

CONSULTING ENGINEERS

# **CONSTRUCTION NOTES**

#### **GENERAL**

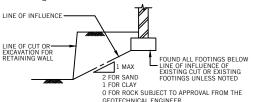
- G1. Read these drawings in conjunction with all architectural and other working drawings, specifications and with such other written instructions as may be issued during the course of the contract.
- G2. Provide all workmanship and materials in accordance with the requirements of the current editions of the BCA, the Australian Standards and the By-Laws and Ordinances of the relevant Building Authority
- G3. The Builder must comply with requirements of the Occupational Health &
- G4. Refer any conflict between these notes, the specification, the drawings or any other relevant documents to the Engineer (Structure) for decision prior to proceeding with the work.
- G5. Do not obtain dimensions by scaling the drawings. For setting out dimensions and levels refer to architectural drawings.
- G6. The Builder is responsible for the provision of all shoring to maintain the stability and integrity of excavations and adjacent structures. Provide details, for review by the Engineer, of any necessary temporary works, including shoring, prior to commencing construction.
- G7. During construction it is the Builder's responsibility to maintain the structure in a stable condition and to ensure no part is overstressed.
- G8. The design and drawings are copyright and may not be used or reproduced in whole or in part without the written permission of Structure.

  G9. Fire-Resistant Levels (FRL's) required for the various structural elements must
- be confirmed by the BCA consultant or Architect.

#### **EXISTING STRUCTURES (ALTERATIONS & ADDITIONS)**

E1. After exposing the structure of the existing building, the Builder must advise the Engineer to allow for inspection to confirm suitability of documented strengthening requirements, prior to commencing structural alterations and

- F1. The minimum safe bearing capacity of foundation material shall be:
- F2. Foundation material shall be approved by the Geotechnical Engineer prior to placing concrete.
- F3. The bases of footing excavations shall be finished clean and horizontal
- F4. All walls and columns shall be concentric with the supporting footings unless noted otherwise on the drawings.
- F5. Founding levels where shown are for tender purposes only.
- F6. Any proposed footing excavation near boundaries, other structures or services shall be approved by the Engineer.
- F7. Subgrade shall be approved material compacted to 98% Standard Dry density determined by testing to AS 1289.5.1.1 u.n.o.
- F8. Locate all new footings relative to line of cut/excavation including excavations for retaining walls as follows:



# **ALTERATIONS AND ADDITIONS TO** 20/19 SURFVIEW PARADE, MONA VALE FOR MARGI & DAVID KINDL

#### REINFORCED CONCRETE

- C1. Provide all workmanship and materials in accordance with AS3600, the SAA standards cited in AS3600, the drawings and the specification.
- C2. Provide concrete composition and minimum clear concrete cover to reinforcement as follows:

ELEMENT	CONCRETE GRADE (MPa)	COVER TO REINFORCEMENT (mm)		
		TOP	BOTTOM	SIDE
REFER TO MASONRY NOTE M11 FOR CORE FILLING OF CONCRETE BLOCK WALLS				

- C3. Support all reinforcement at 1m maximum centres both ways on mild steel plastic tipped chairs, plastic chairs or concrete chairs. Use only plastic chairs for externally exposed soffits.
- C4. Provide all concrete with 80mm maximum slump, 20mm maximum aggregate with no admixtures, unless approved by the Engineer.
- C5. Sizes of concrete are net, exclusive of applied finishes. Beam depths are written first and include slab thickness.
- C6. Properly form construction joints and use only where shown or approved by
- C7. Make no holes or chases in concrete members without the approval of the
- C8. Reinforcement is represented diagrammatically and is not necessarily shown in true projection.
- C9. Weld or splice reinforcement only in positions approved by the Engineer
- C10. Provide the minimum clear spacing between conduits, cables, pipes and bars as required by AS3600 but not less than three bar diameters. Do not place conduits in slabs above top reinforcement or below bottom reinforcement.
- Denotes hot rolled deformed bars Grade 230S. Denotes hot rolled deformed hars Grade 500N Denotes hot rolled plain round bars Grade 230R
- SL, RL, L(size)TM Denotes hard drawn wire fabric Grade 500.
- C12.Notify the Engineer a minimum of 24 hours before reinforcement has been completed. Allow 2 hours after the completion of the reinforcement for the Engineer's inspection. Do not order concrete until reinforcement has been approved by the Engineer.
- C13.Cure concrete in accordance with AS3600. Commence curing within two hours of finishing operations and continue for a minimum of seven days by using an approved proprietary compound or by keeping continuously wet.
- C14. Tie all unsupported bars in transverse direction to N12-300, lapped 500 U.N.O.
- C15.Lap fabric in accordance with details fig.13.2.4 of AS3600
- C16.Provide hooks, laps and bends in accordance with AS3600 U.N.O.
- C17. Provide Chamfers, drip grooves etc. in accordance with the Architect's details.
- C18.Design, construct and strip formwork in accordance with AS3610 & AS3600. C19.Pre camber formwork upwards by 1/500 of the clear span U.N.O. where
- supported beams and slabs span greater than 5m.

  C20.These slabs have not been designed or detailed for an in-slab hydraulic heating system or for a polished concrete finish. Contact the engineer for
- redesign and instruction if either is to be featured in these slabs.

- L1. Importance Levels of Building: 2
- L2. Superimposed floor live loads are generally in accordance with AS/NZS1170.1 and specifically:
  - 1.5 kPa. GENERALLY 2.0 kPa. BALCONIES
  - 2.0 kPa, STAIRS
- L3. Wind loads have been dete ned in accordance with AS4055 Wind Region: A Terrain Category: 2 Topographic Class: T1 Wind Classification = N2
- L4. The relevant provisions of AS1170.4 have been applied for the following Earthquake Design: Probability factor kp: 1 Hazard Factor Z: 0.08

Site Sub-Soil Class: Ce Earthquake Design Category: I

- T1. Ensure all workmanship and materials are in accordance with AS1720 andAS1684, the SAA Standards cited in AS1720, AS1684 and the specification
- T2. Provide all timber as undressed MGP10 stress grade SEASONED PINE u.n.o. Provide all external timber as undressed hardwood or appropriately treated seasoned pine u.n.o.
- T3. Where the use of treated pine for durability is noted on the structural drawings ensure it complies with the following treatments levels: Interior above ground = H2

Interior above ground Exterior above ground = H3 All in accordance with AS1684 = H4 & H5 J Exterior in ground

- T4. Install proprietary timber connectors in accordance with the manufacturer's written instructions
- T5. Retighten bolted connections in unseasoned timber prior to the fixing of
- T6. Timber elements or timber framing have not been designed unless noted.
- T7. Provide all new construction with protection from subterranean termites in accordance with AS3660.1-1995. Provide the protection system or systems as specified by the architect.
- T8. Submit three copies of all truss workshop drawings to the Engineer for checking prior to fabrication. All trusses to be pre-cambered upward 1/240
- T9. For bushfire prone areas, use timber species classified as "fire-retardant-treated timbers" in accordance with AS3959 1999, ie. untreated Blackbutt, Kwila (Merbau), Red Iron Bark, River Red gum, Silver Top ash, Spotted Gum or Turpentine.

#### STEELWORK

- S1 Ensure materials, fabrication and erection are in accordance with AS4100, the SAA Standards cited in AS4100 and the specification.
- S2. Submit three copies of all workshop drawings to the Architect and the Engineer to obtain their written approval prior to fabrication.
- S3. Provide all welds as 6mm continuous fillet from E41XX Electrodes, all bolts as M20 4.6/S and all cleats and gussets as 10mm plate u.n.o. S4. For bolts, the following notation is used:
- - 4-M16 4.6/S denotes 4 x M16 commercial grade bolts snug tight. 6-M20 8.8/TF denotes 6 x M20 high strength structural bolts fully tensioned
  - 8-M24 8.8/TB denotes 8 x M24 high strength structural bolts fully tensioned in a bearing joint.
- S5. Leave mating surfaces of TF connections unpainted (no galvanising) and free of mill scale and rust
- S6. Tighten bolts in TF and TB connections using the part turn method or load indicating washers. Do not use calibrated torque wrenches. Use a hardened washer under the bolt head or nut, whichever is rotated. The re-use of fully tensioned bolts is prohibited.
- S7. Provide all cleats and drill all holes necessary for fixing steel to steel or timber S8. Fabricate steel beams and trusses spanning greater than 5m with an upward pre camber of 1/500 span u.n.o.
- S9. Prepare structural steelwork to class 2 and paint with Zinc Phosphate Primer to a thickness of 70 micrometres u.n.o.
- S10. Hot dip galvanise all exposed external steelwork and all steelwork built into an external masonry skin, in accordance with grade HDG600 to AS/NZS2312 Within 100m from the non-surf coast or 1 km from the surf coast, hot dip galvanise above in accordance with grade HDG900 to AS/NZS2312.
- S11.Provide fire protection to all steelwork as required.
- S12.Ensure all cold formed sections conform to AS1538 and are roll-formed from steel strip, minimum yield stress 450 MPa, 300g/m minimum zinc coating

ALL CHEMICAL ANCHORS FOR THREADED FIXINGS OR REINFORCEMENT SHALL BE HILTI HIT-RE 500 ADHESIVE ANCHOR SYSTEM OR APPROVED EQUIVALENT INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

ALL THREADED CHEMICAL ANCHORS SHALL BE HOT DIP GALVANISED UNLESS NOTED OTHERWISE: M12 MIN. 100 EMBEDMENT, MIN. 60 EDGE DISTANCE, MIN. 70 SPACING M16 MIN. 125 EMBEDMENT, MIN. 70 EDGE DISTANCE, MIN. 100 SPACING

- M1. Ensure all workmanship and materials are in accordance with AS3700, the Standards cited in AS3700, the drawings and the APPL Standard Technical Specification STD-D905
- M2. Where masonry supports concrete slabs or beams, lay the top course with frogs down and covered with 2 layers of approved slip joint material
- M3. Walls shown shaded on plan are load bearing. Separate non-load bearing walls under slabs from the slab by 15mm of approved compressible material. Where masonry abuts slab downturns, provide 15mm gap between brickwork and side of downturn.
- M4. Do not erect masonry supported by concrete slabs or beams until all formwork and props under have been removed
- M5. Provide all bricks of strength f'uc= 20 MPa u.n.o.
- M6. Provide all hollow concrete masonry of strength f'uc= 15 MPa u.n.o.
- M7. Provide classification M3 masonry mortar u.n.o. Note that within 100m from non-surf coast, or 1km surf coast, provide classification M4 masonry mortar.
- M8. Cut no chases into load bearing masonry without the approval of the Engineer.
- M9. Provide movement control joints vertically for full height of wall as follows: For general masonry = 8m max. centres & 4m max. from corners. For articulated masonry = 6m max, centres & 4m max, from corners. Provide 15mm min, joints with an approved compressible filler, tied together
- every 4th course with an MET 3.3 masonry sliding tie or approved equal M10.Construct hollow walls to full height or maximum 3m before filling cores.
- Provide cleanout openings at the base of all cores to be filled. M11.Provide hollow F'c 20 MPa core filling concrete with 10mm aggregate
- 180 slump, UNO. M12. Construct hollow masonry retaining walls using "double U blocks".
- M13.Unreinforced masonry walls have not been designed unless noted.

### SPECIFICATION FOR PAINT SYSTEMS (ALTERNATIVE TO HOT-DIP-GALVANISING):

OR APPROVED FOLIVALENT SYSTEM

PROVIDE ALL EXTERNAL STEELWORK WITH THE FOLLOWING CORROSION PROTECTION SYSTEM AS MANUFACTURED BY INTERNATIONAL PROTECTIVE COATINGS:

PREPARATION: ABRASIVE BLAST CLEAN TO CLASS 21/2. PRIMER - INTERZINC 52 AT 75 MICRONS DRY FILM THICKNESS (DFT.) INTERMEDIATE COAT - INTERCURE 420 AT 125 MICRONS DFT FINAL COAT - INTERFINE 629 AT 75 MICRONS DFT.

PROVIDE WRITTEN CERTIFICATION ISSUED BY THE STEELWORK FABRICATOR CONFIRMING THE THICKNESS OF THE APPLIED PAINT SYSTEM WAS MEASURED ON SITE AND COMPLIES WITH THE ABOVE SPECIFICATION

ALL TIMBER CONNECTIONS, TIE DOWNS BRACING AND TIMBER SIZES NOT NOMINATED ARE TO BE IN STRICT ACCORDANCE WITH AS1684 RESIDENTIAL TIMBER-FRAMED CONSTRUCTION CODE ALL TIE DOWNS TO BE DESIGNED FOR ULTIMATE LIMIT STATE GUST WIND SPEED OF 40 m/s (CATEGORY N2 AS DETERMINED FROM AS4055 - WIND LOADS FOR HOUSING)

# PRELIMINARY - NOT FOR CONSTRUCTION

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Rev. Issue / Amendment

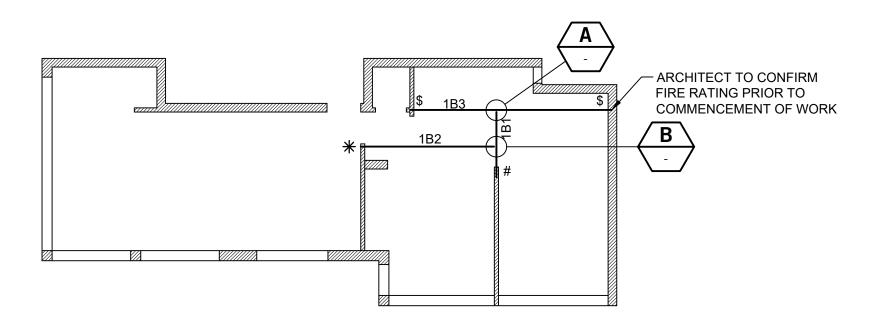
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Flectronic Code Design Drawn **ALTERATIONS AND ADDITIONS** TC MCL 20/19 SURFVIEW PARADE Scale at A3 Date **MONA VALE** N/A **JULY 2024** CONSTRUCTION NOTES Job No 24S0132 **S1** 



## **UNIT 20 FLOOR PLAN**

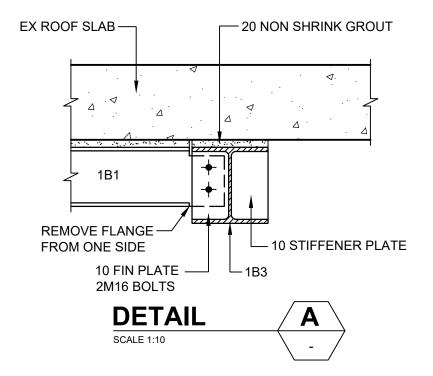
MEMBER SCHEDULE

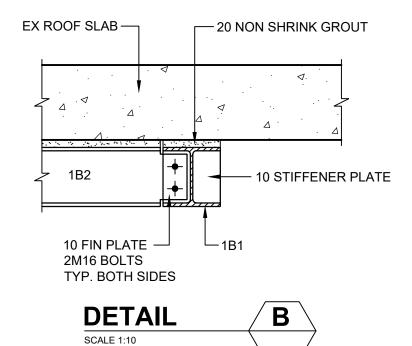
1B1.1B2 ---- 150UC30. 1B3 ----- 200UC46. NOTES

1. #:- DENOTES 150 BEARING ONTO EX BRICKWORK.

2. \* :- DENOTES 250x12 BEARING PLATE [SUPPLY LOOSE]

3. \$ :- DENOTES 110 MINIMUM BEAM END BEARING.





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 Date

 P1
 PRELIMINARY
 5.08.24

 P2
 PRELIMINARY BEAM SIZES REVISED
 15.08.24



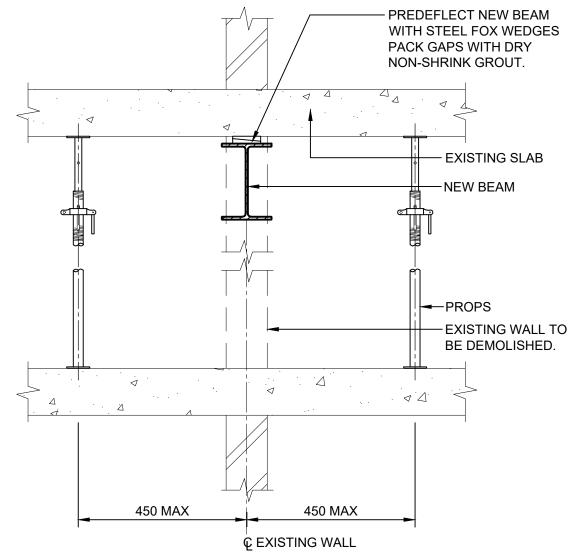
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ALTERATIONS AND ADDITIONS 20/19 SURFVIEW PARADE		Design	Drawn	
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	UNIT 20 FLOOR PLAN & DETAILS	Job No.	3 -	Rev.
		<b>24S0132</b>	S2	P2



# **PROPPING DETAIL NTS**

FOR DOUBLE STOREY, CONCRETE FLOORS

## SUGGESTED BEAM INSTALLATION PROCEDURE

## IN CONJUNCTION WITH ENGINEER'S DRAWINGS PROCEED WITH THE FOLLOWING:

- INSTALL PROPS AT 1200 CRS. SUPPORTED ON EXISTING FLOOR FOR FULL LENGTH OF OPENING.
   SCREW UP PROPS TO SUPPORT FULL LOAD OF SLAB ABOVE.
- 2. BREAK OUT OPENING.
- 3. INSERT BEAM WITH SEATING ON GROUT BED AS PER DETAILS.
  ALLOW 24 HOURS FOR GROUT TO CURE.
  PREDEFLECT BEAM BY DRIVING 1:20 STEEL FOX WEDGES BETWEEN UNDERSIDE
  OF SLAB AND TOP OF BEAM TO TRANSFER LOAD TO NEW BEAM.
- 4. RAM PACK BETWEEN NEW STEEL BEAM AND UNDERSIDE OF EXISTING SLAB WITH DRY NON-SHRINK GROUT.
- 5. A MINIMUM OF 48 HOURS AFTER GROUTING, REMOVE PROPS AND MAKE GOOD.

NOTE: THE ABOVE SUGGESTED PROCEDURE IN NO WAY RELIEVES THE BUILDER OF THE USUAL CONSTRUCTION RESPONSIBILITIES.

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ALTERATIONS AND ADDITIONS	Design	Drawn	
20/19 SURFVIEW PARADE	TC	MCL	
	Scale at A3	Date	
MONA VALE	1:20	AUG 2024	
NEEDLING DETAILS	Job No. <b>24S0132</b>	Drg. <b>S3</b>	Rev.