PROJECT: DEMOLITION, NEW SUPPORTING STRUCTURE AND DOUBLE STOREY UNIT (DUAL OCCUPANCY SITE)
SITE ADDRESS: 34 EARL STREET, AIR PORT WEST VIC 3342

WB CIVIL STRUCTURAL ENGINEERS
ABN: 84119322438

PRIYAN WIJEYERATNE, EC 19060
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PLAN SET INDEX	
SH. NO	TITLE
1	COVER
2	STANDARDS
3	STORMWATER
4	CRITICAL DEPTH
5	FOUNDATION BEAM SECTIONS
6	STIFFENED RAFT SLANB
7	EXISTING DWELLING
8	1ST FL FRAMING & GR. STR BRA
9	ROOF FR. & 1ST STR. BRA.
10	STRUCTURAL MEMEBR TABLE
11	BRACING DETAIL
12	HYNE BRACING SYSTEM
13	GENERALCONNECTIONS
14	GENERAL CONNECTIONS
15	GENERAL CONNECTIONS
16	STUD REQUIREMENTS
17	BRACKETS/HANGERS
18	WALL FRAMING
19	ARTICULATION JOINTS DETAILS
20	Ajs ON SOUTH ELE.
21	Ajs ON EAST ELE.
22	Ajs ON NORTH ELE.
23	Ajs ON WEST ELE.

DISCLAIMER

CIVIL/STRUCTURAL DESIGN ENGINEER WB CIVIL STRUCTURAL ENGINEERS MUST NOT BE HELD RESPONSIBLE FOR ANY CLAIM ARISING DUE TO MISTAKES, OMISSIONS AND SUBSTANDARD WORKMANSHIP BY BUILDER OR ITS SUB-CONTRACTORS AND SUPPLIERS.

NOTE:
SETTING-OUT OF ANY ELEMENT MUST BE DONE AS PER ARCHITECTURAL PLANS. DIMENSIONS PROVIDED ON THESE PLANS MUST ALWAYS BE CHECKED AGAINST ARCHITECTURAL PLANS.

STRUCTURAL ENGINEER (MOBILE: 0401023328)MUST BE KEPT INFORMED IMMEDIATELY OF ANY DISCREPANCY AND CLARIFICATION SOUGHT BEFORE SETTING-OUT AND CONCRETING IS ORGANISED.

DIAL BEFORE YOU DIG www.1100.com.au

WARNING

ALL SERVICES SHOWN ON THESE DRAWINGS ARE APPROXIMATE ONLY AND EXACT LOCATION IS TO BE CONFIRMED ON SITE BY CONTRACTOR PRIOR TO COMMENCEMENT OF ANY WORKS.

CLIENT:
ARCHITECTURAL
CUSTOM DESIGN - CUSTOM BUILD

JOB NO: ARCHI/2016/2

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(VICTORIAN BUILDING AUTHORITY)

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M.Eng(Struct)., M.Tech.(Mgt.), BSc(Civil)

PROJECT:
DEMOLITION, SUPPORTING STRUCTURE & PRO. DWELLING

PROJECT ADDRESS:
34 EARL St, AIRPORT WEST VIC 3342

SHEET NO: 1/23

SCALE: AS SHOWN

DATE: 03/04/2016

WB CIVIL STRUCTURAL ENGINEERS

Rev.	Remarks/comments	Date	Aprv.
A	Remarks/comments	Date	Aprv.

STANDARDS, MATERIALS, AND WORKMANSHIP REQUIREMENTS

THESE NOTES TO BE FOLLOWED UNLESS NOTED OTHERWISE BY THE ENGINEER

GENERAL NOTES

G1. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH SPECIFICATION AND OTHER WORKING DRAWINGS. ANY DISCREPANCIES SHALL BE NOTIFIED TO THE ENGINEER IMMEDIATELY.

G2. ALL DIMENSIONS RELEVANT TO SETTING OUT AND OFF-SITE WORK SHALL BE VERIFIED BY THE CONTRACTOR BEFORE CONSTRUCTION AND FABRICATION IS COMMENCED. THE ENGINEER'S DRAWINGS SHALL NOT BE SCALED.

G4. MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE SPECIFICATION, THE CURRENT REVISION OF ALL RELEVANT SAA CODES, THE REQUIREMENTS OF THE VICTORIAN BUILDING REGULATIONS, THE BUILDING CODE OF AUSTRALIA AND THE RELEVANT AUTHORITY.

G5. CONTRACTORS SHALL ENSURE THAT LOCATIONS OF ALL UNDERGROUND SERVICES ARE IDENTIFIED PRIOR TO COMMENCEMENT OF WORKS AND EXCAVATIONS. THE WORK COMMENCES.

G6. RELEVANT STANDARDS USED:

1	Structural Steel Design	AS4100
2	Structural Reinforced Concrete Design	AS3600
3	Structural Timber Framing	AS1684
4	Timber Structures Design	AS1720
5	Domestic Slab Design	AS2870
6	Brickwork	AS3700
6	Wind Analysis & Design	AS1170
7	Access & Mobility	AS1428
8	Welding	AS1554
9	Bolts & Nuts	AS1252
10	Cold formed Steel	AS 4600
11	Bolts & Nuts	AS1252
12	Stormwater Drainage	AS3500
13	Glazing	AS1288/AS2047
14	Water Proofing to Wet Areas	AS3740/BCA 4-3-1

LIVE LOADS

L1. THE STRUCTURAL WORK SHOWN ON THESE DRAWINGS HAS BEEN DESIGNED FOR THE FOLLOWING LIVE LOADS:-

ROOF ..... 0.25k Pa OR [1.8/ A+ 0.12] WHICHEVER IS GREATER

FLOOR ..... 1.5 kPa. (OR AS USED FOR COPUTATIONS)

Balcony ..... 2.0 kPa. (OR AS USED FOR COPUTATIONS)

TEMPORARY BRACING

TB1. DURING CONSTRUCTION THE STRUCTURE SHALL BE MAINTAINED IN A STABLE CONDITION AND NO PARTS HALL BE OVER STRESSED.

TB2. THE CONTRACTOR SHALL PROVIDE AND INSTALL ANY ADDITIONAL BRACING, EQUIPMENT NECESSARY TO ADEQUATELY AND SAFELY HOLD THE STRUCTURE IN POSITION DURING CONSTRUCTION.

CONCRETE

C1. All CONCRETE AND WORKMANSHIP TO CONFORM TO THE REQUIREMENTS OF AS3600.

C2. ALL INSET CONCRETE SHALL BE A CHARACTERISTIC STRENGTH TO BE AS NOTED BELOW AT 28 DAYS UNLESS NOTED OTHERWISE:-

BLINDING CONCRETE	15 MPa
STRIP FOOTINGS	20 MPa.
PAD FOOTINGS	20 MPa
SLAB ON GROUND	20 MPa

ALL OTHER MEMBERS TO BE 32 MPa (OR AS NOTED OTHERWISE).

MAXIMUM SLUMP TO BE 75mm
MAXIMUM AGGREGATE TO BE 20mm

C3. CONCRETE ELEMENTS SHOWN ON THE DRAWINGS MUST NOT BE REDUCED IN ANY WAY WITHOUT THE ENGINEER'S APPROVAL. NO HOLES, CHASES DRY EMBEDMENT'S OTHER THAN THOSE SHOWN WILL BE PERMITTED IN ANY CONCRETE ELEMENTS WITHOUT THE ENGINEER'S APPROVAL.

C4. REINFORCEMENT NOTATION:-
N - DENOTES HOT ROLLED DEFORMED BARS TO AS 4671
RL - DENOTES RECTANGULAR REINFORCEMENT FABRIC TO AS/NZS 4671
SL - DENOTES SQUARE REINFORCEMENT FABRIC TO AS/NZS 4671
LXTM - DENOTES TRENCH MESH REINFORCEMENT TO AS/NZS 4671.

LAPPING REINFORCEMENT:-

REINFORCEMENT SPLICES SHALL BE LAP SPLICES AS REQUIRED BY THE CURRENT CONCRETE CODE UNLESS NOTED IN THE DRAWINGS FOR FABRIC, THE MINIMUM SPLICE SHALL BE 220mm MINIMUM WITH THE OVERLAP MEASURED BETWEEN THE OUTERMOST WIRES AND NOT LESS THAN THE PITCH OF THE SECONDARY WIRES.

C5. CLEAR COVER TO REINFORCEMENT AS NOTED ON THE DRAWINGS.

C6. CONCRETE COVER TO BE MAINTAINED BY THE USE OF APPROVED BAR CHAIRS AND/OR CONCRETE BLOCKS SPACED AT APPROXIMATELY 1000 CROSS CTS. CONDUITS, PIPES ETC. ARE NOT TO BE PLACED IN CONCRETE COVER.

C7. CONCRETE TO BE KEPT FREE OF SUPPORTING BRICKWORK BY TWO LAYERS OF A SUITABLE MEMBRANE; VERTICAL FACES OF CONCRETE TO BE KEPT FREE BY 12mm THICKNESS OF BITUMINOUS CANEITE.

C8. ALL MILD STEEL BRACKETS, SLOTS ETC. EMBEDDED IN THE CONCRETE SHALL BE HOT-DIP GALVANISED.

C9. DIRECTION OF MESH ON PLAN INDICATES THE DIRECTION OF MAIN WIRES WHICH SHOULD BE PLACED NEAREST THE RELEVANT SLAB SURFACE.

C10. ALL CONCRETE SHALL BE PROPERLY COMPACTED BY MEANS OF APPROVED VIBRATORS.

C11. CONSTRUCTION JOINTS WHERE NOT SHOWN, SHALL BE LOCATED TO THE APPROVAL OF THE ENGINEER.

C12. FORMWORK SHALL NOT BE STRIPPED UNTIL 3 DAYS HAS ELAPSED FROM TIME OF POUR - UNLESS APPROVED OTHERWISE BY THE ENGINEER. NO LOADS APPLIED FOR 28 DAYS.

C13. ENGINEER TO BE NOTIFIED 48 HOURS PRIOR TO POURING CONCRETE.

C14. ALL PIPE WORK CAST INTO CONCRETE IS TO BE SLEEVED OR LAGGED WITH APPROPRIATE COMPRESSIBLE MATERIAL FOR THE FULL LENGTH OF EMBEDMENT.

BRICKWORK - BLOCKWORK

B1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 3700.

B2. LOAD BEARING BRICKS SHALL HAVE A MINIMUM CHARACTERISTIC UNCONFINED STRENGTH OF 20 MPa AND LOAD BEARING BLOCKS SHALL HAVE A CHARACTERISTIC UNCONFINED COMPRESSIVE STRENGTH OF 15 MPa. UNLESS OTHERWISE NOTED.

B3. MORTAR SHALL BE FRESHLY PREPARED AND UNIFORMLY MIXED IN THE RATIO OF ONE PART CEMENT, ONE PART LIME AND SIX

B4. BLOCKWORK CORE FILLING CONCRETE COMPRESSIVE STRENGTH AT 28 DAYS SHALL BE: 20 MPa.

B5. BRICKWORK OR BLOCKWORK SUPPORTING CONCRETE SHALL BE TROWELLED SMOOTH AND SEPARATED AT THE BEARING SURFACE BY A LAYER OF GALVANIZED STRIP OR TWO LAYERS OF BITUMINOUS BUILDING PAPER.

B6. JOINT REINFORCEMENT WHERE SHOWN ON THE PLAN SHALL BE AT EVERY 600 mm. WITH AN EXTRA COURSE OVER AND UNDER WINDOW OPENINGS USING 'RECTOR', 'BLOTTER' OR SIMILAR.

B7. NO BRICKWORK OR BLOCKWORK WHICH IS SUPPORTED BY CONCRETE SHALL BE ERECTED UNTIL SUPPORTING FORMWORK HAS BEEN REMOVED.

B8. CAVITY WALL TIES TO BE IN ACCORDANCE WITH THE CURRENT BCA REQUIREMENTS.

STRUCTURAL STEELWORK

S1. ALL WORKMANSHIP, FABRICATION, ERECTION AND MATERIALS SHALL BE IN ACCORDANCE WITH AS4100.

S2. SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER AND APPROVED BEFORE FABRICATION IS COMMENCED.

S3. EXCEPT AS SHOWN, STEEL MEMBERS SHALL NOT BE SPLICED WITHOUT THE PRIOR APPROVAL OF THE ENGINEER.

S4. WELDING OF STEELWORK TO BE IN ACCORDANCE WITH AS 1554 AND UNLESS OTHERWISE NOTED, SHALL BE 6mm FILLET WELD ALL AROUND.

S5. ALL HIGH STRENGTH BOLTS SHALL BE ASSEMBLED AND INSPECTED IN ACCORDANCE WITH AS 1252.

8.8/S BOLTS ARE HIGH STRENGTH BOLTS.
8.8/TB BOLTS ARE HIGH STRENGTH BEARING TYPE SLOTS.
8.8/FT. BOLTS ARE HIGH STRENGTH FRICTION TYPE BELTS.

S6. STEEL WORK TO BE ENCASED IN CONCRETE SHALL NOT BE PAINTED, BUT SHALL BE GIVEN ONE COAT OF CEMENT WASH.

S7. STEEL WORK NOT ENCASED OR OTHERWISE NOTED SHALL BE GIVEN ONE COAT OF APPROVED METALLIC PRIMER AT LEAST 48 HOURS BEFORE DISPATCH.

S8. STEEL WORK TO BE ENCASED SHALL BE WRAPPED WITH 3mm WIRE AT 100mm PITCH AND ENCASED IN 4:2:1 CONCRETE WITH A MINIMUM COVER OF 50mm.

S9. ALL STEEL WORK BELOW GROUND SHALL BE ENCASED IN CONCRETE AND IF EXPOSED, GALVANISE TO HAVE 600 g/sq.m OF GALVANISE.

S10. ALL CLEATS AND DRILLING FOR FIXING OF ARCHITECTURAL ELEMENTS, TIMBER FRAMING ETC. SHALL BE PROVIDED BY THE FABRICATOR. THE STRUCTURAL DRAWINGS ARE DEEMED TO PROVIDE FOR ALL THE NECESSARY MAJOR STRUCTURAL STEELWORK AND CONNECTIONS. MINOR NON-STRUCTURAL ITEMS SUCH AS TRIMMERS, CLEATS AND OTHER ITEMS SHOWN ON THE ARCHITECTURAL DRAWINGS, BUT NOT SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE ALLOWED FOR BY THE CONTRACTOR IN HIS TENDER PRICE, AND DETAILED.

S11. THE CONTRACTOR SHALL PROVIDE BRACING AND LEAVE IN PLACE UNTIL PERMANENT BRACING ELEMENTS ARE CONSTRUCTED OR CLEATS, ETC. AS IS NECESSARY TO STABILISE THE STRUCTURE DURING ERECTION.

S12. ALL UB, UC AND PFC MEMBERS TO HAVE Fy= 300 MPa MINIMUM.

TIMBER NOTES

T1. ALL TIMBER MATERIALS, WORKMANSHIP AND PRACTICE SHALL BE IN ACCORDANCE WITH THE TIMBER ENGINEERING CODE AS 1720 AND THE TIMBER FRAMING CODE AS 1684. ALL LINTELS, BEAMS ETC. NECESSARY FOR THE PROPER SUPPORT OF ROOF FRAMING SHALL BE PROVIDED EITHER AS SHOWN ON THE DRAWINGS OR AS REQUIRED IN ACCORDANCE WITH AS 1684.

T2. ALL TIMBER SHALL BE IN ACCORDANCE WITH THE STRESS GRADE NOMINATED ON THE DRAWINGS AND SHALL BE FREE OF DEFECTS, SPLITS, ROT ETC. THE ENGINEER RESERVES THE RIGHT TO REJECT UNSUITABLE TIMBER.

T3. ALL BOLTED TIMBER CONNECTIONS SHALL BE MADE WITH M12 BOLTS UNLESS NOTED OTHERWISE MILD STEEL WASHERS SHALL BE PLACED UNDER THE HEAD AND NUT IN ACCORDANCE WITH THE TABLE BELOW:-

WASHER SIZE	
50x50x3mm	BOLTS UP TO M12
65x65x5mm	M16, M20 BOLTS
75x75x5mm	BOLTS GREATER THAN M20

ALL EXPOSED BOLTS AND FITTINGS SHALL BE HOT-DIP GALVANISHED.

T4. ALL BOLTS SHALL BE RE-TIGHTENED AT THE COMPLETION OF THE CONTRACT AND AGAIN AT THE END OF THE MAINTENANCE PERIOD. BOLTS WHICH ARE INACCESSIBLE AT THE COMPLETION OF THE STRUCTURAL WORKS SHALL BE RE-TIGHTENED IMMEDIATELY BEFORE BEING BUILT-IN.

TSO. ALL PROPRIETARY FIXINGS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS, OR AS NOTED ON THE STRUCTURAL DRAWINGS.

T6. THE STRUCTURAL DRAWINGS ARE DEEMED TO PROVIDE FOR ALL NECESSARY MAJOR STRUCTURAL TIMBER AND CONNECTIONS. MINOR NON-STRUCTURAL ITEMS SUCH AS TRIMMERS, CLEATS AND OTHER ITEMS AS SHOWN ON THE ARCHITECTURAL DRAWINGS, BUT ARE NOT SHOWN ON THE STRUCTURAL DRAWINGS, SHALL BE ALLOWED FOR BY THE CONTRACTOR IN HIS TENDER PRICE, AND DETAILED AT THE SHOP DRAWING STAGE IF REQUIRED.

CLIENT:
ARCHITECTURAL
CUSTOM DESIGN - CUSTOM BUILD

JOB NO: ARCHI/2016/2

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REGISTERED ENGINEER
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M.Eng(Struct)., M.Tech.(Mgt.), BSc(Civil)

PROJECT:
DEMOLITION, SUPPORTING STRUCTURE & PRO. DWELLING

PROJECT ADDRESS:
34 EARL St, AIRPORT
WEST VIC 3342

SHEET NO: 2/23

SCALE: AS SHOWN

DATE: 03/04/2016

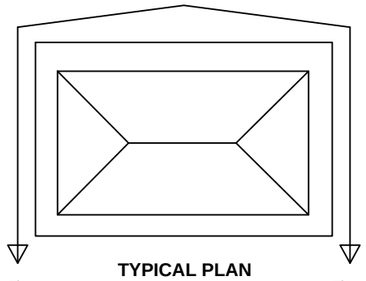
WB CIVIL STRUCTURAL ENGINEERS

MANAGING STORMWATER DRAINAGE & SEWER RETICULATION

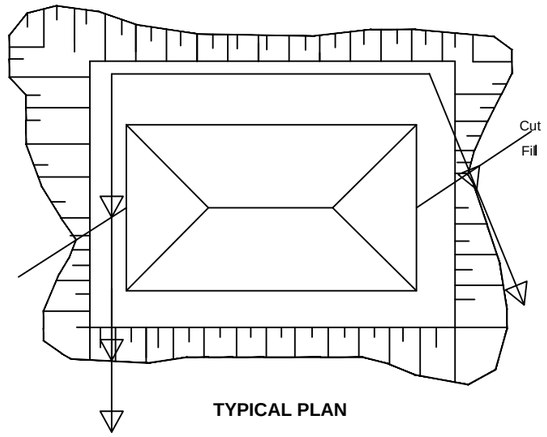
THESE NOTES TO BE FOLLOWED UNLESS NOTED OTHERWISE BY THE ENGINEER

TYPICAL STORMWATER DRAINAGE

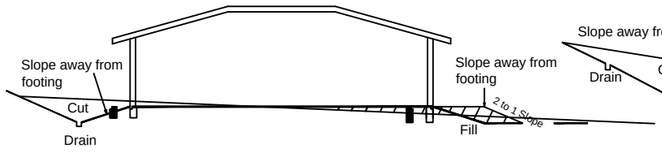
TYPICAL SECTION
SITES WITH SLIGHT OR NO FALL



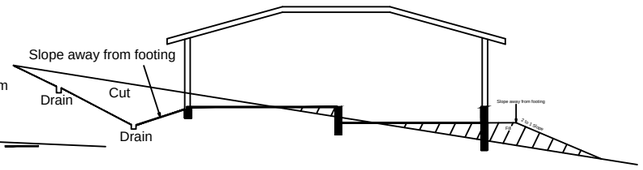
TYPICAL PLAN



TYPICAL PLAN



TYPICAL SECTION
SITES WITH FALL UP TO 1 : 18



TYPICAL SECTION
SITES WITH FALL GREATER THAN 1 : 18

DRAINAGE REQUIREMENTS

GENERAL

THESE DRAINAGE AND OTHER REQUIREMENTS FORM PART OF THE FOOTING DESIGN.

DEFECTIVE SURFACE DRAINAGE IS A COMMON FACTOR IN REACTIVE CLAY FOUNDATION MOVEMENT PROBLEMS. THE EFFECTIVE DRAINAGE OF THE SITE IS A PREREQUISITE FOR SATISFACTORY PERFORMANCE OF A FOUNDATION SYSTEM.

THE BUILDER'S RESPONSIBILITY IS TO MAKE THE OWNER AWARE OF THE IMPORTANCE OF SURFACE DRAINAGE, EVEN IF IT IS NOT PART OF BUILDER'S CONTRACT TO CONSTRUCT SURFACE DRAINAGE.

LANDSCAPING AND OTHER FINISHING SITE WORKS MUST BE INCORPORATED WITH WELL DESIGNED SURFACE DRAINAGE TO MITIGATE ANY ADVERSE IMPACT ON A FOUNDATION SYSTEM.

DRAINAGE NOTES

- ALL SURFACE DRAINAGE WORKS SHALL BE INSTALLED IN ACCORDANCE WITH CLAUSE 5.6.3 DRAINAGE REQUIREMENTS OF AS 2871-2011, WHEREIN FOR BUILDINGS ON MODERATELY, HIGH AND REACTIVE SITES.
- SURFACE DRAINAGE SHALL BE CONTROLLED THROUGHOUT CONSTRUCTION AND BE COMPLETED BY THE FINISH OF CONSTRUCTION
- THE BASES OF TRENCHES SHALL SLOPE AWAY FROM THE BUILDING
- WHERE PIPES PASS UNDER THE FOOTING SYSTEM, CLAY PLUGS ARE TO BE ADOPTED TO PREVENT THE INGRESS OF WATER
- FOR BUILDINGS ON HIGHLY REACTIVE SITES, DRAINER SHALL PROVIDE DRAINAGE ARTICULATION TO ALL STORMWATER, SANITARY PLUMBING DRAINS AND DISCHARGE PIPES IN ACCORDANCE WITH CLAUSE 5.6.4 PLUMBING REQUIREMENTS. WHEREIN FLEXIBLE JOINTS IMMEDIATELY OUTSIDE BUILDING AND COMMENCING WITHIN 1m OF THE BUILDING PERIMETER ARE REQUIRED TO ACCOMMODATE THE REQUIRED DIFFERENTIAL MOVEMENT BASED ON THE SOIL CLASSIFICATION. REFER TO TABLE BELOW FOR 'MIN. REQUIREMENTS FOR EXPANSION AND ALLOWABLE IN FITIINGS
- FLEXIBLE JOINTS ARE REQUIRED AT ENTRY & EXIT OF SLAB/FOOTINGS. SURFACE WATER MUST BE DIVERTED AWAY FROM THE DWELLING AND GRADED AWAY FROM ALL FOUNDATIONS TO GIVE A SLOPE OF NOT LESS THAN 50mm OVER THE FIRST 1000mm FROM THE DWELLING
- SUBSURFACE DRAINS TO REMOVE GROUND WATER SHALL BE DETAILED BY THE DESIGN ENGINEER. FURTHERMORE, DAMP-PROOF MEMBRANE IN ACCORDANCE WITH CLAUSE 5.3.3 OF AS 2870 SHALL BE INSTALLED FOR GROUNDWATER DRAINAGE ON AGGRESSIVE SOILS

SITE DRAINAGE REQUIREMENTS

CONSTRUCTION STAGE

THE GEOTECHNICAL REPORT HAS RECOMMED THE USE OF A CERTAIN FOOTING THAT IS APPROPRIATE FOR THIS SITE. WHILE MAKING THIS RECOMMENDATION IT HAS BEEN ASSUMES THAT CERTAIN SITE DRAINAGE REQUIREMENTS AS PER AS2870-2001 HAS BEEN MET.

DURING THE CONSTRUCTION OF THE FOOTING THE FOLLOWING SITE DRAINAGE REQUIREMENTS ARE LISTED AS BEING PART OF THE FINAL FOOTING DESIGN BY THE DESIGN ENGINEER.

- MUST PREVENT WATER PONDING AGAINST OR NEAR THE FOOTING
- THE GROUND IN THE IMMEDIATE VICINITY OF THE PERIMETER FOOTING SHALL BE GREADED TO A FALL OF 50mm MIN. AWAY FROM THE FOOTING OVER A DISTANCE OF 1000mm (1:20) AND SHAPED TO PREVENT PONDING OF WATER (THIS INCLUDES THE GROUND UP HILL FROM THE FOOTING ON A CUT/FILL SITE) - WHERE FILLING IS PLACED ADJACENT TO THE BUILDING. THE FILLING SHALL BE COMPACTED AND GRADED TO ENSURE DRAINAGE AWAY FROM FOOTINGS OR
- ALL COLLECTED STORMWATER MUST BE DISCHARGED TO A LEGAL POIT OF DISCHARGE
- SURFACE DRAINAGE OF THE SITE SHALL BE CONTROLLED FROM THE START OF THE SITE PREPARATION AND CONSTRUCTION. SURFACE DRAINAGE INCLUDES SURFACE WATER RUN-OFF AND BUILDING WATER (ROOF/FLOOR/CONCRETE) RUN-OFF
- ALL WATER RUN-OFF SHALL BE CONTROLLED AT ALL TIMES
- USE TEMPORARY DOWNPIPES TO COLLECT WATER FROM A ROOFED BUILDING FRAME
- WHEN SILT PITS ARE USED TO GATHER SURFACE WATER FROM AREAS ADJACENT TO THE FOOTINGS, THESE SILT PITS ARE TO BE AT LEAST 1000mm AWAY FROM THE FOOTING AND CONNECTED TO THE STORMWATER SYSTEM WITH A SOLID PIPE
- STORMWATER DRAINS SHALL BE AT LEAST 90mm AND HAVE A MINIMUM FALL OF 1:100 AND 100mm COVER UNDER THE SOIL AND/OR PAVED AREAS
- INSPECTION OPENINGS SHOULD BE PROVIDED AT EACH PIPE CONNECTION POINT AND AT A NOMINAL SPACING OF 25m
- AVOID UNDERMINING THE FOOTING WITH ANY TRENCHES OR PIPE OR PITS UNLESS THE FOOTING HAS BEEN DESIGNED TO ALLOW FOR SUCH SITUATION SUB-SURFACE DRAINAGE IS REQUIRED TO REMOVE ANY UNWANTED GROUNDWATER BY MEANS OF 90mm SLOTED PIPE IN A 300mm WIDE TRENCH (MIN. FALL OF 1:100). BASE OF THE TRENCH IS FILLED WITH 10mm CRUSHED ROCK OR SIMILAR COVERING THE SLOTED PIPE
- AG DRAINS MUST NOT BE INSTALLED WITHIN 1500mm FROM ANY FOOTING
- AG DRAINS MUST BE INSTALLED AT THE BASE OF ALL SITE CUTS THAT EXCEED 400mm IN HEIGHT, ALONG THE HIGH SIDED OF A SLOPING SITE AND POSSIBLY ALONG THE LOW SIDE OF A SLOPING SITE ALONG THE BOUNDARY. TO BE CONNECTED TO

MAINTENANCE:

- THE MAINTENANCE OF THE SITE AROUND A NEW HOME IS AN IMPORTANT FACTOR IN THE LONG-TERM PERFORMANCE OF THE FOOTING SYSTEM
- THE PRIMARY OBJECTIVE OF THIS MAINTENANCE IS TO MINIMISE THE VARIATION IN SOIL MOISTUE LEV AROUND THE FOOTING THAT COULD LEAD THE EXCESSIVE SOIL MOVEMENT AND POSSIBLE DISTRESS THE SUPERSTUCTURE AND/OR FOOTING. WHEN THE SLAB FORMS PART OF THE TERMITE BARRIER SY FOR THE HOUSE, THEN IT IS ASLO NECESSARY TO MAINTAIN THE EFFECTIVENESS OF THAT BARRIER V APPOPRIATE MAINTANCE ACTIVITIES.
- WHEN A CONCRETE SLAB-ON-GROUND IS USED AS PART OF THE TERMITE BARRIER SYSTEM AS OUTLI AS3660.0, THEN IT CANNOT BE TOO HIGHLY STRESSES THAT REGULAR INSPECTION AND MAINTENANCI THE SLAB SURROUNDING BY A COMPETENT PROFESSIONAL IS REQUIRED TO ENSUE THAT ANY TERMI INFESTATION IS DETECTED AND TREATED PROMPTLY.
- ONGOING MAINTENANCE AND INSPECTION ON A REGULAR BASIS IS A REQUIREMENT OF AS3660.1 AND OWNER SHOULD BE CLEARLY ADVISED IF THEIR RESPONSIBILITIES TO ENSURE THAT THEIR INVESTME PROPERLY PROTECTED.
- LEAKING TAPS, DOWNPIPES, SEWERS GUTIERS AND DRAINAGE CAN ALSO AFFECT THE MOISTURE CO OF THE SOIL AND THESE MUST BE INSPECTED REGULARLY TO ENSURE AGAINST DAMAGE TO THE FOOTINGS. SIMILARLY, GUTIERS, DOWNPIPES AND COLLECTION POINTS CAN GET BLOCKED WITH LEA AND OTHER DEBRIS, PREVENTING THE EFFECTIVE DRAINAGE OF STORMWATER AWAY FROM THE HOU AGAIN, REGULAR INSPECTIONS AND MAINTENANCE SHOULD BE CARRIED OUT TO PREVENT BLOCKAGE
- IT IS IMPORTANT FOR BUILDER TO MAKE THE HOMEOWNER AWARE OF THE MAINTENANCE ISSUES ASSOCIATED WITH ENSURING THE LONG-TERM PERFORMANCE OF THE FOOTING SYSTEM.

LANDSCAPING

- THE WORKS ON GARDENS SHALL NOT IMPACT ON DRAINAGE REQUIREMENTS, SUBFLOOR VENTILATION AND WEEPHOLE DRAINAGE SYSTEMS. GARDEN BEDS ADJACENT TO THE BUILDING SHALL BE AVOIDED. CARE SHALL BE TAKEN TO AVOID OVERWATERING OF GARDENS CLOSE TO THE BUILDING FOOTINGS. (AS 2870 Cl. B2.3(b))
- PLANTING OF TREES SHALL BE AVOIDED NEAR THE FOUNDATION OF A BUILDING OR NEIGHBOURING BUILDING AS THEY CAN CAUSE DAMAGE DUE TO DRYING OF THE CLAY AT SUBSTANTIAL DISTANCES. TO REDUCE THE POSSIBILITY OF DAMAGE TREES SHOULD BE RESTRICTED TO A DISTANGE FROM THE HOUSE AS FOLLOWS:
- 1 1/2 x MATURE TREE HEIGHT FOR CLASS E SITES.
- 1 1/2 x MATURE TREE HEIGHT FOR CLASS H1 AND CLASS H2 SITES
- 1 1/2 x MATURE TREE HEIGHTFOR CLASS M SITES
- WHERE ROWS OR GROUPS OF TREES ARE INVOLED, THE DISTANGE FROM THE BUILDING SHOULD BE INCREASED. REMOVAL OF TREES FROM THE SITE CAN ALSO CAUSE SIMILAR PROBLEMS. (AS 2870 B2.3 (c))

STORMWATER DISCHARGE & LPD

- IT IS BUILDER'S RESPONSIBILITY TO CONNECT ROOF RAIN WATER FROM NEW DWELLING TO EXISTING PROPOERTY DISCHARGE PIPE LINE WHICH IS ALREADY CONNECTED TO LPD.
- STORMWATER DRAINAGE LINE DESIGN AND CONSTRUCTION MUST CONFORM TO INFORMATION PROVIDED IN MOONEY VALLEY COUNCIL DOCUMENT
- "STORMWATER DRAINAGE REQUIREMENTS FOR DEVELOPMENT WORKS", WHICH IS AVAILABLE ON-LINE FROM MVCC WEBSITE OR FROM ITS ENGINEERING DEPARTMENT.

MINIMUM REQUIREMENTS FOR SEWER RETICULATION

SITE CLASS	SEWER EXIT POINTS		MIN. EXPANSION JOINT CAPACITY	ALLOWABLE ROTATION	LAGGING
	SWIVEL	EXPANDER			
M	0	0	-	-	MIN. 20
H1	1	1	60MM	15^0	MIN. 40
H2/H2-D	2	1	90MM	15^0	MIN. 40
E	2	1	120MM	15^0	MIN. 40
P	2	1	90MM (UNO)	15^0	MIN. 40

CLIENT:
ARCHITECTURAL
Custom Design - Custom Build

JOB NO: ARCHI/2016/2

WB CIVIL STRUCTURAL ENGINEERS
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Email: wbcseng@gmail.com

REGISTERED ENGINEER
REGISTERED BUILDER
(VICTORIAN BUILDING AUTHORITY)

PRIYAN WIJEYERATNE
EC 19060, D-BU 22220
M.I.E.(AUST)., C.P.ENG.
M.Eng(Struct)., M.Tech.(Mgt.), BSc(Civil)

PROJECT:
DEMOLITION, SUPPORTING STRUCTURE & PRO. DWELLING

PROJECT ADDRESS:
34 EARL St, AIRPORT WEST VIC 3342

SHEET NO: 3/23

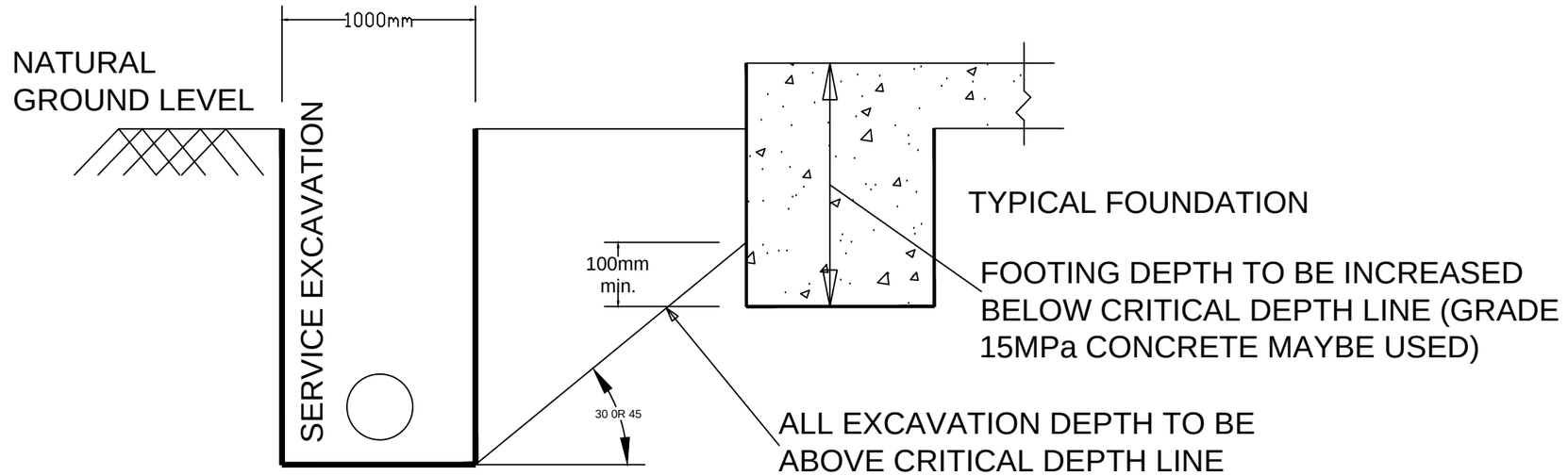
SCALE: AS SHOWN

DATE: 03/04/2016

WB CIVIL STRUCTURAL ENGINEERS

TRENCHING, FOOTINGS & CRITICAL DEPTH LINE

THESE NOTES TO BE FOLLOWED UNLESS NOTED OTHERWISE BY THE ENGINEER

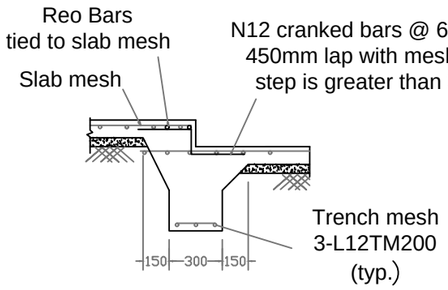


30 DEG. FOR CLAY / 45
DEG. FOR SAND

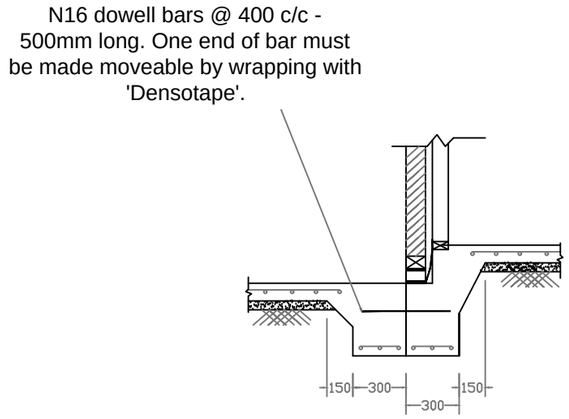
SERVICE TRENCH EXCAVATION ADJACENT A TO FOUNDATION NTS

CLIENT: ARCHITECTURAL CUSTOM DESIGN - CUSTOM BUILD **JOB NO:** ARCHI/2016/2	**WB CIVIL STRUCTURAL ENGINEERS** ENGINEERS & BUILDERS ABN: 84119322436 OFFICE: NO: 9, NUMERING COURT, MELTON, VIC 3337 Mobile: 0401023328 / Ph: 03 9746 0089 Email: wbcseng@gmail.com	REGISTERED ENGINEER REGISTERED BUILDER (VICTORIAN BUILDING AUTHORITY) PRIYAN WIJEYERATNE EC 19060, D-BU 22220 M.I.E.(AUST)., C.P.ENG. M.Eng(Struct)., M.Tech.(Mgt.), BSc(Civil)	**PROJECT:** DEMOLITION, SUPPORTING STRUCTURE & PRO. DWELLING PROJECT ADDRESS: 34 EARL St, AIRPORT WEST VIC 3342	SHEET NO: 4/23 SCALE: AS SHOWN DATE: 03/04/2016	WB CIVIL STRUCTURAL ENGINEERS

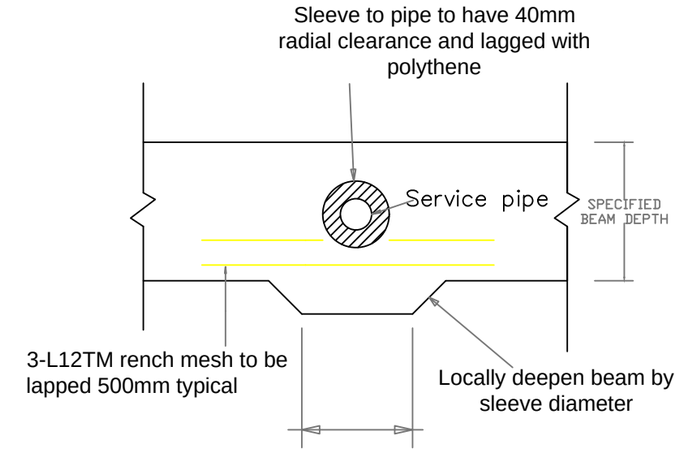
STIFFENED RAFT SLAB/BEAM DETAIL



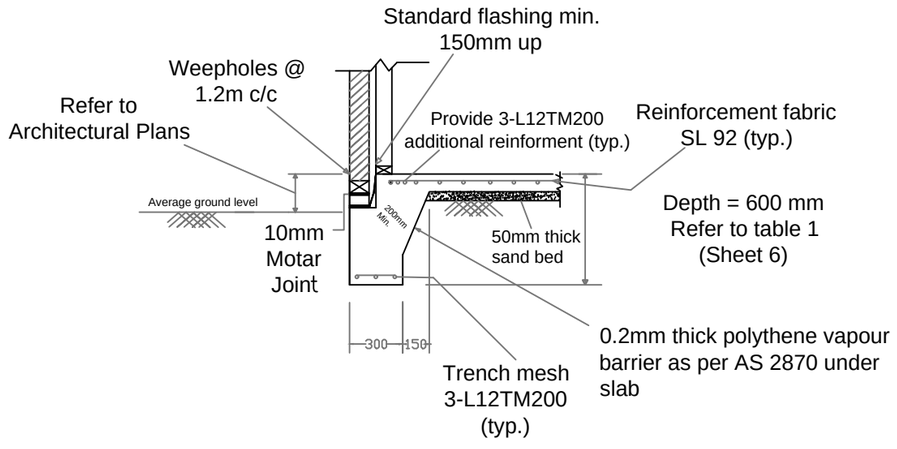
STEP DOWN NTS



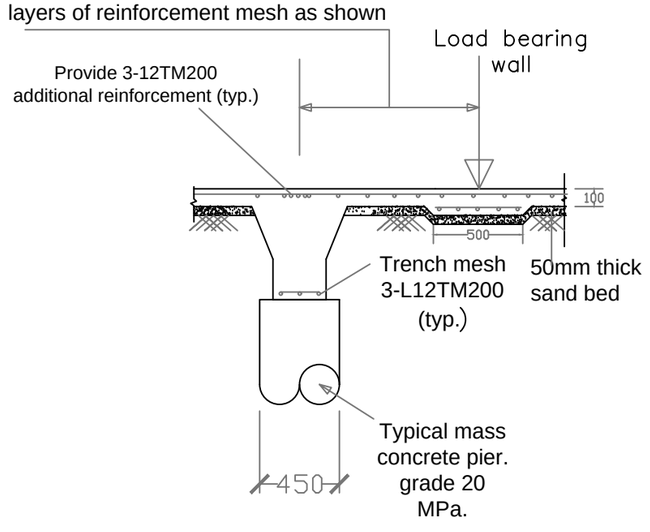
CONSTRUCTION JOINT NTS



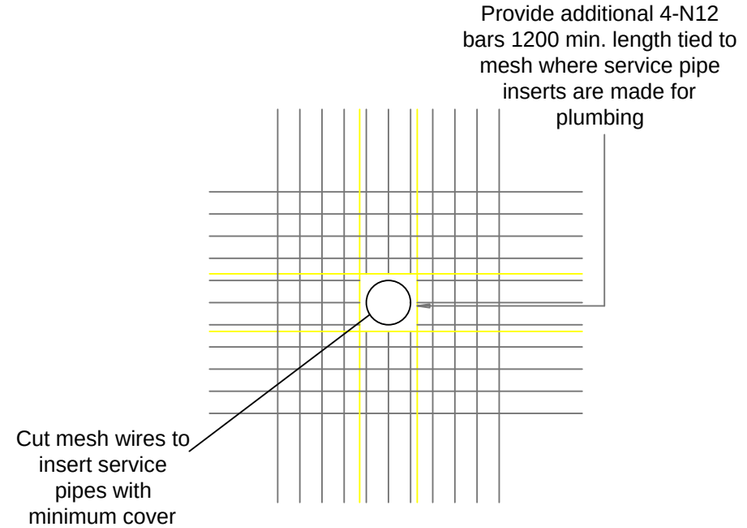
SERVICE PENETRATION IN BEAM PLAN VIEW NTS



EDGE BEAM NTS



INTERNAL RIB NTS



SERVICE PENETRATION IN SLAB PLAN VIEW NTS

Note 1:
The Builder shall ensure that during construction the surface and roof stormwater is drained away from the house foundation.

CLIENT:
ARCHITECTURAL
CUSTOM DESIGN - CUSTOM BUILD

JOB NO: ARCHI/2016/2

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PROJECT:
DEMOLITION, SUPPORTING STRUCTURE & PRO. DWELLING

PROJECT ADDRESS:
34 EARL St, AIRPORT
WEST VIC 3342

SHEET NO: 5/23

SCALE: AS SHOWN

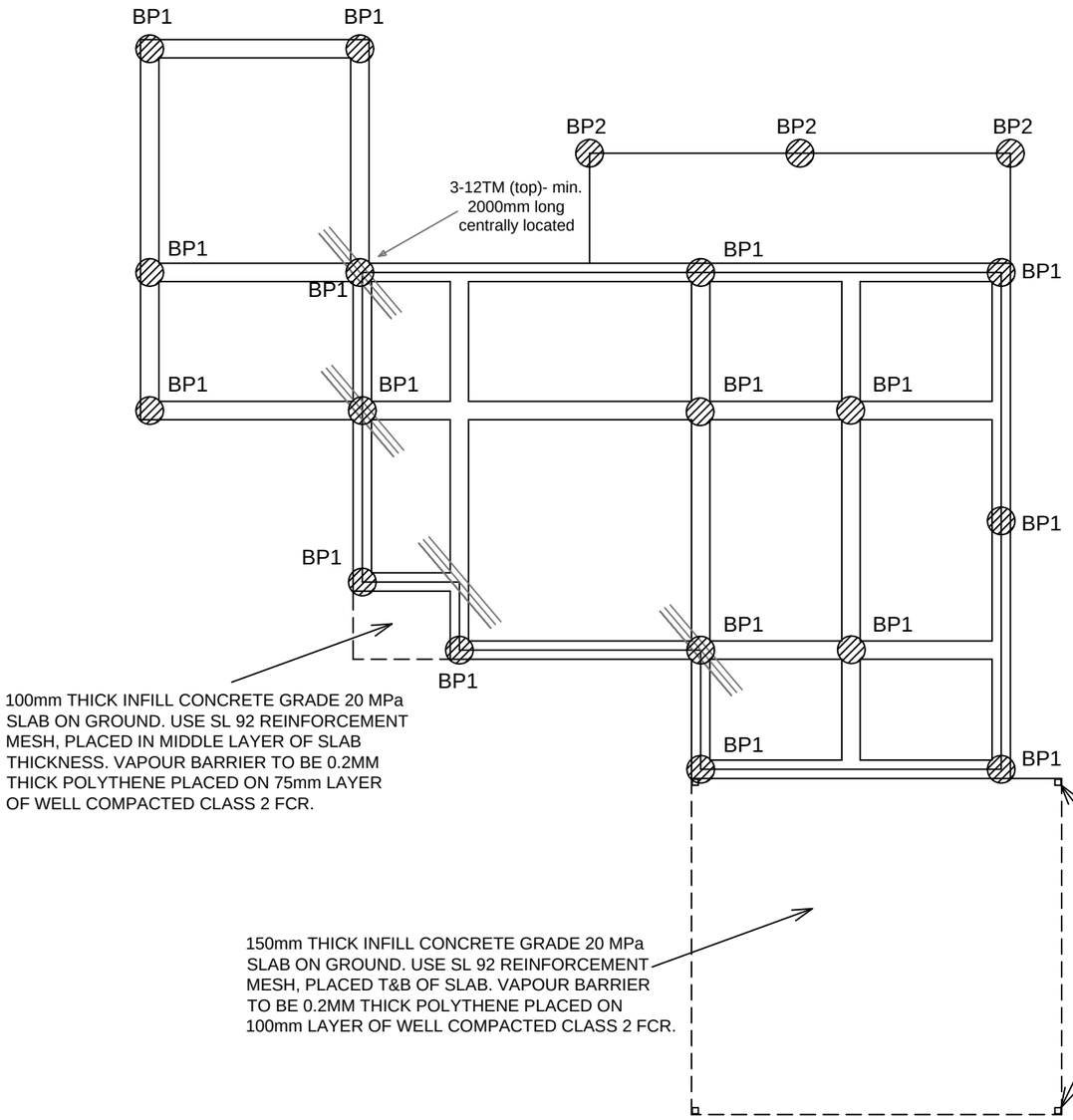
DATE: 03/04/2016

WB CIVIL STRUCTURAL ENGINEERS

STIFFENED RAFT SLAB ON GROUND WITH BORED PIERS

SCALE - 1 : 100

ABH SOIL TESTING AND SURVEYING BY LTD
Soil Classification – P (AS 2870 – 2011) - Job No: 4176



RAFT SLAB, BEAMS & PIERS DETAIL	
"D"	TRENCH REINFORCEMENT
300mm(W)X600(D)mm – Beams	3-L12TM200 (T&B)
MAXIMUM SPAN OF A BEAM TO BE LESS THAN OR EQUALT TO 4000mm	
MINIMUM GRADE OF CONCRETE IN FOUNDATION - 20MPa	
MESH REINFORCEMENT SL 92 (MIN. LAP 300mm)	
MINIMUM COVRE TO ALL REINFORCEMENT 30mm	
VAPOUR BARRIER UNDER SLAB TO BE 0.2 mm POLYTHENE	
APPROVED FILL MATERIAL UNDER SLAB LAIE AND WELL COMPACTED IN 150mm MAX. THICK LAYERS	
PIERS: P1 - MASS CONCRETE 450mm DIA. FOUNDING DEPTH 800mm FROM N.G.L.	
P2 – MASS CONCRETE 450mm DIA. FOUNDING DEPTH 600mm FROM N.G.L. (PIER CONCRETE TO BE GRADE 20MPa)	

NOTE:
THE BUILDER SHALL ENSURE THAT DURING CONSTRUCTION THE SURFACE AND ROOF STORMWATER IS DRAINED AWAY FROM HOUSE SLAB FOUNDATION.

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JOB NO: ARCHI/2016/2

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PROJECT:
DEMOLITION, SUPPORTING STRUCTURE & PRO. DWELLING

PROJECT ADDRESS:
34 EARL St, AIRPORT WEST VIC 3342

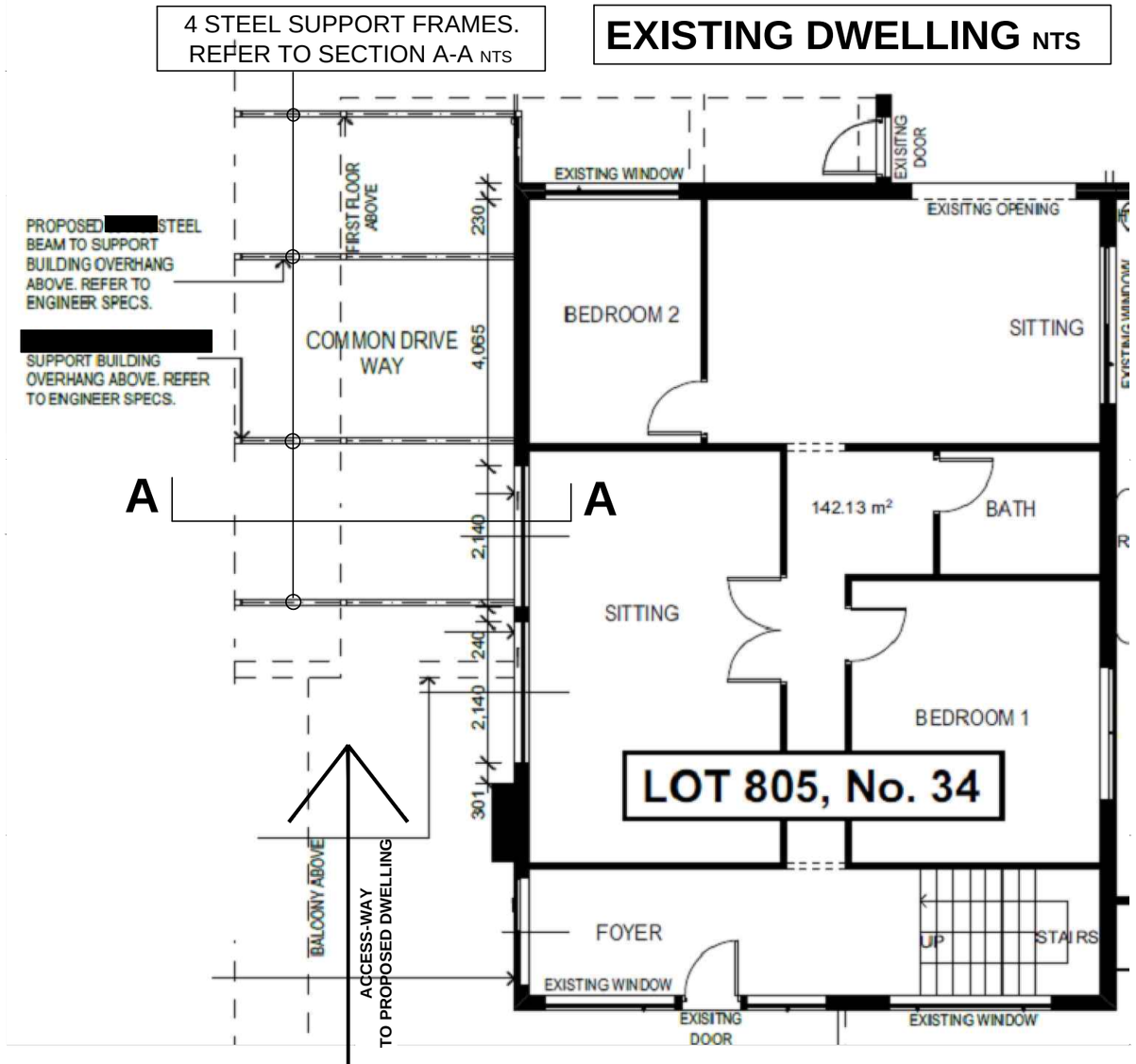
SHEET NO: 6/23

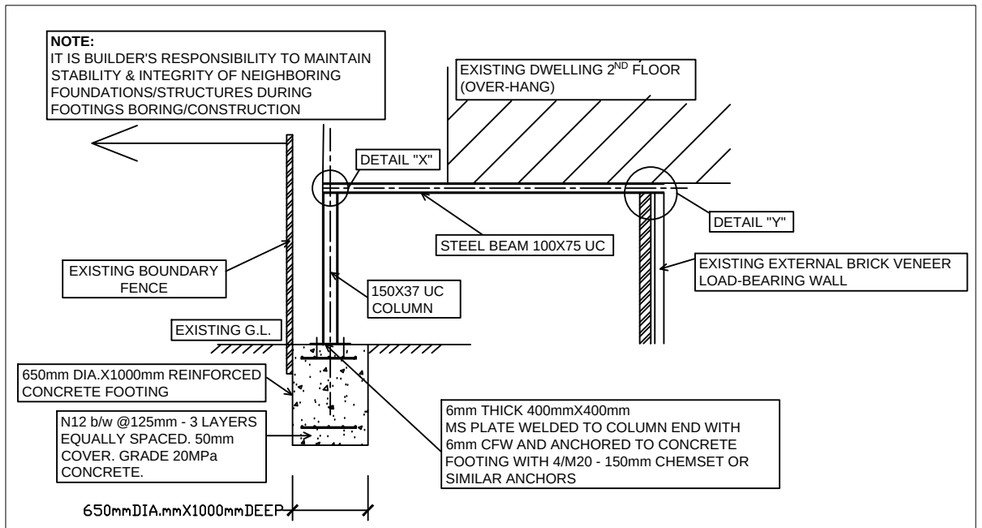
SCALE: AS SHOWN

DATE: 03/04/2016

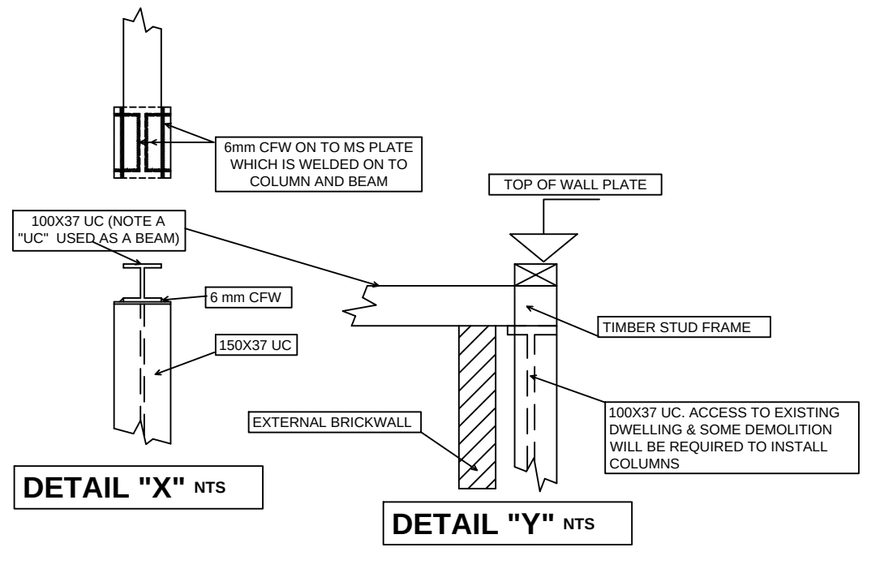
WB CIVIL STRUCTURAL ENGINEERS

EXISTING DWELLING GROUND FLOOR PLAN AND SUPPORTING STRUCTURE OVER ACCESS-WAY TO PROPOSED DWELLING - NTS





SECTION A-A SHOWING SUPPORTING COLUM(S) & BEAM(S) NTS



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PROJECT:
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34 EARL St, AIRPORT WEST VIC 3342

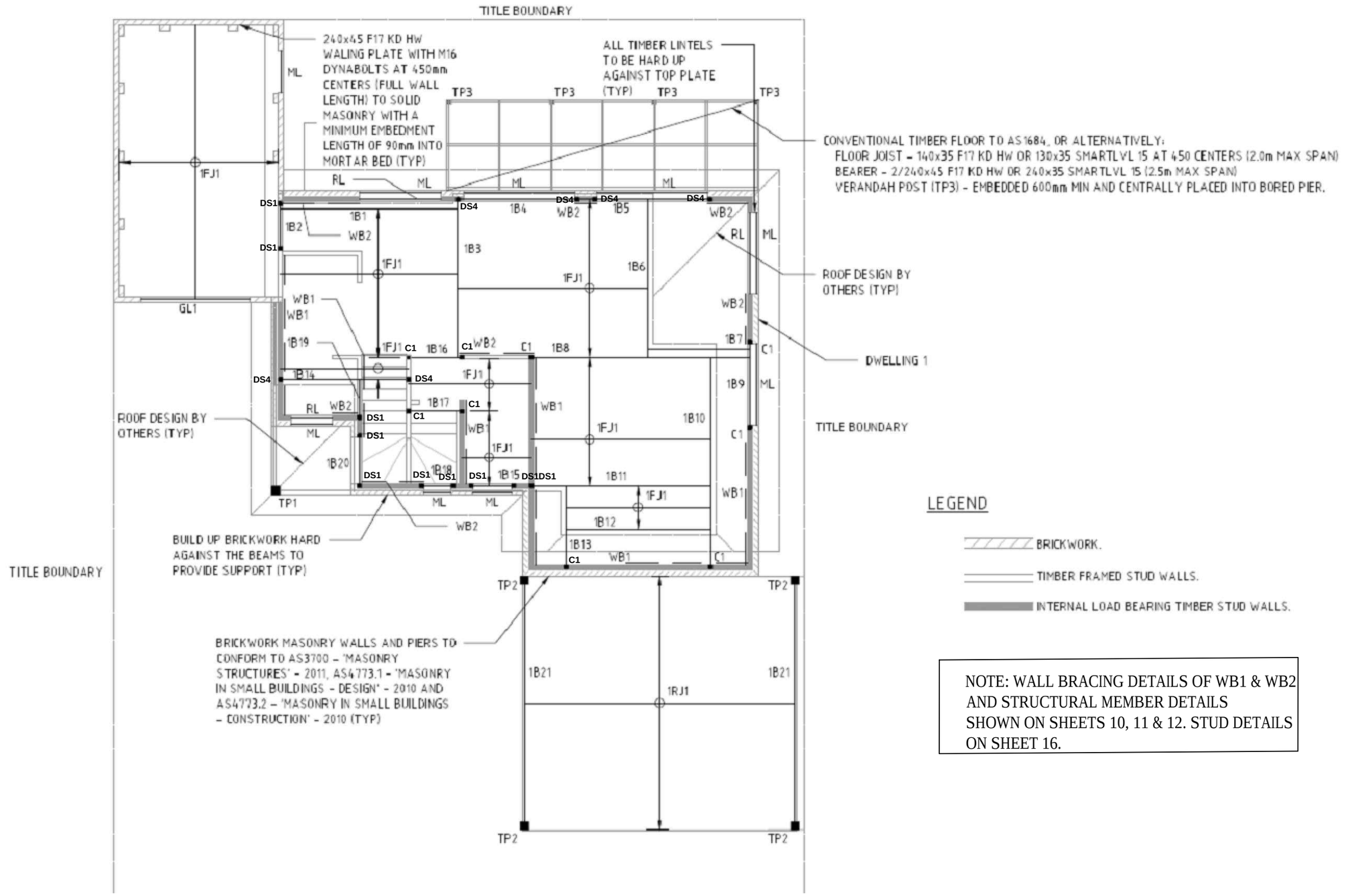
SHEET NO: 7/23

SCALE: AS SHOWN

DATE: 03/04/2016

WB CIVIL STRUCTURAL ENGINEERS

FIRST FLOOR FRAMING & GROUND STOREY BRACING PLAN NTS



LEGEND

- BRICKWORK.
- TIMBER FRAMED STUD WALLS.
- INTERNAL LOAD BEARING TIMBER STUD WALLS.

NOTE: WALL BRACING DETAILS OF WB1 & WB2 AND STRUCTURAL MEMBER DETAILS SHOWN ON SHEETS 10, 11 & 12. STUD DETAILS ON SHEET 16.

CLIENT:
ARCHITECTURAL
CUSTOM DESIGN - CUSTOM BUILD

JOB NO: ARCHI/2016/2

WB CIVIL STRUCTURAL ENGINEERS
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PROJECT:
DEMOLITION, SUPPORTING STRUCTURE & PRO. DWELLING

PROJECT ADDRESS:
34 EARL St, AIRPORT WEST VIC 3342

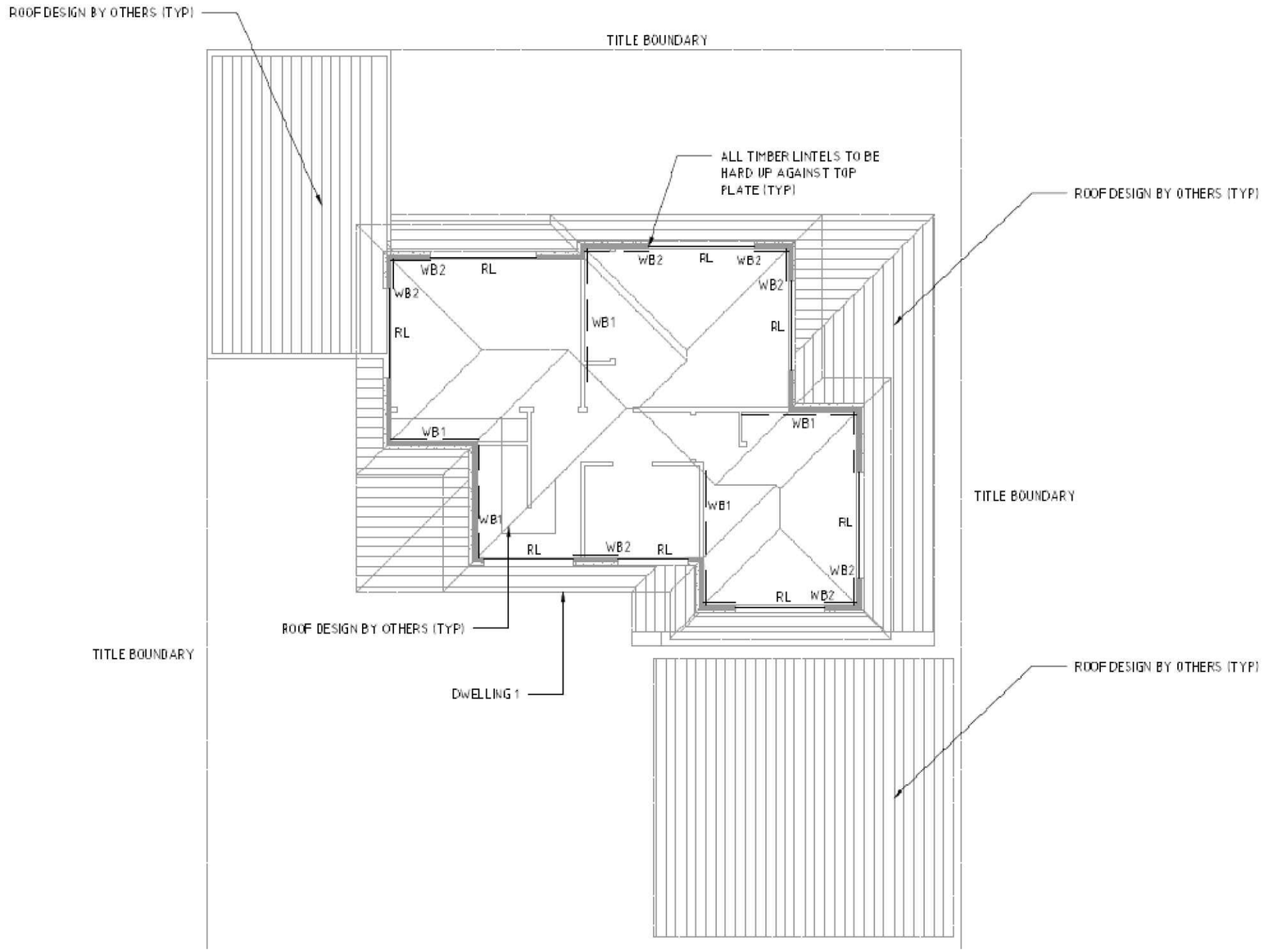
SHEET NO: 8/23

SCALE: AS SHOWN

DATE: 03/04/2016

WB CIVIL STRUCTURAL ENGINEERS

ROOF FRAMING & FIRST STOREY BRACING PLAN NTS



LEGEND

BRICKWORK.

TIMBER FRAMED STUD WALLS.

INTERNAL LOAD BEARING TIMBER STUD WALLS.

NOTE: WALL BRACING DETAILS OF WB1 & WB2 AND STRUCTURAL MEMBER DETAILS SHOWN ON SHEETS 10, 11 & 12

CLIENT:
ARCHITECTURAL
CUSTOM DESIGN - CUSTOM BUILD

JOB NO: ARCHI/2016/2

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PROJECT:
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34 EARL St, AIRPORT WEST VIC 3342

SHEET NO: 9/23

SCALE: AS SHOWN

DATE: 03/04/2016

WB CIVIL STRUCTURAL ENGINEERS

STRUCTURAL MEMBER SECTIONS & TYPES

STRUCTURAL MEMBER SCHEDULE		
MARK	**SECTION**	**REMARKS**
C1	89X6 SHS (G 300)	3.0m MAX. HEIGHT
TP1	F8 - 150X150	3.0m MAX. HEIGHT (OR EQUIVALENT)
TP2	F8 - 150X150	3.0m MAX. HEIGHT (OR EQUIVALENT)
TP3	F8 - 110X110	2.5m MAX. HEIGHT (OR EQUIVALENT)
GL1	150X10 H/PLATE+250 PFC	2.5m MAX. SPAN -6 CFW 300 mm FROM ENDS THEN HIT & MISS. MIN. END BEARING 150mm
1B1	2/290X45 F17 KDHW OR 2/300X35 LVL 15	3.5m MAX SPAN
1B2	190X45 F17 KDHWOR	0.9m MAX SPAN
1B3	2/290x45 F17 KDHW OR 2/300X42 LVL 15	3.5m MAX SPAN
1B4	2/240X45 F17 KDHW OR 2/240X58 LVL 15	3.0m MAX SPAN
1B5	2/240X45 F17 KDHW OR 2/240X58 LVL 15	3.0m MAX SPAN
1B6	2/240X45 F17 KDHW OR 2/240X58 LVL 15	3.4m MAX SPAN
1B7	190X45 F17 KDHW	2.5m MAX SPAN
1B8	200X75 PFC (G300)	5.5m MAX SPAN
1B9	2/190X45 F17 KDHW	2.0m MAX SPAN
1B10	230X75 PFC (G300)	6.0m MAX SPAN
1B11	2/290X45 F17 KDHW OR 300X75 LVL 15	3.5m MAX SPAN
1B12	2/290X45 F17 KDHW OR 2/300X75 LVL 15	3.5m MAX SPAN
1B13	2/240X45 F17 KDHW OR 2/240X42 LVL 15	2.75m MAX SPAN
1B14	2/240X45 F17 KDHW OR 2/240X42 LVL 15	3.0m MAX SPAN
1B15	300X35 LVL 15	FACILITATOR BEAM
1B16	2/300X35 LVL 15 OR 2/300X65 LGL 18	2.5m MAX SPAN
1B17	240X45 F17 KDHW	1.0m MAX SPAN
1B18	140X45 F 17 KDHW	0.8m MAX SPAN
1B19	190X45 F 17 KDHW	1.5m MAX SPAN
1B20	140X45 F17 KDHW	1.5m MAX SPAN
1B21	2/300X58 LVL 15	5.5m MAX SPAN
IFJ1	300X58 LVL 15 OR SMARTFRAME H2S I-BEAMS	5.0 m MAX. SPAN
1RJ1	300X58 LVL 16	5.0 m MAX. SPAN
RL	240X45 F17 KDHW	ROOF TIMBER LINTELS (WEIGHT OF ANY GTs CONSIDERED)

CLIENT:
ARCHITECTURAL
CUSTOM DESIGN - CUSTOM BUILD

JOB NO: ARCHI/2016/2

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PROJECT:
DEMOLITION, SUPPORTING STRUCTURE & PRO. DWELLING

PROJECT ADDRESS:
34 EARL St, AIRPORT
WEST VIC 3342

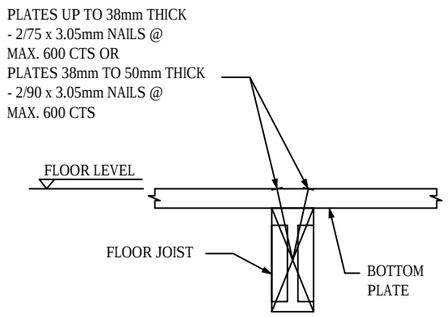
SHEET NO: 10/23

SCALE: AS SHOWN

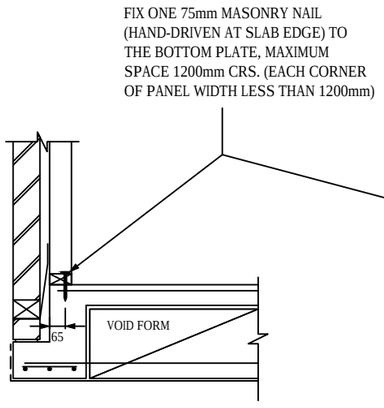
DATE: 03/04/2016

WB CIVIL STRUCTURAL ENGINEERS

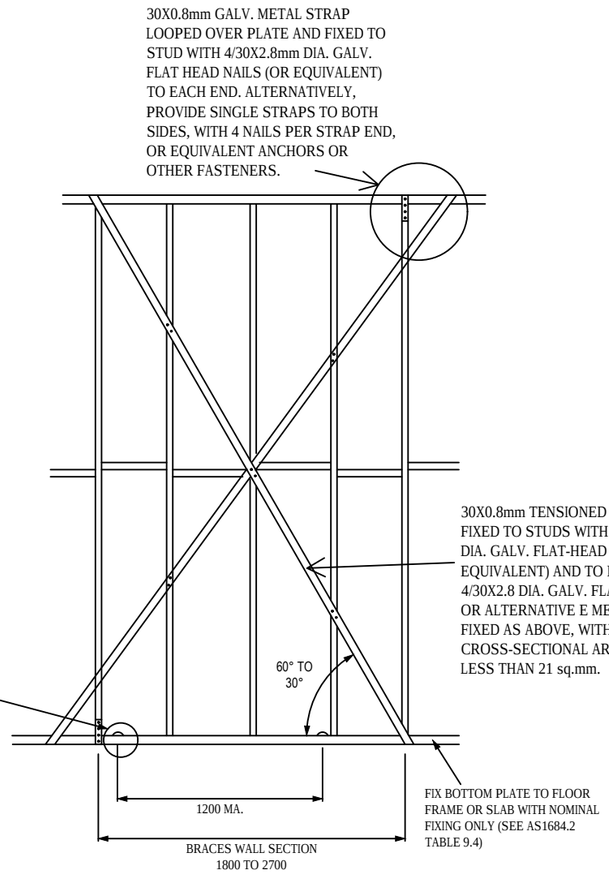
METAL BRACING DETAILS & OPTIONS NTS



BOTTOM WALL PLATE TO
CONCRETE SLAB FIXING DETAIL
DETAIL A - A

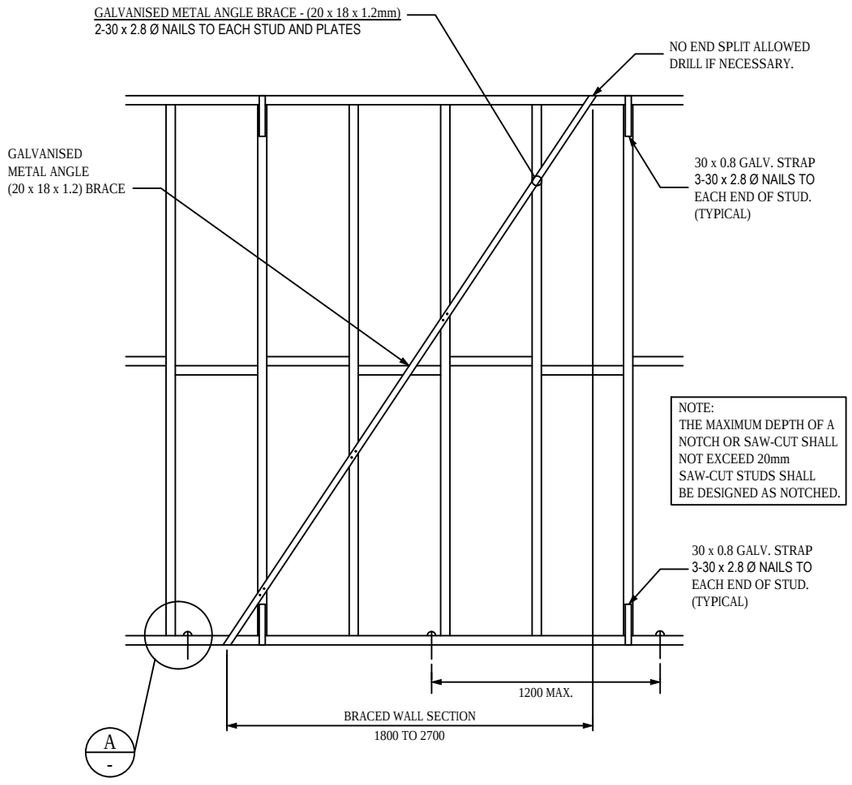


BOTTOM WALL PLATE TO
CONCRETE SLAB FIXING DETAIL
DETAIL A - A



DOUBLE DIAGONAL METAL TENSION W/STUD STRAPS
(BRACING CAPACITY - 3.0kN/m)
SCALE: NTS
WB1

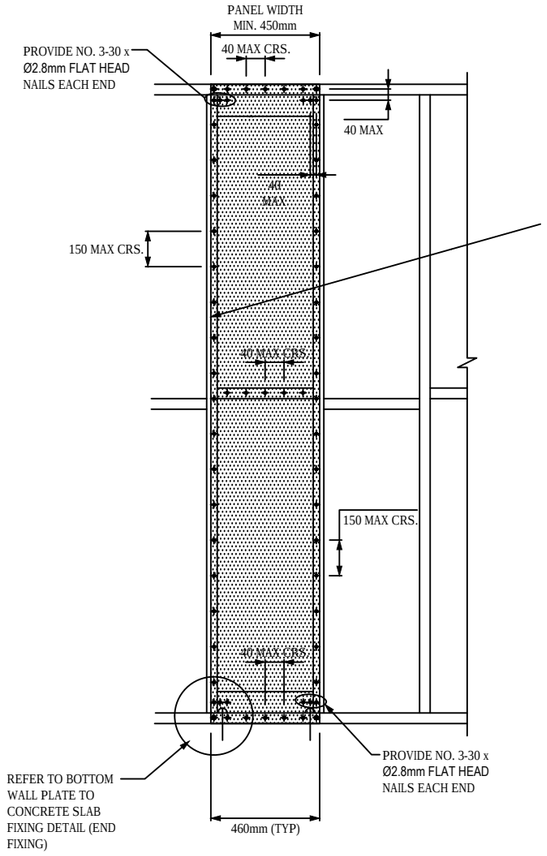
OR



DIAGONAL METAL ANGLE BRACES
(BRACING CAPACITY - 1.5kN/m)
SCALE: NTS
WB 2

CLIENT: ARCHITECTURAL Custom Design - Custom Build **JOB NO:** ARCHI/2016/2	**WB CIVIL STRUCTURAL ENGINEERS** ENGINEERS & BUILDERS ABN: 84119322436 OFFICE: NO: 9, NUMERING COURT, MELTON, VIC 3337 Mobile: 0401023328 / Ph: 03 9746 0089 Email: wbcseng@gmail.com	REGISTERED ENGINEER REGISTERED BUILDER (VICTORIAN BUILDING AUTHORITY) PRIYAN WIJEYERATNE EC 19060, D-BU 22220 M.I.E.(AUST)., C.P.ENG. M.Eng(Struct)., M.Tech.(Mgt.), BSc(Civil)	**PROJECT:** DEMOLITION, SUPPORTING STRUCTURE & PRO. DWELLING **PROJECT ADDRESS:** 34 EARL St, AIRPORT WEST VIC 3342	SHEET NO: 11/23 SCALE: AS SHOWN DATE: 03/04/2016	WB CIVIL STRUCTURAL ENGINEERS

HYNE PLYWOOD BRACING SYSTEM & FRAME PLATE SPLICING DETAIL NTS



HYNE OS' BRACE®SYSTEM DETAIL
BRACING CAPACITY - 2.2 kN/m)

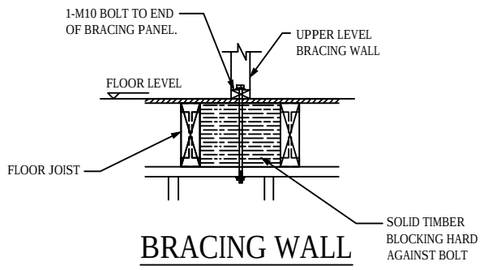
WB1

SCALE: NTS

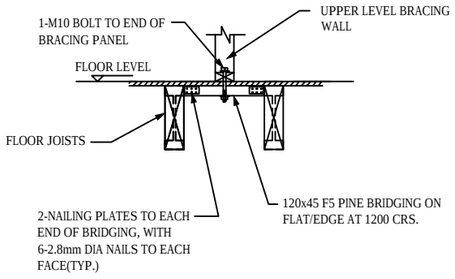
NOTES:

1. HYNE OS" BRACE SHALL COMPLY WITH AS/NZS 1859.4.
2. HYNE OS'BRACE SHALL BE NAILED TO FRAME USING MINIMUM Ø30x2.8mm GALVANIZED FLAT-HEAD NAILS OR EQUIVALENT.
3. NAILS SHALL BE LOCATED A MINIMUM OF 19mm FROM THE VERTICAL EDGES AND 15mm FROM THE TOP AND BOTTOM EDGES. MAXIMUM 600mm STUD SPACING. BRACING PANEL LESS THAN 460mm WIDTH SHOWN ON PLAN DOES NOT CONTRIBUTE TO BRACING CAPACITY.
4. AT LEAST ONE SIDE OF THE BRACING WALL SHALL BE LINED WITH GYPSUM PLASTER BOARD OR APPROVAL EQUIVALENT.

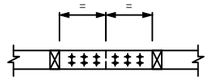
BRACING PANEL > 1200mm IN LENGTH FIXINGS	
BOTTOM PLATE TO JOISTS	PLATES UP TO 38mm THICK - 2/75 X 3.05mm NAILS @ MAX. 600 CTS OR PLATES 38mm TO 50mm THICK - 2/90 x 3.05mm NAILS @ MAX. 600 CTS
BOTTOM PLATE TO CONCRETE SLAB	FIX ONE 75mm MASONRY NAIL (HAND-DRIVEN AT SLAB EDGE) @ MAX 1200 CTS.



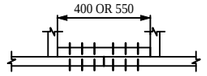
BRACING WALL
PARALLEL TO JOISTS
(INTERNAL BRACING WALL SHOWN)



BRACING WALL
PARALLEL TO JOISTS
(INTO STUD WALL UNDER)



PLAN

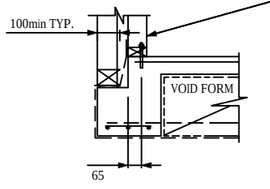


ELEVATION

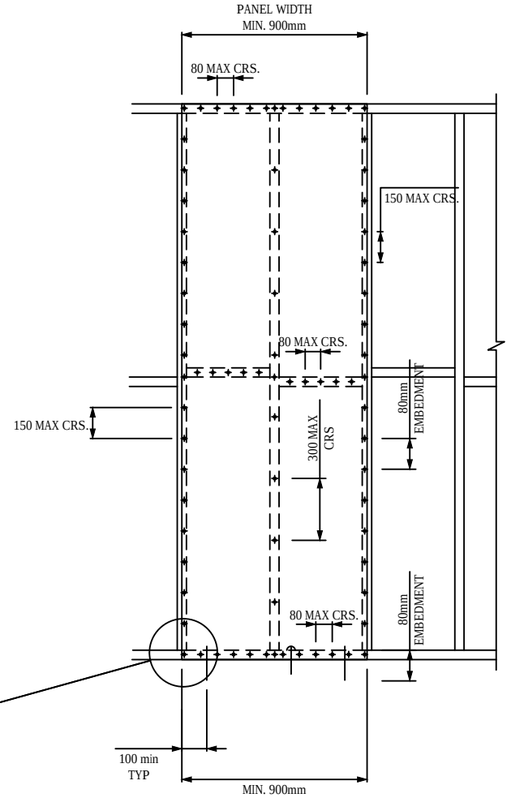
NOTE:

- SPLICE PLATE MUST BE SAME SIZE & STRESS GRADE AS TOP & BOTTOM PLATES
- WHERE TOP & BOTTOM PLATES IN BRACED SECTIONS ARE DISCONTINUED, THEY MUST BE SPLICED AS SHOWN IN THIS DETAIL.

TYPICAL TOP & BOTTOM
PLATE SPLICE DETAIL



BRACING WALL PLATE TO
CONCRETE SLAB FIXING DETAIL
(END FIXING)



HYNE OS' BRACING®SYSTEM
BRACING CAPACITY - 3.4 kN/m)

WB2

SCALE: NTS

CLIENT:

ARCHITECTURAL
CUSTOM DESIGN - CUSTOM BUILD

JOB NO: ARCHI/2016/2

WB CIVIL STRUCTURAL ENGINEERS
ENGINEERS & BUILDERS
ABN: 84119322436
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REGISTERED ENGINEER
REGISTERED BUILDER
(VICTORIAN BUILDING AUTHORITY)

PRIYAN WIJEYERATNE
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M.I.E.(AUST)., C.P.ENG.
M.Eng(Struct)., M.Tech.(Mgt.), BSc(Civil)

PROJECT:
DEMOLITION, SUPPORTING STRUCTURE & PRO. DWELLING

PROJECT ADDRESS:
34 EARL St, AIRPORT
WEST VIC 3342

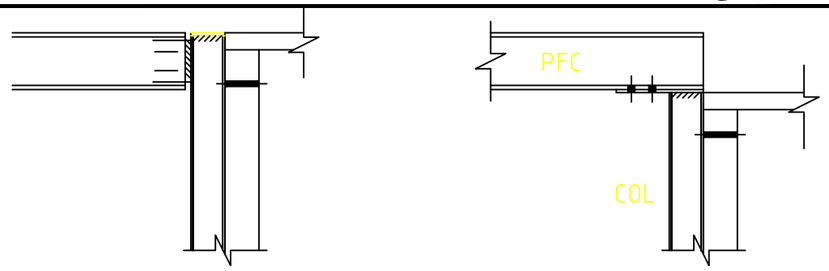
SHEET NO: 12/23

SCALE: AS SHOWN

DATE: 03/04/2016

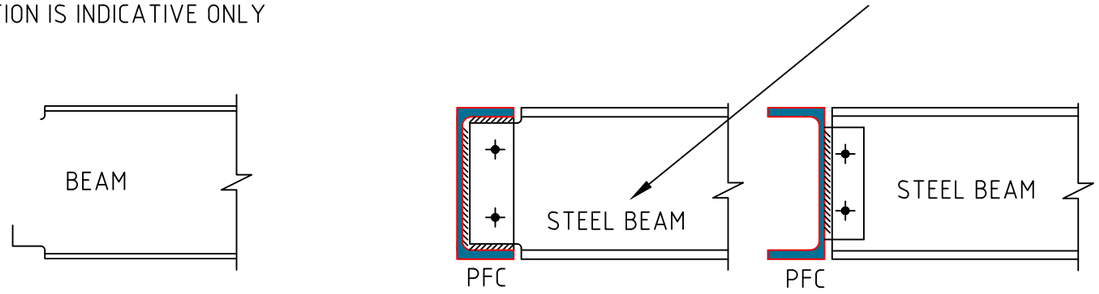
WB CIVIL STRUCTURAL ENGINEERS

GENERAL CONNECTIONS IF REQUIRED NTS



STANDARD STEEL BEAM TO COLUMN DETAILS

NOTE:
1. DETAILS ARE TO BE USED UNLESS NOTED OTHERWISE ON THE DRAWINGS TYPICAL
2. TOP PLATE LOCATION IS INDICATIVE ONLY

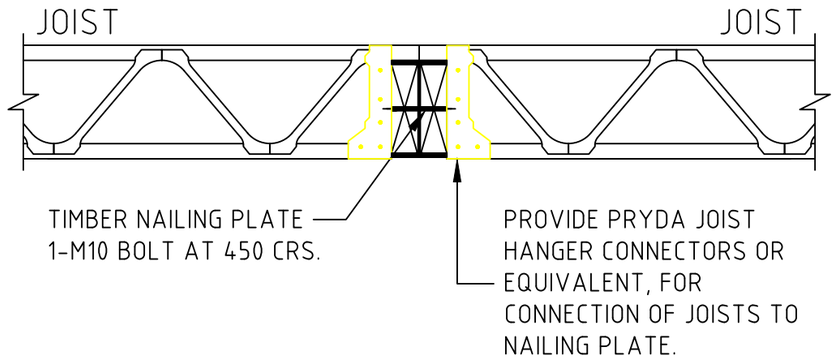


BEAM CONNECTION DETAILS

MEMBER SIZE	BOLTS REQUIRED	CLEAT PLATE THICKNESS
UPTO 200UB/PFC	2-M16 8.8/S BOLTS	10mm
UPTO 250UB/PFC	2-M16 8.8/S BOLTS	10mm
UPTO 360UB/PFC	3-M20 8.8/S BOLTS	10mm
NOTE: TYPICAL FOR ALL CONNECTIONS (U.N.O. ON DETAILS).		

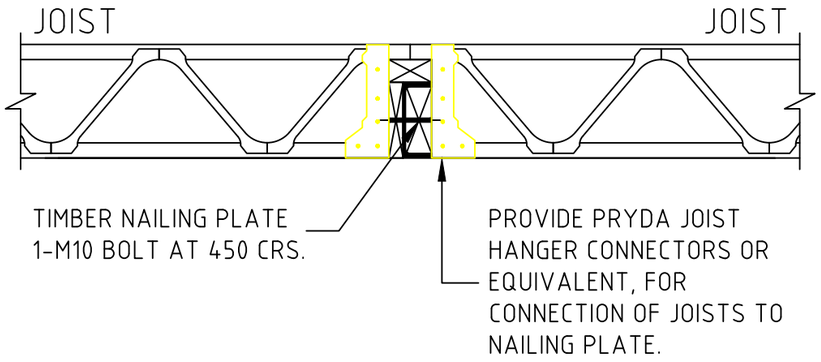
STEEL BEAM TO STEEL BEAM CONNECTION DETAILS

SCALE : NTS



FLOOR JOISTS TO STEEL BEAM CONNECTION DETAIL

SCALE 1 :20



FLOOR JOISTS TO STEEL BEAM CONNECTION DETAIL

SCALE NTS

CLIENT:
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PROJECT:
DEMOLITION, SUPPORTING STRUCTURE & PRO. DWELLING

PROJECT ADDRESS:
34 EARL St, AIRPORT WEST VIC 3342

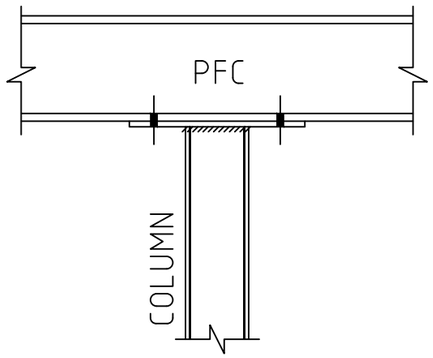
SHEET NO: 13/23

SCALE: AS SHOWN

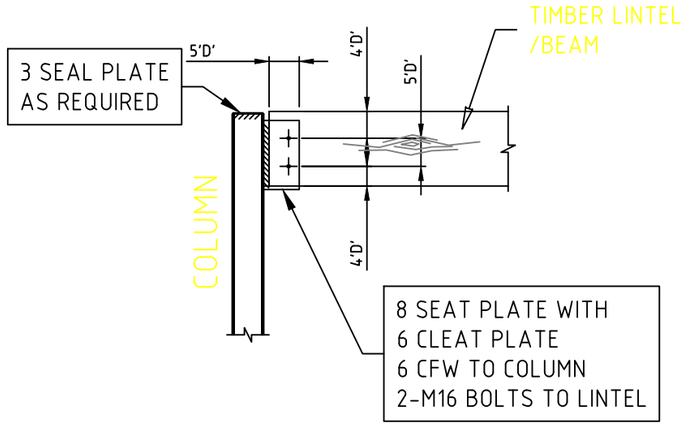
DATE: 03/04/2016

WB CIVIL STRUCTURAL ENGINEERS

GENERAL CONNECTIONS IF REQUIRED NTS



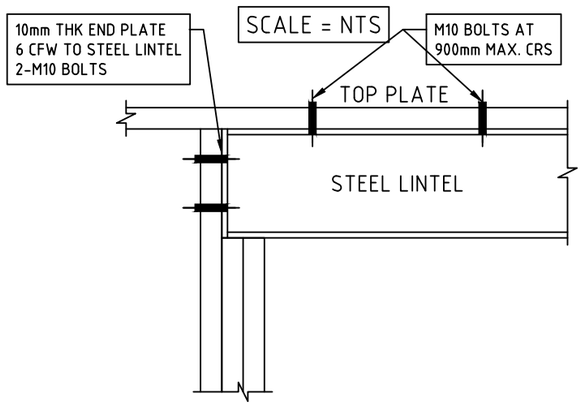
TYPICAL STEEL BEAM TO STEEL COLUMN DETAIL



NOTE 'D' DENOTES BOLT DIAMETER

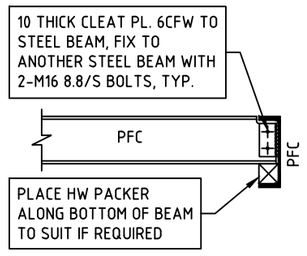
TYPICAL TIMBER BEAM/LINTEL TO COLUMN CONNECTION DETAIL

SCALE 1:20



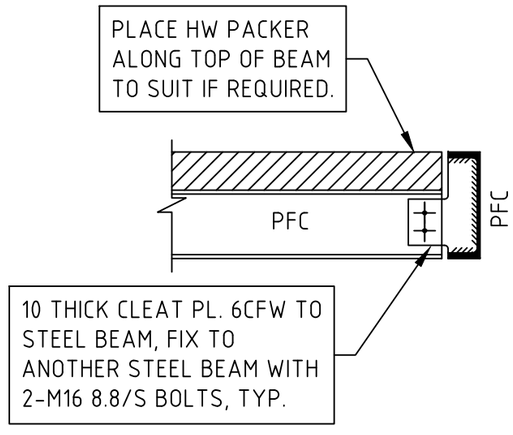
TYPICAL STEEL LINTEL TO DOUBLE STUD DETAIL

SCALE = NTS



TYPICAL STEEL BEAM TO STEEL BEAM DETAIL

SCALE 1 : 20



TYPICAL STEEL BEAM TO STEEL BEAM DETAIL

SCALE 1 : 20

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PROJECT:
DEMOLITION, SUPPORTING STRUCTURE & PRO. DWELLING

PROJECT ADDRESS:
34 EARL St, AIRPORT WEST VIC 3342

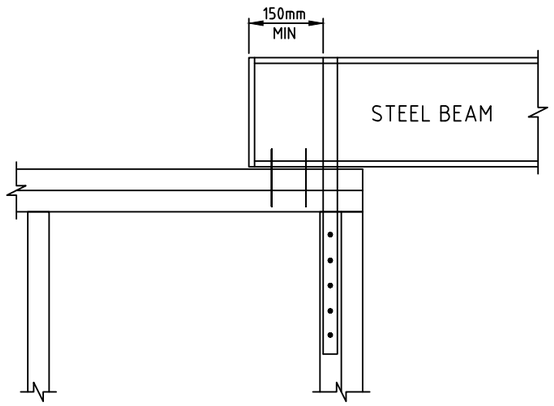
SHEET NO: 14/23

SCALE: AS SHOWN

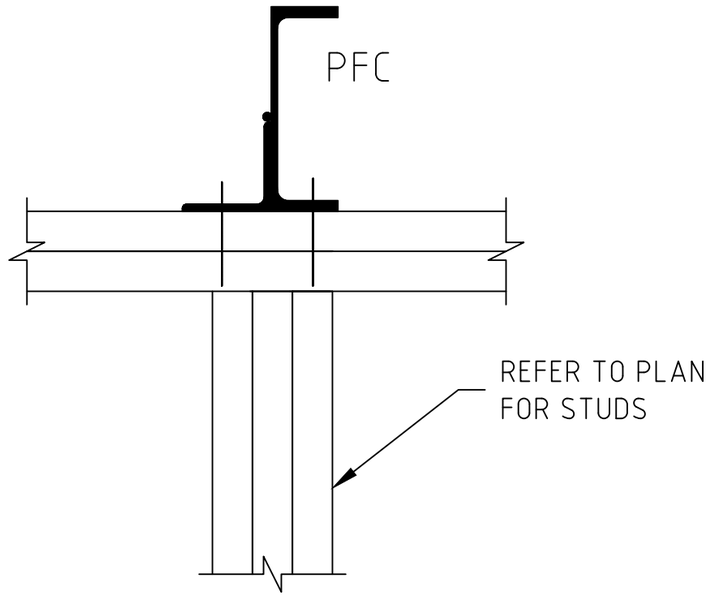
DATE: 03/04/2016

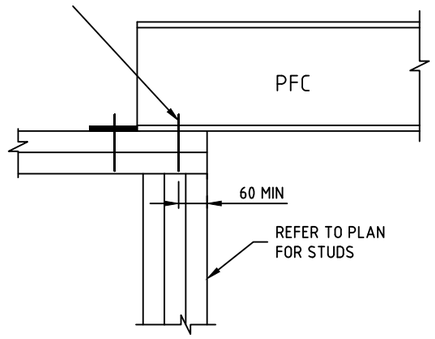
WB CIVIL STRUCTURAL ENGINEERS

GENERAL CONNECTIONS IF REQUIRED NTS

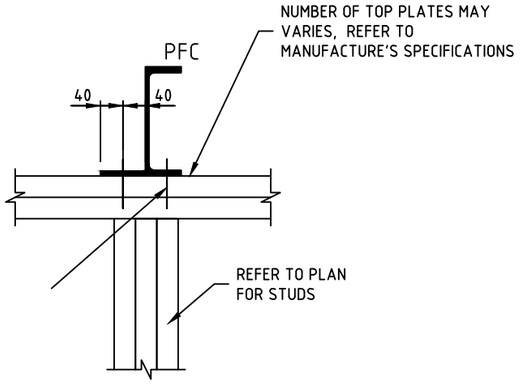


TYPICAL STEEL BEAM TO
DOUBLE STUD DETAIL
SCALE = NTS





TYPICAL PFC PARALLEL
TO TOP PLATE DETAIL
SCALE 1:10



TYPICAL PFC PERPENDICULAR
TO DOUBLE TOP PLATE DETAIL
SCALE 1:10

NUMBER OF TOP PLATES MAY
VARIES, REFER TO MANUFACTURE'S
SPECIFICATIONS

TYPICAL PFC PERPENDICULAR
TO TOP PLATE DETAIL
SCALE 1:10

CLIENT:
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DEMOLITION, SUPPORTING
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PROJECT ADDRESS:
34 EARL St, AIRPORT
WEST VIC 3342

SHEET NO: 15/23

SCALE: AS SHOWN

DATE: 03/04/2016

WB CIVIL STRUCTURAL ENGINEERS

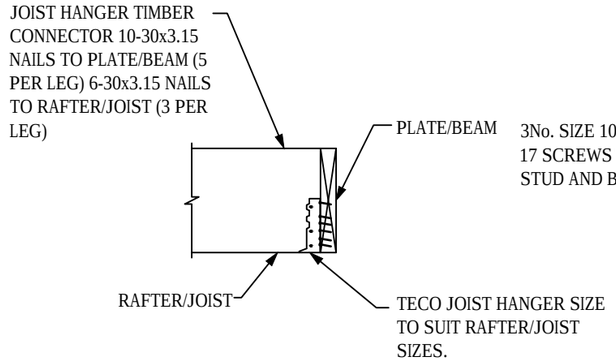
STUD FIXING AND REQUIRED NUMBERS DETAIL NTS

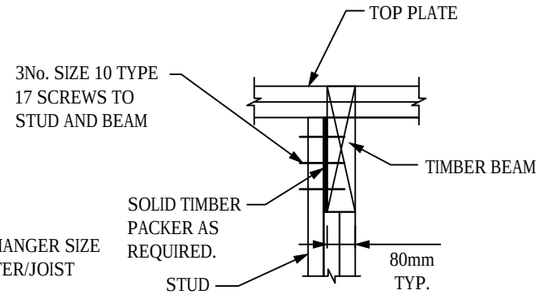
ALL STUDS SHALL BE NAIL LAMINATED IN ACCORDANCE WITH AS1684.2		DS1	DS2	DS3	DS4	TS1	TS2	TS3	QS1	QS2	FS1	FS2
		90 x 45	90 x 45	70 x 45	120 x 45	90 x 45	90 x 45	70 x 45	90 x 45	90 x 45	90 x 45	90 x 45
		MGP10	F17 KD HW	F17 KD HW	MGP10	MGP10	F17 KD HW	F17 KD HW	MGP10	F17 KD HW	MGP10	F17 KD HW
LINTEL	NO. OF BEARING STUD	1	1	1	1	1	1	1	2	2	2	2
	NO. OF JAMB STUD	1	1	1	1	2	2	2	2	2	3	3
BEAM	NO. OF BEARING STUD	2	2	2	2	3	3	3	4	4	5	5

NOTE:

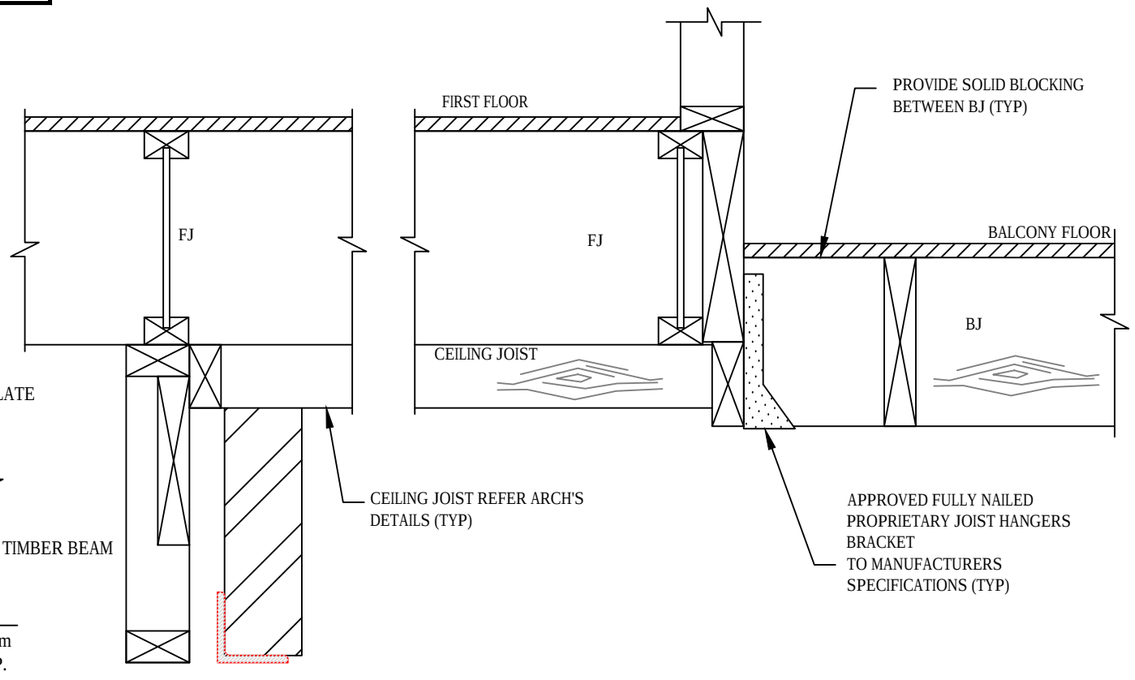
1. AT DOUBLE JOIST TO DOUBLE JOIST USE JOIST HANGER TO ONE JOIST AND TRIP L GRIP FIXING TO SECOND JOIST WITH 5 NAILS/LES. (15 NAILS)

2. AT DOUBLE JOIST TO WALL PLATE USE JOIST HANGER TO ONE JOIST AND TRIP L GRIP FIXING TO SECOND JOISE WITH 5 NAILS/LEG. (15 NAILS) 2 - 16 Ø DYNABOLTS TO WALL SPACE DYNABOLTS AT 80mm CRS AND 80mm EDGE DISTANCE.





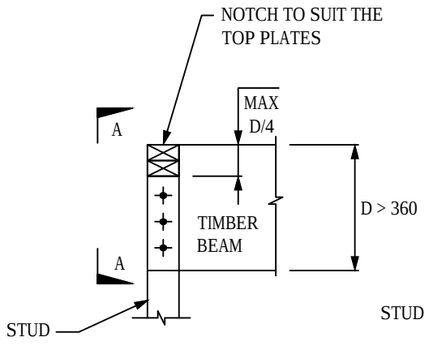
SECTION A-A



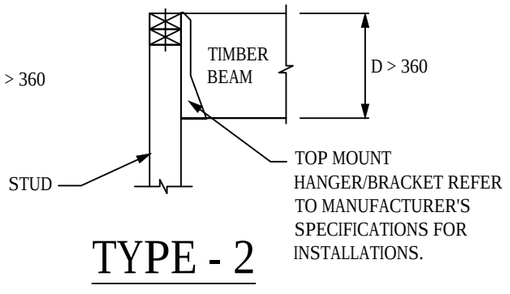
BALCONY JOIST DETAIL

SCALE = 1:20

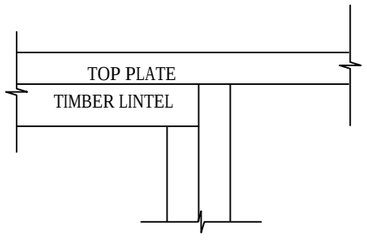
TYPICAL TIMBER TO TIMBER RAFTER/JOIST CONNECTION



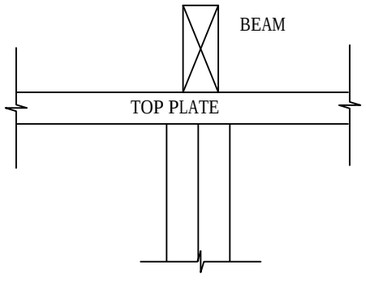
TYPE - 1



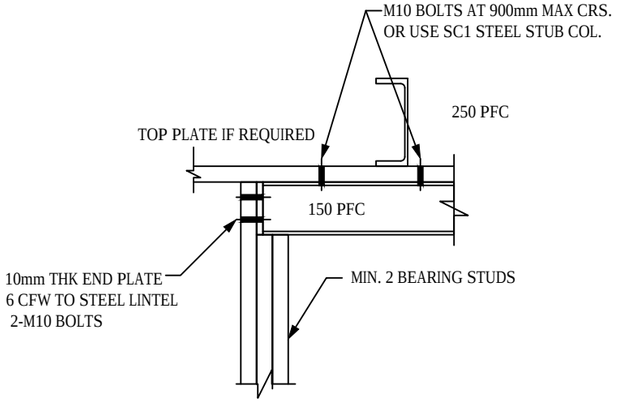
TYPE - 2



LINTEL SUPPORT ON STUDS



BEAM SUPPORT ON STUDS



STEEL LINTEL TO DOUBLE STUD DETAIL

SCALE = 1:10

TYPICAL VERANDAH BEAM TO STUD DETAIL

TIMBER STUDS

SCALE = 1:10

CLIENT:
ARCHITECTURAL
CUSTOM DESIGN - CUSTOM BUILD

JOB NO: ARCHI/2016/2

WB CIVIL STRUCTURAL ENGINEERS
ENGINEERS & BUILDERS
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PROJECT:
DEMOLITION, SUPPORTING STRUCTURE & PRO. DWELLING

PROJECT ADDRESS:
34 EARL St, AIRPORT
WEST VIC 3342

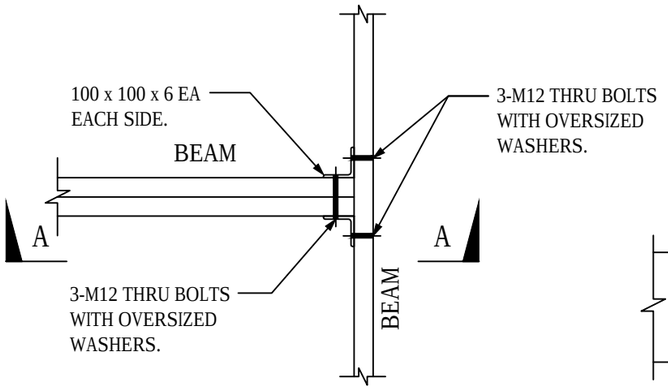
SHEET NO: 16/18

SCALE: AS SHOWN

DATE: 03/04/2016

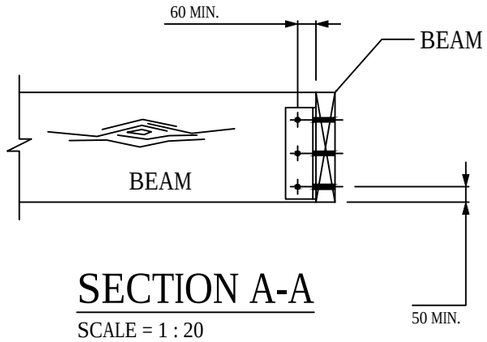
WB CIVIL STRUCTURAL ENGINEERS

BRACKET/HANGERS FIXING DETAIL NTS



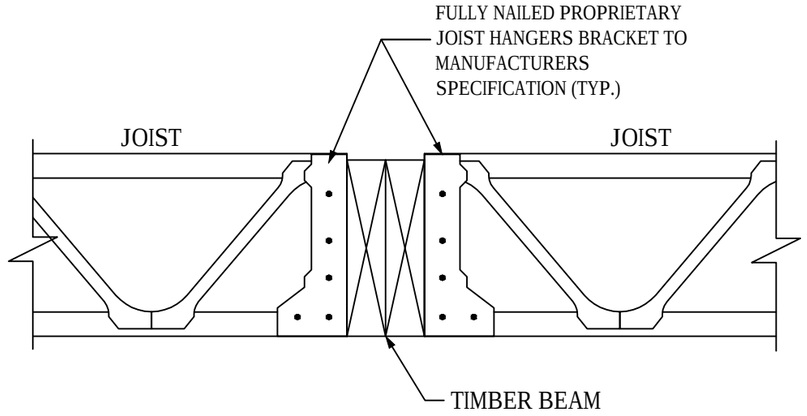
TIMBER BEAM TO TIMBER BEAM CONNECTION DETAIL

SCALE = 1 : 20



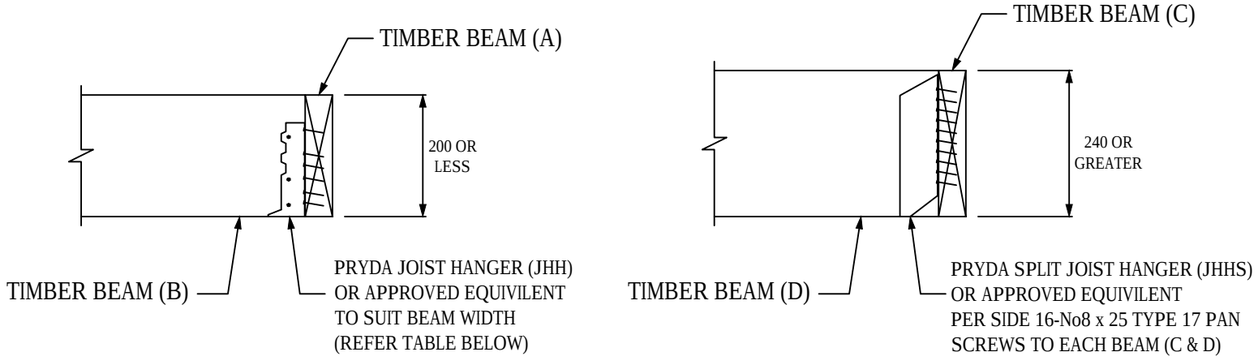
SECTION A-A

SCALE = 1 : 20



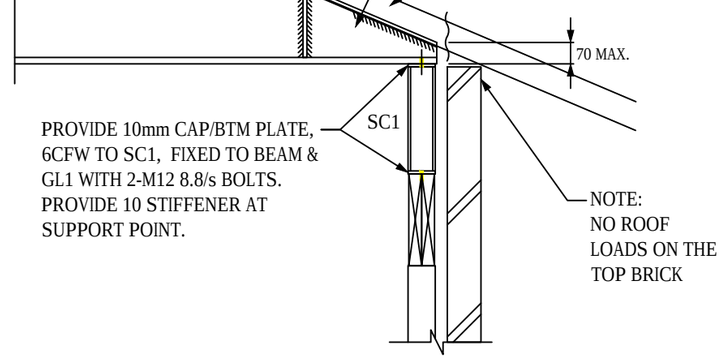
FLOOR JOIST TO TIMBER BEAM CONNECTION DETAIL

SCALE = 1 : 10



BEAM WIDTH (B)	BRACKET	FIXING
63	JHH65	20-No12 x 35 TYPE 17 HEX HEAD SCREWS TO BEAM (A) 16-No12 x 35 TYPE 17 HEX HEAD SCREWS TO BEAM (B)
70	JHH75	20-No12 x 35 TYPE 17 HEX HEAD SCREWS TO BEAM (A) 16-No12 x 35 TYPE 17 HEX HEAD SCREWS TO BEAM (B)
90	JHH100	20-No12 x 35 TYPE 17 HEX HEAD SCREWS TO BEAM (A) 16-No12 x 35 TYPE 17 HEX HEAD SCREWS TO BEAM (B)

ALTRNATIVE TIMBER BEAM TO TIMBER BEAM CONNECTIONS (FOR PORCH AND / OR ALFRESCO AREAS ONLY)



BEAM/LINTEL TO STUB COLUMN DETAIL (IF REQUIRED)

SCALE = 1 : 20

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JOB NO: ARCHI/2016/2

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DEMOLITION, SUPPORTING STRUCTURE & PRO. DWELLING

PROJECT ADDRESS:
34 EARL St, AIRPORT
WEST VIC 3342

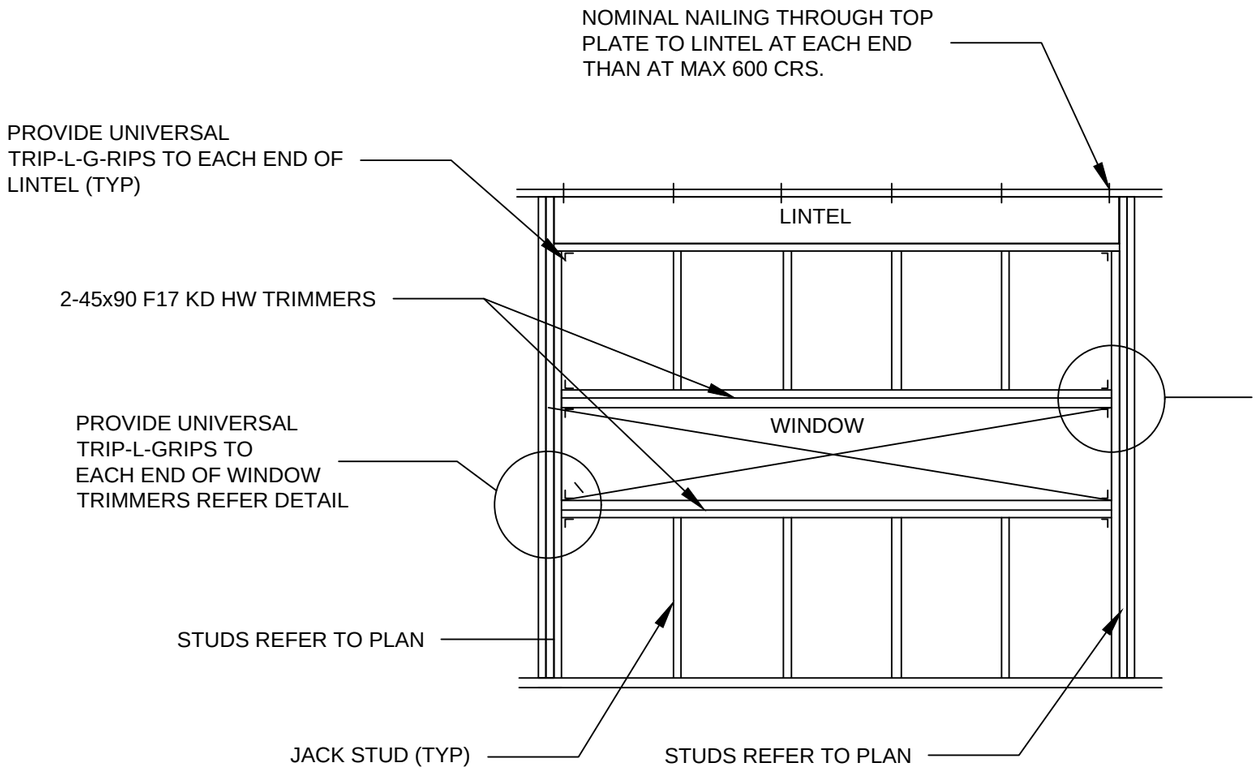
SHEET NO: 17/18

SCALE: AS SHOWN

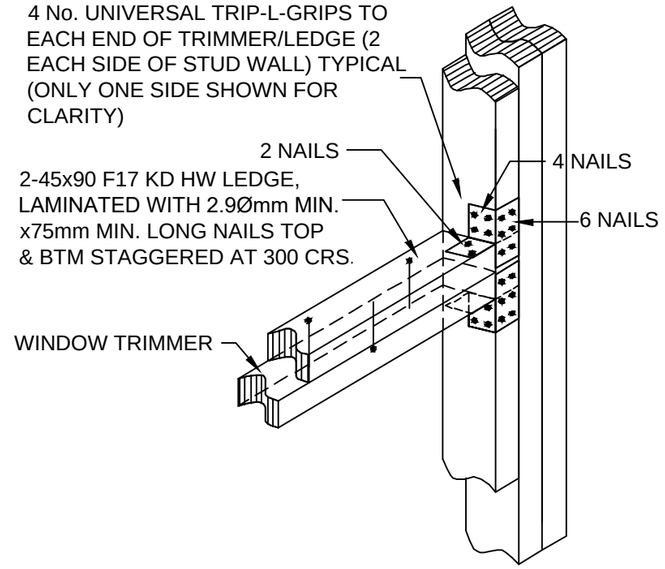
DATE: 03/04/2016

WB CIVIL STRUCTURAL ENGINEERS

TYPICAL WALL FRAMING DETAIL NTS



MID WINDOW TIMBER STUD ELEVATION



TIMBER STUD END CONNECTION

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34 EARL St, AIRPORT WEST VIC 3342

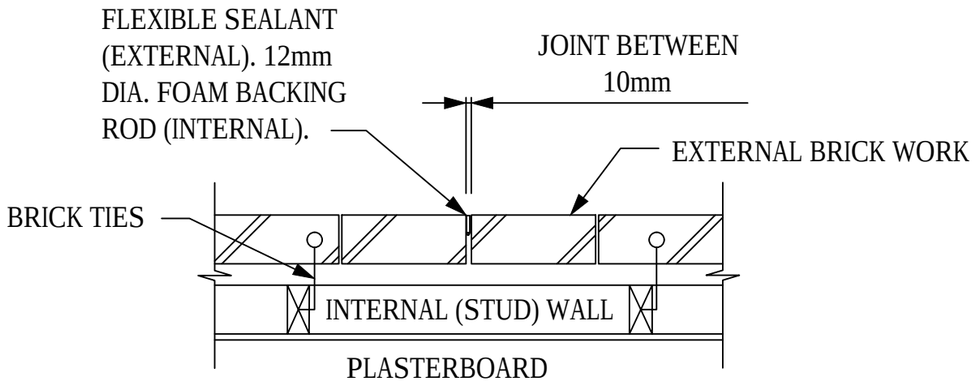
SHEET NO: 18/18

SCALE: AS SHOWN

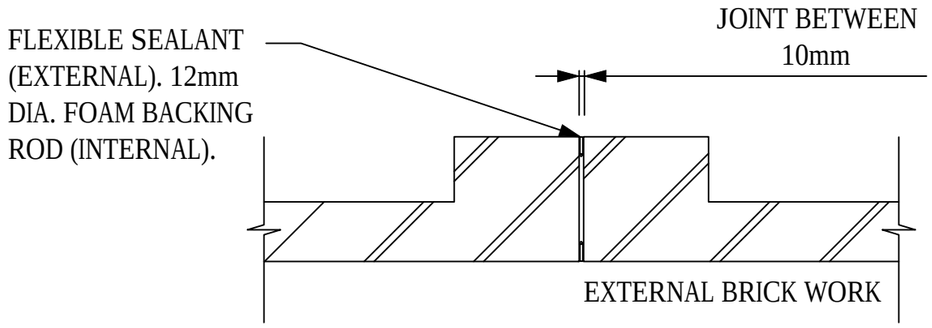
DATE: 03/04/2016

WB CIVIL STRUCTURAL ENGINEERS

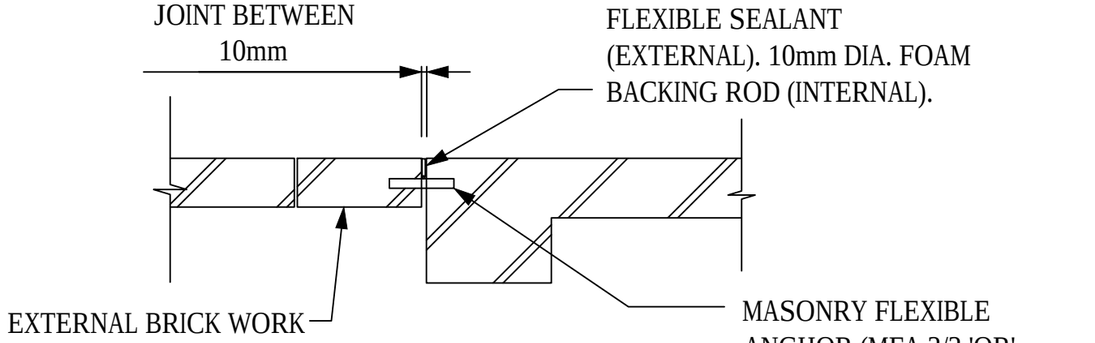
ARTICULATION JOINTS TYPICAL DETAIL NTS



BRICK VENEER WALL
ARTICULATION DETAILS



ENGAGED BRICK PIER
ARTICULATION JOINT DETAILS



ENGAGED BRICK PIER
ARTICULATION JOINT DETAILS

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34 EARL St, AIRPORT
WEST VIC 3342

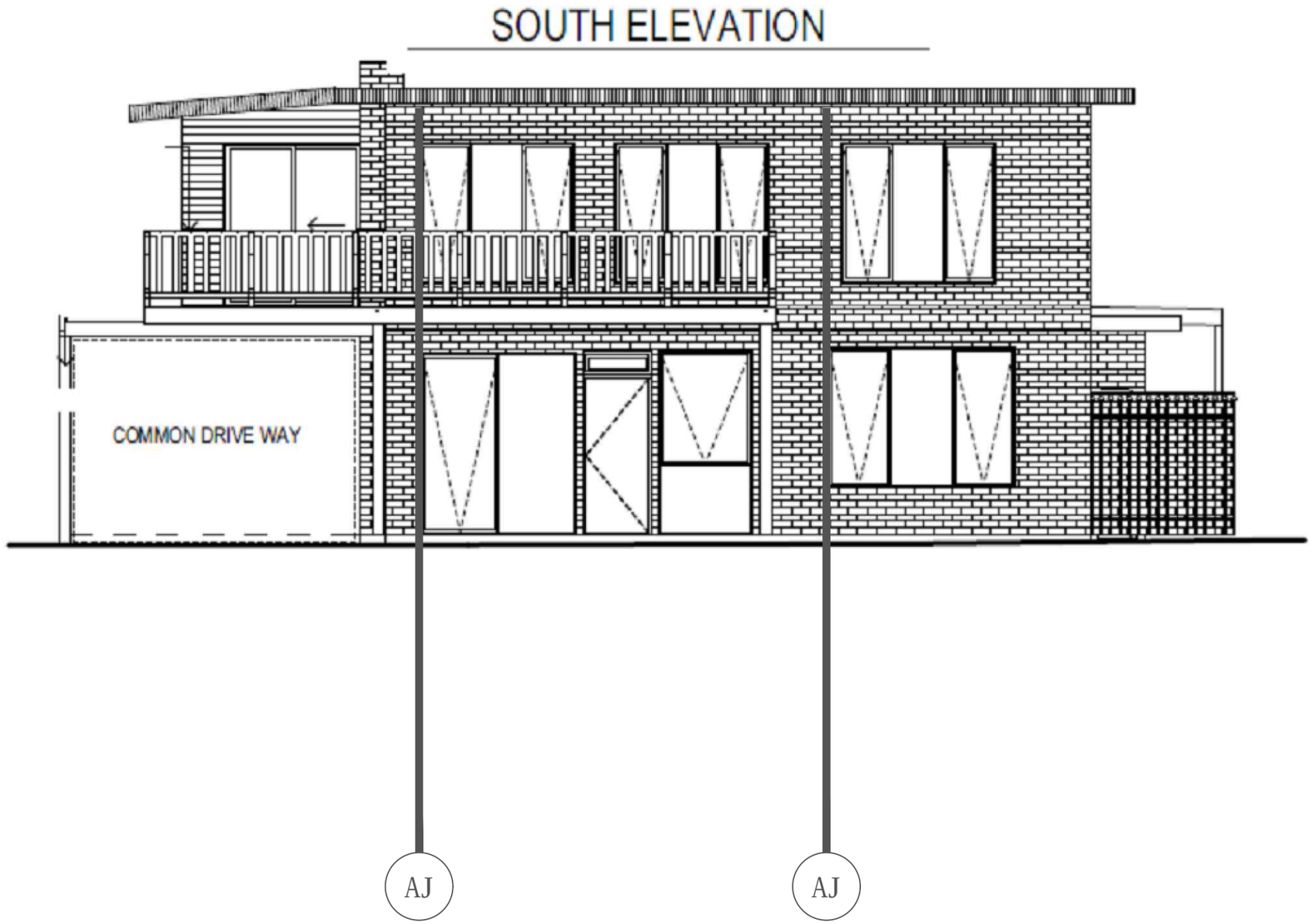
SHEET NO: 18/18

SCALE: AS SHOWN

DATE: 03/04/2016

WB CIVIL STRUCTURAL ENGINEERS

ARTICULATION JOINTS ON ELEVATIONS NTS



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Email: wbcseng@gmail.com

REGISTERED ENGINEER
REGISTERED BUILDER
(VICTORIAN BUILDING AUTHORITY)

PRIYAN WIJEYERATNE
EC 19060, D-BU 22220
M.I.E.(AUST)., C.P.ENG.
M.Eng(Struct)., M.Tech.(Mgt.), BSc(Civil)

PROJECT:
DEMOLITION, SUPPORTING STRUCTURE & PRO. DWELLING

PROJECT ADDRESS:
34 EARL St, AIRPORT WEST VIC 3342

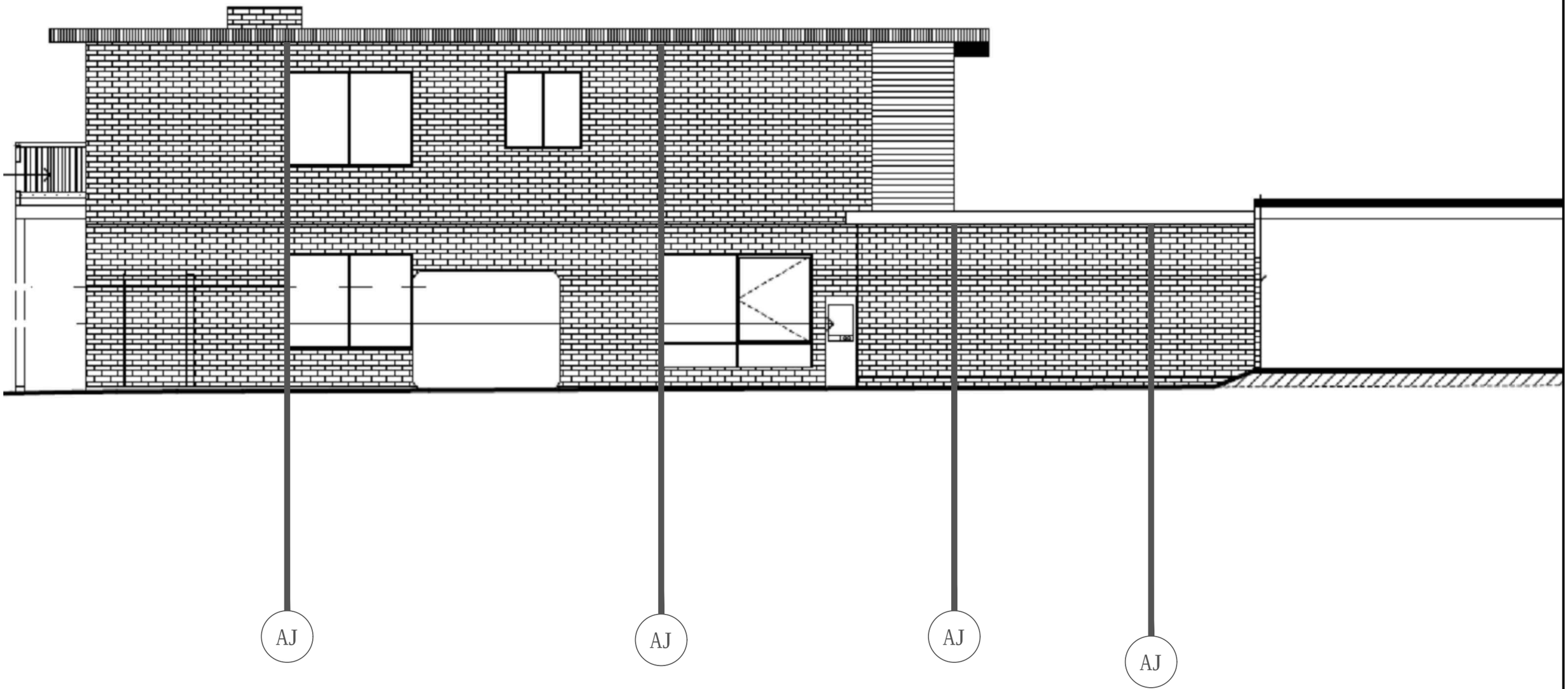
SHEET NO: 18/18

SCALE: AS SHOWN

DATE: 03/04/2016

WB CIVIL STRUCTURAL ENGINEERS

ARTICULATION JOINTS ON ELEVATIONS NTS



CLIENT:

ARCHITECTURAL
CUSTOM DESIGN - CUSTOM BUILD

JOB NO: ARCHI/2016/2

WB CIVIL STRUCTURAL ENGINEERS
ENGINEERS & BUILDERS
ABN: 84119322436
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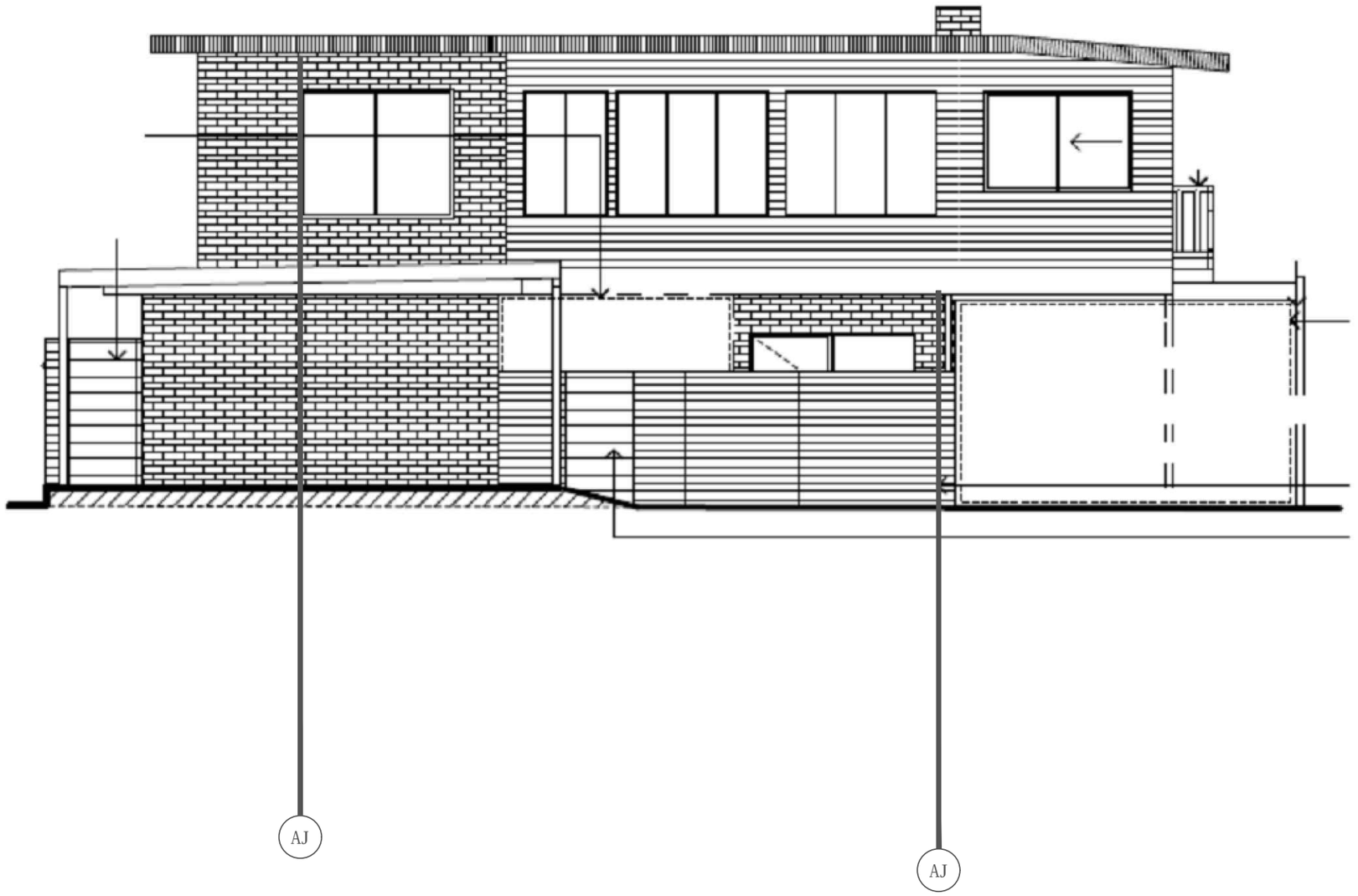
NORTH ELEVATION



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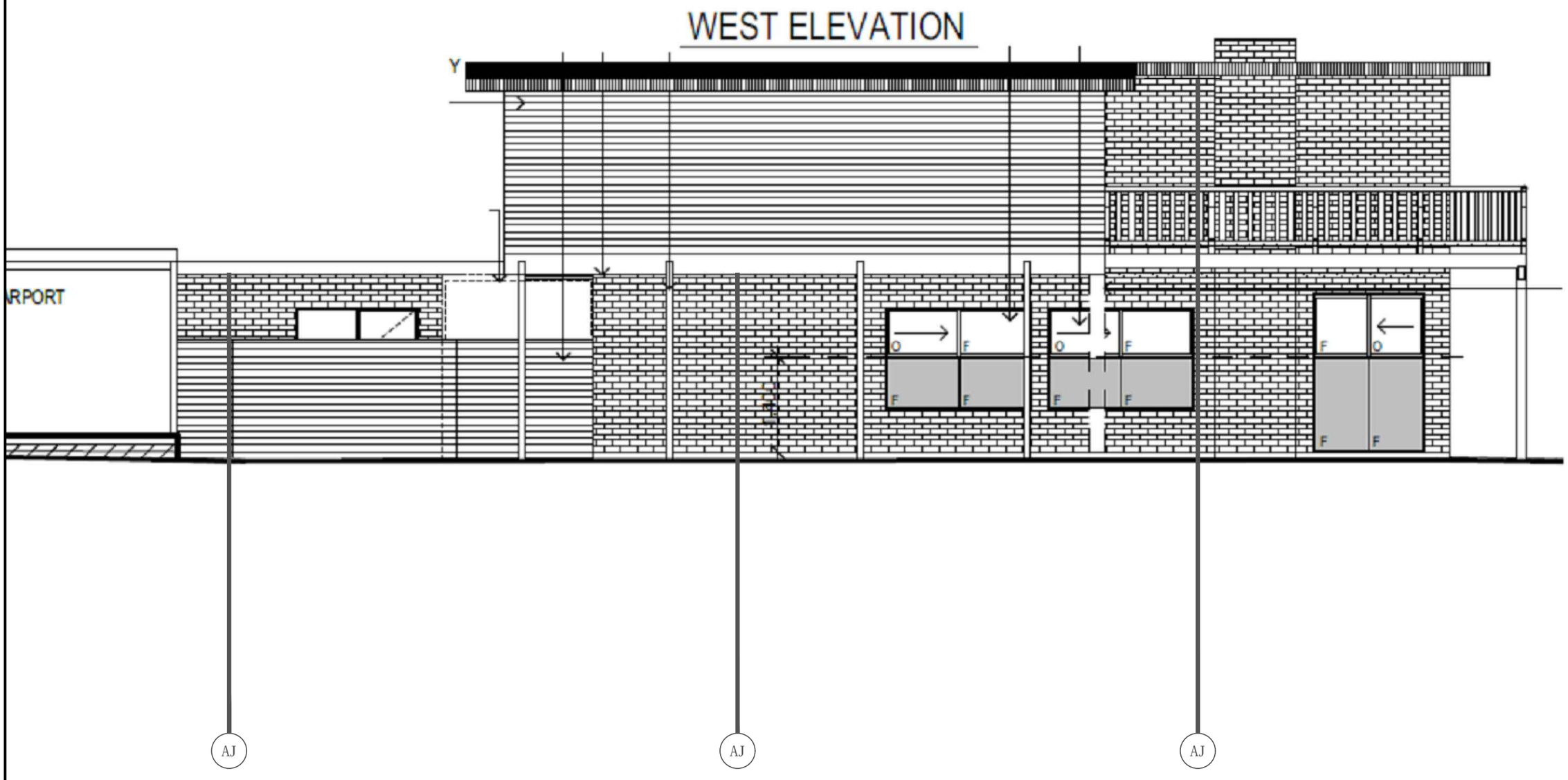

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