WITH PANEL SEAL COAT OR PAINT SYSTEMS, AND JOINT SEALANTS.

CW6. APPLY A WATERPROOF COATING TO THE BOTTOM OF WALL PANELS PRIOR TO ERECTION. REFER TO CONCRETOR SECTION OF THE ARCHITECT'S SPECIFICATION. EXTENT OF APPLICATION SHALL BE ALL SURFACE AREAS BELOW GROUND AND FLOOR LEVEL; BOTH SIDES AND BOTTOM EDGE.

CW7. SUBMIT 3 COPIES OF SHOP DRAWINGS FOR REVIEW BY THE ARCHITECT AND THE STRUCTURAL ENGINEER AT LEAST 14 DAYS BEFORE FABRICATION. ELECTRONIC COPIES WILL NOT BE ACCEPTED. DO NOT COMMENCE FABRICATION UNTIL SHOP DRAWINGS ARE APPROVED. SHOP DRAWINGS SHALL INCLUDE THE DESIGN DETAILS OF THE PANELS AND THE ERECTION. THE DESIGN IS TO BE CERTIFIED BY AN NPER STRUCTURAL ENGINEER, ENGAGED BY THE FABRICATOR.

CW8. THE BUILDER IS TO PROVIDE TEMPORARY STRUTTING, INCLUDING FOOTINGS FOR THE TEMPORARY STRUTS, AS REQUIRED. TEMPORARY BOLTING TO THE FLOOR SLAB IS ACCEPTABLE. TEMPORARY BOLTS (IF ALLOWED IN THE FLOOR SLAB) ARE TO BE REMOVED AND THE SLAB REINSTATED TO THE ARCHITECTS APPROVAL. STRUTTING WORKS ARE TO BE COORDINATED BY THE BUILDER TO SUIT HIS CONSTRUCTION PROGRAM AND METHODOLOGY. THE DESIGN OF THE TEMPORARY STRUTTING AND FOOTINGS IS TO BE CERTIFIED BY AN NPER STRUCTURAL ENGINEER ENGAGED BY THE BUILDER.

CW9. ANY CRACKED PANELS ARE TO BE REPLACED, (OR REPAIRED AT THE DISCRETION OF THE ARCHITECT), AT THE BUILDER'S EXPENSE. REPAIR, IF ALLOWED, IS TO BE BY EPOXY INJECTION.

CW10. SEALING OF JOINTS, WATERPROOFING OF WALLS (WHERE REQUIRED), JOINT DETAIL, FILLETS, ARE TO BE TO ARCHITECTS DETAILS.

CW11. THE PANEL CONTRACTOR IS TO BE RESPONSIBLE FOR SEALING ALL JOINTS, AND FULLY GROUTING BETWEEN PANELS AND FOOTINGS USING A NON-SHRINK GROUT. LEVELLING GROUT SHALL HAVE A COMPRESSIVE STRENGTH OF 32MPa AND MAXIMUM THICKNESS OF 40mm.

CW12. MAXIMUM DIFFERENTIAL OUT OF PLANE DIMENSION BETWEEN ADJACENT PANELS IS TO BE 10mm. ANY PANELS EXCEEDING THIS ARE TO BE REPLACED OR BROUGHT INTO PERMANENT ALIGNMENT WITH INTERNAL BRACKETS, AT THE ARCHITECTS DISCRETION.

CW13. THE FLOOR SLAB HAS BEEN DESIGNED FOR THE FINAL CONDITION ONLY.

CW14. ADVISE ENGINEER OF ANY ALTERATIONS REQUIRED TO THE FLOOR SLAB OR JOINT LAYOUT TO ACCOMMODATE TEMPORARY STRUTTING. NO COST VARIATION WILL BE ALLOWED FOR ALTERATIONS TO THE SLAB.

Revision	Amendment or reason for issue	Issue date	Drawing Completed by	Designed & dwg. checked by	Verified by X = Not verified	Issue authorised (*)
A	ISSUED FOR CC	20.12.24	K.S.	D.S.	X	D.S.
1	ISSUED FOR DISCUSSION	30.11.24	K.S.	D.S.	X	

*** Drawing Status**
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Notes

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Project
RIVCOTT COTTON GIN ADDITIONS
CONARGO ROAD
CARRATHOOL NSW

Drawing Title
GENERAL NOTES - SHEET 2

Client
RIVCOTT

Scales
NTS

Client Project No.

Architect / Project Manager

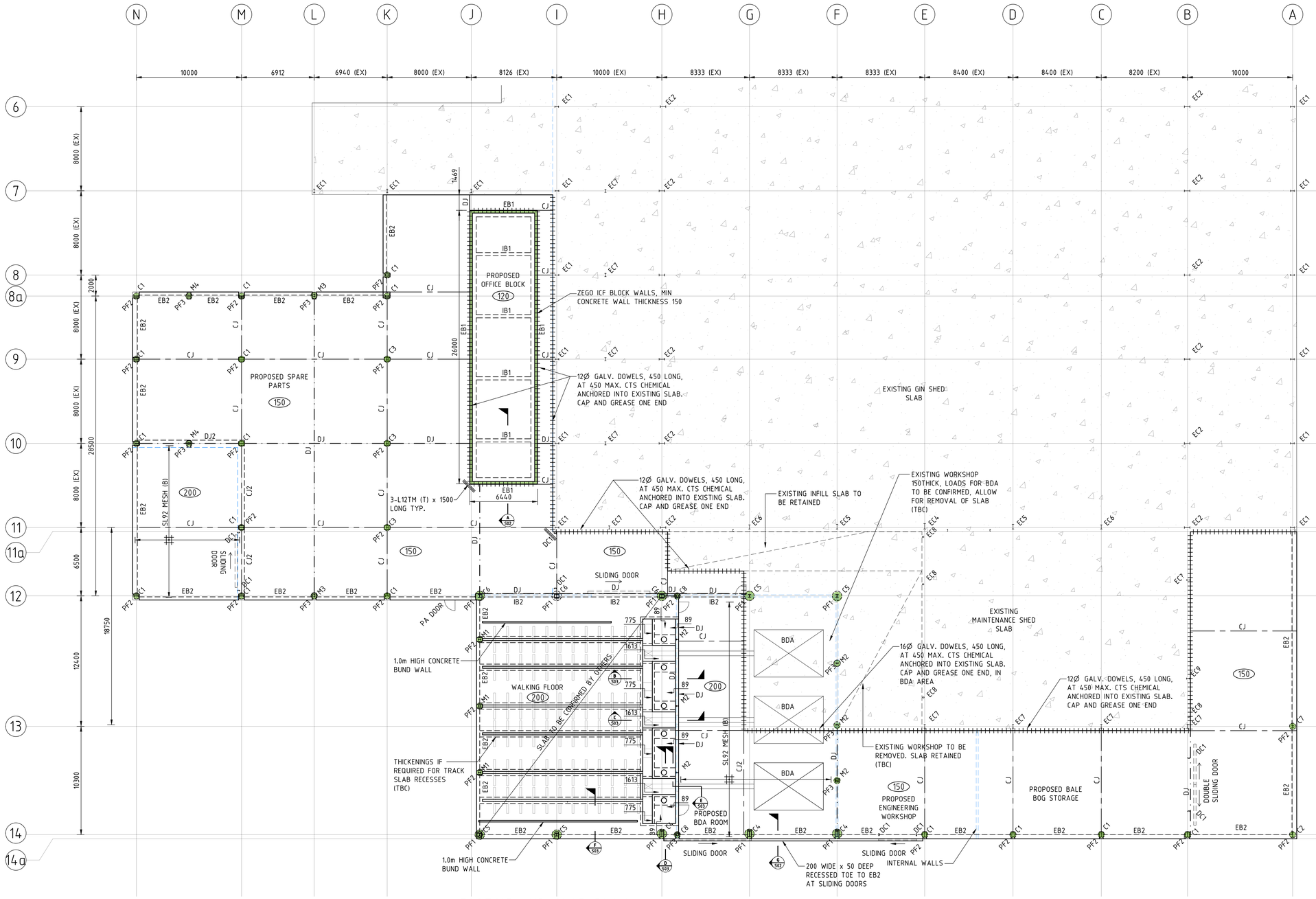
Drawing No.
24S105-GN02

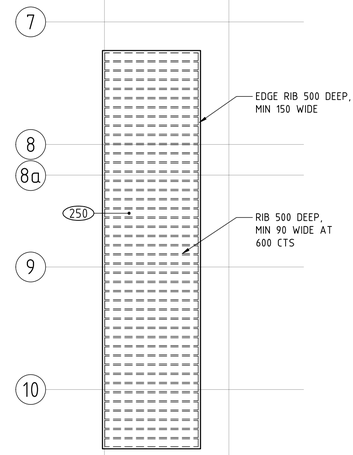
Sheet
2 of 14

Revision
A

A1 SHEET

300mm 200mm 100mm 0





OFFICE BLOCK ROOF SLAB PLAN

FOOTING AND SLAB PLAN

FOOTING SCHEDULE

PIER FOOTING.....PF1.....900Ø x 3500 MIN DEEP
PF2.....600Ø x 3500 MIN DEEP
PF3.....600Ø x 3000 MIN DEEP

FOOTING NOTES:
- PIER FOOTINGS HAVE BEEN DESIGNED TO BEAR 1500 MIN BELOW EXISTING GROUND LEVEL, ON NATURAL FOUNDATION MATERIAL OR ENGINEERED FILL HAVING SAFE BEARING VALUE OF 150kPa.

SLAB NOTES:
- SITE TO BE STRIPPED OF VEGETATION AND EXPOSED SURFACE ROFF ROLLED.
- SLABS TO BE 150 THICK UNO, REINFORCED WITH SL92 HAVING 30 MIN TOP COVER. PROVIDE EXTRA REINFORCEMENT AS SHOWN ON PLAN.
- PROVIDE 50 MIN, 350 MAX OF COARSE SAND FILL, COMPACTED IN 150mm MAX LAYERS WITH AN APPROVED MECHANICAL VIBRATOR TO ACHIEVE 98% STANDARD DRY DENSITY.
- PROVIDE A 0.2mm THICK POLYTHENE VAPOUR BARRIER BETWEEN SAND AND SLAB WITH MEMBRANE TIURNED UP OUTSIDE PERIMETER RIBS.

Revision	Amendment or reason for issue	Issue date	Drawing Completed by	Designed & dwg. checked by	Verified by X = Not verified	Issue authorised (*)
A	ISSUED FOR CC	20.12.24	K.S.	D.S.	X	D.S.
1	ISSUED FOR DISCUSSION	30.11.24	K.S.	D.S.	X	

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Project: RIVCOTT COTTON GIN ADDITIONS
CONARGO ROAD
CARRATHOOL NSW

Client: RIVCOTT

Architect / Project Manager

Drawing Title: FOOTING & SLAB PLAN

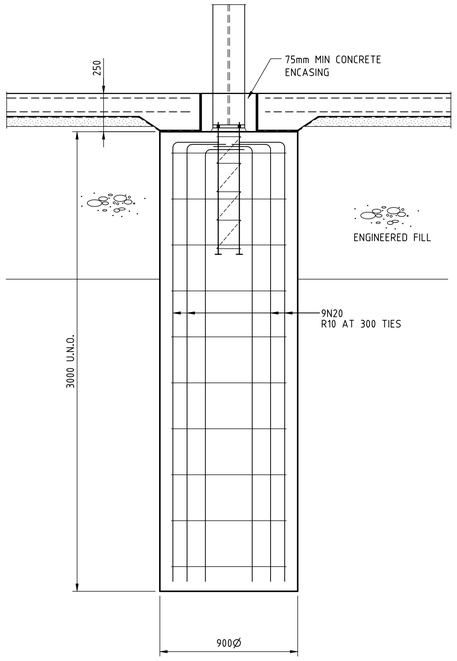
Scales: 1:200

Client Project No.

Drawing No.: 24S105-S01

Sheet: 3 or 14

Revision: A



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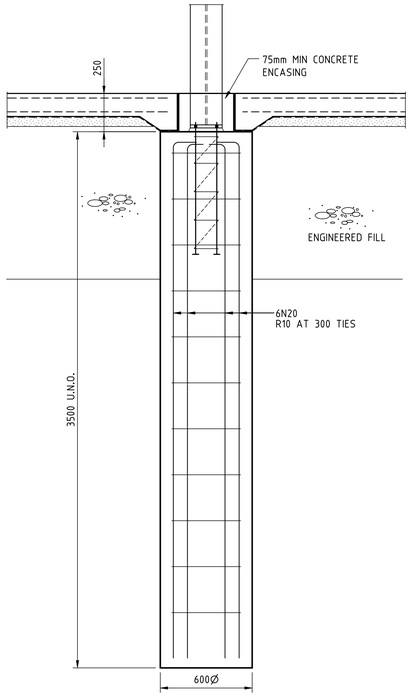

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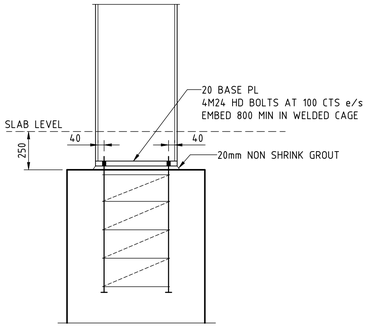
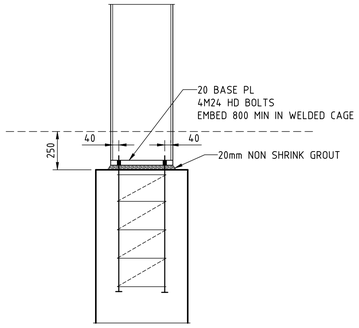
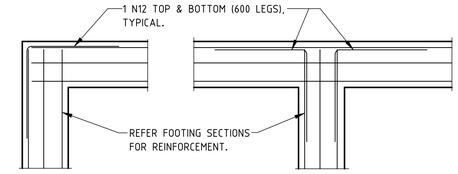


COLUMN C2, C4

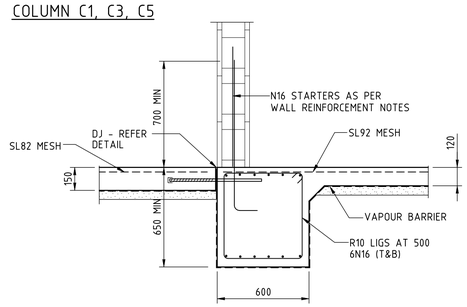


COLUMN C1, C3, C5

COLUMN BASE PLATE DETAILS



RIB CORNER RIB INTERSECTION



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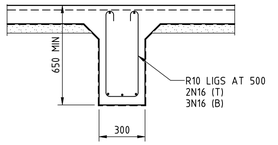

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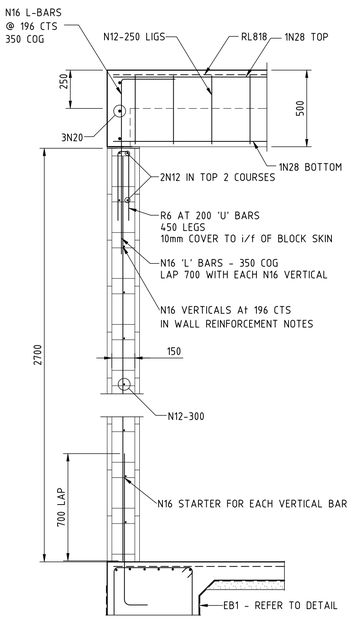
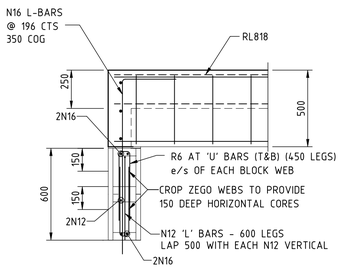


TYPICAL ICF BLOCK WALL SECTION



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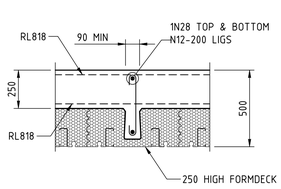

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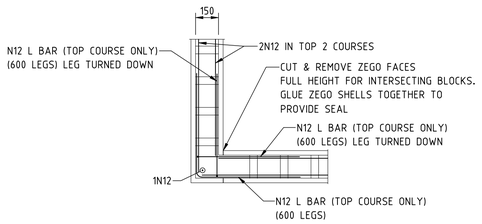
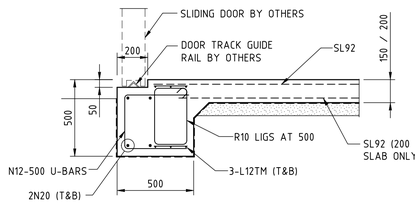


ICF BLOCK WALL CORNER

R6 'U' BARS NOT SHOWN

SECTION A-A



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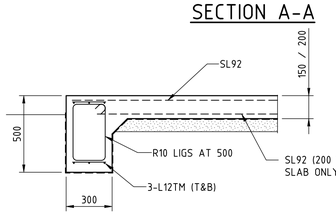

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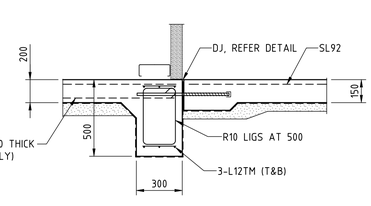

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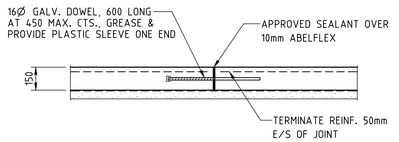
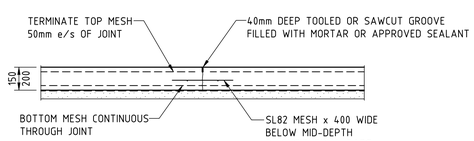
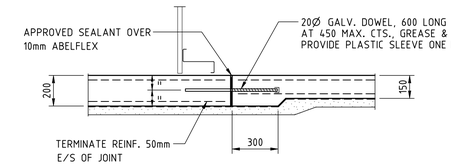


DJ DETAIL



CJ DETAIL

JOINT TO BE SAWN AS SOON AS THE CONCRETE HAS HARDENED SUFFICIENTLY THAT IT WILL NOT BE DAMAGED BY SAWING.



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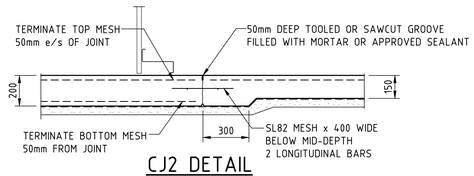

CJ2 DETAIL

JOINT TO BE SAWN AS SOON AS THE CONCRETE HAS HARDENED SUFFICIENTLY THAT IT WILL NOT BE DAMAGED BY SAWING.

Revision	Amendment or reason for issue	Issue date	Drawing Completed by	Designed & dwg. checked by	Verified by X = Not verified	Issue authorised (*)
A	ISSUED FOR CC	20.12.24	K.S.	D.S.	X	D.S.
1	ISSUED FOR DISCUSSION	30.11.24	K.S.	D.S.	X	

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Project: RIVCOTT COTTON GIN ADDITIONS
CONARGO ROAD
CARRATHOOL NSW

Drawing Title: FOOTING & SLAB DETAILS

Client: RIVCOTT

Scales: 1:20

Client Project No.:

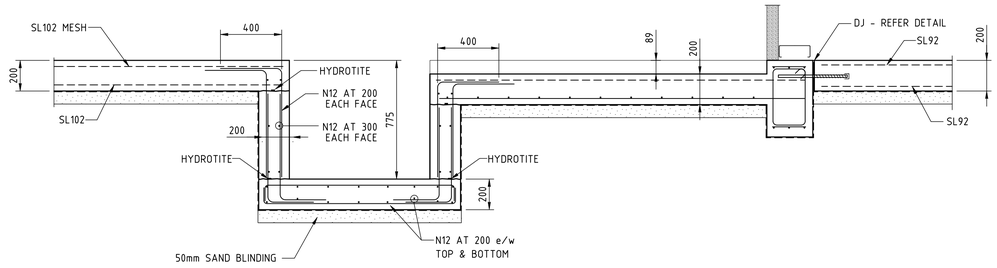
Architect / Project Manager:

Drawing No.: 24S105-S02

Sheet: 4 of 14

Revision: A

A1 SHEET
300mm
200mm
100mm
0



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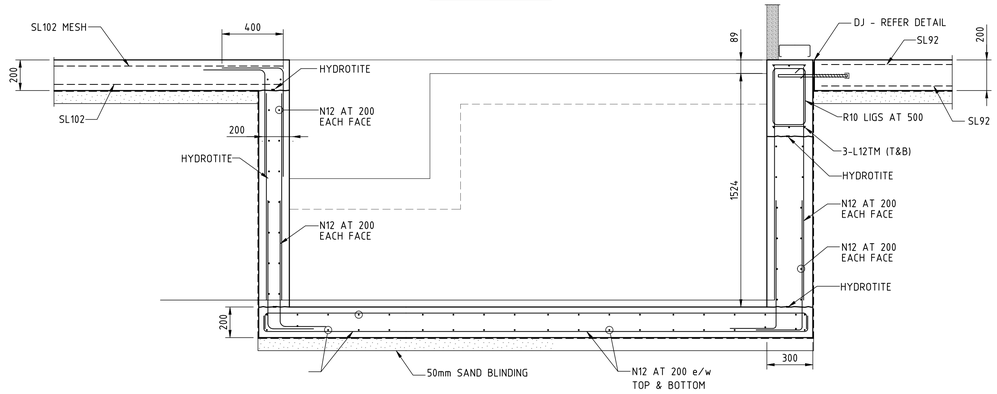

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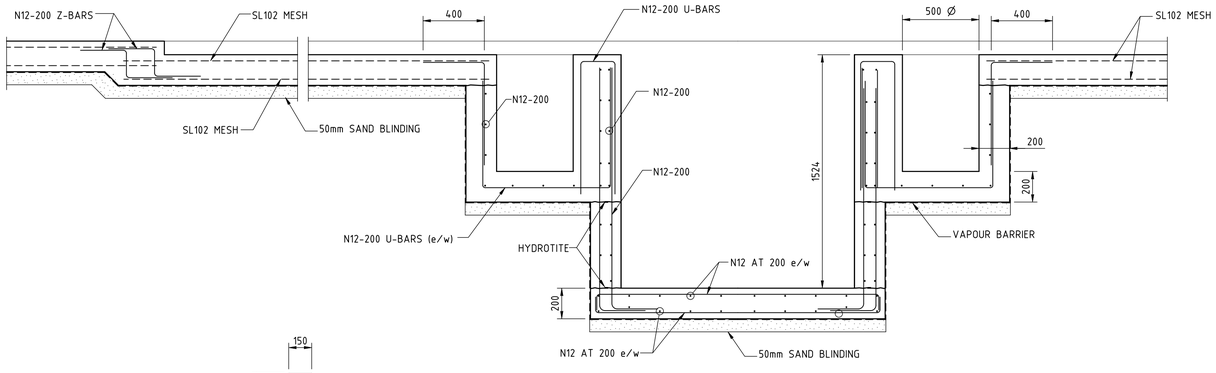

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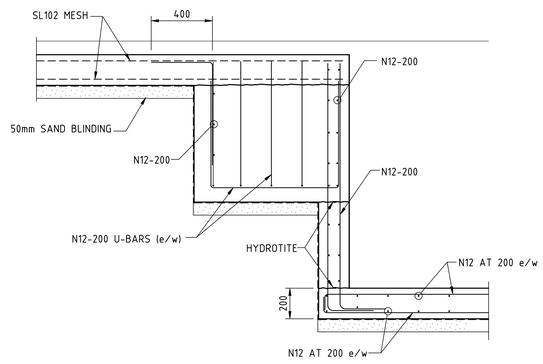
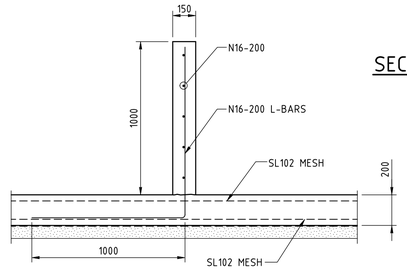


SECTION E-E



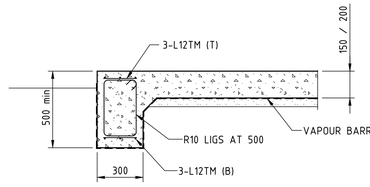
SECTION F-F

CONCRETE BUND WALL

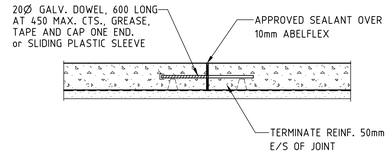
HELIX MICRO REBAR ALTERNATIVE

HELIX MICRO REBAR DOSAGE:

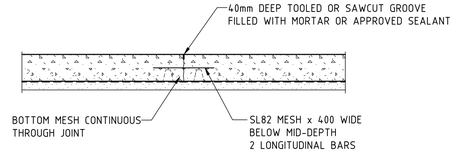
150 THICK SLAB.....9.9kg/m3
200 THICK SLAB.....15.0kg/m3



EB1 - SLAB EDGE DETAIL



DJ DETAIL



CJ DETAIL

JOINT TO BE SAWN AS SOON AS THE
CONCRETE HAS HARDENED SUFFICIENTLY
THAT IT WILL NOT BE DAMAGED BY SAWING.

Revision	Amendment or reason for issue	Issue date	Drawing Completed by	Designed & dwg. checked by	Verified by X = Not verified	Issue authorised (*)
A	ISSUED FOR CC	20.12.24	K.S.	D.S.	X	
1	ISSUED FOR DISCUSSION	30.11.24	K.S.	D.S.	X	

*** Drawing Status**
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Notes

North

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Project
RIVCOTT COTTON GIN ADDITIONS
CONARGO ROAD
CARRATHOOL NSW

Client
RIVCOTT

Architect / Project Manager

Drawing Title
SLAB DETAILS

Scales
1:20

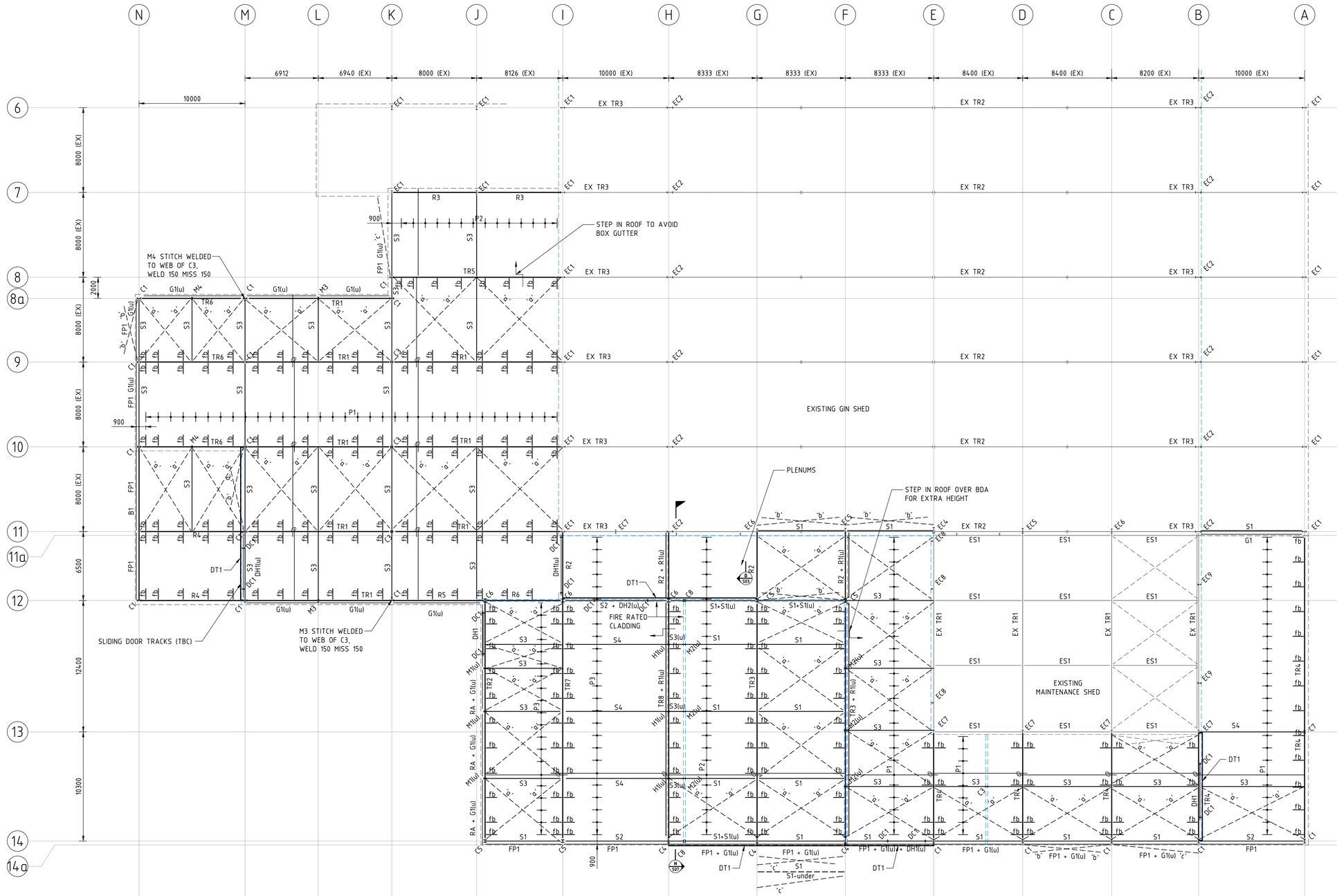
Client Project No.

Drawing No.
24S105-S03

Sheet
5 or 14

Revision
A

A1 SHEET
300mm
200mm
100mm
0



ROOF FRAMING PLAN

MEMBER SCHEDULE

COLUMN	C1	360UB57
	C2	460UB67
	C3	200UC59
	C4	530UB92 - MIDHEIGHT FLYBRACE
	C5	250UC89
	C6	310UC96
	C7	200UC52
	C8	200x6 SHS
STRUT	S1	125x5 SHS
	S2	150x5 SHS
	S3	100x6 SHS
	S4	125x5 SHS
MULLION	M1	250UB31
	M2	200UC52 - MIDHEIGHT FLYBRACE
	M3	250UB31
	M4	200UB25
TRUSS	TR1	75x5 SHS TOP & BOTTOM CHORDS, 50x5 SHS WEBS, 800 DEEP O/A
	TR2	100x6 SHS TOP & BOTTOM CHORDS, 75x3.5 SHS WEBS, 1000 DEEP O/A
	TR3	100x6 SHS TOP & BOTTOM CHORDS, 75x3.5 SHS WEBS, 1000 DEEP O/A
	TR4	75x4 SHS TOP & BOTTOM CHORDS, 50x3 SHS WEBS, 800 DEEP O/A
	TR5	75x5 SHS TOP & BOTTOM CHORDS, 50x5 SHS WEBS, 600 DEEP O/A
	TR6	75x5 SHS TOP & BOTTOM CHORDS, 50x5 SHS WEBS, 800 DEEP O/A
	TR7	100x9 SHS TOP & BOTTOM CHORDS, 75x5 SHS WEBS, 1000 DEEP O/A
	TR8	100x9 SHS TOP & BOTTOM CHORDS, 75x5 SHS WEBS, 1000 DEEP O/A
BRACING	'a'	20 DIA ROD TENSIONED WITH TURNBUCKLE
	'b'	24 DIA ROD TENSIONED
	'c'	125x5 SHS
PURLIN	P1	Z20015 AT 1200 CTS, LAPPED. 2 ROWS BRIDGING
	P2	Z20015 AT 1200 CTS, LAPPED. 2 ROWS BRIDGING
	P3	Z20024 AT 1200 CTS, LAPPED. 3 ROWS BRIDGING
GIRT	G1	Z20015 AT 1200 CTS, LAPPED. 2 ROWS BRIDGING
	G2	C20019 AT 1200 CTS, LAPPED. 2 ROWS BRIDGING
RAFTER	R1	250UB37
	R2	460UB67
	R3	250UB31
	R4	410UB60
	R5	410UB60
	R6	360UB57
	R7	360UB57
BEAM	B1	460UB82
HANGER	H1	100x5 SHS
DOOR HEAD	DH1	200 PFC
	DH2	300 PFC
DOOR TRACK	DT1	150UC30 + 150PFC
DOOR JAMB	DC1	200 PFC
EXISTING COLUMN	EC1	360UB51
	EC2	530UB92
	EC4	530UB92
	EC5	530UB82
	EC6	460UB67
	EC7	360UB45 MIDHEIGHT FLYBRACE
	EC8	150x100x5 RHS
	EC9	310UB32
EXISTING STRUT	ES1	125x5 SHS
EXISTING TRUSS	EX TR1	800 DEEP, 75x5 SHS CHORDS, 40x3 SHS WEBS

Revision	Amendment or reason for issue	Issue date	Drawing Completed by	Designed & dwg. checked by	Verified by X = Not verified	Issue authorised (*)
A	ISSUED FOR CC	20.12.24	K.S.	D.S.	X	D.S.
1	ISSUED FOR DISCUSSION	30.11.24	K.S.	D.S.	X	

*** Drawing Status**
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Notes

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Project
RIVCOTT COTTON GIN ADDITIONS
CONARGO ROAD
CARRATHOOL NSW

Drawing Title
ROOF FRAMING PLAN

Client
RIVCOTT

Scales
1:200

Client Project No.

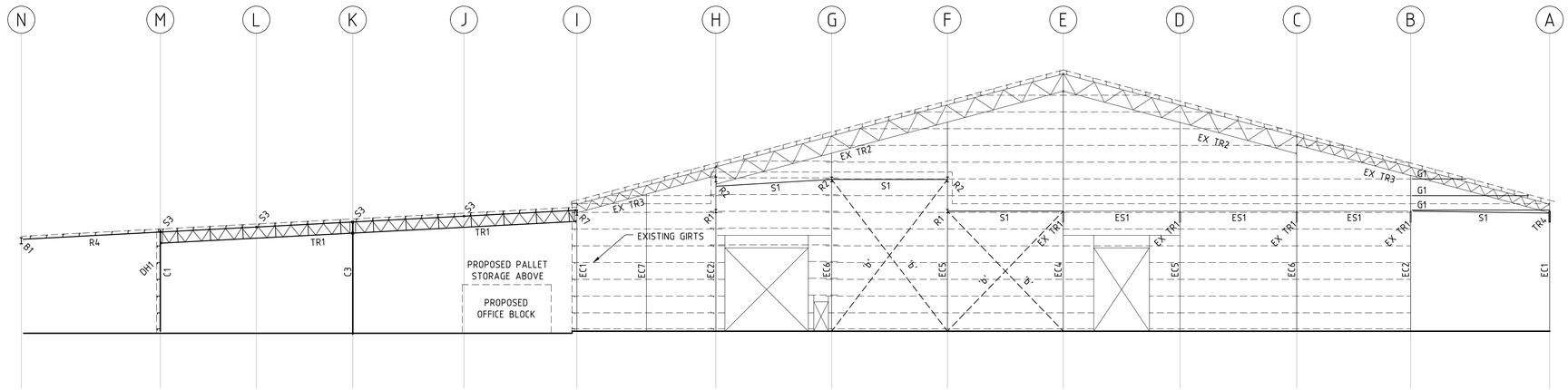
Architect / Project Manager

Drawing No.
24S105-S04

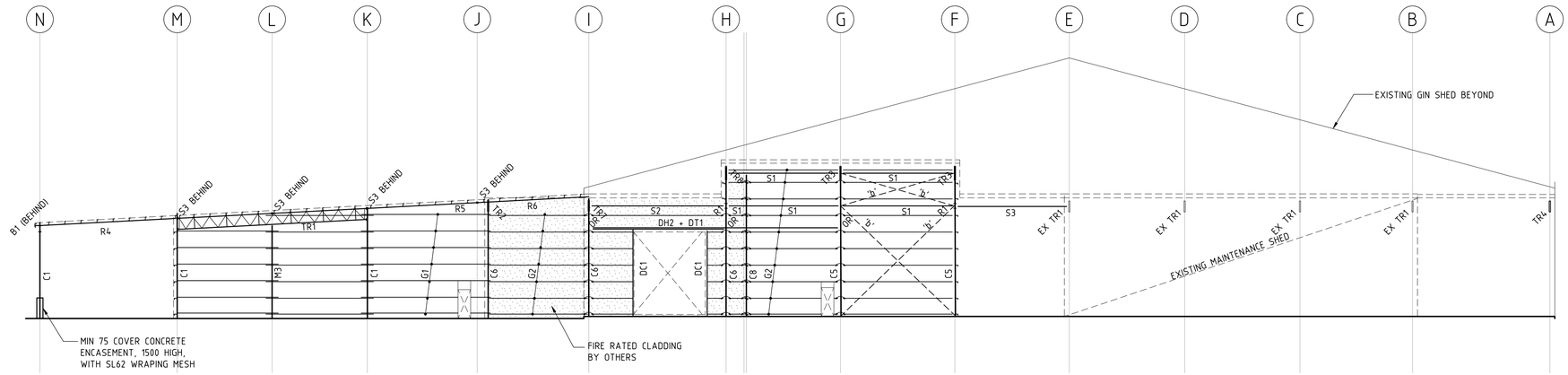
Sheet
6 or 14

Revision
A

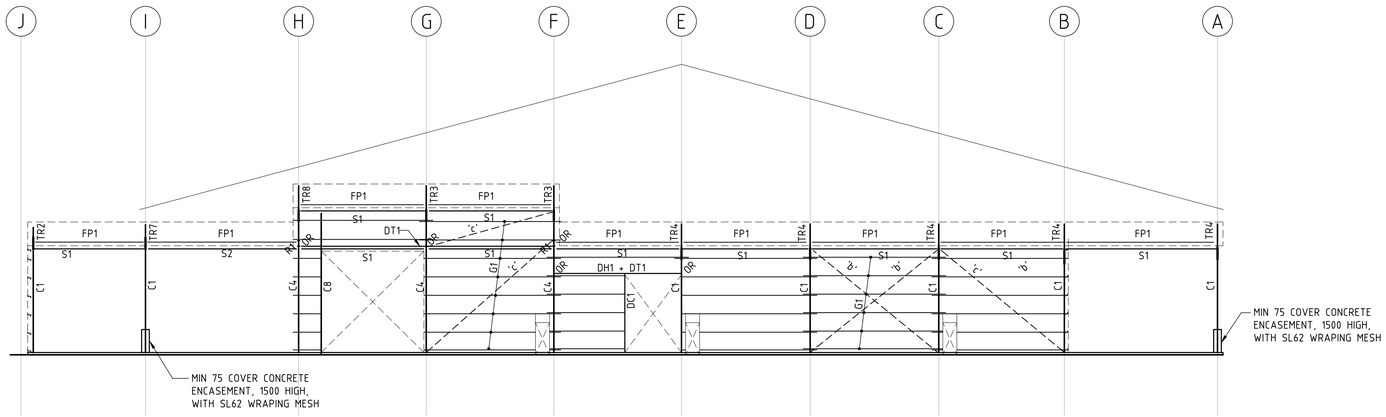
A1 SHEET
300mm
200mm
100mm
0



SECTION AT GRID 11A



ELEVATION / SECTION AT GRID 12



ELEVATION AT GRID 14A

Revision	Amendment or reason for issue	Issue date	Drawing Completed by	Designed & dwg. checked by	Verified by X = Not verified	Issue authorised (*)
A	ISSUED FOR CC	20.12.24	K.S.	D.S.	X	D.S.
1	ISSUED FOR DISCUSSION	30.11.24	K.S.	D.S.	X	

*** Drawing Status**
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Project
RIVCOTT COTTON GIN ADDITIONS
CONARGO ROAD
CARRATHOOL NSW

Client
RIVCOTT

Architect / Project Manager

Drawing Title
FRAMING ELEVATIONS & SECTIONS
SHEET 1

Scales
1:200

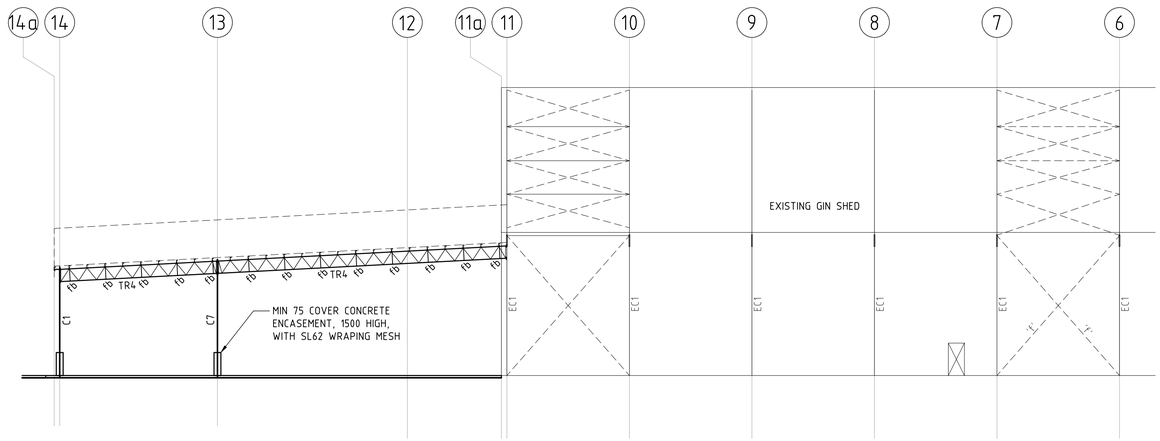
Client Project No.

Drawing No.
24S105-S05

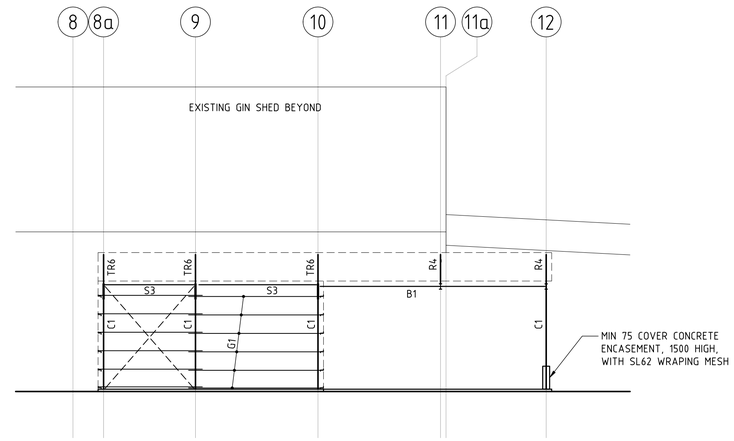
Sheet
7 of 14

Revision
A

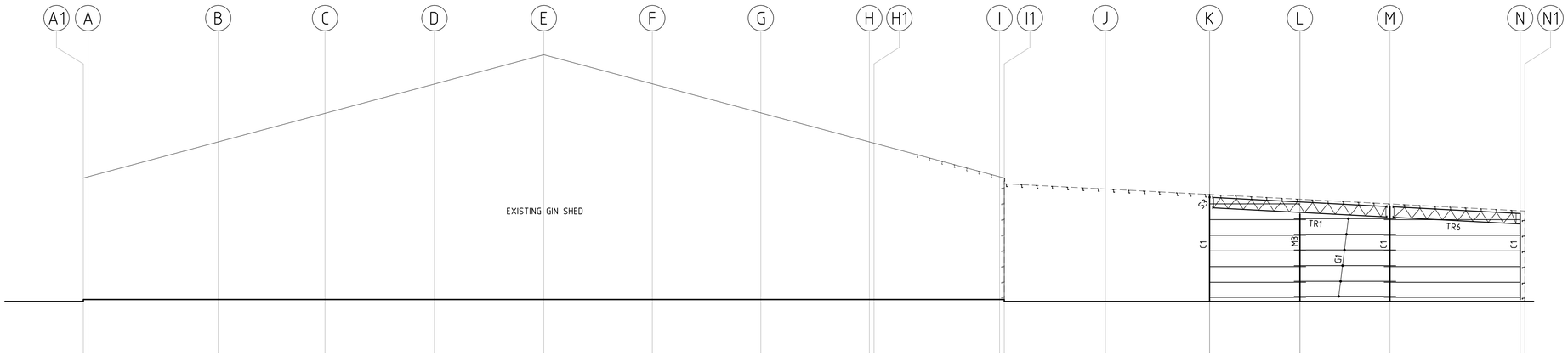
A1 SHEET
300mm
200mm
100mm
0



ELEVATION AT GRID A



ELEVATION AT GRID N



ELEVATION / SECTION AT GRID 8a

Revision	Amendment or reason for issue	Issue date	Drawing Completed by	Designed & dwg. checked by	Verified by X = Not verified	Issue authorised (*)
A	ISSUED FOR CC	20.12.24	K.S.	D.S.	X	
1	ISSUED FOR DISCUSSION	30.11.24	K.S.	D.S.	X	

*** Drawing Status**
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Project
RIVCOTT COTTON GIN ADDITIONS
CONARGO ROAD
CARRATHOOL NSW

Client
RIVCOTT

Architect / Project Manager

Drawing Title
FRAMING ELEVATIONS & SECTIONS
SHEET 2

Scales
1:200

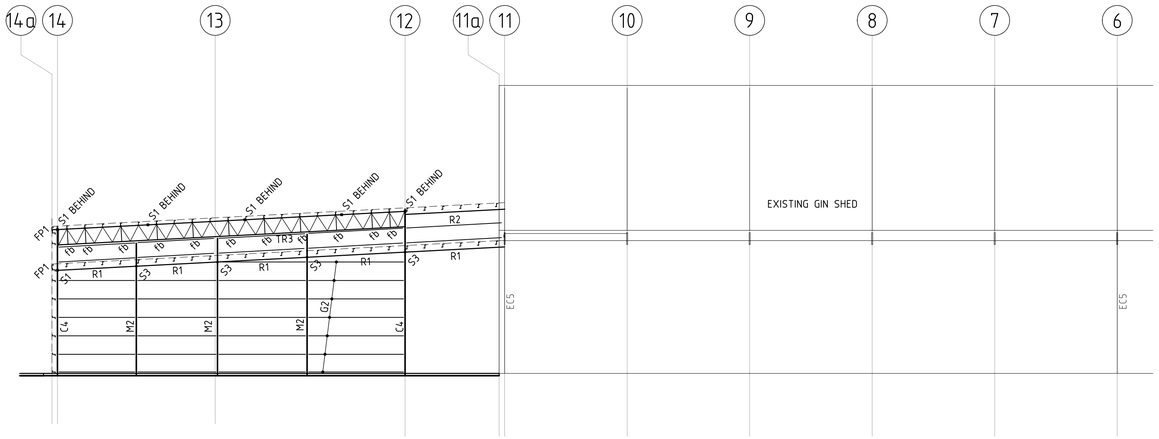
Client Project No.

Drawing No.
24S105-S06

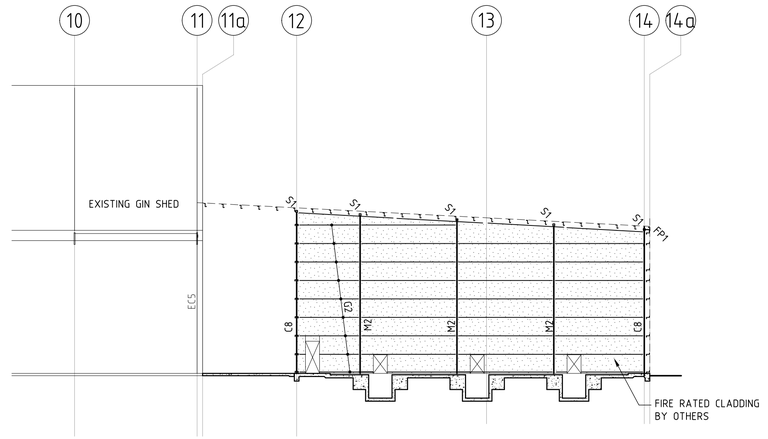
Sheet
8 or 14

Revision
A

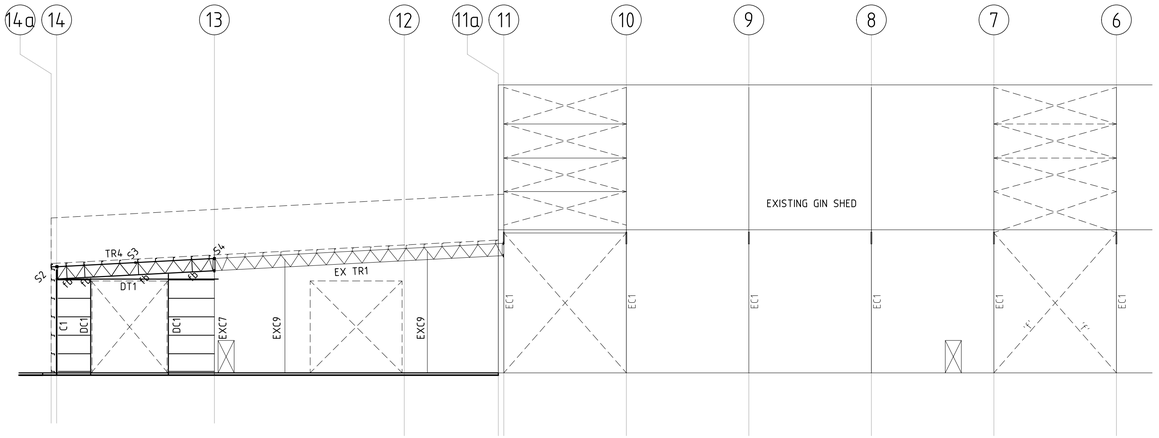
A1 SHEET
300mm
200mm
100mm
0



SECTION AT GRID F



SECTION H-H



SECTION AT GRID B

Revision	Amendment or reason for issue	Issue date	Drawing Completed by	Designed & dwg. checked by	Verified by X = Not verified	Issue authorised (*)
A	ISSUED FOR CC	20.12.24	K.S.	D.S.	X	D.S.
1	ISSUED FOR DISCUSSION	30.11.24	K.S.	D.S.	X	

*** Drawing Status**
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Project
RIVCOTT COTTON GIN ADDITIONS
CONARGO ROAD
CARRATHOOL NSW

Client
RIVCOTT

Architect / Project Manager

Drawing Title
FRAMING ELEVATIONS & SECTIONS
SHEET 3

Scales
1:200

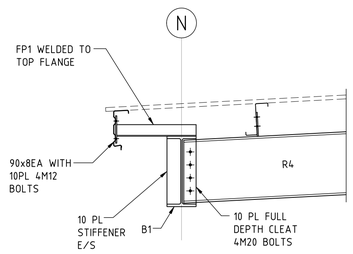
Client Project No.

Drawing No.
24S105-S07

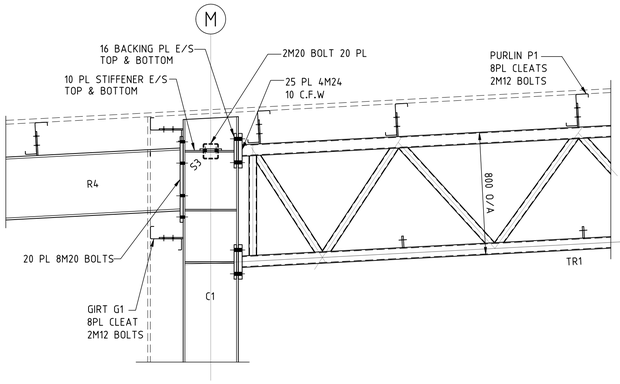
Sheet
9 of 14

Revision
A

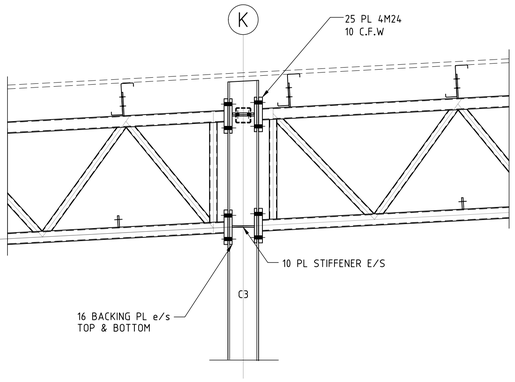
A1 SHEET
300mm
200mm
100mm
0



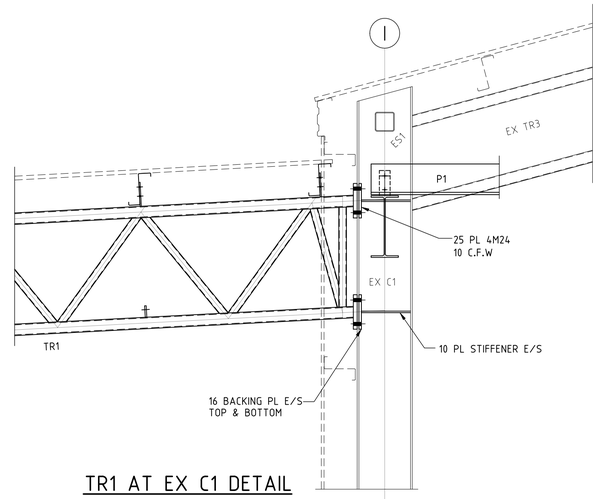
R4 AT B1 DETAIL



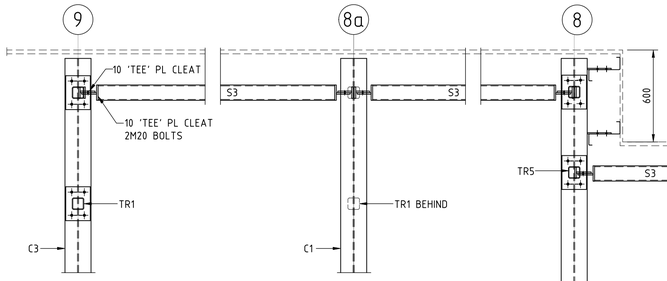
R4 / TR1 AT C1 DETAIL



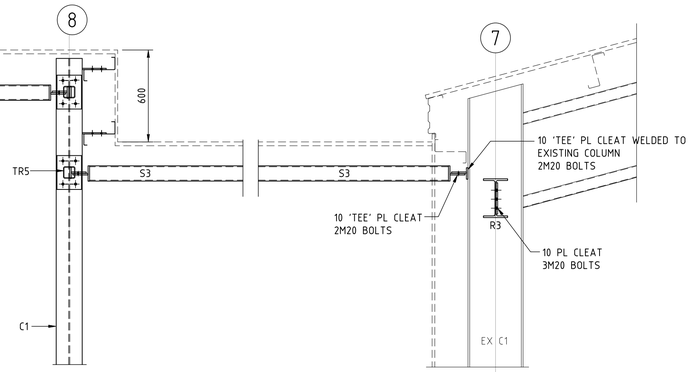
TR1 AT C3 DETAIL

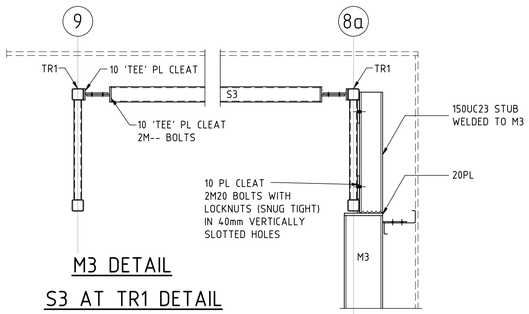


TR1 AT EX C1 DETAIL



TYPICAL S3 AT C1 / C3 DETAILS

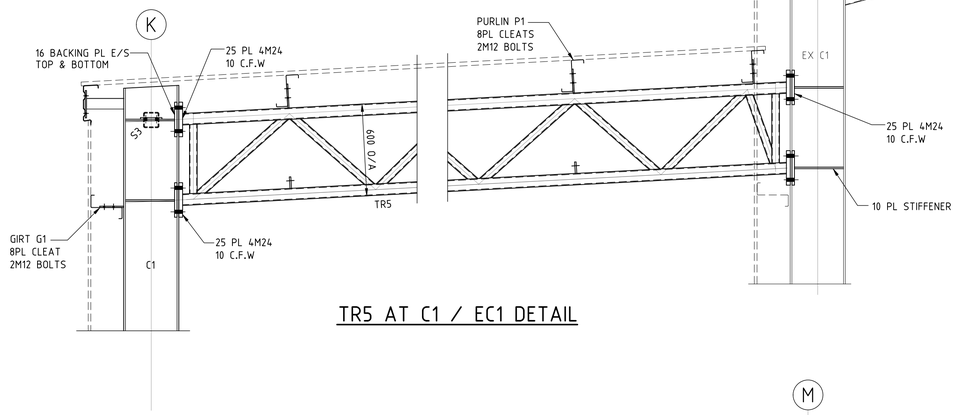




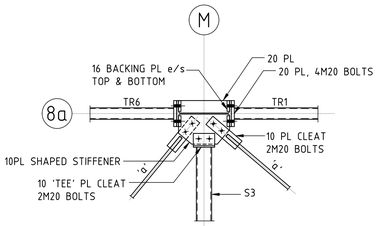
M3 DETAIL

S3 AT TR1 DETAIL

S3 AT TR5 & TR6 DETAIL SIMILAR



TR5 AT C1 / EC1 DETAIL



PLAN DETAIL - BRACING 'a' AT C1

Revision	Amendment or reason for issue	Issue date	Drawing Completed by	Designed & dwg. checked by	Verified by X = Not verified	Issue authorised (*)
A	ISSUED FOR CC	20.12.24	K.S.	D.S.	X	
1	ISSUED FOR DISCUSSION	30.11.24	K.S.	D.S.	X	

*** Drawing Status**
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Notes

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Project
RIVCOTT COTTON GIN ADDITIONS
CONARGO ROAD
CARRATHOOL NSW

Client
RIVCOTT

Architect / Project Manager

Drawing Title
STEEL FRAMING DETAILS
SHEET 1

Scales
1:20

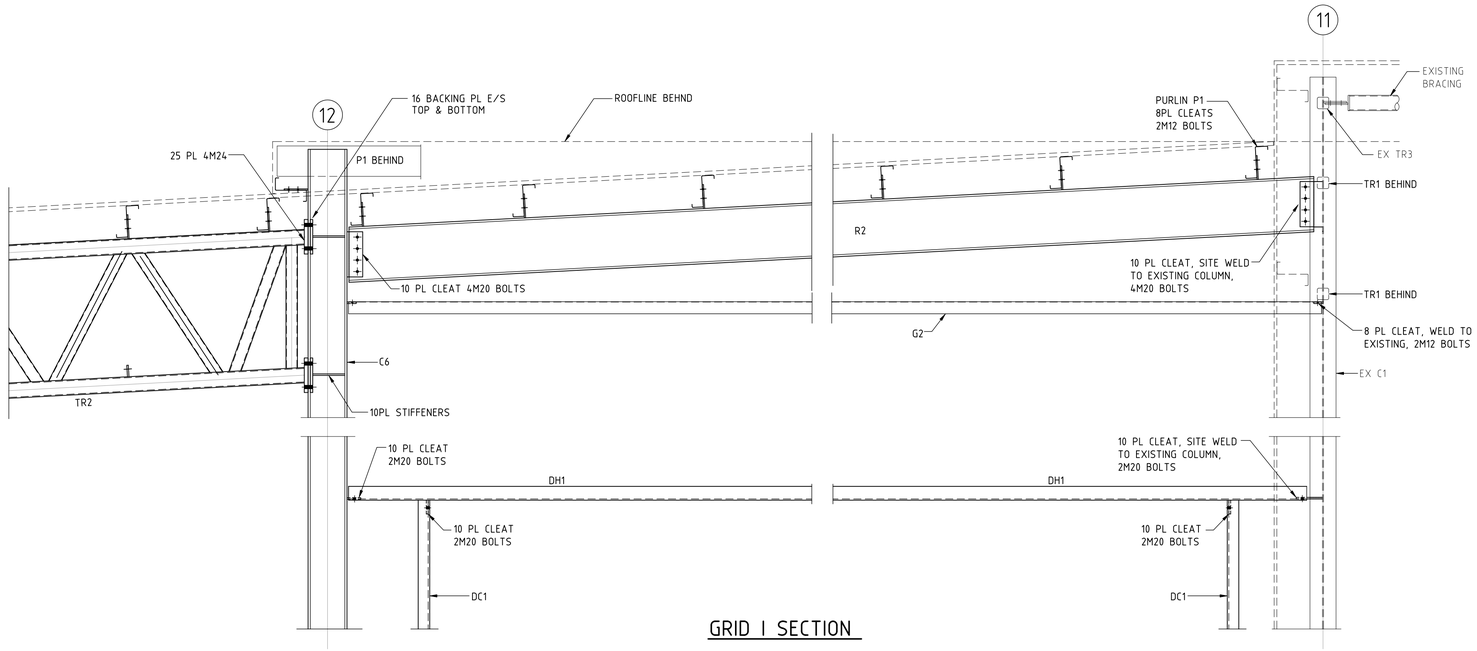
Client Project No.

Drawing No.
24S105-S08

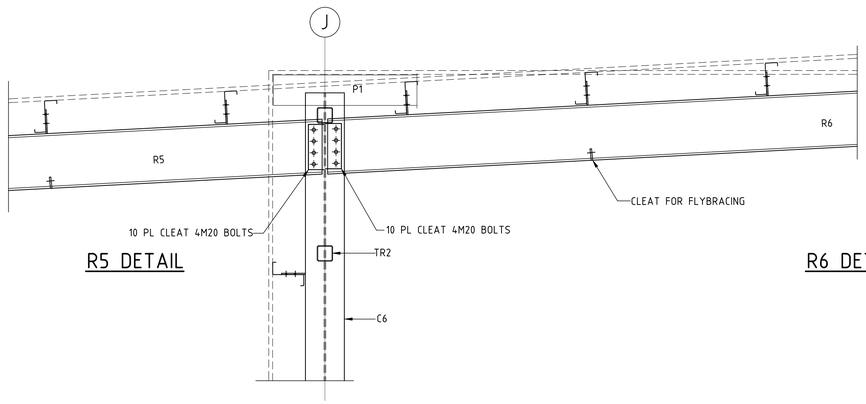
Sheet
10 or 14

Revision
A

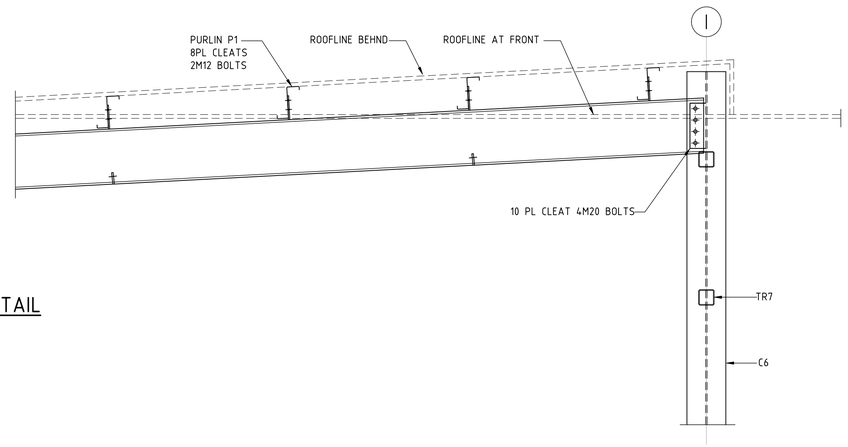
A1 SHEET
300mm
200mm
100mm
0



GRID I SECTION



R5 DETAIL



R6 DETAIL

Revision	Amendment or reason for issue	Issue date	Drawing Completed by	Designed & dwg. checked by	Verified by X = Not verified	Issue authorised (*)
A	ISSUED FOR CC	20.12.24	K.S.	D.S.	X	D.S.
1	ISSUED FOR DISCUSSION	30.11.24	K.S.	D.S.	X	

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Project
RIVCOTT COTTON GIN ADDITIONS
CONARGO ROAD
CARRATHOOL NSW

Client
RIVCOTT

Architect / Project Manager

Drawing Title
STEEL FRAMING DETAILS
SHEET 2

Scales
1:20

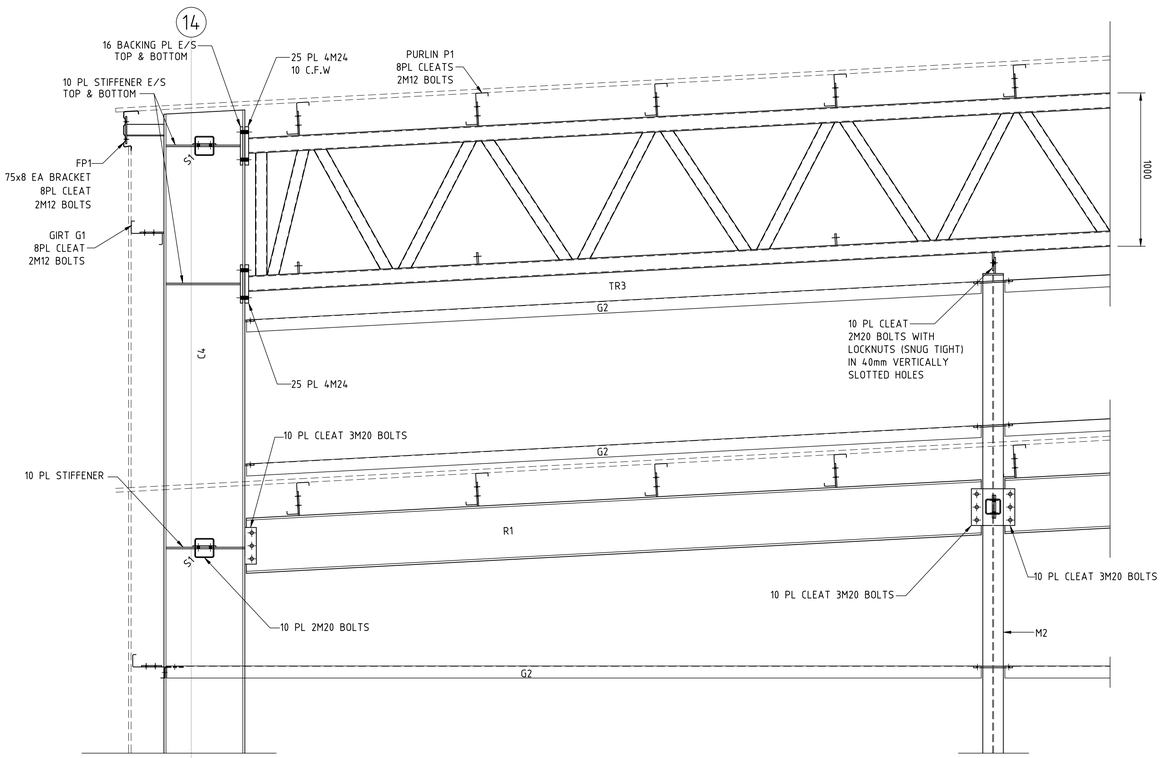
Client Project No.

Drawing No.
24S105-S09

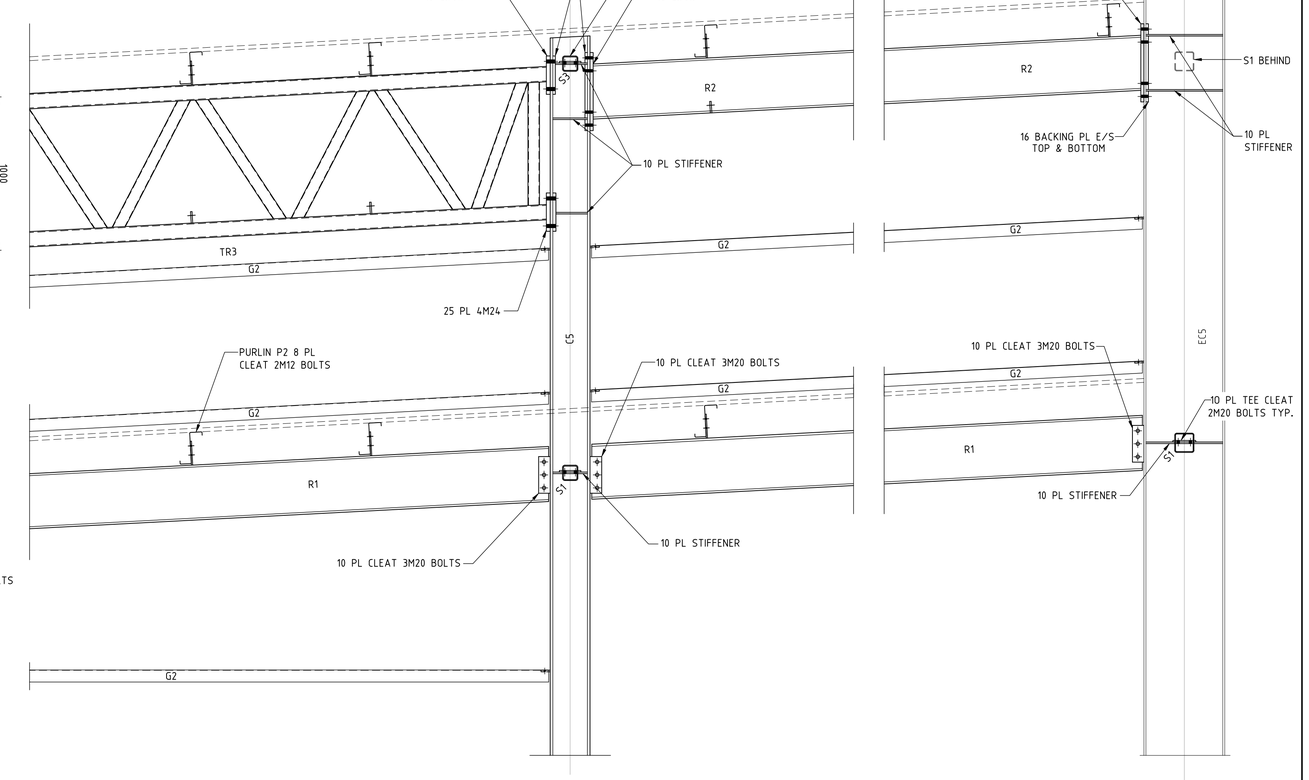
Sheet
11 of 14

Revision
A

A1 SHEET
300mm
200mm
100mm
0



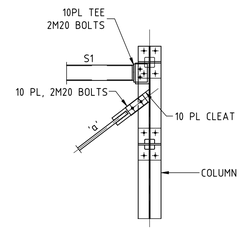
TR3 / R1 TO C4 DETAIL



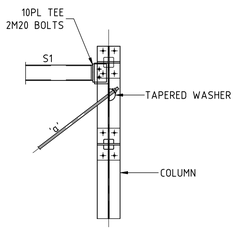
R1 TO M2 DETAIL
M2 TO TR3 DETAIL

TR3 / R1 / R2 TO C5 DETAIL

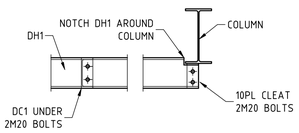
R1 & R2 TO EC5 DETAIL

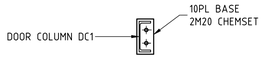


ALTERNATIVE COLUMN BRACING CONNECTION

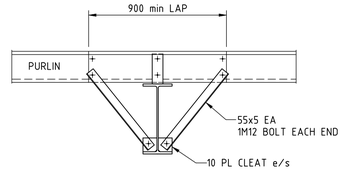


COLUMN BRACING CONNECTION

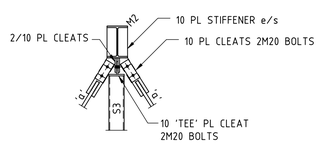




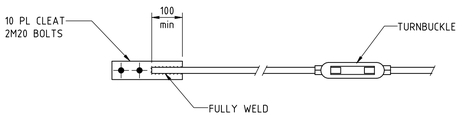
DOOR JAMB BASE



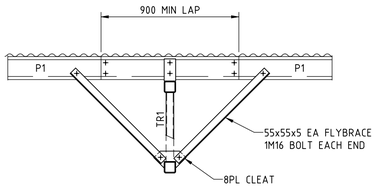
RAFTER FLYBRACE (fb) DETAIL



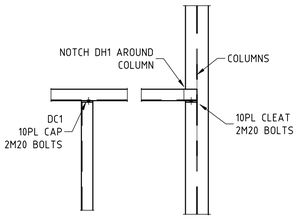
S3 TO M2 BRACING DETAIL



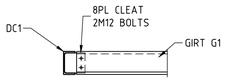
ALTERNATIVE ROD BRACE



TRUSS FLYBRACE (fb) DETAIL



DOOR HEAD - COLUMNS DETAIL



DOOR JAMB - G1 DETAIL

Revision	Amendment or reason for issue	Issue date	Drawing Completed by	Designed & dwg. checked by	Verified by X = Not verified	Issue authorised (*)
A	ISSUED FOR CC	20.12.24	K.S.	D.S.	X	
1	ISSUED FOR DISCUSSION	30.11.24	K.S.	D.S.	X	

*** Drawing Status**
Warning: Unless there is an authorised Shutte & Kennard Consulting Engineers signature at * , this drawing is not authorised for issue.

Notes

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RIVCOTT COTTON GIN ADDITIONS
CONARGO ROAD
CARRATHOOL NSW

Client
RIVCOTT

Architect / Project Manager

Drawing Title
STEEL FRAMING DETAILS
SHEET 3

Scales
1:20

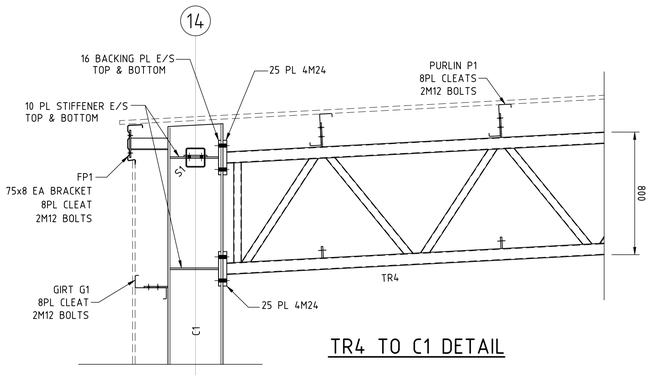
Client Project No.

Drawing No.
24S105-S10

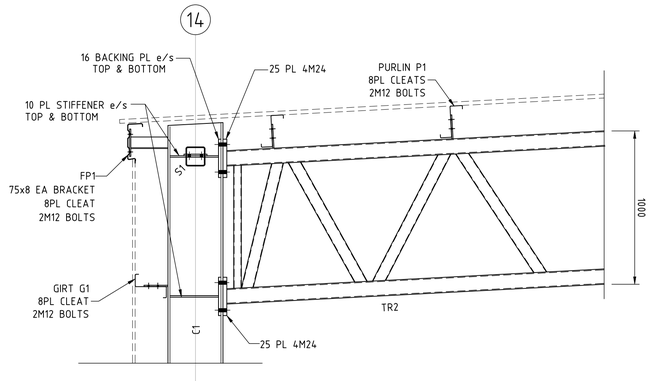
Sheet
12 of 14

Revision
A

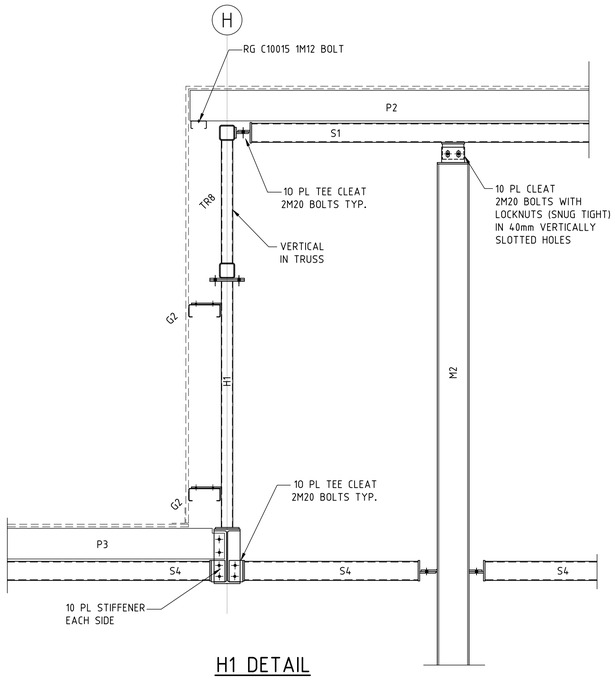
A1 SHEET
300mm
200mm
100mm
0



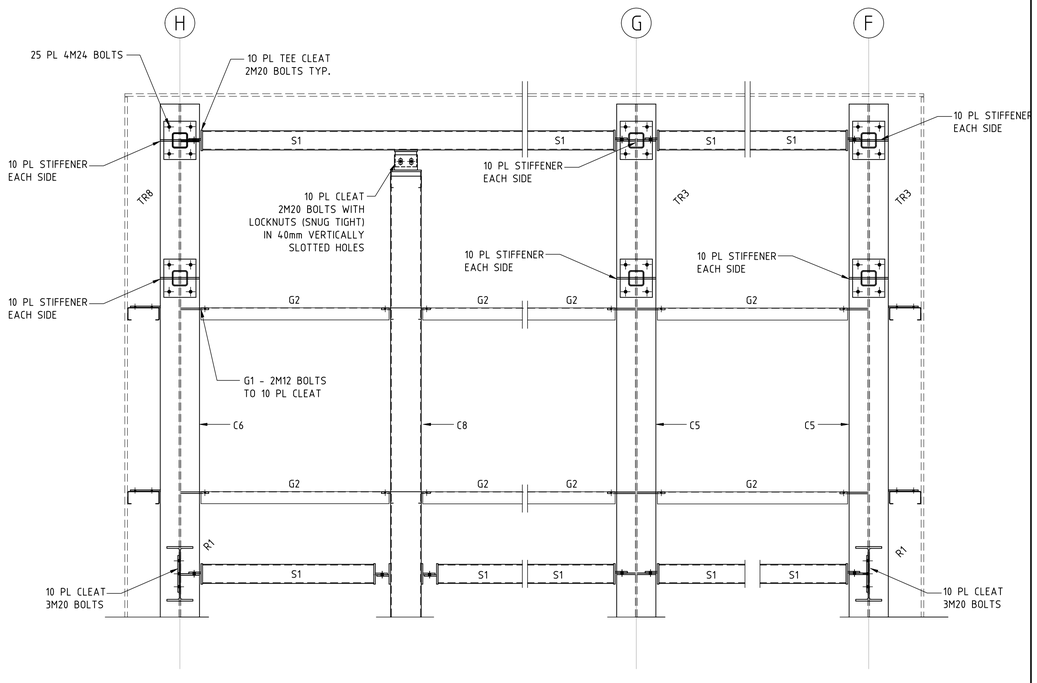
TR4 TO C1 DETAIL



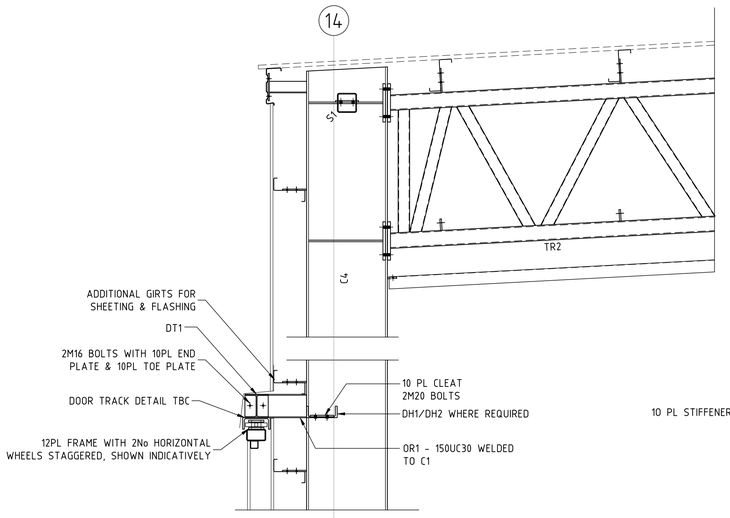
TR2 TO C1 DETAIL



H1 DETAIL

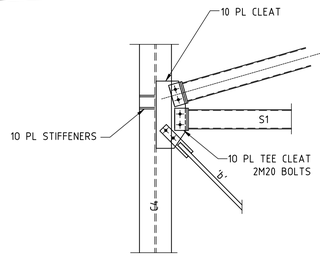


S1 AT C5/C6/C8 DETAIL

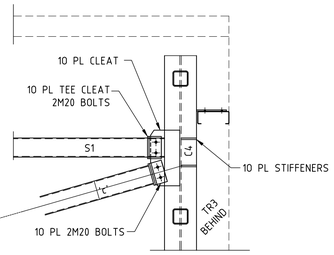


DOOR TRACK DETAIL TYPICAL

SHOWN INDICATIVELY TBC BY OTHERS



C4 BRACING DETAIL



C4 BRACING DETAIL

Revision	Amendment or reason for issue	Issue date	Drawing Completed by	Designed & dwg. checked by	Verified by X = Not verified	Issue authorised (*)
A	ISSUED FOR CC	20.12.24	K.S.	D.S.	X	D.S.
1	ISSUED FOR DISCUSSION	30.11.24	K.S.	D.S.	X	

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CONARGO ROAD
CARRATHOOL NSW

Client
RIVCOTT

Architect / Project Manager

Drawing Title
STEEL FRAMING DETAILS
SHEET 4

Scales
1:20

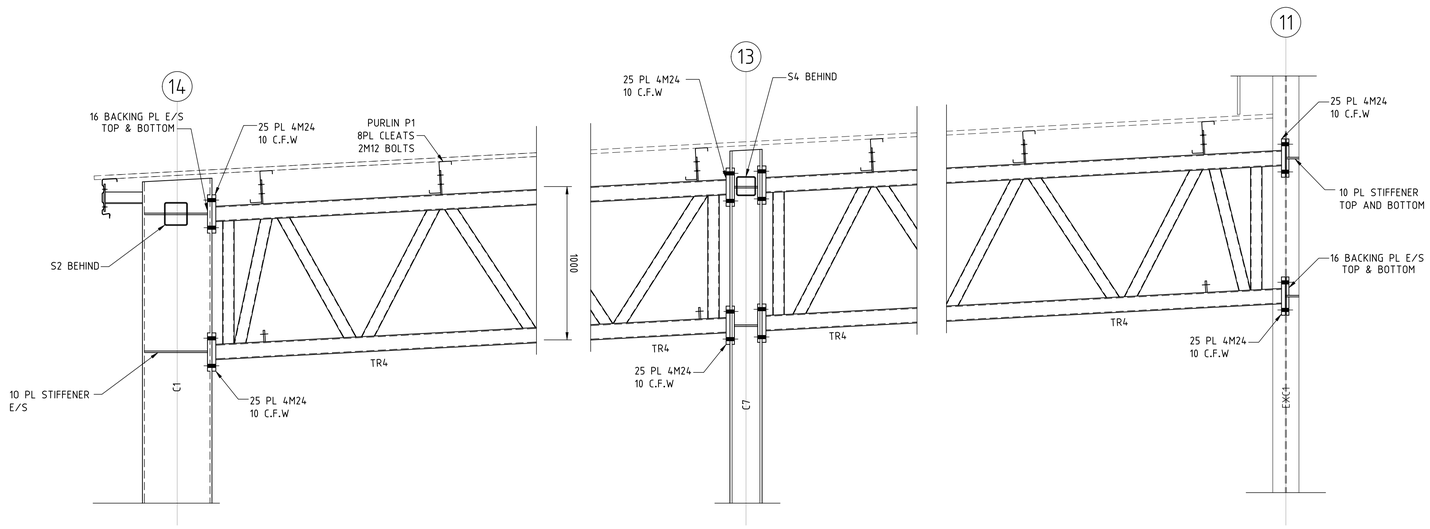
Client Project No.

Drawing No.
24S105-S11

Sheet
13 of 14

Revision
A

A1 SHEET
0 100mm 200mm 300mm



TR4 TO C1 DETAIL

TR4 TO C7 DETAIL

TR4 TO EXC1 DETAIL

A1 SHEET

300mm

200mm

100mm

0

Revision	Amendment or reason for issue	Issue date	Drawing Completed by	Designed & dwg. checked by	Verified by X = Not verified	Issue authorised (*)
A	ISSUED FOR CC	20.12.24	K.S.	D.S.	X	D.S.
1	ISSUED FOR DISCUSSION	30.11.24	K.S.	D.S.	X	

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CARRATHOOL NSW

Client
RIVCOTT

Architect / Project Manager

Drawing Title
STEEL FRAMING DETAILS
SHEET 5

Scales
1:20

Client Project No.

Drawing No.
24S105-S12

Sheet
14 of 14

Revision
A