

ROTORUA

SPECIFICATION

OF

WORK TO BE DONE AND MATERIALS TO BE EMPLOYED

IN THE ERECTION OF A RESIDENCE AT

Lot 4 PUKEHANGI ROAD
ROTORUA.



PLANS APPROVED SUBJECT TO ALL RE-
QUIREMENTS OF THE PLANS
HEALTH DEPT. BEING FULLY COMPLIANT
WITH.

Date 9-381 Permit Number 0035603

Inspector

Mahey

LABOUR DEPT. STAMP PERMITS

THIS PERMIT DOES NOT RELIEVE YOU OF
OBLIGATIONS UNDER THE OFFSHORE ACT,
FACTORY ACT AND CONSTRUCTION ACT.

BUILDER

UNIVERSAL HOMES LTD.

68 PUKUATUA STREET

ROTORUA

P.O. Box 1644

ROTORUA

PHONE: 80-469

CONTRACT:

This includes the supply and delivery of all materials, labour, fittings, tools plant, etc, necessary for the due and proper completion of the building as shown on the plans and herein specified.

PERMITS:

Contractor to comply with Labour and Building By-Laws of the district to apply for and obtain specific building permit and pay for the same.

WATER:

The Builder will be responsible for getting water laid on to the section by making application to Local Body and paying all fees.

SITE AND ACCESS:

The Builder will be responsible for ensuring that the section is fully pegged with pegs correctly numbered and flagged. The Builder will be responsible for clearing excess vegetation from the building site and will provide suitable access to the section and building site for vehicles of the Builder and various sub-trades.

PROVIDE AND FIX:

Shall be construed to mean 'Provide and Fix' where used separately unless otherwise specified.

INSURANCE:

The Contractor is to have all his employees covered against accident by an Employee Liability Policy and to take out an insurance against fire for a sum sufficient to cover 75% of the contract price, both policies to remain in force until the building is taken over by the Purchaser.

INTERPRETATION:

Workmanship shown on plans or otherwise specified and not shown must be applied as though both shown and specified or alternatively constructed to accept trade practice. Materials shown but not specified must be of the kind commonly employed for the service it is intended to perform. All figure dimensions shall be taken in preference to those scales and all detail drawings shall supersede those scaled to smaller scale. All dimensions shown on plans are approximate only and the Builder is in no way responsible for variation on site. This Specification is to be read in conjunction with the accompanying drawings and to be followed in conjunction with the ^{NZS3604} N.Z.S.S. 1900 Common Trade Practices.

METRICATION & DIMENSIONS:

Due to partial metrication sizes shown on plans and specifications may vary from those supplied and in addition, base heights as shown on plans may vary from final heights on site and the Builder shall not be held responsible for such variation.

CLEARING:

All trades shall remove their trade wastes from the house on completion of their work and place on site in a neat stack for removal.

MAINTENANCE:

The maintenance period shall be thirty one days (31 days) after the dwelling is completed. Purchaser will notify the Builder in writing of any defects or faults which appear within 31 days and give the Builder a signed clearance when all items are rectified. If no such written notice is received within seven days after the 31 day period it shall be construed that no maintenance is required and the Builder is cleared of responsibility.

MATERIALS:

In the event of any materials herein specified not being procurable at the time it is required, such materials may be substituted with other similar materials provided that the other materials conform to the Local By-Laws. The right of substitution shall be at the sole discretion of the Builder and his decision will be final.

EXCAVATION:

Excavate for all piles walls and other foundations as shown on drawings to a minimum depth of ^{450mm}~~300mm~~ or to good solid bearing. Step as necessary for falls in ground and leave bottom trenches level and consolidated. Backfill all foundation excavations at completion. Where extra foundation work is required by the Owner, the Lending Institution of the Local Body because of any peculiarity of the section such as excess rock, loose filling, unstable sub-soil or hidden subsidence etc, such work will be carried out charged as an extra on labour and materials plus 10%. Where excavation is carried out to provide basement, as Builder is excavating at request of Owner, and Owner will accept full responsibility for any claim arising through subsidence, water damage or any like contingency on Owner's or adjoining property. Spoil from excavations shall be placed on section at Builder's discretion and disposal of same is full responsibility of Purchaser.

DRAINLAYERS

GENERAL:

Provide and fix all materials for the installation of the complete sanitary and stormwater drainage system.

SEWER CONNECTIONS:

Arrange with the Local Authority to lay a sewer connection and pay all charges for same. Drains shall be laid in straight lines and to even gradients, properly cleaned out as the work proceeds. Fix 100mm G.E.W. gulley traps to take wastes and 100mm bends to take soil pipe, terminal vents etc. Gulley traps shall have concrete kerbs and C.I. gratings. Position of drains may be altered from Site Plan either by the Plumbing or Drainage Contractor at their sole discretion.

STORMWATER DRAINS:

Fix 100mm E.W.P. bend to each downpipe and lead to soakage systems clear of the house site as required by the Local Authority. The whole of the drainage work shall be carried out in accordance with the By-Laws of the Local Authority and to the satisfaction of its Inspectors. Position of drains may be altered from Site Plan either by the Plumbing or Drainage Contractor at their sole discretion.

BOUNDARY DRAINS:

All boundary draining or ring draining for irrigation of site required by the Local Authority Inspector or Lending Institution is the responsibility of the Owner and will be provided by the Owner at his own expense.

CONCRETE

THE CONTRACTOR:

Shall erect all concrete work as indicated on Plans and as specified. All Portland cement shall be of an approved brand. All sand shall be clean and sharp. All aggregate shall be broken metal 20mm gauge of approved Builders mix. All concrete shall be properly mixed, shall be placed immediately after mixing and well rammed. All re-inforcement shall be mild steel rods or H.R.C. Fabric free from scale, rust and other defects. All concrete shall be composed of five parts approved aggregate to one of cement. Ready-mix concrete may be used at Builders discretion.

PILES:

140mm ϕ tanapiles
Shall be ~~precast 600mm x 200mm x 200mm square in 300mm x 300mm x 100mm pads or~~
to Local Body requirements.

CONCRETE CONT.

PORCHES:

Box for end re-inforce both ways and pour 100mm concrete floors with falls out for porches suitably supported on piers, tender walls or filling at discretion of the Builder. Form coved upstands to slabs. Slab shall be trowelled to a smooth surface.

STEPS:

Shall be concrete, constructed as Builder considers suitable and trowelled to a smooth surface.

TERRACES:

~~Shall be concrete, poured as for porch slabs, or timber, constructed as shown on plan.~~

CONCRETE FLOORS TO HABITABLE ROOMS:

a. GRANULAR BASE:

Hard fill shall have a minimum depth of 100mm and a minimum size of 10 mm and shall be of sufficient strength not to break up under compaction. Aggregate may be of rounded gravel or crushed rock or a mixture of both. A layer of fines or building paper shall be placed over the aggregate after compaction and before pouring.

b. MOISTURE CONTROL:

A vapour barrier shall be placed between the fines or building paper and the concrete slab. This shall be continuous over the entire floor area and be adequately sealed around service pipes and other projections. The bed on which this barrier is placed shall be even and free from any projections. The barrier shall be of polythene sheeting, a minimum thickness of 0.2mm and laid in the longest widths and lengths available, and shall be lapped a minimum of 100mm, and sealed with polythene backed pressure sensitive tape.

c. CONCRETE SLAB:

The concrete slab shall have a minimum thickness of 100mm and the mix proportion, mixing and placing shall comply with N.Z.S.S. 95 part V 17,240Kpa concrete. The slab shall be re-inforced with H.R.C. 665 and the top cover over the steel shall be not less than 20mm or greater than 25mm.

CONCRETE CONT.

ATTACHMENT OF SUPERSTRUCTURE:

d. TIMBER FRAMED WALLS:

Bottom plate of exterior framed walls shall be secured to the floor slab by 12.5mm bolts bedded in at least 150mm into concrete or by special fasteners driven into the concrete after it has set. Fixing should not be spaced at more than 1.4m c.c. with at least two fixings to any length over 760mm or more than 380mm from each end.

e. SITE:

Site shall be excavated to good bearing and shall be well drained to remove water from slab area.

CARPORTS AND GARAGES:

Provide 75mm concrete to Carport and Garage floors, re-inforced with .688 H.R.C. mesh. Only where indicated on drawings.

BASE WALLS

FLAT FIBROITE

CONCRETE BLOCKS:

All concrete blocks shall be of approved type laid in cement mortar with approved additive. Joints shall be filled 10mm thick with struck or pointed finish. Construct 200mm foundation walls with lateral supports and bond beam as shown on plans. Perpend shall be kept true. Provide and build in 400mm x 200mm precast vents of a maximum of 1.6m centres. Build in holding down bolts or wire ties as required. All corners and sides of openings shall be vertical re-inforced with one 12.5mm diameter rod and solid filled with concrete. Bond beams shall be re-inforced with four 12.5mm diameter rods and 5mm diameter stirrups at 600mm centres and solid filled with concrete. Lateral supports shall be re-inforced as required by the Local Authority. Clean down all work on completion. Footings shall be 400mm x 300mm or 300mm x 300mm as required by the Local Authority re-inforced with four 12.5mm diameter rods.

CONCRETE BLOCK DWARF WALLS:

Shall be of 200mm concrete block of approved make laid in cement mortar with approved additive. Joints shall be solid filled 10mm thick with struck or pointed finish. Construct dwarf walls to 300mm minimum above ground level, stepped to follow ground line. Provide 200mm x 200mm bond beam solid filled with concrete and re-inforced with one 15mm diameter rod. Dwarf wall to be on 300mm x 300mm concrete footing re-inforced with three 12.5mm diameter rods.

RETAINING WALLS:

Where required to be constructed in accordance with Winstones Standard Detail in concrete block retaining walls. Provide adequate drainage and damp-proofing behind all walls. Backfill with scoria or similar.

BRICK WALLS:

Construct 230mm x 230mm brick piles up to 915mm height or 300mm x 300mm brick piles up to 1.2m height bonded in at 1.35m maximum centres. Piles to be on 450mm x 450mm x 150mm pads. Construct 100mm brick infill panels between piles. Infill panels to be on 300mm x 150mm concrete footing re-inforced with two 12.5mm diameter rods. Where brick height exceeds 1,220mm above ground or has brick veneer above, base wall shall be 200mm brick work with cast insitu concrete perimeter beam re-inforced with four 12.5mm diameter rods and 5mm stirrups at 600mm centres. 200mm base walls to be on 300mm x 300mm concrete footing re-inforced with four 12.5mm diameter rods. Build in precast vents 750mm from corners and at 1.8m intervals. Build in holding down bolts or wire ties as required. Clean down all work on completion.

SPLITSTONE BASE:

To be veneer to a maximum of 1.22m above ground level on 300mm x 150mm footing re-inforced with two 12.5mm diameter rods. Veneer to be laid against 200mm x 200mm x 600mm foundation blocks as shown on plans.

FIBROLITE BASE:

~~Provide jack studs to base walls at 680mm centres, dwanged at 500mm centres.~~
Cover base with 5mm flat fibrolite with building felt between fibrolite and framing on all joints and angles. Fix base vents 750mm away from angles and at approximately 1.2m centres. (Not required on a recessed base).. Provide building paper under fibrolite where required by Local Authority.

SHADOW BRICK BASE:

To be fixed as for fibrolite base.

DAMP COURSE:

Fix three ply damp-course between concrete or brick and all woodwork adjacent.

BRICKLAYER

GENERAL:

All bricks shall be B3/Splitstone unless otherwise specified of approved make and sound. Bricks to be well burnt. Mortar shall be 6:1:1 sand, lime and cement. Plimortar may be used in place of lime. All brickwork shall be properly bonded and well wetted before use. All perpends and levels shall be accurate and external joints shall be weather struck.

BRICK VENEER WALLS:

Shall be 110mm thick kept 40mm clear of framing. Build in galvanised iron tiles at 500mm c.c. horizontally and 340mm vertically bent up and stapled to studs. Build in approved galvanised metal vermin stop below vermin plates. Clean out cavity as work proceeds and thoroughly clean down exposed face on completion. Provide quarry tile sills.

CARPENTER AND JOINER

TIMBER:

All timber up to flooring and all exterior timbers shall be heart quality or timber treated by an approved process. All timbers shall be graded according to New Zealand Standard Specifications No. 169, 3rd Revision.

SCHEDULE OF MATERIALS	SIZE	GRADE	REMARKS
Jack Studs	100mm x 75mm	BAH Rimu/Matai or approved treated Pine.	1.35m centres 2.13m max centres
Stringers	100mm x 75mm 7/150mm x 50mm.	Ditto	
Wall Plates	100mm x 50mm	Ditto	
Foundation Braces	100mm x 75mm 100mm x 50mm 100 x 100 mm.	Ditto	
Floor Joists	150mm x 50mm & 225mm x 50mm & 250mm x 50mm	Ditto	600mm centres
Vermin Plates	100mm x 50mm	Ditto	
Studs (Exterior)	100mm x 50mm & 100mm x 75mm	Ditto	450mm centres
Studs (Interior)	100mm x 50mm & 75mm x 50mm	Ditto	Ditto
Noggings	Ditto	Ditto	2 or 3 rows

CARPENTER AND JOINER

CONT

SCHEDULE OF MATERIALS	SIZE	GRADE	REMARKS
Plates	100mm x 50mm & 75mm x 50mm	Ditto	
Braces	100mm x 25mm or approved metal strap	Ditto	Diagonal checked in
Ceiling Joists	100mm x 50mm	Ditto	Max 500mm centres
* Rafters (Iron roof)	100mm x 50mm	Ditto	Max 915mm centres
* Rafters (Tile roof)	100mm x 50mm	Ditto	Max 450mm centres
Truss roof	To manufacturers specifications		
Purlins	75mm x 50mm 52mm x 52mm	Ditto	Max 760mm centres TO MANUFACTURERS SPEC.
Ridges & Hips	150mm x 25mm	Ditto	
Under Purlins Tile	100mm x 75mm	Ditto	
Under Purlins Iron	100mm x 50mm	Ditto	
Roof Struts	100mm x 50mm	Ditto	1.3m centres
Gollar Ties	150mm x 25mm	Ditto	Ditto
Valley	150mm x 25mm	Ditto	
Valley Boards	150mm x 25mm	Ditto	
Fascia Boards	150mm x 25mm 200mm x 25mm	D.A.H.R.	
Weatherboards		Hardies Fibro- plank, or N.Z. F.P. weather- sides	
Flooring		Particle Board Customfloor 600	OR KINSHOL 600
Facings (Exterior)	100mm x 25mm	D.A.H.R.	
Interior Door Jambs	25mm	Finger Jointed Boric Pine	With 12.5mm planted stops
Skirting	75mm x 12.5mm	Finger Jointed Boric Pine	Splayed
Architraves	50mm x 12.5mm	Finger Jointed Boric Pine	Splayed
Sillboards		Finger Jointed Boric Pine	Where required
Aprons	20mm quad	Finger Jointed Boric Pine	
Cornices	30mm	Finger Jointed Boric Pine	Splayed
Exterior Jambs	150mm x 40mm	Finger Jointed Boric Pine	solid rebated

* Pine rafters to be 125mm x 50mm

CARPENTERS AND JOINERS

CONT

SCHEDULE OF MATERIALS	SIZE	GRADE	REMARKS
Mullions (Exterior)	100mm x 75mm	D.A.H. Rimu	Double rebated
Window Sills (Exterior)	150mm x 65mm	D.A.H. Rimu	Pitched double sunk
Door Sills (Exterior)	220mm x 65mm	D.A.H. Matai	

BEAM SCHEDULES:

Non Truss Roof:

To openings up to 1m		100mm x 50mm	On Flat
To openings from 1m	to 1.4m	100mm x 75mm	On Flat
To openings from 1.4m	to 2m	100mm x 100mm	
To openings from 2m	to 2.4m	150mm x 100mm	
To openings from 2.4m	to 3m	200mm x 100mm	

Truss Roof:

7.200mm Max Truss span Monier Tile

To openings	900mm to 1.4m	100mm x 100mm or	2/100mm x 50mm
To openings	1.4m to 1.8m		2/150mm x 50mm
To openings	1.8m to 2.7m		2/220mm x 50mm
To openings	2.7m to 3.6m		2/300mm x 50mm

TRUSSES TO COMPLY WITH THE FOLLOWING CODES FOR SPANS UP TO 7.2m

Standard Monier 20° Pitch:

Up to 4m	span	Gangnail A41
Up to 7.2m	span	Gangnail A41

Double Pitch 18° & 30° Monier Tile:

Gangnail A41

Double Pitch 16° & 30° Lightweight Roofing:

Gangnail A41

Single Pitch 16° Lightweight Roofing:

Gangnail A41

CEILING RUNNERS:

When ceiling joist span over 2.3m and up to 3.6m - one runner. When ceiling joists span over 3.6m one runner for every 1.8m of span.....

100mm x 50mm up to 2.4m of span

125mm x 50mm up to 3.6m of span

CARPENTER AND JOINER CONT.

FRAMING:

~~Frame up from blocks with 100mm x 75mm jack studs secured with stapled wire ties, diagonally braced as required with 100mm x 50mm braces. Frame floors with 150mm x 50mm floor joists at 600mm centres gauged and checked and set level with trimmer joists splay checked 15mm. 100mm x 75mm sleeper and wall plates set on edge at no more than 2.1m centres with halved joints.~~ ^{2, 150mm x 50mm} Frame walls and partitions with full length plates, studs at 450mm centres. Check in flush braces at approximately 45 degrees where required. Check lintels into studs 15mm. Fix rows of nogging to each lined wall and elsewhere as required for fixing.

Fully nog round perimeter with 75mm x 50mm. Frame for roof as shown on drawings in compliance with good trade practice. Truss roof shall be framed to manufacturers specifications with 125mm x 40mm plate on top of top plate. Form soffits as on drawings, line under with flat asbestos sheets housed into fascia board and with mould at walls.

HARDIPLANK

Cover exterior walls with Hardies Hardiplank weatherboards over building paper fixed to manufacturers specifications with 55mm x 2.5mm galvanised countersunk flathead nails. External corners to be covered with 47mm galvanised soakers and interior corners to be butted into 47mm galvanised internal angle moulding. Butt joints to be set in 15mm P.V.C. moulding soaker.

FIBROLITE:

Verticle panels. Fix to manufacturers specifications.

WEATHERSIDES:

To be fitted to N.Z.F.P. specifications.

FLOORING:

Finafloor 600
Lay particle board/or Custom Floor 600 at Builder's sole discretion, with one machine sand at completion. Suitable for floor coverings only. No responsibility for colour variation of floors.

CEILINGS:

Ceilings to be lined with fibrous plaster sheets flush jointed to an even surface thoroughly wadded or glued at joints and 400mm x 450mm centres.

Ceilings to be lined with Gibraltar Board sheets in accordance with manufacturers instructions. The Builder accepts no responsibility in the event of joints cracking when this product is used.

CEILING FRAMING:

a. Truss Roof:

Double skew nail 75mm x 40 mm boric treated strapping to bottom chords at trusses at 500mm centres for fibrous ceilings.

b. Sloping Ceiling for Framed Roof:

Where ceilings are fixed to rafters exceeding 500mm centres, nogging shall be fixed at 450mm centres.

WALL LININGS:

All walls to be lined with 9.5mm flush jointed Gibraltar board sheets. All sheets to be nailed or glued. All stopping to be done with good quality plaster of Paris by skilled tradesmen. All back porches to be lined with flat fibrolite.

DOORS:

Each exterior doors shall be 1980mm x 810mm x 50mm solid framed Hutloc treated pine doors glazed of obscured glass or as indicated on drawings hung with 1½ pairs 100mm loose pin galvanised butts in 50mm solid rebated and throated frames with 75mm weathered and grooved sills. Each internal door shall be hollow core of approved make hung with one and a half pair 89mm loose pin A.C. butts in 25mm jamb linings with 12.5mm stops planted on doors to wardrobes; line and coats where specified shall be 1980mm x 610mm or 1980mm x 460mm and all others shall be 1980mm x 760mm; W.C. and bathroom 1980mm x 710mm. Interior doors suitable for painting only.

ALUMINIUM JOINERY:

Shall be of approved make. Opening sashes to have friction stays and approved catches. Sizes to be overall shown on plan and to have factory fitted jamb liners. Sizes may vary due to metrication. Window head flashings where necessary should accurately fit the work and cap the scribes.

KITCHEN FITTINGS:

To be of Builder's standard design placed as shown on plan. Provide toe space to all fittings. Dresser or buffet top to be finished with formica or laminex. Sizes may vary to plan due to metrication.

CARPENTERS AND JOINERS CONT

SINK TOPS:

To be a Formica top. Form cupboards as on plan under with one full width full length shelf and doors with toe space at floor.

WARDROBES - COAT CUPBOARDS ETC:

Frame wardrobes, linen, coats etc, as shown with linings as previously specified 19mm shelves in linen and one 19mm shelf and hanger rods in coats and each wardrobe.

INTERIOR FINISHING:

Fix skirting to all walls with scribed angles. Fix architraves with mitred angles to all openings. Fix 25mm full length boards to all windows. Fix scotia cornices to all ceilings. Fix 12.5mm quarter round beadings to all internal angles of fittings and enamelled walls.

HARDWARE:

Hardware to be installed by the Contractor - locks, butts, hinges and screws for doors and fittings for sashes.

BATHROOM CABINET:

Provide cabinet with mirror in bathroom, finish round cabinet with quarter round beads. Provide cupboard under tub.

ACCESS TO CEILING:

Provide access to ceiling.

ACCESS TO BASEMENT:

Provide base door and frame for access.

GABLE FINISHING:

Finish eaves and gable ends as indicated on plans. Line gables with:-

- a. ~~Weatherboards as specified for exterior finish.~~
- b. Fibrolite as per makers instructions and fixed on approved building felt tacked for studding.

SHOWER RECESS:

If shown on plan recess will have stainless steel base and be lined with white seraton or similar (or) ~~provide shower over bath with curtain rail.~~ Fix single soap recess.

ROOFER

GENERAL:

Fix roof as indicated on drawings. All roofs shall be fixed by approved specialist roofing contractors. Pitch of roof shall be as indicated with minimum of 20 degrees for concrete tiles and 10 degrees for corrugated roofs.

GALVANISED IRON:

Fix 045mm corrugated iron roofing complete with all ridges, hips and barge roll 225mm end laps and 1½ corrugations side laps. Paint all laps before fixing and fix roof with lead headed or other approved roofing nails at top and bottom of sheets and at intermediate purlins. Fix lead edge ridging beaten well down into corrugations and 150mm end laps and ridge caps. Provide under iron an approved Building paper underlay supported on galvanised wire netting or galvanised strand wire at the plumber's sole discretion.

HARVEY TILE:

Fixed to Maker's specifications.

TILE ROOFS:

Monier 20 Degrees Pitch:

Fix tile roof with main slope set out in complete courses with not less than 100mm end lap and in straight vertical and horizontal lines. All concrete tiles shall be in colour to be selected by the Builder.

PLUMBING

GENERAL:

All work shall be carried out in accordance with the Specifications, Local Authority and Public Health Regulations. Approved New Zealand manufactured materials are to be used wherever possible. All materials are to be of approved manufacture. Water pipes shall be set out in straight runs avoiding all places where air locks are likely to occur.

FLASHINGS:

Flash as necessary to render building watertight. All flashings shall accurately fit the work and shall be machine bent and cut in as long lengths as possible with all joints well lapped and fixed with 18mm flat head galvanised nails. Fix 045mm gauge galvanised iron sill trays.

PLUMBING CONT

ROOFS:

Fix 045mm gauge galvanised ridge caps at each apex of galvanised roofs. Flash all vents, chimneys and other upstands through roof. Line all valleys with 055mm gauge galvanised iron.

SPOUTING AND DOWN PIPES:

Fix 125mm quarter round galvanised iron spouting to drain all outlets; with 50mm lapped soldered joints and all necessary stop ends, mitred returns and outlets. Support spouting on 28.5mm x 2.0mm galvanised brackets at not less than 900mm centres, fixed with 28.5mm x 2.9mm galvanised clouts. Downpipes shall be 75mm diameter, galvanised iron, seamed and welted with slipped end joints, angles and shoes fitted to walls with stand-off brackets. Position of downpipes may be altered as shown on site plan by Plumbing Contractors or Local Authority at their sole discretion.

VENT AND SOIL STACK:

Vent pipes shall be 100mm x 6mm cast iron for the first 1800mm above ground level with copper extensions or 75mm Rigid P.V.C. for total length. Secure cast iron pipes to walls with metal screws and Rigid P.V.C. with galvanised or P.V.C. Stand-Off Clips. Fix wire cage.

WASTES:

Join W.C. pan to drain above the level of the floor with a spun yarn ring sealed with mastic or other approved material which will provide a non-rigid gas tight joint. Fix lavatory basin with 32mm polypropylene trap and copper or Rigid P.V.C. waste pipes to ground level with an approved floor flange. All other wastes shall be either screwed galvanised iron P.V.C. or copper pipes, with polypropylene traps and cleaning eyes. Bath and wash tub wastes shall be 38mm diameter. Sink wastes shall be not less than 38mm diameter. Where waste pipes terminate this will determine position of drainage gulley traps not as indicated on site plan.

COLD WATER SUPPLY:

Lay cold water supply from point in 18mm diameter galvanised, 15mm P.V.C., 15mm copper, or 15mm polybutylene pipe burried not less than 300mm, take 12mm branches to bath, basin, sink and each compartment of wash tubs, W.C. flushing cisterns and to one exterior hose tap.

HOT WATER SUPPLY:

Lagg 12mm copper, or polybutylene pipe to sink; also provide lagged exhaust pipe between cylinder and ceiling where relief valves are not fitted. Provide and fix 135 litre electric hot water cylinder ^(narrow) of approved type and manufacture, complete with lagging and galvanised iron casing. Connect copper or polybutylene expansion pipe, 12mm diameter, copper or polybutylene sludge pipe with screwed cap and 12mm copper or polybutylene branches to sink, tubs, basin and bath.

Install potbelly stove (supplied by Client) and connect water back to h.w.c.

TAPS:

Taps should be chromium plated streamlined pattern of approved manufacture marked 'HOT' and 'COLD' with 18mm extended bibs to bath; 12mm diameter pillar cocks to basin; 12mm cocks with 75mm extension to sink; 12mm bibcocks to tubs; 12mm stopcock to w.c. and exterior 12mm diameter brass cock

Provide topliss Felton or approved mixer to shower.

SANITARY FITTINGS:

Fit 1676mm Plastic Bath, and ~~558mm x 406mm basin on brackets~~ or vanity unit.

Fit rubber plugs and plastic gratings to all fittings. Fix single soap recess for bath. Fix white glazed earthenware W.C. pan and fit with double flap plastic seat and low-down flushing cistern of approved manufacture. Fix single stainless steel tub in Laundry according to Plan with hot and cold tap over.

ELECTRICIAN

GENERAL:

All installations shall be made in a sound safe practical and workmanlike manner in conformity with modern practice in accordance with the Wiring Regulations 1961 and to the satisfaction of the Local Authority. All switches and plugs shall be flush type and all cables shall be C.M.A. brand or similar approved. Internal fuse board where required by the Authority.

LIGHTS:

Provide 12 light points with lamps and shades at positions to be arranged and provide 100 watt lamps in Living and Dining rooms and 60 watt lamps to all other points.

POWER POINTS:

Provide 10 power points at positions to be arranged, 1400mm above floor in Kitchen and 300mm above floor elsewhere.

COOKER:

Provide and fix Electric Cooker Shacklock 610AS or approved automatic stove of Builder's discretion. Install to instructions with control switch within easy reach of cooker.

ELECTRICIAN (CONT'D.)

HOT WATER:

Connect element and thermostat to hot water cylinder provided by Plumber. The Company guarantees the hot water element for 3 months from date of possession and will replace it free of charge if it fails within those 3 months. The manufacturer guarantees the element for 12 months from date of installation and should the element fail after 3 months from possession, then the manufacturer and NOT Universal Homes Limited should be contacted.

PAINTER

GENERAL:

All materials shall be the best of their kind and all work shall be performed by skilled tradesmen. Protect all work against damage and adjacent surfaces to be kept clean.

EXTERIOR WORK:

Prime all exterior exposed woodwork with approved primer. Follow with one undercoat. Finish with a first quality Exterior High Gloss in Owner's colour scheme restricted to three shades. Fibrolite soffit, porch, walls and Fibrolite base to be given two coats of P.V.A. paint. ~~Painting of corrugated iron roof is included in the Contract.~~ Fibrolite weatherboards to receive two coats Acrylic Vinyl S/Gloss. Block or brick bases will NOT be painted. Handrail is NOT to be painted.

Picking out of colours or work considered by the painter to be beyond normal standard will be subject to extra charges as agreed between the Owner and the Painter before work is carried out.

INTERIOR WORK:

SERVICE ROOMS viz. Kitchen, Laundry, W.C., Bathroom

Standard finish shall be vinyl wallpapers based upon a P.C. sum of \$10 per roll

ALL OTHER ROOMS

Painting of ceilings and scocia shall be with two coats ready-mixed approved matt finish except in service rooms which shall have an approved brand ready mixed gloss enamel. Prime interior work to windows, undercoat and enamel with approved brand. All interior finishing lines except scocia shall be undercoated and enamelled. Where exposed beams or rafters are involved, these shall be stained to obtain a satisfactory finish on condition that the Owner accepts without redress the finish obtained with clear varnish.

Where Owner's colour schemes exceed three colours to a room or is considered by the Painter to be beyond normal standard, extra may be charged as agreed

between Owner and Painter before work is carried out. Tinted ceilings are subject to extra charge. Painting interior of cupboards is not included in Contract. All interior doors to be painted. Stained cupboard doors and flush doors subject to extra charge to Painting Contractor.

PAPER ALL WALLS:

Paper all walls NOT otherwise specified as service rooms with papers P.C. value \$6.00 standard roll, to be selected by the Owner. Hang papers plumb and in full lengths and widths with butt joints. Excess of P.C. sum shall be payable by the Owner to the Supplier, prior to commencement of paperhanging.

... GLAZING

ALL GLASS:

Shall be of approved manufacture and shall be cut with allowance for expansion and bedded sprigged and back-puttied. Glaze all sashes with panes under $.56m^2$ in 510 gram sheet glass ordinary glazing quality, sashes with panes $.56$ to $1.022m^2$ in 680 gram sheet glass ordinary glazing and panes over $.929m^2$ glazed with 907 gram sheet glass selected glazing quality. Glaze all Bathroom and W.C. sashes with white translucent glass. Glass louvres with 6mm cast plate glass. Glaze internal Fig 6 or 10 sliding doors and external casement doors and sidelights with 680 gram glass ordinary glazing quality. Glaze front door and sidelights and glaze back doors with selected obscured glass.

ALUMINIMUM GLAZING:

All glazing to aluminimum joinery to be carried out in compliance with Manufacturer's specifications.

METRIC CHANGEOVER INTERPRETATION:

Wherever it occurs within these specifications, the builder shall not be held responsible for variation between imperial and metric dimensions and the builder reserves the right to substitute any material in metric dimensions in lieu of any previous imperial dimensions.

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PROPOSED RESIDENCE
AT LOT 4 PAREHANUI ROAD
ROTORUA

DATE 16/12/80
PLAN NO. M329/5809
DP

UNIVERSAL HOMES LTD.

85 AIREDALE STREET, AUCKLAND
ph. 775309
P.O. box 6742
Wellesley Street

5809

ECONOMY TRADITIONAL CONTEMPORARY HOMESTEAD

ROOF
SHEATHING
BASE
JOINERY
CEILING
FLOOR
KITCHEN
SINK/BENCH
DRESSING
H.W.C.
L.P.
R.P.

COMMENTS

Details only.

DOOR SCHEDULE

all doors
painted hardboard

A	1980 x 810 fig 6
A ¹	1980 x 810 fig 10
A ^{2L}	1980 x 810 2 light
A ^F	1980 x 810 flush (temp. h.b.)
A ^F	1980 x 810 fig 2 h.b. + bedding as shown
B	1980 x 760 flush
C	1980 x 710 flush
C ^{2L}	1980 x 710 2 light
D	1980 x 610 flush
E	1980 x 450 flush
F	1980 x 810 flush

5809

BRANZ

SHEET A

(CIRCLE whichever is applicable)

NAME: 14329

ADDRESS: LOT 4 PUKEHANGI ROAD
ROTORUA

STOREY: ☒ Single or Uppermost
☐ Lower of two or middle of three
☐ Lower of three

ROOF TYPE: Light / ☒ Heavy

ROOF PITCH: 0° - ☒ 25° / 26° - 45°

WIND AREA: High / Medium / ☒ Low

W = 18 B.U.'s/m

EARTHQUAKE ZONE: A / ☒ B / C

E = 4 B.U.'s/m²

ROOF OR BUILDING LENGTH

BL = 44 m

ROOF OR BUILDING WIDTH

BW = 6.8 m

GROSS ROOF OR BUILDING PLAN AREA

GPA = 1120 m²

EARTHQUAKE: B.U.'s ALONG AND ACROSS

E x GPA = 4 x 11200 = 449 B.U.'s

WIND: B.U.'s ALONG

W x BW = 18 x 6.8 = 123 B.U.'s

WIND: B.U.'s ACROSS

W x BL = 18 x 44 = 200 B.U.'s

SKETCH PLAN (external and internal walls) :

500

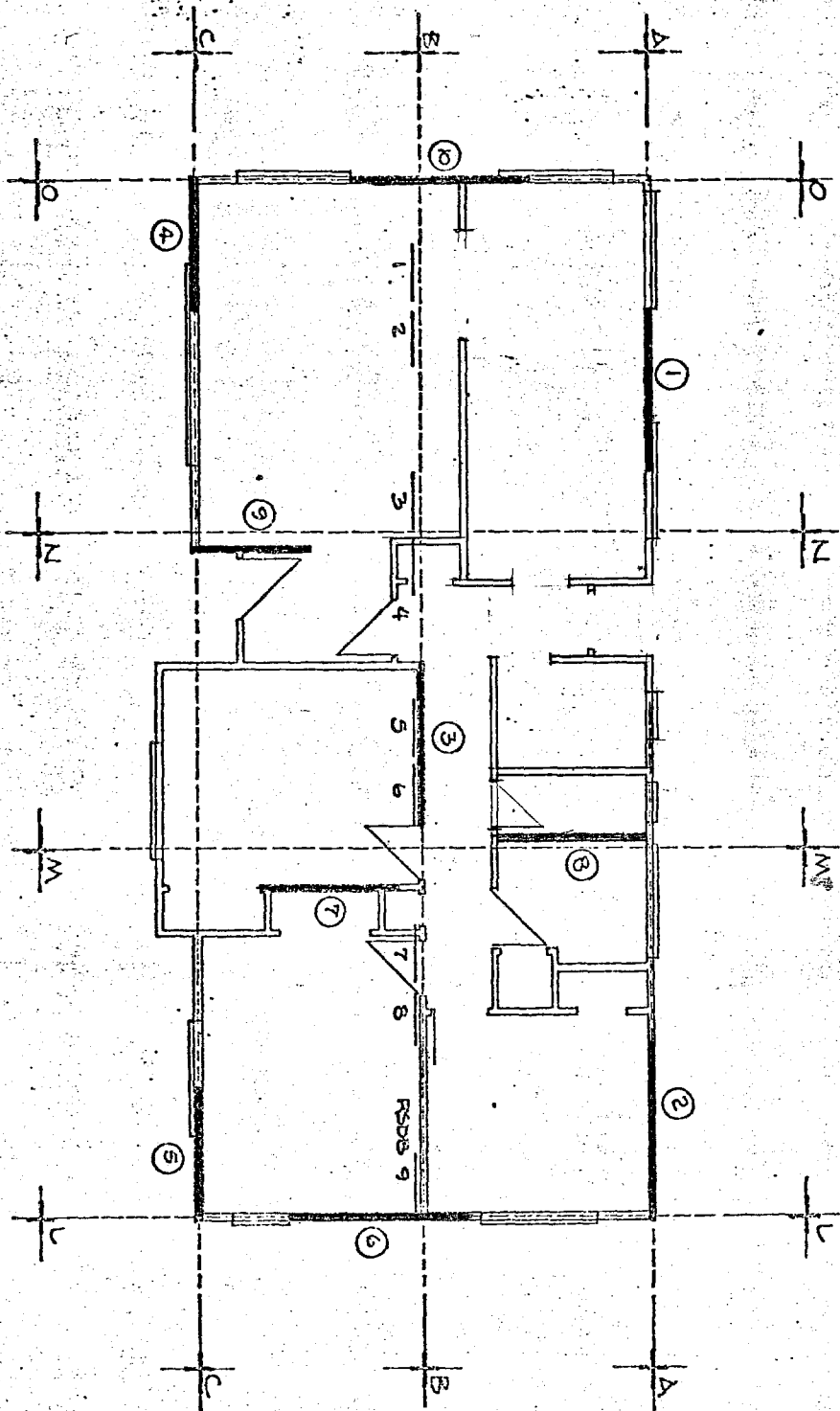
SHEET B

1	2	3	4	5	6	7	8	
Total B.U.'s Required	Wall Line		Wall Bracing Elements Provided					
	Label	Minimum B.U.'s Required	Label No.	Type	Rating B.U.'s/m	Length (m)	B.U.'s Provided	
ALONG	A		1	1	42	$1.5 \times 1.5 = 2.25$	94.5	
			2	1	42	2.4	100.8	
		144	Sub-total					195.3
	B		3	2	62	2.0	124	
		70	Sub-total					124
	C		4	1	42	$1.5 \times 1.2 = 1.8$	75.6	
			5	1	42	$1.5 \times 1.2 = 1.8$	75.6	
		144	Sub-total					151.2
	D							
			Sub-total					
449	TOTAL	358	TOTAL					470.5

ACROSS	L		6	1	42	2.4	100.8	
		63	Sub-total					100.8
	M		7	1	42	1.8	75.6	
			8	2	62	2.0	124	
		70	Sub-total					199.6
	N		9	1	42	1.7	71.4	
		70	Sub-total					71.4
	O		10	1	42	2.4	100.8	
		63	Sub-total					100.8
P								
		Sub-total						
449	TOTAL	260	TOTAL					472.6

689

BRACE N°	TYPE	LENGTH
1	1	1.5x1.5x2.0
2	1	2.4
3	2	2.0
4	1	1.5x1.2x1.0
5	1	1.5x1.2x1.0
6	1	2.4
7	1	1.5
8	2	2.0
9	1	1.7
10	1	2.4

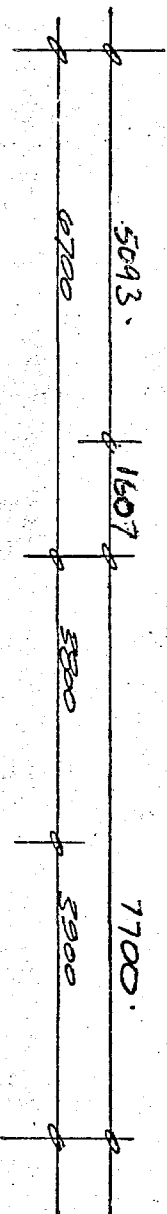
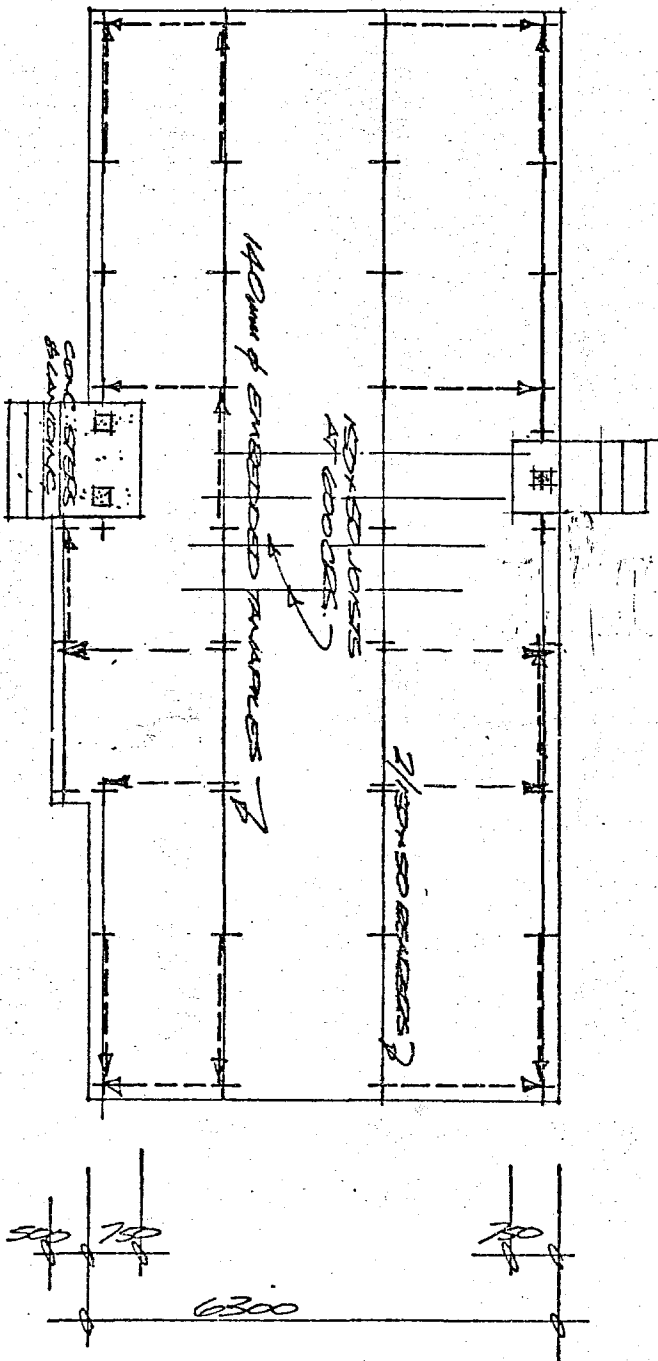
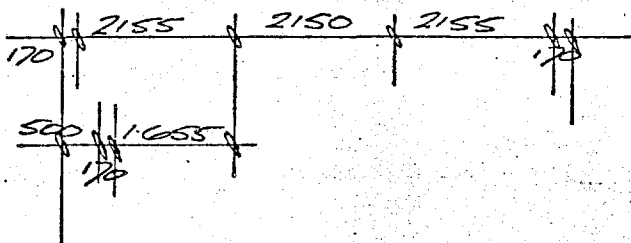
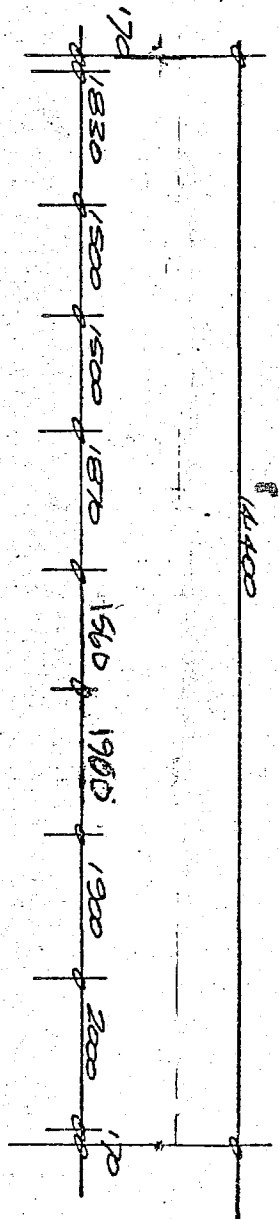


RSDB - ROOF SPACE DIAGONAL BRACING

101. 4 PUKEMANGI ROAD ROTORUA

HEAVY ROOF AT MAX 25° PITCH

JOB N° M329 / 5809



INDICATES BEACH EASE

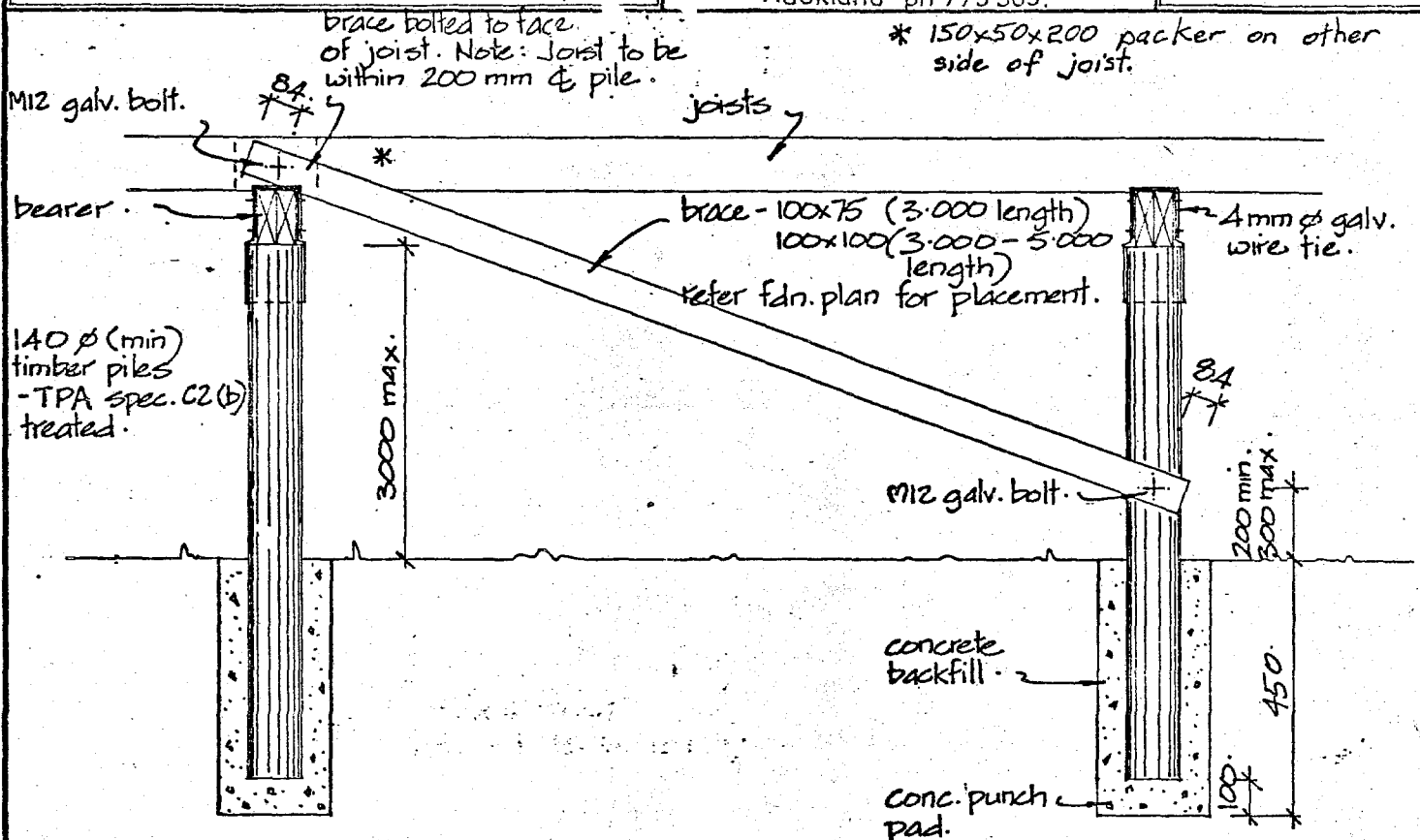
PLAN. M329/5809 LOT 4 PUKEHANGI ROAD ROTORUA.

M329/5809

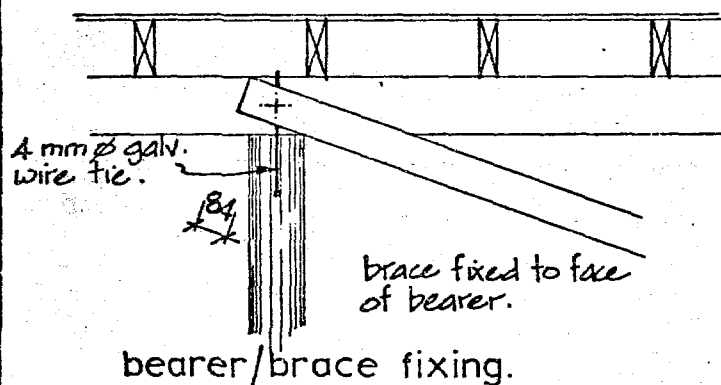
PLACED TIMBER PILES. (small)

UNIVERSAL HOMES LTD
85 Airedale Street
Auckland ph 775 309.

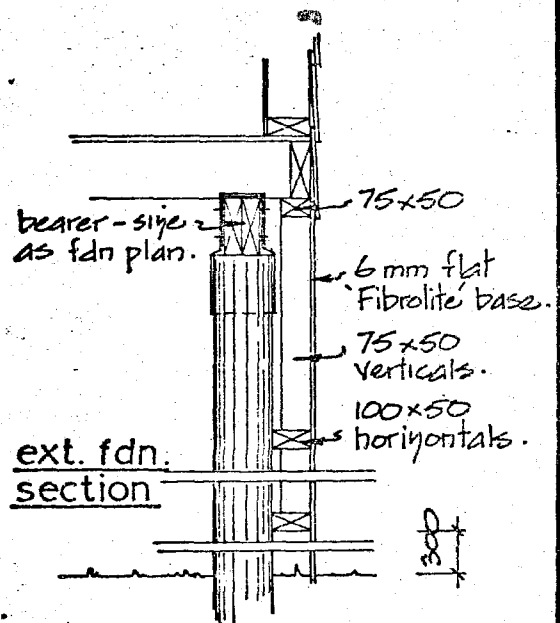
drawing no.



interior piles section.



bearer/brace fixing.



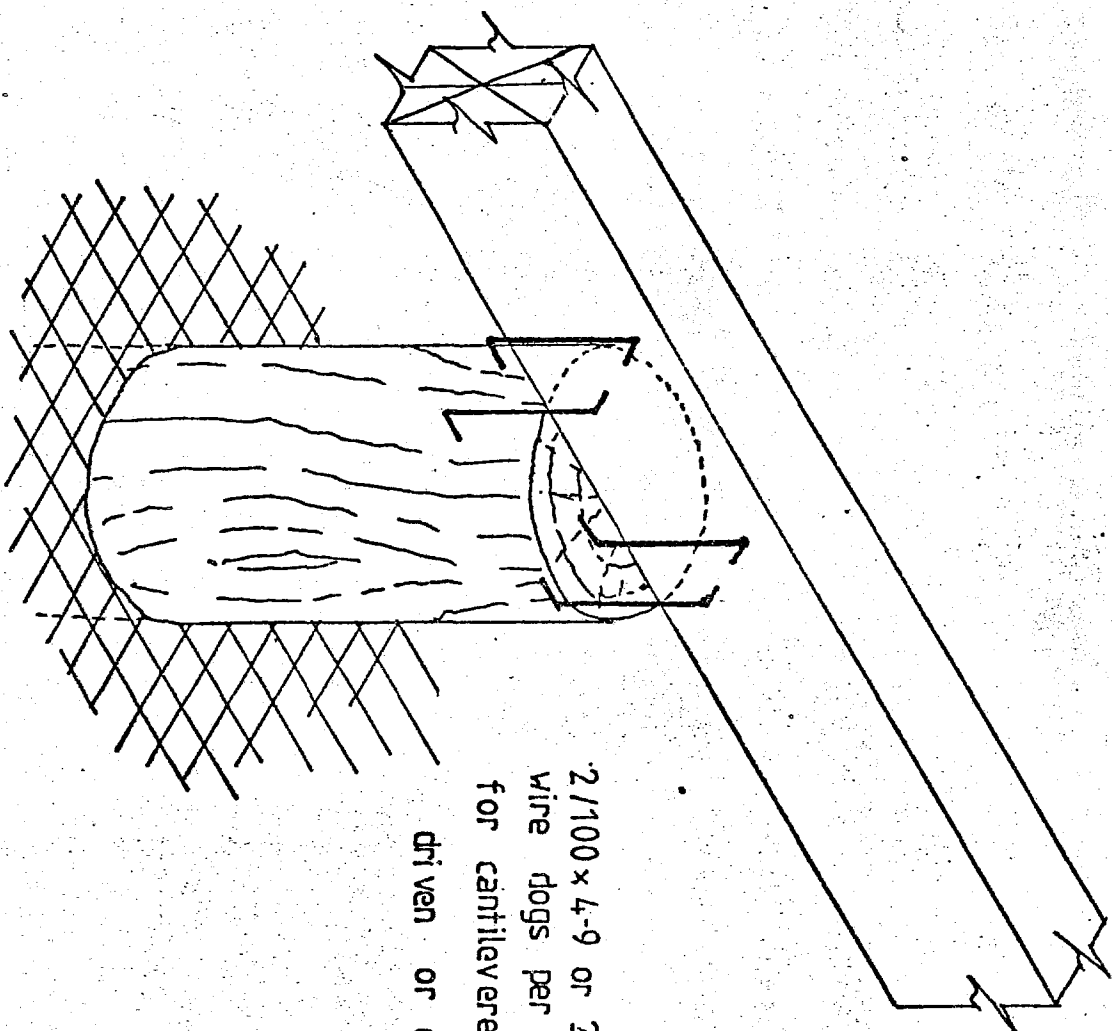
Note: Any checking out required must be taken from framing, not from piles.
Note: Provide framing to base walls at 680 mm cts, & noggs at 500 mm cts.
Note: Ends cut after tanalising may not be placed in ground.
Note: All piles to have a minimum tanalising retention of 13.5 kg/m³.
Note: Any piles checked or cut must be treated with CCA preservative or similar.

LENGTH OF OF LINE HORIZONTAL SUPPORT.	NO. OF LEVELS	NUMBER OF BRACES REQD IN EACH LINE HORIZ SUPPORT		
		light roof	heavy roof	
0 - 7.5	1 or 2	2	2	
7.5 - 10.0	1 or 2	2	2	
10.0 - 15.0	1 or 2	2	3.	

Chart indicates bracing reqd for building constr.

- (i) in earthquake zone C.
- (ii) in low wind exposure area.
- (iii) with max. ht. eaves above gl - 6.0.
- (iv) with max. roof pitch 45°

Alternative detail for timber piles.
Refer NZS 3604 page 35 fig 13 c & clause 4.5.71-b



2/100 x 4-9 or 2/175 x 4-9
wire dogs per side
for cantilevered or braced piles
driven or cast in place

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ADDENDUM TO STANDARD SPECIFICATION

PLACED TIMBER PILES

This specification refers specifically to timber piles having a minimum diameter of 140 mm. The piles shall not exceed a maximum height of 3.000 mm above finished ground level and shall not be used to support more than a single storey dwelling.

This specification applies only to dwellings constructed in Seismic Zone C and Wind Exposure Areas with a rating of Low.

A. TIMBER PILES

- A.1. Timber piles shall be straight, natural rounds, free from decay with all outer bark removed, treated with preservative to T.P.A. Specification C.2.(b).
- A.2. The minimum diameter of the pile shall not be less than 140 mm.
- A.3. Where piles have been cut after treatment the cut end shall not be embedded in the ground.
- A.4. Cut and notched surfaces (above ground level) shall be coated with a mixture of 5% copper naphthanate, creosote, or pentachlorophenol and 95% light petroleum solvent applied liberally by brush. Enseal or equivalent proprietary brands are acceptable.

B. EMBEDDMENT OF PILES

- B.1. All piles shall be embedded to a minimum depth of 350 mm in a specified hole (or circ.equiv.) carried to a minimum depth of 450 mm below ground level or to firm solid bearing.
- B.2. Piles shall be placed on a 100 mm punch pad of concrete prior to the initial set occurring, plumbed and then back-filled with concrete with a compressive strength at 28 days of not less than 17.5 MPa.
- B.3. Piles shall be laid out in as straight a row as possible with the top of the pile within a tolerance of 10 mm from a straight line in the direction of the bearer.
- B.4. Piles shall be placed plumb within a tolerance of 15 mm in 1000 mm from the vertical.

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P I L E F O O T I N G S

1.5 kPa and 2.0 kPa floor loads

A Square footings

Maximum spans of:		Minimum plan dimensions of square footing for pile supporting:			
Bearers	Joists	Floor only	Floor and walls of:		
			One storey	Two storeys	Three storeys
(m)	(m)	(mm x mm)	(mm x mm)	(mm x mm)	(mm x mm)
1.3	2.0	200 x 200*	275 x 275*	325 x 325*	350 x 350
	3.5	225 x 225*	350 x 350	425 x 425	475 x 475
	5.0	275 x 275*	400 x 400	500 x 500	550 x 550
	6.0	300 x 300*	450 x 450	550 x 550	600 x 600
1.65	2.0	200 x 200*	300 x 300*	375 x 375	400 x 400
	3.5	250 x 250*	400 x 400	475 x 475	525 x 525
	5.0	300 x 300*	450 x 450	575 x 575	600 x 600
2.0	2.0	200 x 200*	325 x 325*	400 x 400	450 x 450
	3.5	275 x 275*	425 x 425	525 x 525	575 x 575

B Circular footings

Side of square footing	Minimum diameter of circular footing
(mm)	(mm)
200	230
225	260
250	290
275	310
300	340
325	370
350	400
375	430
400	460
425	480
450	510
475	540
500	570
525	600
550	620
575	650
600	680

C. HEIGHT OF PILES

- C.1. The maximum height of the pile above cleared ground shall be 3000 mm.
- C.2. The minimum height a pile may be cut above ground level shall be 300 mm. except that an uncut pile may be set to a minimum height of 150 mm. above ground level.

D. FIXING OF BEARERS

- D.1. The minimum fixing of bearers to the timber pile shall be a 900 mm. x 4 mm. Ø galvanised steel wire, doubled and formed into a loop and passed through a 12 mm. hole bored 150 mm. from the pile head lapped over the bearer and fixed with two 40 x 4 mm. galvanised staples, or two 100 mm. x 4.9 mm. Z nails either side.

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E. BRACING TO PILES

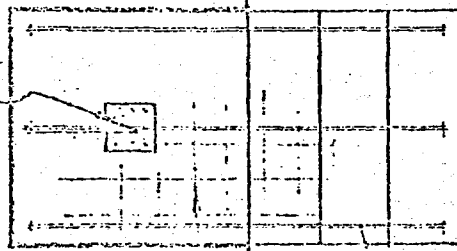
- E.1. Diagonal timber bracing shall be fixed to the timber piles on exterior wall lines and on lines at no more than 5000 mm centres in two directions at right angles, except where the conditions of Clause E.2. apply.
- E.3. Where bracing is required the minimum number shall be four in each direction at right angles placed at the extremities of the dwelling. Additional bracing shall be as indicated on the attached drawings. (Foundation Plan and Detail).
- E.4. Braces shall be No.1 framing grade in one continuous length fixed with 12 mm hot dipped galvanised bolts.
- E.5. Braces shall be 100 x 75 for braces up to 3000 mm long and 100 x 100 for braces up to 5000 mm long.
- E.6. The lower end of the brace shall not be closer than 150 mm to the finished ground level or more than 300 mm above finished ground level.
- E.7. The upper end of the brace shall be attached either to a floor joist with the fixing placed within 200 mm of the centre line of the bearer or to the bearer within 200 mm of the centre line of the pole. (See Detail.)
- E.8. No braces shall be steeper than 45° to the horizontal and if possible of alternate slope.
- E.9. No more than one brace in each bracing line shall be fixed to any pole. (Two braces at right angles may be fixed to a single pole).
- E.10. Where corners are braced the upper end of the braces shall be at the corner.
- E.11. All bolts, nuts and washers and other connections used, whether exposed to or protected from the weather, shall be hot dipped galvanized. Bolts shall be protected by smearing with grease or pitch.
- E.12. Where bracing piles are indicated on the drawings these shall have the bottom of the brace attached to them.

F. BASE LINING

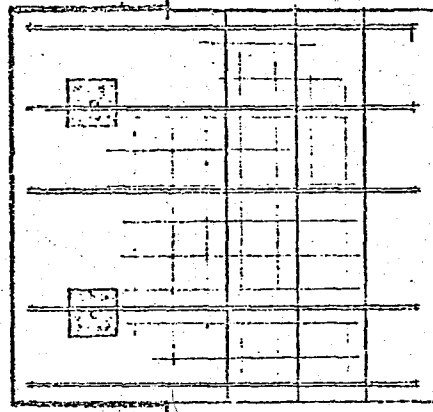
- F.1. Unless otherwise specified the base shall be lined with 6 mm flat Hardiflex fixed in accordance with the manufacturers specification.
- F.2. Base framing shall be fixed as per the attached details 75 x 50 and 100 x 50 framing fixed horizontally at 500 mm centres and vertical 75 x 50 nogs at 680 centres.
- F.3. Any check outs required to keep base true shall be taken from the framing not the piles.

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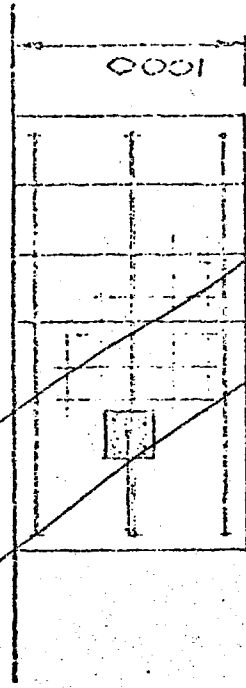
200 mm x 200 mm insitu conc. pier
 reinf. one 12 mm ϕ rod, turned at top
 & tied to centre longitudinal rod.



one layer 668 HRC
 fabric over longi-
 tudinal rods.
 three 12 mm ϕ
 longitudinal rods.



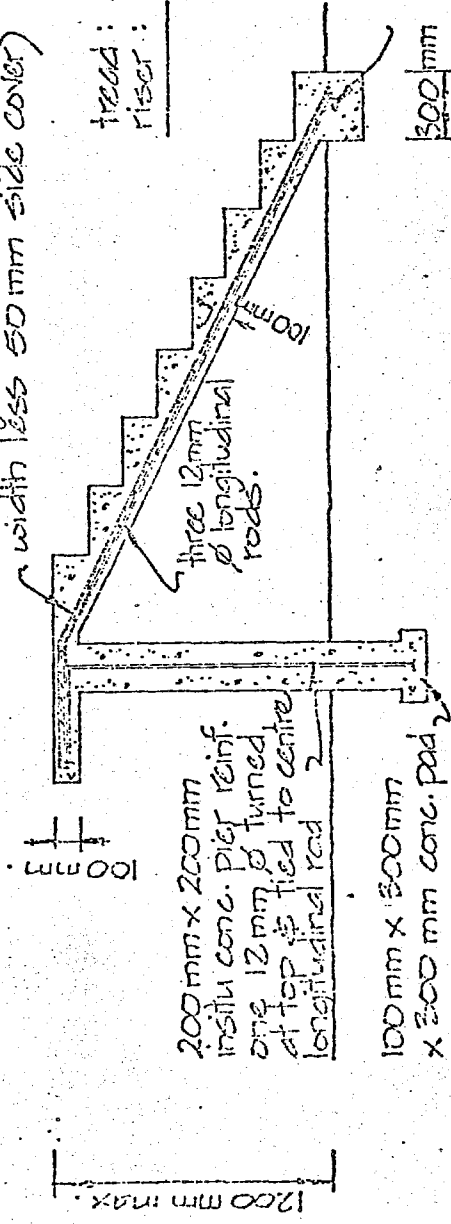
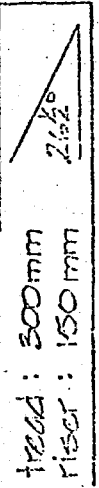
1000



1000

one layer 668 HRC fabric
 over longitudinal rods (full
 width less 50 mm side cover)

Recommended
 combination.



200 mm x 200 mm
 insitu conc. pier reinf.
 one 12 mm ϕ turned
 at top & tied to centre
 longitudinal rod

100 mm x 300 mm
 x 300 mm conc. pad

Standard Concrete Steps and
 Landing Detail to 1200 mm. height.

NOTE: Alternative construction
 solid fill between concrete
 nib walls at carpenters
 discretion.

bottom step - 300 mm x 300 mm
 to form pad reinf. one 12 mm ϕ
 rod.

address:

UNIVERSAL HOMES LTD.
 85 Airedale Street, Auckland.

drawing no.

STANDARD DETAILS.

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