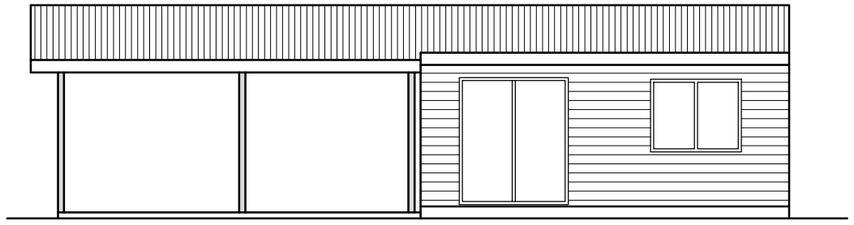
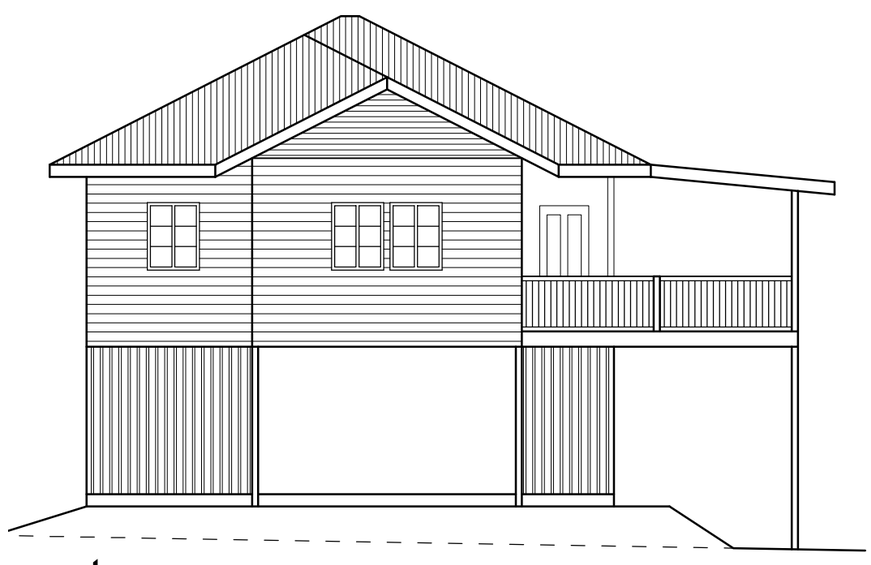
DWELLING & GRANNY FLAT
FOR COLIN ALEXANDER AT
22 HOOPER DRIVE
PLAINLAND

SHEET INDEX		
SHEET NUMBER	REVISION	DRAWING TITLE
		COVER SHEET
ALX-1	A	SITE PLAN
ALX-2	A	PROPOSED FLOOR PLAN
ALX-3	A	ELEVATIONS
ALX-4	A	SECTION A-A'
ALX-5	A	EXISTING FLOOR PLAN
ALX-6	A	BRACING AND TIE DOWN
ALX-7	A	GRANNY FLAT PLAN & ELEVATIONS
ALX-8	A	GRANNY FLAT SECTION & FOUNDATION

ENGINEERING		
ALX-9	A	NOTES
ALX-10	A	STD TIE-DOWN DETAILS
ALX-11	A	STD TIE-DOWN DETAILS
ALX-12	A	STRUCTURAL PLANS
ALX-13	A	STD STRUCTURAL DETAILS
ALX-14	A	FOUNDATION DETAILS
ALX-15	A	FOUNDATION DETAILS
ALX-16	A	FOUNDATION DETAILS
ALX-17	A	FOUNDATION DETAILS
ALX-18	A	STANDARD PLATFORM DETAILS
ALX-19	A	PLUMBING DETAILS
ALX-20	A	PLUMBING DETAILS





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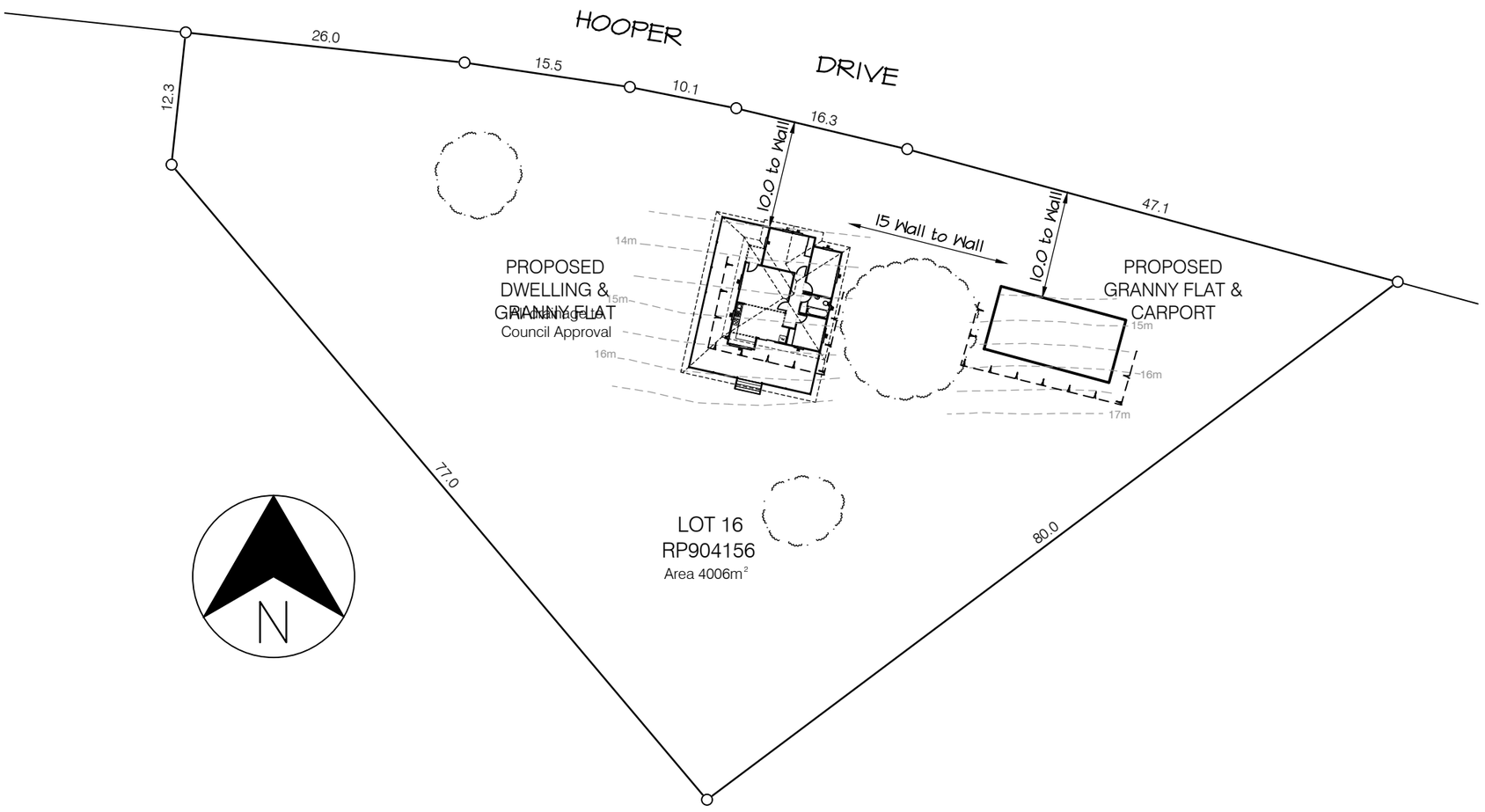
ALX-COVER

WIND CATEGORY: N3



NOTES

DESIGN
- This Dwelling and Granny Flatare to comply with the BUILDING CODE OF AUSTRALIA NCC 2019.

TERRAIN
- The site is an exposed rural block in a non cyclone area. N3 Wind Velocity 42m/s.

TIMBERWORK
- This building is an existing timber framed building clad with Weatherboard.

CONCRETE
F'c = 20MPa

ADDITIONAL TIMBERWORK
All timber to be stress grade F14 joint group J2 unless noted otherwise. Sizes and details not shown on the drawings shall comply with AS 1684.2-2010.

TIMBER SCHEDULE
- Refer to supplier's specifications.

DWELLING
- The proposed Dwelling and Granny Flat are existing structures and are to be sited as shown.

STUMPS
- Stump positions are indicative only. Actual stump positions should be determined when on site. All dimensions to be checked and verified on site. Figured dimensions take precedence over scaled.

BRACING
- Refer to sheet 6.

TIE DOWN
- Refer to sheet 6.

BUILDING COMPLIANCE
- Stairs to comply with Part 3.9.1 - v2 of the BCA.
- Handrails / Balustrades to comply with Part 3.9.2 - v2 of the BCA.
- WC doors to comply with Part 3.8.3.3 - v2 of the BCA.
- All wet areas to comply with Part 3.8.1 - v2 of the BCA .
- Lighting to comply with Part 3.8.4 - v2 of the BCA.
- Ventilation to comply with Part 3.8.5 - v2 of the BCA.
- Smoke alarms to be provided in accordance with Part 3.7.2 - v2 of the BCA and AS 3786 of the Australian Standards.
- Termite protection to comply with Part 3.1.3 - v2 of the BCA.
- Masonry construction to comply with Part 3.3 - v2 of the BCA.
- All gutters to discharge to 90mm downpipes with reticulation to street kerb, and channel downpipes to be located at 12m max. spacings.
- New HWU's to be fitted with temp. limiting valves. Existing HWU's without TLV's are to have mixing valves at all new bathroom fixtures.

SUSTAINABILITY
As per Queensland Development Code Part MP4.1 & MP4.2:
- Ceiling Batts with minimum R2.5 Rating to be installed.
- All shower roses to be AAA-rated unless otherwise noted.
- All WC cisterns to be 6/3 litre dual-flush.
- Provide energy efficient lighting to at least 80 per cent of the house.
- Water pressure to any fixture must not exceed 500kPa. Water pressure limiting devices to be installed in areas with high water pressure.
- Provide greenhouse efficient hot water systems such as solar, heat pump or gas hot water with minimum 14 renewable energy certificates. Provide temp. limiting devices to all bathroom fixtures.

GENERAL NOTES
- APPROXIMATE LOCATION OF RESIDENCE AS INDICATED. CONFIRM LOCATION ON SITE WITH OWNER. BUILDING MUST REMAIN WITHIN LOCAL COUNCILS MINIMUM SETBACK REQUIREMENTS. ALL PLUMBING AND DRAINAGE TO LOCAL COUNCIL APPROVAL.
- FINAL LEVELS TO BE DETERMINED ONSITE.
- YARD GULLY FINAL LOCATION TO BE DETERMINED ON SITE. YARD GULLIES SHOULD NOT BE POSITIONED CLOSER THAN 1.0M TO GAS HOT WATER SYSTEM OR GAS BOTTLE LOCATIONS (IF APPLICABLE). REFER AS 5601-2002.

Scale 1 : 500
0 5 10 15m

DRAWN: WP DATE JAN 2023

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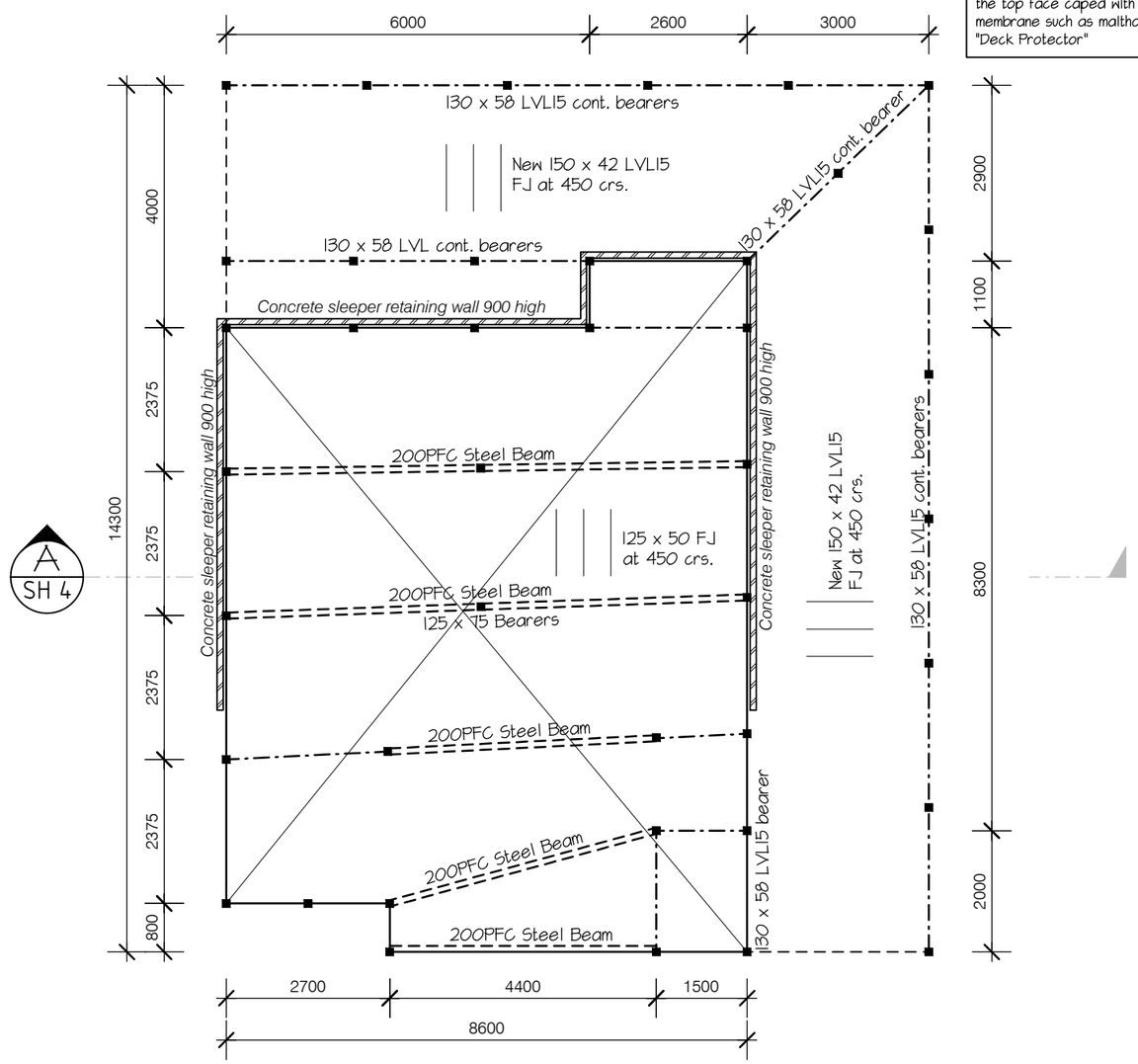
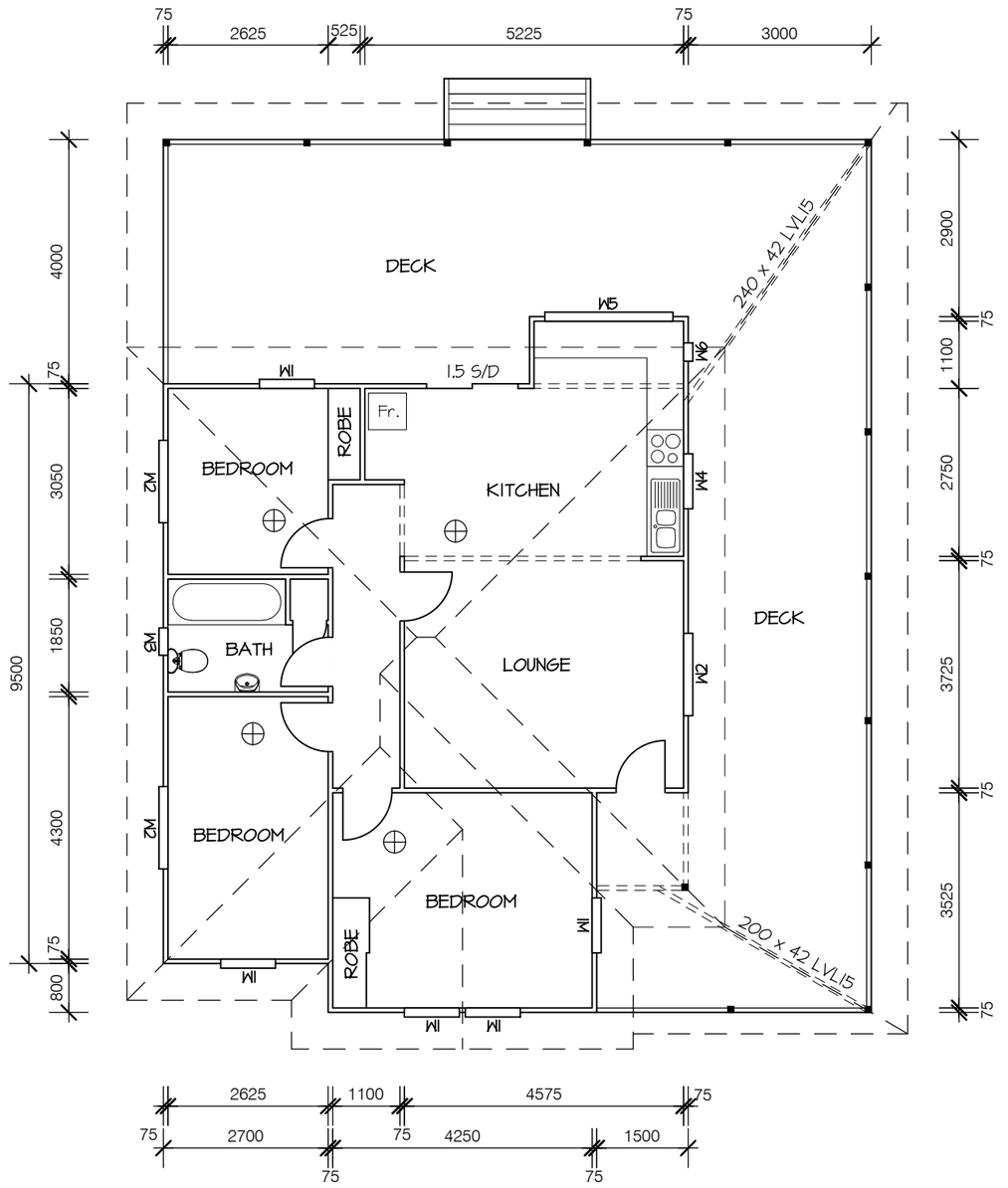
SITE PLAN

ALX-001 SHEET 1 OF 20

NOTE:
Weather exposed LVL floor joists and bearers to be painted on all 4 sides before assembly and have the top face caped with a membrane such as malthoid or "Deck Protector"



FRONT



FRONT

A
SH 4

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WINDOW SCHEDULE

W1	1100 x 850
W2	1100 x 1350
W3	1100 x 450
W4	900 x 900
W5	900 x 2100 Bifold
W6	900 x 300

LEGEND

- SMOKE ALARM
- SL Skylight
- MV MECHANICAL VENT
- DISABLED ACCESS

0 1 2 4m

SCALE 1:100

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DWELLING & GRANNY FLAT FOR COLIN ALEXANDER AT 22 HOOPER DRIVE PLAINLAND

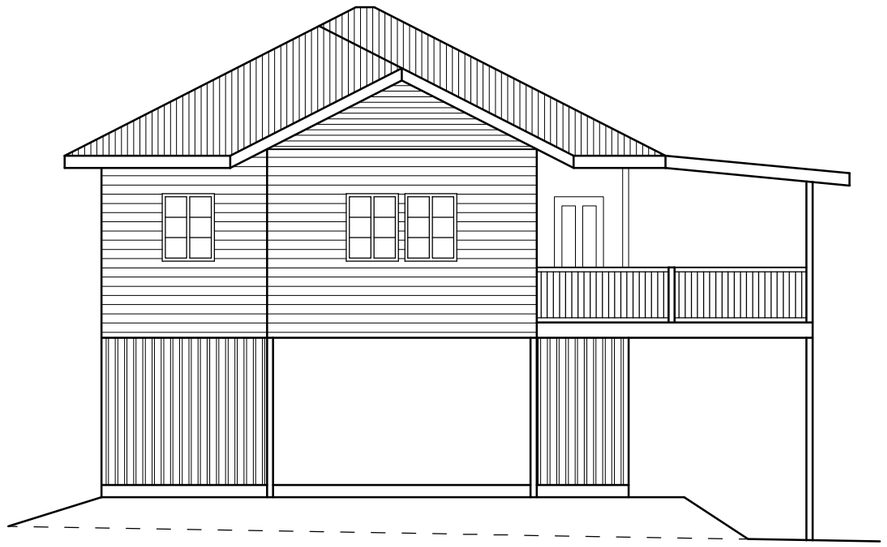
PROPOSED FLOOR PLAN

ALX-002 SHEET 2 OF 20

ALX - Alexander 22 Hooper Drive Plainlanding

SOUTH EAST ELEVATION

SOUTH WEST ELEVATION



NORTH EAST ELEVATION
(FRONT)

NORTH WEST ELEVATION

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0 1 2 4m

SCALE 1:100

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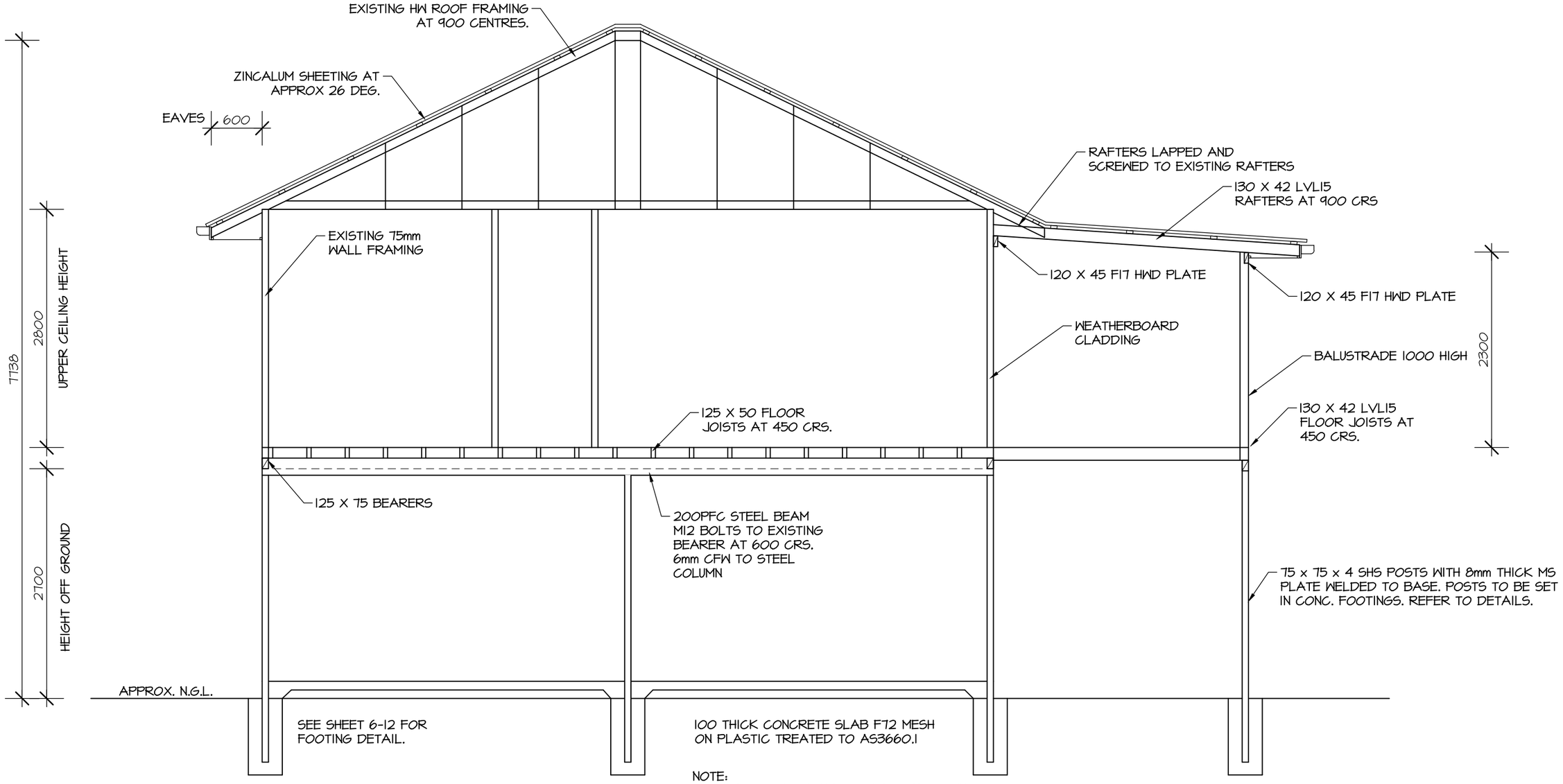
ELEVATIONS

ALX-003 SHEET 3 OF 20



NOTES:

DECK SURFACE DRAINAGE TO BE DIVERTED AWAY FROM DWELLING TO COMPLY WITH NCC 2014 VOL. 2 PART 3.1.2.3, INCLUDING THE PROVISION OF 50mm STEP DOWN FROM DOOR THRESHOLD FINISHED LEVEL TO DECK ALL IN ACCORDANCE WITH AS4654

ENGINEERED WOOD PRODUCTS (EWP's), SOFTWOOD AND NON NATURAL DURABLE ARE TO BE H3 TREATED, PAINTED WITH EXTERNAL GRADE, LIGHT-COLOUR, ACRYLIC PAINT AND HAVE END GRAIN PHYSICALLY CAPPED AND OR PROTECTED FROM THE WEATHER INGRESS AS REQUIRED BY THE MANUFACTURER OF THE PRODUCT.

0 0.5 1 2m

SCALE 1:50

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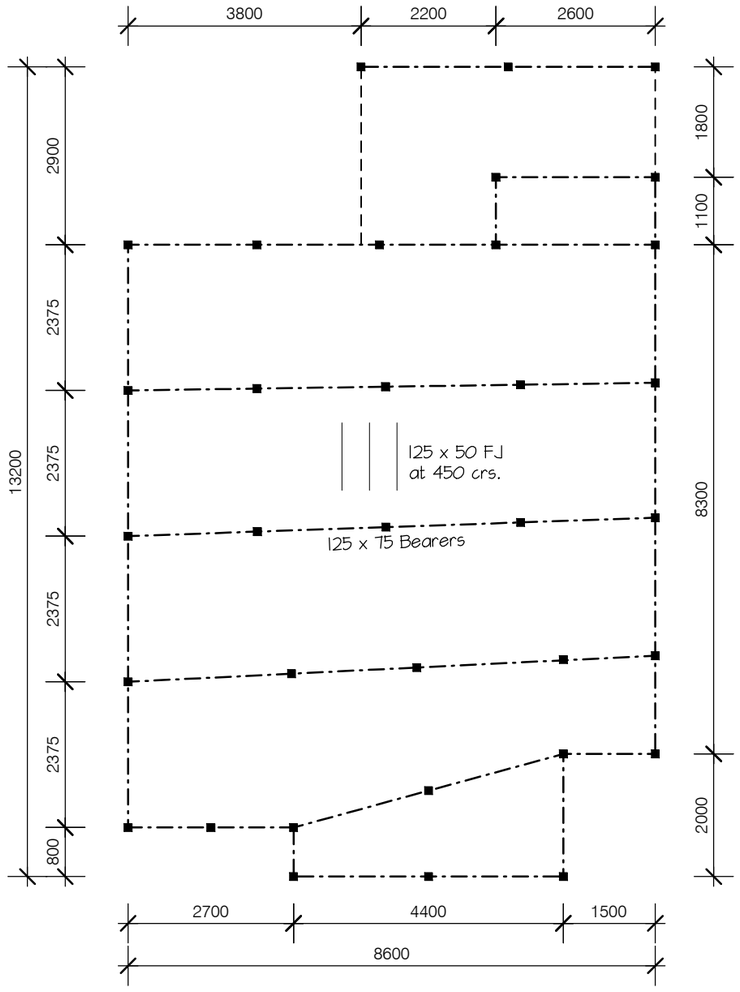
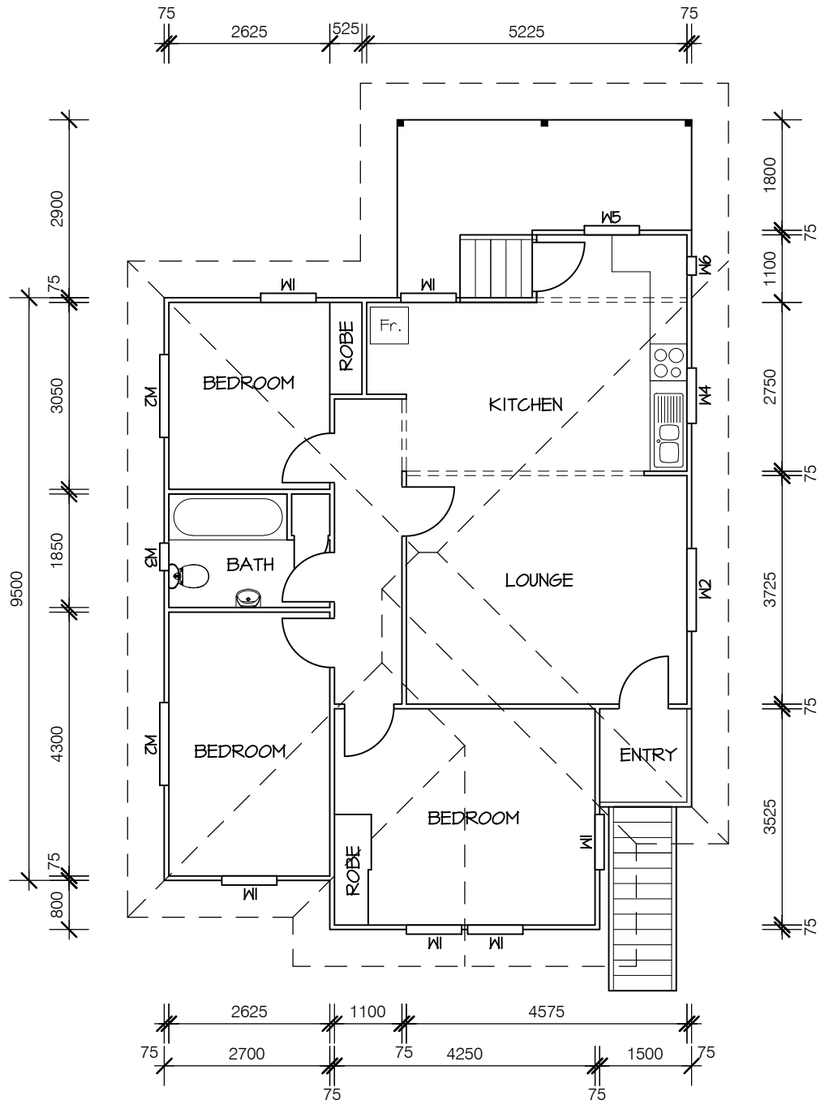
SECTION A-A

ALX-004 SHEET 4 OF 20



FRONT



FRONT

ALX - Alexander 22 Hooper Drive Plainland.dwg

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WINDOW SCHEDULE

W1	1100 x 850
W2	1100 x 1350
W3	1100 x 450
W4	900 x 900
W5	600 x 900
W6	900 X 300

0 1 2 4m

SCALE 1:100

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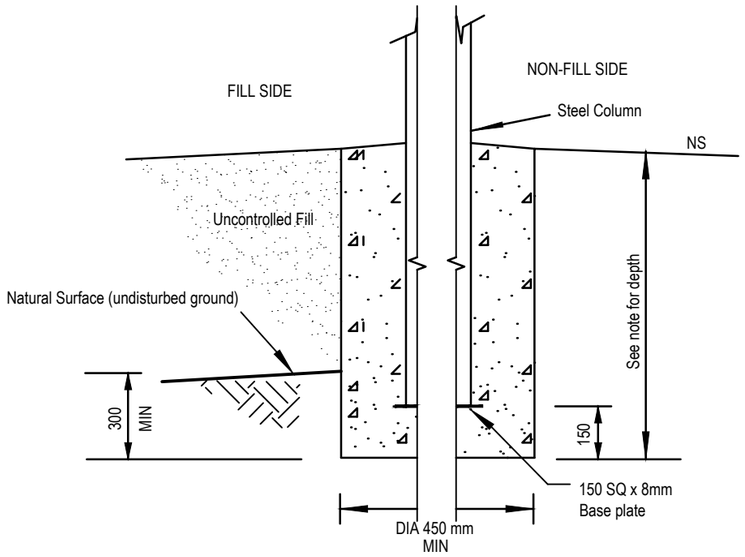
EXISTING FLOOR PLAN

ALX-005 SHEET 5 OF 20



TYPICAL MAIN POST PAD FOOTING DETAIL - PF1

Not to scale

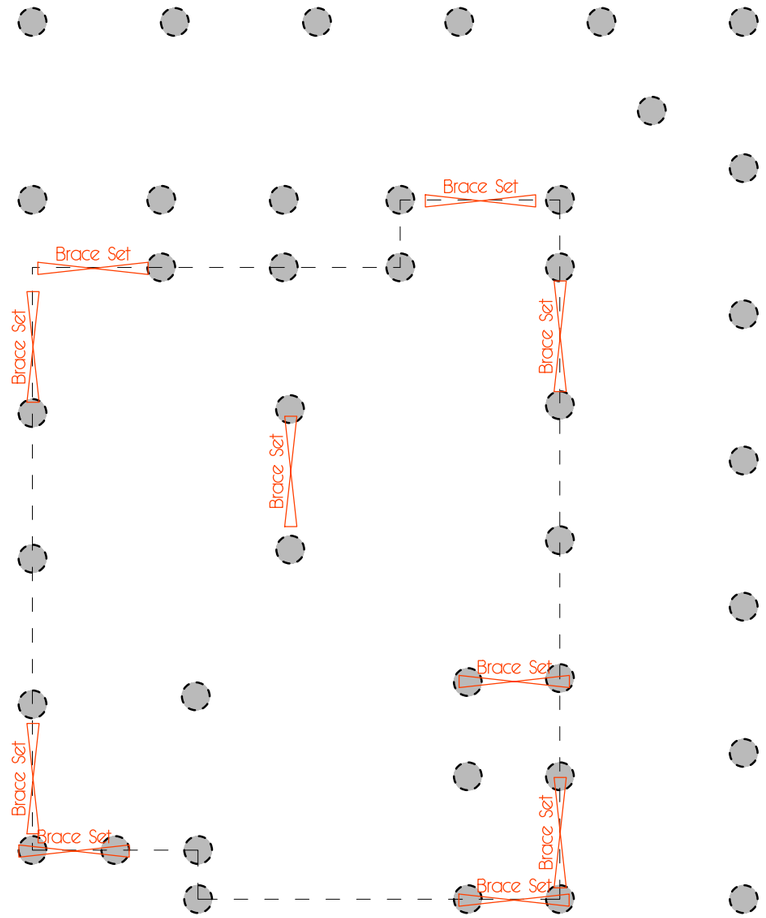
Bracing Required 58 kN

Bracing Provided 60 kN (4 Bracing Sets)

Bracing Required 72 kN

Bracing Provided 75 kN (5 Bracing Sets)

BRACING UPPER LEVEL: Existing timber framed building clad with weatherboard



GROUND FLOOR LINTEL AND BRACING PLAN

ALL LINTELS SHALL BE MGP12 UNLESS NOTED OTHERWISE

ANY EXTERNALLY EXPOSED PINE MUST BE H3 TREATED
LINDSAY CONSULTING P/L RECOMMEND H3 TRUECORE TREATMENT

MEMBERS DESIGNED WITH HYNE DESIGN V7.5.3

NOTE THAT LINTELS BASED ON TRUSS LAYOUT SHOWN. BUILDER SHALL CONFIRM LINTELS FOR TRUSS LAYOUT PROVIDED BY MANUFACTURER PRIOR TO CONSTRUCTION.
SUITABLE FOR N3 CONDITIONS

PF1

Brace Set — BRACING SET

NOTE:
THIS SITE CLASSIFICATION HAS BEEN DETERMINED AS A "P/H2" SITE AS PER SOIL REPORT 852637 BY QLD TESTING PTY LTD ON 28/2/2022. BORED PIERS 450mm DIA AND A MINIMUM DEPTH OF 1500mm, THROUGH ALL FILL AND 1500mm MINIMUM INTO THE EXISTING SOIL PROFILE.

STANDARD NOTES FOR RELOCATED RESIDENCE
50 m/s ULTIMATE WIND VELOCITY (N3)

FOUNDATIONS

Footings shall be as per AS2870 based on a site classification report for the proposed site. The columns shall be installed minimum 750mm into any footing, backfill with concrete. A competent person prior to the pouring of the concrete should inspect all footings and columns should be placed 750mm into excavation and backfilled with 20mpa concrete.

TIE-DOWN SCHEDULE

Reinstatement of tie-down etc shall be necessary following relocation and shall be as noted below.

BEARERS TO STUMPS

TIMBER STUMPS - install 12mm diameter rod extending from the top of the bearer to 500mm down the stump with 100 x 56 x 6mm G.I. plate welded to rod (500mm min), bolt pole to stump with 16mm dia through stump.

STEEL STUMPS - Bolted as per table below. All connections shall be galvanised or treated to prevent corrosion.

Maximum roof area per connection

Up to 9 m²	1-No. M12 - 100 mm long coach screw
Up to 15 m²	2-No. M12 - 100 mm long coach screws
Up to 30 m²	2- No. M12 bolts (horizontal) or 1 M12 bolt (vertically through bearers)

PLATES TO BEARERS/JOISTS
Remove top and bottom Weatherboard or sheeting and strap the top of every stud to plate and the bottom of every stud to bearers with 30 x 0.8 galvanised strap with a minimum of 4 nails to each leg.

If constructed of vertical VJ lining boards, provide all boards with of 2 No 75 mm long No. 14 Type 17 screws to bearer and top plate. Drills nail holes to prevent splitting of boards.

12mm cyclone rods requires beside ea. window and door opening larger than 2400 mm.

Alternatively the studs may be fixed to the floor joists via the above method and the floor joists fixed to the bearers by the following methods.

For roof areas up to 2 m² per joist 2 No. 75 mm x 3.05 mm skew nails may be provided per joist into the supporting bearer.

For roof areas between 2 m2 and 5.8 m2 per joist 1 No. framing anchor with 4-No. 3.05 mm nails per leg of each framing anchor.

RAFTERS TO TOP PLATES

For rafters at 900 crs with a maximum length of 3m fix with 1 triple grip, 4/2.8 nails ea. leg.

For rafters at 900 crs exceeding 3m length fix with 2 triple grips, 4/2.8 nails ea. leg. 30 x 0.8 G.I.

1 No. 30 x 0.8 GI Looped straps may be used in lieu of tie-down given above but strapping must be tight and nailed with 4/2.8 nails ea. leg. If rafters are in-line vertically above wall studs then strapping of rafters can be fixed directly to wall studs and eliminate strapping of studs to top plates.

RAFTERS TO RIDGE AND HIPS

Use 30 x 0.8 G.I. strap to each rafter. Strap each rafter to each ridge or hip by nailing each pair of rafters with strapping passing under ridge. All ridge and hips will be strapped down to internal walls at maximum 900 crs. Internal walls to be bolted or strapped to bearers under house.

BATTENS TO RAFTERS

Fix all roof battens to rafters with 1/75mm No.14 Type 17 screw, but all batten joins will be mitred across rafters and strapped to each side of rafter.

KING POSTS, COLLAR TIES AND STRUTTING BEAMS

Collar ties shall be fixed to rafters with 1/M12 bolt. Provide 2 triple grips with 4/2.8 nails ea. leg at all intersections of members unless specified otherwise.

All bearer spans shall be as per existing locations prior to removal except where reinforced as per approved engineering drawings.

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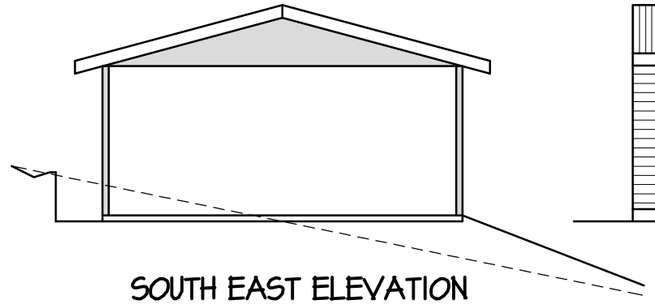
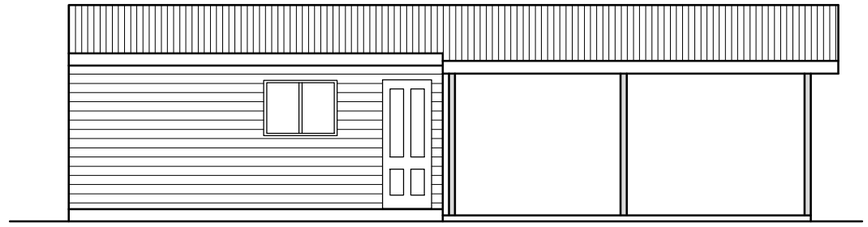
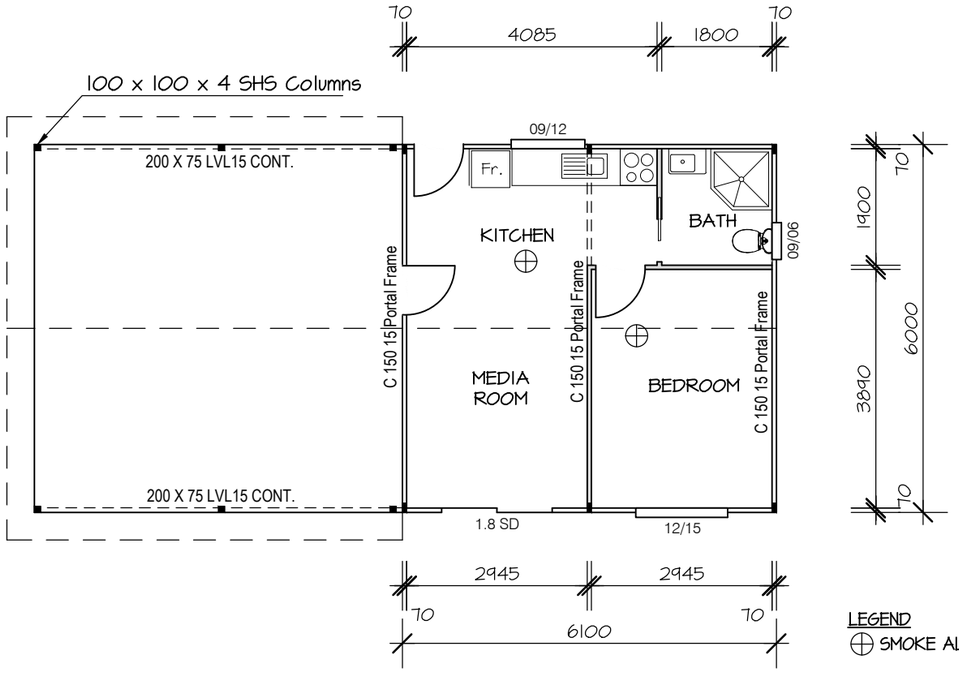
BRACING & TIE-DOWN

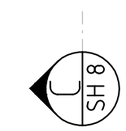


SOUTH EAST ELEVATION

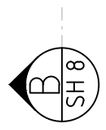


SOUTH WEST ELEVATION





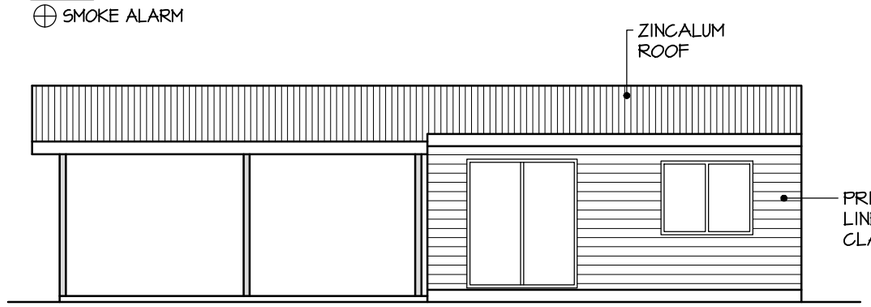
CARPORT



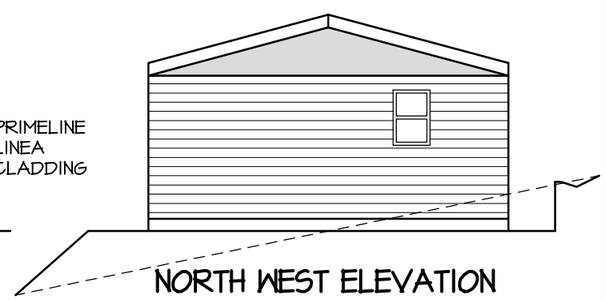
GRANNY FLAT

LEGEND

⊕ SMOKE ALARM



NORTH EAST ELEVATION (FRONT)



NORTH WEST ELEVATION

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0 1 2 4m

SCALE 1:100

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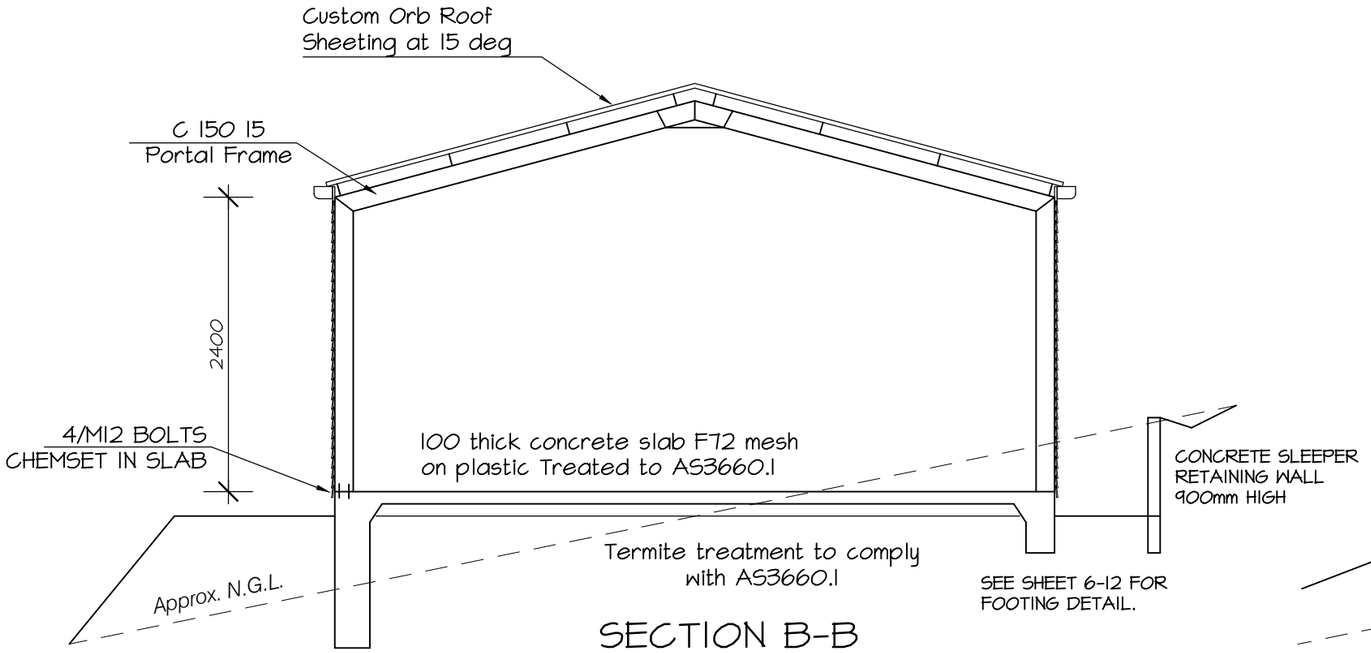
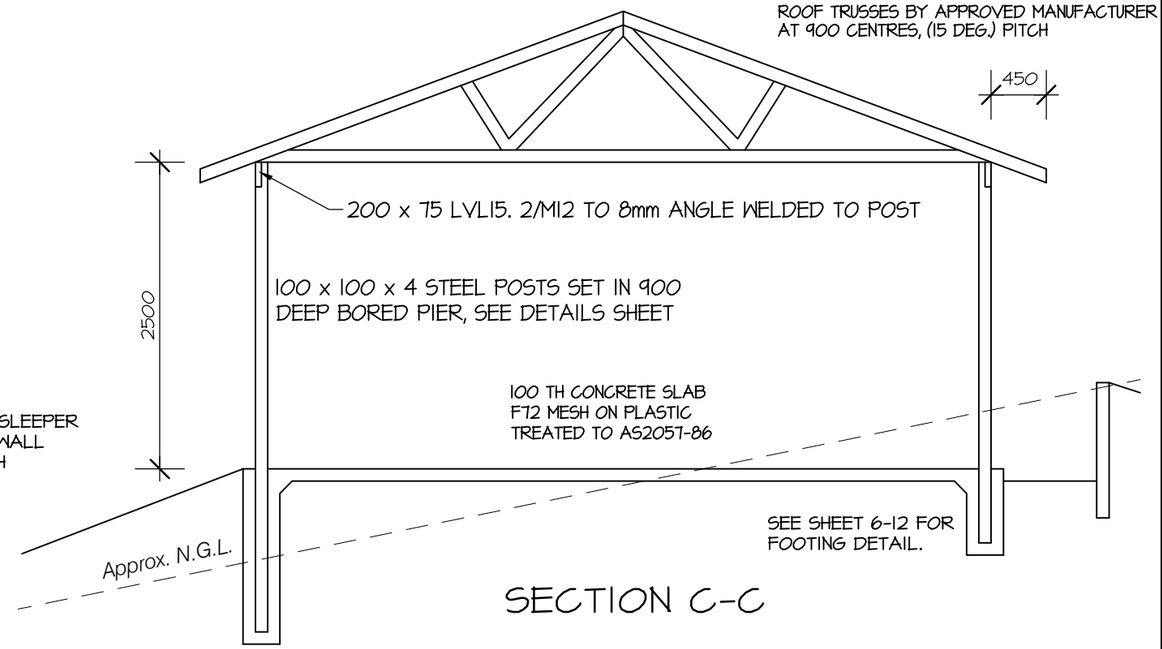
GRANNY FLAT PLAN & ELEVATIONS

ALX-007 SHEET 7 OF 20

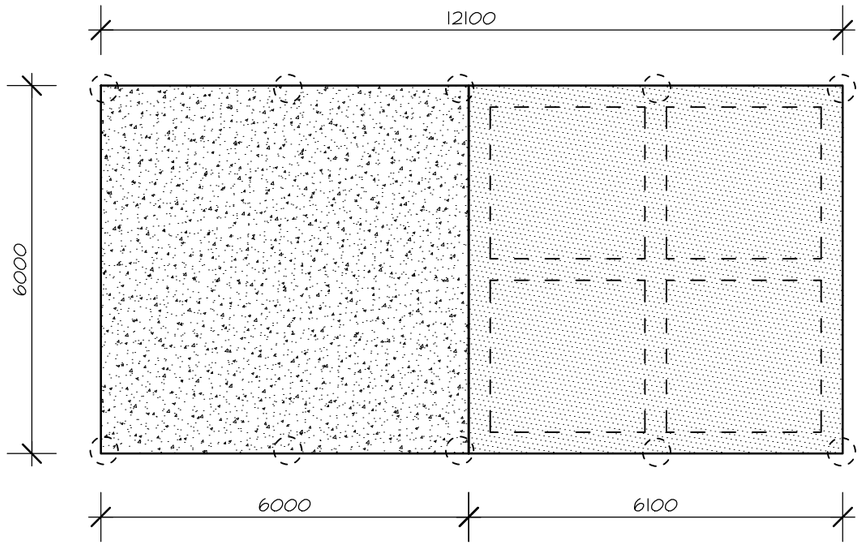
ALX - Alexander 22 Hooper Drive Plainland.dwg



SECTION B-B

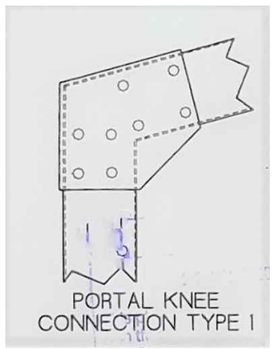


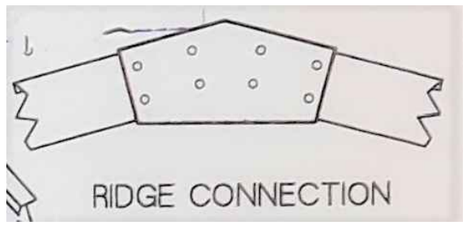
SECTION C-C



FOUNDATION PLAN

Scale 1:100





100 mm SLAB SL72 TOP FABRIC

100 mm NON-HABITABLE SLAB SL72 FABRIC CENTRALLY

ALX - Alexander 22 Hooper Drive Plainland.dwg

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0 0.5 1 2m

SCALE 1:50

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PLAINLAND

GRANNY FLAT
SECTION & FOUNDATION

ALX-008 SHEET 8 OF 20

SITE CLASSIFICATION - P/H2
CLAD FRAME

EXISTING SITE CONDITIONS	Y	N
TREES PRESENT	√	
FILL PRESENT	√	
SITE CONTOURS PROVIDED	√	
AS-CONST SERVICES PROVIDED		√

NOTE:
THIS SITE CLASSIFICATION HAS BEEN DETERMINED AS A "P/H2" SITE AS PER SOIL REPORT 852637 BY QLD TESTING PTY LTD ON 28/2/2022. BORED PIERS 450mm DIA AND A MINIMUM DEPTH OF 1500mm, THROUGH ALL FILL AND 1500mm MINIMUM INTO THE EXISTING SOIL PROFILE.

FOUNDATION REQUIREMENTS FOR MODERATELY, HIGHLY & EXTREMELY REACTIVE SITES.

For stiffened rafts, waffle rafts and strip footings on moderately, highly and extremely reactive sites, the following requirements apply to the building services and footing system in addition to requirements of clause 6.4 & 6.5:

A. Penetrations of the edge beam and footing by drain pipes shall be sleeved using closed cell polyethylene lagging or similar.

B. During construction, water run-off shall be collected and chanelled away from the building.

C. Excavations near the edge of the footing system shall e backfilled in such a way as to prevent access of water to the foundations as described in clause 5.6.3b.
Notes:
1. For example, excavations should be backfilled above or adjacent to the footing with moist clay compacted by hand rodding or tamping.
2. Porous material such as sand, gravel or building rubble should not be used.

D. Water shall not be allowed to pond in the trenches.

E. Concrete in beams shall be mechanically vibrated.

AS2870-2011 Appendix B2.3

(A) Drainage o the site: The site should be graded or drained so that water cannot pond against or near the building. The ground immediately adjacent to the building should be graded to a uniform fall of 50mm min away from building over the first metre. The sub-floor space for buildings with suspended floors should be graded or drained to prevent ponding where this may affect the performance of the footing system. The site drainage recommendations should be maintained for the economic life of the building.

(B) Limitations on gardens: The development of the gardens should not interfere with the drainage requirements or the sub floor ventilation and weephole drainage systems. Garden beds adjacent to the building should be avoided. Care should be taken to avoid overwatering of gardens close to the buildings footings.

(C) Restrictions on trees and shrubs: Planting of trees should be avoided bear the foundation of the building or neighbouring building on reactive sites as the can cause damage due to the drying of the clay at substantial distances. To reduce, but not eliminate, the the possibility of damage, tree planting should be restricted to a distance from the house as follows.
(i) 1 and a half times the mature height for class E sites.
(ii) 1 times the mature height for class H1 and H2 sites.
(iii) 0.75 times the mature height for class M sites.
Where rows or groups of trees are involved, the distance from the building should be increased. Removal of trees from the site can also cause similar problems. Alternatively, root barrier shall be installed as per manufacturers specifications.

BUILDERS NOTES

1. These drawings shall be read in conjunction with the architectural & any other consultant drawings. Any variations/descrepancies shall be referred immediately to the engineer.
2. The builder shall verify all set-out dimensions and levels prior to construction.
3. The builder shall be responsible for the maintainance of safe working conditions.
4. All workmanship and materials shall be in accordance with the relevant standards and the BCA.
5. Subterranean termite protection shall be in accodance with AS3660-Part and the BCA.
6. Non-structural items such as damp proof coursing, flashing and weep holes are not shown for clarity. Refer to the architectural details as required.

CONSTRUCTION NOTES

1. All workmanship and materials shall be in accordance with the requirements of the relevant current Australian Standard Codes, Building By-Laws and the ordinances of the relevant Local Authority.
2. i) Concrete Class - Minimum 20 MPa at 28 days
   Slab on ground - 20 nominal maximum aggregate size
   - 100 maximum slump +/-10mm
   ii) Concrete Class - Minimum 32 MPa at 28 days for internal slabs
   Suspended slab - Minimum 40 MPa at 28 days for external slabs
   - 20 nominal maximum aggregate size
   - 100 maximum slump +/-10mm
3. Minimum Cover to Reinforcement
   - 25 to upper face of internal slabs -0 +5mm
   - 45 for external exposure
   - 30 to a membrane in contact with the ground
   - 40 to unprotected ground
4. Minimum Laps and Splices for Reinforcement
   (a) Slab Fabric - 225 minimum overlap of transverse bars at all edges
   (b) Trench Mesh - 500 splices in all footing beams
   - Laps at intersections as per the Design Drawings
   (c) Reinforcing Bars - 500 splices in all footing beams
   - Provide "L" bars at all beam intersections with 500 laps to each leg
5. Fireplaces shall be supported on slab thickening extending 300 past the edges of the masonry, and reinforced with F72 mesh top and bottom. Slab thickening shall be 150 thick for single storey construction and 200 thick for two storey construction.

Shrinkage Control

6. Reinforcing mesh shall be no less than SL82 for slabs over 18m (no steps) in length.
7. Where the floor slab is to be tiled, the following recommendations are made, in order to minimise the effect of shrinkage:-
   - SL92 slab mesh (or equivalent) should be provided
   - Placement of tiles should be delayed for as long as possible (preferably for at least 3 months)

EARTHWORKS NOTES:

Where any filling is carried out on the site after the completion of the site investigation, the following recommendation shall be followed:-

1. The site shall be stripped of all vegetation prior to the placement of any filling material.
2. Compaction Standards for filling Material

A. Controlled Filling
(a) Sand filling up to 800 deep, placed in maximum 300 thick layers and compacted with a vibrating roller to achieve a minimum Dynamic Cone Penetrometer reading of 7 blows per 300 penetration (refer AS 1289.F3.3). Sand fill may be flooded if necessary to achieve this compaction standard, provided the water can subsequently be drained from the site.
(b) Non-sand filling up to 400 deep, placed in maximum 150 thick layers and compacted with a mechanical roller. Clay fill shall be moist during compaction.
(c) Controlled filling shall continue for at least 1 metre past the edge of the footing beam and shall be battered back to the original surface with a slope of no more than 1:2 (Vert : Hor).
(d) Where the depth of filling material exceeds that specified above, the filling material shall be compacted as follows:-
Sand fill to 65% Density Index in accordance with AS1289.E6.1
Non-sand fill to 95% Maximum Dry Density (Standard Compaction) in accordance with 5.4.1
Compaction tests shall be carried out on each layer as the filling is placed. If the compaction standard specified is not achieved, then a "Pier and Slab" and "Pier and Beam" footing design shall be adopted with all piers founded on the underlying natural material.

B. Rolled Filling
(a) Sand Filling up to 600 deep, placed in maximum 300 thick layers and compacted by repeated rolling with an excavator.
(b) Non-sand filing up to 300 deep, placed in maximum 150 thick layers and compacted by repeated rolling with an excavator.
(c) Where the depth of filling material exceeds that specified above, the filling material shall be compacted as follows:-
Sand fill to 65% Density Index in accordance with AS1289.E6.1
Non-sand fill to 95% Maximum Dry Density (Standard Compaction) in accordance with 5.4.1
Compaction tests shall be carried out on each layer as the filling is placed. If the compaction standard specified is not achieved, then a "Pier and Slab" and "Pier and Beam" footing design shall be adopted with all piers founded on the natural underlying material.

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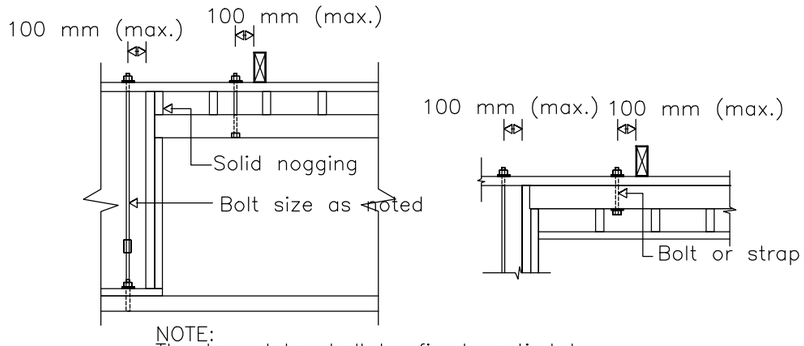
DWELLING & GRANNY FLAT
FOR COLIN ALEXANDER AT
22 HOOPER DRIVE
PLAINLAND

ENGINEERING NOTES

DETAIL 1 - Lintel to Plate via bolt

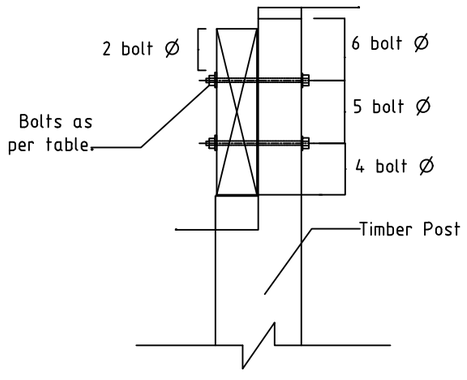


NOTE:
The top plate shall be fixed or tied to lintel within 100 mm of each rafter/truss, or the rafter/truss fixed directly to the lintel with a fixing of equivalent tie-down strength to that required for the rafter/truss.

Tiedown located at: * Lintels/beams to studs/posts.

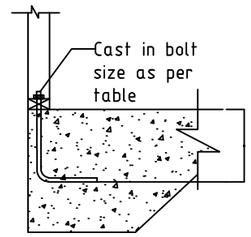
Fixing Details	J2	J3	J4	JD4	JD5	JD6
M10 Bolt	18	18	18	15	12	9.0
M12 Bolt	27	27	26	20	16	12

DETAIL 2 - Roof Beam to Post detail.



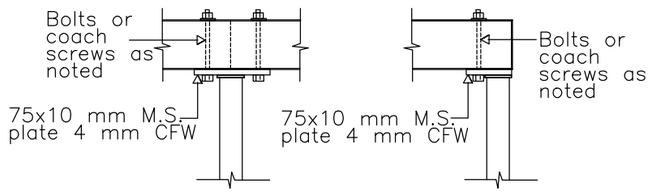
NO. OF BOLTS	J2	J3	J4	JD4	JD5	JD6
1/M10 bolt	5.7	5.2	3.6	5.2	4.5	3.9
1/M12 bolt	8.1	6.8	4.7	7.4	6.4	5
2/M10 bolts	13	10	7.3	12	11	8.3
2/M12 bolts	17	14	9.4	17	14	10
2/M16 bolts	26	20	14	27	20	13

DETAIL 3 - Bottom plate to Slab detail.



BOLTS	J2	J3	J4	JD4	JD5	JD6
M10 bolt	18	18	18	15	12	9
M12 bolt	27	27	26	20	16	12

DETAIL 4 - Bolt through stump and base plate



Tiedown located at: * Bearers to Columns, Stumps, Piers, or Masonry Supports

* Lower storey of two storey Bearers to Columns, Stumps, Piers or Masonry Supports

Fixing Details	J2	J3	J4	JD4	JD5	JD6
1/M10 bolt	18	18	18	15	12	9.0
1/M12 bolt	27	27	26	20	16	12
2/M10 bolts	36	36	36	30	24	18
2/M12 bolts	54	54	52	40	32	24
1/M10 75mm Coach Screw	7.5	5.5	3.7	4.7	3.6	2.6
1/M12 75mm Coach Screw	8.2	6.0	4.0	5.0	4.2	3.0
2/M10 75mm Coach Screws	15	11	7.4	9.4	7.2	5.2
2/M12 75mm Coach Screws	16	12	8.0	10	8.4	6.0

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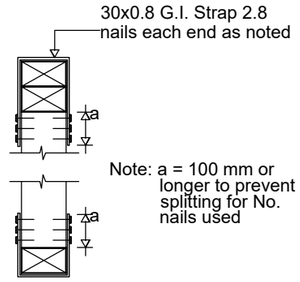
DWELLING & GRANNY FLAT FOR COLIN ALEXANDER AT 22 HOOPER DRIVE PLAINLAND

STD TIE-DOWN DETAILS

ALTERNATE TIE-DOWN DETAILS

Stud to plate via 30x0.8 G.I. strap.



Note: a = 100 mm or longer to prevent splitting for No. nails used

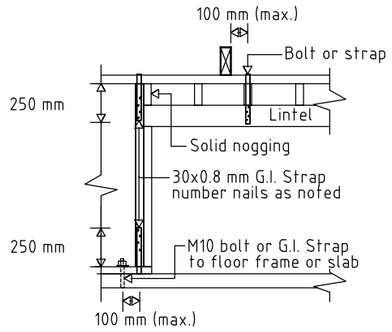
Tiedown located at: * Bottom Plates to floor frame or slab - single or upper storey

* Lower story of two story wall frames to floor frames or slab.

Fixing Details	J2	J3	J4	JD4	JD5	JD6
2 nails per end	4.9	3.5	2.5	3.5	2.9	2.2
3 nails per end	6.5	4.7	3.3	4.7	3.8	2.9
4 nails per end	8.3	5.9	4.2	5.9	4.9	3.7
6 nails per end	12	8.4	5.9	8.4	6.9	5.2

Note: use 2.8 dia. nails.

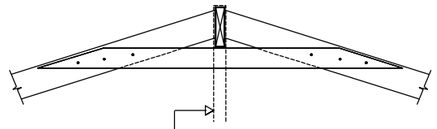
Lintel Tie-Down using GI Strap



NOTE:
The top plate shall be fixed or tied to lintel within 100 mm of each rafter/truss, or the rafter/truss fixed directly to the lintel with a fixing of equivalent tie-down strength to that required for the rafter/truss.

Alternatively provide 2 No. Framing anchors with 4/2.8 Dia Nails each leg (4.9 kN

Ridgeboards and hip rafters to walls.

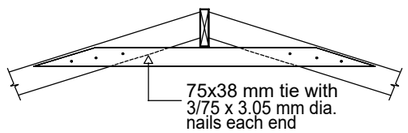


Bolt or 30 x 0.8 mm G.I. looped strap as per table, tied down to floor frame via internal walls or external walls at gable ends

Bolt welded to 50x6 mm bent MS flat with 50x4 mm FW

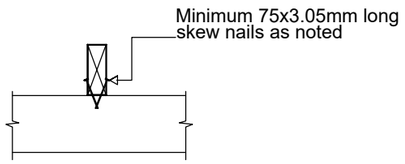
Uplift capacity (kN)						
	Unseasoned timber			Seasoned timber		
	J2	J3	J4	JD4	JD5	JD6
1 Looped Strap	13	13	13	13	13	13
2 Looped Straps	25	25	25	25	25	25
1/M10 Bolt	18	18	18	15	12	9
1/M12 Bolt	27	26	20	16	12	9

Rafters to rafters at ridge. 1 Cross tie.



Uplift capacity (kN)					
Unseasoned timber			Seasoned timber		
J2	J3	J4	JD4	JD5	JD6
7.0	5.0	3.6	5.0	4.2	3.1

Skew nailed

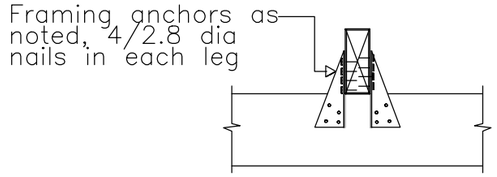


Tiedown located at: * Floor Joist to Floor Frame -Single or Upper Storey

* Lower Storey of Two Storey Floor Joist to Bearers or Supports

Fixing Details	J2	J3	J4	JD4	JD5	JD6
2 nails	1.5	1.2	1.1	0.77	0.50	0.36
3 nails	2.2	1.8	1.6	1.1	0.75	0.55
4 nails	3.0	2.4	2.2	1.5	1.0	0.72

Framing Anchors



Tiedown located at: * Floor Joist to Floor Frame – Single or Upper Storey
* Lower Storey of Two Storey Floor Joist to Bearers or Supports

Fixing Details	J2	J3	J4	JD4	JD5	JD6
1 Framing Anchor	4.9	3.5	2.5	3.5	2.9	2.2
2 Framing Anchors	8.3	5.9	4.2	5.9	4.9	3.7
3 Framing Anchors	12	8.4	5.9	8.4	6.9	5.2
4 Framing Anchors	15	11	7.7	11	8.9	6.8

note: Fix with 4/2.8 nails per leg

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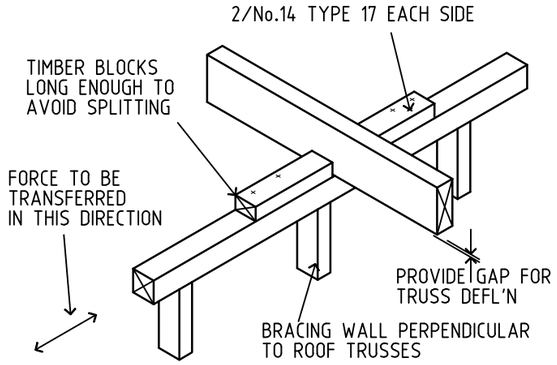
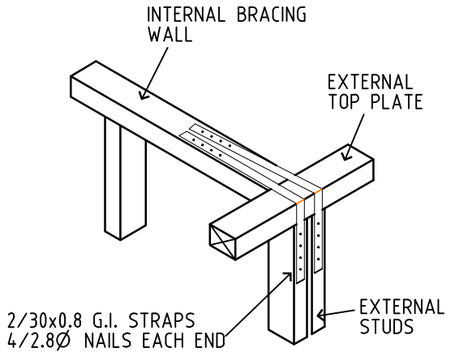
DWELLING & GRANNY FLAT FOR COLIN ALEXANDER AT 22 HOOPER DRIVE PLAINLAND

STD TIE-DOWN DETAILS



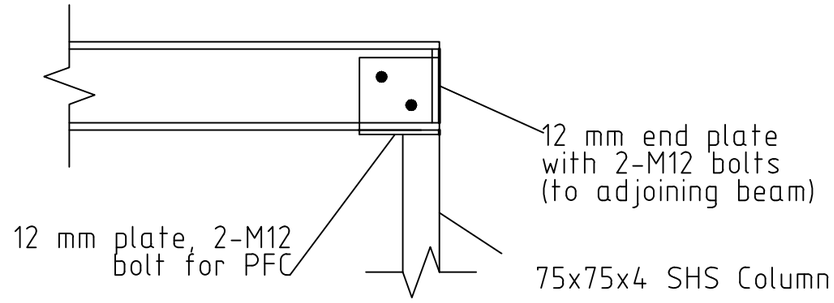
BRACING WALL TO TRUSSES

DESIGN STRENGTH JD4 - 6.9kN (Table 8.22 (j))



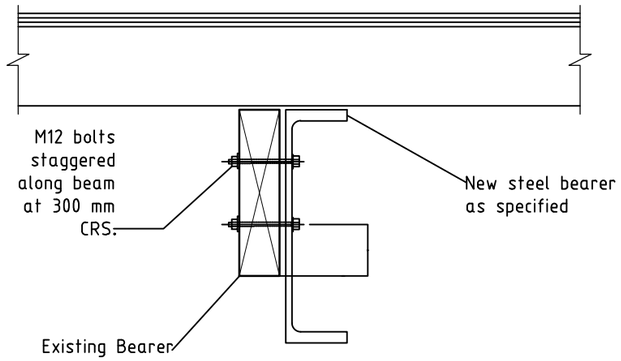
BRACING WALL TO EXTERNAL WALL

DESIGN STRENGTH JD4 - 6.6kN (Table 8.22 (k))

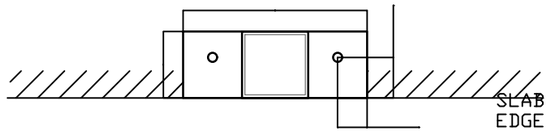


PFC/SHS CONNECTION DETAILS

NOT TO SCALE

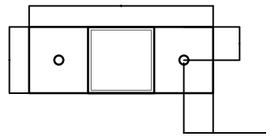


TYPICAL STEEL BEARER/TIMBER BEARER DETAIL



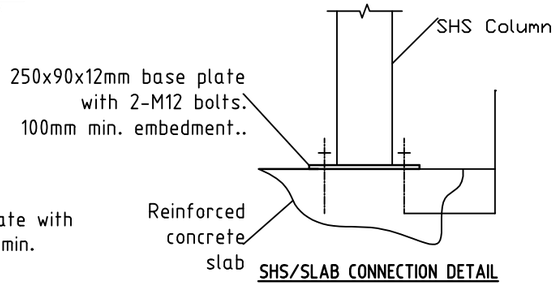
SHS ON SLAB EDGE

NOT TO SCALE



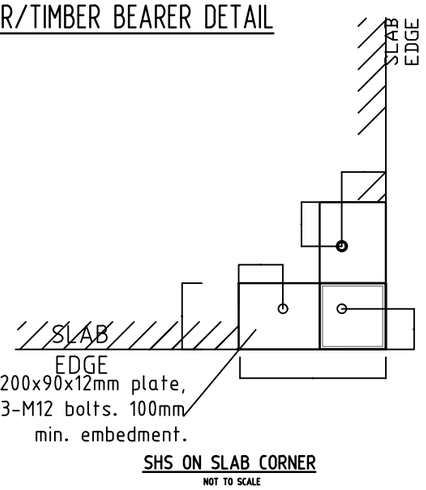
INTERNAL SHS

NOT TO SCALE



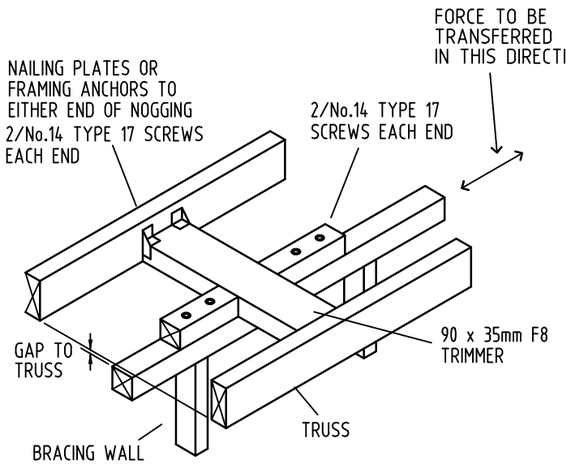
SHS/SLAB CONNECTION DETAIL

NOT TO SCALE



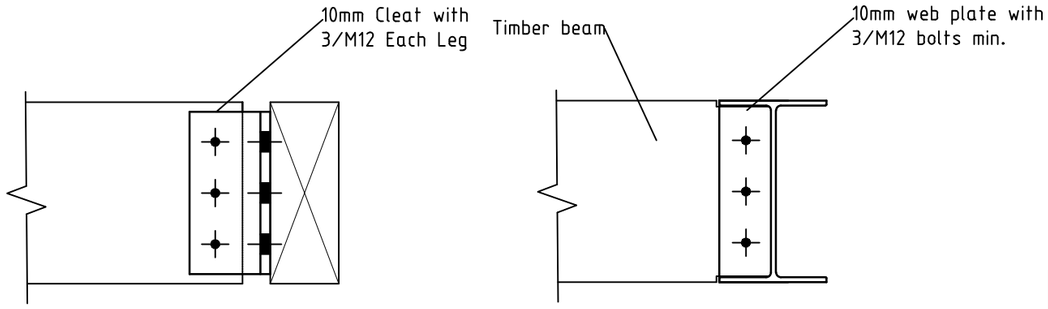
SHS ON SLAB CORNER

NOT TO SCALE



BRACING WALL TO TRUSSES

DESIGN STRENGTH JD4 - 6.9kN (Table 8.22 (e))



TIMBER BEAM TO TIMBER BEAM DETAIL TIMBER BEAM TO STEEL BEAM DETAIL

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DWELLING & GRANNY FLAT FOR COLIN ALEXANDER AT 22 HOOPER DRIVE PLAINLAND

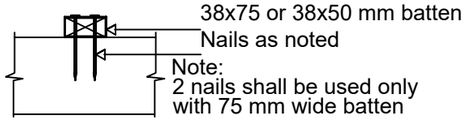
STRUCTURAL PLANS

ALX-0012 SHEET 12 OF 20

DESIGN ASSUMPTIONS

- SUITABLE FOR SHEET ROOFS ONLY
- TIE DOWNS SUITABLE FOR N3 WIND RATING
- SUITABLE FOR MAXIMUIM 3.6 m RAFTER TIE DOWN SPACING
- F14 MINIIMUM STRESS GRADE FOR STRUCTURAL ELEMENTS
- 600 kg/m3 MINIMUM DENSITY AT MOISTURE CONTENT > 15% (UNEASONED TIMBERS)
- J3 MINIMUM JOINT GROUP STRENGTH
- SUITABLE FOR RAFTER/TRUSS SPACINGS UP TO 900 CRS
- SUITABLE FOR ROOF BATTENS UP TO 900 CRS
- SUITABLE FOR FLOOR JOISTS UP TO 450 CRS

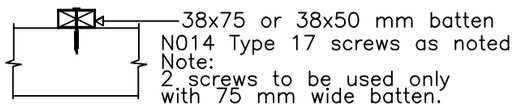
75 mm Wide Battens to rafters with nails.



GENERAL ROOF AREA --> 2/75x3.05 dia. deformed shank nail (2.1 kN)

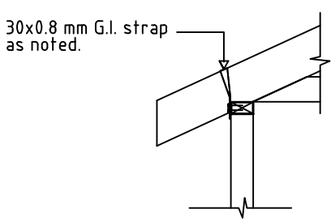
WITHIN 1200 mm OF ALL EDGES -->2/75x3.75 dia. deformed shank nail (2.5 kN)

75 mm Wide Battens to rafters with nails.



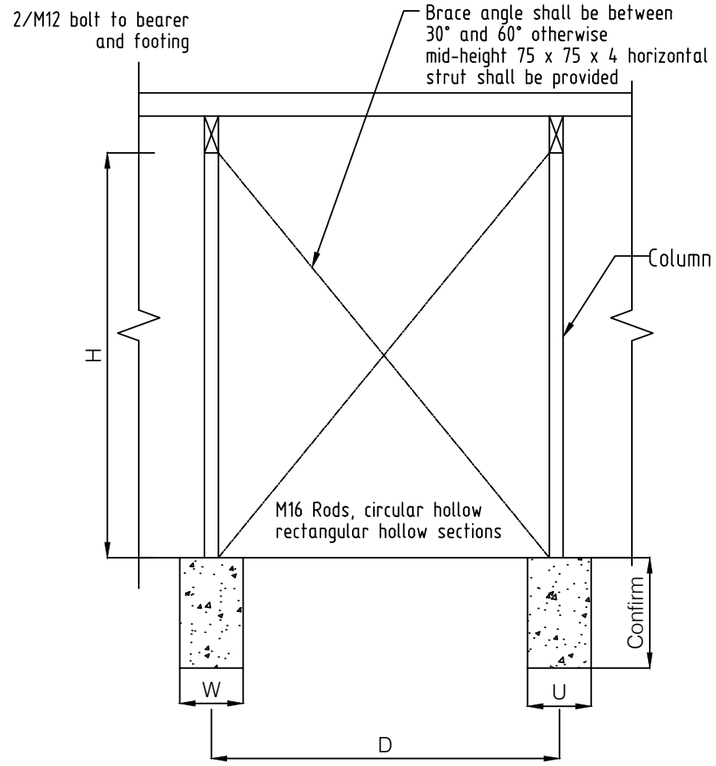
ALL ROOF AREAS --> 1/75mm long No. 14 TYPE 17 SCREW (4.2 kN)

Rafter to wall frame or roof beams via 30x0.8 G.I. strap.



ALL ROOF AREAS --> 1/30 x 0.8 GI strap 4/2.8 Dia Nails each end (4.9 kN)

Alternatively provide 2 No. Framing anchors with 4/2.8 Dia Nails each leg (4.9 kN



STEEL BRACES ON TIMBER OR STEEL COLUMNS

Not to scale

BRACING CAPACITY OF A DIAGONALLY BRACED STUMP	
Concrete pier Diameter W mm	Maximum bracing capacity per stump H (kN)
250	15
300	18
350	21
400	23
450	26

$F = U \times \frac{D}{H}$ (kN)

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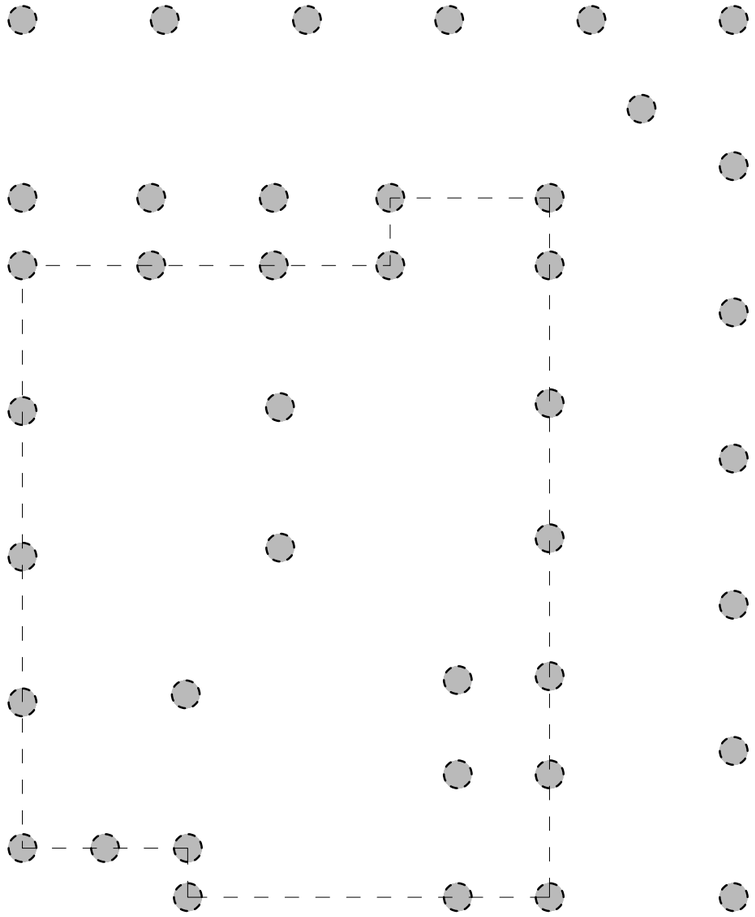
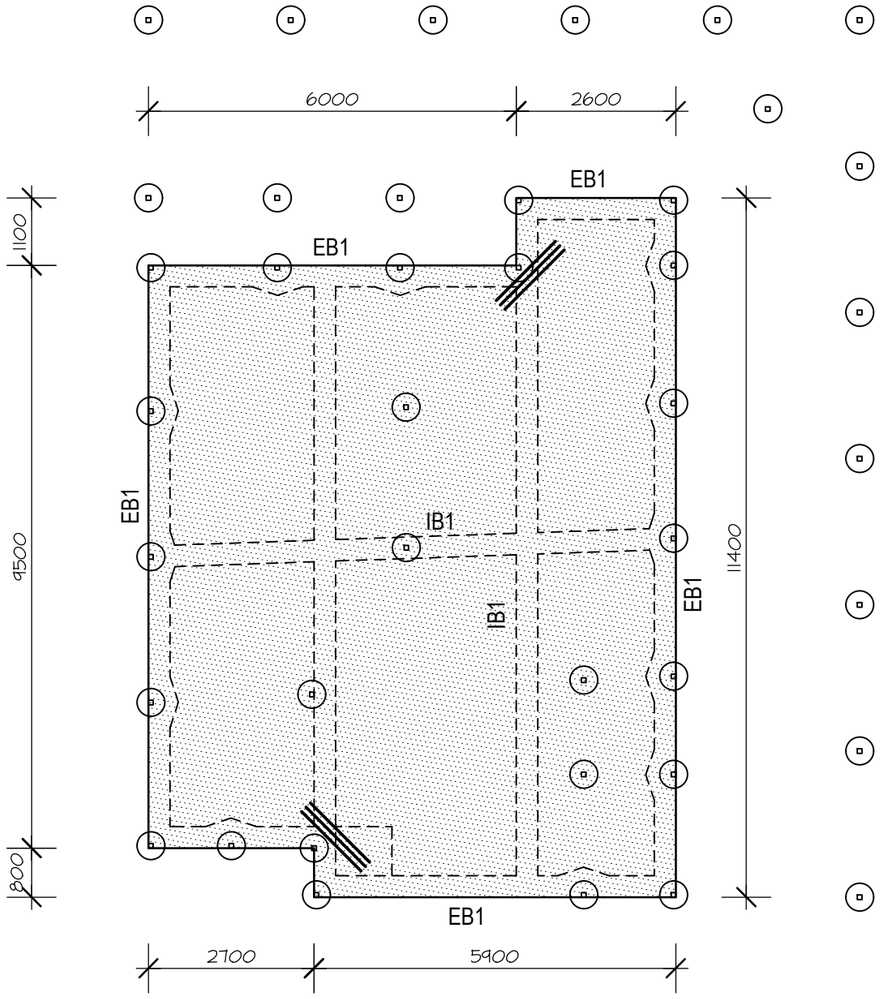
DWELLING & GRANNY FLAT
FOR COLIN ALEXANDER AT
22 HOOPER DRIVE
PLAINLAND

STD STRUCTURAL DETAILS

ALX-0013 SHEET 13 OF 20



FOUNDATION PLAN - STAGE 1



FOUNDATION PLAN - STAGE 2

NOTE: CUT/FILL LINES AND PIER LOCATIONS SHALL BE CONFIRMED ON-SITE SUITABLE FOR MAXIMUM BUILDING LENGTH OF 25 METRES

NOTE:
THIS SITE CLASSIFICATION HAS BEEN DETERMINED AS A "P/H2" SITE AS PER SOIL REPORT 852637 BY QLD TESTING PTY LTD ON 28/2/2022. BORED PIERS 450mm DIA AND A MINIMUM DEPTH OF 1500mm, THROUGH ALL FILL AND 1500mm MINIMUM INTO THE EXISTING SOIL PROFILE.

100 mm SLAB SL72 TOP FABRIC

ALX - Alexander 22 Hooper Drive Plainland.dwg

PRECAUTIONARY STATEMENT

1. Confirm details of setouts, levels, setbacks and critical dimensions on site prior to and during the works. Notify designer of any discrepancies discovered before proceeding.
2. All construction to comply with the Building Code of Australia and applicable Australian Standards.
3. Use dimensions over scaling off the drawing.
4. These drawings and the Copyright thereof are the property of CONTRACT DESIGN STAFF P/L and shall not be used, retained or copied without the written authority of CONTRACT DESIGN STAFF P/L.
5. Plans To Be Read In Conjunction With Engineer's / Manufacturer's Design & Specifications.

0 1 2 4m

SCALE 1:100

DRAWN: WP DATE JAN 2023

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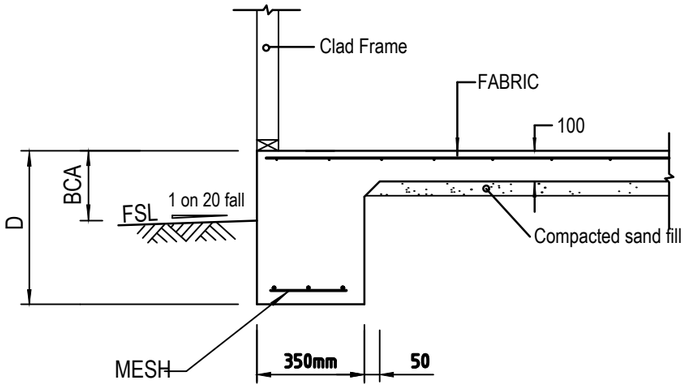
DWELLING & GRANNY FLAT FOR COLIN ALEXANDER AT 22 HOOPER DRIVE PLAINLAND

FOUNDATION DETAILS

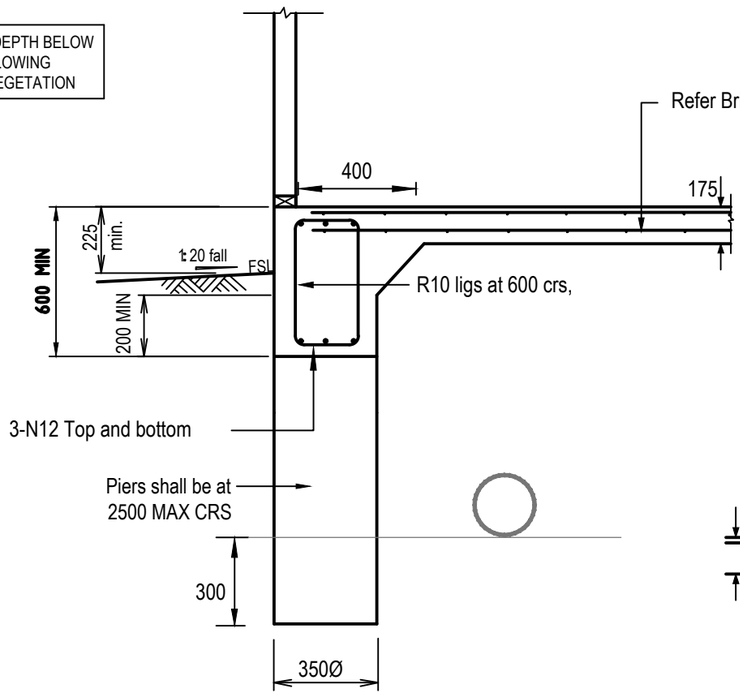
ALX-0014 SHEET 14 OF 20

FOUNDATION SPECIFICATIONS	
FABRIC	SL72
MESH	3-L11TM
D (DEPTH)	450mm MIN

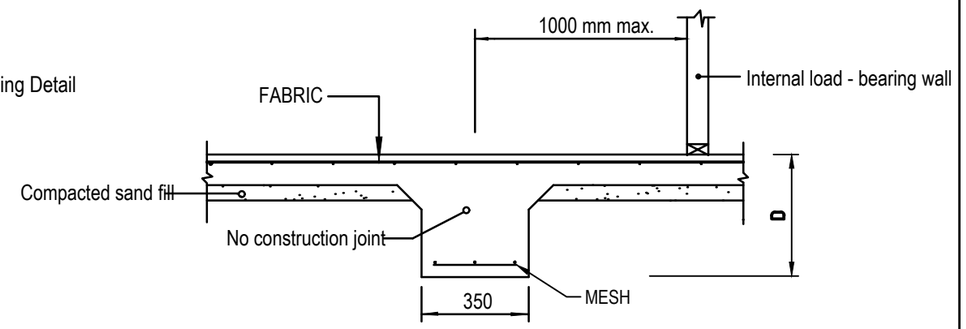
✳ DENOTES MINIMUM DEPTH BELOW SITE LEVEL (SL) FOLLOWING STRIPPING OF ALL VEGETATION



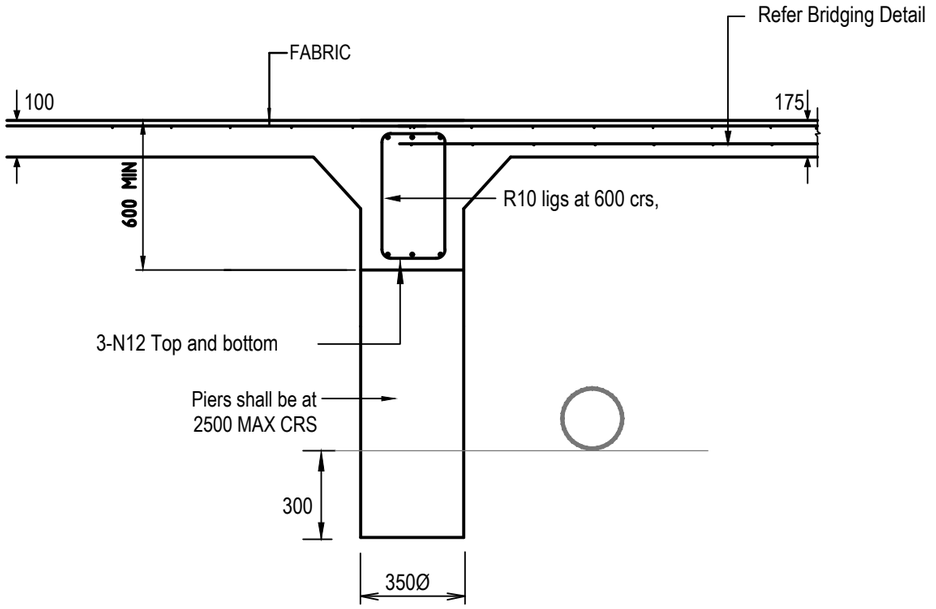
EXTERNAL EDGE BEAM - EB1
Not to scale



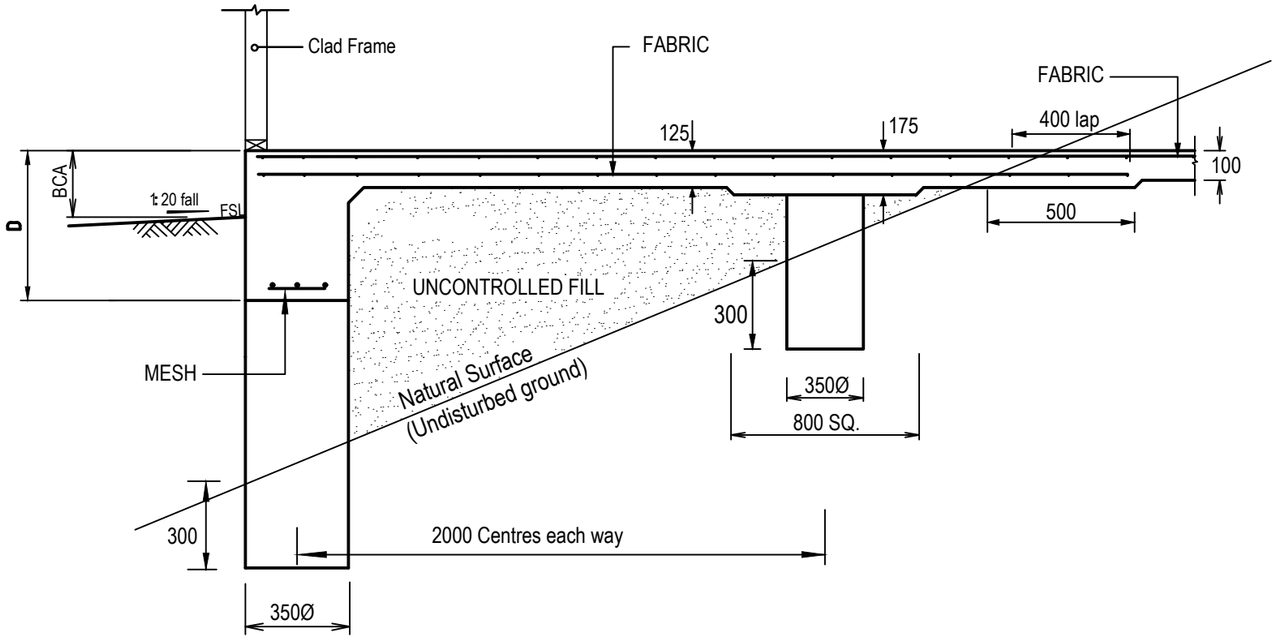
EXTERNAL EDGE BEAM - SERVICE BRIDGING DETAIL - EB2
Not to scale



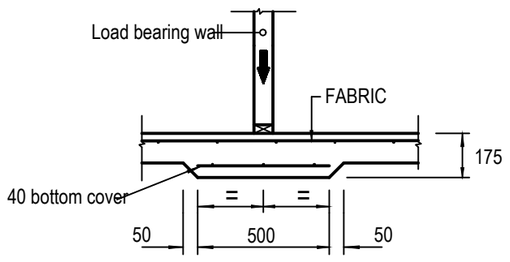
TYPICAL INTERNAL BEAM - IB1
Not to scale



INTERNAL BEAM - SERVICE BRIDGING DETAIL - IB2
Not to scale



EXTERNAL EDGE BEAM - FILL SECTION OF PLATFORM - EB2
Not to scale



TYPICAL SLAB THICKENING UNDER LOAD BEARING WALLS - STB
Not to scale

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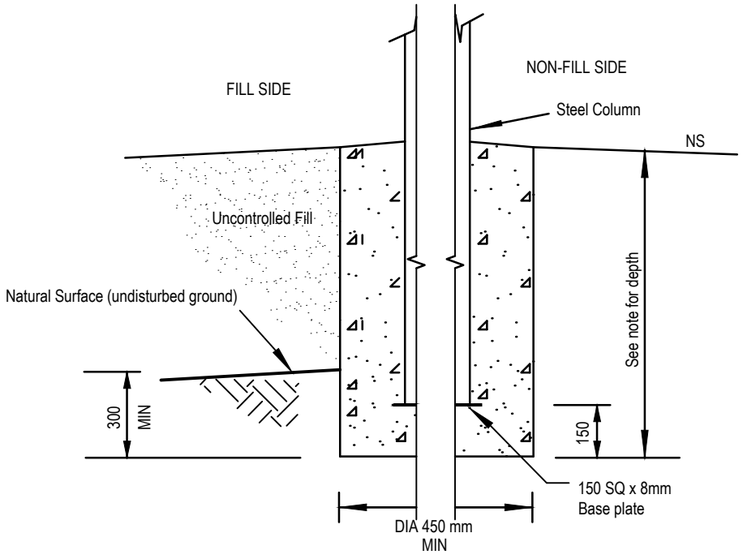
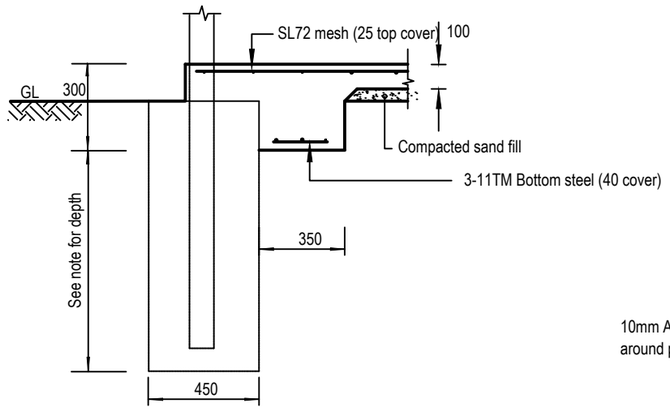
DWELLING & GRANNY FLAT
FOR COLIN ALEXANDER AT
22 HOOPER DRIVE
PLAINLAND

PLUMBING DETAILS



TYPICAL MAIN POST PAD FOOTING DETAIL - PF1

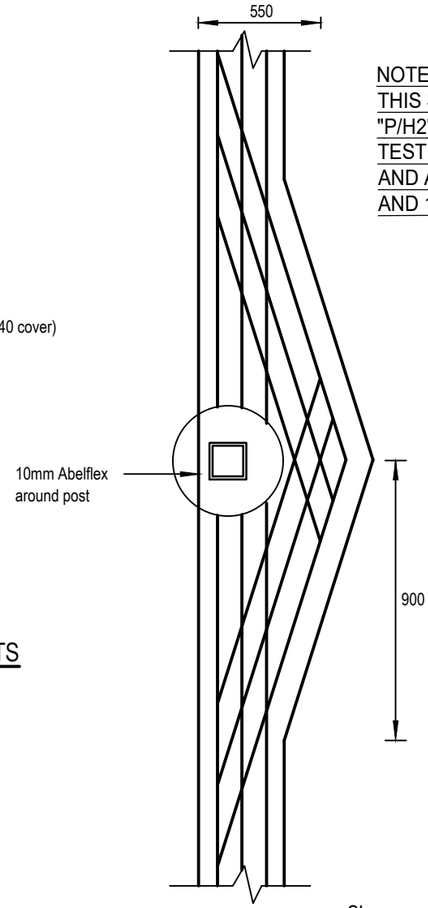
Not to scale



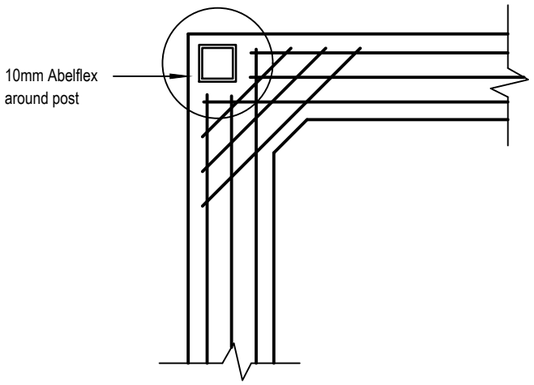
ELEVATION

TYPICAL FOUNDATION OFFSET AROUND EXISTING POSTS

Not to scale



PLAN



PLAN

NOTE:
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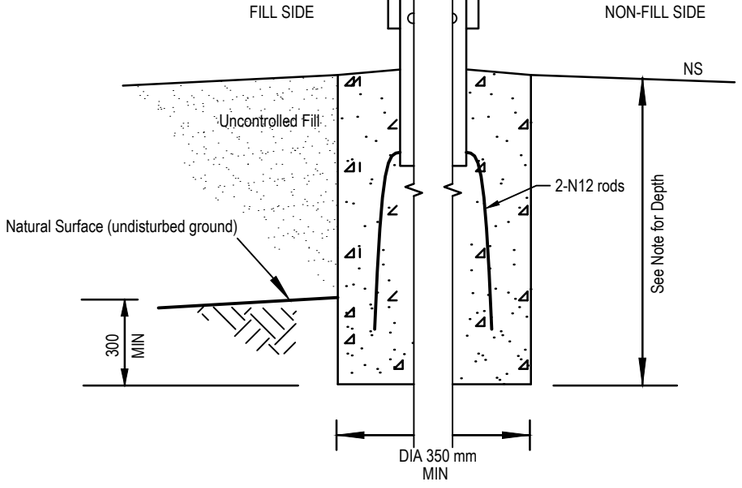
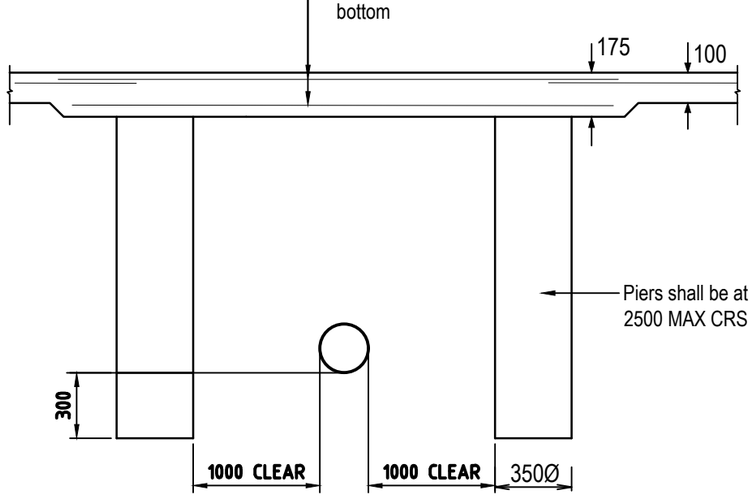


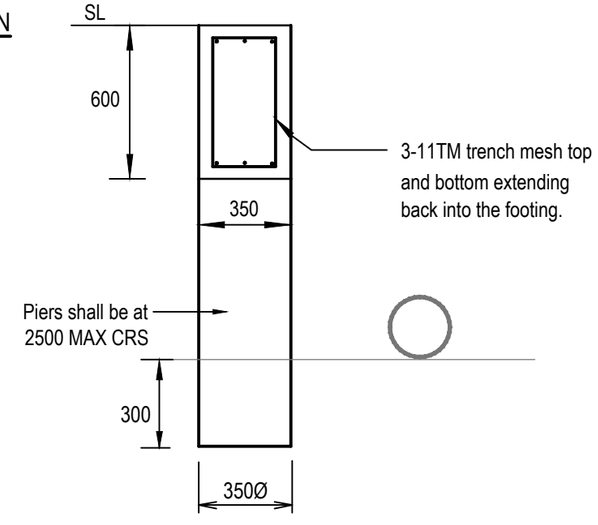
TYPICAL VERANDAH POST PAD FOOTING DETAIL - PF2

Not to scale



SERVICE BRIDGING DETAIL

Not to scale



TYPICAL GROUND BEAM - SERVICE BRIDGING DETAIL- GB

Not to scale

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DWELLING & GRANNY FLAT
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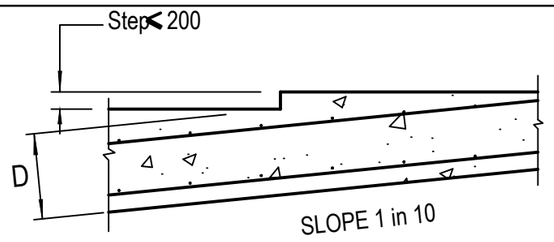
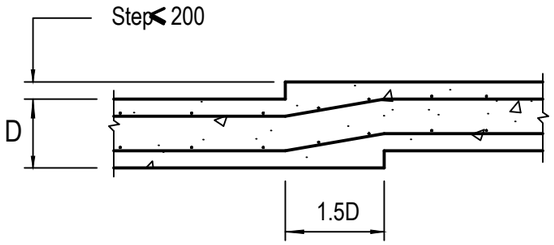
22 HOOPER DRIVE
PLAINLAND

FOUNDATION DETAILS

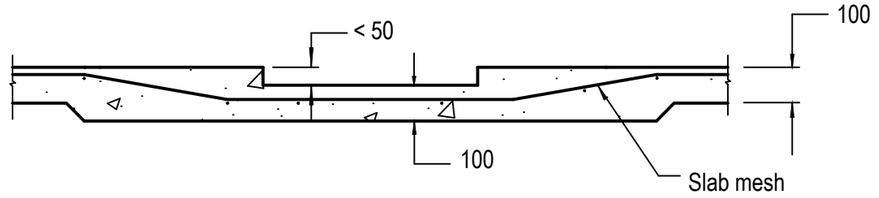
ALX-0016 SHEET 16 OF 20



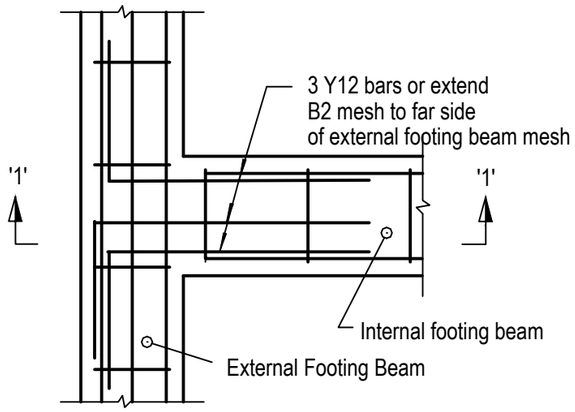
ALTERNATIVE STEP DETAIL A
Not to Scale



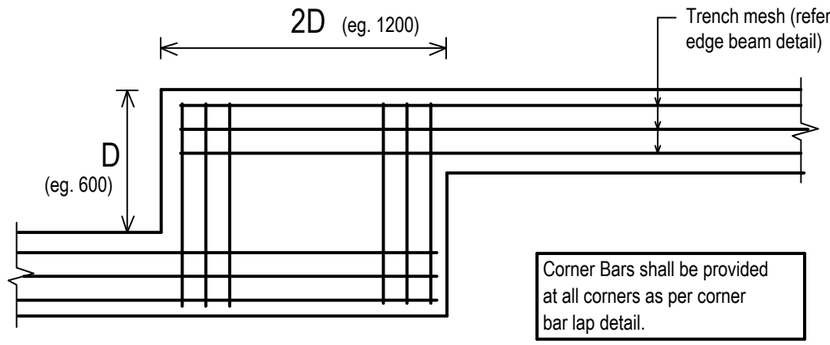
ALTERNATIVE STEP DETAIL B
Not to Scale



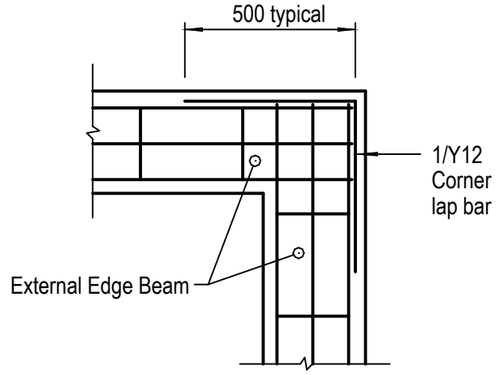
TYPICAL SLAB RECESS DETAIL (SUITABLE FOR RECESSES LESS THAN 50mm DEEP)
Not to Scale



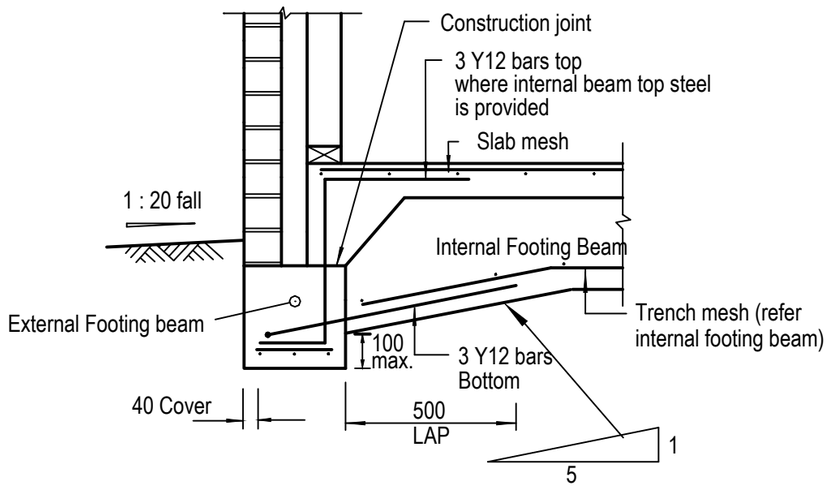
TYPICAL FOOTING BEAM INTERSECTION DETAIL
Not to Scale



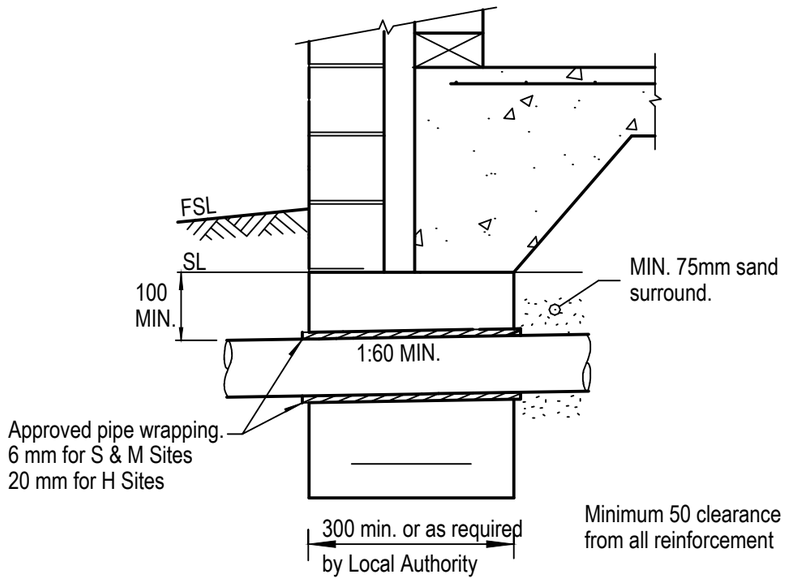
TYPICAL OFFSET FOOTING DETAIL
Not to scale



OUTSIDE CORNER LAP BAR DETAIL
Not to Scale



SECTION 1 - 1
Not to Scale



TYPICAL FOOTING PENETRATION DETAIL
Not to Scale

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DWELLING & GRANNY FLAT
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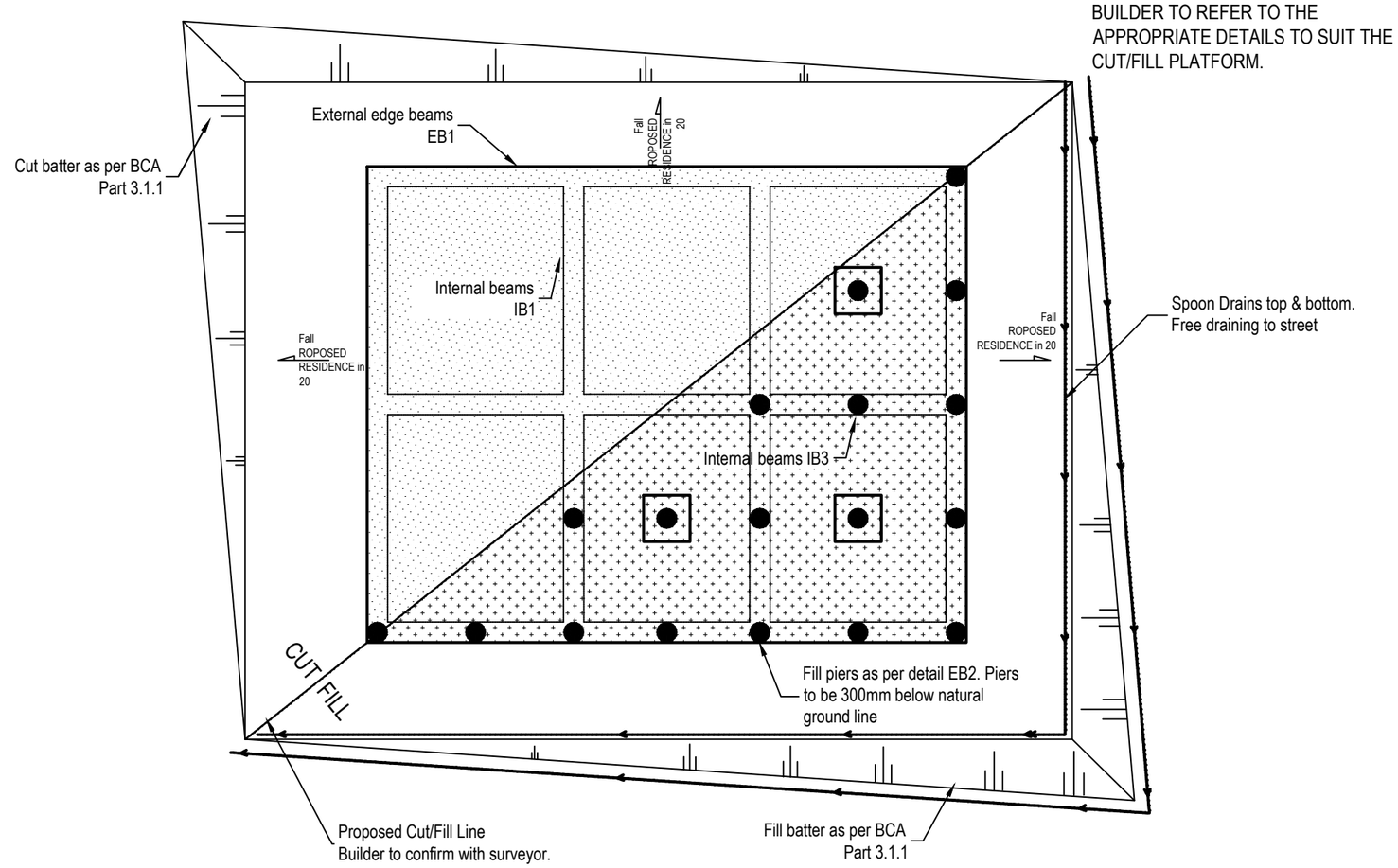
22 HOOPER DRIVE
PLAINLAND

FOUNDATION DETAILS

ALX-0017 SHEET 17 OF 20



TYPICAL CUT/FILL PLATFORM PLAN

SCALE 1:100

100 mm SLAB TOP FABRIC

125 mm SLAB TOP & BOTTOM FABRIC

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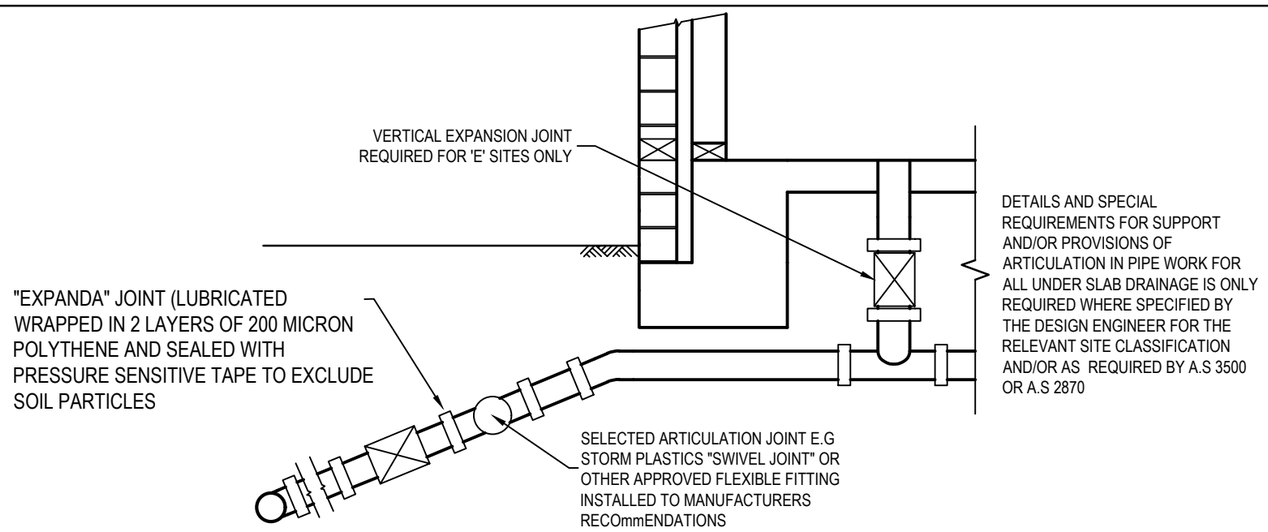
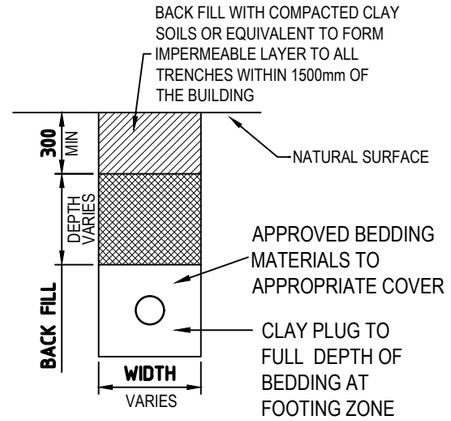
DWELLING & GRANNY FLAT FOR COLIN ALEXANDER AT 22 HOOPER DRIVE PLAINLAND

STANDARD PLATFORM DETAILS



TYPICAL UNDER SLAB-EDGE BEAM/WAFFLE POD DETAIL
Not to scale



TYPICAL TRENCH DETAIL
Not to scale

GUIDELINES FOR DESIGN AND INSTALLATION

NOTES: THE FOLLOWING NOTES AND DETAILS PROVIDED ARE A GUIDE ONLY FOR ARTICULATION FOR SANITARY PLUMBING, DRAINAGE AND SHOULD BE READ IN CONJUNCTION WITH AS/NZS 3500, AS 2870 AND ANY OTHER RELEVANT STANDARD REQUIREMENTS OF THE B.C.A.

1. ALL DRAINS INSTALLED IN GROUND THAT IS FILLED, UNSTABLE, EXPANSIVE (EG. M, H, E AND P SITES) OR WATER CHARGED AND WHERE SOIL MOVEMENT MAY EFFECT THE PERFORMANCE OF ANY DRAIN, A CERTIFIED PLAN AND SPECIFICATION SHOULD BE PROVIDED BY AN APPROPRIATELY QUALIFIED PERSON. WHEN A COMPLIANCE PERMIT AND ASSESSMENT IS REQUIRED BY THE LOCAL AUTHORITY. A SOIL REPORT AND ALL CALCULATIONS SHOWING PROPOSED METHOD TO PROTECT THE DRAINAGE FROM POTENTIAL GROUND MOVEMENTS MAY BE REQUIRED.
2. ALL SEWER & STORMWATER TO BE CONSTRUCTED IN ACCORDANCE WITH AS/NZS 3500 AND THE REQUIREMENTS OF AS2870 SECTION 5: CLAUSE 5.5 AND SECTION 6: CLAUSE 6.6 ARTICULATION AND EXPANSION JOINTS ARE TO BE PROVIDED TO ACCOMMODATE MOVEMENT IN ALL PIPE WORK WITHIN 3 METRES OF THE DWELLING AND COMPLY WITH AS1260.
3. PLUMBING AND DRAINAGE UNDER THE SLAB SHOULD BE AVOIDED WHERE PRACTICAL (REFER AS/NZS 3500 CLAUSE 4.10).
4. GRADES IN PIPE WORK ON M, H, AND P SITES SHOULD HAVE A MINIMUM GRADE OF 1.30 WITHIN 5 1.5 METRES OF THE BUILDING AND 1:60 ELSEWHERE. GRADES IN FLEXIBLE FITTINGS TO BE SET AT THE MINIMUM GRADE.
5. ALL EXPANSION AND ARTICULATION JOINTS TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOmmENDATIONS. ALL JOINTS TO BE SET MID POINT SO AS TO ALLOW FOR MAXIMUM IN EITHER DIRECTION.
6. STORMPLASTICS (SA) PTY LTD "SWIVEL JOINTS" SHOULD NOT BE USED AS A BEND TO ACHIEVE CORRECT FALLS. THE JOINT SHOULD BE SET IN A STRAIGHT LINE OF THE DRAIN TO ALLOW MAXIMUM (+) OR (-) MOVEMENT. A MINIMUM 15° BEND TO BE INSTALLED BEFORE SWIVEL JOINTS TO ACHIEVE MINIMUM GRADES FROM THE FACE OF THE FOOTING.
7. DETAIL AND SUPPORT OF TRAPS AT THE O.R.G. TO BE CONSIDERED ON SITE, TO ALLOW FOR POTENTIAL MOVEMENTS INCLUDING ISOLATION AND ARTICULATION ASSOCIATED WITH PATHS AND PAVEMENTS. THE O.R.G SHOULD BE CAST IN CONCRETE MONOLITHICALLY WITH THE FOOTING SYSTEMON CLASS H AND E SITES.
7. DETAIL AND SUPPORT OF TRAPS AT THE O.R.G. TO BE CONSIDERED ON SITE, TO ALLOW FOR POTENTIAL MOVEMENTS INCLUDING ISOLATION AND ARTICULATION ASSOCIATED WITH PATHS AND PAVEMENTS. THE O.R.G SHOULD BE CAST IN CONCRETE MONOLITHICALLY WITH THE FOOTING SYSTEM ON CLASS H AND E SITES.
8. ALL PVC PIPE WORK PASSING THROUGH CONCRETE MUST HAVE 25mm LAGGING.
9. STORM WATER SYSTEM THAT COLLECT ROOF WATER AND SURFACE WATER ARE REQUIRED TO BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH AS/ NZS 3500 PART 5.
10. THE USE OF CORRUGATED FLEXIBLE PVC PIPE PRODUCTS SHOULD BE AVOIDED ON CLASS H AND E SITES AS THEY ARE NOT ABLE TO EXPAND LONGITUDINALLY TO ACCOMMODATE POTENTIAL VERTICAL AND LATERAL MOVEMENTS AT THE SLAB OR FOOTING EDGE UNLESS SPECIFICALLY DETAILED BY THE MANUFACTURE.
11. ALL JOINTS IN STORM WATER PIPES WITHIN 3,0 METERS OF THE HOUSE UNDER CONSTRUCTION SHOULD BE ARTICULATED TO ACCOMMODATE GROUND MOVEMENT WITHOUT LEAKAGE.
12. SEPTIC TANKS AND ASSOCIATED SOAKAGE AREAS SHOULD BE LOCATED TO MINIMISE SOIL MOISTURE INCREASES WITHIN THE FOUNDATION JOINTS IN PLUMBING PIPES WITHIN 3.0 METERS OF THE HOUSE UNDER CONSTRUCTION SHOULD BE ARTICULATED TO ACCOMMODATE GROUND MOVEMENTS WITHOUT LEAKAGE. SEPTIC TANKS IN PARTICULAR REQUIRE CAREFUL DETAILING.
13. ALL PIPE WORK INCLUDING STORM WATER FITTINGS AND ADAPTERS SHOULD BE PROTECTED FROM MECHANICAL DAMAGE.
14. TERMITE PROTECTION NOT SHOWN ON THESE DRAWINGS AS THERE ARE VARIOUS OPTIONS. REFER TO THE BUILDER DESIGNER.
15. ALL DETAILS ARE INDICATIVE ONLY. DESIGN OF PATHS FOOTINGS ETC. AND LOCATION OF PENETRATIONS TO BE SPECIFIED BY AND ENGINEER.
16. PROVISIONS SHOULD BE MADE FOR THE CONNECTION OF OVERFLOW OR WATER DISCHARGE FROM MIXTURES SUCH AS H.W.S. AND A.C. TO A DRAIN AS REQUIRED BY THE RELEVANT LOCAL AUTHORITY.
17. EXPECTED MINIMUM REQUIREMENTS FOR EXPANSION AND ALLOWABLE RELATION IN FITTINGS AS FOLLOWS.

SITE CLASS	MINIMUM REQUIRED EXPANSION JOINT CAPACITY	ALLOWABLE ROTATION
"E"	150mm	15°
"H"	70mm	15°
"P"	70mm PLUS ADDITIONAL REQUIREMENTS IN THE CASE OF FILL (MIN DEPENDENT ON SITE CONDITION)	15°
"M"	MINIMUM 25mm LAGGING THROUGH FOOTINGS	NOT APPLICABLE

TYPICAL ELEVATED PIPEWORK (EPW)
Not to scale

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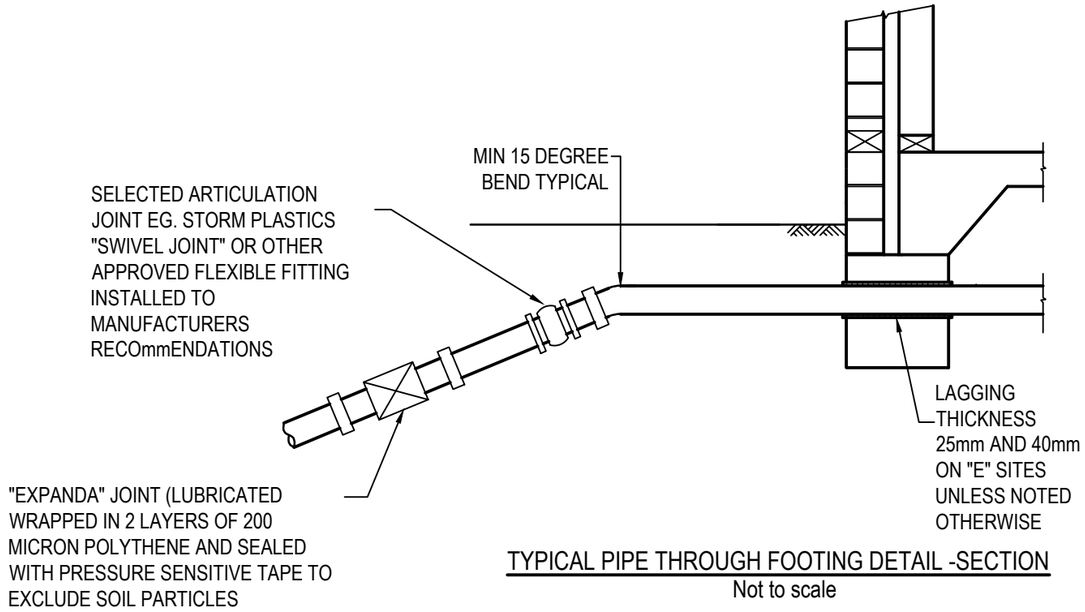
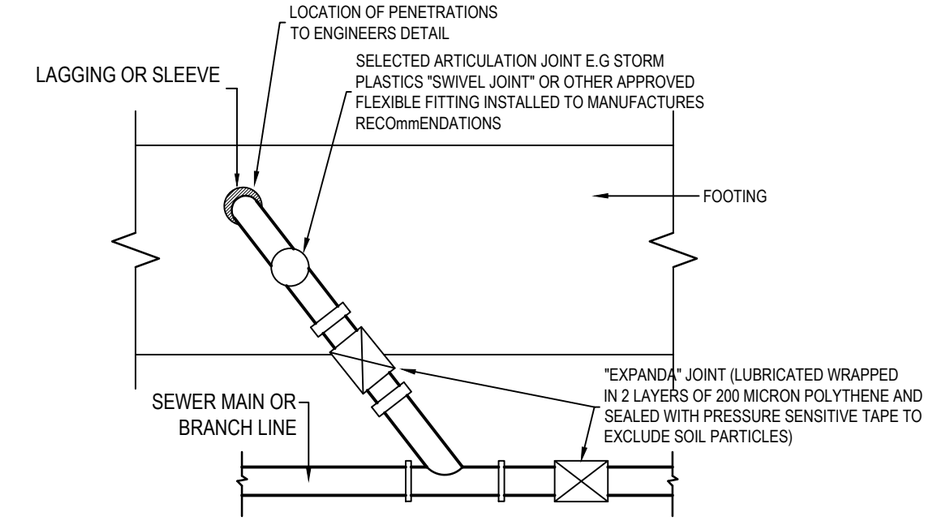
DWELLING & GRANNY FLAT FOR COLIN ALEXANDER AT 22 HOOPER DRIVE PLAINLAND

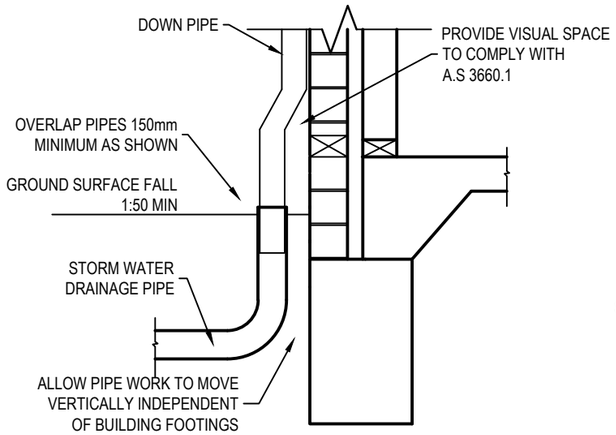
PLUMBING DETAILS



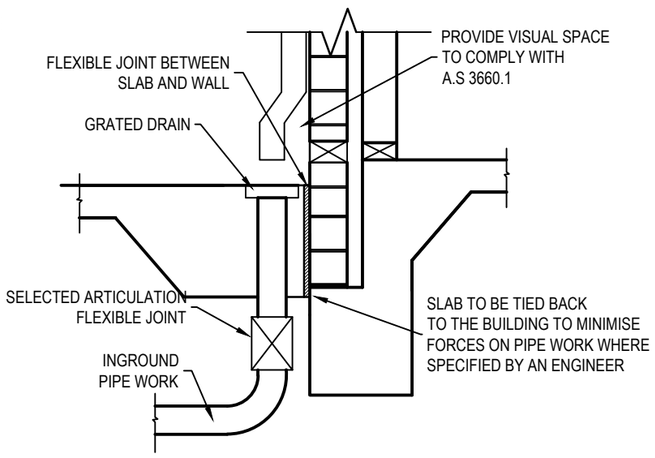
TYPICAL PIPE THROUGH FOOTING DETAIL -SECTION
Not to scale



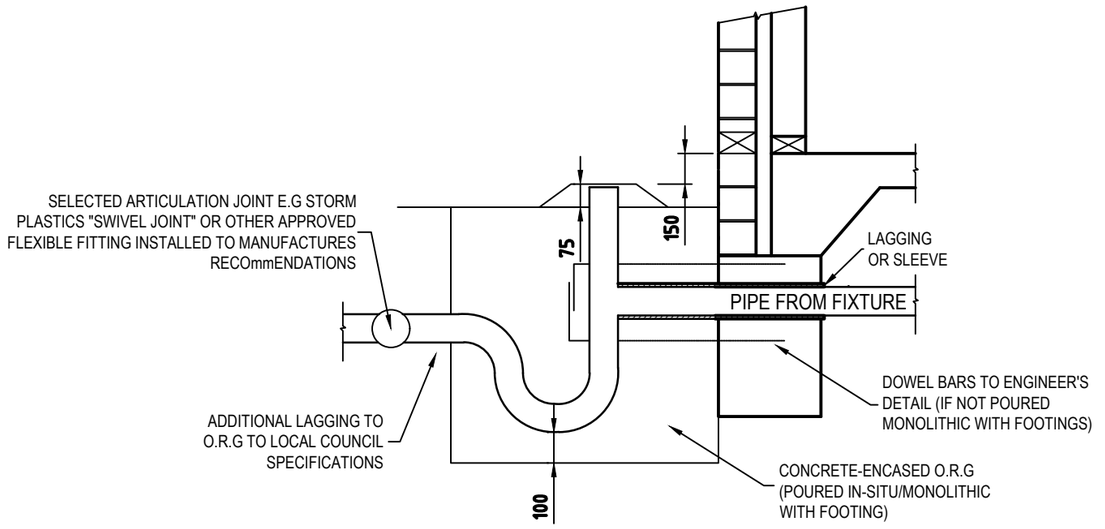
TYPICAL CONNECTION FROM PIPE WORK TO BRANCH LINE DETAIL
Not to scale



TYPICAL STORM WATER DETAIL (ALTERNATIVE)
Not to scale



DOWN PIPE TO GRATED DRAIN DETAIL
Not to scale



TYPICAL SECTION AT O.R.G TO PREVENT SHEAR AT FOOTING FACE
Not to scale

NOTE:
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DWELLING & GRANNY FLAT FOR COLIN ALEXANDER AT 22 HOOPER DRIVE PLAINLAND

PLUMBING DETAILS