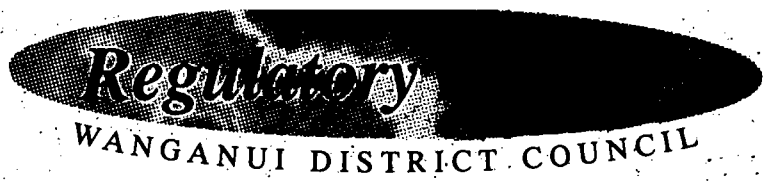


Office use only
BC 7155



P.I.M / Building Consent Application

Fill in all relevant details. Attach two (2) copies of all documents

This application is for a: (tick the appropriate box)

- Project Information Memorandum - PIM (preliminary application for a Building Consent)
- Building Consent

Owner 44928-2, 57023
 Name: KEITH TRAJERS
 Mailing Address: P.O. Box 852
 Phone: 3443368 025 422836

Contact Person
 Name: KE AB AROUE 257
 Phone:
 Fax:

Project
 Description of PROJECT and USE: TOWN HOUSE

Project Location
 Street Address/Rural No.: 30 KAKAHO DR

Durable Life of Project (please tick ONE box only)

- 5 Years
- 15 Years
- Indefinite but not less than 50 Years
- Other (please state):

Value of Project Work (include all labour & materials)

\$ 90,000 (Incl. G.S.T)

Fees & Key Personnel

Consent Fees to be paid by (ie: owner, builder etc.) KEITH TRAJERS
 Builder(s) KEITH TRAJERS 257
 Craftsman Plumber DAVE ANDERSON #8887 130 CP
 Registered Drainlayer T&T DRAINAGE #8887 105 RD

New Residential Dwellings or New Commercial Only

Floor Area of Project 126 m²

Signed by (or on behalf of) the applicant

Signature: K Trajers

owner, builder, plumber, designer, agent
(circle appropriate one)

Date: 15/10/94

Office use only

LEGAL DESCRIPTION

WDC Property No. 23155
 Valuation Roll No.
 Lot(s) 22
 DP yet to be issued
 Section
 Block
 Survey District

FEES APPLICABLE

Building Consent	\$
P.I.M.	\$
Non-Notified Appl. Fee	\$
Prepaid Crossing	\$ <u>0.05</u>
Prepaid Sewer Connection	\$ <u>existing</u>
Prepaid Water Connection	\$ <u>existing</u>
Stormwater Connection	\$ <u>existing</u>
Building Research Levy	\$ <u>9000</u>
BIA Levy	\$ <u>7200</u>
Additional Charges c.c.c.	\$ <u>2500</u>
Total Fees (Incl. G.S.T)	\$

Return application to:

Technical Officer
 Regulatory Services
 Wanganui District Council
 PO Box 637
 Wanganui

P.T.O

Project Details

The project involves the following:

(tick each applicable box, if any, and attach two (2) copies of any relevant information)

- (1) Location in relation to legal boundaries, and external dimensions of new, relocated or altered buildings
- (2) New provisions to be made for vehicular access and on-site parking, ie: a new crossing
- (3) Provisions to be made in building over or adjacent to any road or public place, ie: hoardings, signs
- (4) New provisions to be made for disposing of stormwater and wastewater
- (5) Precautions to be taken where building work is to take place over existing drains or sewers or in close proximity to wells or watermains
- (6) New connections to public utilities, ie: new drainage or water connections
- (7) Provisions to be made for any demolition work, ie: the protection of the public, suppression of dust, disposal of debris, disconnection from public utilities and suppression of noise
- (8) Any cultural heritage significance of the building or building site, including whether it is on a marae

Project Documents (provided with this application)

- Plans & Specifications
- (22) Producer Statements (ie: truss design, design review) - specify:
- (23) Other Documents - specify:

Inspections

- (26) By Wanganui District Council
- (27) Other - specify (ie: Design Engineer):

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Unit	Checks					Inspections			Adtnl. Chgs		P.W.R	Approved	
	Initials	Date	Initials	Date	Time	No.	Time	Total	Type	Amount	No.	Initials	Date
Administration			<i>JOB</i>	6/1/94	5								
Planning	<i>[Signature]</i>	17/11			45							<i>[Signature]</i>	17/11
Building	<i>[Signature]</i>	18/11	<i>[Signature]</i>	19/12	10	5		150				<i>[Signature]</i>	13/12
Drainage	<i>[Signature]</i>	3			30							<i>[Signature]</i>	20/12
Water	<i>[Signature]</i>				10							<i>[Signature]</i>	20/12
Structural													
Plumbing/Drainage	<i>[Signature]</i>	22/11/94	<i>[Signature]</i>	22/12/94		5	220	220.00				<i>[Signature]</i>	22/12/94
Roading													
Health													
Dangerous Goods													
Total check time (min)					Total (min)			→ Total (x1.5) \$					
Approved for issue of PIM/Building Consent										22 DEC 1994			
District Building Controller: <i>[Signature]</i>										Date: 22 DEC 1994			

Enquiry/Memo

To Fons

Section: Building Environmental
Animal Parking

Date: 2.8.95 Time: 9:45 Message taken by: JKB

Name of Enquirer: Keith Travers

Address: PO Box 852

Phone:

Phoned Please phone

Nature of Enquiry (incl. address & locality of enquiry):

Please can you do a final inspection of this ring - Mr Keith Travers would like a refund. Thank you.

Action taken:

completed
Actioned for refund - given to Denise
3/8/95 11:05 AM

Enquirer advised? Yes No

Date action completed: 3.8.95

Signed: [Signature]

WANGANUI DISTRICT COUNCIL
PRIVATE WORK REQUISITION

3957

CLIENT DETAILS	AMOUNT PREPAID
NAME: <u>K. TRAVERS</u>	DRAINAGE \$ _____
ADDRESS: <u>P O Box 852</u>	WATER \$ _____
<u>WANGANUI</u>	CROSSING \$ <u>585-00</u>
CONTACT PERSON: <u>Keith Travers</u>	MISC. \$ _____
PHONE No.: _____	RECEIPT No. _____
ORDER No.: _____	DEBTOR No. _____

QUOTATION	AMOUNT \$ _____	JOB MANAGER: (SIGNATURE) _____
------------------	-----------------	--------------------------------

LOCATION OF JOB 30 KAKAHO DRIVE

DESCRIPTION OF WORK/PLAN Vehicle Crossing

ESTIMATE/DETAILS

CLIENT SIGNATURE: *[Signature]* DATE 23 / 12 / 194

JOB MANAGER/DEPT _____

OFFICE USE	SIGNATURE	DATE
WORK APPROVED/RECORDED		___ / ___ / ___
JOB CREATED		___ / ___ / ___
CONSTRUCTION COMPLETE		___ / ___ / ___
JOB CLOSED PHYSICAL		___ / ___ / ___
COSTS COMPLETE AND CORRECT		___ / ___ / ___
JOB CLOSED ACCOUNTING		___ / ___ / ___
MANAGER		___ / ___ / ___
INVOICED INV. No: _____		___ / ___ / ___

GREEN: CUSTOMER COPY; YELLOW: WORKING COPY; WHITE: BOOK COPY

Meteor Print

7955

PLACEMAKERS MANUFACTURING
59A Wilson St., P.O.Box 319, Wanganui.
Ph (06) 3455559, Fax (06) 3455877

**** COUNCIL DETAILS ****

JOB REFERENCE: KT-UNIT2
CLIENT: Keith Travers

JOB:
ADDRESS: "Unit 2"
Kakaho Subdivision
Wanganui.


JOB DETAILS:

Roof Pitch:	17.50 deg	Truss Centres:	900 mm
Roof Load -Live:	0.250 kPa	Ceiling Material:	Standard
Roof Material:	Metal Tiles	BC Restraint Centres:	400 mm
TC Restraint Centres:	400 mm	Design Wind Speed:	44.0 m/s
Wind Area:	High	Int Pressure Coef:	0.30
Ext Pressure Coef:	-0.90		

The trusses covered by these job details have been designed using the Gangnail computer program MiTek 2000, to the requirements of Clause B1 of the Building Regulations 1992, in accordance with NZS 4203, NZS 3604 & TPI 90.

These trusses should be fabricated and erected in accordance with the Gang-Nail manual. Proper erection bracing must be installed to hold the components true and plumb and in a safe condition until permanent bracing is fixed. All permanent bracing and fixing must be installed before loads are applied.

PLACEMAKERS MANUFACTURING, if awarded this job, confirm that they will manufacture these trusses in accordance with the Building Regulations 1992, in accordance with NZS 4203, NZS 3604 & TPI 90.

Signed 
Ross Bennett



PROPOSED HOMEUNITS

KAKAHO SUBDIVISION

For Keith Travers - Builder

SPECIFICATION FOR THE CONSTRUCTION OF
PROPOSED HOMEUNITS
AT KAKAHO SUBDIVISION
FOR KEITH TRAVERS - BUILDER

<u>INDEX</u>	<u>SECTION</u>
1	Preliminary and General
6.	Concrete and Reinforcing
9.	Brickwork
13.	Metal Windows
14.	Carpentry
15.	Joinery
16.	Roofing
17.	Plumbing
18.	Drainage

SECTION 1 : PRELIMINARIES

GENERAL CONDITIONS

1.1 CONDITIONS OF CONTRACT:

A printed copy of the General Conditions of Contract will be available in the office of the Engineer for inspection by tenderers and upon signing of the contract, it will be assumed that the Contractor has made himself conversant with the whole of the conditions therein, and has based his price on such conditions and the further conditions set out in this specification.

1.2 NATURE OF THE WORKS:

Before submitting a price the Contractor and intending sub-contractors shall visit the site of the contract and ascertain for himself the nature of the works required. He shall further examine all drawings and details relating to the work and shall become fully informed as to the extent and character of the work required.

Thereafter no consideration will be granted for any alleged misunderstanding of the materials to be furnished or work to be done, it being understood that the lodgement of a tender carries with it:

- (a) a full understanding of the project;
- (b) agreement with the conditions therein;
- (c) an understanding to execute and complete all work as specified herein and/or as indicated or implied by the accompanying drawings.

1.3 TRADE SECTIONS:

This specification has been divided into trade sections for convenience and reference only, and it shall not be construed that each trade section is a complete and separate contract. Whilst reasonable care has been taken to classify relevant items under each trade, no claims will be admitted from sub-contractors for work not specifically mentioned in a trade section, but which is provided for, (expressed or implied) elsewhere in the specification or shown on the drawings.

1.4 DRAWINGS & SPECIFICATION:

The drawings and specification shall be read together and the works completed according to the true intent and meaning of the same. Anything shown on the drawings and not specified or vice versa, shall be equally binding as though included in both. Any item not expressly shown or specified shall be constructed and finished as described throughout the job generally.

1.4 Cont'

In addition to supplying the contract drawings, the Engineer shall furnish with reasonable promptness by means of drawings or in writing, such additional instructions as are necessary for the proper execution of the works.

All such additional drawings, unless the subject of a variation, shall be consistent with the contract, true developments thereof and reasonably inferable therefrom. The works shall be executed in conformity therewith and no work shall be done without proper drawings and instructions.

A copy of all drawings and specifications for the works shall be kept on the site in charge of the Contractor.

1.5 AMBIGUITIES:

In the event of ambiguities or contradictions in the plans and specifications, the Contractor must verify the item(s) with the Engineer before pricing that portion of the work.

1.6 DEFINITIONS:

"Approved", "directed", or "selected" shall mean the approval, direction or selection of or by, the Engineer.

"Best" as applied to materials, articles or workmanship shall mean, that in the opinion of the Engineer there is no more superior quality of materials or finished articles on the market and no better class of workmanship.

"Provide", "fix", "supply" and "place" used separately shall be taken to mean "provide and fix" unless otherwise mentioned.

1.7 VERIFICATION OF MEASUREMENTS:

It is the Main Contractor's responsibility to verify all dimensions on the job for each trade, and he is responsible for the correct setting out of the job. Figured dimensions or measurements from large scale details are to be taken in preference to dimensions scaled from the drawings.

1.8 SETTING OUT:

The Contractor shall be responsible for the accurate setting out of the complete works as detailed in the drawings. The Contractor shall establish all boundaries prior to commencement of work. In the event of the boundaries not being identifiable the Contractor shall advise the client who shall then arrange to have the boundary pegs redefined.

1.9

MATERIALS & WORKMANSHIP:

All materials and workmanship shall comply with the relevant requirements of the NZ Building Code, every appropriate NZ Standard Specification and the Building By-Laws of the Territorial Authority. Where no such specification is available then the relevant British Standards shall apply.

Materials throughout shall be of first class quality and the best of their respective kinds. All workmanship is to be carried out in accordance with the best trade practice, accurately set out, structurally sound, neatly executed and finished.

Wherever a manufacturer provides printed instructions as to the best manner in which to use a material, such printed instructions shall be deemed part of this specification, except that in the event of detailed drawings or specification varying from the manufacturer's recommendations, instructions shall be sought from the Engineer.

Work that is not in accordance with this and any work that is defective is liable for removal and replacement at the Contractor's expense. In the case of demolition of concrete it is to be completely removed from the site.

1.10

SUBSTITUTIONS:

Should the Contractor or any sub-contractor wish to substitute any specified brand material with another equal brand material, or any specified type of material or workmanship with another equal material or workmanship, the Contractor shall submit in writing to the Engineer a request for approval of such substitution. The request shall be accompanied by all relevant data, including cost both of the original material and the proposed substitute and if required, samples. If the proposed substitution is acceptable to the Engineer, the Contractor shall be advised in writing. The Engineer will also give instructions on any variations in cost. If no such instruction is given by the Engineer the substitution shall be deemed to be at no variation in cost.

1.11

SUPERVISION:

A competent foreman shall be employed on the site from the date of commencement until the completion of all trades.

1.12

ATTENDANCE ON ALL TRADES:

The Contractor shall ensure that all dwangs, fixing timbers, plugs, holes, chases, lugs etc., required are provided.

He shall also allow for all cutting and making good in all trades and after all trades.

The main Contractor shall allow access throughout the building and site and also the use of ladders, scaffolding, trestles etc., to facilitate the work of sub-trades.

1.12 Cont'

The main Contractor shall allow in his tender whatever sum is required to cover the cost and profit for attending upon the separate sub-contractors.

1.13 SCAFFOLDING & PLANT:

The Contractor shall provide requisite scaffolding and plant, and labour for its utilisation for the proper, expeditious and complete execution of the work, including that of sub-contractors. Where a nominated sub-contractor requires scaffolding this shall be provided by the Contractor except that the Contractor shall not be responsible for the re-erection of scaffolding for a nominated sub-contractor, should that nominated sub-contractor fail to use the scaffolding within a reasonable time of being requested to do so. In the event of scaffolding requirements of nominated sub-contractors not being clear at the time of tender, the Contractor shall give notice in writing to the Engineer not less than five working days before tenders close, so that clarification can be given.

Scaffolding is to be in accordance with the Scaffolding Act and the Local Body requirements and will be regularly inspected by the Scaffolding Inspectors. All new scaffolding before use must be inspected and written notice given to the Engineer concerning the date the inspection was carried out.

1.14 COVER & PROTECT:

The Contractor shall take care to cover up and protect the works and all materials and equipment from the weather, and shall suspend all operation during weather, which, in the opinion of the Engineer, will be detrimental to the works.

1.15 DAMAGE:

The Contractor shall exercise every precaution to protect throughout the duration of the contract any existing adjacent properties, and is to make good any damage to same by the result of his workings. All damage done to footpaths, kerbs, roads, cables, sewers, watermains or other property under the control of Local Authorities concerned shall be made good to the satisfaction of that same authority at the Contractor's expense.

1.16 ACCEPTANCE OF SURFACES:

Should any trade consider that the work of another trade, or the condition of any surface, is not of such standard as to ensure a proper finish for his work thereon, he shall so notify the Contractor and the Engineer before any work is done. He shall not proceed with his work until the necessary alterations or improvement has been made.

1.16 Cont'

Failing such notice the trade concerned will not be relieved of responsibility for a poor result due to such unsatisfactory standard.

Application of materials to a surface will be considered as an acceptance of the surface as satisfactory.

1.17 NOTICES & FEES:

Give all requisite notices and descriptions to the Territorial Authority, and pay all fees legally demandable.

1.18 PROTECTION OF PUBLIC SERVICES:

Section 12(d) of the Construction Act, 1959 requires that every employer undertaking excavation work shall first ascertain as far as practicable the location and nature of underground services likely to be affected by the excavation and shall take steps such as may be necessary to prevent danger to workmen or unnecessary interruption to any such services.

These services are for sewerage, drainage, telephone telegraphic communication or the reticulation of water, gas or electricity.

It will be the responsibility of the Contractor to protect himself and the Employer adequately against any liability as the result of damage to any of the above services and he will take steps before commencement of any excavation works to see that he has familiarised himself with the position of any such services and shall protect same as required.

1.19 TEMPORARY SERVICES:

Unless specified otherwise under the Specific Conditions of this section, the Contractor shall furnish and pay for all temporary water, light and power used for both his own and sub-contractor's purposes and provide adequate means of distribution for same. The Contractor shall obtain all permits and pay all fees in connection with the foregoing.

1.20 TOILET FACILITIES:

Unless otherwise specified under the Specific Conditions of this section, the Contractor shall provide, to the approval of the Engineer, all necessary toilet facilities for the workmen and site staff. Maintain and keep in a clean and orderly condition, and made good after removal.

1.21

SHEDS:

Provide, erect and maintain adequate sheds for the storage and protection of materials, and for the execution of work that may be fabricated or carried out on the site.

Sheds for the storage of cement and other perishable materials or goods are to have floors raised above the level of the ground and they are to be completely waterproof.

1.22

ENCLOSURES:

No portion of the building under construction shall be used by the Contractor or any of his employees as a store, office, workshop or for any other purpose without written permission from the Engineer. The Contractor and his employees shall cease so using any part of the building when directed and in no circumstances shall any space be used as above after plastering, tiling, painting or other finishing works have been substantially completed.

No part of the building shall be locked or otherwise secured against the admission of any authorised inspecting officer. Should it be necessary to close any portion against intruders, duplicate keys shall be handed to the Engineer.

1.23

FENCES & PLANTING:

Unless specified otherwise under the Specific Conditions of this section, the site will be handed over to the Contractor in its natural condition. No existing fences, trees or other planting is to be in any way interfered with until such time as the Engineer shall issue specific instructions on site.

Protect and maintain all fences, trees and planting which is to remain in position during the currency of the contract, and make good any damage which is allowed to occur.

1.24

CLEANING UP:

The Contractor shall, at frequent intervals and in any case whenever so required by the Engineer, remove from the building and site all rubbish and litter which may accumulate and shall take all reasonable precautions to protect finish surfaces from damage and/or disfigurement. Each individual trade shall take steps to prevent damage or disfigurement of the finished work of other trades and will be responsible for the cost of restoring any surfaces harmfully affected. As soon as they are installed all floors, windows, sanitary fittings and the like shall be thoroughly cleaned and, on completion, the building shall be left clean, tidy and ready for immediate occupation.

1.25

SERVICES LAYOUT:

At the completion of the contract works, a scale plan showing the position of all underground services shall be deposited with the Engineer. This plan shall show the positions as actually laid of foul and stormwater drains, gas, electricity, water, telephone and heating pipes. The distances between points of inspection or access and the final depths of inverts, runs etc., shall be shown. NO FINAL PAYMENT WILL BE MADE UNTIL SUCH FULLY COMPLETED PLAN HAS BEEN RECEIVED.

1.26

GENERAL:

The "Preliminaries" clauses apply to and shall be equally binding on all trade sections.

1.27

CRANES:

No crane, hoist, or any other builders' equipment capable of lifting one tonne or more, including machinery or mechanically operated plant of more than 1 h.p. shall derive support from the permanent structure at any time during the contract, except with the consent of and in such a manner as shall be approved by the Engineer.

1.28

COMPLETION CERTIFICATES & GUARANTEES, FINAL ACCOUNTS:

The following items must accompany the Contractor's final account:

- (1) All guarantees in each trade as specified;
- (2) Services layout as specified in Clause 1.25 above;
- (3) Completion certificate for electrical work;
- (4) Evidence in support of claims for increase in costs of labour and materials in accordance with the Special Conditions of Contract.

1.29

GUARANTEES & WARRANTIES:

Where the contract fails to specify the terms of any guarantee or warranty that it requires in respect of any material it shall be a guarantee or warranty to the effect that if the material fails for the period specified (and if none is specified, then for a period of two years) after completion of the contract, to withstand without fault or sign of deterioration the elements and stresses and meet the purposes for which it is specified, the guarantor or warrantor shall forthwith on demand by the Owner, cause such fault or deterioration to be made good to the standard required by this contract and without cost to the Owner.

1.30

PROTECTION OF NEW FINISHED SURFACES:

The Contractor shall provide all necessary covers and planks etc., to protect all new and finished walls, floors, fittings and roofs from the time of completion until being handed over to the owner, from traffic damage caused by other trades.

1.31

NOMINATED SUB-CONTRACTORS AND SUPPLIERS:

All nominated sub-contractors and suppliers shall have the same relationship to the main contractor as those selected by the main contractor who shall be responsible for accepting the price of that nominated sub-contractor and payments to him.

1.32

P.C. SUMS:
PROVISIONAL SUMS:
& CONTINGENCY SUMS:

Shall be as defined in General Conditions of Contract NZS 3910 : 1987.

1.33

UNDERGROUND SERVICES:

Unless specified to the contrary, new power and telephone services shall be laid underground in trenches to the approval of the Authority - Power Board and Telecom.

SECTION 6 : CONCRETE & REINFORCING

GENERAL CONDITIONS

6.1

PRELIMINARY:

Refer to P & G section of this specification which is equally binding on all sections.

6.2

EXCAVATIONS:

Excavation for slabs and foundations etc. to the profiles shown. Allow for all excavation necessary to achieve construction of those works shown on the drawings. All soft areas to be over-excavated and back-filled with weak concrete or clean wet sand compacted to a scala penetrometer value of 3 blows per 75mm.

Any necessary over-excavation will be paid for as an extra to the contract, but the Owner or his appointed agent must be advised prior to that over-excavation commencing.

6.3

BACKFILLING:

Prop all foundation walls, as necessary, and back fill as stated hereunder or shown on drawings to underside of slabs or to existing or new ground levels.

Site and surroundings to perimeter of building to be left clean and uniformly graded.

6.4

MATERIALS & WORKMANSHIP:

All work shall comply with the following standards:-

N.Z.S. 1900 : 9.3a 1970 - Concrete Design and Construction

N.Z.S. 3121 : 1974 - Water and Aggregate for Concrete

N.Z.S. 3122 : 1974 - Portland Cement

N.Z.S. 3402p: 1973 - Hot Rolled Steel Bars

N.Z.S. 2086 : 1967 - Ready Mixed Concrete

N.Z.S. 3422 : 1975 - Welded Fabric of Drawn Steel Wire for Concrete Reinforcement.

NZ Building Act : 1991 - Regulations & Codes

6.5

REINFORCING:

Unless stated otherwise on drawings or hereunder, all reinforcing except mesh shall be deformed mild steel except for 6mm and 10mm bars which may be plain. All bars must have a minimum lap of 40 diameters and be placed to provide the following covers:-

Against ground unboxed - 75mm

Against ground or a surface exposed to weather (boxed) - 50mm

Internal surface protected from weather - 25mm

6.5

REINFORCING Cont'd

All bends shall comply with N.Z.S.S. 1900 : 9.3a.

No reinforcing shall be rebent.

Welded fabric mesh shall have minimum lap of 300mm.

All reinforcing must be securely held in position during concrete placing. Bars may be tack welded or tied with soft black m.s. wires and shall be kept in place with precast concrete blocks or approved plastic spacers.

6.6

CONCRETE AND CONCRETE GRADES:

Unless otherwise stated hereunder all concrete shall be 'Ready Mixed' high grade and shall be:-

21 MPa (3000 p.s.i.) crushing strength for all structural concrete slabs, beams, footings etc.

17.5 MPa (2500 p.s.i.) concrete block infill.

14 MPa (2000 p.s.i.) site concrete - paths, drives, filling etc.

6.7

FORMWORK:

All formwork shall be mortar proof.

All formwork shall be erected true to line and level with sufficient pegs, walings and strongbacks to maintain dimension accuracy upon pouring concrete and prevent bulging.

Formwork shown on drawings as "fair faced" shall be dressed boards, continuous ply or metal sheathed and present a completely smooth and uniform surface finish free from honeycombing and other imperfections.

6.8

CONSTRUCTION JOINTS:

Shall be provided in slabs, beams and columns as shown in drawings. Any changes to that pouring pattern which may be desired by the Contractor must be referred to the Owner or his appointed agent before commencing that section of the work.

6.9

DAMP PROOF COURSE:

Under all slabs to enclosed buildings i.e. including garages but excluding carports, the top 100mm of basecourse shall be "no fines" aggregate with 25mm clean sand blinding on top.

Lay over sand and under slabs 0.25mm polythene d.p.c. turn down 450mm at all foundation walls or terminate as otherwise shown on drawings. All laps shall be 150mm and taped with p.v.c. pressure sensitive tape. Seal with tape all penetrations around service pipes etc.

6.10

CONCRETE FINISH:

See drawings for specialised surface finishes and profiles etc.

Unless otherwise stated all floor slabs shall be finished with a steel bladed power float.

6.11

SERVICES:

Make provision in foundation walls, slabs and concrete beams for any electrical, plumbing or drainage services required.

6.12

HOLDING DOWN BOLTS:

Allow for all holding down bolts for timber plates, steel posts and plates etc. where applicable.

6.13

FLOOR REBATES:

At all roller door positions, provide 25mm deep rebates full width of door.

SECTION 9 : BRICKWORK/TILING

GENERAL CONDITIONS

9.0 PRELIMINARY:

Refer to the General Conditions of Contract and the Preliminaries section of this specification, which are equally binding on all sections.

9.1 STANDARDS:

All work shall comply with NZS 4210 Code of Practice for Masonry construction.

9.2 MATERIALS:

All shall be the best of their respective kinds, bricks shall be true to size and pattern and free from stains, chips or blemishes unless a specified requirement. All mortar shall be freshly made and workability additives shall only be used strictly in accordance with manufacturer's instructions, and shall comply with N.Z.S.S. 1900 : 9.2.4.1. Attempts must be made to ensure all walls or panels be of full brick modules.

9.3 WORKMANSHIP:

All brick courses shall be laid plumb, true to line and level with all joints uniformly weather struck. Every third perpend to bottom course of veneer work shall be struck clean to provide drainage. To all veneer work provide plastered splay to foundation rebate to run water to outer face of wall.

9.4 WINDOW SILLS:

See Section 9 Specific Conditions.

9.5 LINTELS:

All lintels to openings in brick panels shall be supported on galv. m.s. angles and shall comply with N.Z.S. 3604 Table 33.

9.6 WALL TIES:

To all veneer work provide "Century" or equal hot dipped galv. wall ties fixed to wall frame over building paper at ~~350~~³⁰⁰ c/c max. vertically and 600 c/c max. horizontally.

9.7 CLEANING DOWN:

Upon completion clean down all brick and tile work to remove excess mortar and wash exposed face of work if required with weak acid.

Clean mortar from surrounding materials - timber, joinery, glass etc .

9.8

TILE GROUTING:

Where required colour grout prior to applying.
See Section 9 Specific Conditions.

9.9

BRICKS:

See Section 9 Specific Conditions.

SECTION 13 : METAL WINDOWS

GENERAL CONDITIONS

13.0

PRELIMINARY:

Refer to the General Conditions of Contract and the Preliminaries section of this specification, which are equally binding on all sections.

13.1

SCOPE:

This section includes the supply of all Aluminium and/or mild steel windows and doors either shown on the drawings or listed in the schedule in Section 13A - Specific Conditions.

13.2

MANUFACTURE:

All Aluminium window and door units shall be of the same suite and same manufacture.

All box section units shall be of the same suite and same manufacture.

All mild steel units shall be of the same suite and same manufacture.

13.3

STANDARDS:

The following N.Z. Standards and Amendments form part of his specification:

N.Z.S. 3504 - 1979 - "Aluminium Windows"

N.Z.S. 4211 - 1979 - "Windows Performance"

N.Z.S. 1188 - Fire Rated Steel

NZ Building Act 1991 - Regulations & Codes

13.4

FINISH AND COLOUR:

All Aluminium units shall be uniform in colour and finish and shall be either "anodized" or "powder" coated as scheduled on drawings or in Section 13A.

13.5

SIZES:

All sizes shown are nominal overall frame sizes of the joinery units. All rough openings in timber frames or blockwork are assumed to be extra size allowing for normal clearance. The Contractor shall confirm frame sizes prior to manufacture.

13.6

DOMESTIC WINDOWS AND DOORS:

All windows and doors unless noted otherwise shall be standard overlay face fitting domestic grade Aluminium units. All units shall be well made square, with all corners securely fixed by welding or corner brackets and pop rivets or screw fixing, and sealed.

All awning sashes shown shall be hung on 2 awning friction stays - size and strength as recommended by the manufacture. All awning sashes to be fitted with 2 metal wedge fasteners.

13.6 Cont'

All sliding doors (ranch sliders) to be box section Aluminium tube and fitted with proprietary snib latch operated from inside. (See 13A for external operated locks).

All aluminium hinged doors (pairs) where one leaf only has lock set, secondary leaf to be fitted with either flush mounted or surface mounted bolts well fixed to top and bottom rail; not wedge fasteners.

13.7 REVEALS:

All reveals shall be as specified in Section 13A.

All timber shall be treated.

Where stain or varnish finish is required only native timber shall be used and shall not be finger jointed.

Where paint quality is required finger jointed pine may be used or Customwood. Customwood must be that water resistant M.U.F. grade specifically produces for window reveal use.

Where architraves are to be fitted timber reveals may be ex 25mm (18mm min. finished thickness).

Where specified to be ploughed for linings, reveals shall be ex 32mm (25mm min. finished thickness).

Aluminium reveals shall be proprietary profile and finish and made by the manufacturer of the appropriate joinery unit.

13.8 BOX SECTION FRAMES:

Where labelled "box section" all windows and doors shall be manufactured from heavy duty commercial shop front box section profile extrusion. All doors shall be 45mm min. (McKechnie Multi-line or similar).

All outer frames shall be 75mm min. similar.

All hinged doors shall be hung on a min. of 4 proprietary hinges.

All door head profile material to be suitable to accommodate a transome enclosed head closer if required. See Section 13A.

For vision rails, closers and locks see Section 13A or drawings.

13.9 GLAZING:

All glazing to be type shown in 13A or drawings and to comply with N.Z.S.S. 4223 : 1985 For weight.

All glass to be fitted with recommended clearances at beads and all edges to be held with proprietary neoprene glazing beads both sides.

13.10 TRIM HEIGHTS:

Unless otherwise specified in Section 13A, or if shown on accompanying drawings; all windows and doors shall be trimmed at 2.00m from floor.

SECTION 14 : CARPENTRY

GENERAL CONDITIONS

14.0 PRELIMINARY:

Refer to the General Conditions of Contract and the Preliminaries section of this specification, which are equally binding on all sections.

14.1 STANDARDS:

All work shall comply with the requirements of the Building Consent issuing Territorial Authority and with the following NZ Standards, unless there are specific requirements within these documents to the contrary.

N.Z.S. 3602 : 1975	Specifying Timber and Wood-Based Products for use in Building.
N.Z.S. 3603 : 1981	Code of Practice for Timber Design.
N.Z.S. 3604 : 1990	Code of Practice for Light Timber Frame Buildings and not Requiring Specific Design.
N.Z.S. 3616 : 1978	Finger Jointed Timber.
N.Z.S. 3631 : 1978	Classification and Grading of New Zealand Timbers (National Timber Grading Rules).
NZ Building Act 1991 - Regulations and Codes	

14.2 TIMBER:

All timber shall comply with N.Z.S.S. 3602 : 1975 for species and grade except where specifically noted on the drawings or hereunder to the contrary.

All framing timber shall be uniformly gauged.

All finishing timber shall be dressed and sanded or sawn finished as specified hereunder.

14.3 TREATMENT:

All timber shall be treated to the approval of the "N.Z. Timber Preservation Authority" and if embedded in ground or concrete shall be H.4. treated (C.3.)

All exposed timber to be stained, varnished or uncoated shall be left free from treatment dye and markings.

14.4 WORKMANSHIP:

All work shall comply with N.S.S. 3604 as above and with best trade practice. All finishing timber shall be free from hammer marks and other surface imperfections and where specified to be dressed and sanded shall have all machine planing marks sanded out, arrises removed, shall not be split and all nails shall be punched. Nails and panel pins appropriate to the timber size shall be used.

14.5 PROTECTION OF TIMBER:

Provide 2 ply "Malthoid" d.p.c. between all concrete and timber to protect from moisture in accordance with N.Z.S. 3604.

14.6

FRAMING:

All framing shall be erected plumb, square and true to line, 3 studs to all corners, dwangs at 800 c/c max. and full thickness of walls.

All joints shall be well spiked with all plates halved at joints or butt jointed with approved nail plates. Provide appropriate seating for all beams and lintels as per N.Z.S. 3604.

Provide solid backing behind all edges and ends of linings, sheathings and weatherboard and extra blocks for fixing or fittings, finishing materials and as required by other trades. All wall frames shall be generally 100 x 50 nominal framing size unless otherwise shown. All "girt" walls shall have main members spanning horizontally and fixed to detail shown.

Provide dwangs vertically for all sheet edges as above or as required by drawings.

14.7

LINTELS:

All lintels shall comply with appropriate schedule of table 16 N.Z.S. 3604.

14.8

BRACING:

Provide all temporary props and braces to prevent damage to uncompleted work.

Permanent bracing shall follow one of the following 3 options:
See Section 14.a. - Specific Section.

- a) structural steel bracing elements specifically designed - as shown on drawings.
- b) Bracing elements calculated in accordance with N.Z.S. : 3604. See bracing plan and schedule of elements.
- c) Nominal bracing consisting of 1 Pryde galv. angle brace at 45° for each exterior wall up to 5m in length and 2 braces per exterior wall over 5m in length.

14.9

HOLES AND CHASES:

The bolting of all structural members and provision of other holes and chases etc. shall comply with N.Z.S.S. 1900 : 9.1.

14.10

SHEET FIXING - GENERALLY:

All sheets and other proprietary materials shall be fixed strictly in accordance with manufacturer's instructions as regards substrate materials, adequacy of support, nail or screw fixing and jointing. The Contractor shall allow for manufacturer's requirements and any desired departure from these shall be discussed with the owner or his supervising agent prior to tendering or commencing that section of the work.

14.11

PRIMING:

All exterior finishing timber specified to be paint finished shall prior to fixing have all laps and joints and backs primed with an approved oil based primer.

14.12

BUILDERS IRONMONGERY:

The Contractor shall provide all nails, brads, screws, metal clips, bolts, connectors and other sundry ironmongery required throughout the work. All nails and ironmongery shall be of best quality and of a size suitable for the work.

All nails used externally or where exposed to the weather shall be galvanised.

All screws used externally or where exposed to the weather shall be either galvanised or of solid brass. Only galvanised nails and brass or galvanised screws shall be used in Totara or Redwood timbers.

See section 14A of this specification for hinges, locksets and other approved hardware.

14.13

PAPERS & FOILS:

Provide all underlay papers and foils as specified in Section 14A. All underlay materials shall be well fixed, taut, lapped and supported according to manufacturer's specifications. No sagging shall be permissible unless specifically requested.

14.14

PROTECTION OF WORKS:

The Contractor shall fully protect all work completed or uncompleted from the weather or from damage caused by his own staff or other trades.

14.15

GYPSUM PLASTER STOPPING:

Unless otherwise specified all standard gibraltar board, fibrous plaster, "Fyrestop and Fyrelime" boards etc. shall be finished stopped flush with Gypsum plaster. The standard of finish shall be adequate to fill all joint gaps, undulations and nail depressions and be suitable for an exposed painted finish if specified hereunder. See Sections 14A and 30A.

14.16

JOINERY:

Take delivery of all windows, doors and other joinery shown, or listed elsewhere and install in place. Take care to observe normal working clearances.

14.17

ARCHITECTURAL HARDWARE:

Provide all window and door hardware plus miscellaneous hardware listed in Section 14A and install and leave in perfect working order. Fit all miscellaneous metal work cleats, bolts, posts, brackets etc. shown or described elsewhere in this specification.

14.18

ROOF TRUSSES:

Where required by Section 14 or Specific Section, to provide prefabricated trussed roof system, the Contractor shall, at the permit application stage, and to the satisfaction of the permit issuing authority;

- a) Nominate the truss design system and the local fabricator.
- b) Provide any and all truss design certificates to comply with the permit issuing authority.
- c) Supply all trusses required to provide a total integrated roof framing system together with all additional struts, strongbacks, gussets, ridges, hips and valley boards, packers, braces, roof cavity beams and all components required to complete the roof framing to comply with N.Z.S. 3604.

N.B.

All required bracing and support for a trussed roof shall be provided within the roof cavity.

No additional beams or posts shall be permitted - exposed to view unless previously approved by the Designer.

SECTION 15 : JOINERY

GENERAL CONDITIONS

15.0

PRELIMINARY:

Refer to the General Conditions of Contract and the Preliminaries section of this specification, which are equally binding on all sections.

15.1

STANDARDS:

All work shall comply with the following standards unless specified to the contrary.

N.Z.S. 3602) Specified Timber and Wood-Based Products for Use in Building.

N.Z.S. 3616) Finger Jointed Timber.

N.Z.S. 3631) Classification and Grading of New Zealand Timbers (National Timber Grading Rules).

NZ Building Act 1991 - Regulations and Codes

15.2

SCOPE:

This section of the work consists of the factory manufacture of joinery units as described hereunder and shown on the drawings.

15.3

MATERIALS:

All materials shall be the best of the respective kinds.

All timber shall be "Dressing A" or "Finishing" grade and shall be treated to comply with N.Z.T.P.A. requirements.

All timber shall be dried to a moisture content required by N.Z.S. 3604.

All ply shall be Cp-D grade C face outwards or better if specified.

15.4

WORKMANSHIP:

All work shall comply with good trade practice with all joints housed, glued, screwed or nailed as necessary.

All surfaces shall be supplied fine sanded with all arrises removed.

All nails shall be punched and screws counter sunk. No fixings shall be exposed on the exterior surfaces of veneered work.

15.5

FITTINGS:

Unless otherwise shown all carcass work shall be 18mm Customwood with all edges dressed smooth. All sides, shelves and centre divisions shall be solid. Fixing rails shall be timber, doors shall be overlay type.

Any exposed edges of particle board shelves or carcass divisions and ends shall be chased with solid timber (O.B. Rimu) beads full thickness by 15mm deep.

All cupboard fittings shall be supplied with fixed backs.

Wall mounted units shall be fitted with ex 50 x 25 fixing rail.

15.6

TOPS:

All "Formica" tops shall be built up to 32mm (nominal) thickness from particle board and shall have all exposed edges Formica clashed. All Formica sink tops or tops for other wet areas and/or specified to have coved upstands, shall be factory pressed and shall have built up anti-spill edges. All corner butt joints of Formica shall be a neatly dressed finish "factory joint".

15.7

DOORS:

All frames shall be as specified hereunder for timber finish and thickness. Composition board will not be acceptable for frames. All joints at head and jambs shall be rebated with jambs continuous and heads rebated in 10mm.

Provide planted stops 40 x 10 mm finished - O.B. Rimu well fixed.

Where frames specified as "Slimline" ploughed for linings frame thickness to be ex 40mm (min. 32mm finished) and finish 10mm proud of wall linings.

Where architraves specified ex 25mm (20mm fin) jambs shall be used.

All interior timber doors shall be hung on 1½ prs. 90mm loose pin F.B. butts.

All exterior timber doors shall be hung on 1½ prs. 90mm fixed pin galv. butts.

SECTION 16.4 : ROOFING - Pressed Coated Metal Tiles

GENERAL CONDITIONS

16.4.0

PRELIMINARY:

Refer to the General Conditions of Contract and Preliminaries section of this specification, which are equally binding on all sections.

16.4.1

SCOPE:

This section of the work includes the supply and fixing of all primary roofing elements such as tiles, slates and shingles together with all accessories required by the manufacturer of the primary elements to render that roof completely finished, water-proof, and bird-proof.

16.4.2

WORKMANSHIP:

All work shall be carried out strictly in accordance with manufacturer's instructions and only by approved fixers. Standards - NZ Building Act 1991 - Regulations and Codes.

16.4.3

PROFILES AND COMPATIBILITY:

All elements and accessories shall be the same manufacture, unless otherwise directed by the drawings or "Specific Section 16A".

16.4.4

UNDERLAY:

See Section 16A for required type.

All underlay shall be adequately supported and be well fixed taut. No subsequent sagging will be permissible. Leave complete without tears or wrinkles. Provide a minimum 200mm side lap to all underlay sheets and run single continuous length for each "run" of roof. Allow to hang 25mm beyond gutter fascia.

16.4.5

MATERIALS:

For specific material choice - See Section 16A.

Material and workmanship shall be the best available with tiles complying with N.Z.S. 3441, N.Z.S. 4217, and their amendments.

Supply and fix tile battens (size as shown) fixed in straight lines evenly spaced between fascia and ridge boards so as to avoid cutting tiles. Allow for a minimum 75mm tile headlap with a 50mm overhang into gutter.

Supply and lay over whole roof area, heavy duty roofing underlay directly under tile battens. Provide and fix netting if required (see drawings). Allow for sufficient downturn into gutter with all sides and end laps lapped 200mm.

All tiles shall be laid staggered with all courses straight and parallel. Work to be carried out in a workmanlike manner by approved agent fixers in strict accordance with manufacturer's specifications.

16.4.5 MATERIALS CONT...

Fix tiles to battens with hot dipped galvanised flat head nails. Provide splay battens to edges of valley boards.

Cutting of tiles to valleys and penetrations must be accurate and true to line. Fold down tile edges into valleys.

Guarantee: The Contractor shall supply a written guarantee for 2 years against poor workmanship, 10 years against chip loss and 25 years against weather-tightness of tiles.

16.4.6 FLASHINGS:

Provide and fix all flashings such as ridges, barge covers, roof lights, apron flashings and roof penetrations. All flashings must match roofing material if applicable.

16.4.7 GUTTERS:

See Plumbing Section 17.

SECTION 17 : PLUMBING

GENERAL CONDITIONS

17.0 PRELIMINARY:

Refer to the General Conditions of Contract and the Preliminaries section of this specification, which are equally binding on all sections.

17.1 SCOPE:

This section consists of the supply of materials and labour involved in installing the whole of the water and drainage reticulation and metal flashings to leave the building plumbing systems and stormwater complete and working and the building watertight.

See Roofing Section for roof flashings.

17.2 STANDARDS:

All work shall be carried out in accordance with the New Zealand Building Act 1991 - Regulations and Codes, and its amendments, with the local by-laws and with the relevant clauses of the following standard specifications which shall form part of this specification.

N.Z.S. 3501 : 1976 Copper tubes for water, gas and sanitation.

N.Z.S. 7648 : 1974 Unplasticized P.V.C. pipe for cold water services.

N.Z.S. 7641 : 1978 Unplasticized P.V.C. waste and ventilating pipe, fittings and accessories.

N.Z.S. 625 : 1950 Water taps (12 - 25mm)

N.Z.S. 7643 : 1979 Installation of unplasticized P.V.C. pipe systems.

17.3 MATERIALS:

All materials and fittings shall be the best of their respective kinds.

All hot water piping may be copper or polybutylene.

All cold water piping may be unplasticized P.V.C. or polybutylene.

All wastes, soil and vent pipes may be unplasticized P.V.C.

All pipes to fire hose reels shall be copper.

17.4 WORKMANSHIP:

All work shall be in accordance with best trade practice.

All runs shall be in straight lines with minimum bends and junctions.

All copper bends shall be either easy pipe bends or preformed elbows braze jointed. (Elbows shall be restricted to an absolute minimum):

17.4

WORKMANSHIP Cont'd

All pipework shall be concealed in framing, concrete floor or ceiling cavity.

Any pipework set into concrete shall be copper or polybutylene and must be fully lagged with Denso tape or similar to allow for mechanical or thermal movement.

All work shall be carried out by a competent and registered tradesman.

17.5

DISSIMILAR METALS:

Pack between or separate dissimilar metals to prevent electrolytic action.

17.6

PIPES & SIZES:

All pipe sizes shall be either as shown on services plan of drawings or specified in Section 17A.

As a minimum requirement all individual fittings e.g. cisterns, sinks, basins etc. shall have a 12mm connection - cold (and hot where applicable).

Where fittings are grouped together 20mm branch supply (hot and cold) will be taken to each group with 12mm connections made.

Showers will be connected to branch lines independent of other fittings with their supply taken as directly as possible from either the water heater or the cold supply source.

Provide piped reticulation to all fittings shown in cold supply; and hot where applicable from water heater.

Provide wing backs securely fixed to framing for all tap connections - fact of wingbacks to finish flush with wall linings.

17.7

WASTES:

Provide U/P.V.C. wastes from all fittings to gulley traps as shown either to sizes given or to comply with Clause 17.2.

Over-length wastes to be oversized in diameter and to be fitted with screw cap cleaning eye and breather pipe mounted 2m up wall.

All wastes to be turned down into gulleys - under grates. (Max. 4 per gulley).

17.8

VENTS:

Provide all terminal vents to drains and back vents to fittings, from U/P.V.C., to comply with Clause 17.2 and as shown.

All back vent pipes to be run in wall cavities and project above roof.

All terminal vents to be neatly clipped to exterior of wall where shown. Terminate with perforated P.V.C. flush end cap.

17.9

FITTINGS:

Provide and install all fittings shown on drawings and/or scheduled in Section 17A. Connect all water supply pipes, wastes and taps and valves and leave complete in working order.

17.10

TAPS AND VALVES:

Provide and fit all taps and valves as scheduled in Section 17A.

17.11

FLASHINGS:

(See also Section 16 Roofing)

Provide and install all flashings shown and described hereunder to render the building completely weather tight e.g. roof and wall penetrations, around pipes and flues, roof lights, window heads etc.

All flashings to be compatible in metal content and colour, with roofing or window joinery material.

17.12

STORMWATER SYSTEM (Gutters and Downpipes.)

(see also Section 16 Roofing).

Provide and fix gutters and downpipes as shown and as scheduled in Section 17A. All gutters to be proprietary clipped to line and graded to fall to outlets. Clip down pipes to wall and terminate at ground level discharging into stormwater drain.

Where p.v.c. is used for downpipes and stormwater drain, connection at ground level shall be sealed (unless specified otherwise) using proprietary junction fittings (and reducers if required).

All runs of eaves gutters shall be in single lengths unless over 6m.

SECTION 18 : DRAINAGE

GENERAL CONDITIONS

18.0 PRELIMINARY:

Refer to the General Conditions of Contract and the Preliminaries section of this specification, which are equally binding on all sections.

18.1 SCOPE:

This section includes all the sewage and stormwater reticulation in the ground as shown and specified hereunder.

18.2 STANDARDS:

All drainage work shall be undertaken strictly in accordance with Local By-laws, the relevant clauses of the NZ Building Act 1991 - Regulations and Codes, and the relevant clauses of the following NZ Standards, which shall form part of this specification:-

N.Z.S. 1823 : 1967 Ceramic (earthenware) sewer pipes for use with flexible joints.

N.Z.S. 7649 : 1974 Unplasticised P.V.C. underground drain pipes and fittings.

N.Z.S. 4452 : 1974 Construction of underground pipe sewers and drains.

N.Z.S. 7643 : 1979 Installation of unplasticised P.V.C. pipe systems.

The whole of this work shall be carried out by competent and registered tradesmen.

18.3 TRENCHES:

All trenches shall allow drains to have a minimum cover of 600mm and be uniform to line and grade.

Trenches shall be clear of building foundations by 800mm and shall be maintained free of water and loose soil.

All bedding and backfill material shall be as per Clause 18.2.

18.4 SEWER DRAINS:

Shall be 100mm internal diameter laid to min. 1:60 fall and may be G.E.W. or U.P.V.C.

Run drain as shown from all fittings, connect to public drain or to existing as shown. If larger diameter drains are shown on the drawings, gradients shall be as required by Clause 18.2.

All drains to be laid to a uniform line, level and grade. All junction fittings shall be inspection fittings.

18.5

MANHOLES:

Manholes on san. sewer line shall be precast concrete of 900mm dia. Maintain drain fall across manhole and concrete base and haunch sides of channels to facilitate water flow. Provide manholes with heavy duty roading quality C.I. top, frame and removeable lid.

18.6

GULLEY TRAPS:

Shall be closed type set on a concrete bed haunched to sides of trap. Surrounds to extend 75mm above finished ground level and carried down at least 150mm into ground. All surrounds to at least 75mm below floor level.

18.7

STORMWATER DRAINS:

Whole of storm water system to be a complete sealed system with sealed joints between downpipes and S.W. drain. See Section 17A for downpipe sizes and Section 18A for S.W. drain sizes.

All drain branches shall be run as shown and discharge into kerb or public S.W. drain or to yard traps as shown.

18.8

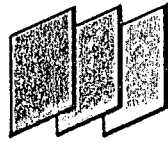
CONNECTIONS:

The Contractor shall arrange for Local Authority to make any necessary San. sewer or stormwater connections, and allow to pay all associated costs and fees.

18.9

YARD SUMPS:

Where shown provide and install 400 x 400 precast silt traps complete with removeable cast grate. Provide inlet pipe connection square cut flush with wall of chamber. Provide bend and down-turn on outlet pipe 300mm minimum into water and allow 100mm minimum depth under down-turn. Concrete and seal base of chamber.



**GIBRALTAR BOARD
Wall Bracing Systems**

WALLBRACING CALCULATION SHEET A

(For use with NZS 3604 : 1990)

Name: Travers - Unit No 2.

1.	Location of STOREY	foundation <u>single</u> upper of two lower of two	SITE ADDRESS City/Town or District: <u>Wanganui</u> Street and Number: _____ or LOT AND D.P. Number: _____
	SITE WIND ZONE: (Table 2.4)	low <u>medium</u> high / very high	
	EARTHQUAKE ZONE: (Fig. 2.2, Table 2.3)	<u>A</u> / B / C	

2.	FOR EARTHQUAKE	
	Roof weight: <u>light</u> / heavy	E = 4.6 BU's/m ²
	Average Roof Pitch: <u>17.5°</u>	
	Type of Cladding: light / <u>heavy</u>	
	Earthquake Zone: <u>A</u>	
	Storey in Roof space: yes / <u>no</u>	

3.	FOR WIND	
	Building Height <u>4.3</u> m	W = 44 BU's/m Along
	Roof Height <u>2</u> : m	W = 37 BU's/m Across
	Stud Height <u>2.4</u> : m	
	Wind Speed <u>M</u> :	

4.	ROOF or BUILDING LENGTH	BL = 15.37 m
	ROOF or BUILDING WIDTH	BW = 10.296 m
	GROSS ROOF or BUILDING PLAN AREA	GPA = 126.32 m ²

5.	EARTHQUAKE LOAD (ACROSS and ALONG) E x GPA	= 4.6 x 126.32 = 581	BU's
	WIND LOAD: ACROSS	W ACROSS x BL = 37 x 15.37 = 568.7	BU's
	WIND LOAD: ALONG	W ALONG x BW = 44 x 10.296 = 453	BU's

Unit No 2.

ALONG

WALL OR BRACING LINE		BRACING ELEMENTS PROVIDED			EARTHQUAKE		WIND	
1	2	3	4	5	6 EQ	7 EQ	6 W	7 W
Line Label	Minimum BU's Required	Bracing Element No.	Bracing Type	Length Element (m) L	Rating BU/m EQ	BU's Achieved (BU/m x L) EQ	Rating BU/m W	BU's Achieved (BU/m x L) W
A	132	1	Type 4	1.2	67	80.4	67	80.4
		2	BR4	0.9	85	76.5	100	90
B	70	3	Type 4	2.4	83	199.2	83	199.2
		4	61B3	2.0	60	120	65	130
C	132	5	BR4	1.2	85	102	100	120
		6	BR4	1.0	85	85	100	100
D								
E								

TOTALS ACHIEVED	EQ	663.1	W	719.6
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TOTALS REQUIRED	EQ	581	W	453
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(From Sheet A)

ACROSS

WALL OR BRACING LINE		BRACING ELEMENTS PROVIDED			EARTHQUAKE		WIND	
1	2	3	4	5	6 EQ	7 EQ	6 W	7 W
Line Label	Minimum BU's Required	Bracing Element No.	Bracing Type	Length Element (m) L	Rating BU/m EQ	BU's Achieved (BU/m x L) EQ	Rating BU/m W	BU's Achieved (BU/m x L) W
M	103	7	61B1	1.8	50	90	55	99
N	70	8	61B3	2.0	60	120	65	130
		9	61B3	3.8	60	228	65	247
O	70	10	61B3	2.4	60	144	65	156
P	103	11	BR9	0.6	95	57	110	66
		12	BR9	0.6	95	57	110	66
Q								

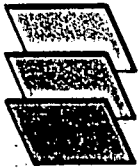
TOTALS ACHIEVED	EQ	696	W	764
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TOTALS REQUIRED	EQ	581	W	568.7
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(From Sheet A)

GIBALTAR BOARD
Wall Bracing Systems

WALL BRACING CALCULATION SHEET B
(For use with NZS 3604 : 1990)

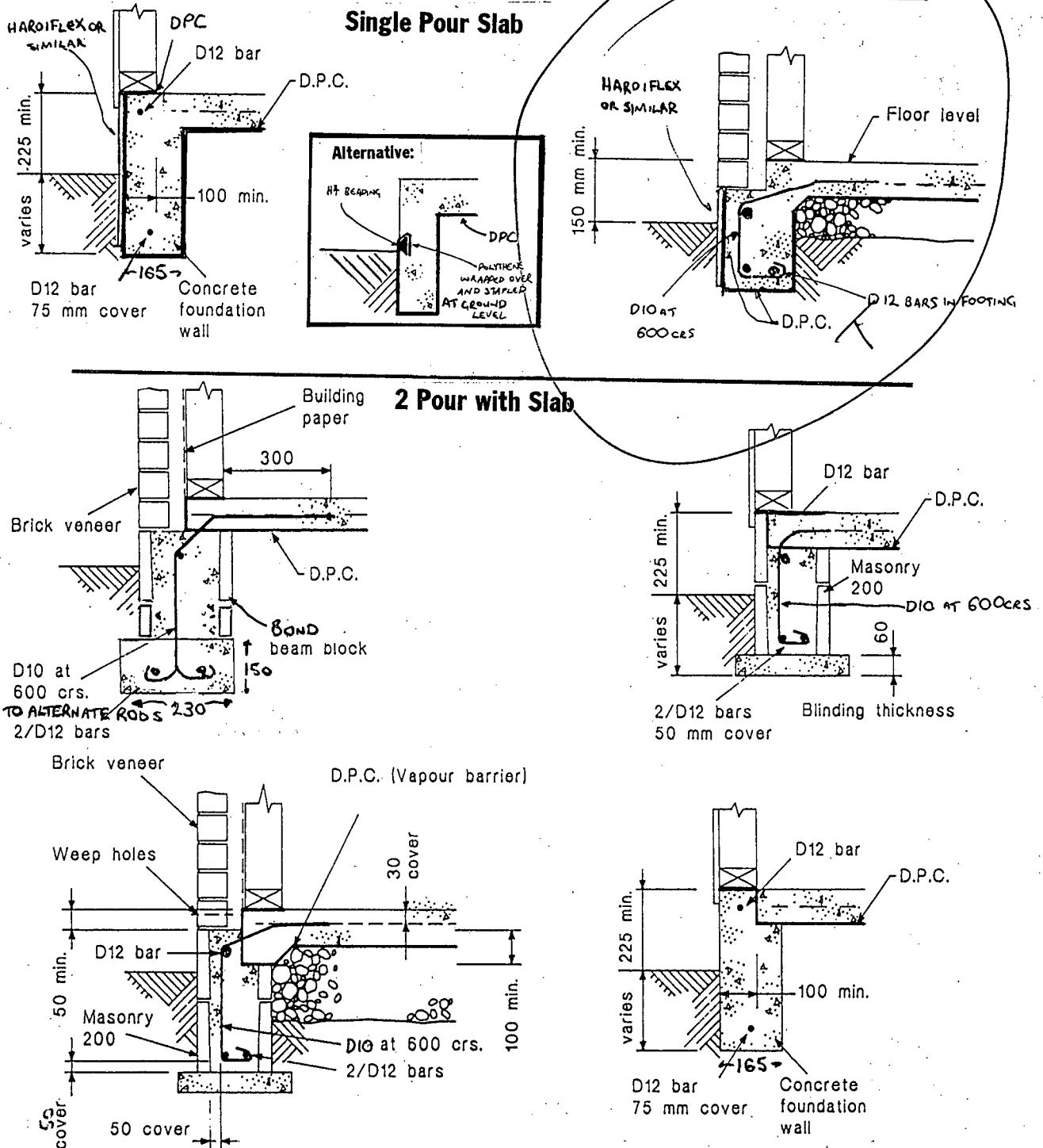


W.D.C Accepted methods for concrete foundation and slab construction

- Please state clearly on the plans, which method is to be used.
- Other methods will be accepted only if discussed and approved by Building Control Officers.

Also note,

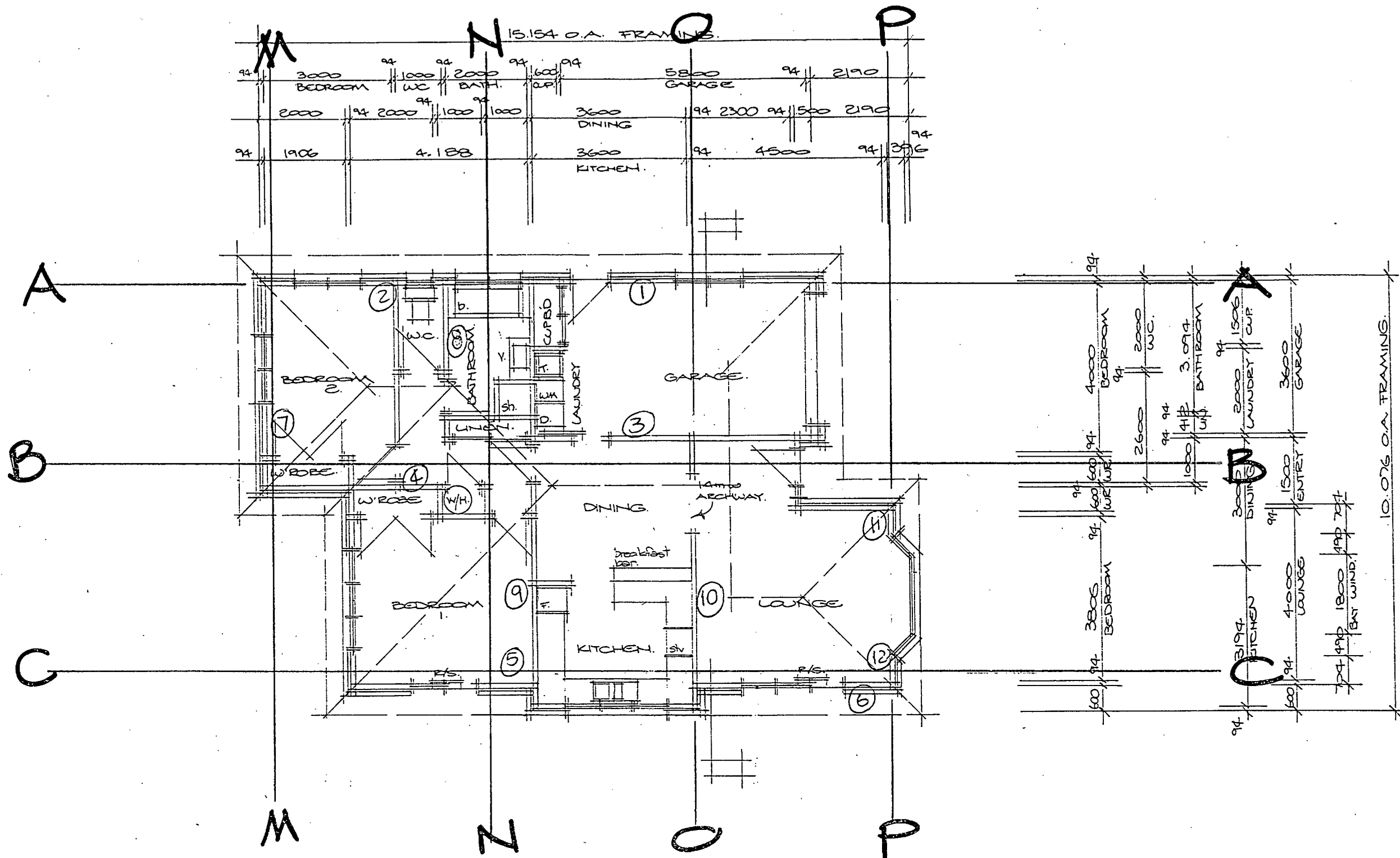
All footing steel must be blocked, or suspended by a wire tie or similar, with 70mm minimum clearance to the base and 50mm to the sides.



PROPOSED HOME UNITS
KAKAHO SUBDIVISION

FOR KEITH TRAVERS - BUILDER.

30 KAKAHO DR.

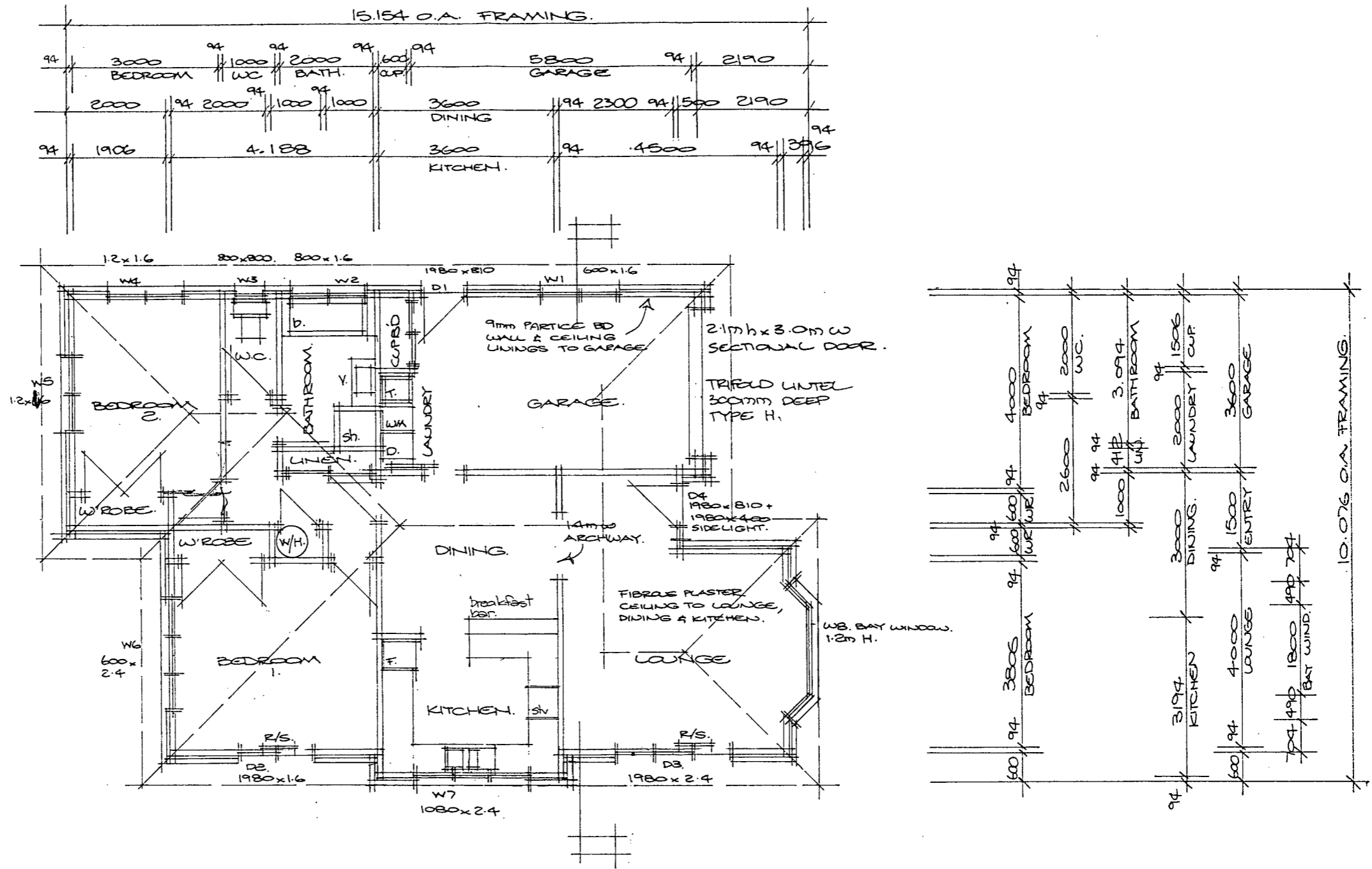


FLOOR PLAN FLOOR AREA: 126.32m² (1359.7 ft²)
 Scale 1:100

UNIT NO. 2
KAKAHO SUBDIVISION
 FOR KEITH TRAVERS - BUILDER.

7 JUNE 1994

Sheet No.

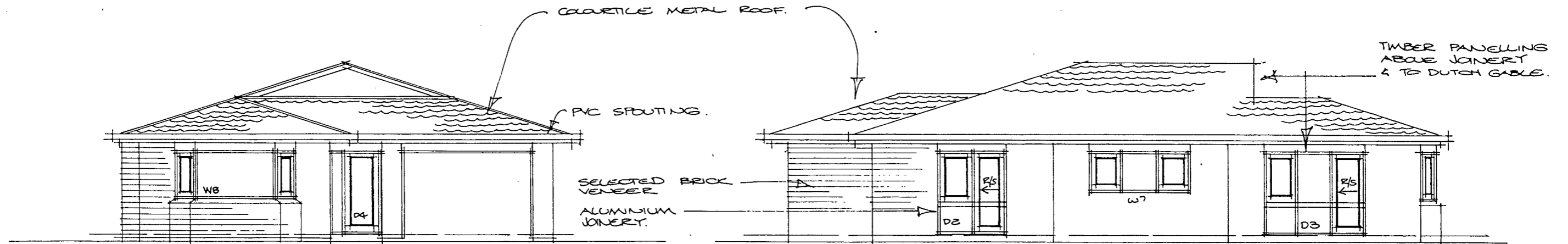


FLOOR PLAN FLOOR AREA: 126.32m² (1359.7 ft²).
 Scale 1:100

UNIT No. 2
KAKAHO SUBDIVISION
 FOR KEITH TRAVERS - BUILDER.

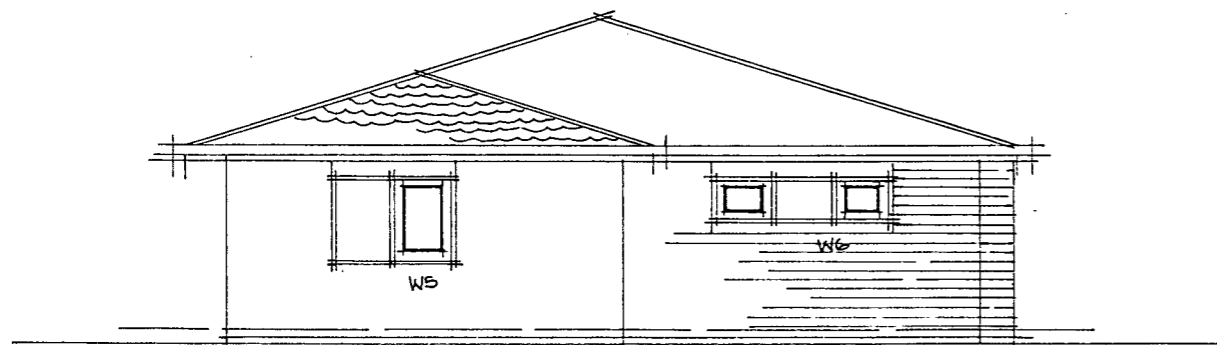
7 JUNE 1994

Sheet No. 4

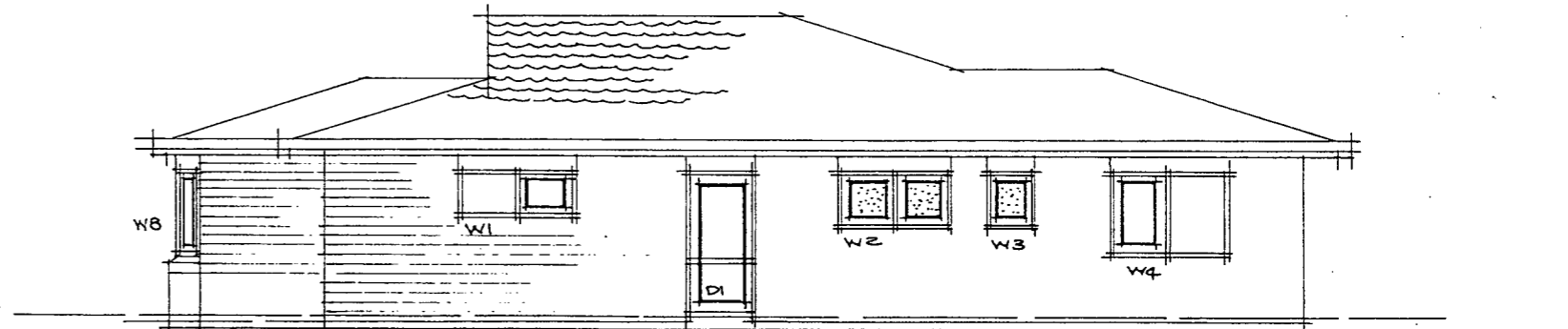


ELEVATION - SOUTH.
Scale 1:100

ELEVATION - WEST.
Scale 1:100



ELEVATION - NORTH
Scale 1:100

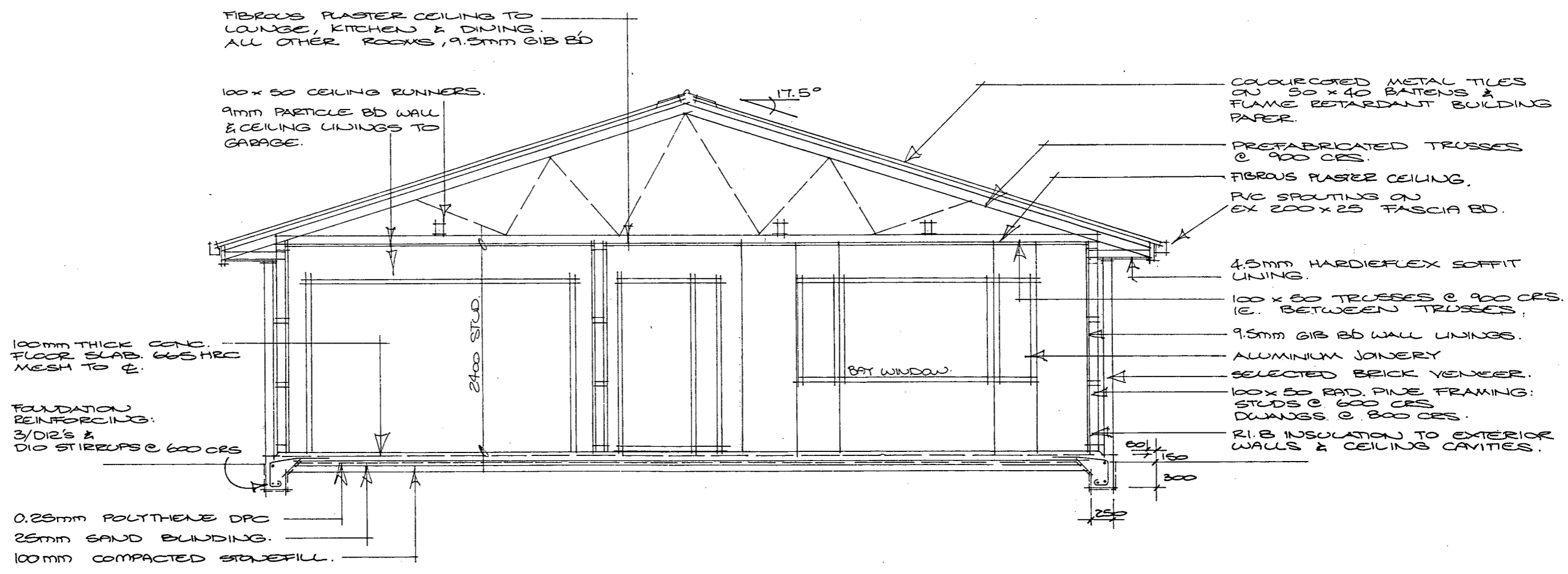


ELEVATION - EAST.
Scale 1:100

UNIT NO 2.
KAKAHO SUBDIVISION
FOR KEITH TRAVERS - BULDER

7 JUNE 1994

Sheet No. 5.



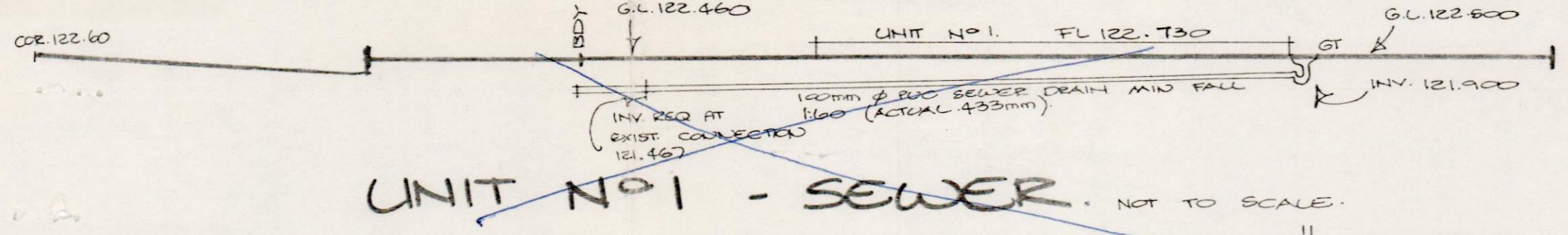
CROSS SECTION

Scale 1:50

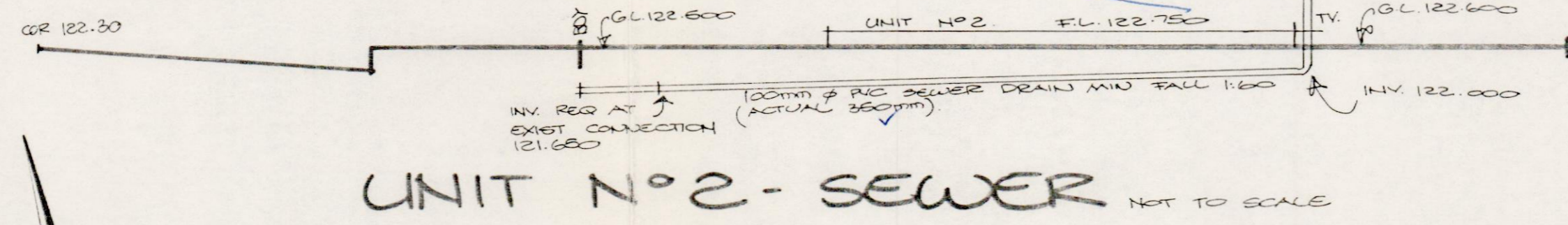
UNIT No 2.
KAKAHO SUBDIVISION
FOR KEITH TRAYERS - BUILDER.

7 JUNE 1994

Sheet No 6.

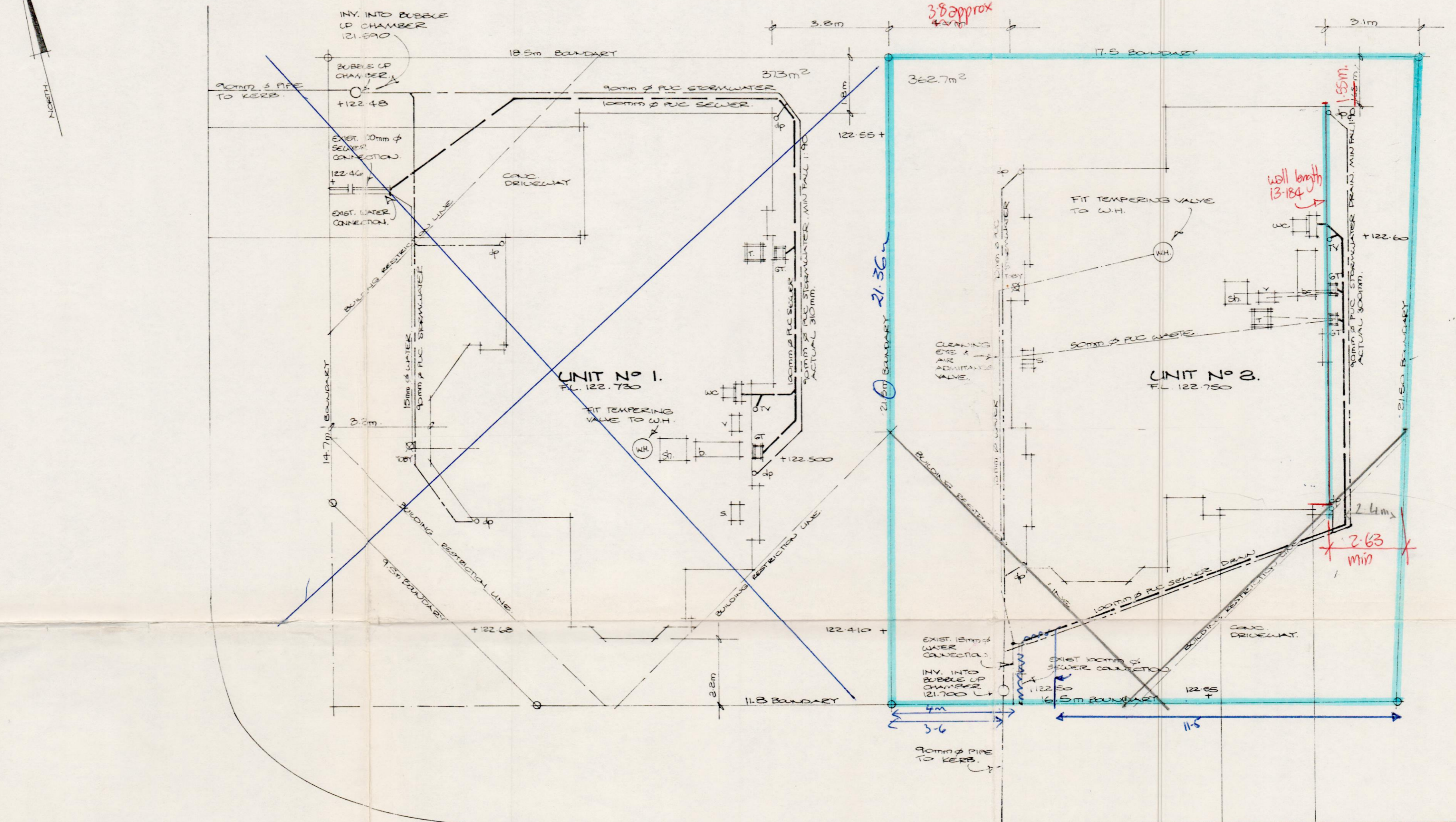


UNIT NO 1 - SEWER NOT TO SCALE.



UNIT NO 2 - SEWER NOT TO SCALE.

Hot water cylinders to be gas mains pressure, valve vented & fitted with tempering valve.



SITE & DRAINAGE PLAN

Scale 1:100

KAKAHO DRIVE

UNITS ~~NO 1~~ & NO 2.
KAKAHO SUBDIVISION.

7 JUNE 1994

Sheet No. 7

Wanganui District Council

~~REGISTRATION SERVICE UNIT~~



Date: 22ND DECEMBER 1994 Building Consent No: 7955

Name: KEITH TRAVERS

SITE Address: 30 KAKAHO DRIVE WANGANUI.

LOT 22 DP NOT TO BE ISSUED

ERECT TOWN HOUSE WITH ATTACHED GARAGE

Plumber: DAVID ANDERSON # 8887 CP

5x4 min inspection advised

Drainlayer: DAVID ANDERSON # 8887 RD

* Remarks:

Wanganui District Council

REGULATORY SERVICES DIVISION



Date: _____ Building Consent No. _____
 Name: _____
 Address: _____
 Plumber: _____
 Drainlayer: _____
 Remarks: _____

Sanitary Sewer Drain
 Layed by Trevor Bailey
 S/Water: Layed by Dave Anderson
 OK Inspected 9/5 3/5/95
 CONSENT # 7955
 30 KAKAHO DRIVE

