PITTWATER COUNCIL

EPC103

Construction Certificate Application

Environmental Planning and Assessment Act 1979, Section 109C
EP&A Regulation 2000, Clauses 139 (1) and 148

PO Box 882, Mona Vale NSW 1660
Tel: (612) 9970 1111
Fax: (612) 9970 1200
Internet: www.pittwater.nsw.gov.au
Email: pittwater_council@pittwater.nsw.gov.au

Please tick one:
- ☐ New Construction Certificate
- ☐ Modification of previously issued Construction Certificate
  CC _____/____

SITE DETAILS

Unit/Suite:	Street No:	Street:	
	1771	PITTWATER RD	
Suburb: MONA VALE. 2103		Lot No: 11	Deposit /Strata Plan: 732064

DEVELOPMENT CONSENT

Development Application No:	Determination Date:
N0308/12	31. 12. 2012

APPLICANT DETAILS

Name/Company:	Contact Person:
TOMASY P/L.	DENIS SMITH
Postal Address: L1/1073 PITTWATER RD COLLAROY. 2097	Contact Numbers: Phone (H/B): 8456 4752 Mobile: 0400 777115 Fax:
Signature of Applicant:	Date: 4. 3. 2013

OWNERS DETAILS

Name:	If Company, contact person:
J. & L. PAPANDREA A. JNOW	SAM PAPANDREA.
Postal Address: 1771 PITTWATER RD MONA VALE.	Contact Numbers: Phone (H/B): 9979 6443 Mobile: Fax:

As the owner of the land to which this application relates, I consent to this application. I also give consent for the authorised Council Officer to enter the land to carry out inspections.

Signature of Owners:	Date:
x ..... x	4/3/13 4/3/13
x	4/3/13

If more than one owner, every owner must sign. If the owner is a company, the form must be signed by an authorised director and the common seal must be stamped on this application.
If the property has been recently purchased, written confirmation from the purchaser's Solicitor must be provided.
If the contracts have been exchanged for the purchase of the land, the current owner is to sign the application.

DEVELOPMENT DETAILS

Type of Work: ☒ Building Work

OR

☐ Subdivision Work

Description of proposal – (Provide brief, concise details):
ALTERATIONS / ADDITIONS TO EXISTING RETAIL SHOP FOR A STORAGE AREA.

WHO WILL BE DOING THE BUILDING WORKS? N/A COMMERCIAL

☐ Owner Builder

Owner Builders Permit No: .....

Copy of Owner Builders permit attached: ☐ Yes ☐ No – to be provided with Notice of Commencement Form

If you are an Owner-Builder for the residential building work exceeding $5000 you must apply for a permit at NSW Office of Fair Trading, 1 Fitzwilliam Street, Parramatta NSW 2150 Australia. Tel: 61 2 98950111 Fax: 61 2 9895 0222. www.fairtrading.nsw.gov.au

OR

☐ Licensed Builder
Builder's License Number .....

Name of Builder:	Phone: .....
Contact person:	Mobile: .....
Address:	Fax: .....
.....	

Insurance Company: .....

Insurance Certificate attached: ☐ Yes ☐ No – to be provided with Notification of Commencement form

From 1 February 2012 if you are using a licensed builder for residential building work exceeding $20,000 you must obtain Home Warranty Insurance issued under the Home Building Act. A certificate of insurance must be provided with this application or submitted with the Notification of Commencement form.

VALUE OF PROPOSED DEVELOPMENT

Value of Works: $ 22,500 (including full cost of labour and materials)

DO YOU NEED TO PAY THE BUILDING INDUSTRY LONG SERVICE LEVY?

☐ Yes ☒ No

Only required if the development involves building and construction works costing $25,000.00 and above. Further details are available from the Long Service Corporation on telephone13 14 41 or www.longservice.nsw.gov.au.

OFFICE USE ONLY

Fee Type	Cashier's Code	Fee Amount
Construction Certificate Application Fee	TCER	860
Modification of Construction Certificate Fee	TCER	
Long Service Levy Fee	QLSL	
Driveway/Street Levels	ESTR	
Sec 94 Contributions		
Bonds/Guarantees		
Other Fees		
TOTAL		$860.00
Date of Receipt:	**Receipt No:**	**Accepted By:**
New Application Number issued (not required for modification of CC)		**CC ____/___**

PRIVACY AND PERSONAL INFORMATION PROTECTION NOTICE

Purpose of collection:	To enable Council to assess your proposal.
Intended recipients:	Council Staff/Consultants and any other relevant government agency that may be required to assess the proposal.
Supply:	The information is required by legislation.
Consequence of Non-provision:	Your application may not be accepted, not processed or rejected for lack of information
Storage:	Pittwater Council will store details of the application and any subsequent decision in a register that can be viewed by the public.
Retention period:	Hard copies of the application will be destroyed after 7 years and electronic records will be kept indefinitely.

Please contact Council if this information you have provided is incorrect or changes.

* PAID 20/03/2013 *
R/338575

STATISTICAL RETURN FOR AUSTRALIAN BUREAU OF STATISTICS

What is the area of the land?	Area in square metres	125 m²
Gross floor area of existing building? *If no existing building, write "NIL"*	Area in square metres	120 m²
What is the existing building or site used for at present?	Main uses: PHARMACY Other uses: —	
Does the site contain a dual occupancy?	☐ Yes	☒ No
Gross floor area of proposed building?	Proposed floor area in square metres	155 m²
What will the proposed building to be used for?	Main uses: STORAGE. Other uses: —	
How many dwellings: Are pre-existing at this property? Are proposed to be demolished? Are proposed to be constructed?	Dwellings: N/A. Dwellings: Dwellings:	
How many storeys will building consist of?	Storeys: ONE	

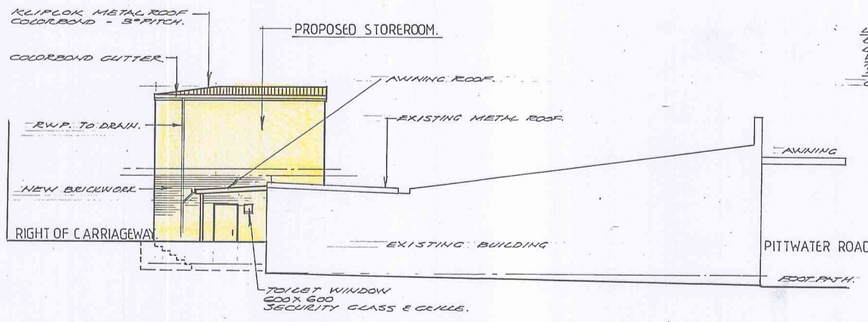
What are the main building materials?

Walls		**Roof**	
Full Brick	☑	Aluminium	☑
Brick veneer	☐	Concrete or slate	☐
Concrete, masonry	☐	Tile	☐
Steel	☐	Fibrous cement	☐
Fibrous cement	☐	Steel	☐
Timber/weatherboard	☐	Other	☐
Cladding-aluminium	☑	Unknown	☐
Curtain glass	☐		
Other	☐		
Unknown	☐		

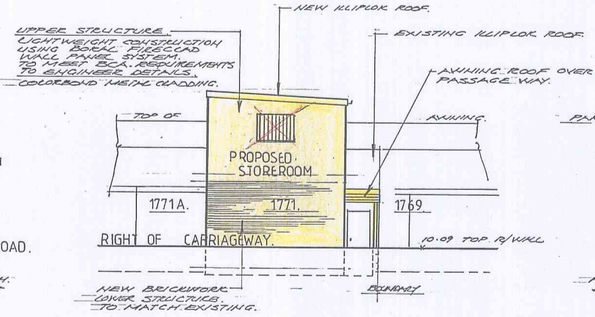
Floor		**Frame**	
Concrete	☑	Timber	☐
Timber	☐	Steel	☑
Other	☐	Other	☐
Unknown	☐	Unknown	☐

APPLICANT'S CHECK LIST

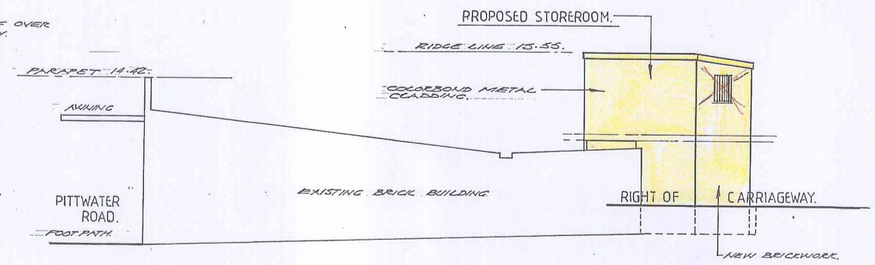
Note: This list is intended as a guide to the type of information to be submitted. Some items may not be required and Section B of the Conditions of Development Consent for the building works may specify further additional information required with submission of your Construction Certificate Application.	
Application Form –	☑ Owner's Consent ☑ Applicant's Signature ☐ Long Service Levy N/A. ☐ Driveway/Street levels Application N/A.
Supporting Documentation - (3 copies of each)	☑ Architectural Plans ☐ Quick Check Plans endorsed by Sydney Water ☐ Construction Specifications for Building Works ☑ Structural Engineer's Plans ☐ Structural/Geotechnical Certificates ☐ Landscape Plans ☐ Driveway Level Plans ☐ On-site Stormwater Detention Plans ☐ Drainage Plans on Site Storm Management ☐ Erosion and Sediment Management Plan ☐ Sydney Water Quick Check Plans ☐ Subdivision Work Plans ☐ Schedule of External Finishes/Colours ☐ Fire Safety Measures Schedule ☐ Form No. 2 – "Geotechnical Risk Management Policy for Pittwater" ☐ Details and location of fencing for Swimming Pool to comply with AS 1926-1986 "Fences and Gates for Private Swimming Pools" ☐ Specifications for construction of buildings in Bushfire-prone areas ☐ Security Deposit / Section 94 contributions ☐ Building Code of Australia – Alternative solution report that has been peer reviewed by a separate suitably qualified person



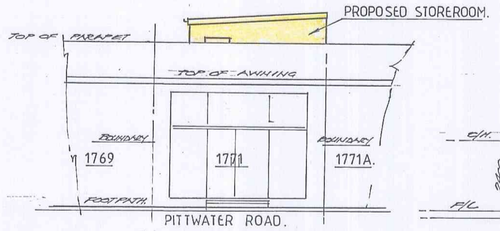
SOUTH ELEVATION.



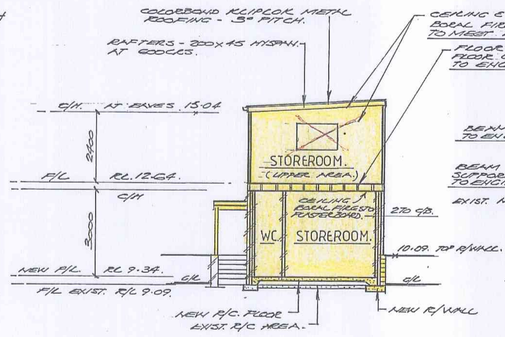
WEST ELEVATION.



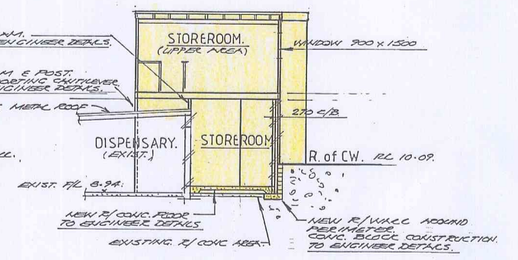
NORTH ELEVATION.



EAST ELEVATION.



SECTION A-A.
(SCALE 1:100)



SECTION B-B.
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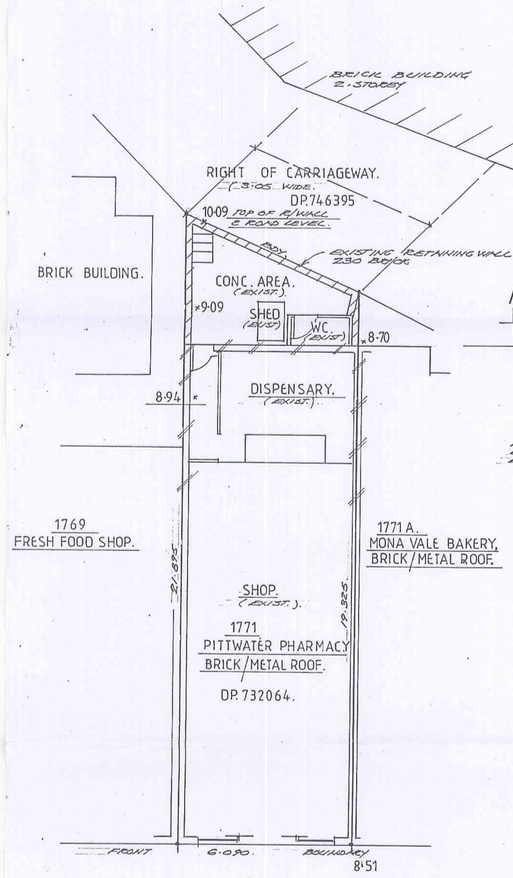
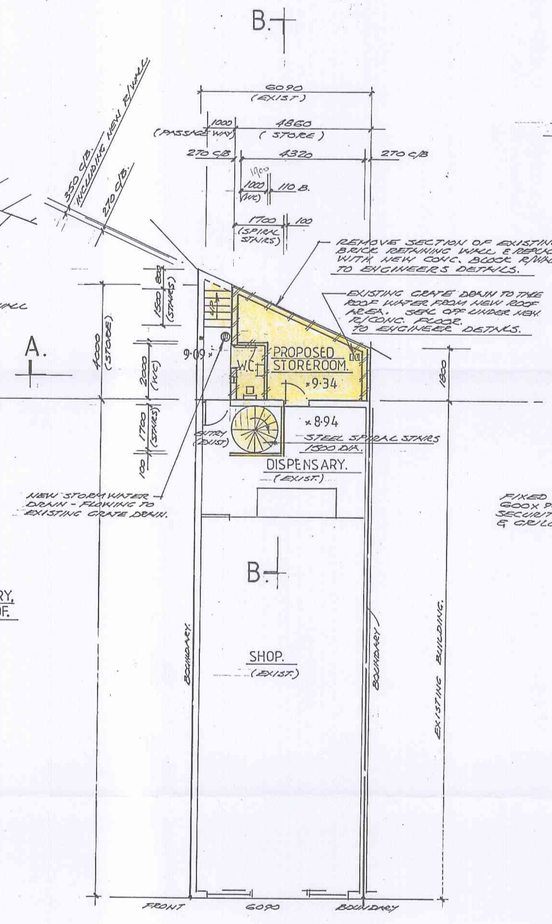
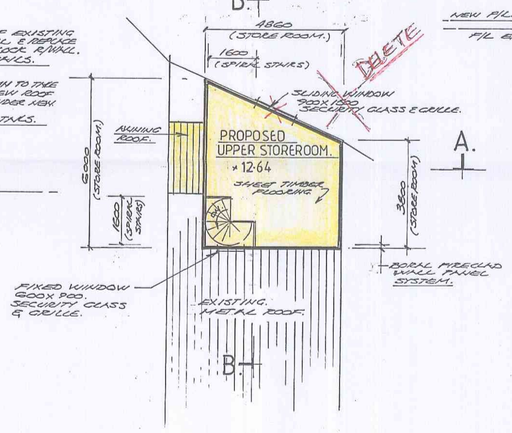


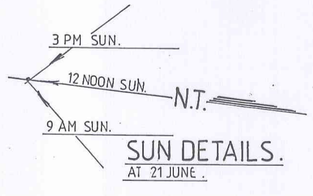
EXISTING FLOOR PLAN & SITE PLAN DETAILS.



EXISTING FLOOR PLAN. + PROPOSED STOREROOM.



PROPOSED UPPER FLOOR STOREROOM.



SUN DETAILS.
AT 21 JUNE.

NOTES.

EXTENT OF WORK.

CONSTRUCT 2. STOREY STOREROOM AREA OVER EXISTING OPEN CONC. AREA TO THE REAR OF EXIST. BUILDING (PITTWATER PHARMACY)

1. BUILDER TO CHECK & CONFIRM PRIOR TO CONSTRUCTION
   - ALL DETAILED DIMENSIONS.
   - SITE BOUNDARIES & LEVELS.
   - ALL NOMINATED TIMBER & BEAM SIZES.
2. ALL CONSTRUCTION WORK TO BE IN ACCORDANCE WITH THE BCA. CURRENT REQUIREMENTS & THE RELEVANT SAA. CODES GOVERNING THIS PROJECT.
3. ENGINEER DETAILS & SPECIFICATIONS -
   - ALL R/CONCRETE SLABS & FOOTINGS
   - RETAINING WALLS & EXCAVATION.
   - STRUCTURAL BRICKWORK
   - STRUCTURAL BEAMS & TIMBERS AS NOMINATED.
   - UPPER FLOOR CONSTRUCTION & CANTILEVER.
   - UPPER FLOOR EXTERNAL WALL STRUCTURE.
   - ROOF STRUCTURE & TIE DOWN.
   - ALL OTHER DETAILS AS NOMINATED ON DRAWING.
4. WASTE WATER (SEWERAGE) FROM DEDICATED TOILET TO CONNECT INTO EXISTING SEWERAGE SYSTEM. - DUAL FLUSH PAPER SUITE.
5. ROOF WATER FROM NEW ROOF AREA TO CONNECT INTO EXISTING STORMWATER DRAINAGE SYSTEM. - TO ENGINEER DETAILS.
6. ALL STUD FRAME BRACING & ROOF STRUCTURE BRACING & TIE DOWN AS PER LIGHT TIMBER FRAMING CODE AS.1684. & ENGINEER DETAILS.
7. PREFERENCE OF CONSTRUCTION TO MEET WITH BCA. REQUIREMENT.
   - GROUND FLOOR CONSTRUCTION - CRITY BRICK.
   - UPPER FLOOR CONSTRUCTION - LIGHTWEIGHT STRUCTURE USING BORAL FIRECLAD WALL PANEL SYSTEM.
8. TERMITES PROTECT TO BE CARRIED OUT AS TO AS 3660 FOR R/CONC. WORK & ALL NEW TIMBERS.
9. SITE DATUMS, BOUNDARIES & DETAILS REFER. TO SURVEY DRAWING No 11-39 (15/8/2011. SUTTER & ASSOCIATES. - SURVEYORS.

DO NOT SCALE DRAWING
WORK FROM DETAILED OR SITE MEASUREMENTS.

SITE DETAILS.

- SITE AREA. — 125.6M²
- EXISTING SITE COVER. —
  - BUILDING — 106.0
  - TOILET & SHED — 2.4
  - OPEN CONC. AREA. — 17.2
  - TOTAL — 125.6M²
- PROPOSED SITE COVER. —
  - BUILDING & TOILET. — 120.4
  - OPEN CONC. AREA. — 5.2
  - TOTAL — 125.6M².

INSULATION DETAILS.

- ROOF.
  COLORBOND KLIPLOK METAL ROOFING.
  THERMAL & ACOUSTIC INSULATION.
  - BRADFORD ANTICON 90 (R2.5) ROOFING BLANKET.
  - FIRESTOP PLASTERBOARD CEILING.
- UPPER EXTERNAL WALL.
  - BORAL FIRECLAD WALL SYSTEM.
  - BRADFORD COLD WALL BATS (R2.0)
  - FIRESTOP PLASTERBOARD INTERNAL LINING.
- ALL INSULATION MATERIALS TO BE INSTALLED AS TO MANUFACTURER'S SPECIFICATIONS

NOTE: ALL INSULATION MATERIALS TO BE OF A FIRERATE MATERIAL TO MEET THE BCA. REQUIREMENTS.

Project. — PROPOSED STOREROOM ADDITION. 1771 PITTWATER ROAD, MONA VALE. (Lot 11. DP. 732064)	Drawn - W. Knight Scale - 1:100 Date - SEPT. '12.	KNIGHT DESIGNS. Building Designer.
Client — PITTWATER PHARMACY INVESTMENTS P/L.	Drwg No. 180912.	67 Towradgi Street, Dee Why, 2099. 02 99827494.

PROPOSED STOREROOM ADDITION

1771 PITTWATER ROAD, MONA VALE

GENERAL

G1 The 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 in these drawings shall be referred to the Structural Engineer before proceeding with the work.
G2 Construction using these structural drawings shall not commence until a Construction Certificate is issued by the Principal Certifying Authority, and only if the structural drawings are designated "Issued for Construction".
G3 All materials and workmanship shall be in accordance with the structural drawings, all relevant current Standards Australia Codes and with the Building Code of Australia.
G4 All dimensions shown on these structural drawings shall be verified by the Builder from architectural drawings. These structural drawings shall not be scaled for dimensions.
G5 Unless noted otherwise all levels are in metres and all dimensions are in millimetres.
G6 The structural components detailed on these structural drawings have been designed in accordance with the relevant Standards Australia Code and the Building Code of Australia for the following loadings. Refer to Architectural drawings for proposed floor usage.

Floor Usage	Live Load (kPa)	Superimposed Dead Load (kPa)
INTERNAL	4.0 kPa	-
ROOF	0.25 kPa	-

Wind Loads are in accordance with AS 1170.2 as follows:
Basic Wind Velocity, Vs = 30m/s Vu = 46m/s
Region A2
Terrain Category: TC3
The relevant provisions of AS 1170.4:2007 have been applied for an earthquake design category of EDCII with the following parameters:
i. Probability Factor Kp=1.3,
ii. Hazard Factor Z = 0.08,
iii. Site Sub Soil Class De
G7 The method of construction and the maintenance of safety during construction is 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. The determination of a safe work method remains the responsibility of the Builder.
G8 During construction the structure shall be maintained in a stable condition and no part shall be overloaded. Temporary bracing shall be provided by the Contractor in order to keep the building works and excavations stable at all times.
G9 No changes in any structural element documented in these structural drawings shall be made without reference to the structural engineer. No substitutions shall be made without reference to the structural engineer.
G10 Proprietary items specified on the structural drawings shall be installed in accordance with manufacturers written recommendations.
G11 The Builder shall arrange separate certification of any design and construct component by a chartered (NPER registered) structural engineer.
G12 All architectural fitments (glazing, partitions and ceilings) should allow for the short term and long term movement of structural elements. The Builder should consult the structural engineer for the extent of allowance to be made.
G13 The structural engineer accepts no responsibility for any works not inspected or not approved by the structural engineer during construction.
G14 A minimum of forty eight (48) hours notice is required for all engineering inspections.

FOOTINGS

F1 Footings have been designed for an allowable bearing capacity of 100 kPa in Sandy clay. The foundation material shall be approved in writing for this allowable bearing capacity by the Geotechnical Engineer and a copy supplied to the structural engineer before placing membrane, reinforcement or concrete.
F2 Refer to Geotechnical Investigation Report.
This report is for information only, it is not a complete description of conditions at or below ground level.
F3 Footings shall be located centrally under walls and columns unless noted otherwise on the structural drawings.
F5 Residential slabs and footings have been designed for a reactivity Class M to AS2870.
F6 Footings shall be constructed and backfilled as soon as possible following excavation to avoid either softening of the founding material or drying out by exposure.
F7 Excavate for footings wholly into clay to the nominated size and depth. Footing founding materials and levels are provisional and are subject to actual site conditions and approval by the Geotechnical Engineer. (See F1 above). Founding material shall be inspected and approved before placing membranes or reinforcement or concrete.
F8 The Builder shall ensure the stability of adjacent buildings and services during the excavation for the footings.

FORMWORK

FW1 The design, certification, construction, inspection and performance of the formwork and false work shall be the responsibility of the Formwork Sub-Contractor, except to the extent that formwork design is shown on the structural drawings.
FW2 Formwork shall be certified by a structural engineer experienced in formwork design in accordance with WorkCover Regulations and the WorkCover Code of Practice.
FW3 Formwork shall be designed in accordance with AS 3610. The design shall accommodate movements and load re-distribution due to any post tensioning.
FW4 The formwork shall not be designed to rely on restraint or support from the permanent structure without prior approval from the Structural Engineer.
FW5 Design information for the foundations under the formwork shall be determined by the Formwork Sub-Contractor from the conditions existing on site at the time of construction. Refer to the Geotechnical Report for the site.
FW6 Formwork construction dimensional tolerances and stripping times shall comply with AS3610 and AS3600 unless otherwise approved by the Structural Engineer.
FW7 During construction, support propping will be required where loads from stacked materials, formwork and other supported slabs induce loads in a slab or beam which exceed the design capacity for strength or serviceability limit states at that age. Once the nominated 28 dcy strength has been attained, these loads shall not exceed the design superimposed loads set out in these general notes at item G6.
FW8 It is to be anticipated in multi-storey construction that back-propping may be required to extend a number of levels below the floor being cast. Prop removal is to be programmed to avoid distress to previously cast floors. Re-shoring or backpropping proposals shall be subject to the approval of the Structural Engineer.
FW9 Formed concrete surfaces shall have formwork class and surface finishes in accordance with AS3610, as specified by the Project Architect.
FW10 Do not place permanent loads on the concrete structure until after formwork and propping is removed.
FW11 Refer to Project Architect's drawings for test panel requirements. Reinforcement for test panels shall be similar to that in the permanent structure being represented by the test panel.
FW12 Before placing reinforcement in the formwork, apply a release agent to the face of the formwork compatible with the required surface finish.
FW13 Dimensional tolerances shall comply with AS3610 for the appropriate finish class.
FW14 Chamfer re-entrant angles and fillet at corners by 25mm UNO.
FW15 Before placing concrete, remove all water, dust, and debris from the formwork.
FW16 Fill all holes left by form tie bolts with mortar matching the surface colour of the finished surface.

CONCRETE

C1 All workmanship and materials shall be in accordance with the current edition of AS3600 including amendments, except where varied by the contract documents.
C2 Readymix concrete supply shall comply with AS1379.
C3 Concrete Quality

ELEMENT	F'c MPa (28 DAYS)	SLUMP	MAX AGG SIZE	CEMENT TYPE	MAX W/C RATIO	MIN CEMENT CONTENT kg/m^3	MAX. SHRINKAGE STRAIN
FOOTINGS	32	80	20	SL	0.5	325	750 microstrain

C4 Project assessment shall be carried out in accordance with AS1379. Submit results of project assessment to the Structural Engineer.
C5 No admixtures shall be used in concrete unless approved in writing by the Structural Engineer.
C6 Clear concrete cover to all reinforcement for durability shall be as follows unless shown otherwise.

ELEMENT IN STRUCTURE	EXPOSURE CLASSIFICATION TO AS 3600	CONCRETE GRADE (MPa)	FIRE RATING (MINUTES)	MINIMUM COVER (mm)
FOOTINGS	B1 EXTERNAL	32	90/90/90	50 CAST AGAINST GRD

C7 All reinforcement shall be firmly supported 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 use only plastic or concrete chairs. Bars shall be tied at alternate intersections with tie wire.
C8 Concrete sizes shown do not include thicknesses of applied finishes. Sizes shall not be changed without the approval of the structural engineer.
C9 Depths of beams are given first and include slab thickness. Slabs and beams are to be poured together unless approved otherwise by the Structural Engineer.
C10 For chamfers, drip grooves, reglets, etc., refer to Project Architect's details. Maintain cover to reinforcement at these details.
C11 No holes, chases or embedment of pipes other than those shown on the structural drawings shall be made in concrete members without the prior written approval of the Structural Engineer.
C12 Where not shown on the structural drawings construction joints shall be located to the approval of the Structural Engineer.
C13 Conduits, pipes etc. shall only be located in the middle third of slab depth and spaced at not less than 3 diameters. Pipes or conduits shall not be placed within the cover to the reinforcement.
C14 Slabs and beams shall be constructed to bear only on the beams, walls, columns, etc. shown on these structural drawings. All other building elements shall be kept 15mm minimum clear from the soffits of the structure.
C15 Reinforcement
All reinforcing bars shall be Grade D500N to AS4671 unless noted otherwise.
All mesh shall be Grade 500L to AS4671 and shall be supplied in flat sheets.
Reinforcement notation shall be as follows in the following order
17N20-250
17 NUMBER OF BARS IN GROUP
N BLOCK SHAPE
20 NOMINAL BAR SIZE IN mm
250 SPACING IN mm
The figures following the fabric symbols RL, SL, L, TM is the reference number for fabric in accordance with AS4671.
Reinforcement is represented diagrammatically and not necessarily in true projection.
Slab reinforcement shall extend at least 65mm onto masonry support walls and 50 percent of bottom reinforcement shall be cogged to achieved anchorage at simply supported ends.
Splices in reinforcement shall be made only in positions shown on the structural drawings or in positions 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.
Site bending of reinforcing bars shall be done without heating using mechanical bending tools.
Welding or threading of reinforcement shall not be permitted unless shown on these structural drawings or approved by the Structural Engineer.
Joggles to bars shall be 1 bar diameter over a length of 12 bar diameters.
Fabric shall be lapped 2 transverse wires plus 50mm. Bundled bars shall be tied together at 30 bar diameter centres with 3 wraps of tie wire.
C16 The Structural Engineer shall be given 48 hours notice for reinforcement inspection and concrete shall not be delivered until final approval has been obtained from the Structural Engineer.
C17 The finished concrete shall be a dense homogeneous mass, completely filling the formwork thoroughly embedding the reinforcement and free of stone pockets. All concrete shall be compacted with mechanical vibrators. Vibrators shall not be used to spread concrete.
C18 Curing of all concrete is to be achieved by keeping surfaces continuously wet for a period of 3 days, or by prevention of loss of moisture for a total of 7 days followed by a gradual drying out. Approved spray on curing compounds that comply with AS3799 may be used where floor finishes will not be affected (refer Manufacturers Specification). Polythene sheeting or wet hessian may be used to retain concrete moisture where protected from wind and traffic. Submit details of proposed curing method for approval.
C19 Construction support propping is to be left in place where needed to avoid overstressing the structure due to construction loading. All backpropping shall be approved by the Structural Engineer. No brickwork or partition walls are to be constructed on suspended levels until all propping is removed and the slab has absorbed its dead load deflection.
C20 All penetrations to have 2/N12 bars x 1000 long to each face.
C21 Set downs or falls in slabs or beams are not permitted unless shown on these structural drawings.
C22 The surface finish of the concrete shall be as specified on the Architectural drawings.

RESIDENTIAL SLABS ON GROUND

SG1 Residential slabs-on-ground shall be in accordance with AS 2870.
SG2 The site of the works shall be stripped of all grass, roots, vegetable matter and compressible topsoil.
SG3 The ground below slabs shall be proof rolled with an approved heavy compactor. All "soft spots" encountered shall be removed and replaced with compacted crushed rock or approved fill in accordance with AS 2870 & AS 3798.
SG4 Clean granular filling up to 600 mm may be placed under the slab in accordance with the provisions of AS 2870 Part 6.4. Filling shall be compacted in 150 mm thick layers by mechanical roller.
SG5 Termite protection shall be provided as required by the Australian Standard and the Local Statutory Authority.
SG6 Slabs shall be laid on a 0.2 mm polythene membrane, continuous, lapped 200 mm minimum and taped at joints, punctures and service and pipe penetrations. Membrane to extend under and to the sides of all slabs, beams and thickenings.
SG7 Beam and strip footing reinforcement shall have a nominal cover of 50 mm.
SG8 Trench mesh shall be laid continuously and shall be spliced where necessary with a lap of 500 mm.
SG9 Trench mesh shall be overlapped by the width of fabric at corners and intersections and the ends of trench mesh shall terminate with a crossbar.
SG10 Fabric shall be placed near the top of the slab and shall have a nominal cover of 25 mm, unu. Fabric shall be lapped a minimum of two wires plus 25 mm and shall be set out such that no more than three thicknesses of fabric occur at any location.
SG11 Hot water heating pipes may be embedded in the slab if the thickness is increased by 25 mm and laid on F52 mesh.
SG12 The ground surrounding the slab shall have its surface at least 150 mm lower than the slab surface and be graded away from the slab edge to the site drainage system.

MASONRY

M1 Materials including mortar, concrete, grout shall comply with Section 10 of AS3700.
Masonry units shall comply with AS4455. Wall ties shall comply with AS2699.
M2 Masonry shall be constructed in accordance with Section 11 of AS3700.
M3 Mortar proportions shall comply with Tables 5.1 and 10.1 of AS3700.
Mortar admixtures shall not be used without the written approval of the Structural Engineer.
M4 Strengths of bricks, class of blocks and type of mortar shall be as follows:

ELEMENT	MATERIAL	STRENGTH (CS) OR CLASS	MORTAR TYPE
WALLS	BRICKS	20 MPa	1:1:6 GENERALLY

Mortar admixtures shall not be used without the written approval of the superintendent. Exclude fire clays, fuel ash and the like.
M5 All masonry walls and piers supporting slabs and beams shall have full bed joints and a pre-greased galvanised steel slip joint between the concrete soffit and the top of the masonry element. Non load bearing walls shall be separated from concrete above by 10mm thick closed cell polyethylene strip.
M6 All masonry supporting or supported by concrete floors shall be provided with vertical control joints to match any control joints in the concrete floors.
M7 No chases or recesses are permitted in load bearing masonry without the approval of the Structural Engineer.
M8 All bonding, tying and fixing of masonry shall comply with Clause 4.11 of AS3700.
M9 Do not construct masonry walls on suspended concrete slabs until slab has been stripped and de-propped.
M10 Provide vertical control joints at 10m max centres, and 5m maximum from corners in all masonry walls, unless shown otherwise on these structural drawings. Provide ties at 600 mm centres installed in accordance with manufacturers recommendations.
M11 Reinforced concrete blockwork shall comply with the following:-
- Blocks shall be strength Grade 15 conforming to AS4455.
- Mortar shall comprise 1 cement: 0.25 lime : 3 sand. Mortar shall cure for at least 3 days before grouting.
- Provide cleanout holes at base of all walls and rod core holes to remove protruding mortar fins and other material. Grout up when masonry is grouted.
- Core filling grout to have a characteristic strength of 20MPa, 10mm maximum aggregate, 230mm slump (±30mm) with a minimum cement content of 300kg/m3. Core fill in lifts not exceeding 400 mm and vibrate or rod into position.
- Provide 65 mm cover to reinforcing bars from the outside face of the blockwork to allow adequate grout cover.

M12 All cavities below ground level shall be mortar or grout filled.

RETAINING WALLS

R1 Do not backfill behind retaining walls (other than cantilever walls) until floor construction at top and bottom is completed, unless retaining wall is propped during backfilling.
R2 Ensure free draining backfill and drainage is in place behind all retaining walls.
R3 Refer Keystone Wall specification.

STRUCTURAL STEEL

S1 All workmanship and material shall be in accordance with AS4100 except where 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 Grade
Universal beams and columns, parallel flange channels, angles to AS/NZS 3679.1300
Welded sections to AS/NZS 3679.2300
Hot rolled plates, floor plates and slabs to AS/NZS 3678250
Hollow sections to AS 1163C350
Cold formed purlins and girts to AS1397G450 Z350
Test certificates confirming conformance to the above standards and grades shall be supplied to the structural engineer.
S3 Three (3) copies of workshop fabrication drawings shall be submitted to the Structural Engineer for review at least 7 days prior to commencement of fabrication. Fabrication shall not commence without the Structural Engineer's review of the workshop drawings. Any review will cover member sizes and connection details but will not extend to dimensions. All dimensions and setouts shall be obtained from architectural drawings where not indicated on structural drawings.
S4 The Fabricator shall provide all cleats and drill all holes necessary for fixing other elements shown on the architectural drawings to the steel whether or not detailed on the structural drawings.
S5 The fabrication and erection of the structural steelwork shall be supervised by a qualified person experienced in such supervision, in order to ensure that all requirements of the design are met.
S6 All beams and rafters shall be fabricated and erected with natural camber up. Additional camber shall be as noted on these structural drawings.
S7 All members shall be supplied in single lengths. Splices shall only be permitted in locations shown on these structural drawings.
S8 All steelwork shall be securely temporarily braced by the erector as necessary to stabilise the structure during erection.
S9 Bolting
Bolting Categories are identified on these structural drawings in the following manner.

Bolt Category:	Comments:
4.6/S	commercial bolts of grade 4.6 to AS 1111 snug tightened
8.8/S	high strength structural bolts of grade 8.8 to AS1252 snug tightened
8.8/TB	high strength structural bolts of grade 8.8 to AS1252 fully tensioned to AS4100 as a bearing type joint
8.8/TF	high strength structural bolts of grade 8.8 to AS1252 fully tensioned to AS4100 as a friction type joint with faying surfaces left uncoated

Test certificates confirming conformance of the bolt to the above standards and grades shall be supplied to the structural engineer.
S10 Unless noted otherwise all bolts shall be M20 category 8.8/S. No connection shall have less than 2 bolts. All bolts and washers shall be galvanised. All holes shall be 2mm larger than the bolt diameter unless noted otherwise.
S11 /TB and /TF bolt categories shall be installed in accordance with Section 15 of AS4100, using either the part-turn method or the direct-tension indicator method.
S12 Welding
All welding shall be carried out in accordance with AS1554.1.
Electrodes shall be to either AS1553, AS1858, AS2203 or AS2717, as appropriate.
Unless noted otherwise, all fillet welds shall be 6mm continuous category SP using E48XX electrodes or equivalent. All butt welds shall be complete penetration butt welds category SP to AS1554.1.
The extent of non-destructive weld examination shall be as noted below.

TYPE OF WELD AND CATEGORY	EXAMINATION METHOD	% 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
	RADIAGRAPHIC OR ULTRASONIC INSPECTION	10

Radiographic or ultrasonic examination shall be to AS1554.1, AS2177.1 and AS2207 as appropriate. A third party compliance certificate for all welds shall be provided by the fabricator. The certifying party shall be NATA registered.

S13 Corrosion Protection
Structural steelwork not encased in concrete shall have the following corrosion protection.

ELEMENT	SURFACE PREPARATION	PRIME COAT	SECOND COAT	THIRD COAT
ELEMENTS EXTERNALLY & IN CONTACT WITH MASONRY EXPOSED	PICKLE	HOT DIP GALVANISED		
INTERNALLY EXPOSED STEEL	PART 4 CLASS 2.5	INORGANIC ZINC SILICATE MIN. DRY FILM THICKNESS 75um	ARCH. REFER SPEC.	ARCH. REFER SPEC.

All galvanising of structural steelwork shall be to AS4680. The continuous average zinc coating mass shall be 600g/m2 (550g/m2 minimum).
S14 Provide 3 mm seal plates to the ends of all hollow sections, with 'breather' holes if members are to be hot dip galvanized.
S15 Steelwork intended to be concrete encased shall be unpainted. Encasing concrete shall be grade N25 providing a cover adequate to suit fire rating or exposure conditions. Concrete encasement shall be centrally reinforced with 5mm wire to AS4671 or 6mm structural grade bars to AS4671 at 150mm pitch.
S16 All steel lintels shall be hot dip galvanised to AS 4680.

TIMBER

T1 All timber design, material and construction to be AS1720 or AS1684 as appropriate.
T2 Softwood to be minimum stress grade F7 (oregon) or F5 (pine), strength group SD5. Hardwood to be minimum grade F14 (seasoned) or F8 (unseasoned). Submit suppliers certificate as to stress grade of timber members. All timber shall be branded.
T3 External timber shall be either hardwood durability class 1 or class 2 to AS1720.2 or impregnated pine grade F7, pressure treated to AS1604 and re-dried prior to use. Supplementary treatment shall be applied to all cut surfaces. Supply supporting documentation regarding preservation treatment.
T4 Timber treated in accordance with AS 1604 shall have following hazard level-
interior above ground H2
exterior above ground H3
exterior in ground H4 or H5
T5 Timber trusses are to be pre-cambered an amount equal to dead load deflection. Three (3) copies of shop drawings are to be submitted to the Structural Engineer for approval clearly showing the design loads on the roof and ceiling and truss node point loads and the precamber. Shop drawings shall also indicate member sizes and locations, timber species, stress grade, strength group and joint details.
T6 All bolts in timber construction to be minimum M16 U.N.O. Bolt holes to be drilled exact bolt size.
Washers under heads and nuts to be at least 2.5 times bolt diameter. All bolted connections shall use washers under bolt head and nut. All external bolts and washers to be hot dip galvanised.
T7 Timber tolerances on the finished width and thickness to be in accordance with AS 2082, AS1748, AS3519 as appropriate
Minimum actual dimensions for timber members are as follows:

NOMINAL DIMENSIONS	MINIMUM ACTUAL
50	45
100	92
150	140
200	187
250	235
> 250	MINUS 6%

Hyspan and MGP members are actual sizes.
T8 All timber joints and notches are to be 100mm minimum away from loose knots, severe sloping grain, gum veins or other defects.
T9 Glue laminated timber shall be manufactured in accordance with AS 1328. Members for external use shall be fabricated using resorcinol or phenolic adhesive.
T10 Camber in beams or rafters shall be as noted on these structural drawings or beams/rafters shall be installed with natural hog up.
T11 All proprietary fixings shall be installed in accordance with manufacturers recommendations. All metal fixings shall be compatible with timber glues and preservative treatments.
T12 No penetrations or notches other than those shown on these structural drawings shall be made in any timber members without prior approval of the Structural Engineer.
T13 Builder to provide termite protection in accordance with AS 3660.1.

DRAWING LIST

S1.00 - GENERAL NOTES AND DRAWING LIST
S2.00 - GROUND FLOOR SLAB PLAN AND DETAILS
S2.01 - GROUND FLOOR SLAB DETAILS
S3.00 - FIRST FLOOR FRAMING AND ROOF FRAMING PLANS AND DETAILS
S3.01 - FIRST FLOOR FRAMING DETAILS

ISSUED FOR

CONSTRUCTION CERTIFICATE

Mk	Details of Amendment	Approved
A	ISSUED FOR CONSTRUCTION CERTIFICATE	JM 01.03.13

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Proud Member of CONSULT AUSTRALIA

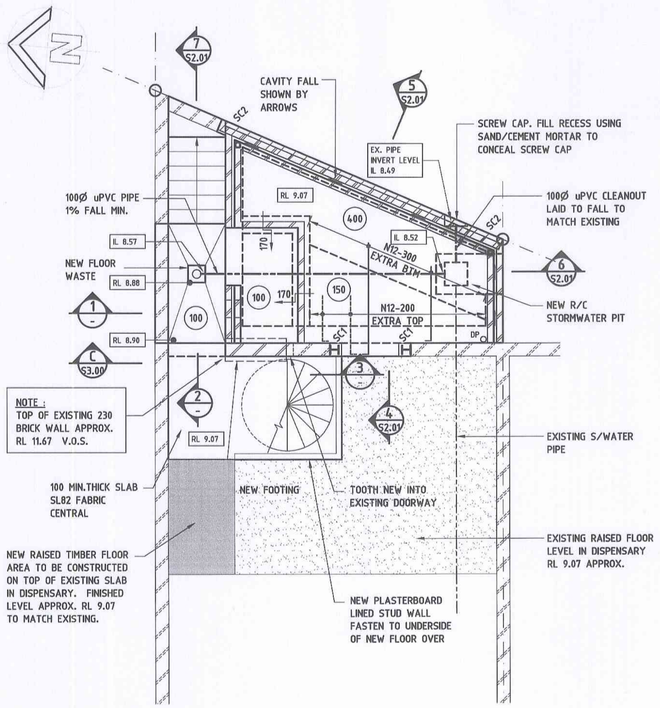
Client: PITTWATER PHARMACY INVESTMENTS Pty Ltd

Project: PROPOSED STOREROOM ADDITION
1771 PITTWATER ROAD, MONA VALE

Designed	Drawn	Checked	Approved
J.M.	A.C.W	J.M.	J.M.

Title: CONSTRUCTION NOTES AND DRAWING LIST

Drawing No. 1301-S1.00
Amendment A
Cad File No. .../S100.DWG



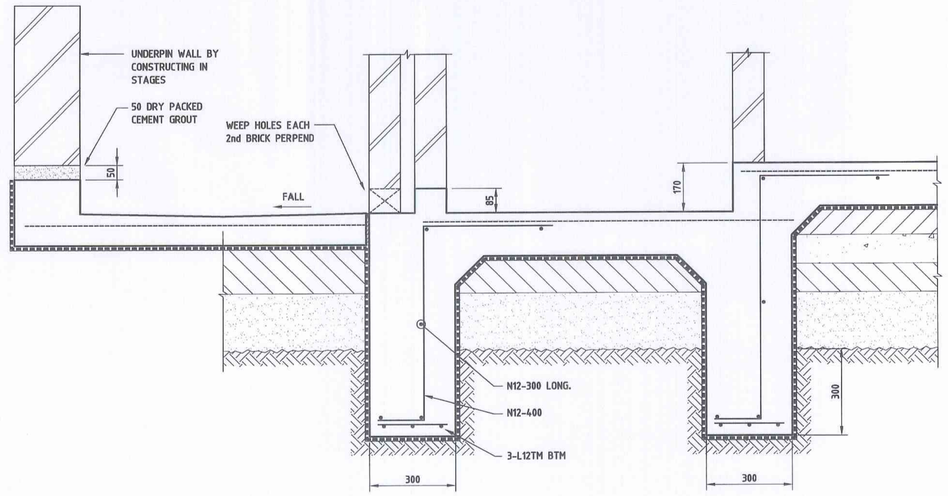
GROUND FLOOR SLAB PLAN SCALE 1:50

NOTE :

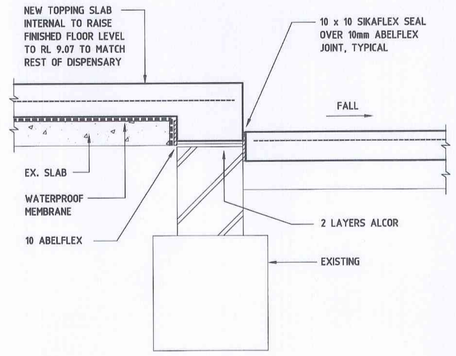
ALL SLABS SHALL BE 150 THICK PLACED ON A WATERPROOF MEMBRANE ON 100 mm DGB20

ALL SLABS SHALL BE REINFORCED WITH SL82 FABRIC TOP. N12-300 DISTRIBUTION BARS UNO

CONCRETE GRADE N32
50 COVER TO EXPOSED SURFACES
50 COVER CAST AGAINST GROUND



SECTION 1 -



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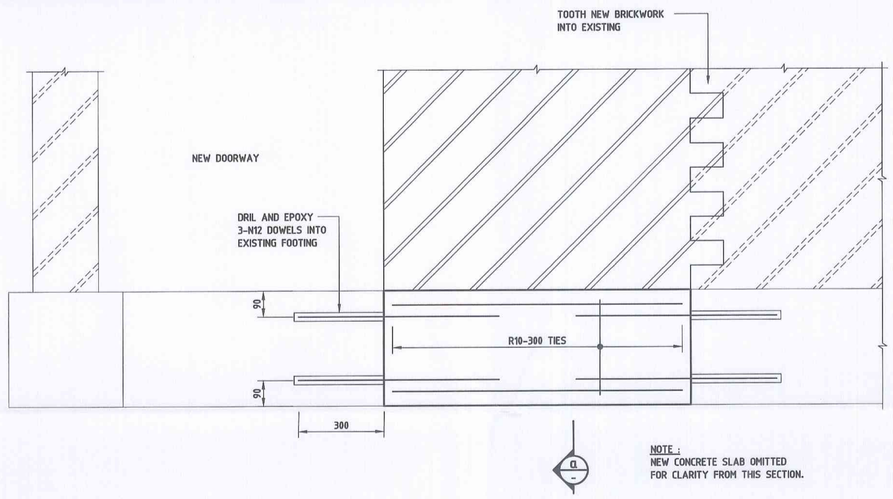
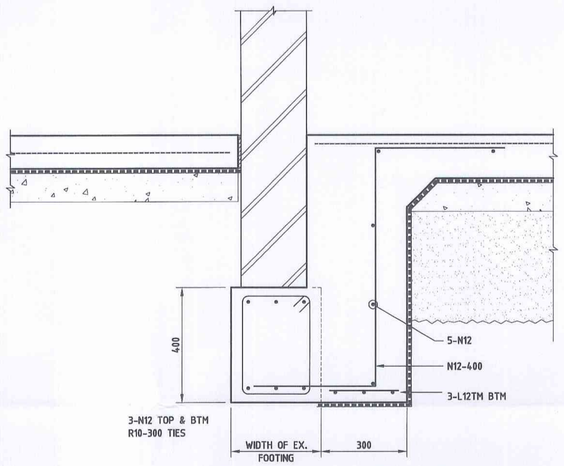


NOTE :
NEW CONCRETE SLAB OMITTED FOR CLARITY FROM THIS SECTION.

SECTION 3 -



SECTION a -

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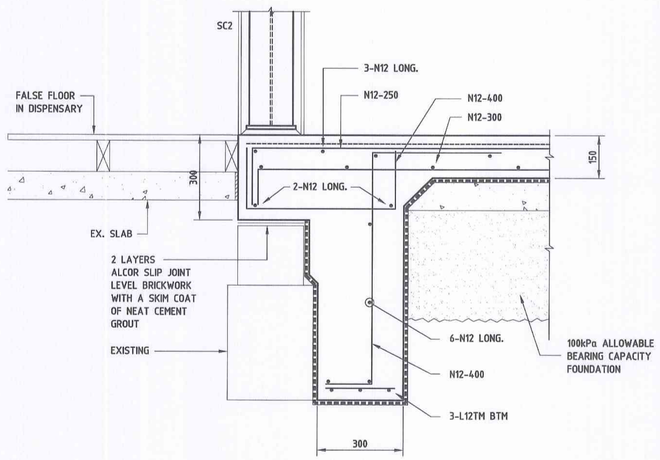
Project: PROPOSED STOREROOM ADDITION
1771 PITTWATER ROAD, MONA VALE

Designed: J.M. | Drawn: A.C.W | Checked: J.M. | Approved: J.M.

Title: **GROUND FLOOR SLAB PLAN AND DETAILS**

Drawing No. 1301-S2.00
Amendment A
Cad File No. .../S200.DWG



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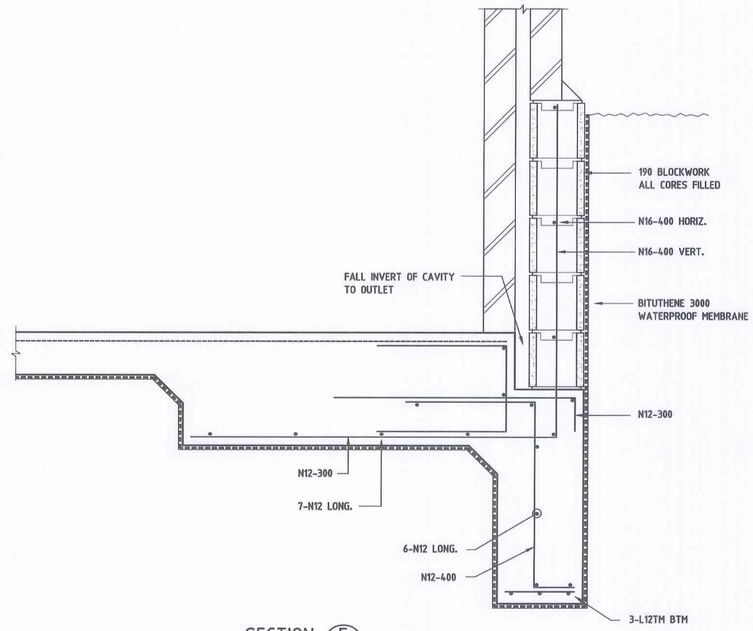

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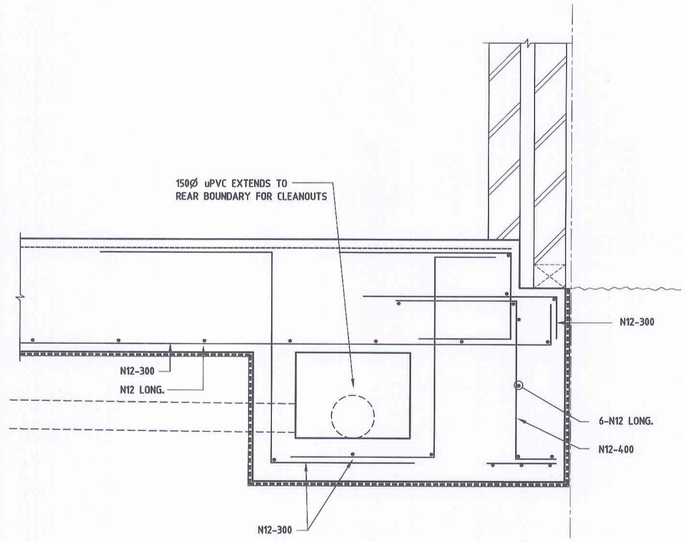

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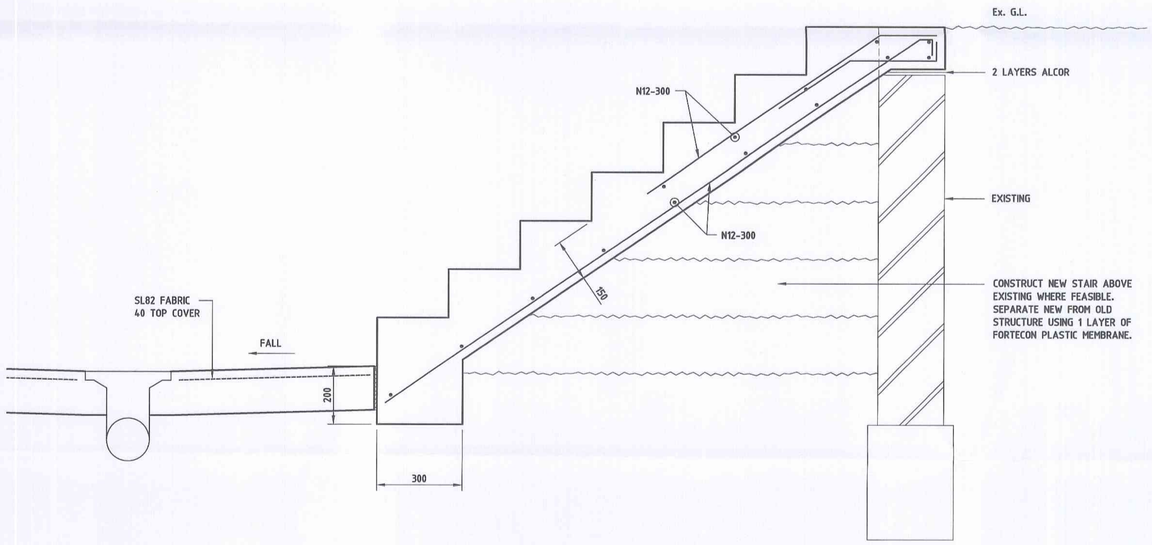

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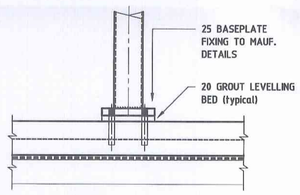

TYPICAL BASE PLATE DETAIL

SPIRAL STAIR

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1771 PITTWATER ROAD, MONA VALE

Designed	Drawn	Checked	Approved
J.M.	A.C.W	J.M.	J.M.

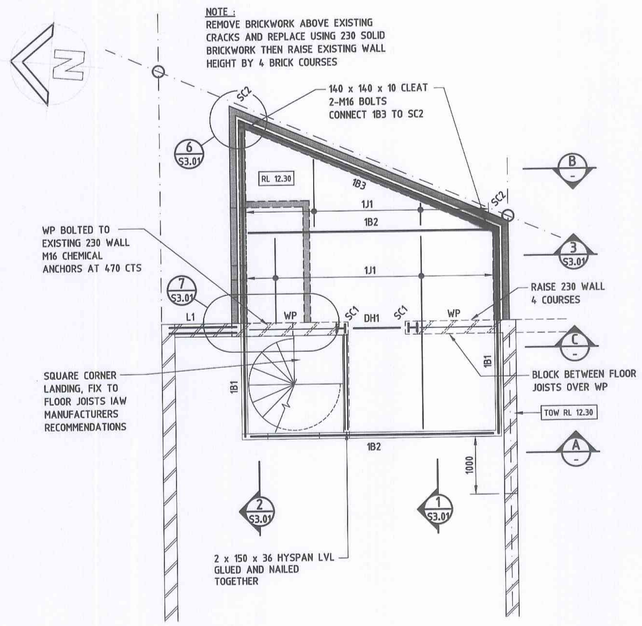
Title: GROUND FLOOR SLAB DETAILS

Drawing No. 1301-S2.01

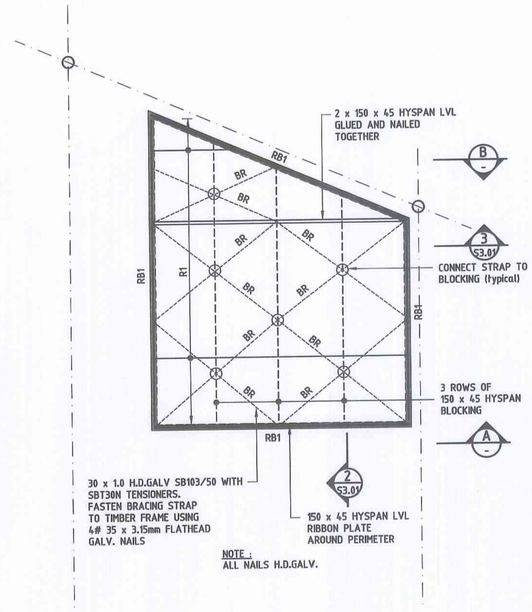
Amendment A

Cad File No. .../S200.DWG

A1



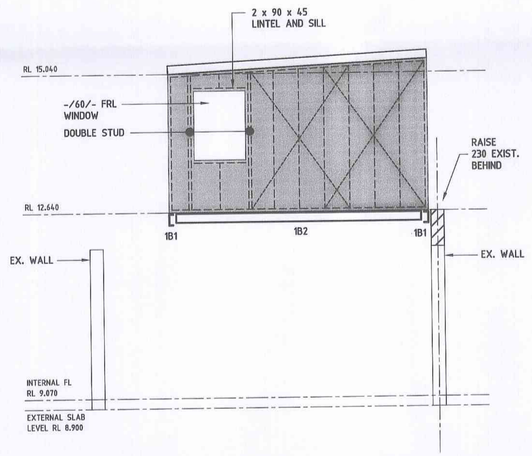
FIRST FLOOR FRAMING PLAN SCALE 1:50



ROOF FRAMING PLAN SCALE 1:50

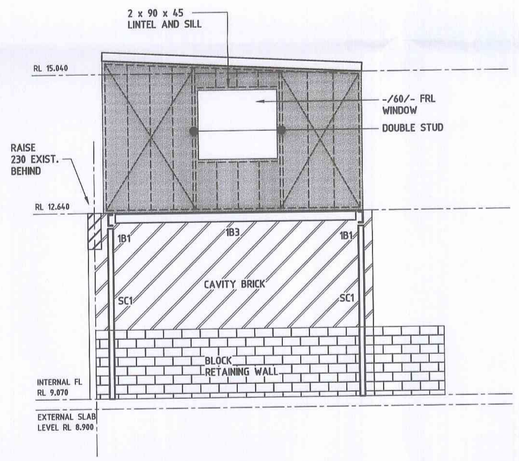
MEMBER SCHEDULE		
MARK	SIZE	REMARKS
SC1	150UC30	COLUMN - GRADE 300 PLUS
SC2	89 x 5.0 SHS	COLUMN - GRADE C350
1B1	200 PFC	BEAM - GRADE 300 PLUS
1B2	150UC23	BEAM - GRADE 300 PLUS
1B3	150 x 45	HYSPAN LVL
DH1	150UC30	BEAM - GRADE 300 PLUS
WP	70 x 190 F7	TIMBER WALL PLATE
1J1	150 x 36	HYSPAN LVL JOISTS AT 450 CTS
RB1	150 x 45	HYSPAN LVL RIBBON PLATE
R1	150 x 45	HYSPAN LVL RAFTERS AT 450 CTS
BR	30 x 1.0 H.D.GALV	GALV. STRAP BRACING
L1	2 x 90 x 8 EA	HOT DIP GALV. LINTELS

NOTE :
TYPE 'C' CONSTRUCTION REQUIRED FOR ALL PERIMETER FIRST FLOOR WALLS UP TO UNDERSIDE OF ROOFING IN ACCORDANCE WITH THE BCA.

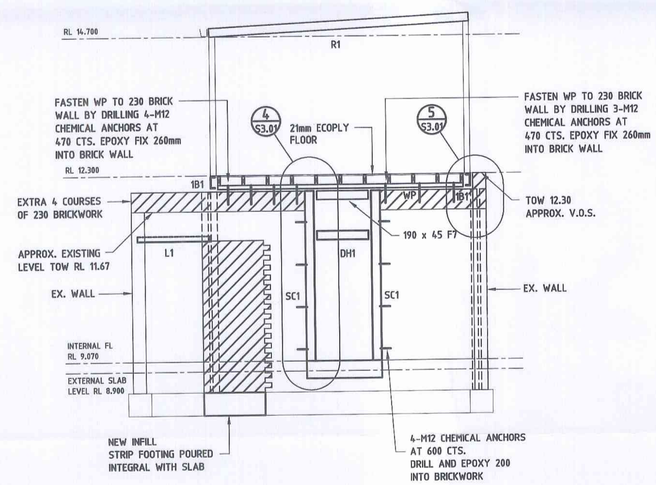


SECTION A

WINDOWS TO BE FULLY TESTED AND CERTIFIED -/60/-, IAW BCA INCORPORATING A NON-INSULATED STEEL FRAME AND 13mm PILKINGTON PYRODUR CLEAR INTUMESCENT GLASS, WITH RUBBER BEADING/ SILICONE WEATHER SEAL.



SECTION B



SECTION C

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Project: PROPOSED STOREROOM ADDITION
1771 PITTWATER ROAD, MONA VALE

Designed: J.M. | Drawn: A.C.W | Checked: J.M. | Approved: J.M.

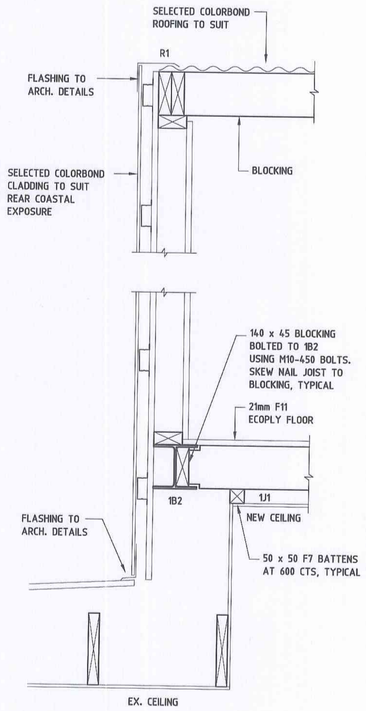
Title: FIRST FLOOR FRAMING AND ROOF FRAMING PLANS AND DETAILS

Drawing No. 1301-S3.00

Amendment A

Cad File No. .../S300.DWG

A1



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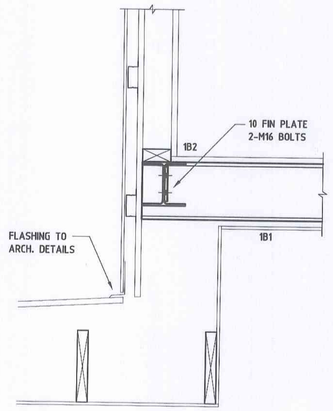

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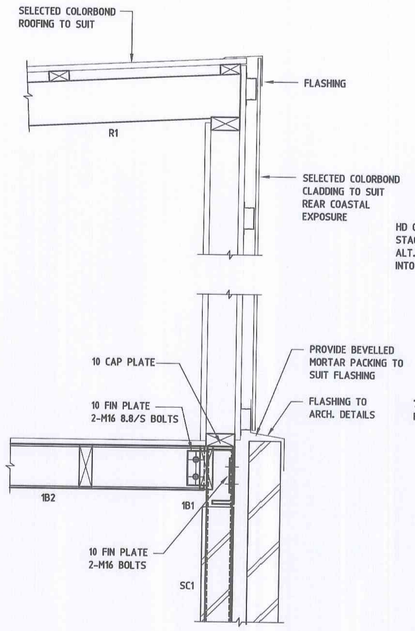

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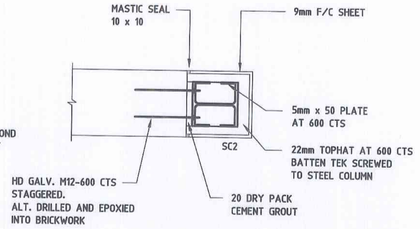
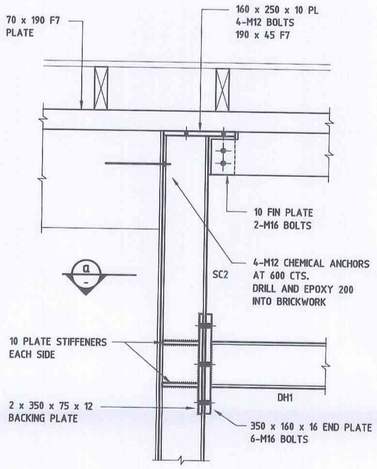
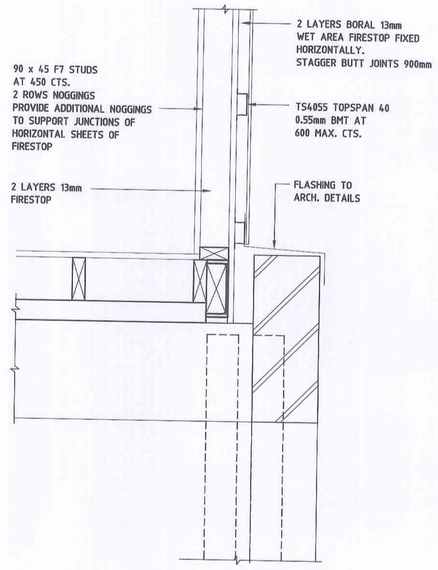
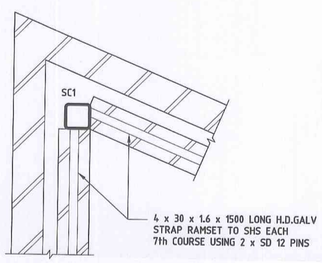


SECTION a

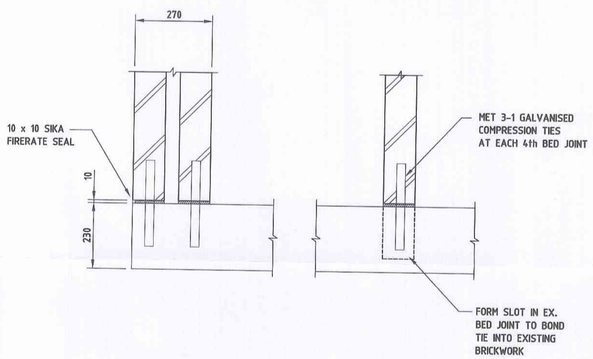




DETAIL 5 S3.00



DETAIL 6 S3.00



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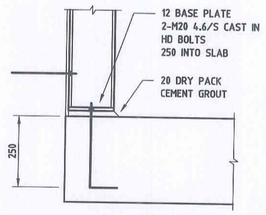

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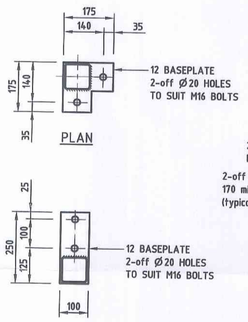

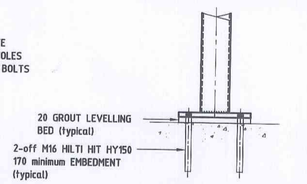

SECTION - FOOTING / SLAB

TYPICAL COLUMN BASEPLATE (89 SHS) - SC1

ISSUED FOR CONSTRUCTION CERTIFICATE

Mk	Details of Amendment	Approved
A	ISSUED FOR CONSTRUCTION CERTIFICATE	JM 01.03.13

A1

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Proud Member of CONSULT AUSTRALIA

Client: PITTWATER PHARMACY INVESTMENTS Pty Ltd

Project: PROPOSED STOREROOM ADDITION
1771 PITTWATER ROAD, MONA VALE

Designed: J.M. | Drawn: A.C.W | Checked: J.M. | Approved: J.M.

Title: **FIRST FLOOR FRAMING DETAILS**

Drawing No. 1301-S3.01
Amendment A
Cad File No. .../S300.DWG

PROPOSED STOREROOM ADDITION

1771 PITTWATER ROAD, MONA VALE

GENERAL

G1 The 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 in these drawings shall be referred to the Structural Engineer before proceeding with the work.

G2 Construction using these structural drawings shall not commence until a Construction Certificate is issued by the Principal Certifying Authority, and only if the structural drawings are designated "Issued for Construction".

G3 All materials and workmanship shall be in accordance with the structural drawings, all relevant current Standards Australia Codes and with the Building Code of Australia.

G4 All dimensions shown on these structural drawings shall be verified by the Builder from architectural drawings. These structural drawings shall not be scaled for dimensions.

G5 Unless noted otherwise all levels are in metres and all dimensions are in millimetres.

G6 The structural components detailed on these structural drawings have been designed in accordance with the relevant Standards Australia Code and the Building Code of Australia for the following loadings. Refer to Architectural drawings for proposed floor usage.

Floor Usage	Live Load (kPa)	Superimposed Dead Load (kPa)
INTERNAL	4.0 kPa	-
ROOF	0.25 kPa	-

Wind Loads are in accordance with AS 1170.2 as follows:
Basic Wind Velocity, Vs = 30m/s Vu = 46m/s
Region: A2
Terrain Category: TC3

The relevant provisions of AS 1170.4:2007 have been applied for an earthquake design category of EDCII with the following parameters:
I. Probability Factor Kp=1.3,
II. Hazard Factor Z = 0.08,
III. Site Sub Soil Class De

G7 The method of construction and the maintenance of safety during construction is 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. The determination of a safe work method remains the responsibility of the Builder.

G8 During construction the structure shall be maintained in a stable condition and no part shall be overloaded. Temporary bracing shall be provided by the Contractor in order to keep the building works and excavations stable at all times.

G9 No changes in any structural element documented in these structural drawings shall be made without reference to the structural engineer. No substitutions shall be made without reference to the structural engineer.

G10 Proprietary items specified on the structural drawings shall be installed in accordance with manufacturers written recommendations.

G11 The Builder shall arrange separate certification of any design and construct component by a chartered (NPER registered) structural engineer.

G12 All architectural fitments (glazing, partitions and ceilings) should allow for the short term and long term movement of structural elements. The Builder should consult the structural engineer for the extent of allowance to be made.

G13 The structural engineer accepts no responsibility for any works not inspected or not approved by the structural engineer during construction.

G14 A minimum of forty eight (48) hours notice is required for all engineering inspections.

FOOTINGS

F1 Footings have been designed for an allowable bearing capacity of 100 kPa in Sandy clay. The foundation material shall be approved in writing for this allowable bearing capacity by the Geotechnical Engineer and a copy supplied to the structural engineer before placing membrane, reinforcement or concrete.

F2 Refer to Geotechnical Investigation Report.
This report is for information only, it is not a complete description of conditions at or below ground level.

F3 Footings shall be located centrally under walls and columns unless noted otherwise on the structural drawings.

F5 Residential slabs and footings have been designed for a reactivity Class M to AS2870.

F6 Footings shall be constructed and backfilled as soon as possible following excavation to avoid either softening of the founding material or drying out by exposure.

F7 Excavate for footings wholly into clay to the nominated size and depth. Footing founding materials and levels are provisional and are subject to actual site conditions and approval by the Geotechnical Engineer. (See F1 above). Founding material shall be inspected and approved before placing membranes or reinforcement or concrete.

F8 The Builder shall ensure the stability of adjacent buildings and services during the excavation for the footings.

FORMWORK

FW1 The design, certification, construction, inspection and performance of the formwork and false work shall be the responsibility of the Formwork Sub-Contractor, except to the extent that formwork design is shown on the structural drawings.

FW2 Formwork shall be certified by a structural engineer experienced in formwork design in accordance with WorkCover Regulations and the WorkCover Code of Practice.

FW3 Formwork shall be designed in accordance with AS 3610. The design shall accommodate movements and load re-distribution due to any post tensioning.

FW4 The formwork shall not be designed to rely on restraint or support from the permanent structure without prior approval from the Structural Engineer.

FW5 Design information for the foundations under the formwork shall be determined by the Formwork Sub-Contractor from the conditions existing on site at the time of construction. Refer to the Geotechnical Report for the site.

FW6 Formwork construction dimensional tolerances and stripping times shall comply with AS3610 and AS3600 unless otherwise approved by the Structural Engineer.

FW7 During construction, support propping will be required where loads from stacked materials, formwork and other supported slabs induce loads in a slab or beam which exceed the design capacity for strength or serviceability limit states at that age. Once the nominated 28 day strength has been attained, these loads shall not exceed the design superimposed loads set out in these general notes at item G6.

FW8 It is to be anticipated in multi-storey construction that back-propping may be required to extend a number of levels below the floor being cast. Prop removal is to be programmed to avoid distress to previously cast floors. Re-shoring or backpropping proposals shall be subject to the approval of the Structural Engineer.

FW9 Formed concrete surfaces shall have formwork class and surface finishes in accordance with AS3610, as specified by the Project Architect.

FW10 Do not place permanent loads on the concrete structure until after formwork and propping is removed.

FW11 Refer to Project Architect's drawings for test panel requirements. Reinforcement for test panels shall be similar to that in the permanent structure being represented by the test panel.

FW12 Before placing reinforcement in the formwork, apply a release agent to the face of the formwork compatible with the required surface finish.

FW13 Dimensional tolerances shall comply with AS3610 for the appropriate finish class.

FW14 Chamfer re-entrant angles and fillet at corners by 25mm UNO.

FW15 Before placing concrete, remove all water, dust, and debris from the formwork.

FW16 Fill all holes left by form tie bolts with mortar matching the surface colour of the finished surface.

CONCRETE

C1 All workmanship and materials shall be in accordance with the current edition of AS3600 including amendments, except where varied by the contract documents.

C2 Readymix concrete supply shall comply with AS1379.

C3 Concrete Quality

ELEMENT	F'c MPa (28 DAYS)	SLUMP	MAX AGG SIZE	CEMENT TYPE	MAX W/C RATIO	MIN CEMENT CONTENT kg/m^3	MAX. SHRINKAGE STRAIN
FOOTINGS	32	80	20	SL	0.5	325	750 microstrain

C4 Project assessment shall be carried out in accordance with AS1379. Submit results of project assessment to the Structural Engineer.

C5 No admixtures shall be used in concrete unless approved in writing by the Structural Engineer.

C6 Clear concrete cover to all reinforcement for durability shall be as follows unless shown otherwise.

ELEMENT IN STRUCTURE	EXPOSURE CLASSIFICATION TO AS 3600	CONCRETE GRADE (MPa)	FIRE RATING (MINUTES)	MINIMUM COVER (mm)
FOOTINGS	B1 EXTERNAL	32	90/90/90	50 CAST AGAINST GRD

C7 All reinforcement shall be firmly supported 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 use only plastic or concrete chairs. Bars shall be tied at alternate intersections with tie wire.

C8 Concrete sizes shown do not include thicknesses of applied finishes. Sizes shall not be changed without the approval of the structural engineer.

C9 Depths of beams are given first and include slab thickness. Slabs and beams are to be poured together unless approved otherwise by the Structural Engineer.

C10 For chamfers, drip grooves, reglets, etc., refer to Project Architect's details. Maintain cover to reinforcement at these details.

C11 No holes, chases or embedment of pipes other than those shown on the structural drawings shall be made in concrete members without the prior written approval of the Structural Engineer.

C12 Where not shown on the structural drawings construction joints shall be located to the approval of the Structural Engineer.

C13 Conduits, pipes etc. shall only be located in the middle third of slab depth and spaced at not less than 3 diameters. Pipes or conduits shall not be placed within the cover to the reinforcement.

C14 Slabs and beams shall be constructed to bear only on the beams, walls, columns, etc. shown on these structural drawings. All other building elements shall be kept 15mm minimum clear from the soffits of the structure.

C15 Reinforcement
All reinforcing bars shall be Grade D500N to AS4671 unless noted otherwise.
All mesh shall be Grade 500L to AS4671 and shall be supplied in flat sheets.
Reinforcement notation shall be as follows in the following order
17N20-250
17 NUMBER OF BARS IN GROUP
N BAR GRADE AND TYPE
20 NOMINAL BAR SIZE IN mm
250 SPACING IN mm
The figures following the fabric symbols RL, SL, L, TM is the reference number for fabric in accordance with AS4671.
Reinforcement is represented diagrammatically and not necessarily in true projection.
Slab reinforcement shall extend at least 65mm onto masonry support walls and 50 percent of bottom reinforcement shall be cogged to achieved anchorage at simply supported ends.
Splices in reinforcement shall be made only in positions shown on the structural drawings or in positions 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.
Site bending of reinforcing bars shall be done without heating using mechanical bending tools.
Welding or threading of reinforcement shall not be permitted unless shown on these structural drawings or approved by the Structural Engineer.
Joggles to bars shall be 1 bar diameter over a length of 12 bar diameters.
Fabric shall be lapped 2 transverse wires plus 50mm. Bundled bars shall be tied together at 30 bar diameter centres with 3 wraps of tie wire.

C16 The Structural Engineer shall be given 48 hours notice for reinforcement inspection and concrete shall not be delivered until final approval has been obtained from the Structural Engineer.

C17 The finished concrete shall be a dense homogeneous mass, completely filling the formwork thoroughly embedding the reinforcement and free of stone pockets. All concrete shall be compacted with mechanical vibrators. Vibrators shall not be used to spread concrete.

C18 Curing of all concrete is to be achieved by keeping surfaces continuously wet for a period of 3 days, or by prevention of loss of moisture for a total of 7 days followed by a gradual drying out. Approved spray on curing compounds that comply with AS3799 may be used where floor finishes will not be affected (refer Manufacturers Specification). Polythene sheeting or wet hessian may be used to retain concrete moisture where protected from wind and traffic. Submit details of proposed curing method for approval.

C19 Construction support propping is to be left in place where needed to avoid overstressing the structure due to construction loading. All backpropping shall be approved by the Structural Engineer. No brickwork or partition walls are to be constructed on suspended levels until all propping is removed and the slab has absorbed its dead load deflection.

C20 All penetrations to have 2/N12 bars x 1000 long to each face.

C21 Set downs or falls in slabs or beams are not permitted unless shown on these structural drawings.

C22 The surface finish of the concrete shall be as specified on the Architectural drawings.

RESIDENTIAL SLABS ON GROUND

SG1 Residential slabs-on-ground shall be in accordance with AS 2870.

SG2 The site of the works shall be stripped of all grass, roots, vegetable matter and compressible topsoil.

SG3 The ground below slabs shall be proof rolled with an approved heavy compactor. All "soft spots" encountered shall be removed and replaced with compacted crushed rock or approved fill in accordance with AS 2870 & AS 3798.

SG4 Clean granular filling up to 600 mm may be placed under the slab in accordance with the provisions of AS 2870 Part 6.4. Filling shall be compacted in 150 mm thick layers by mechanical roller.

SG5 Termite protection shall be provided as required by the Australian Standard and the Local Statutory Authority.

SG6 Slabs shall be laid on a 0.2 mm polythene membrane, continuous, lapped 200 mm minimum and taped at joints, punctures and service and pipe penetrations. Membrane to extend under and to the sides of all slabs, beams and thickenings.

SG7 Beam and strip footing reinforcement shall have a nominal cover of 50 mm.

SG8 Trench mesh shall be laid continuously and shall be spliced where necessary with a lap of 500 mm.

SG9 Trench mesh shall be overlapped by the width of fabric at corners and intersections and the ends of trench mesh shall terminate with a crossbar.

SG10 Fabric shall be placed near the top of the slab and shall have a nominal cover of 25 mm, una. Fabric shall be lapped a minimum of two wires plus 25 mm and shall be set out such that no more than three thicknesses of fabric occur at any location.

SG11 Hot water heating pipes may be embedded in the slab if the thickness is increased by 25 mm and laid on F52 mesh.

SG12 The ground surrounding the slab shall have its surface at least 150 mm lower than the slab surface and be graded away from the slab edge to the site drainage system.

MASONRY

M1 Materials including mortar, concrete, grout shall comply with Section 10 of AS3700. Masonry units shall comply with AS4455. Wall ties shall comply with AS2699.

M2 Masonry shall be constructed in accordance with Section 11 of AS3700.

M3 Mortar proportions shall comply with Tables 5.1 and 10.1 of AS3700. Mortar admixtures shall not be used without the written approval of the Structural Engineer.

M4 Strengths of bricks, class of blocks and type of mortar shall be as follows:

ELEMENT	MATERIAL	STRENGTH (CS) OR CLASS	MORTAR TYPE
WALLS	BRICKS	20 MPa	1:1:6 GENERALLY

Mortar admixtures shall not be used without the written approval of the superintendent. Exclude fire clays, fuel ash and the like.

M5 All masonry walls and piers supporting slabs and beams shall have full bed joints and a pre-greased galvanised steel slip joint between the concrete soffit and the top of the masonry element. Non load bearing walls shall be separated from concrete above by 10mm thick closed cell polyethylene strip.

M6 All masonry supporting or supported by concrete floors shall be provided with vertical control joints to match any control joints in the concrete floors.

M7 No chases or recesses are permitted in load bearing masonry without the approval of the Structural Engineer.

M8 All bonding, tying and fixing of masonry shall comply with Clause 4.11 of AS3700.

M9 Do not construct masonry walls on suspended concrete slabs until slab has been stripped and de-propped.

M10 Provide vertical control joints at 10m max centres, and 5m maximum from corners in all masonry walls, unless shown otherwise on these structural drawings. Provide ties at 600 mm centres installed in accordance with manufacturers recommendations.

M11 Reinforced concrete blockwork shall comply with the following:-
- Blocks shall be strength Grade 15 conforming to AS4455.
- Mortar shall comprise 1 cement: 0.25 lime : 3 sand. Mortar shall cure for at least 3 days before grouting.
- Provide cleanout holes at base of all walls and rod core holes to remove protruding mortar fins and other material. Grout up when masonry is grouted.
- Core filling grout to have a characteristic strength of 20MPa, 10mm maximum aggregate, 230mm slump (±30mm) with a minimum cement content of 300kg/m3. Core fill in lifts not exceeding 400 mm and vibrate or rod into position.
- Provide 65 mm cover to reinforcing bars from the outside face of the blockwork to allow adequate grout cover.

M12 All cavities below ground level shall be mortar or grout filled.

RETAINING WALLS

R1 Do not backfill behind retaining walls (other than cantilever walls) until floor construction at top and bottom is completed, unless retaining wall is propped during backfilling.

R2 Ensure free draining backfill and drainage is in place behind all retaining walls.

R3 Refer Keystone Wall specification.

STRUCTURAL STEEL

S1 All workmanship and material shall be in accordance with AS4100 except where 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 Grade
Universal beams and columns, parallel flange channels, angles to AS/NZS 3679.1300
Welded sections to AS/NZS 3679.2300
Hot rolled plates, floor plates and slabs to AS/NZS 3678250
Hollow sections to AS 1163C350
Cold formed purlins and girts to AS1397G450 Z350
Test certificates confirming conformance to the above standards and grades shall be supplied to the structural engineer.

S3 Three (3) copies of workshop fabrication drawings shall be submitted to the Structural Engineer for review at least 7 days prior to commencement of fabrication. Fabrication shall not commence without the Structural Engineer's review of the workshop drawings. Any review will cover member sizes and connection details but will not extend to dimensions. All dimensions and setouts shall be obtained from architectural drawings where not indicated on structural drawings.

S4 The Fabricator shall provide all cleats and drill all holes necessary for fixing other elements shown on the architectural drawings to the steel whether or not detailed on the structural drawings.

S5 The fabrication and erection of the structural steelwork shall be supervised by a qualified person experienced in such supervision, in order to ensure that all requirements of the design are met.

S6 All beams and rafters shall be fabricated and erected with natural camber up. Additional camber shall be as noted on these structural drawings.

S7 All members shall be supplied in single lengths. Splices shall only be permitted in locations shown on these structural drawings.

S8 All steelwork shall be securely temporarily braced by the erector as necessary to stabilise the structure during erection.

S9 Bolting
Bolting Categories are identified on these structural drawings in the following manner.

Bolt Category:	Comments:
4.6/S	commercial bolts of grade 4.6 to AS 1111 snug tightened
8.8/S	high strength structural bolts of grade 8.8 to AS1252 snug tightened
8.8/TB	high strength structural bolts of grade 8.8 to AS1252 fully tensioned to AS4100 as a bearing type joint
8.8/TF	high strength structural bolts of grade 8.8 to AS1252 fully tensioned to AS4100 as a friction type joint with faying surfaces left uncoated

Test certificates confirming conformance of the bolt to the above standards and grades shall be supplied to the structural engineer.

S10 Unless noted otherwise all bolts shall be M20 category 8.8/S. No connection shall have less than 2 bolts. All bolts and washers shall be galvanised. All holes shall be 2mm larger than the bolt diameter unless noted otherwise.

S11 /TB and /TF bolt categories shall be installed in accordance with Section 15 of AS4100, using either the part-turn method or the direct-tension indicator method.

S12 Welding
All welding shall be carried out in accordance with AS1554.1.
Electrodes shall be to either AS1553, AS1858, AS2203 or AS2717, as appropriate.
Unless noted otherwise, all fillet welds shall be 6mm continuous category SP using E48XX electrodes or equivalent. All butt welds shall be complete penetration butt welds category SP to AS1554.1.
The extent of non-destructive weld examination shall be as noted below.

TYPE OF WELD AND CATEGORY	EXAMINATION METHOD	% 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
	RADIAGRAPHIC OR ULTRASONIC INSPECTION	10

Radiographic or ultrasonic examination shall be to AS1554.1, AS2177.1 and AS2207 as appropriate. A third party compliance certificate for all welds shall be provided by the fabricator. The certifying party shall be NATA registered.

S13 Corrosion Protection
Structural steelwork not encased in concrete shall have the following corrosion protection.

ELEMENT	SURFACE PREPARATION	PRIME COAT	SECOND COAT	THIRD COAT
ELEMENTS EXTERNALLY & IN CONTACT WITH MASONRY EXPOSED	PICKLE	HOT DIP GALVANISED		
INTERNALLY EXPOSED STEEL	PART 4 CLASS 2.5	INORGANIC ZINC SILICATE MIN. DRY FILM THICKNESS 75um	ARCH. REFER SPEC.	ARCH. REFER SPEC.

All galvanising of structural steelwork shall be to AS4680. The continuous average zinc coating mass shall be 600g/m2 (550g/m2 minimum).

S14 Provide 3 mm seal plates to the ends of all hollow sections, with 'breather' holes if members are to be hot dip galvanized.

S15 Steelwork intended to be concrete encased shall be unpainted. Encasing concrete shall be grade N25 providing a cover adequate to suit fire rating or exposure conditions. Concrete encasement shall be centrally reinforced with 5mm wire to AS4617 or 6mm structural grade bars to AS4617 at 150mm pitch.

S16 All steel lintels shall be hot dip galvanised to AS 4680.

TIMBER

T1 All timber design, material and construction to be AS1720 or AS1684 as appropriate.

T2 Softwood to be minimum stress grade F7 (oregon) or F5 (pine), strength group SD5. Hardwood to be minimum grade F14 (seasoned) or F8 (unseasoned). Submit suppliers certificate as to stress grade of timber members. All timber shall be branded.

T3 External timber shall be either hardwood durability class 1 or class 2 to AS1720.2 or impregnated pine grade F7, pressure treated to AS1604 and re-dried prior to use. Supplementary treatment shall be applied to all cut surfaces. Supply supporting documentation regarding preservation treatment.

T4 Timber treated in accordance with AS 1604 shall have following hazard level-
interior above ground H2
exterior above ground H3
exterior in ground H4 or H5

T5 Timber trusses are to be pre-cambered an amount equal to dead load deflection. Three (3) copies of shop drawings are to be submitted to the Structural Engineer for approval clearly showing the design loads on the roof and ceiling and truss node point loads and the precamber. Shop drawings shall also indicate member sizes and locations, timber species, stress grade, strength group and joint details.

T6 All bolts in timber construction to be minimum M16 U.N.O. Bolt holes to be drilled exact bolt size.
Washers under heads and nuts to be at least 2.5 times bolt diameter. All bolted connections shall use washers under bolt head and nut. All external bolts and washers to be hot dip galvanised.

T7 Timber tolerances on the finished width and thickness to be in accordance with AS 2082, AS1748, AS3519 as appropriate
Minimum actual dimensions for timber members are as follows:

NOMINAL DIMENSIONS	MINIMUM ACTUAL
50	45
100	92
150	140
200	187
250	235
> 250	MINUS 6%

Hyspan and MGP members are actual sizes.

T8 All timber joints and notches are to be 100mm minimum away from loose knots, severe sloping grain, gum veins or other defects.

T9 Glue laminated timber shall be manufactured in accordance with AS 1328. Members for external use shall be fabricated using resorcinol or phenolic adhesive.

T10 Camber in beams or rafters shall be as noted on these structural drawings or beams/rafters shall be installed with natural hog up.

T11 All proprietary fixings shall be installed in accordance with manufacturers recommendations. All metal fixings shall be compatible with timber glues and preservative treatments.

T12 No penetrations or notches other than those shown on these structural drawings shall be made in any timber members without prior approval of the Structural Engineer.

T13 Builder to provide termite protection in accordance with AS 3660.1.

DRAWING LIST

S1.00 - GENERAL NOTES AND DRAWING LIST
S2.00 - GROUND FLOOR SLAB PLAN AND DETAILS
S2.01 - GROUND FLOOR SLAB DETAILS
S3.00 - FIRST FLOOR FRAMING AND ROOF FRAMING PLANS AND DETAILS
S3.01 - FIRST FLOOR FRAMING DETAILS

ISSUED FOR

CONSTRUCTION CERTIFICATE

Mk	Details of Amendment	Approved	
A	ISSUED FOR CONSTRUCTION CERTIFICATE	JM	01.03.13

A1

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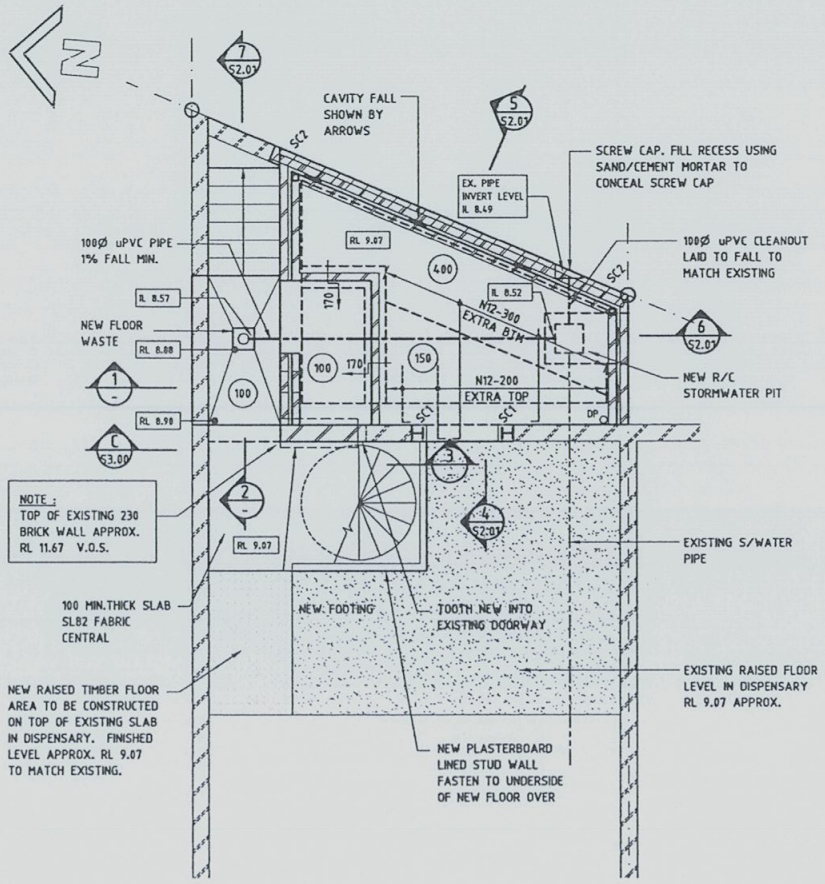
Client: PITTWATER PHARMACY INVESTMENTS Pty Ltd

Project: PROPOSED STOREROOM ADDITION
1771 PITTWATER ROAD, MONA VALE

Designed	Drawn	Checked	Approved
J.M.	A.C.W.	J.M.	J.M.

Title: CONSTRUCTION NOTES AND DRAWING LIST

Drawing No.: 1301-S1.00
Amendment: A
Cad File No.: .../S100.DWG



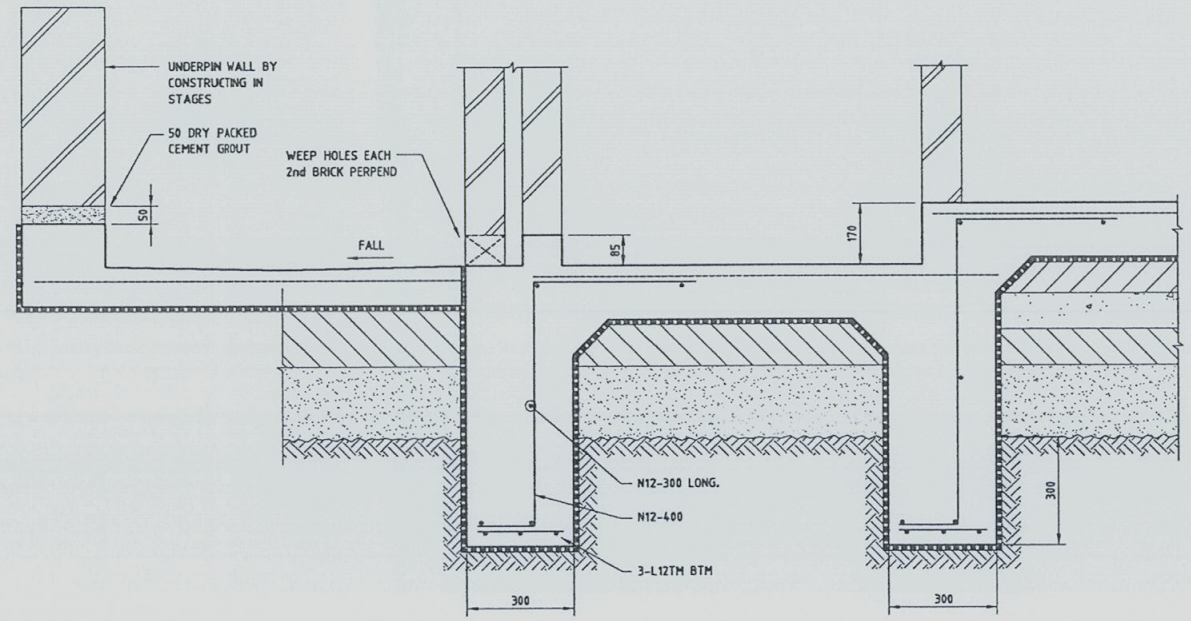
GROUND FLOOR SLAB PLAN SCALE 1:50

NOTE :

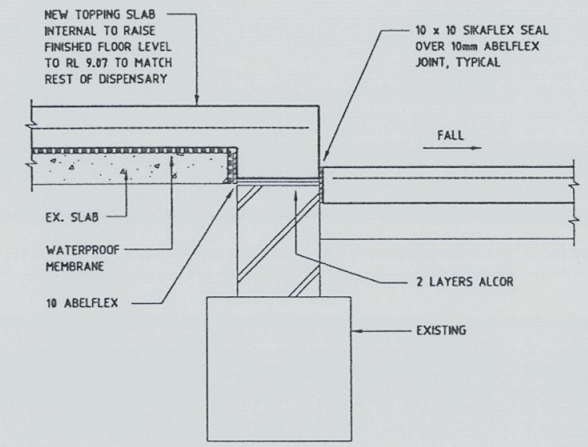
ALL SLABS SHALL BE 150 THICK PLACED ON A WATERPROOF MEMBRANE ON 100 mm DGB20

ALL SLABS SHALL BE REINFORCED WITH SL82 FABRIC TOP. N12-300 DISTRIBUTION BARS UNO

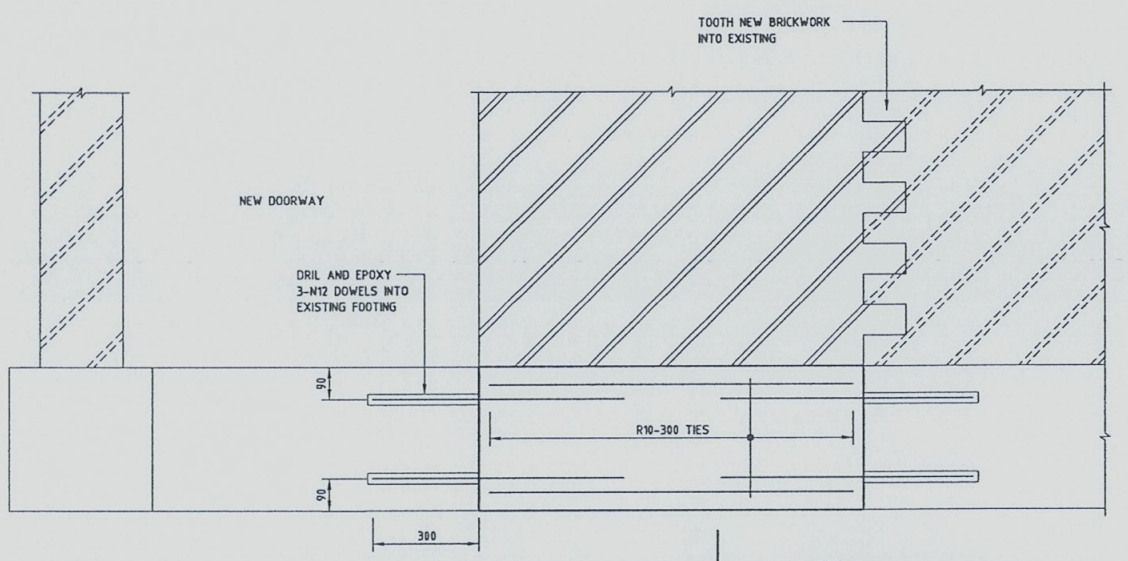
CONCRETE GRADE N32
50 COVER TO EXPOSED SURFACES
50 COVER CAST AGAINST GROUND



SECTION 1

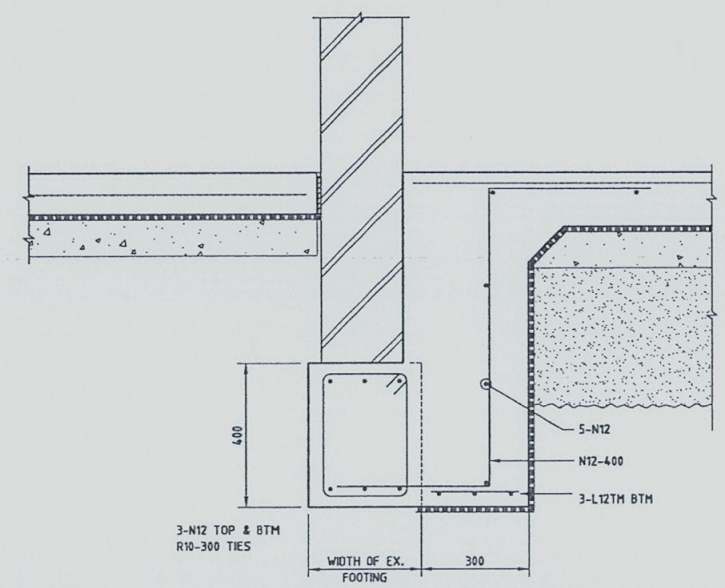


SECTION 2



NOTE : NEW CONCRETE SLAB OMITTED FOR CLARITY FROM THIS SECTION.

SECTION 3



SECTION a

ISSUED FOR

CONSTRUCTION CERTIFICATE

Mk	Details of Amendment	Approved
A	ISSUED FOR CONSTRUCTION CERTIFICATE	JM 01.03.13

A1

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Proud Member of CONSULT AUSTRALIA

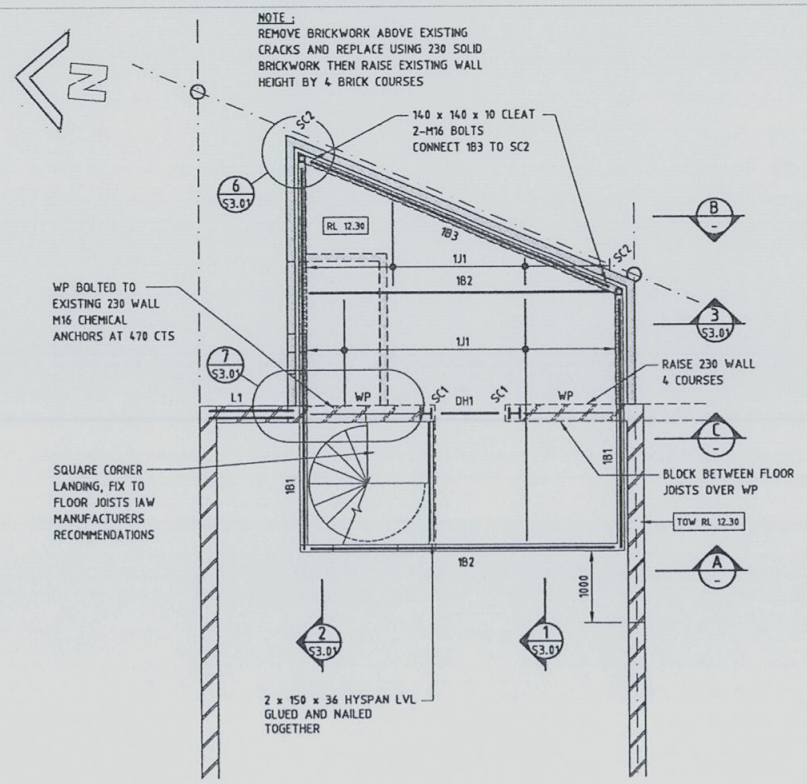
Client: PITTWATER PHARMACY INVESTMENTS Pty Ltd

Project: PROPOSED STOREROOM ADDITION
1771 PITTWATER ROAD, MONA VALE

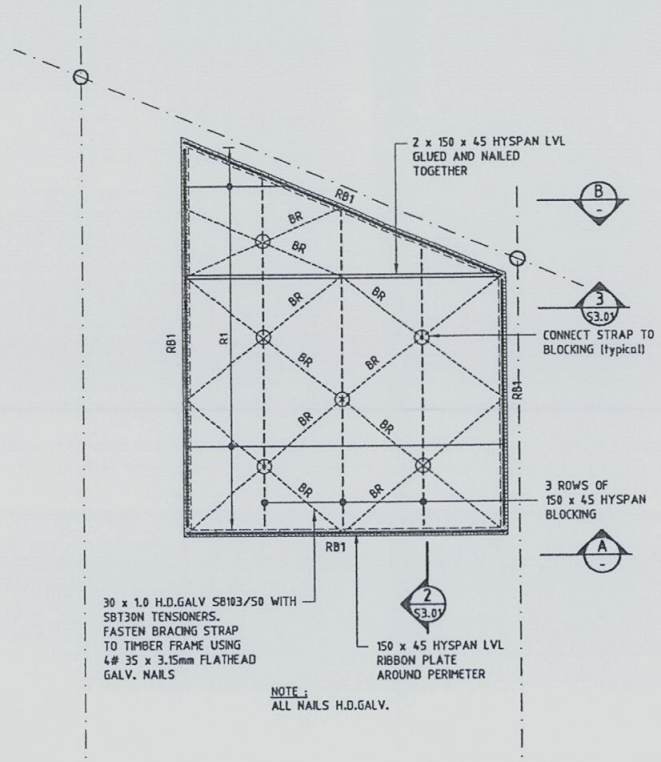
Designed: J.M. | Drawn: A.C.W. | Checked: J.M. | Approved: J.M.

Title: GROUND FLOOR SLAB PLAN AND DETAILS

Drawing No. 1301-S2.00
Amendment A
Cad File No. .../S200.DWG



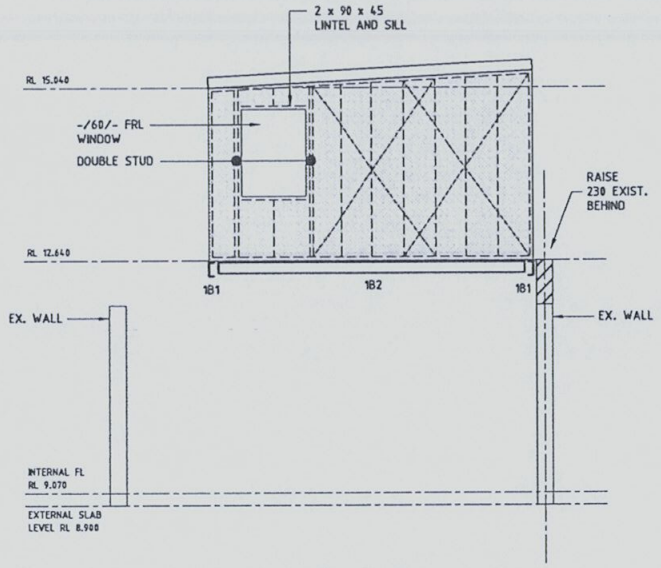
FIRST FLOOR FRAMING PLAN SCALE 1:50



ROOF FRAMING PLAN SCALE 1:50

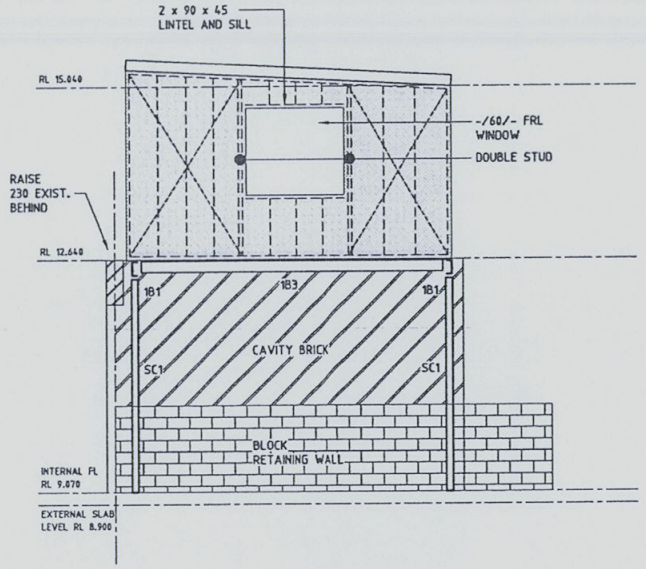
MEMBER SCHEDULE		
MARK	SIZE	REMARKS
SC1	150UC30	COLUMN - GRADE 300 PLUS
SC2	89 x 5.0 SHS	COLUMN - GRADE C350
1B1	200 PFC	BEAM - GRADE 300 PLUS
1B2	150UC23	BEAM - GRADE 300 PLUS
1B3	150 x 45	HYSPAN LVL
DH1	150UC30	BEAM - GRADE 300 PLUS
WP	70 x 190 F7	TIMBER WALL PLATE
1J1	150 x 36	HYSPAN LVL JOISTS AT 450 CTS
RB1	150 x 45	HYSPAN LVL RIBBON PLATE
R1	150 x 45	HYSPAN LVL RAFTERS AT 450 CTS
BR	30 x 1.0 H.D.GALV	GALV. STRAP BRACING
L1	2 x 90 x 8 EA	HOT DIP GALV. LINTELS

NOTE :
TYPE 'C' CONSTRUCTION REQUIRED FOR ALL PERIMETER FIRST FLOOR WALLS UP TO UNDERSIDE OF ROOFING IN ACCORDANCE WITH THE BCA.

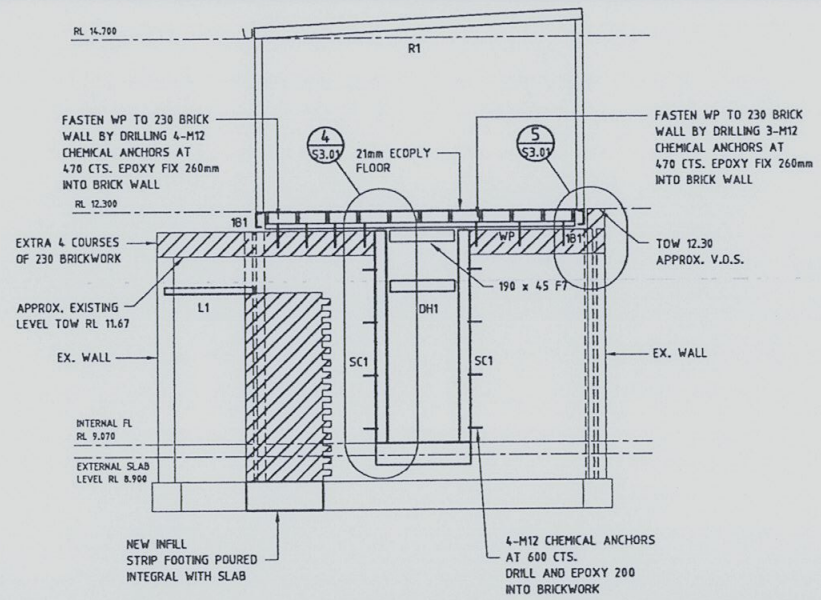


SECTION A

WINDOWS TO BE FULLY TESTED AND CERTIFIED -/60/-, IAW BCA INCORPORATING A NON-INSULATED STEEL FRAME AND 13mm PILKINGTON PYRODUR CLEAR INTUMESCENT GLASS, WITH RUBBER BEADING/ SILICONE WEATHER SEAL.



SECTION B



SECTION C

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1771 PITTWATER ROAD, MONA VALE

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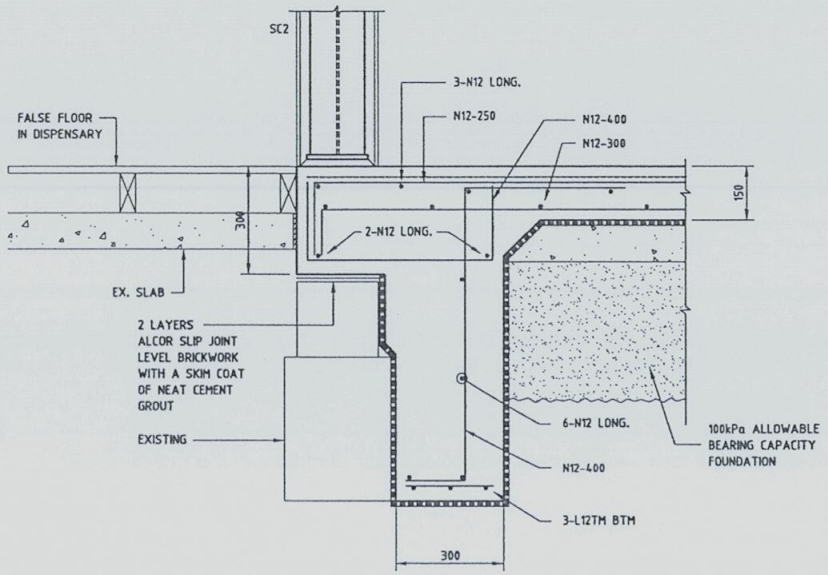
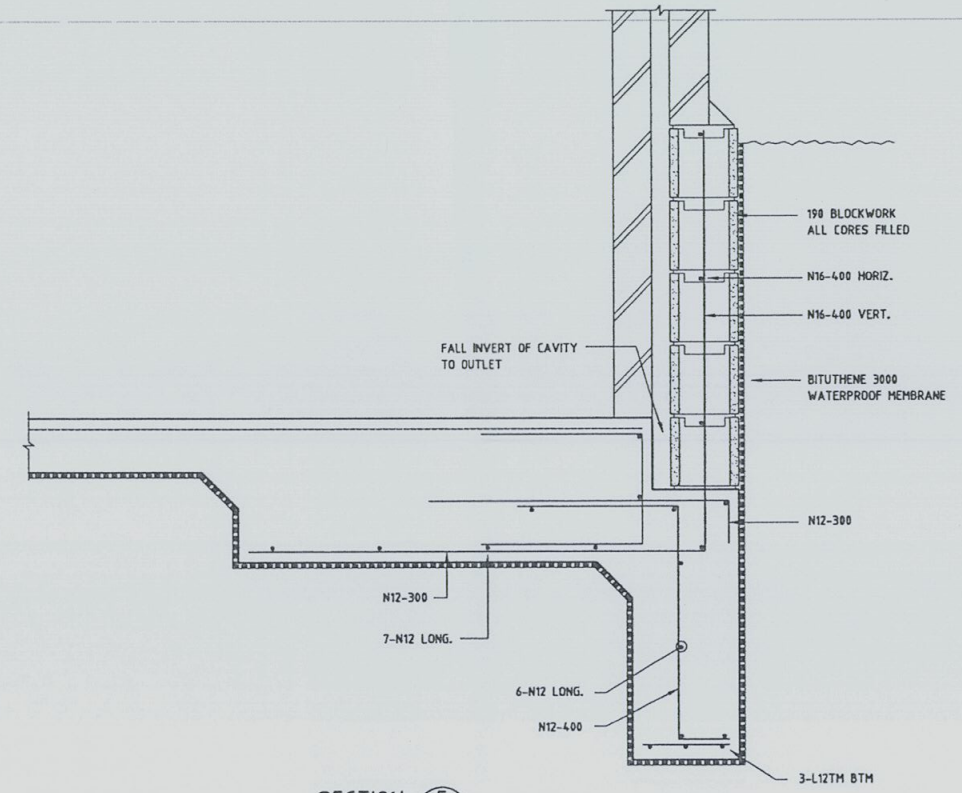
Title: FIRST FLOOR FRAMING AND ROOF FRAMING PLANS AND DETAILS

Drawing No. 1301-S3.00
Amendment A
Cad File No. .../S300.DWG

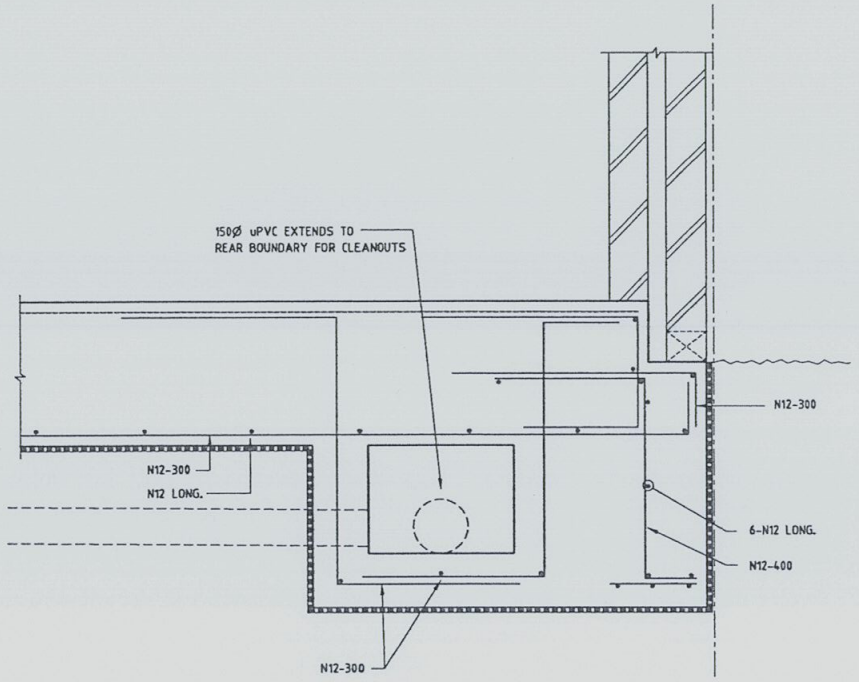
A1



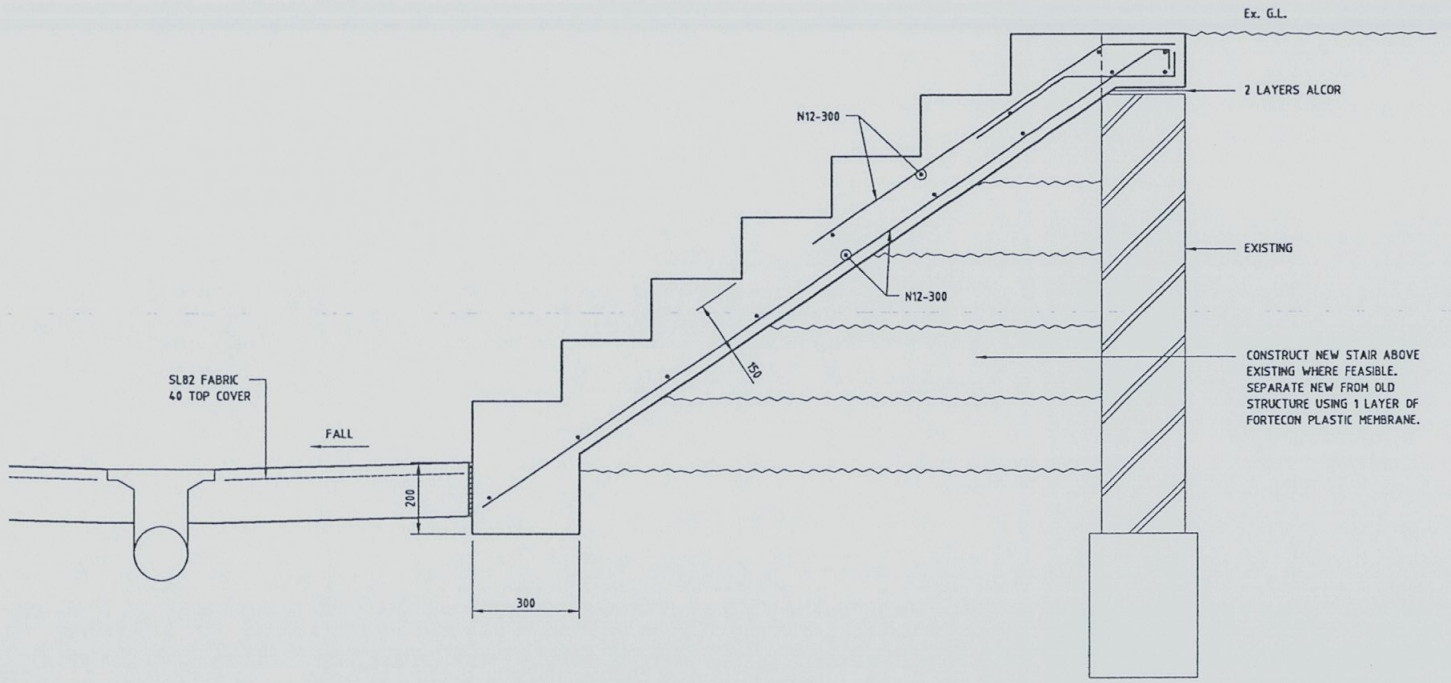
SECTION 4 / S2.00



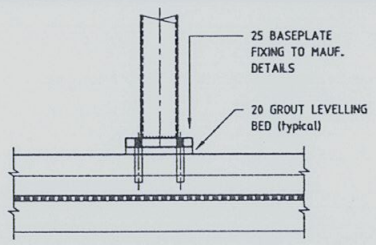
SECTION 5 / S2.00



SECTION 6 / S2.00



SECTION 7 / S2.00



TYPICAL BASE PLATE DETAIL

SPIRAL STAIR

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CONSTRUCTION CERTIFICATE

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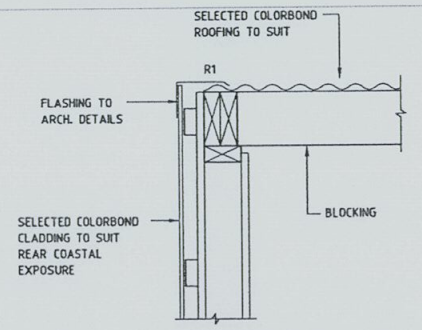
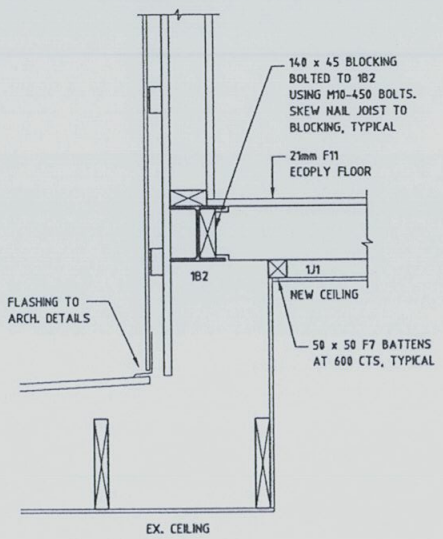
Title: GROUND FLOOR SLAB DETAILS

Drawing No.: 1301-S2.01

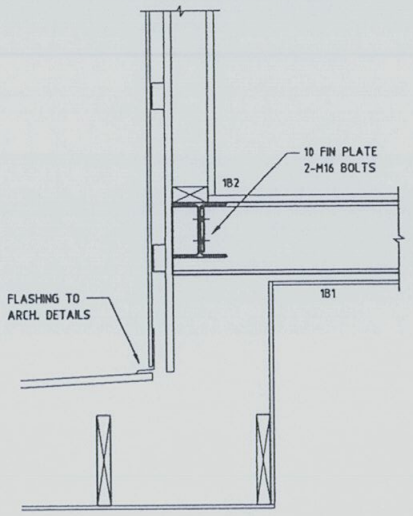
Amendment: A

Cad File No.: .../S200.DWG

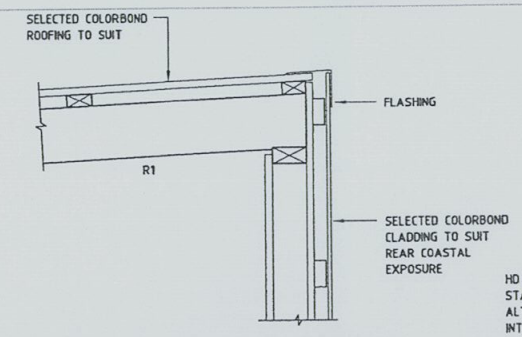


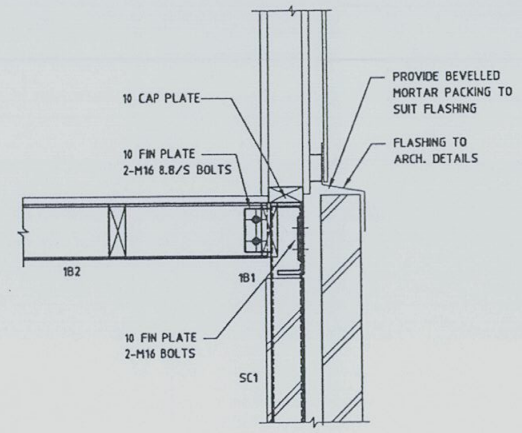


SECTION 1 / S3.00

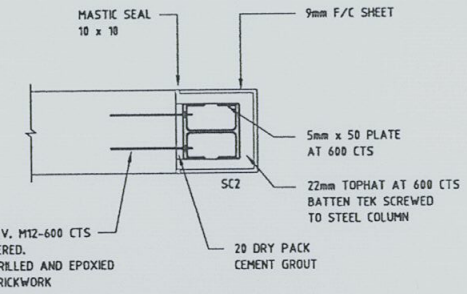


SECTION 2 / S3.00

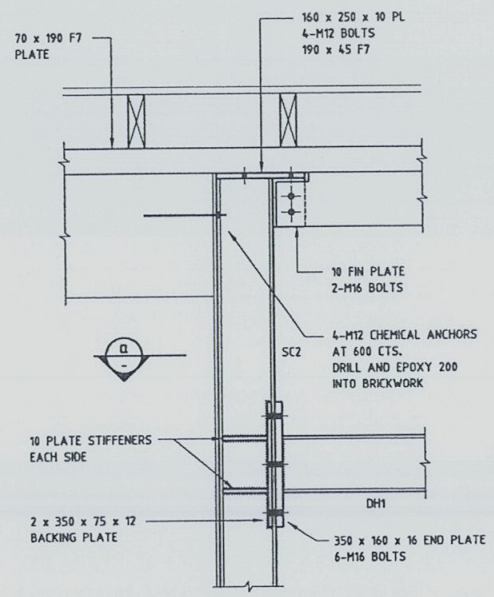


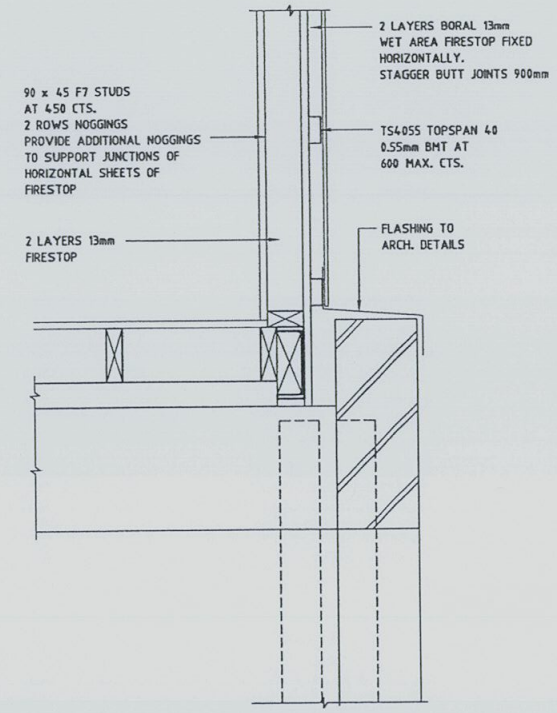


SECTION 3 / S3.00



SECTION a / -





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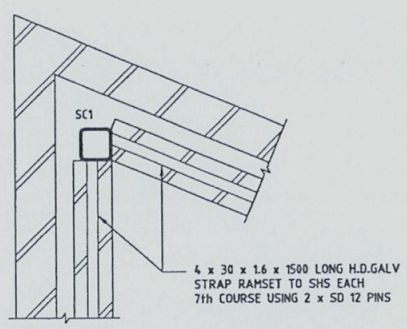
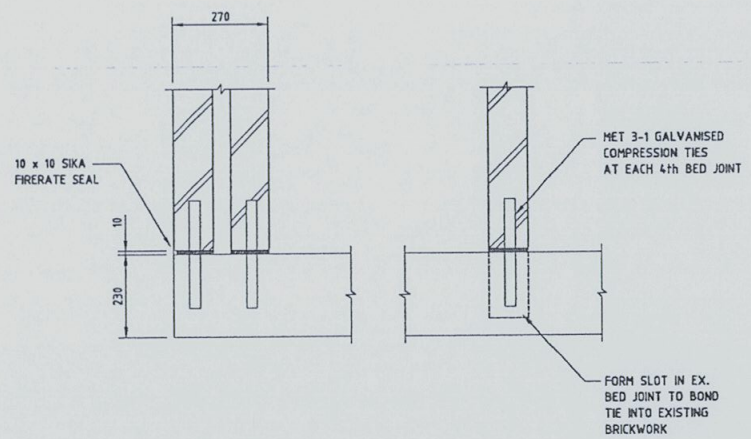
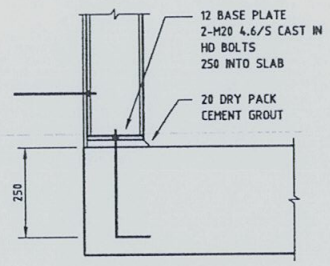


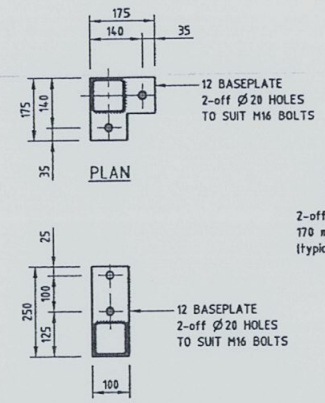
DETAIL 6 / S3.00

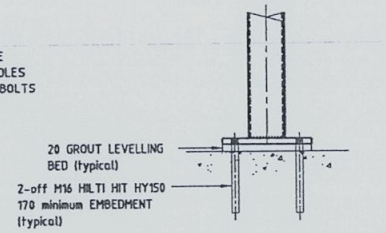


DETAIL 7 / S3.00



DETAIL 4 / S3.00





SECTION - FOOTING / SLAB

TYPICAL COLUMN BASEPLATE (89 SHS) - SC1

ISSUED FOR CONSTRUCTION CERTIFICATE

Mk	Details of Amendment	Approved
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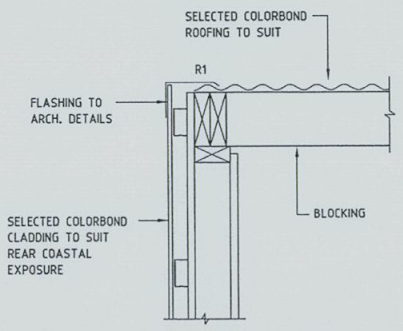
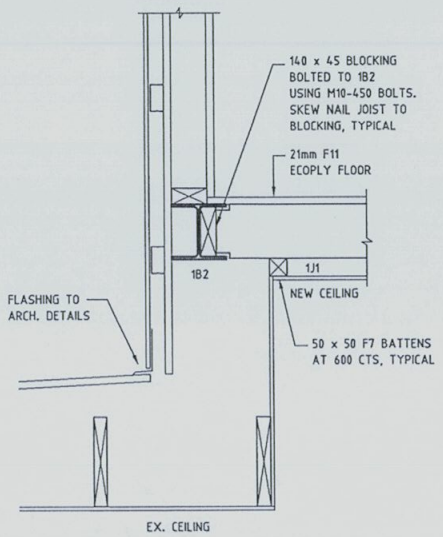
Title: **FIRST FLOOR FRAMING DETAILS**

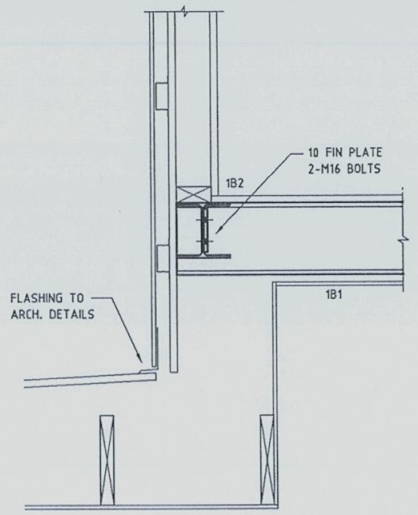
Drawing No.: 1301-S3.01
Amendment: A
Cad File No.: .../S300.DWG

A1

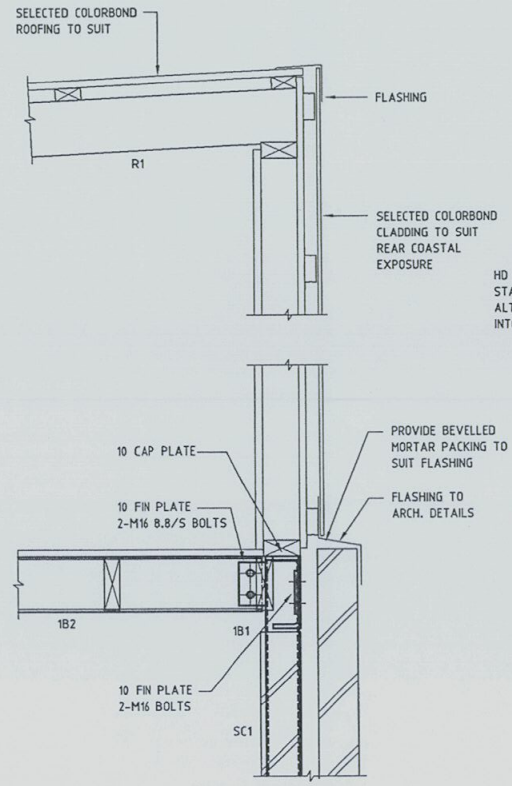




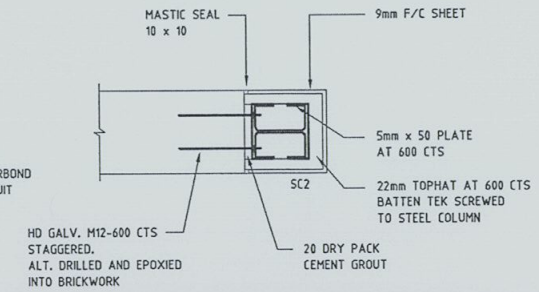
SECTION 1 / S3.00



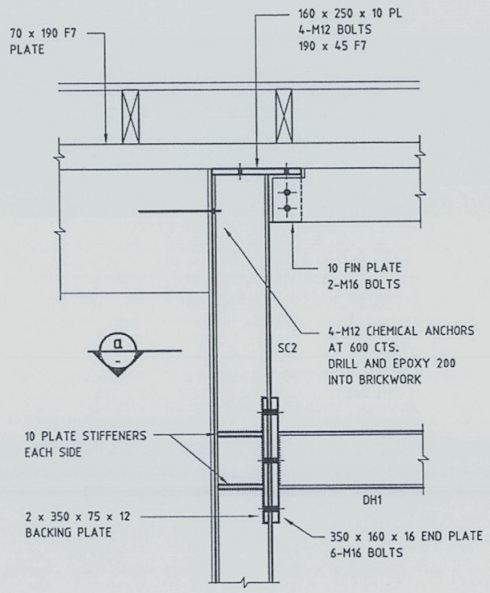
SECTION 2 / S3.00

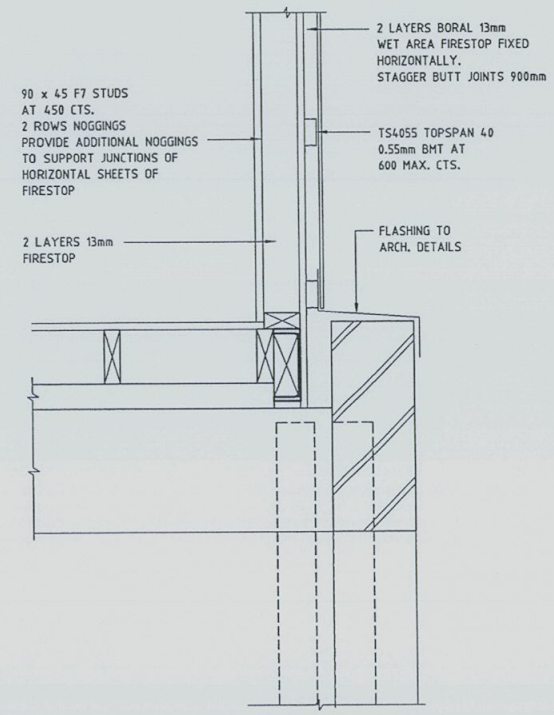


SECTION 3 / S3.00



SECTION a / -





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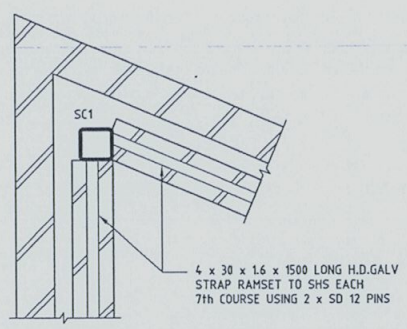

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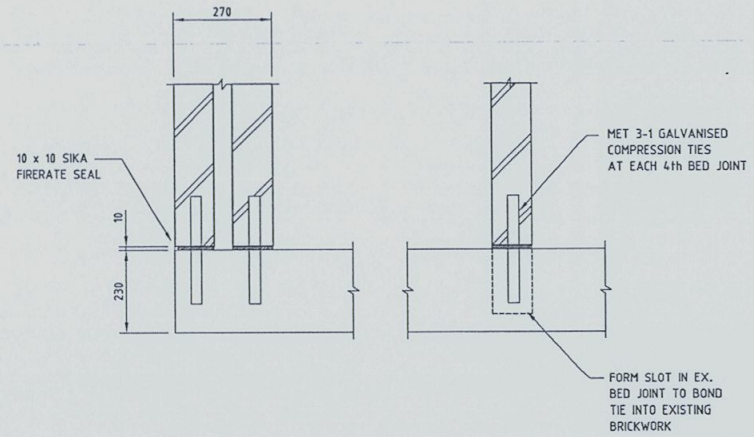

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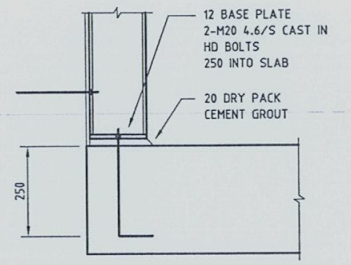

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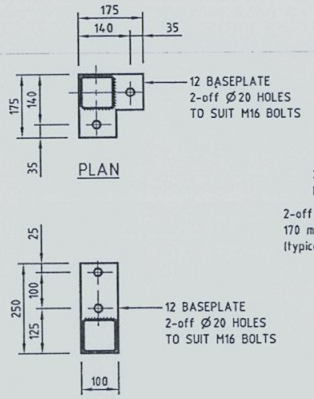

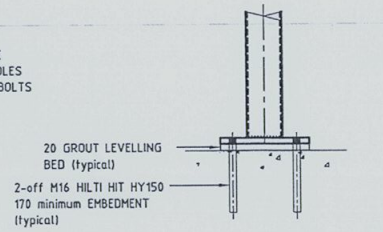

SECTION - FOOTING / SLAB

TYPICAL COLUMN BASEPLATE (89 SHS) - SC1

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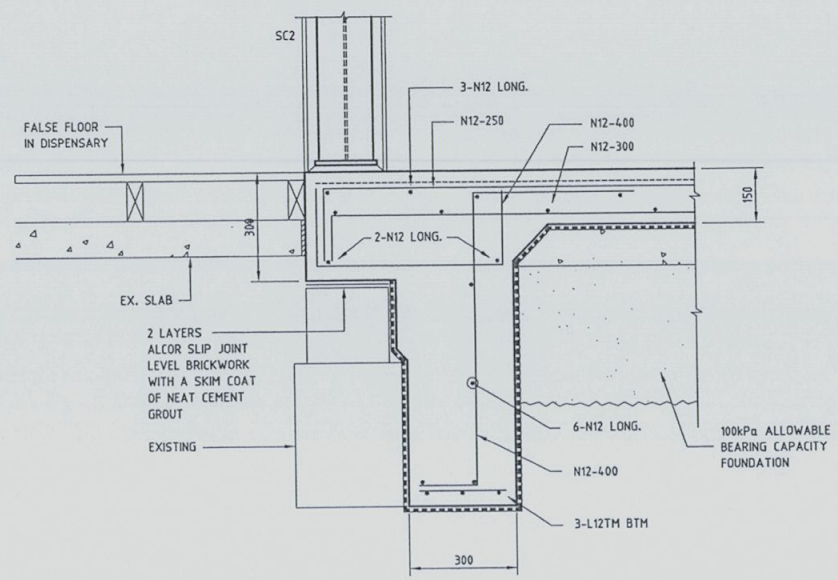
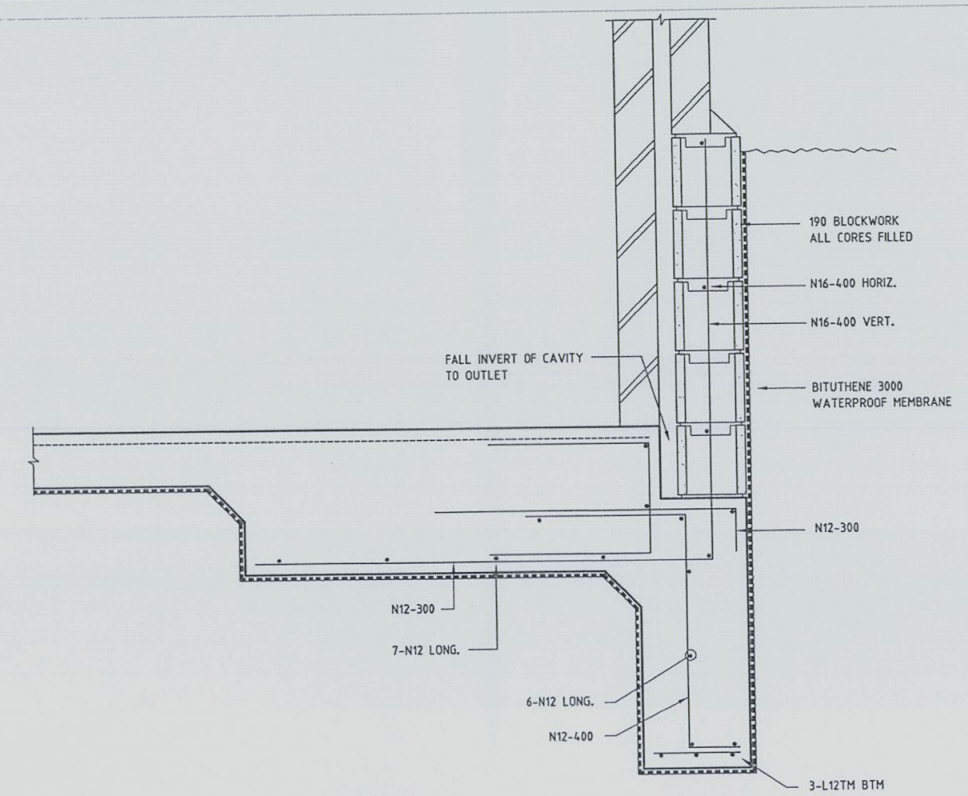
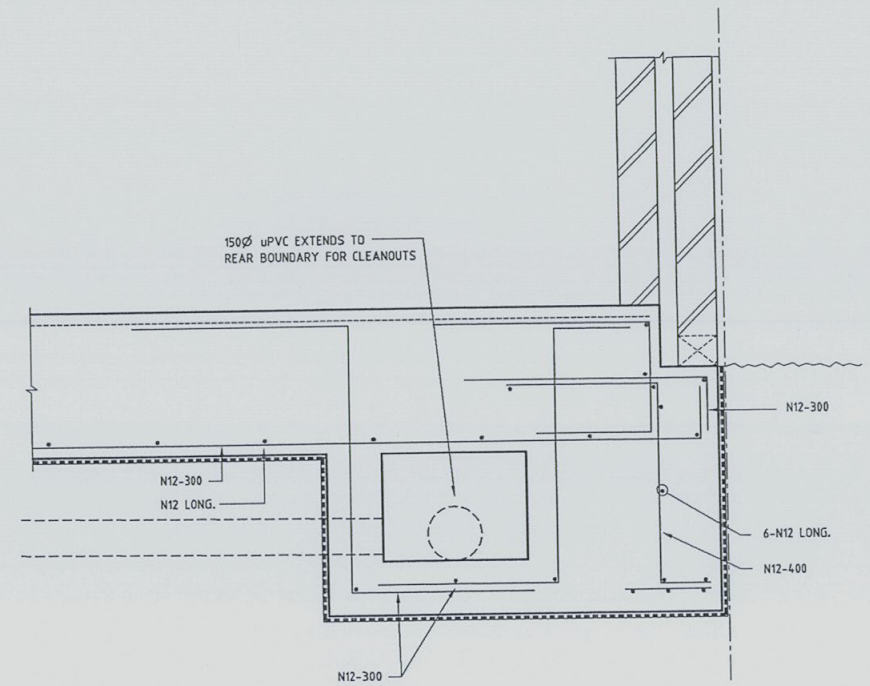
Drawing No. 1301-S3.01
Amendment A
Cad File No. .../S300.DWG



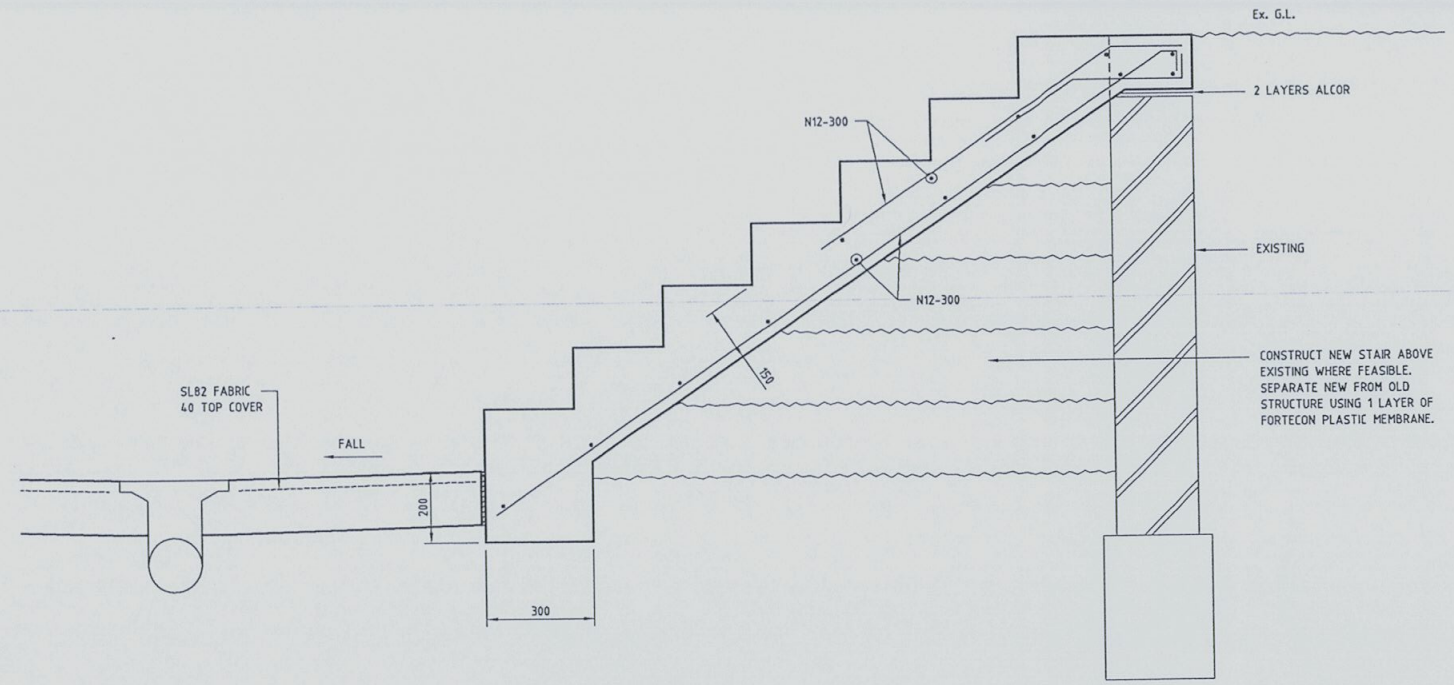
SECTION 4 / S2.00



SECTION 5 / S2.00



SECTION 6 / S2.00



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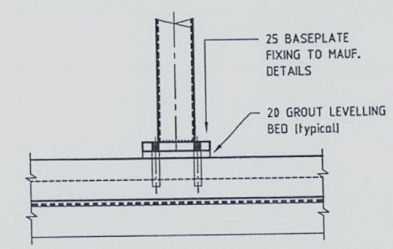

TYPICAL BASE PLATE DETAIL

SPIRAL STAIR

ISSUED FOR

CONSTRUCTION CERTIFICATE

Mk	Details of Amendment	Approved
A	ISSUED FOR CONSTRUCTION CERTIFICATE	JM 01.03.13

A1

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Proud Member of CONSULT AUSTRALIA
Association of Engineering Firms

Client: PITTWATER PHARMACY INVESTMENTS Pty Ltd

Project: PROPOSED STOREROOM ADDITION
1771 PITTWATER ROAD, MONA VALE

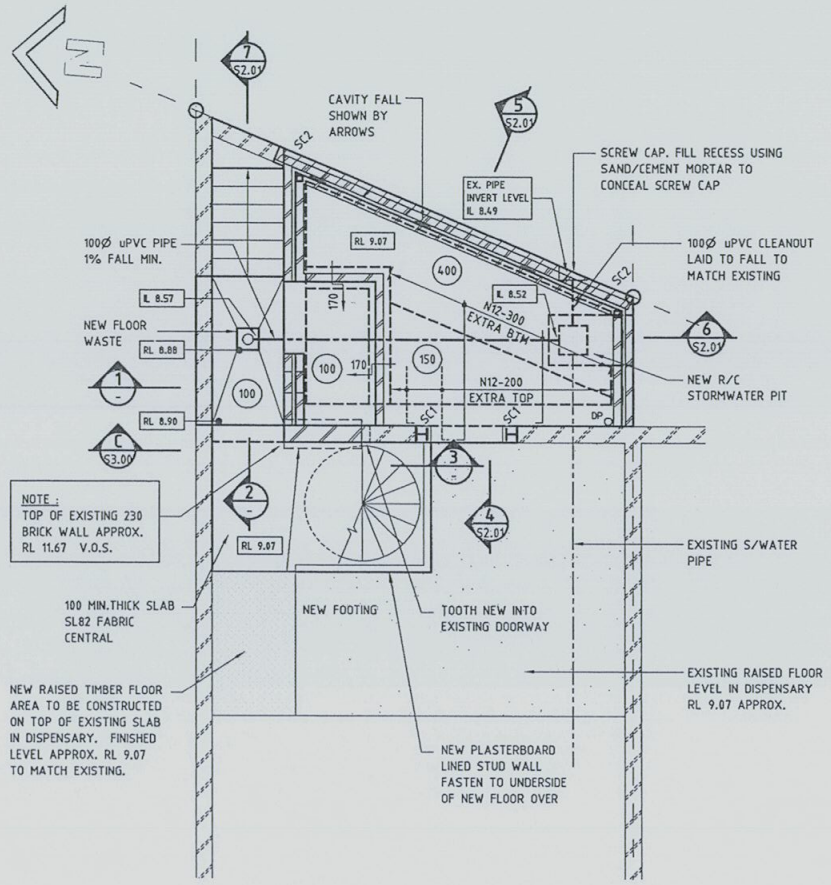
Designed: J.M. | Drawn: A.C.W | Checked: J.M. | Approved: J.M.

Title: GROUND FLOOR SLAB DETAILS

Drawing No.: 1301-S2.01

Amendment: A

Cad File No.: .../S200.DWG



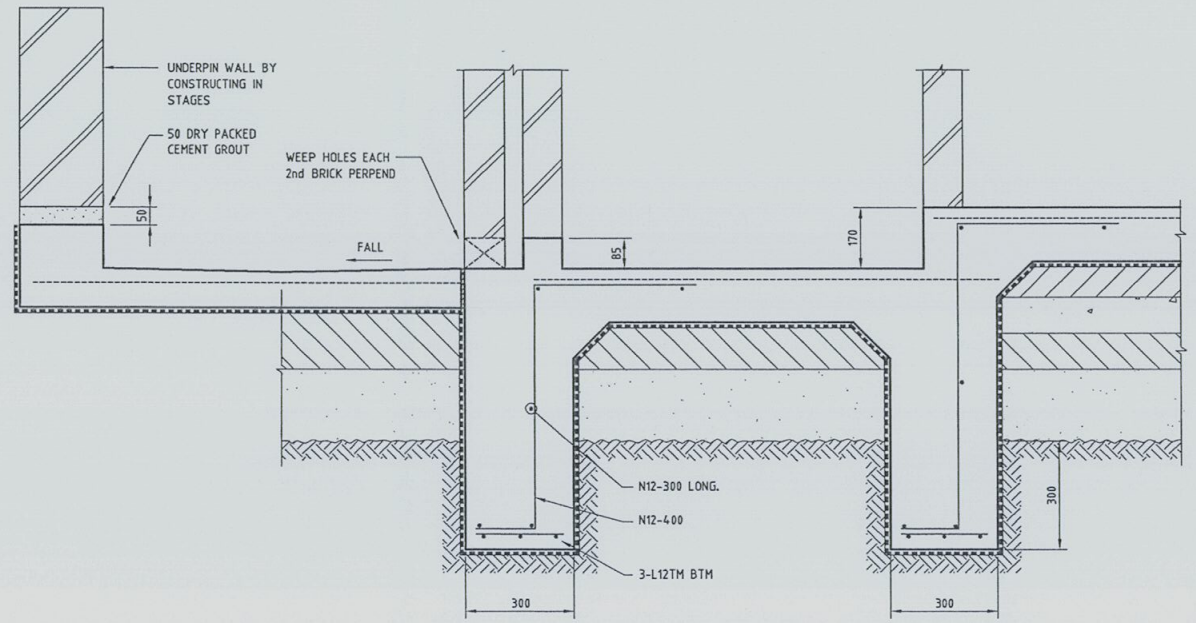
GROUND FLOOR SLAB PLAN SCALE 1:50

NOTE :

ALL SLABS SHALL BE 150 THICK PLACED ON A WATERPROOF MEMBRANE ON 100 mm DGB20

ALL SLABS SHALL BE REINFORCED WITH SL82 FABRIC TOP. N12-300 DISTRIBUTION BARS UNO

CONCRETE GRADE N32
50 COVER TO EXPOSED SURFACES
50 COVER CAST AGAINST GROUND



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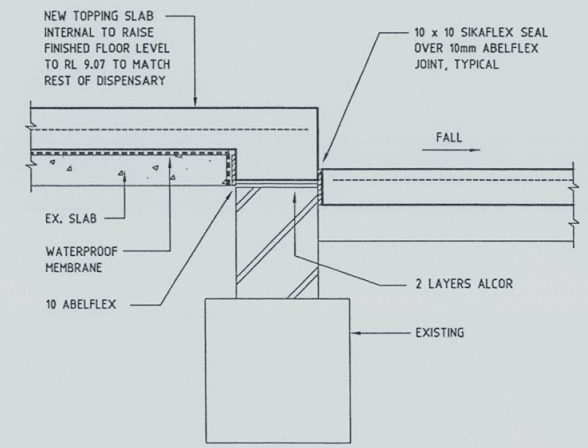

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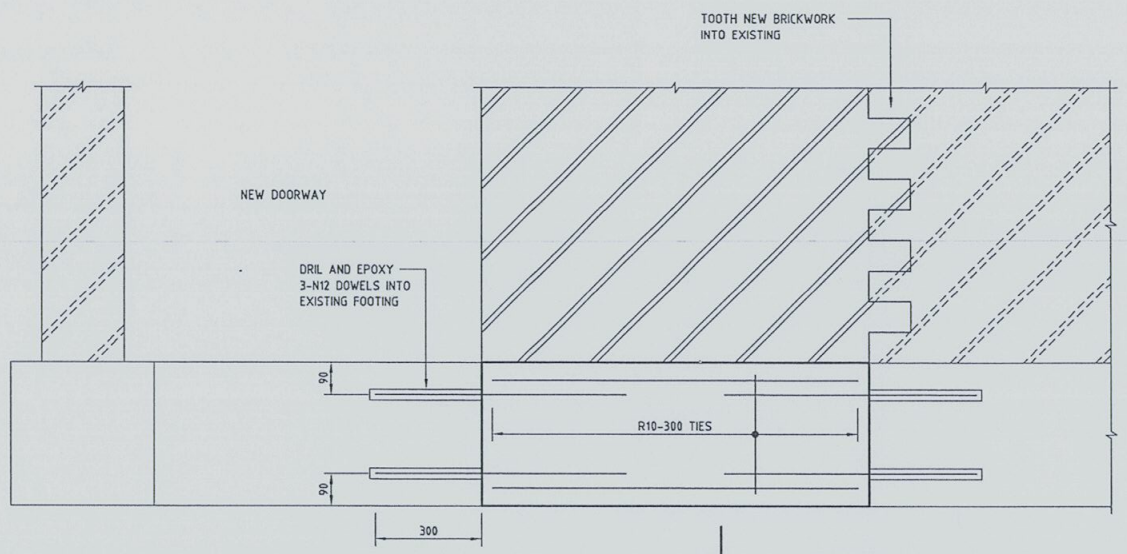
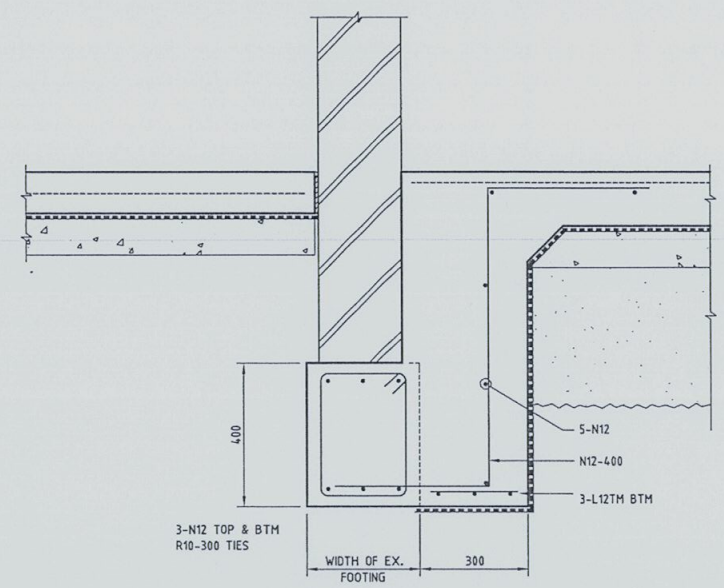


NOTE :
NEW CONCRETE SLAB OMITTED FOR CLARITY FROM THIS SECTION.

SECTION 3



SECTION a

ISSUED FOR CONSTRUCTION CERTIFICATE

Mk	Details of Amendment	Approved
A	ISSUED FOR CONSTRUCTION CERTIFICATE	JM 01.03.13

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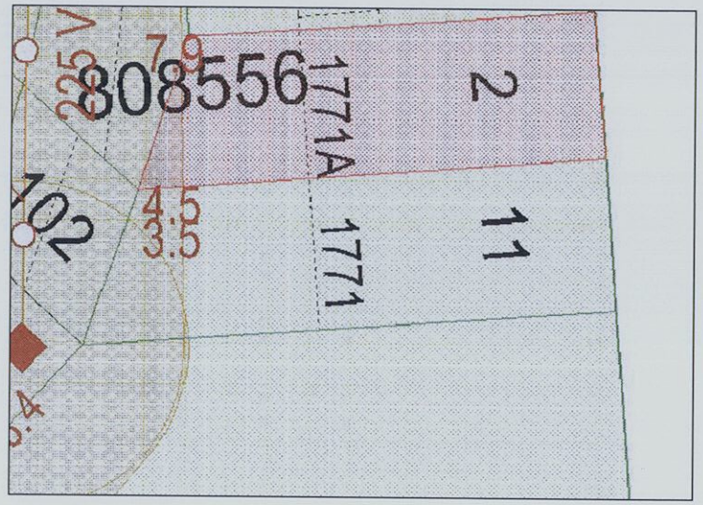
Project: PROPOSED STOREROOM ADDITION
1771 PITTWATER ROAD, MONA VALE

Designed J.M. | Drawn A.C.W | Checked J.M. | Approved J.M.

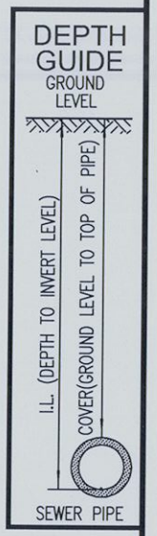
Title: GROUND FLOOR SLAB PLAN AND DETAILS

Drawing No. 1301-S2.00
Amendment A
Cad File No. .../S200.DWG



SYDNEY WATER HYDRA PLOT (N.T.S.)

NOTES:
1. SYDNEY WATER ASSET PROTECTION SURVEY AND PLAN PREPARED BY BYRNE & ASSOCIATES P/L, PO BOX 167, NARRABEEN NSW 2101, FOR PITTWATER PHARMACY – 9999 3398
2. DATE OF INSPECTION: 8-3-2013
3. STRATA :MOSTLY SOIL 1:1 ZONE OF INFLUENCE
4. BYRNE & ASSOCIATES KEY PERSONNEL: D. DIAS, C. PATON.
5. SEWER LOCATION MARKS ARE NOT NECESSARILY ON BOUNDARY.
6. DO NOT SCALE FROM THIS PLAN. USE DIMENSIONS ONLY.
7. SYDNEY WATER WAE RECORDS HAVE BEEN USED TO ASSIST IN DETERMINING THE LOCATION & DEPTH OF SEWER.
8. SO. CAN REFER TO DISTANCE SQUARE OFF FENCE/WALL OR BOUNDARY.



SYDNEY WATER SEWER	SEWER VERTICAL			
SEWER MANHOLE	SEWER VENTSHAFT	A	ORIGINAL	11-3-13
SEWER MAINTENANCE SHAFT	SEWER FLOW DIRECTION	ISSUE	DESCRIPTION	DATE
			ISSUES	

DIAGRAM
(NOT TO SCALE)

I CRAIG PATON OF BYRNE & ASSOCIATES PTY LTD, BEING ACCREDITED TO CARRY OUT A SERVICE PROTECTION REPORT, CERTIFY THAT THE INFORMATION SHOWN ON THE REPORT HAS BEEN PREPARED IN ACCORDANCE WITH THE RELEVANT INSTRUCTIONS AND ACCEPT FULL RESPONSIBILITY FOR THE ACCURACY OF THE INFORMATION ON THE REPORT.

SYDNEY WATER ASSET PROTECTION REPORT AT No 1771 PITTWATER ROAD MONA VALE

BYRNE & ASSOCIATES PTY LIMITED
CONSULTING SURVEYORS & ENGINEERS
63 WATERLOO STREET
NARRABEEN 2101
A.C.N. 002 109 202
Ph: (02) 9913 7110 Fax: (02) 9913 1583
Email: wsc@byrneandassociates.com.au

Date of Survey	Prepared by	Date	Approved by	Date	R.R.
8-3-13	DD	11-3-13	C.P.	11-3-13	N.T.S.

File Name	Sheet	Plan No.
30957swapr.dwg	1 of 1 Sheets	A3 – 30957