

ENERGY COMPLIANCE REPORT

NATIONAL CONSTRUCTION CODE SERIES 2016 - VOLUME TWO

ENERGY ASSESSOR - David Burton : Accreditation No.VIC/BDAV/15/1683
SITE ADDRESS - Dwelling 3 @ No.19 Alexander Ave, Campbelltown
CLIENT - D'Andrea Architects
OWNER - Mr. & Mrs. Blefari
JOB REF - DA-5795
DATE - 01/01/2020

BCA Part 3.12.1.1 - Building Fabric Thermal Insulation

Requirements

Where required, insulation must comply with AS/NZS 4859.1
Installation shall abut or overlap adjoining insulation, form a continuous barrier with ceilings, walls, bulkheads, floors or the like and not affect the safe or effective operation of a domestic service or fitting

Where required, reflective insulation must be installed with-
The necessary airspace to achieve the required R-Value and reflective insulation shall be closely fitted against any penetration, door or window and adequately supported by framing members, overlapped not less than 150mm or taped together

Where required, bulk insulation must be installed so that-
It maintains its position and thickness and in a ceiling where there is no bulk insulation or reflective insulation in the external wall beneath it overlaps the external wall by not less than 50mm

BCA Part 3.12.1.2(a) - Roofs

Requirements

Achieve the Total R-Value as specified
Where a pitched roof has a flat ceiling, have not less than 50% of the added insulation laid on the ceiling

Required - Minimum Total R-Value 5.1

BCA Part 3.12.1.2(b) - Roofs

Requirements

In climate zones 1-5 (inclusive), the Total R-Value specified is reduced by 0.5 where the required insulation is laid on the ceiling and the roof space is ventilated by gable vents, ridge vents, eave vents, roof vents or the like and not less than 2 wind-driven roof ventilators

BCA Part 3.12.1.2(c) - Roofs

Requirements

A roof that is required to achieve a minimum Total R-Value and has metal sheet roofing directly fixed to metal purlins, metal rafters or metal battens and does not have a ceiling lining or has a ceiling lining fixed directly to those metal purlins, metal rafters or metal battens must have a thermal break, consisting of a material with an R-Value of not less than 0.2, installed between the metal sheet roofing and its supporting metal purlins, metal rafters or metal battens

BCA Part 3.12.1.2(d) - Roofs

Requirements

A roof, or roof and associated ceiling, is deemed to have the Total R-Value as specified

Required - Pitched Sheet Roof with flat ceiling has a Total R-Value of 0.39, therefore provide minimum TOTAL R-VALUE OF 4.71

BCA Part 3.12.1.2(e) - Roofs

Requirements

For operational or safety reasons associated with exhaust fans, flues or recessed downlights, the area of required ceiling insulation is reduced, the loss of insulation must be compensated for by increasing the R-Value of insulation in the remainder of the ceiling

Note - No electrical layout provided at time of assessment.
- If recessed downlights are to be installed, IC rated recessed downlights shall be provided.

BCA Part 3.12.1.3(a) - Roof Lights

Requirements

If the roof lights are not required for compliance, roof lights shall comply with Table 3.12.1.2 and have an aggregate area of not more than 3% of the total floor area of the storey served

BCA Part 3.12.1.3(b) - Roof Lights

Requirements

If the roof lights are required for compliance, have an area not more than 150% of the minimum area and have transparent and translucent elements, including any imperforate ceiling diffuser with an SHGC of not more than 0.29 and a Total U-Value of not more than 2.9

BCA Part 3.12.1.4(a) - External walls

Requirements

Each part of an external wall must satisfy the requirements of Table 3.12.1.3a for all walls or Table 3.12.1.3b for walls with a surface density of not less than 220 kg/m² except for opaque non-glazed openings such as doors (including garage doors), vents, penetrations, shutters and the like and glazing unless covered by Table 3.12.1.3b

Required - Minimum Total R-Value 2.8

BCA Part 3.12.1.4(b) - External walls

Requirements

A wall that has lightweight external cladding such as weatherboards, fibre-cement or metal sheeting fixed to the metal frame and does not have a wall lining or has a wall lining that is fixed directly to the metal frame must have a thermal break, consisting of a material with an R-Value of not less than 0.2 installed between the external cladding and the metal frame

BCA Part 3.12.1.4(c) - External walls

Requirements

A wall constructed in accordance with Figure 3.12.1.3 is deemed to have the Total R-Value specified in that Figure if it has an airspace

Required - Clay masonry veneer has a Total R-Value of 0.56, therefore provide minimum TOTAL R-VALUE OF 2.24
Required - Hebel walling system has a Total R-Value of 0.91, therefore provide minimum TOTAL R-VALUE OF 1.89
Required - Hardies Scyon Axon Clad walling system has a Total R-Value of 0.22, therefore provide minimum TOTAL R-VALUE OF 2.70

BCA Part 3.12.1.5(a) - Floors

Requirements

A suspended floor, other than an intermediate floor in a building with more than one storey must achieve the Total R-Value specified, an in-slab heating or cooling system must be insulated and that is enclosed beneath, must have a barrier to prevent convection installed below floor level between the airspace under the floor and any wall cavities

BCA Part 3.12.1.5(b) - Floors

Requirements

A floor is deemed to have the Total R-Value specified in Table 3.12.1.5

Required - Minimum Total R-Value 1.0

BCA Part 3.12.1.5(c) - Floors

Requirements

A concrete slab -on-ground with an in-slab heating or cooling system, must have insulation with an R-Value of not less than 1.0, installed around the vertical edge of its perimeter

Required - Suspended Timber floor has a Total R-Value of 0.51, therefore provide minimum TOTAL R-VALUE OF 0.49

BCA Part 3.12.1.5(d) - Floors

Requirements

Insulation required by Part 3.12.1.5(c) must be water resistant and be continuous from the adjacent finished ground level to a depth of not less than 300mm or for at least the full depth of the vertical edge of the concrete slab-on-ground

BCA Part 3.12.1.6 - Attached Class 10a buildings

Requirements

A Class 10a building must-
Have an external fabric that achieves the required level of thermal performance for a Class 1 building or be separated from the Class 1 building with construction having the required level of thermal performance for the Class 1 building or
In a climate zone 5-
Be enclosed with masonry walls other than where there are doors and glazing and be separated from the Class 1 building with a masonry wall that extends to the ceiling and roof and achieve a Total R-Value in the roof equivalent to that required by Table 3.12.1.1 for the Class 1 building and not have a garage door facing the east or west orientation other than if the Class 1 building glazing complies with 3.12.2.1 with the applicable value for Cshgc reduced by 15%

Required - R1.95 Insulation to dividing wall between Garage & Dwelling only

BCA Part 3.12.2.1 - External glazing

Requirements

The aggregate conductance of the glazing in each storey including any mezzanine of a building must use the following:
Climate Zone 5 - Cu = 13.464 (standard & high air movement)
Climate Zone 6 - Cu = 6.418 (standard & high air movement)

The aggregate solar heat gain of the glazing in each storey including any mezzanine of a building must not exceed the allowances resulting area from multiplying the of the storey including any mezzanine measured within the enclosing walls by the constant Cshgc:
Climate Zone 5 - Cshgc = 0.122 (standard air movement) & Cshgc = 0.134 (high air movement)
Climate Zone 6 - Cshgc = 0.153 (standard air movement) & Cshgc = 0.168 (high air movement)

BCA Part 3.12.2.2 - Shading

Requirements

Where shading is required, it must be provided by an external permanent projection, such as a verandah, balcony, fixed canopy, eaves, shading hood or carport or be provided by an external shading device such as a shutter, blind, vertical or horizontal building screen with blades, battens or slats which are capable of restricting at least 80% of the summer solar radiation and if adjustable, is readily operated either manually, mechanically or electronically by the building occupants

BCA Part 3.12.3 - Building Sealing

Requirements

Applies to Class 1 building and a Class 10a building with a conditioned space

BCA Part 3.12.3.1 - Chimneys and flues

Requirements

The chimney or flue of an open solid-fuel burning appliance must be provided with a damper or flap that can be closed to seal the chimney or flue

BCA Part 3.12.3.2 - Roof lights

Requirements

A roof light must be sealed or capable of being sealed when serving a conditioned space or a habitable room in climate zones 4-8 . (inclusive). A roof light must be constructed with an imperforate ceiling diffuser or the like at the ceiling or internal lining level or a weatherproof seal or a shutter system readily operated either manually, mechanically or electronically by the occupant.

BCA Part 3.12.3.3 - External windows and doors

Requirements

A seal to restrict air infiltration must be fitted to each edge of an external door, openable window and other such opening when serving a conditioned space or habitable room.
A seal must be a draft protection device.

BCA Part 3.12.3.4 - Exhaust fans

Requirements

An exhaust fan must be fitted with a sealing device such as a self-closing damper, filter or the like when serving a conditioned space or a habitable room.

BCA Part 3.12.3.5 - Construction of roofs, walls and floors

Requirements

Roofs, external walls, external floors and any any opening such as a window frame, door frame, roof light frame or the like must be constructed to minimise air leakage when forming part of the external fabric.

BCA Part 3.12.3.6 - Evaporative coolers

Requirements

An evaporative cooler must be fitted with a self-closing damper or the like when serving a heated space or a habitable room.

BCA Part 3.12.4 - Air movement

Requirements

This part applies to a habitable room in a Class 1 building

BCA Part 3.12.4.1 - Air movement

Requirements

Air movement must be provided to habitable rooms
Climate Zone 5 - Without a ceiling fan or evaporative cooler - 7.5%, With a ceiling fan - 5.0%
Air movement may be provided through an opening from an adjoining room

BCA Part 3.12.4.2 - Ventilation openings

Requirements

In climate zone 5, the total ventilation opening area required to a habitable room must be connected by a breeze path to another ventilation opening in another room or space or be provided by a minimum of two ventilation openings located within the same habitable room. A breeze path must pass through not more than two openings in the internal walls and have a distance along the ventilation breeze path between 20m.

BCA Part 3.12.4.3 - Ceiling fans and evaporative coolers

Requirements

Ceiling fans or evaporative coolers required must be permanently installed and have a speed controller

BCA Part 3.12.5.0 - Services

Requirements

A hot water supply system must be designed and installed in accordance with Part B2 of NCC Volume Three - Plumbing Code of Australia

BCA Part 3.12.5.1 - Insulation of services

Requirements

Thermal insulation for central heating water piping and heating and cooling ductwork must be protected against the effects of weather and sunlight and be able to withstand the temperatures within the piping or ductwork and use thermal insulation material in accordance with AS/NZS 4859.1.

BCA Part 3.12.5.5 - Artificial lighting
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Requirements

The lamp power density or illumination power density of artificial lighting, excluding heaters that emit light must not exceed in a Class 1 building - 5 W/m2, Verandah or Balcony attached to a Class 1 building - 4W/m2 and in a Class 10a building associated with a Class 1 building - 3 W/m2.
Halogen lamps must be separately switched from fluorescent lamps.
Artificial lighting around the perimeter of a building must be controlled by a daylight sensor or have an average light source efficiency of not less than 40 Lumens/W.

BCA Part 3.12.5.6 - Water heater in a hot water supply system
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Requirements

A water heater in a hot water supply system must be designed and installed in accordance with Part B2 of NCC Volume Three - Plumbing Code of Australia.

BCA Part 3.12.5.7 - Swimming pool heating and pumping
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Heating for a swimming pool must be by a solar heater not boosted by electric resistance heating or a heater using reclaimed energy or a gas heater or a heat pump or combination solar heater and heat pump.
Where some or all of the heating required by a gas heater or a heat pump, the swimming pool must have a cover unless located in a conditioned space and a time switch to control the operation of the heater.
A time switch must be provided to control the operation of a circulation pump for a swimming pool.
NOTE: For the purposes of 3.12.5.7, a swimming pool does not include a spa pool.

BCA Part 3.12.5.8 - Spa pool heating and pumping

Heating for a spa pool that shares a water recirculation system with a swimming pool must be by a solar heater or a heater using reclaimed energy or a gas heater or a heat pump or a combination of a solar heater and a heat pump.
Where some or all of the heating required by a gas heater or a heat pump, the spa pool must have a cover and a push button and a time switch to control the operation of the heater.
A time switch must be provided to control the operation of a circulation pump for a spa pool having a capacity of 680 L or more.

REPORT SUMMARY

Total R-Value of Roof Insulation	Minimum R4.71 Insulation (Refer to Note 1)
Total R-Value of External Wall Insulation	Minimum R2.24 Insulation for Clay masonry veneer only Minimum R1.89 Insulation for Hebel walling system only Minimum R2.50 Insulation with Vapour permeable membrane Hardies Scyon Matrix Clad walling system only (External cladding fixed over19mm Scyon Cavity Trim on stud) or Minimum R2.00 Insulation with Single reflective vapour permeable membrane for Hardies Scyon Matrix Clad walling system only (External cladding fixed over 19mm Scyon Cavity Trim on stud)
Total R-Value of Internal Wall Insulation	Minimum R1.95 Insulation (dividing wall between Garage & Dwelling only)
Total R-Value of Party Wall Insulation	Minimum R2.0 Insulation (both sides as per manufacturers requirements)
Total R-Value of Suspended Floor Insulation	Minimum R0.49 Insulation
Glazing	Single Glazed - All Glazing Refer to glazing calculator (attached) for specific Total System U - Value & Total System SHGC NOTE: Glazing based on Southern Star proprietary systems
Downlights	IC rated (if applicable)
Lighting maximum wattage /m2	5 W/m2 Dwelling Internally 4 W/m2 Porch/Alfresco 3 W/m2 Garage

Notes:

- 1. Roof Insulation as nominated in REPORT SUMMARY shall extend to both horizontal and vertical sides of raised/lowered ceilings.**
- 2.** The Hebel PowerPanel External Wall System shall be constructed in strict accordance with 'Houses and Low Rise Multi Residential PowerPanel External Walls - Design and Installation Guide'.
- 3.** The Scyon Matrix/Axon Cladding System shall be constructed in strict accordance with 'Technical Supplement' prepared by James Hardie.
- 4.** All details regarding Boral Party Wall System shall be in strict accordance with manufacturers requirements. Insulation nominated by Boral Party Wall System which exceeds this energy report shall take precedence.
- 5.** All glazing nominated in Report Summary shall be in strict accordance with AS 1288, AS 2047 and AS 3959.

Disclaimer:

- 1.** All items contained in this report directly correlate to the National Construction Code Series 2016 - Volume Two. As such, this company shall take no responsibility regarding the accuracy of this report and the National Construction Code Series 2016 - Volume Two shall be used as a reference at all times. All Insulation, Glazing (refer to NCC VOLUME TWO GLAZING CALCULATOR for specific Total System U & Total System SHGC values) and other requirements nominated in the REPORT SUMMARY shall be strictly adhered to otherwise this office shall not accept any liability. The installation and construction of materials to achieve the requirements of this report shall be performed in strict accordance with the manufacturers specifications and relevant Australian Standards. As such, this office shall not be responsible for any reduced performance caused by either poor installation and/or defective workmanship. Any discrepancies on site which directly effect the overall performance and nominated energy rating shall be brought to the attention of this office immediately. An amended energy assessment may be required. This energy compliance report is based entirely on the documentation stamped by this office. Any alterations to the design may alter the energy efficiency compliance of the dwelling or addition and as such, an amended energy compliance report shall be required.
- 2.** This is not a structural report. All assumptions and recommendations made within this report are for energy efficiency purposes only and should be verified by a suitably qualified structural expert as required.

NCC VOLUME TWO GLAZING CALCULATOR

Site Address / Details

Lower Level - Dwelling 3 @ No.19 Alexander Ave, Campbelltown

Climate Zone

5

	C _U	C _{SHGC}
Constants	13.464	0.1267

Floor Construction

Area

Direct Contact	66.94m ²
Suspended	
Total Area	66.94m ²

Wall Insulation Option chosen for 3.12.1.4

No wall insulation concession used

Actual Conductance	12.80	Compliant
Actual Solar Heat Gain	7.10	Compliant



C _u (only)	C _U X Area	C _{SHGC} X Area
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Allowances	13.46	901.28	8.48
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Name	Orientation	Height (m)	Width (m)	Area (m ²)	Habitable	% Open Ability	Total System U-Value	Total System SHGC	P Winter	H Winter	P Summer	H Summer	Ew	Es	Conductance	Solar Heat Gain	U Element share of % Allowance Used	SHGC Element share of % Allowance Used
Entry	E	0.30	1.25	0.38m ²	Yes	0%	6.11	0.75	1.35	0.30			0.15	0.24	0.30	0.07	2% of 95%	1% of 84%
Entry	E	2.40	0.43	1.03m ²	Yes	0%	6.11	0.75	1.35	2.70			0.45	0.65	0.83	0.50	6% of 95%	7% of 84%
Meals/Living	E	2.10	1.80	3.78m ²	Yes	0%	6.11	0.75					0.77	1.19	3.03	3.37	24% of 95%	48% of 84%
Meals/Living	E	0.70	0.60	0.42m ²	Yes	90%	6.23	0.66					0.77	1.19	0.34	0.03	3% of 95%	0% of 84%
Meals/Living	E	0.70	0.60	0.42m ²	Yes	0%	6.11	0.75					0.77	1.19	0.34	0.37	3% of 95%	5% of 84%
Meals/Living	E	0.70	0.60	0.42m ²	Yes	90%	6.23	0.66					0.77	1.19	0.34	0.03	3% of 95%	0% of 84%
Cook	W	1.50	1.50	2.25m ²	Yes	90%	6.23	0.66					0.85	1.30	1.84	0.19	14% of 95%	3% of 84%
Dine	W	2.40	3.00	7.20m ²	Yes	45%	6.11	0.75	2.20	3.10			0.58	0.85	5.78	2.53	45% of 95%	36% of 84%

NCC VOLUME TWO GLAZING CALCULATOR

Site Address / Details

Upper Level - Dwelling 3 @ No.19 Alexander Ave, Campbelltown

Climate Zone

5

	C _U	C _{SHGC}
Constants	12.118	0.1127

Floor Construction

	Area
Direct Contact	
Suspended	78.76m ²
Total Area	78.76m ²

Wall Insulation Option chosen for 3.12.1.4

No wall insulation concession used

Actual Conductance	11.45	Compliant
Actual Solar Heat Gain	8.10	Compliant



	C _u (only)	C _U X Area	C _{SHGC} X Area
Allowances	12.12	954.41	8.88

Name	Orientation	Height (m)	Width (m)	Area (m ²)	Habitable	% Open Ability	Total System U-Value	Total System SHGC	P Winter	H Winter	P Summer	H Summer	Ew	Es	Conductance	Solar Heat Gain	U Element share of % Allowance Used	SHGC Element share of % Allowance Used
Stairs	E	2.10	0.80	1.68m ²	Yes	0%	6.11	0.75	0.75	2.70			0.63	0.96	1.35	1.21	12% of 94%	15% of 91%
Bedroom 1	E	0.70	1.80	1.26m ²	Yes	90%	6.23	0.66	0.45	1.30			0.61	0.92	1.04	0.08	9% of 94%	1% of 91%
Bedroom 1	E	1.40	1.80	2.52m ²	Yes	0%	6.11	0.75	0.45	2.70			0.67	1.03	2.03	1.95	18% of 94%	24% of 91%
Bedroom 1	E	2.10	0.60	1.26m ²	Yes	0%	6.11	0.75	0.45	2.70			0.67	1.03	1.02	0.97	9% of 94%	12% of 91%
Ensuite	E	0.60	1.80	1.08m ²	No	90%	6.23	0.66					0.77	1.19	0.89	0.08	8% of 94%	1% of 91%
Activities	W	0.70	0.75	0.53m ²	Yes	90%	6.23	0.66					0.85	1.30	0.43	0.05	4% of 94%	1% of 91%
Activities	W	1.70	0.75	1.28m ²	Yes	0%	6.11	0.75					0.85	1.30	1.03	1.24	9% of 94%	15% of 91%
Bedroom 2	W	0.70	1.50	1.05m ²	Yes	90%	6.23	0.66					0.85	1.30	0.86	0.09	8% of 94%	1% of 91%
Bedroom 2	W	0.80	1.50	1.20m ²	Yes	0%	6.11	0.75					0.85	1.30	0.97	1.17	8% of 94%	14% of 91%
Bedroom 3	W	0.70	1.50	1.05m ²	Yes	90%	6.23	0.66					0.85	1.30	0.86	0.09	8% of 94%	1% of 91%
Bedroom 3	W	0.80	1.50	1.20m ²	Yes	0%	6.11	0.75					0.85	1.30	0.97	1.17	8% of 94%	14% of 91%



SITE PLAN

scale 1:100

SITE NOTES:

1. ENSURE DAMP POUR MEMBRANE IS LIFTED UP PAST EXISTING PAWING CONCRETE. IF REQUIRED, PAWING CONTRACTOR SHALL BUILD UP STAIR FOOTINGS.
2. FOOTING CONTRACTOR TO CONFIRM FOOTING SETOUT AGAINST EXISTING BUILDING AND REPORT TO THIS OFFICE PRIOR TO EXCAVATION.
3. BOUNDARY IDENTIFICATION SURVEY BY LICENSED SURVEYOR TO BE REPORTED TO THIS OFFICE PRIOR TO EXCAVATION.
4. FULL CIVIL DESIGN & STORMWATER DESIGN REFER TO ENGINEERS DOCUMENTATION AND CALCULATIONS.
5. 90 DAY PLUG STORMWATER PIPE CONNECTED TO STREET WATER TABLE IN STRICT ACCORDANCE WITH THE CITY OF AUCKLAND ENGINEERING DEPARTMENT (WV SEALED VEE SYSTEM).
6. 1200MM SLURRY RAINWATER DETENTION TANK WITH 100MM DIA. 1000MM DEEP WATER STORAGE PLUMBED TO W/O OUTLETS. OVERFLOW RUN OFF TO STREET WATER TABLE VIA PUMPING SYSTEM.
7. ENSURE 20MM REBAR TO BE SLOPE 1% FOR GARAGE DOOR / DOOR TRACK, DRAIN EDGE OF SLAB 1800 BY GARAGE DOOR SUPPLIER.
8. PROVIDE SURE STRONG PUGH STORMWATER PIPE TO ALL RUNS UNDER CO. FOOTINGS.

PRELIMINARY

PRELIMINARY PLAN FOR CONFIRMATION

PLANNING APPLICATION

BUILDING APPLICATION

DRAW

DATE:

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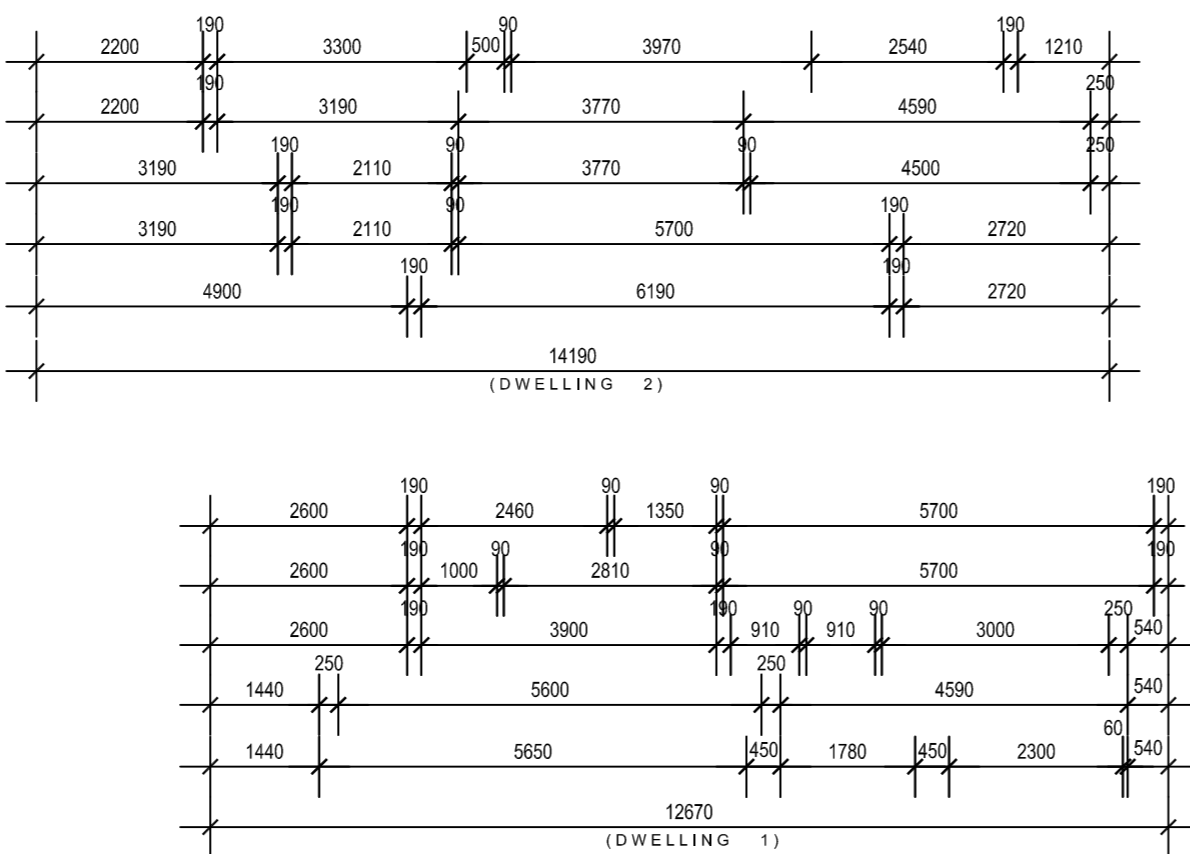
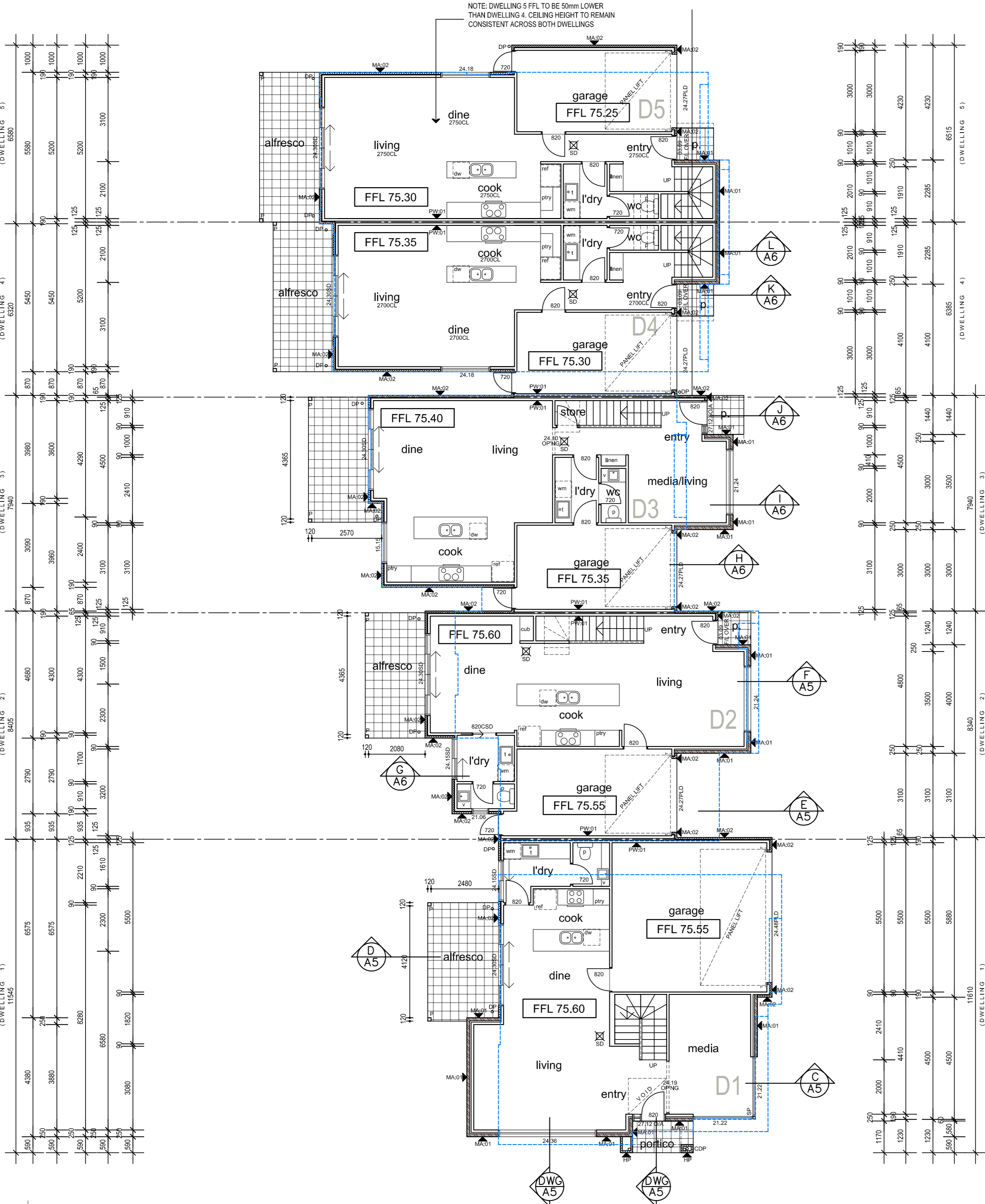
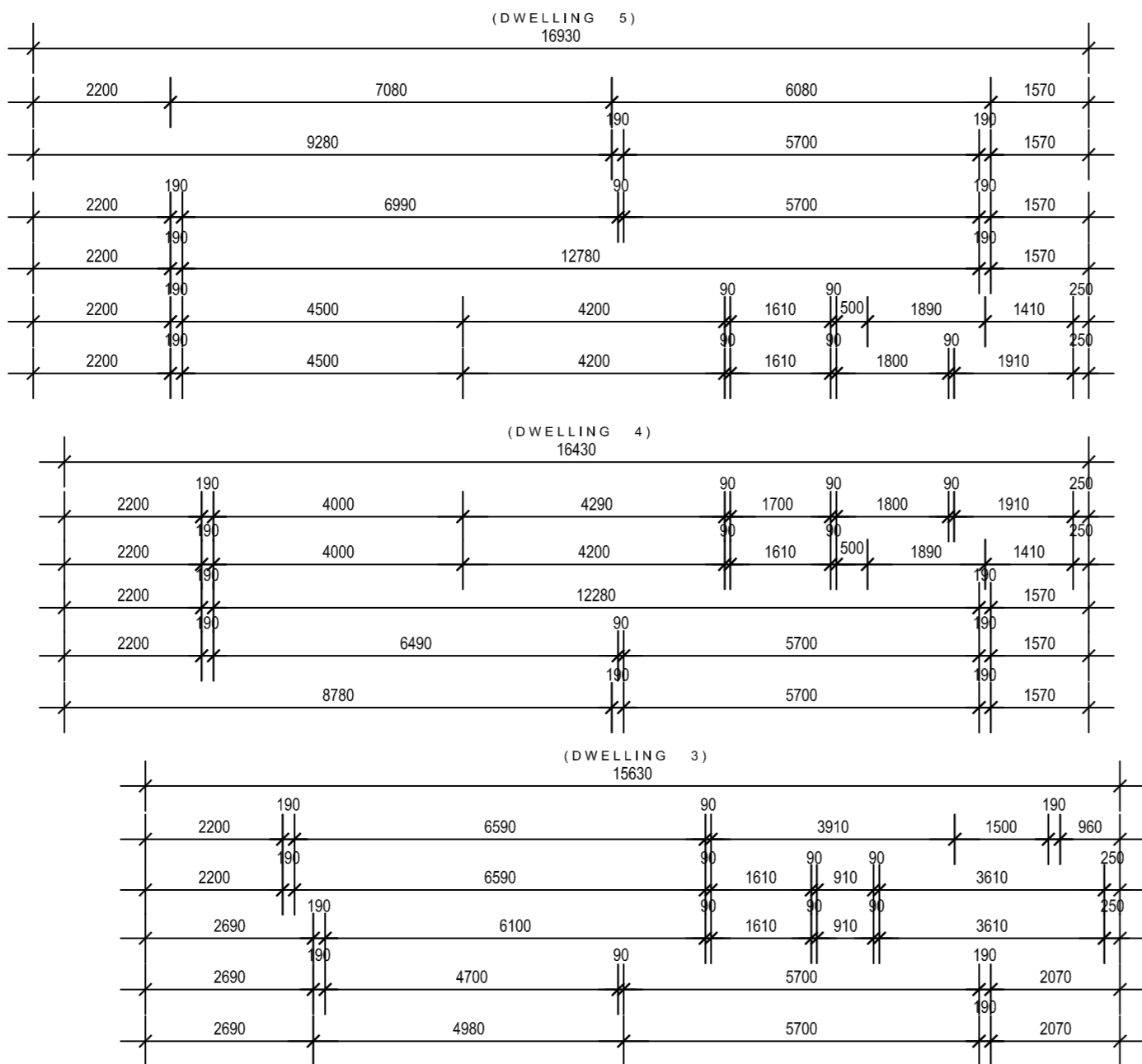
SHEET:

SCALE:

AMENDMENTS:		
ISSUE DATE:	REVISION:	COMMENTS:
16-11-18	A	D3 AMENDED

FLOOR PLANS	A1
NOT FOR CONSTRUCTION	

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WALL SCHEDULE	
CODE	DESCRIPTION
MA-01	BRICK VENEER 11050/9010 - 110MM BRICK SELECTED FACE BRICK, 50MM AIR GAP, BUILDERS WRAP FIXED TO 90MM TIMBER STUDS, 10MM PLASTERBOARD LINING INTERNALLY
MA-02	HEBEL VENEER 7525/9010 - 75MM HEBEL POWERPANEL WALL FIXED TO 25MM TOP HATS, BUILDERSWRAP TO 90MM TIMBER STUDS, 10MM INTERNAL PLASTERBOARD LINING, INSTALLATION & SLAYER EXTERNAL TEXTURE COAT SYSTEM IN STRICT ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS
MA-02a	HEBEL SPANDREL- 75MM HEBEL POWERPANEL WALL FIXED TO 25MM TOP HATS, BUILDERSWRAP TO 90MM TIMBER STUDS PACKED OUT ACCORDINGLY TO SUIT, INSTALLATION & SLAYER EXTERNAL TEXTURE COAT SYSTEM IN STRICT ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS
MA-03	150mm SOLID CONCRETE BLOCKWORK SLAYER EXTERNAL TEXTURE COAT SYSTEM IN STRICT ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS
PD-01	JAMES HARDIE SCYON AXON 8/92/10 - 8MM SHEET THICKNESS THICKNESS HARDIEWRAP FIXED TO 90MM TIMBER STUDS, 10MM PLASTERBOARD LINING INTERNALLY, INSTALLATION IN STRICT ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS
PD-01a	JAMES HARDIE SCYON AXON 8/92/10 - 8MM SHEET THICKNESS THICKNESS PACKED OUT TO CONCEAL ADJACENT CAVITIES, HARDIEWRAP FIXED TO 90MM TIMBER STUDS, 10MM PLASTERBOARD LINING INTERNALLY, INSTALLATION IN STRICT ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS
PD-02	JAMES HARDIE SCYON LINEA 16/90/10 - 16MM TONGUE & GROOVE SHEET THICKNESS, 150MM SIZE WIDTH HARDIEWRAP WEATHER BARRIER FIXED TO 90MM TIMBER STUDS, 10MM PLASTERBOARD LINING INTERNALLY, INSTALLATION IN STRICT ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS
PD-03	JAMES HARDIES SCYON MATRIX 8/19/90/10 - 8MM SHEET THICKNESS FIXED TO 19MM SCYON CAVITY TRIM, HARDIEWRAP WEATHER BARRIER FIXED TO 90MM TIMBER STUDS, 10MM PLASTERBOARD LINING INTERNALLY, INSTALLATION IN STRICT ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS
PW-01	BORAL PARTI WALL SYSTEM PW160.1A 10/90/70/90/10 - 10MM SOUNDSTOP PLASTERBOARD FIXED TO 90MM TIMBER STUDS, R2.0 GW WALL Batts INSULATION, 20MM AIR GAP, 25MM SHAFTLINER, 20MM AIR GAP, R2.0 GW WALL Batts INSULATION, 90MM TIMBER STUD, 10MM SOUNDSTOP PLASTERBOARD TO ACHIEVE FRL 60/30/60 AND RW6 & RW+CT50, INSTALLATION IN STRICT ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS
HP	DENOTES HEBEL PIER DETAIL TO MANUFACTURERS DETAILS REFER DETAIL
P	DENOTES 120° TIMBER POST WITH SELECTED EXT. GRADE PAINT FINISH
SELECTED PRODUCTS/MATERIALS TO BE INSTALLED IN ACCORDANCE WITH MANUF. SPECIFICATION	

GENERAL NOTES 'TYPICAL'

- INTERNAL WALLS TYPICALLY TIMBER STUD, TRENCHED, WITH 10MM PLASTERBOARD TO EACH SIDE, WHERE AN INTERNAL WALL DIVIDES A WET AREA USE 10MM MOISTURE RESISTANT PLASTERBOARD TO WET AREA SIDE.
- 10MM MOISTURE RESISTANT PLASTERBOARD TO ALL WET AREA LOCATIONS
- PLAN TO BE READ IN CONJUNCTION WITH STRUCTURAL ENGINEERS DRAWINGS FOR ALL STRUCTURAL STEEL COLUMN/BEAM DESIGN AND TIMBER FRAMING LAYOUTS.
- ALUMINIUM FRAMED WINDOWS & DOORS, ALL PROPOSED GLASS TO COMPLY WITH AUSTRALIAN STANDARD AS1288.
- ALL WET AREAS TO COMPLY WITH BUILDING CODE OF AUSTRALIA (BCA PART 3.8.1.1) & AUSTRALIAN STANDARD AS3740-2010, FLOOR WASTE PROVIDED TO COMPLY IN ACCORDANCE WITH SA3.2.2
- ALL INTERNAL FINISHES/FITTINGS & FIXTURES TO BE CONFIRMED WITH CLIENT PRIOR TO COMMENCING ON SITE.
- PROVIDE 'TERMITESH' TERMITE MANAGEMENT SYSTEM IN STRICT ACCORDANCE WITH ATTACHED SPECIFICATION FOR PROPOSED STRUCTURE
- ALL INSULATION AS PER ENERGY EFFICIENCY REPORT
- PROVIDE SISAL FOIL TO EXTERNAL WALLS ROOF TYPICAL
- ALL CONTROL JOIN LOCATIONS TO BE READ IN CONJUNCTION WITH STRUCTURAL ENGINEERS FOOTING LAYOUT PLAN.
- PLEASE ENSURE ALL DOWNLIGHTS TO BE SEALED AND ALL EXHAUST FANS TO WET AREAS/WCS TO HAVE DAMPERS
- ☒ SD SMOKE ALARMS TO BE INTERCONNECTED TO PROVIDE A COMMON ALARM & CONNECTED TO CONSUMER MAINS POWER IN ACCORDANCE WITH BCA-2019 3.7.5. & AS3786
- REFER STRUCTURAL ENGINEERS PLANS FOR CONFIRMATION ON ALL STEEL LOCATIONS AND SIZES / RETAINING WALL TYPES AND SLAB / FOOTING DESIGN.
- MECHANICAL VENTILATION MUST BE PROVIDED TO INTERNAL TOILETS AND THE LIKE AND IN ACCORDANCE WITH CLAUSE 3.8.5 OF VOLUME TWO OF THE NATIONAL CONSTRUCTION CODE MUST DISCHARGE TO THE ATMOSPHERE OR TO A WELL VENTILATED ROOF
- ALL VANITY BASINS SELECTIONS WITHIN POWDER ROOMS WHERE A SEPARATE FLOOR WASTE HAS NOT BEEN PROVIDED ARE REQUIRED TO HAVE BUILT IN OVERFLOW PROVISIONS.
- NOTE: ALL PRODUCTS AND MATERIALS TO BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S SPECIFICATION
- DOORS SWINGING INTO INDIVIDUAL TOILETS WHEREBY THE DISTANCE BETWEEN THE DOOR AND FACE OF TOILET IS LESS THAN 1.8M, LIFT OFF HINGES TO WC DOOR TO COMPLY WITH CLAUSE 3.8.3.3 OF THE NCC VOLUME 2
- PARAPET CAPPING MUST BE PURPOSE MADE, MACHINE-FOLDED SHEET METAL AT A MINIMUM 5 DEGREES WHILE EXTEND NOT LESS THAN 50MM DOWN THE SIDE OF THE PARAPET, BE SEPARATED FROM THE SUPPORTING FRAMING BY A VAPOUR PERMEABLE SARKING AND BE FIXED WITH EITHER SELF-DRILLING SCREWS OR RIVETS WITH RUBBER WASHERS AT INTERVALS OF NOT MORE THAN 500MM THAT DO NOT PENETRATE THE TOP OF CAPPINGS, ALL PARAPETS TO BE FULLY SARKED TO FULL HEIGHT OF WALL BEHIND CLADDING AND CAPPED IN ACCORDANCE WITH BCA-P2.2.2.
- NOTE: ALL MECHANICAL VENTILATION/EXTRACTION LOCATIONS TO TOILET / BATHROOM TO HAVE A FLOW RATE OF 25L/s & LAUNDRY / KITCHEN TO HAVE A FLOW RATE OF 40L/s AND ARE VIA A FLEXIBLE DUCT FROM THE SELECTED UNIT DIRECTLY VENTILATED TO THE ATMOSPHERE VIA A WALL OR EAVE VENT IN ACCORDANCE WITH BCA-P2.4.5. WHEN VENTILATION/EXTRACTION INITIATING FROM A HEAT SOURCE THAT CONTAINS A FLAME MUST COMPLY WITH AS4254.1
- ROOF SPACE TO BE VENTILATED VIA A WHIRLYBIRD LOCATED NEAR RIDGE / HIGHEST POINT OF ROOF SPACE AND REMAINDER BY EAVE VENTS IN ACCORDANCE WITH BCA-P2.4.5
- SARKING TO ALL EXTERNAL WALL LOCATIONS / ROOF TO BE INSTALLED ON THE EXTERIOR SIDE OF THE PRIMARY INSULATION LAYER & HAVE A FLAMMABILITY INDEX NOT GREATER THAN 5 WHEN USED IN ROOF APPLICATIONS, THE PLABLE BUILDING MEMBRANE INSTALLED IN THE EXTERNAL WALL MUST COMPLY WITH AS4254.1 AND BE INSTALLED IN ACCORDANCE WITH AS 4200.2, AS REQUIRED UNDER PART 3.8.7.2 OF NCC 2019 VOLUME 2.

GROUND FLOOR PLAN

scale 1:100



PROPOSED: 5 DWELLINGS
AT: 19 ALEXANDER AVE.,
CAMPBELLTOWN.
FOR: MR.& MRS. BLEFARI

ARCHITECTURAL DRAWINGS TO BE READ IN CONJUNCTION WITH ENGINEER'S SOIL REPORT & MSA SPECIFICATION.
ALL DIMENSIONS AND LEVELS TO BE CONFIRMED PRIOR TO THE COMMENCEMENT OF ANY WORK. ANY DISCREPANCY TO BE REPORTED TO THIS OFFICE IMMEDIATELY.

PRELIMINARY PLAN FOR CONFIRMATION
PLANNING APPLICATION
BUILDING APPLICATION
DRAW:
DATE:

PRELIMINARY
SHEET:
SCALE:

AMENDMENTS:

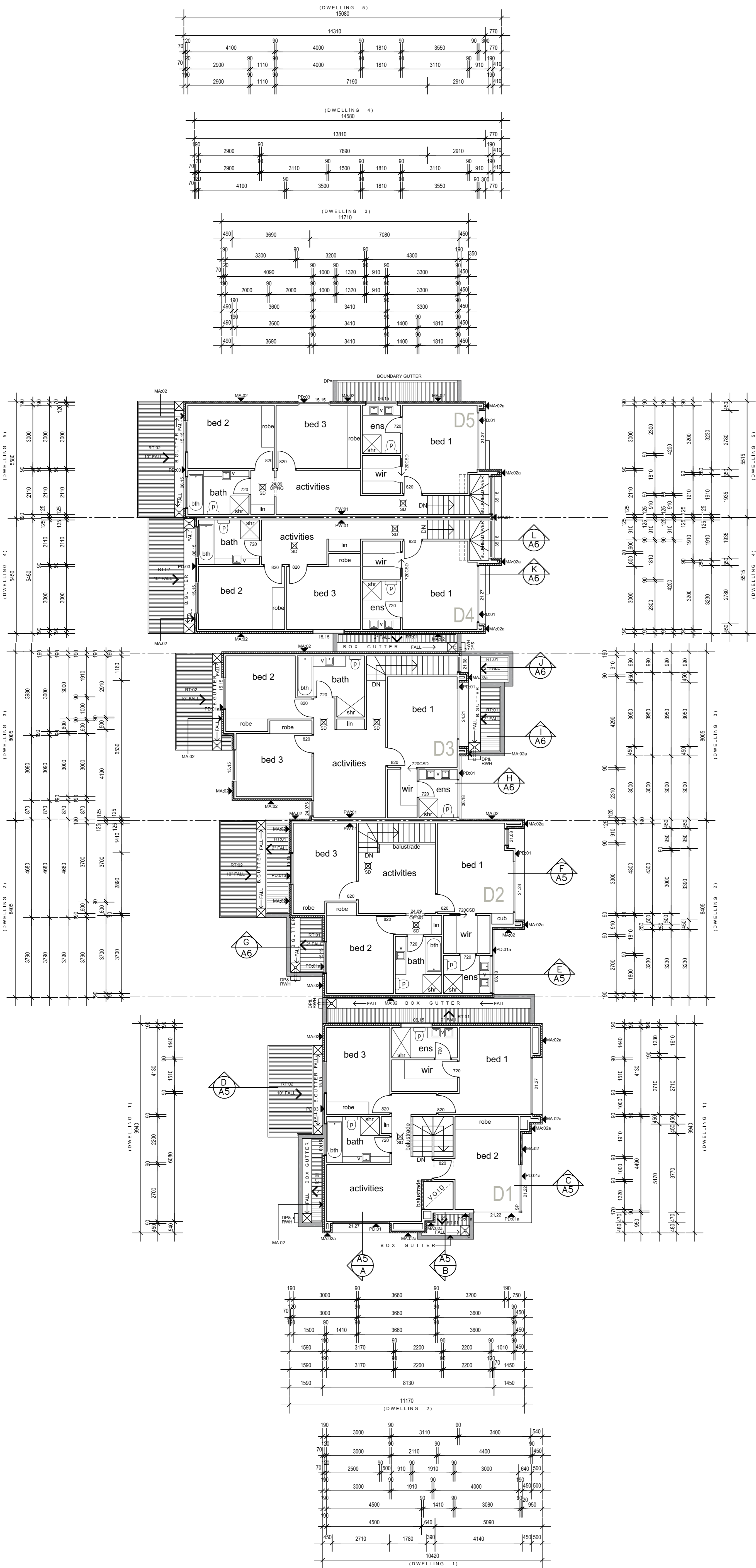
ISSUE DATE:	REVISION:	COMMENTS:
16-11-18	A	D3 AMENDED

FLOOR PLANS

NOT FOR CONSTRUCTION

A2

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WALL SCHEDULE	
CODE	DESCRIPTION
MA-01	BRICK VENEER 11050/90/10 - 110MM BRICK SELECTED FACE BRICK, 50MM AIR GAP, BUILDERS WRAP FIXED TO 90MM TIMBER STUDS, 10MM PLASTERBOARD LINING INTERNALLY
MA-02	HEBEL VENEER 1525/90/10 - 75MM HEBEL POWERPANEL WALL FIXED TO 25MM TOP HATS, BUILDERSWRAP TO 90MM TIMBER STUDS, 10MM INTERNAL PLASTERBOARD LINING, INSTALLATION & SLAYER EXTERNAL TEXTURE COAT SYSTEM IN STRICT ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS
MA-02a	HEBEL SPANDREL- 75MM HEBEL POWERPANEL WALL FIXED TO 25MM TOP HATS, BUILDERSWRAP TO 90MM TIMBER STUDS PACKED OUT ACCORDINGLY TO SUIT, INSTALLATION & SLAYER EXTERNAL TEXTURE COAT SYSTEM IN STRICT ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS
MA-03	150mm SOLID CONCRETE BLOCKWORK SLAYER EXTERNAL TEXTURE COAT SYSTEM IN STRICT ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS
PD-01	JAMES HARDIE SCYON AXON 8/92/10 - 8MM SHEET THICKNESS THICKNESS HARDIEWRAP FIXED TO 90MM TIMBER STUDS, 10MM PLASTERBOARD LINING INTERNALLY, INSTALLATION IN STRICT ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS
PD-01a	JAMES HARDIE SCYON AXON 8/92/10 - 8MM SHEET THICKNESS THICKNESS PACKED OUT TO CONCEAL ADJACENT CAVITIES, HARDIEWRAP FIXED TO 90MM TIMBER STUDS, 10MM PLASTERBOARD LINING INTERNALLY, INSTALLATION IN STRICT ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS
PD-02	JAMES HARDIE SCYON LINEA 16/60/10 - 16MM TONGUE & GROOVE SHEET THICKNESS, 150MM SIZE WIDTH HARDIEWRAP WEATHER BARRIER FIXED TO 90MM TIMBER STUDS, 10MM PLASTERBOARD LINING INTERNALLY, INSTALLATION IN STRICT ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS
PD-03	JAMES HARDIES SCYON MATRIX 8/19/90/10 - 8MM SHEET THICKNESS FIXED TO 19MM SCYON CAVITY TRIM, HARDIEWRAP WEATHER BARRIER FIXED TO 90MM TIMBER STUDS, 10MM PLASTERBOARD LINING INTERNALLY, INSTALLATION IN STRICT ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS
PW-01	BORAL PARTI WALL SYSTEM PW160.1A 10/90/70/90/10 - 10MM SOUNDSTOP PLASTERBOARD FIXED TO 90MM TIMBER STUD, R2.0 GW WALL BATT'S INSULATION, 20MM AIR GAP, 25MM SHAFTLINER, 20MM AIR GAP, R2.0 GW WALL BATT'S INSULATION, 20MM TIMBER STUD, 10MM SOUNDSTOP PLASTERBOARD TO ACHIEVE FRL 60/30/60 AND RW1 & RW1+CTD50, INSTALLATION IN STRICT ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS
HP	DENOTES HEBEL PIER DETAIL TO MANUFACTURERS DETAILS REFER DETAIL
P	DENOTES 120° TIMBER POST WITH SELECTED EXT. GRADE PAINT FINISH
SELECTED PRODUCTS/MATERIALS TO BE INSTALLED IN ACCORDANCE WITH MANUF. SPECIFICATION	

GENERAL NOTES TYPICAL:

- INTERNAL WALLS TYPICALLY TIMBER STUD, TRENCHED, WITH 10MM PLASTERBOARD TO EACH SIDE, WHERE AN INTERNAL WALL DIVIDES A WET AREA USE 10MM MOISTURE RESISTANT PLASTERBOARD TO WET AREA SIDE.
- 10MM MOISTURE RESISTANT PLASTERBOARD TO ALL WET AREA LOCATIONS
- PLAN TO BE READ IN CONJUNCTION WITH STRUCTURAL ENGINEERS DRAWINGS FOR ALL STRUCTURAL STEEL COLUMN/BEAM DESIGN AND TIMBER FRAMING LAYOUTS.
- ALUMINIUM FRAMED WINDOWS & DOORS, ALL PROPOSED GLASS TO COMPLY WITH AUSTRALIAN STANDARD AS1288.
- ALL WET AREAS TO COMPLY WITH BUILDING CODE OF AUSTRALIA (BCA PART 3.8.1.1) & AUSTRALIAN STANDARD AS3740-2010, FLOOR WASTE PROVIDED TO COMPLY IN ACCORDANCE WITH SA3.2.2
- ALL INTERNAL FINISHES/FITTINGS & FIXTURES TO BE CONFIRMED WITH CLIENT PRIOR TO COMMENCING ON SITE.
- PROVIDE 'TERMITESH' TERMITE MANAGEMENT SYSTEM IN STRICT ACCORDANCE WITH ATTACHED SPECIFICATION FOR PROPOSED STRUCTURE
- ALL INSULATION AS PER ENERGY EFFICIENCY REPORT
- PROVIDE SISAL FOIL TO EXTERNAL WALLS ROOF TYPICAL
- ALL CONTROL JOIN LOCATIONS TO BE READ IN CONJUNCTION WITH STRUCTURAL ENGINEERS FOOTING LAYOUT PLAN.
- PLEASE ENSURE ALL DOWNLIGHTS TO BE SEALED AND ALL EXHAUST FANS TO WET AREAS/WCS TO HAVE DAMPERS
- ☒ SD **SMOKE ALARMS TO BE INTERCONNECTED TO PROVIDE A COMMON ALARM & CONNECTED TO CONSUMER MAINS POWER IN ACCORDANCE WITH BCA-2019 3.7.5. & AS3786**
- REFER STRUCTURAL ENGINEERS PLANS FOR CONFIRMATION ON ALL STEEL LOCATIONS AND SIZES / RETAINING WALL TYPES AND SLAB / FOOTING DESIGN.
- MECHANICAL VENTILATION MUST BE PROVIDED TO INTERNAL TOILETS AND THE LIKE AND IN ACCORDANCE WITH CLAUSE 3.8.5 OF VOLUME TWO OF THE NATIONAL CONSTRUCTION CODE MUST DISCHARGE TO THE ATMOSPHERE OR TO A WELL VENTILATED ROOF
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- PARAPET CAPPING MUST BE PURPOSE MADE, MACHINE-FOLDED SHEET METAL, AT A MINIMUM 5 DEGREES WHILE EXTEND NOT LESS THAN 50MM DOWN THE SIDE OF THE PARAPET, BE SEPARATED FROM THE SUPPORTING FRAMING BY A VAPOUR PERMEABLE SARKING AND BE FIXED WITH EITHER SELF-DRILLING SCREWS OR RIVETS WITH RUBBER WASHERS AT INTERVALS OF NOT MORE THAN 500MM THAT DO NOT PENETRATE THE TOP OF CAPPINGS, ALL PARAPETS TO BE FULLY SARKED TO FULL HEIGHT OF WALL BEHIND CLADDING AND CAPPED IN ACCORDANCE WITH BCA-P2.2.2.
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- ROOF SPACE TO BE VENTILATED VIA A WHIRLYBIRD LOCATED NEAR RIDGE / HIGHEST POINT OF ROOF SPACE AND REMAINDER BY EAVE VENTS IN ACCORDANCE WITH BCA-P2.4.5
- SARKING TO ALL EXTERNAL WALL LOCATIONS / ROOF TO BE INSTALLED ON THE EXTERIOR SIDE OF THE PRIMARY INSULATION LAYER & HAVE A FLAMMABILITY INDEX NOT GREATER THAN 5 WHEN USED IN ROOF APPLICATIONS, THE PLIABLE BUILDING MEMBRANE INSTALLED IN THE EXTERNAL WALL MUST COMPLY WITH AS/NZS 4200.1 AND BE INSTALLED IN ACCORDANCE WITH AS 4200.2, AS REQUIRED UNDER PART 3.8.7.2 OF NCC 2019 VOLUME 2.

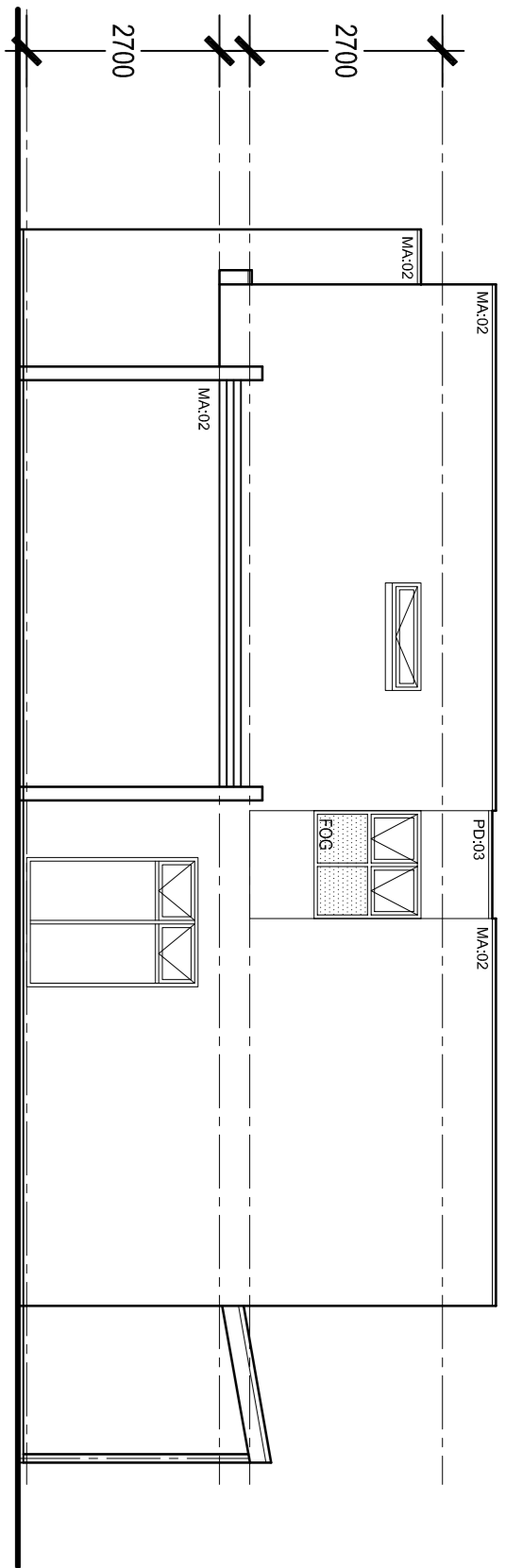
AMENDMENTS:

ISSUE DATE:	REVISION:	COMMENTS:
16-11-18	A	D3 AMENDED

FLOOR PLANS

NOT FOR CONSTRUCTION

A3



Dwelling 1



NORTH ELEVATION
SCALE 1:100



WEST ELEVATION
SCALE 1:100

D'ANDREA
ARCHITECTS
dandrearchitects.com.au
phone 08 9438 5566
mobile 04 380 5566
proposed: 5 dwellings
at: 19 alexander ave.,
campbelltown.
for: mr & mrs. bifeari

ALL DIMENSIONS AND LEVELS TO BE CONFIRMED PRIOR TO THE COMMENCEMENT OF ANY WORK. ANY DISCREPANCY TO BE REPORTED TO THIS OFFICE IMMEDIATELY.

PRELIMINARY PLAN FOR CONFIRMATION	<input type="checkbox"/>
PLANNING APPLICATION	<input type="checkbox"/>
BUILDING APPLICATION	<input checked="" type="checkbox"/>
DRAW	
SHEET:	

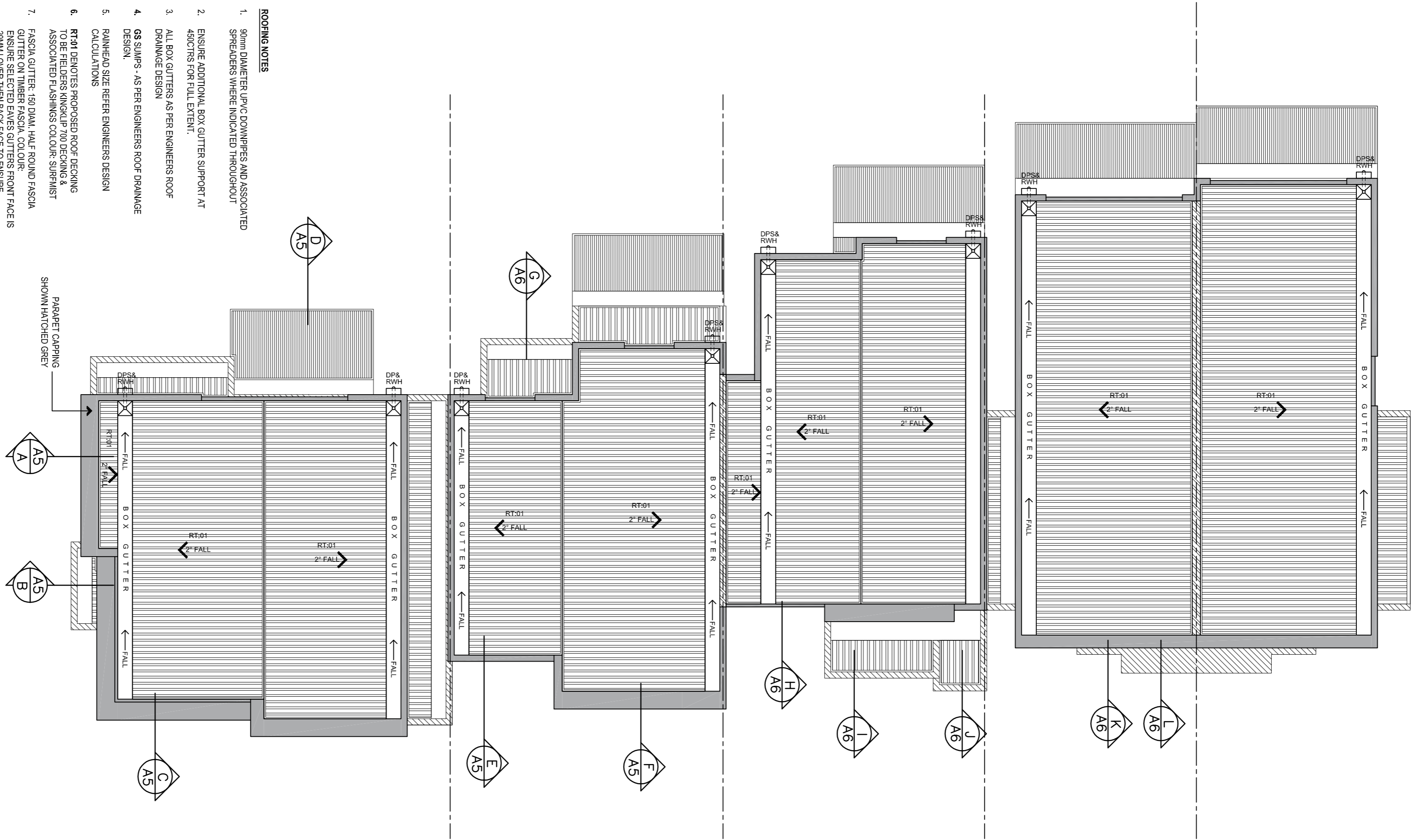
AMENDMENTS:

ISSUE DATE:

16-11-18

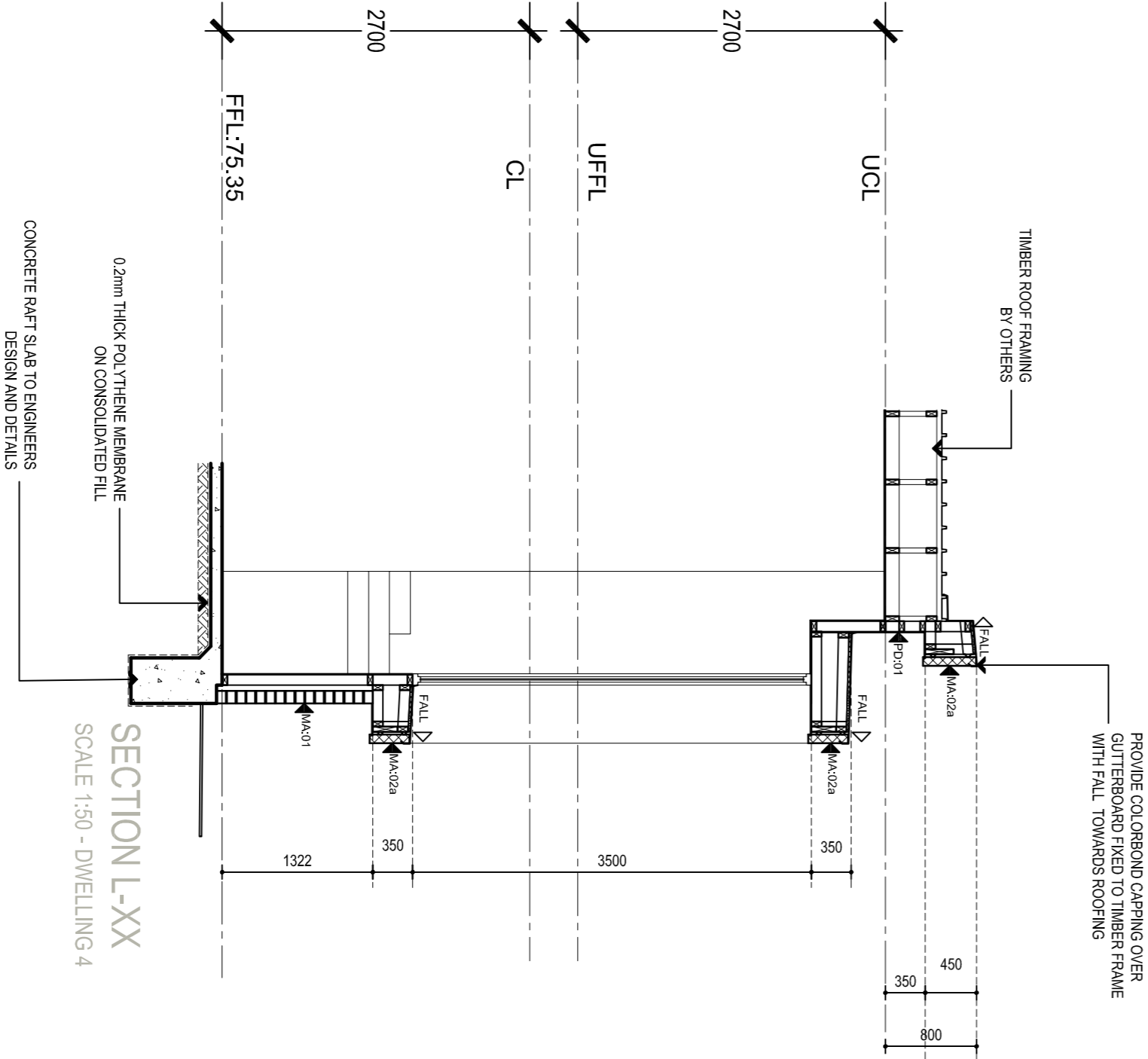
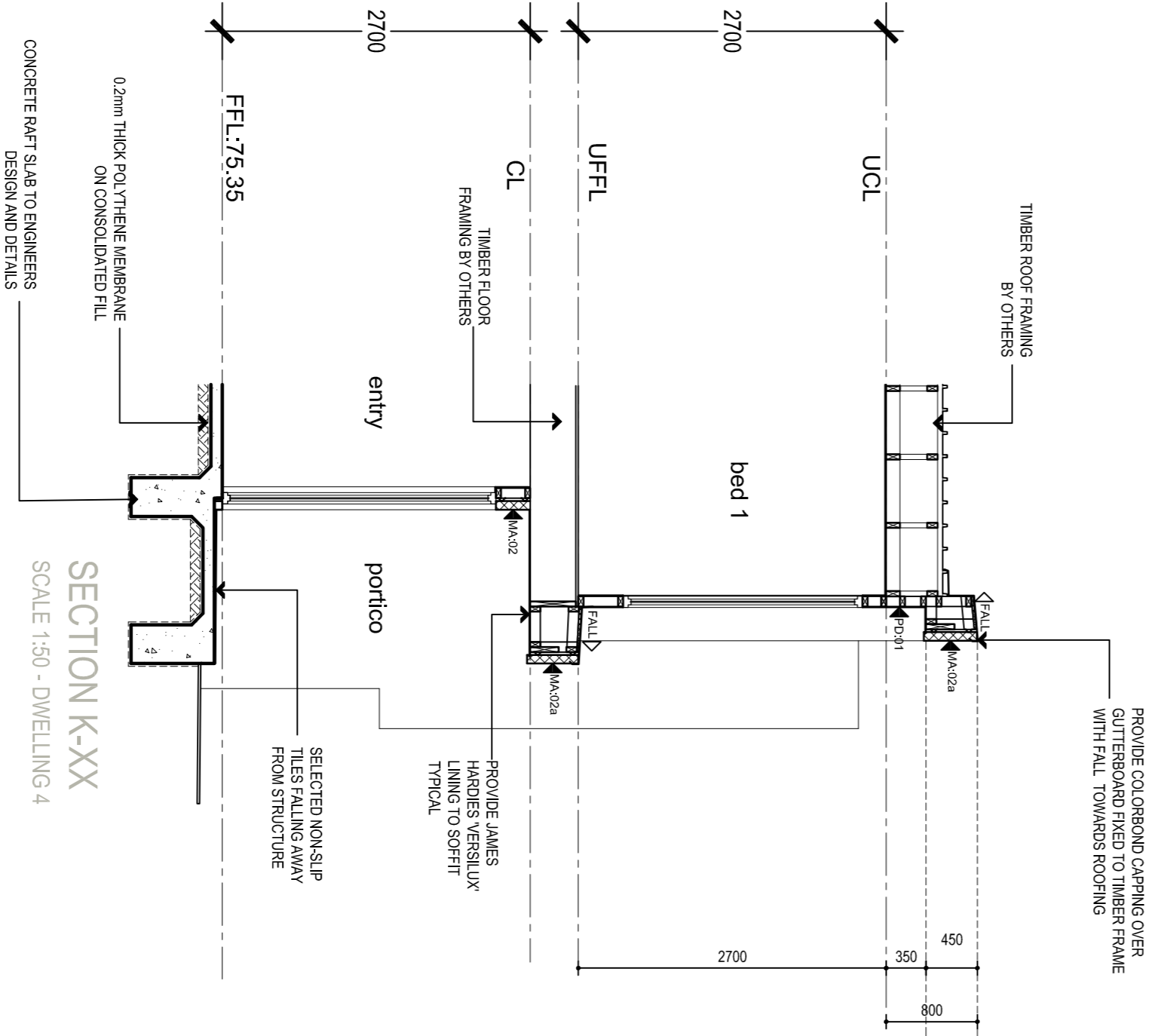
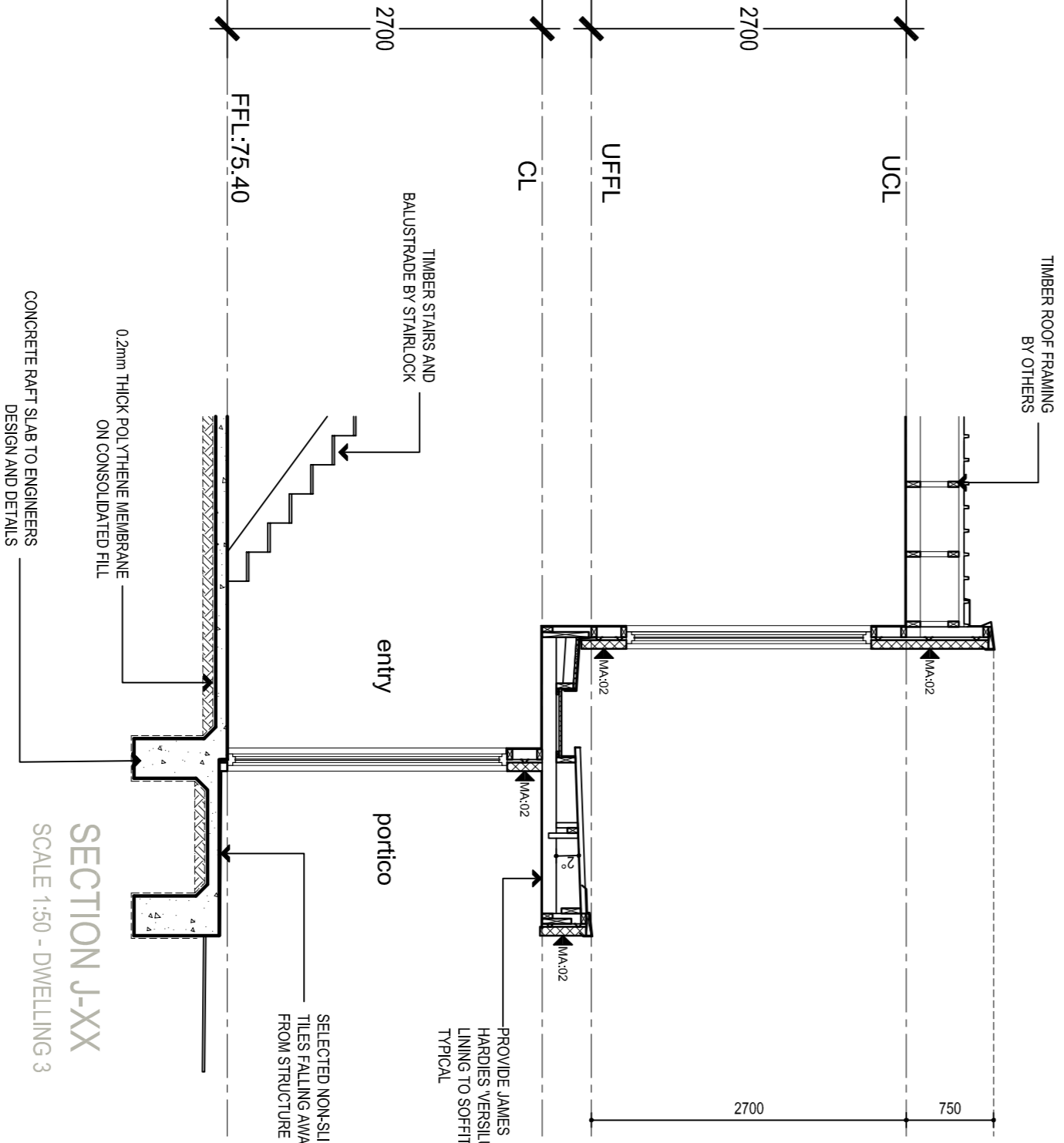
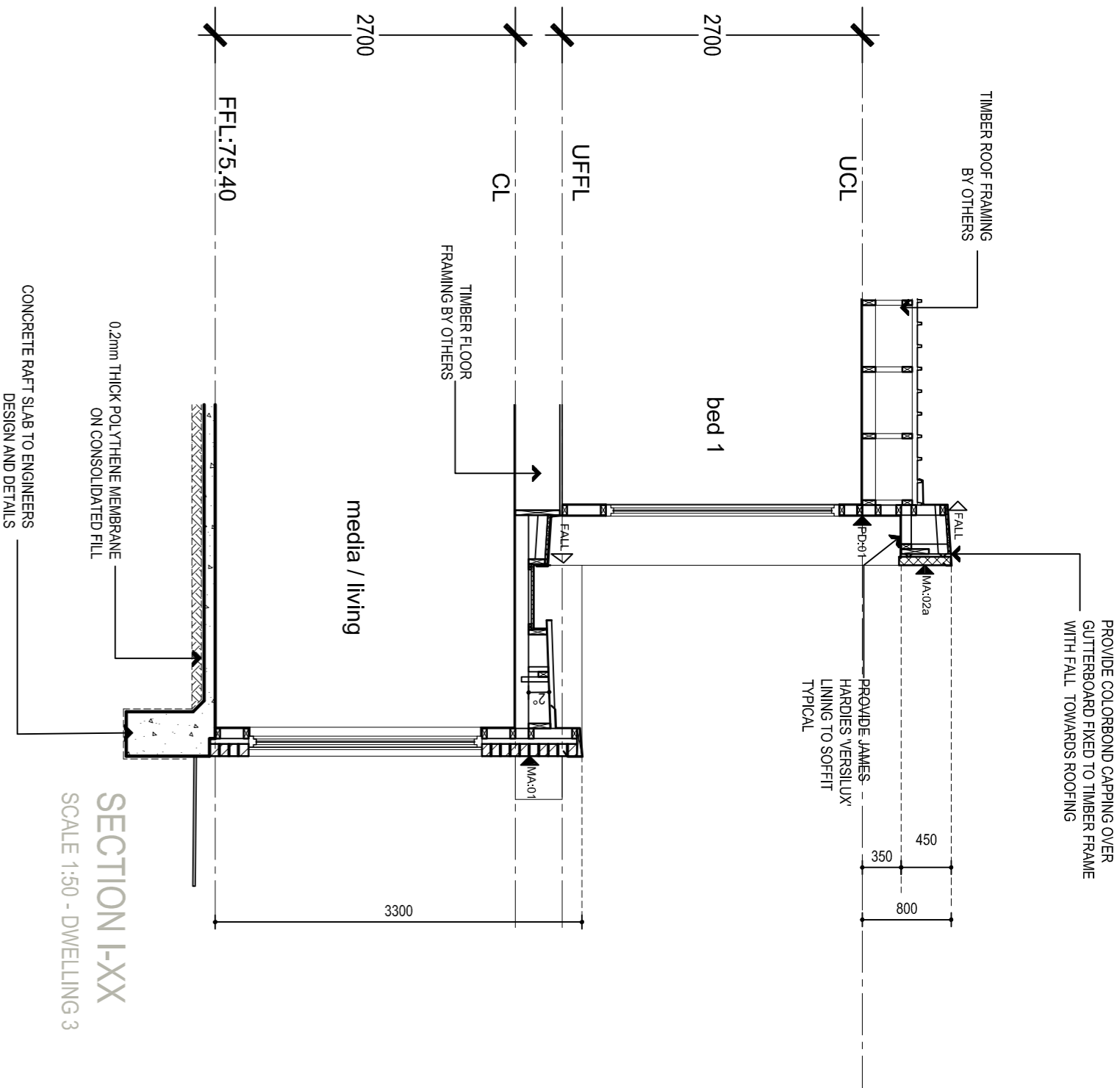
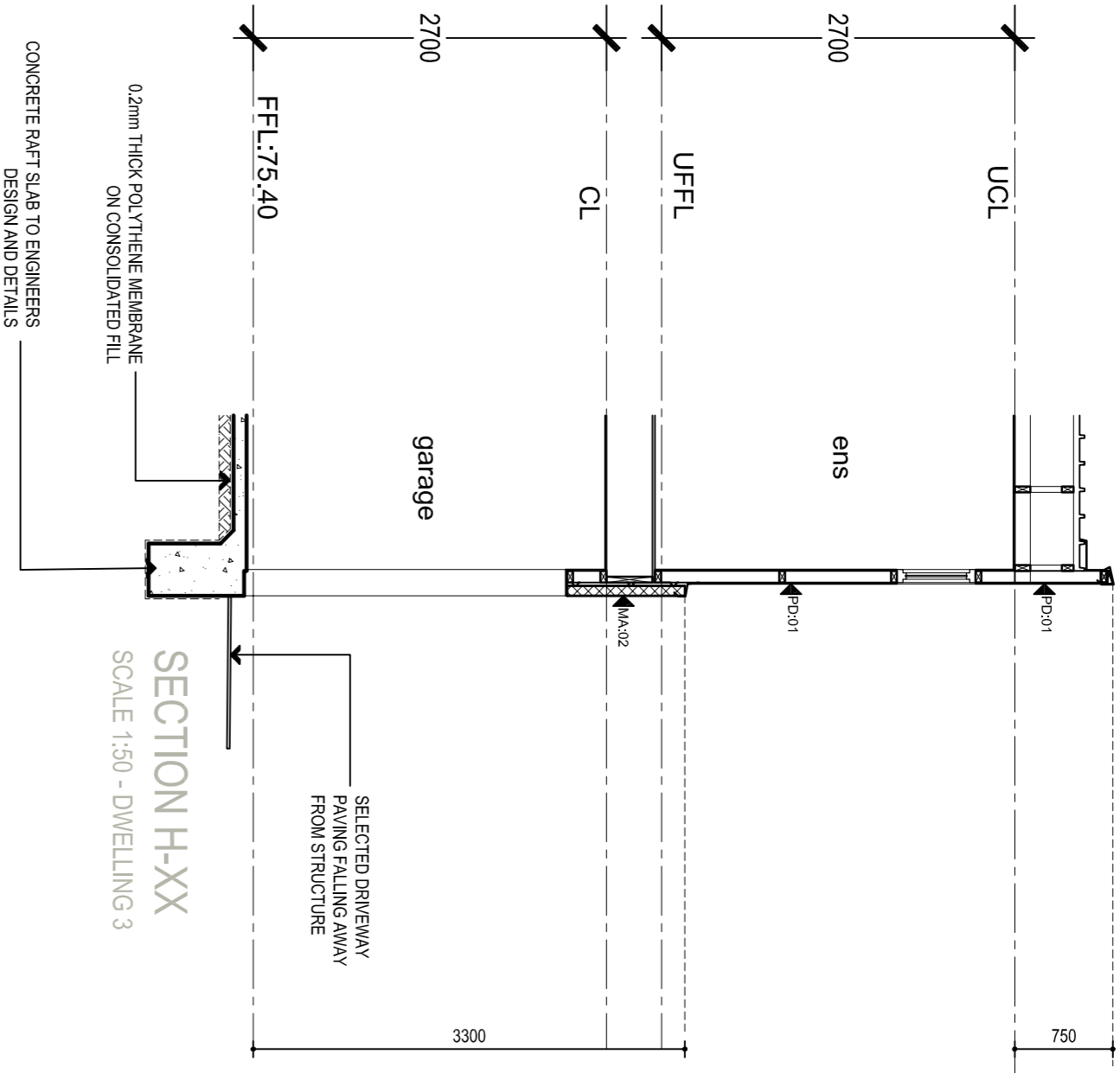
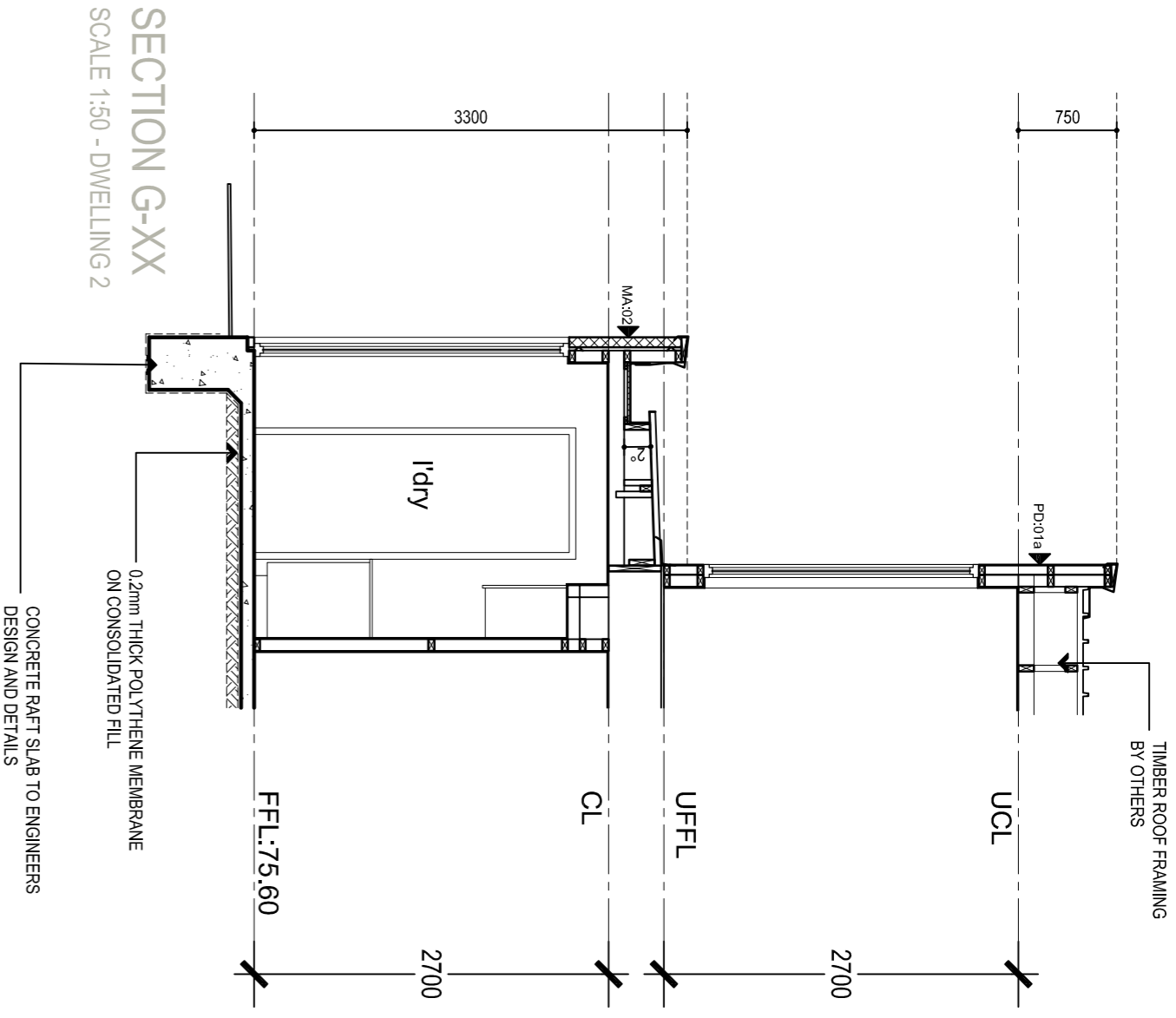
REVISION:	COMMENTS:
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ELEVATIONS	A4
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UPPER ROOF DRAINAGE PLAN

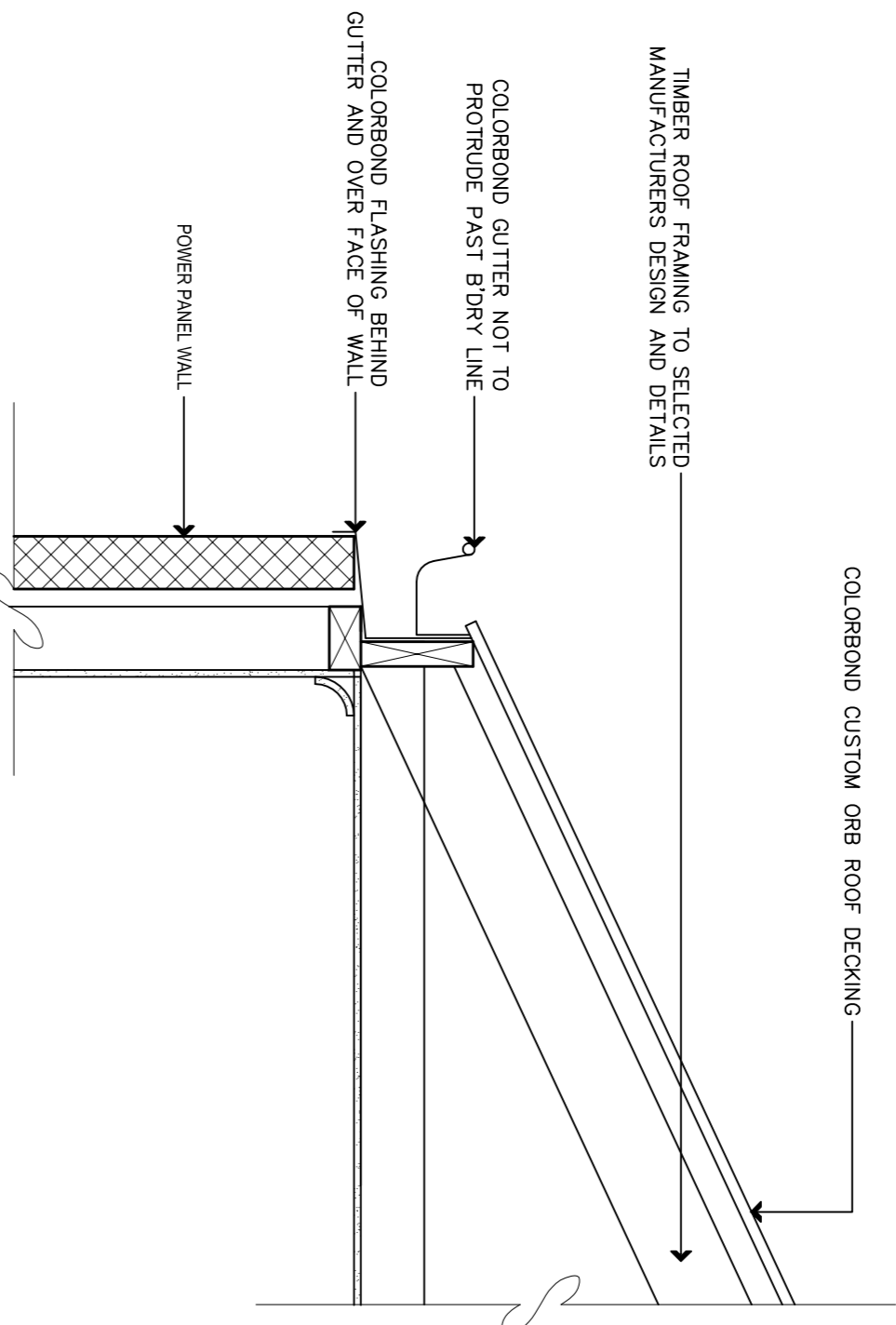
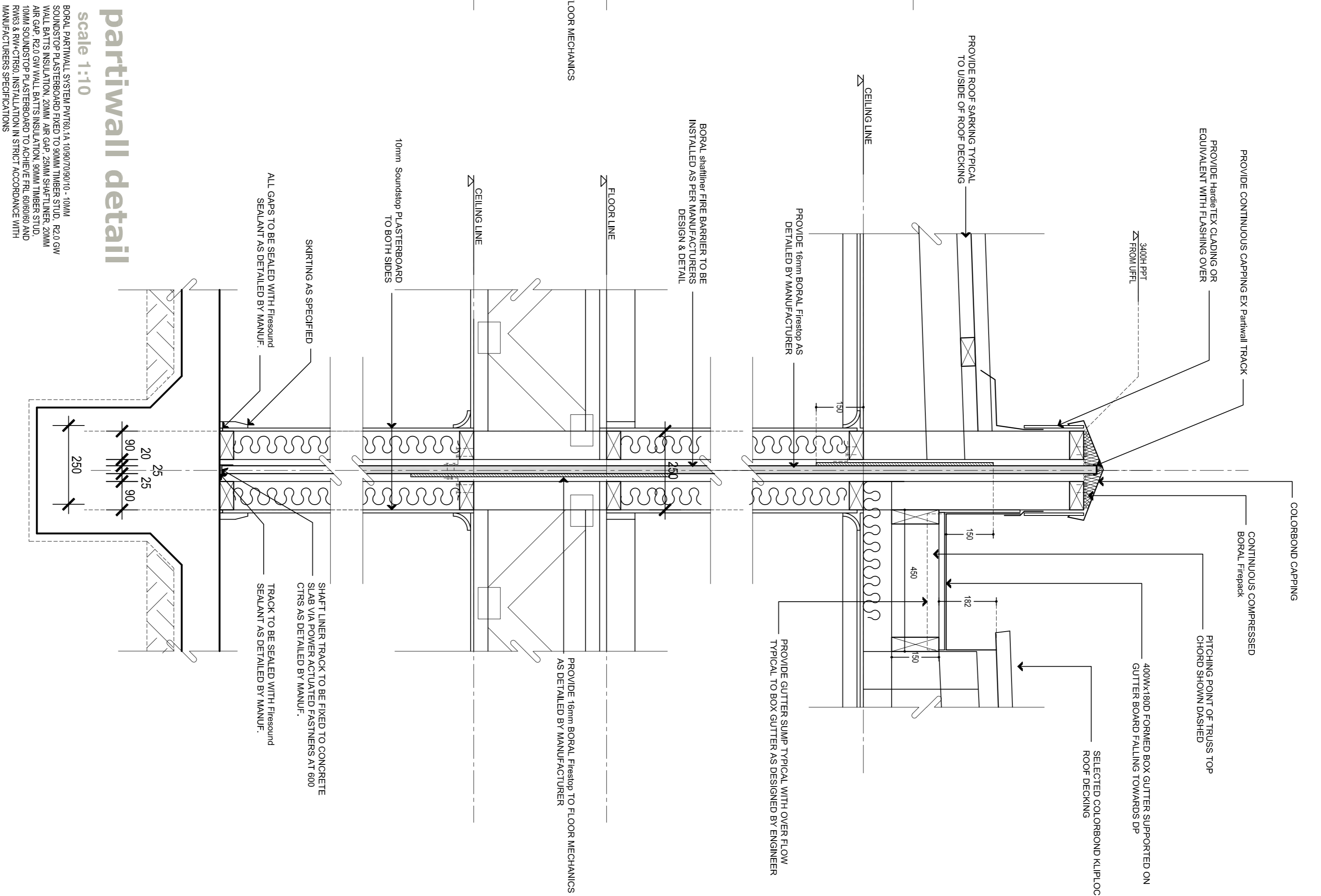
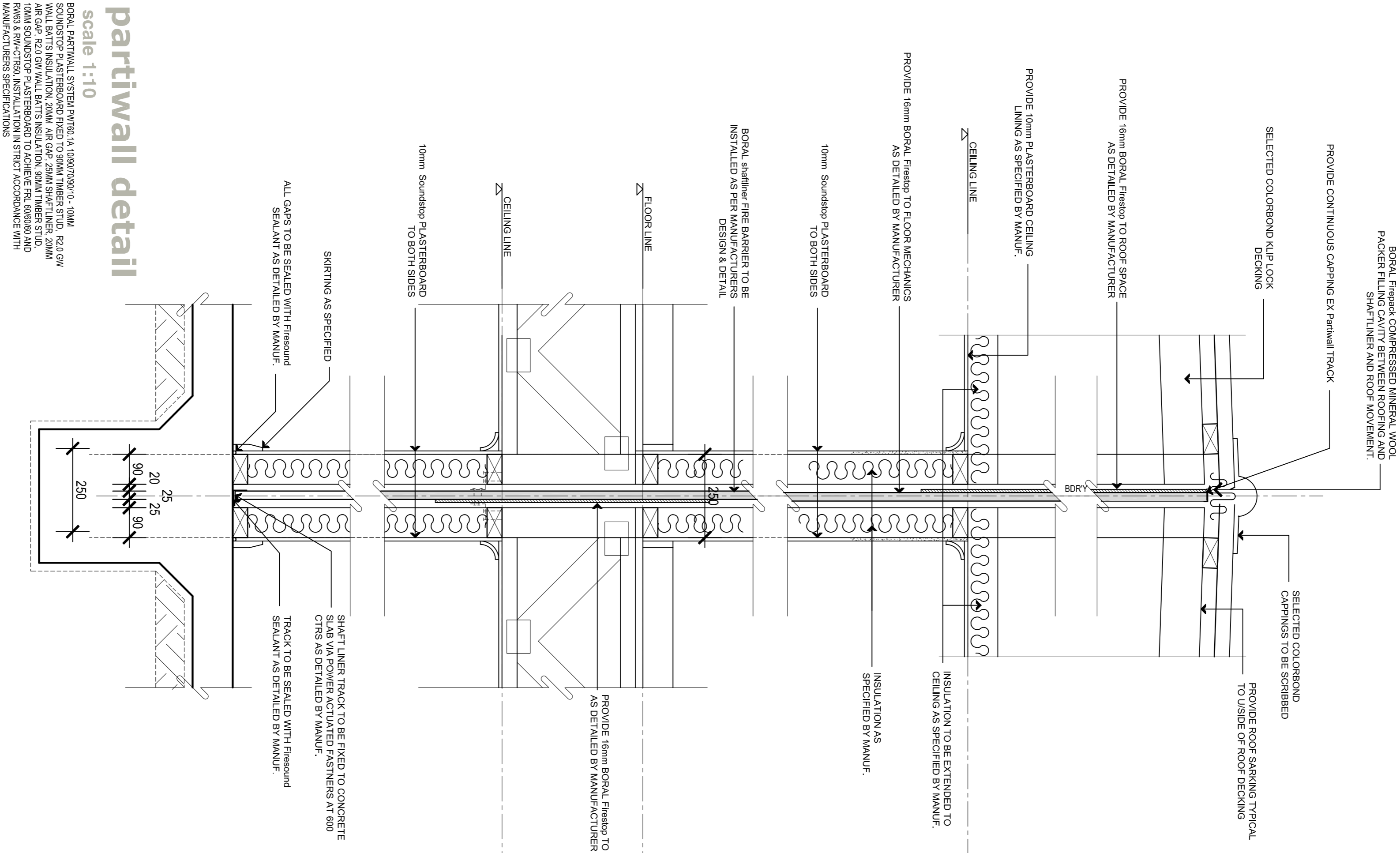
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ARCHITECTURAL SERVICES TO BE PROVIDED
IN CONNECTION WITH ENGINEER'S SCOPE
REPORT & DATA SPECIFICATION
ALL DIMENSIONS AND DETAILS TO BE
COORDINATED WITH ENGINEER'S SCOPE
COORDINATOR OF ANY WORK, ANY
OFFICE IMMEDIATELY.

PRELIMINARY PLANS FOR COORDINATION	
PLANNING APPLICATION	<input type="checkbox"/>
BUILDING APPLICATION	<input checked="" type="checkbox"/>
DATE:	SHEET:
DATE:	SCALE:

AMENDMENTS:	
SHEET DATE	REVISION
6/11/18	A
COMMENTS:	TO AMEND



boundary gutter detail

Scale 1:10