

STRUCTURAL STEELWORK SCHEDULE			CONNEC	CONNECTIONS		
MARK	DESCRIPTION	SECTION	BASE	EAVES	TOP	
C1	COLUMN - UNCLAD FRAME	C20019	FB2	KN3		
C2	COLUMN - CLAD FRAME	C15012	FB1	KN2		
C3	COLUMN - END	C20015	EB2		ER1	
R1	RAFTER - UNCLAD FRAME	C20015		KN3	AP2	
R2	RAFTER - CLAD FRAME	C15010	RA1	KN2	AP1	
DIM	MULLION BOLLED DOOD	005045	EDO	DM	1400	
DM1	MULLION - ROLLER DOOR	C25015	EB3	DM1	MC2	
RH1	HEAD - ROLLER DOOR	TS6160 + TS6160	RH1			
Bw7	BRACING - SIDE WALL	30x 0.8 strap	SB1			
Ве	BRACING - END WALL	DIAPHRAGM				
Br1	BRACING - ROOF	35x 1.5 strap	SB2			
LB1	BRACE - LATERAL FLY	95 x 0.6 STRAP	LB1			
F1	FASCIA	0.75 FB				
			DI 4			
P1	PURLINS	TS6110 @ 1250	BL1			
P1a		TS6175 @ 1250	BL1			
G1	GIRTS - SIDE	TS6160 @ 1160	BL1			
G2	GIRTS - END	TS6160 @ 1160	BL1			

SIDE WALL CROSS BRACING AS SHOWN ON THESE DRAWINGS CAN BE MOVED TO OTHER BAYS ON THE SAME SIDE WALL

- PROVIDED:

 HEIGHT TO WIDTH RATIO IN THE TARGET BAY DOES NOT EXCEED 2

 WIDTH OF THE TARGET BAY DOES NOT EXCEED WIDTH OF THE BAY WHERE BRACING IS SHOWN

 THERE ARE NO DOORS AND WINDOWS IN THE TARGET BAY

 ROD BRACING CAN BE MOVED TO CLAD OR UNCLAD BAYS

 STRAP BRACING CAN BE MOVED ONLY TO CLAD BAYS

GENERAL

- THIS IS A STANDARDISED DESIGN SUITABLE FOR LIGHT INDUSTRIAL, COMMERCIAL & RURAL BUILDINGS TO STANDARDS & REQUIREMENTS PROVIDED BY RANBUILD.
 THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH RANBUILD.

CLADDING

DESIGN LOADING

ROOF DEAD LOAD ROOF LIVE LOAD

WIND LOAD REGIO

TERRAIN CATEGORY
IMPORTANCE LEVEL

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Mt
INTERNAL PRESSURE
COEFFICIENTS
SITE CLASS
GROUND SNOW LOAD Sg
COASTAL DISTANCE

ALL ROOF AND WALL CLADDING TO BE INSTALLED IN ACCORDANCE WITH AS1562.1 AND THE MANUFACTURER'S INSTRUCTIONS.

ROOF AND WALL CLADDING ARE STRUCTURAL DIAPHRAGM BRACINGS. UNDER NO CIRCUMSTANCES SHOULD THE CLADDING BE REMOVED WITHOUT WRITTEN APPROVAL FROM A PRACTICING STRUCTURAL ENGINEER.

THE STRUCTURAL COMPONENTS SHOWN ON THESE DRAWINGS HAVE BEEN DESIGNED FOR THE FOLLOWING LOAD CONDITIONS COMPLYING WITH RELEVANT AUSTRALIAN STANDARDS INCLUDING AS/NZS 1170.2:2021:

ALL DOORS AND WINDOWS SHALL HAVE THE SAME CYCLONIC WIND LOAD RATING AS THE REST OF THE BUILDING ENVELOPE, INCLUDING RESISTANCE TO FLYING DEBRIS AS SPECIFIED IN AS1170.2:2021 AND AS/NZS 4505-2012. DOORS AND WINDOWS SHALL BE CLOSED DURING STORMS. DOORS SHALL BE INSTALLED WITH WIND LOCKS IN CYCLONIC AREAS. SUPPORTING DOCUMENTATION INCLUDING TEST REPORTS SHALL BE AVAILABLE FROM

DOORS AND WINDOWS MANUFACTURERS TO CONFIRM LOAD RATING AND ENSURE COMPLIANCE WITH ABOVE MENTIONED STANDARDS AND BCA. DOORS ARE ALSO REQUIRED TO BE SUPPLIED WITH A STICKER THAT SHOWS A RANGE OF INFORMATION INCLUDING THE DESIGN PRESSURE OF THE DOOR

▲ THIS DRAWING REMAINS THE INTELLECTUAL PROPERTY OF BANBUILD, AND

MUST NOT BE REPRODUCED, COPIED OR MODIFIED WHOLLY OR IN PART WITHOUT THE WRITTEN PERMISSION OF LYSAGHT BUILDING SOLUTIONS PTY

ACCORDING TO AS/NZS 4505-2012 REQUIREMENTS.

SELF WEIGHT ONLY (1.8/A+0.12) BUT NOT LESS

Cpi = -0.3 or 0.0 (ENCLOSED)

- ASSEMBLY GUIDE.
- ASSEMBLY GUIDE.

 ANY DISCREPANCY SHALL BE REFERED TO THE ENGINEER BEFORE PROCEEDING WITH WORK.

 ALL MATERIALS & WORKMANSHIP SHALL BE IN ACCORDANCE WITH RELEVANT & CURRENT SAA CODES & WITH BY-LAWS & ORDINANCES OF THE RELEVANT BUILDING AUTHORITIES EXCEPT WHERE VARIED BY THE PROJECT
- SPECIFICATION.

 ALL DIMENSIONS SHOWN SHOULD BE VERIFIED BY THE BUILDER ON SITE.
- ENGINEERS DRAWINGS SHALL NOT BE SCALED FOR DIMENSIONS.

 DURING CONSTRUCTION THE STRUCTURE SHALL BE MAINTAINED IN A STABLE CONDITION & NO PART SHALL BE OVERSTRESSED. TEMPORARY BRACING CONDITION & NO PART SHALL BE OVERSTRESSED. TEMPORARY BRACING SHALL BE PROVIDED BY THE BUILDER TO KEEP THE WORKS & EXCAVATIONS STABLE AT ALL TIMES.

 • UNLESS NOTED OTHERWISE ALL LEVELS ARE IN METRES & ALL DIMENSIONS ARE IN MILLIMETRES.

 • THE STRUCTURAL COMPONENTS DETAILED ON THESE DRAWINGS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE RELEVANT SAA CODES & NORMAL ENCINEEDING DRACTICE.

- ENGINEERING PRACTICE.

 ARCHITECTURAL ELEMENTS TO HAVE A MINIMUM OF 20mm CLEARANCE OF THE STRUCTURE & ARE TO BE ARTICULATED.

 IT IS COMMON SENSE TO WORK SAFELY AND TO PROTECT YOURSELF AND
- IT IS COMMON SENSE TO WORK SAFELY AND TO PROTECT YOURSELF AND OTHERS FROM ACCIDENTS ON SITE. TO DO THIS, YOU MUST ENSURE YOU HAVE IN PLACE SAFE WORK PRACTICES AND APPROPRIATE EQUIPMENT. SAFETY INVOLVES PERSONAL PROTECTION OF EYES, OF SKINIFROM SUNBURN), AND OF HEARING(FROM NOISE). FALL PROTECTION MUST ALSO BE IN PLACE AS APPLICABLE INCLUDING SAFETY MESH, PERSONAL HARNESSES AND PERIMETER GUARDRAILS. IT IS RECOMMENDED THAT YOU FAMILIARIZE YOURSELF WITH APPLICABLE LAWS, REGULATIONS, RULES, GUIDELINES, CODES OF PRACTICE AND STANDARDS AND THAT YOU ADHERE STRICTLY TO THEM.

STRUCTURAL STEEL SPECIFICATION

- ALL STRUCTURAL STEELWORK TO BE CARRIED OUT IN ACCORDANCE WITH THE LATEST EDITIONS OF THE FOLLOWING SAA CODES & SPECIFICATIONS. AS4100 STEEL STRUCTURES CODE ASA100 STEEL STRUCTURES CODE
 AS/NZS 4600 COLD FORMED STEEL STRUCTURES CODE.
 ASI511 HIGH STRENGTH STRUCTURAL BOLTING.
 ASI111 COMMERCIAL BOLTS & SCREWS.
 AS2887 FARM STRUCTURES (WHERE APPLICABLE).
 PROPRIETARY PRODUCTS ARE TO BE IN ACCORDANCE WITH THE RESPECTIVE MANUFACTURERS INSTRUCTIONS.

FRAME ASSEMBLY

- CORRECT FRAME ASSEMBLY IS IMPORTANT TO ACHIEVE OPTIMUM PERFORMANCE OF THE STRUCTURE
 FULLY TENSION BOLTS AT KNEE & APEX JOINTS AS SPECIFIED BEFORE STANDING

- FRAMES.

 FULLY TENSION BOLTS AT BASE CONNECTIONS AS SPECIFIED IMMEDIATELY AFTER STANDING THE FRAME.

 ROOF & WALL BRACING PROVIDE STRUCTURAL STABILITY WHERE SPECIFIED & MUST BE INSTALLED BEFORE THE CLADDING.

SELF DRILLING SCREWS

- QUALITY AND MECHANICAL PROPERTIES OF STRUCTURAL SCREWS MUST COMPLY WITH AS3566.1.
- SCHEWS MUST COMPLY WITH ASJODE. I.

 ALL TEK SCREWS SHALL BE NO. 14 X 20 U.N.O.

 THE MINIMUM DISTANCE OF EDGE/END SCREWS MUST HAVE AN
 EDGE DISTANCE OF 1.5 X SCREW DIAMETER FROM THE EDGE.

 THE MINIMUM DISTANCE OF SCREW TO SCREW SPACING MUST
- NOT BE LESS THAN 3 X SCREW DIAMETER BETWEEN ANY SCREWS.

HIGH TENSILE BOLTS

- ALL BOLTS SHALL BE M16 / 8.8 / S U.N.O
 CONNECTIONS WITH 8.8S BOLTS SPECIFIED ARE DESIGNED AS FRICTION TYPE JOINTS & BOLTS, NUTS & WASHERS SHALL
- COMPLY WITH THE RELEVANT REQUIREMENTS OF AS1252.

 8.8/S BOLTS TO BE INSTALLED IN ACCORDANCE WITH
- AS1511 & TENSIONED BY AN APPROVED METHOD TO PRODUCE THE FOLLOWING SHANK TENSIONS

	SHANK TENSION
BOLT SIZE	(kN)
M12	50
M1C	00

FOR THIS DESIGN AN ACCEPTABLE TENSIONING METHOD IS SNUG TIGHT (PODGER SPANNER TIGHT) PLUS HALF A TURN.



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DRAWING SCHEDULE

- 1: 428224-GA GENERAL ARRANGEMENT
- 2: ENG1/1-428224 STEEL FRAME SCHEDULE AND NOTES,
- 3: ENG2/1-428224 STEEL FRAME DIAGRAMS
- 4: ENG3/1-428224 CONNECTION DETAILS
- 5: ENG4/1-428224 RC SLAB PLAN
- 6: ENG5/1-428224 RC SLAB DETAILS, CONCRETE SPECIFICATION, SITE NOTES

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NOT FOR CONSTRUCTION

CLIENT

Nick Cashen

62 THULE ROAD WHITEMARK WHITEMARK TAS 7255

BUILDING

SUNDOWN DELUXE 10000 SPAN x 3600 EAVE x 20000 LONG

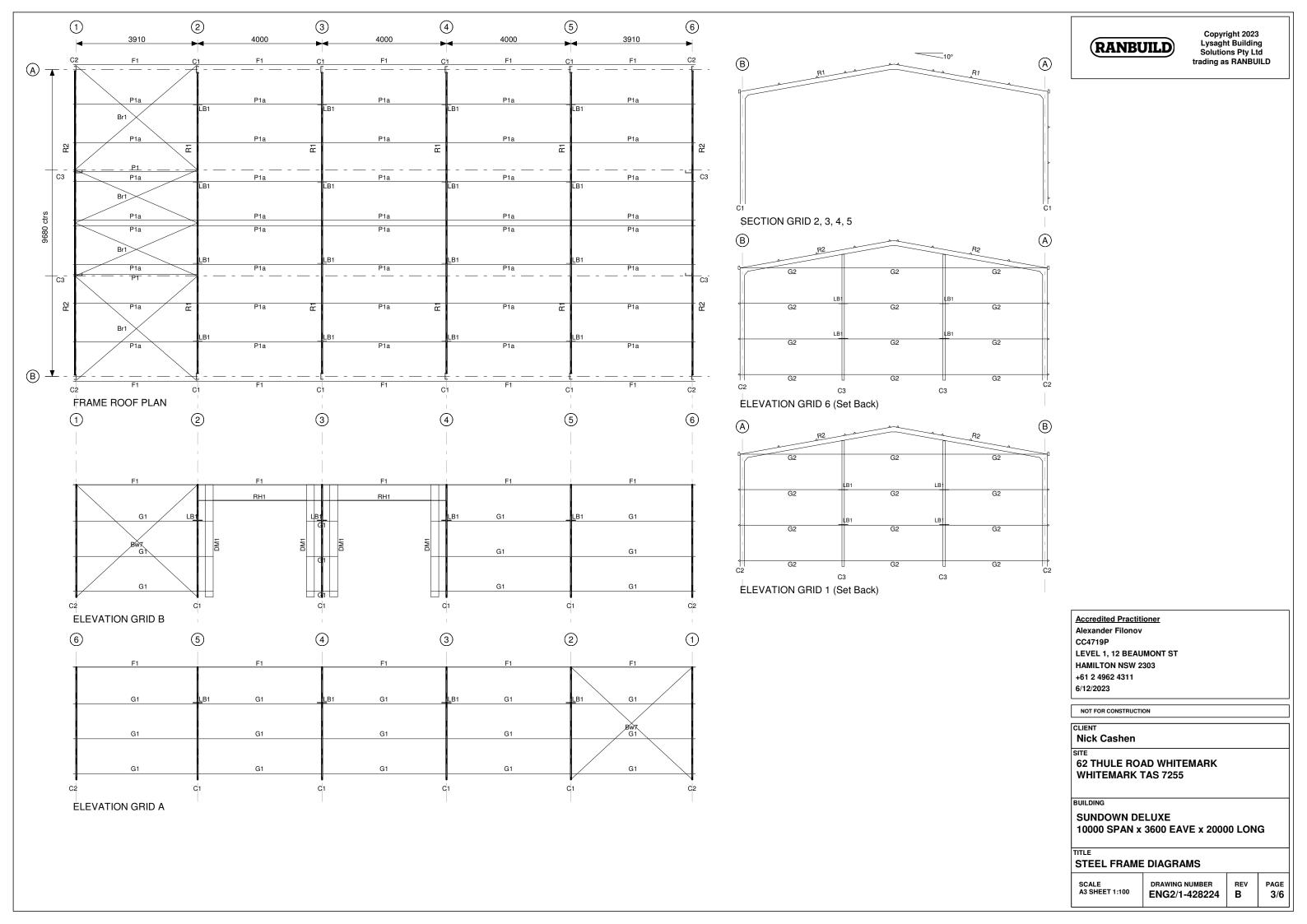
STEEL FRAME SCHEDULE AND NOTES, COVER PAGE

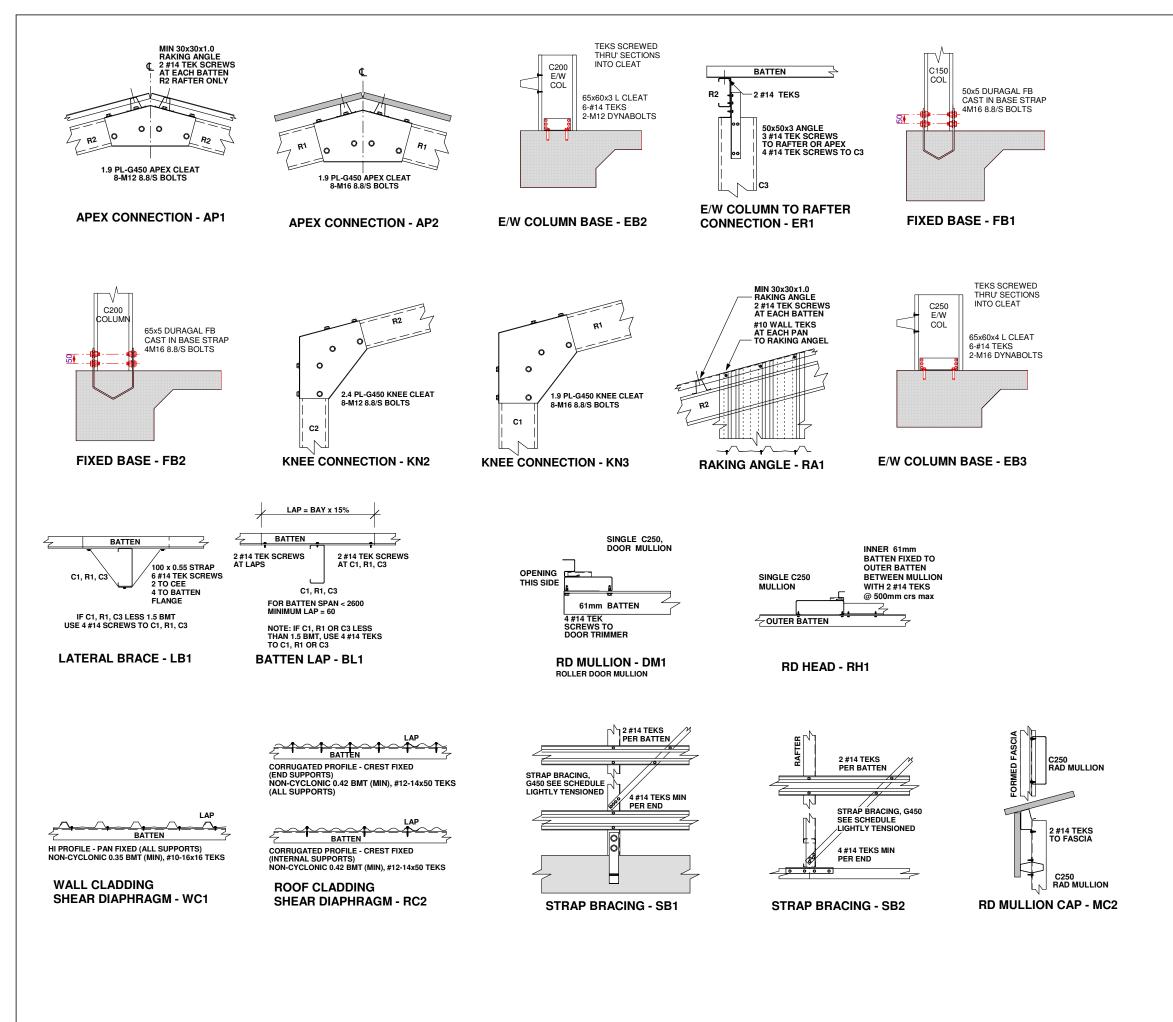
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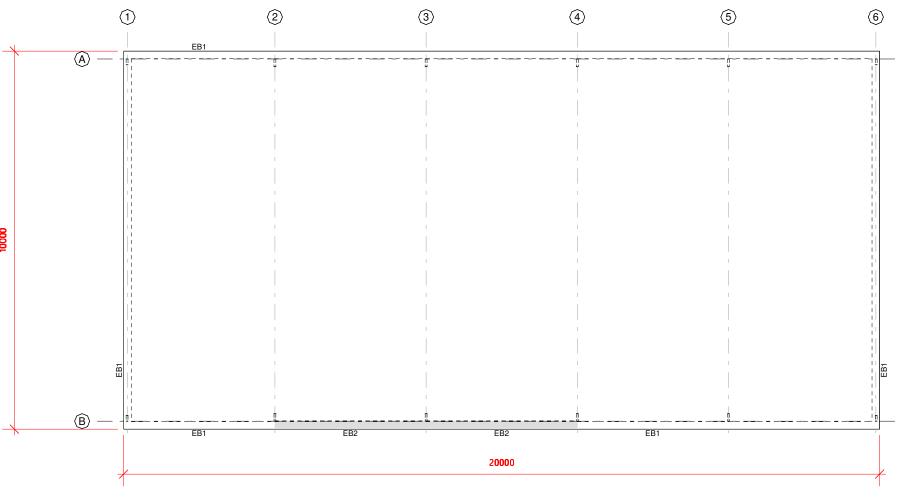
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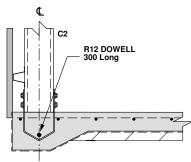
CONNECTION DETAILS

SCALE A3 SHEET 1:20 DRAWING NUMBER ENG3/1-428224

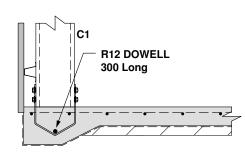
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C150 CAST IN STRAP



C200 CAST IN STRAP

RC SLAB

THIS GENERAL PURPOSE RC FLOOR DESIGN IS SUITABLE FOR STRUCTURES USED FOR DOMESTIC, FARM AND COMMERCIAL NON-HABITABLE BUILDINGS SUCH AS GARAGES, STORAGE SHEDS, BARNS, STABLES ETC. THE DESIGN IS NOT SUITABLE FOR STRUCTURES CONVERTED FOR USE AS A DWELLING. ALL DIMENSIONS SHOULD BE CHECKED AND VERIFIED PRIOR TO COMMENCEMENT OF ANY WORKS. HIS LIDING DOORS ARE INCLUDED ON THIS PROJECT, A STRIP FOOTING OR PAD FOOTINGS WILL BE NECESSARY, AND MUST BE POURED IN CONJUNCTION WITH THIS GARAGE'S SLAB OR FOOTINGS.

SEE ERECTION INSTRUCTIONS FOR ADDITIONAL NOTES.

REFERENCE

- REFERENCE

 SEE SLAB DETAIL DRAWING FOR:

 SITE FOUNDATION CLASSIFICATION NOTES

 MINIMUM SITE PREPARATION NOTES

 CONCRETE SPECIFICATION NOTES

 CONCRETE REINFORCEMENT NOTES

 SLAB ON GRADE NOTES

 DETAIL S1/EB1 SLAB EDGE TYPE 1

 DETAIL S1/EB2 SLAB EDGE TYPE 2

 DETAIL S1/A SLAB CONTROL JOINT

 DETAIL S1/C SLAB CONSTRUCTION JOINT



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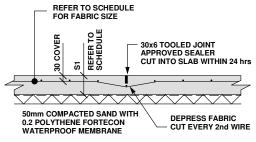
BUILDING

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RC SLAB PLAN

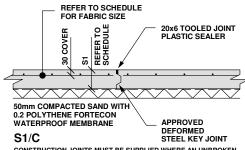
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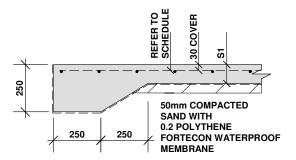


S1/A

CONTROL JOINTS MUST BE SUPPLIED AT NOT GREATER THAN 4.5M OR CONCRETE POUR AT A RATIO OF NOT MORE THAN 1:1.2 IN ANY DIRECTION.



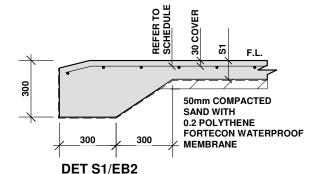
CONSTRUCTION JOINTS MUST BE SUPPLIED WHERE AN UNBROKEN RUN OF CONCRETE POUR EXCEEDS 30M IN ANY DIRECTION.



DET S1/EB1 FOR RC SLAB

NOT SUITABLE AT OPENINGS SUBJECT TO VEHICLE TRAFFIC

REQUIRED AT OPENINGS SUBJECT TO VEHICLE TRAFFIC



SITE FOUNDATION CLASSIFICATION

STIE FOUNDATION CLASSIFICATION
TWO COMMON FOUNDATION CONDITIONS & SITE CLASSIFICATIONS IN
ACCORDANCE WITH AS2870 ARE USED FOR THE STANDARDISED FOOTING
DESIGNS AS FOLLOWS:

STIFF CLAY CONFORMING TO AS2870 CLASS M.
MINIMUM SAFE BEARING CAPACITY - 100 kPa.
SHAFT ADHESION - 20 kPa

- DENSE SAND CONFORMING TO AS2870 CLASS A/S. MINIMUM SAFE BEARING CAPACITY 100 kPa.
- A SITE SPECIFIC GEOTECHNICAL INVESTIGATION IS RECOMMENDED & IF CONDITIONS OTHER THAN ASSUMED ARE ENCOUNTERED A DIFFERENT FOOTING DESIGN MAY BE REQUIRED & SHOULD BE REFERED TO A QUALIFIED
- ALL FOOTINGS TO BE FOUNDED IN NATURAL GROUND.
- NO FOOTING TO BE FOUNDED ON FILL MATERIAL.
- REFERENCE SHOULD BE MADE TO CSIRO PUBLICATION 10.91 GUIDE TO HOME OWNERS ON FOUNDATION MAINTENANCE & FOOTING PERFORMANCE

MINIMUM SITE PREPARATION

- STRIP SITE OF ALL TOP SOIL & DISCARD TO SPOIL. THE EXPOSED SURFACE TO BE PROOF ROLLED & AREAS REMAINING SOFT OR SPONGY ARE TO BE EXCAVATED TO SPOIL.
- PLACE APPROVED GRANULAR FILL MATERIAL TO THE REQUIRED BUILDING PLATFORM LEVEL IN LAYERS NOT EXCEEDING 200mm AND COMPACT BY ROLLING WITH SUITABLE EQUIPMENT TO ACHIEVE A DRY DENSITY RATIO OF 98% STANDARD COMPACTION TO AS1289 - E1 1 AT OPTIMUM MOISTURE CONTENT. THE TOP 200mm TO BE COMPACTED TO 100% STANDARD DRY
- THE COMPACTION OF ALL FILL MATERIAL TO BE INSPECTED AND APPROVED BY A RESPONSIBLE GEOTECHNICAL CONSULTANT.

CONCRETE REINFORCEMENT

- TRUE PROJECTION.
- . REINFORCEMENT NOTATION:-
- N DENOTES HOT ROLLED DEFORMED BAR.
- SL DENOTES HARD DRAWN WELDED WIRE FABRIC. THE NUMBER IMMEDIATELY FOLLOWING BAR NOTATION IS THE NOMINAL DIAMETER IN mm.
- PROVIDE BAR SUPPORTS OR SPACERS TO GIVE THE FOLLOWING COVER TO ALL RIENFORCEMENT UNLESS NOTED OTHERWISE.

FOOTINGS 80 BOTTOM, 65 TOP & SIDES SLABS 30 BOTTOM, 20 TOP BEAMS 40 BOTTOM & SIDES TO STIRRUPS. TOP COVER AS DETAILED

PROVIDE 2N12 DIAGONAL CORNER BARS 900 LONG AT ALL RE-ENTRANT CORNERS OF OPENINGS IN SLABS AND THESE BARS TO BE POSITIONED 30mm FROM THE CORNER.

CONCRETE SPECIFICATION

- . CARRY OUT ALL WORK IN ACCORDANCE WITH THE CURRENT ISSUE OF AS3600 & THE SPECIFICATION.
- CONCRETE SIZES SHOWN DO NOT INCLUDE FINISH & MUST NOT BE REDUCED OR HOLED IN ANY WAY WITHOUT THE ENGINEERS APPROVAL. DEPTH OF BEAMS INCLUDE SLAB THICKNESS.
- SLABS & BEAMS ARE TO BE POURED TOGETHER.
- CONSOLIDATE BY VIBRATION.
- SLAB CONCRETE TO BE AS SHOWN IN SLAB ON GRADE CRITERIA.
- BORED PIER CONCRETE SHALL HAVE F'C = 20 MPa, MAXIMUM AGGREGATE SIZE = 20 mm, SLUMP = 100 mm, EXCEPT FOR BCA CLASSES 2 TO 9 BUILDINGS CONCRETE SHALL HAVE $\,\,$ F'c =

- SLABS ON GRADE

 SLABS TO BE PLACED OVER 25 CONSOLIDATED SAND OVER PREPARED SUBGRADE.
- PROVIDE 0.2 POLYTHENE FORTICON WATERPROOF MEMBRANE UNDER ALL SLABS WITH LAPPED & TAPED JOINTS.
- PLACE PUMP MIX CONCRETE AS SPECIFIED BELOW TO ACCURATE LEVELS
- \bullet PROVIDE CONTROL JOINTS AS INDICATED BY NEATLY SAW CUTTING 40 \times 6 GROOVES WITHIN 12 HOURS OF THE FINAL FLOAT OF THE CONCRETE.
- CURE SLAB FOR 7 DAYS AFTER PLACEMENT BY MAINTAINING A CONTINUOUSLY WET SURFACE BY APPROVED METHODS. FLOODING & COVERING WITH POLYTHENE IMMEDIATLY AFTER FINISHING IS AN APPROVED

 METHOD.
- SEALING OF JOINTS TO BE CARRIED OUT ONE MONTH MINIMUM AFTER CURING IS COMPLETE.
- REINFORCEMENT IS REPRESENTED DIAGRAMATICALLY & NOT NECESSARILY IN PROVIDE PROPER STORMWATER DRAINAGE AWAY FROM THE BUILDING.

SLAB ON GRADE CRITERIA	
CONCRETE COMPRESSIVE STRENGTH AT 28 DAYS (MPa)	20
FLEXURAL STRENGHT AT 90 DAYS (MPa)	5
SLUMP (mm)	100
AGGREGATE MAXIMUM SIZE (MM)	20
CEMENT TYPE	SL
CEMENT CONTENT (kg/cubic metre) MIN	320
FLY ASH CONTENT (kg/cubic metre) MAX	70
WATER / CEMENT RATIO (MAX)	0.45
MICROSTRAIN AT 56 DAYS	600
FLOOR FINISH - BURNISHED STEEL TROWEL	NON SLIP
FLOOR TOLERANCE	CLASS B

FOR OTHER LOAD CONDITIONS A DESIGN VARIATION IS REQUIRED & SHOULD BE REFERED TO A QUALIFIED LOCAL ENGINEER.

DIMENSION SCHEDULE

S1	100RC SLAB
FABRIC	SL72T mesh



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RC SLAB DETAILS, CONCRETE SPECIFICATION, SITE NOTES

DRAWING NUMBER ENG5/1-428224

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