# GENERAL STRUCTURAL NOTES

**GS1** ALL CONSTRUCTION TO THE BUILDING CODE OF AUSTRALIA

COMMERCIAL PROJECTS: VOLUME 1 FOR GENERAL CONDITIONS & VOLUME 1 & 2 FOR WORKMANSHIP & MATERIALS.

**GS2** ALL STRUCTURAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE ARCHITECTS OR DESIGNERS DRAWINGS. ANY DISCREPANCIES SHALL BE REFERRED TO PERISHER BLUE.

**GS3** ALL DIMENSIONS SHALL BE OBTAINED FROM THE ARCHITECTS OR DESIGNERS DRAWINGS. MEMBER SIZING AND STRUCTURAL DETAILING SHALL BE OBTAINED FROM THESE STRUCTURAL DRAWINGS.

GS4 ALL DIMENSIONS ARE IN MILLIMETRES, UNO.

GS5 THE STRUCTURAL WORK SHOWN ON THE DRAWINGS HAS BEEN DESIGNED FOR THE FOLLOWING LOADS IN ACCORDANCE WITH 'AS 1170 - 2002'

- WIND LOAD TERRAIN CATEGORY 2 TO 'AS 1170.2' OR CLASSIFICATION N3 TO 'AS 4055'
- LIFT LOADS AS PER SCHINDLER DRAWINGS PROJECT NO. 813448221 DATED 06.08.2024.
- GROUND SNOW LOAD Sg=17.1kPa. µ=0.65. ROOF SNOW LOAD S=11.1kPa.

**GS8** GENERAL ABBREVIATIONS SHOWN SHALL BE READ AS FOLLOWS;

- DENOTES "UNLESS NOTED OTHERWISE" UNO
- DENOTES "NOT TO SCALE" NTS
- TBC DENOTES "TO BE CONFIRMED"
- TME DENOTES "TO MATCH EXISTING"

**GS9** THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDER GROUND SERVICES PRIOR TO EXCAVATION OR SAW CUTTING OF CONCRETE.

**GS10** DURING CONSTRUCTION, THE STRUCTURE SHALL BE MAINTAINED IN A STABLE CONDITION AND NO PART SHALL BE OVERSTRESSED.

### CONCRETE NOTES

CN1 ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH 'AS 3600'

CN2 CONCRETE SHALL BE N40 WITH 4% CONTAINED AIR TO 'AS 3600':

MAXIMUM. AGG. SIZE 20mm WITH MINIMUM CEMENT CONTENT 300 kg/m3. MAXIMUM WATER/CEMENT RATIO = 0.5.

CN3 SLUMP OF CONCRETE MIX FROM SUPPLIER TO BE SPECIFIED BY CONCRETE FINISHER WITHIN THE TOLERANCE SPECIFIED IN 'AS 1379'.

CN4 CONCRETE FILLING FOR HOLLOW STEEL COLUMNS AND BLOCK CORE FILLING SHALL BE 1: 0.25: 4 BLOCK MORTAR OR N20 CONCRETE MAXIMUM AGGREGATE SIZE 10mm AND MINIMUM SLUMP OF 200mm.

CN5 @ DENOTES CONCRETE THICKNESS.

CN6 NO HOLES FOR SERVICES LARGER THAN 100mm DIAMETER AT 1m c/c SHALL BE FORMED VERTICALLY IN THE SLAB WITHOUT PERMISSION FROM THE STRUCTURAL ENGINEER. ANY CUT BAR SHALL HAVE SAME DIAMETER BAR INSTALLED BOTH SIDES WITH MIN LAPS AS SPECIFIED ELSEWHERE ON THESE DRAWINGS.

CN7 VIBRATORS SHALL BE USED WHEN PLACING FOOTING & SLAB BEAM THICKENINGS CONCRETE.

CN8 ALL SERVICES IN THE FOOTINGS SHALL EITHER BE PLACED UNDER THE FOOTINGS AT RIGHT ANGLES OR HORIZONTALLY AND AT RIGHT ANGLES IN THE FOOTING MIDDLE THIRD TO 'AS 2870'.

CN10 SURFACE FINISH TO SLABS ARE TO BE MACHINE FLOAT FINISH WITH TOLERANCE OF 5mm IN 3000mm, A BUILDER'S LEVEL OR LASER SHALL BE USED WHEN PLACING SLAB CONCRETE.

CN11 SLABS SHALL BE COVERED FOR MIN 5 DAYS WITH 0.2mm POLYTHENE AFTER POURING

CN12 SEE RATE OF WATER EVAPORATION DIAGRAM BELOW AND IF RATE OF WATER EVAPORATION IS: PLACE CONCRETE

LESS THAN 0.5 0.5 TO 1.0 1.0 TO 1.5

**GREATER THAN 1.5** 

PLACE CONCRETE USING ALIPHATIC ALCOHOL INSTALL WIND BREAKS AND PLACE CONCRETE USING ALIPHATIC ALCOHOL DO NOT POUR CONCRETE

40 = CONCRETE TEMPERATURE (°C) -RELATIVE HUMIDITY (%) 100 10 15 20 25 30 35 WIND SPEED (km/h) 40 AIR TEMPERATURE (°C) 4 4.0 ATION USE OF CHART 3.5 1 FROM AIR 3.0 TEMPERATURE MOVE UP 1 TO RELATIVE HUMIDITY. ¥ (ਜ 2.5 2 MOVE RIGHT TO WATER (kg/m<sup>2</sup>, 12 CONCRETE TEMPERATURE 3 MOVE DOWN TO WIND Ч 1.0 SPEED ΠE 0 4 MOVE LEFT TO READ RATE OF EVAPORATION 2 ٥

CN13 ALL FORMWORK SHALL BE TO 'AS 3610'

## **REINFORCEMENT NOTES**

**RE1** REINFORCEMENT SHALL BE SUPPLIED, FABRICATED AND PLACED TO 'AS 3600' AND IS GENERALLY DESIGNATED TO 'AS 1100.501'.

**RE2** REINFORCEMENT BARS SHALL BE DESIGNATION GRADE D500N AND REINFORCEMENT MESH SHALL BE DESIGNATION GRADE D500L TO 'AS 4671' UNO

RE3 REINFORCING LAPS SHALL BE 50 BAR DIAMETERS, OR 500mm FOR TRENCH MESH, AND FOR SLAB MESH SHALL BE TWO CROSS BARS PLUS 25mm.



RE4 CLEAR COVER TO REINFORCEMENT SHALL BE MIN 20mm MAX 30mm FOR INTERNAL SLABS, MIN 30mm MAX 45mm FOR EXTERNAL SLABS AND MIN 50mm MAX 75mm FOR FOOTINGS.

**RE5** BAR CHAIRS SHALL BE AT 60 BAR DIAMETERS EACH DIRECTION EXCEPT FOR MESH WHERE BAR CHAIRS SHALL BE AT 800c/c EACH DIRECTION. CHAIRS SHALL NOT PUNCTURE POLYTHENE MEMBRANE. TAPE POLYTHENE WITH TESA TAPE AT JOINS.

#### STEELWORK NOTES

ST1 ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH 'AS 4100' AND 'AS 1554' EXCEPT WHEN VARIED BY THE DRAWINGS.

ST2 ALL STEEL SHALL BE IN ACCORDANCE WITH 'AS 3679' GRADE 300 OR 'AS 1163' GRADE C350LO FOR RECTANGULAR AND SQUARE HOLLOW SECTIONS OR GRADE C250LO FOR CIRCULAR HOLLOW SECTIONS TO 165 O.D. AND GRADE C350LO ABOVE 165 O.D. COLD FORMED LIGHT GAUGE PURLIN AND GIRT SECTIONS SHALL BE GRADE 450 ZINC COATED Z200 TO 'AS 1397'.

ST3 ALL STEEL MEMBERS SHALL BE FULL LENGTH i.e. NO BUTT WELD JOINS.

ST4 WELD TYPE ABBREVIATIONS:-CFW = CONTINUOUS FILLET WELD FPBW= FULL PENETRATION BUTT WELD

ST5 WELDING SHALL BE 4mm CFW UNO AND SHALL COMPLY WITH 'AS 1554'

ST6 ELECTRODES SHALL BE E41XX OR E48XX.

ST7 BUTT WELDS ARE TO BE COMPLETE PENETRATION BUTT WELDS AS DEFINED IN 'AS 1554'. E48XX ELECTRODES SHALL BE USED.

ST8 BOLTS SHALL BE M16 GRADE 8.8TB TO 'AS 1252' UNO.

**ST9** BOLT HOLES SHALL BE BOLT DIAMETER +2mm FOR STEEL TO STEEL CONNECTIONS, +4mm FOR STEEL TO CONCRETE CONNECTIONS. HOLES BEING +3mm SHALL HAVE MIN 4mm THICK LARGE WASHER UNDER NUTS.

ST10 ALL PLATES AND STIFFENERS SHALL BE 12mm THICK UNO.

ST11 CORROSION PROTECTION FOR STEELWORK SHALL BE TWO COATS ROZP GENERALLY, WITH EXTRA TWO COATS OF ENAMEL FOR EXPOSED STEELWORK TO 'AS 2312'.

ST12 ALL EPOXY SHALL BE SIKA ANCHORFIX -3+. EPIREZ 633. RAMSETT C20 INJECTION OR HILTI HIT INSTALLED TO MANUFACTURERS SPECIFICATIONS.

### **BLOCKWORK NOTES**

BL1 ALL STRUCTURAL BLOCKWORK SHALL BE REINFORCED BLOCKWORK AND CORE FILLED UNO TO 'AS 3700' AND NOTE CN4. WALLS TO BE WELL SATURATED PRIOR TO CORE FILLING AND VIBRATED

BL2 ALL BLOCK UNITS SHALL HAVE A MIN COMPRESSIVE STRENGTH OF 15MPa.

**BL3** ALL REINFORCED BLOCKWORK SHALL BE CONSTRUCTED OF BLOCK UNITS MINIMUM 190mm WIDE THAT INCLUDE A NOTCH. CHANNEL, CUTOUT OR KNOCKOUT THAT ALLOWS FOR THE PLACEMENT OF HORIZONTAL REINFORCEMENT UNO.

BL4 REINFORCED BLOCKWORK MINIMUM REINFORCING SHALL BE N12 @ 400c/c HORIZONTAL AND VERTICAL. AT CORNERS REINFORCEMENT SHALL BE N12 L BARS WITH 1000 LEGS @ 200c/c UNO. STRUCTURAL ENGINEERS BL5 BLOCKWORK MORTAR SHALL BE 1:0:5 CEMENT : LIME : SAND AND TO ()HAVE XYPEX ADDITIVE AT A RATE OF 1 CUP (250MI) PER TWO CUBIC ft OF MORTAR. CONSULTING ENGINEERS **BL7** THE BUILDER IS RESPONSIBLE FOR PROPPING AND STABILITY OF **COOT Consulting Engineers** BLOCKWORK DURING CONSTRUCTION Level 1 3/15 Murray Crescent Griffith ACT 2603 **ROCKWORK NOTES** CONTACT LINDEN COOT 02 6282 4620 RK1 ALL ROCKWORK SHALL BE TO 'AS 3700' UNO. linden@cootengineers.com.au **CLIENT** RK2 ALL ROCKWORK ROCKS SHALL BE SOUND DURABLE ROCK WITH EQUIVALENT MIN COMPRESSIVE STRENGTH OF 15MPa. **VAIL RESORTS** PERISHER RK3 MORTAR SHALL BE 1: 0.25: 4 CEMENT : LIME : SAND. ALL ROCKWORK MORTAR BELOW GROUND LEVEL AND TO HAVE PENETRON ADMIX ADDITIVE AT A RATE OF 4.5mL/L OR 125mL/ft3/ OF MORTAR. **RK5** THE BUILDER IS RESPONSIBLE FOR PROPPING AND STABILITY OF PROJECT ROCKWORK DURING CONSTRUCTION. **PROPOSED SKI CENTRE LIFT** PERISHER SKI CENTRE PERISHER N.S.W 2624 TITI F STRUCTURAL NOTES DRG NO. DESIGN DRAWN DATE S01 LC HC 26/08/2024

RATE OF WATER EVAPORATION DIAGRAM



**-**¥(13)5.



Y9.2



**-Y2.**1

-Y0.0





C:\Users\HannaCoot\Coot Consulting Engineers Pty Ltd\Jobs - 2023-0153 - Perisher Centre lift\COOT Documents\CAD\Perisher Centre lift.dwg - PLOTTED 26/08/2024







# BLOCK CORNER DETAIL 1:20 @ A3

S	
	COOSULTING ENGINEERS
	COOT Consulting Engineers Level 1 3/15 Murray Crescent Griffith ACT 2603 CONTACT LINDEN COOT 02 6282 4620 linden@cootengineers.com.au
	CLIENT VAIL RESORTS PERISHER
	PROJECT PROPOSED SKI CENTRE LIFT PERISHER SKI CENTRE PERISHER N.S.W 2624
	DETAIL Y
<u></u>	
3	DESIGN DRAWN DATE DRG NO.
	LC HC 26/08/2024 <b>S06</b>



