

CARTERTON DISTRICT COUNCIL

Saved as:

FILE NAME Pim980247 .pdf

☐	APPLICATION FOR BUILDING PERMIT
☐	LAND INFORMATION MEMORANDUM (LIM)
☒	PROJECT INFORMATION MEMO (PIM)
☐	EARTHQUAKE PRONE BUILDING
☐	PLUMBING & DRAINAGE APPLICATION
☐	BUILDING CONSENT APPLICATION
☐	RESOURCE CONSENT
☐	

VALUATION NUMBER OR TP NUMBER <u>18140</u> <u>68300</u>

DOC PREP
10 minutes
Yaslegg

PIM No. 980247

OWNER

R C Stapleton

VAL. No.

18140/68300

ADDRESS Josephs Road

RDI, Carterton

APPLICATION FOR BUILDING CONSENT

INSPECTION RECORD

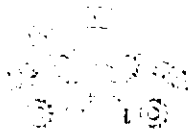
Date Referred	Department	Comments and Requisitions	Approved Name	Date	Particulars	Sign
	TOWN AND COUNTRY PLANNING OFFICER				BUILDING -	
	COUNCIL					
	BUILDING INSPECTOR					
	ENGINEER				DRAINAGE & PLUMBING -	
	DRAINAGE & PLUMBING INSPECTOR					
	Misc. - WRC, MOW, Etc.					

PROJECT

Addition of Garage/Laundry
with studio above

BUILDING CONSENT DATE

22.10.98



Carterton District Council

P.O. Box 9 Holloway Street Carterton New Zealand Phone: 06-379-6626 Fax: 06-379-7832

Building Consent

Section 35, Building Act 1991

Application

R C STAPLETON	No.	980247
JOSEPHS ROAD	Issue date	22/10/98
RD1	Application date	7/10/98
CARTERTON	Overseer	JIM EDGE

Project

Description	ALTERATIONS, REPAIRS or EXTENSIONS BEING STAGE 1 OF AN INTENDED 1 STAGES RELOCATE GARAGE/DWELING ADDITIONS
Intended Life	INDEFINITE, BUT NOT LESS THAN 50 YEARS
Intended Use	DOMESTIC GARAGE & DWELLING
Estimated Value	\$80,000
Location	JOSEPHS RD
Legal Description	LOT 1 DP 67695 BLK IX TIFFIN SD
Valuation No.	1814068300

Builder: TO BE ADVISED
Designer: R C STAPLETON JOSEPHS ROAD, RD1, CARTERTON

Charges

The Council's charges paid on uplifting this Building Consent, in accordance with the

attached details are:	\$	435.00
Building Research Levy	\$	80.00
Building Industry Authority Levy	\$	52.00
Total	\$	567.00

This building consent is a consent under the Building Act 1991 to undertake building work in accordance with the attached plans and specifications so as to comply with the provisions of the building code. It is not a consent under the Resource Management Act and does not affect any duty or responsibility under any other Act nor permit any breach of any other Act.

This building consent is issued subject to the conditions specified in the attached page(s) headed Conditions of Building Consent 980247.

Signed for and on behalf of the Council:

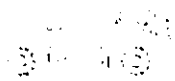
Name:

[Signature]

Date: 22-10-98



1. LETTER FROM NEIGHBOUR RECEIVED GIVING PERMISSION TO DIMINISH SIDE BOUNDARY



Carterton District Council

P.O. Box 9 Holloway Street Carterton New Zealand Phone: 06-379-6626 Fax: 06-379-7832

Site Inspection Sheet

Application

R C STAPLETON	No.	980247
JOSEPHS ROAD	Issue date	22/10/98
RD1		
CARTERTON	Overseer	JIM EDGE

Project

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Valuation No.	1814068300
Charges incl. Levies \$	567.00

Builder: TO BE ADVISED
Designer: R C STAPLETON JOSEPHS ROAD, RD1, CARTERTON

This inspection list and all the approved plans relating to this building consent are to be kept on site and available to the building and/or plumbing and drainage inspector, or approved building certifier, on request.

Please give at least 24 hours notice for the next required inspection.

Work cannot proceed past each step until that step has been inspected and approved, and this form signed by the relevant inspector or certifier.

Name	Address	Signature
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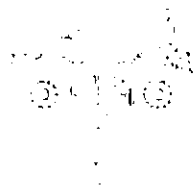
Plumber

Drainlayer

This sheet is to be returned to CARTERTON DISTRICT COUNCIL when applying for your Code Compliance Certificate.

Note: If this form is not completed, the Code Compliance Certificate will not be issued until Council is satisfied that the building complies with the New Zealand Building Code.





Carterton District Council

P.O. Box 9 Holloway Street Carterton New Zealand Phone: 06-379-6626 Fax: 06-379-7832

{ PAGE }

Site Inspection Sheet 980247

When this project is completed this inspection sheet will be attached to the relevant property file held at the Council office.

Please note! The approved plans and this inspection sheet are to be available on site, on request, at all times.

FOUNDATION INSPECTION

PRELINE INSPECTION

PLUMBING & DRAINAGE INSPECTION

FINAL INSPECTION



Carterton
Duffield Capital

Received with thanks by 12/01 5
Carterton District Council

7-10-98 13:20 Receipt no. 43168

GL 730515	
STAPLETON B/PERMIT	435.00-
GL 752515	
STAPLETON B/PERMIT	80.00-
GL 753515	
STAPLETON B/PERMIT	52.00-
GL 810564	PHOTOCOPYIN
CQ NAT	MSTN
RC STAPLETON	657.00
Total Receipted	657.00

Carterton District Council

BUILDING CONSENT APPLICATION FORM

Consent No. 980247

Consent Services sought: (✓ appropriate Box)

- ☐ BUILDING ☐ PLUMBING ☐ DRAINAGE ☐ DEMOLITION
☐ REMOVAL FROM DISTRICT ☐ RELOCATE IN DISTRICT ☐ HEATER INSTALLATION
☐ CONSENT & PIM ☐ CONSENT IN ACCORDANCE WITH PIM No.

CONSENT AUTHORISED

APPROVED NOT APPROVED

SEE ENFORCEMENT

DATE 16/10/98 BUILDING INSPECTOR

[Signature]

G. L. EDGE; Building Inspector

Date

16/10/98

G. R. SPOONER; General Manager

Date

OWNER

NAME: RC STAFFORD
POSTAL ADDRESS: JOSEPHS ROAD
RD1, CARTERTON
PHONE: 06 3798734
SIGNATURE: *[Signature]*

SITE DESCRIPTION

STREET ADDRESS
LOT DP
VALUATION No 18140/68300
LOT AREA FIRE No
PREVIOUS OWNER (If property recently transferred)

APPLICANT

NAME: AS OWNER
POSTAL ADDRESS:
PHONE:
SIGNATURE:

ESTIMATED VALUES

Estimated Value of Work Inc. GST
BUILDING \$
PLUMBING \$
DRAINAGE \$
ELECTRICALS \$
TOTAL \$ 60,000

DESCRIPTION OF PROPOSED WORK:

ADDITION OF GARAGE, STUDIO AND LAUNDRY

Total Floor Area: m²

☐ Intended Life: Indefinite but not less than 50 years
specified as years

PURPOSE OF USE:

Purpose for which each part of proposed building is to be separately used or occupied (describe separately each part of intended use or occupation for a separate purpose, i.e. dwelling, carport, office, commercial use, etc):

AS ABOVE

TYPE OF WORK TO BE CARRIED OUT:

- ☐ FOUNDATIONS ONLY
- ☐ NEW DWELLING
- ☒ DWELLING ADDITIONS
- ☐ FLATS
- ☐ ALTERATIONS, REPAIRS, EXTENSIONS, RESITING HEATING APPLIANCES
- ☐ REPIPING
- ☐ DOMESTIC GARAGES & DOMESTIC OUTBUILDINGS
- ☐ OTHER NEW CONSTRUCTION
- ☐ DEMOLITION
- ☐ TRANSPORTABLE BUILDING
- ☐ RELOCATED BUILDING
- ☐ COMMERCIAL & INDUSTRIAL
- ☐ AGRICULTURAL
- ☐ PLUMBING
- ☐ DRAINAGE

FOR REMOVAL OR DEMOLITION OF BUILDINGS:

Remove from:

Removed To:

Services to be Disconnected: ☐ Temporarily ☐ Permanently

☐ Water ☐ Sewer ☐ Stormwater (where connected to services)

Date Services to be disconnected by:

SOLID FUEL HEATERS:

Type & Brand of heater to be installed:

If a wetback is to be installed on a solid fuel heater the name of the craftsman Plumber must be completed on the front of the application.

BUILDER

NAME:

POSTAL ADDRESS:

.....

PHONE:

PLUMBER

NAME:

POSTAL ADDRESS:

.....

PHONE:

DRAINLAYER

NAME:

POSTAL ADDRESS:

.....

PHONE:

ELECTRICIAN

NAME:

POSTAL ADDRESS:

.....

PHONE:

CERTIFIER

NAME:

POSTAL ADDRESS:

.....

PHONE:

DESIGNER

NAME: RE STATION

POSTAL ADDRESS: JOSEPH RD.

CARTERTON

PHONE: 06 398 734

SERVICE CONNECTIONS AND VEHICLE CROSSINGS:

1. Water Connection

- ☐ PROVIDE STANDARD RESIDENTIAL 15mm CONNECTION
- ☐ PROVIDE NON-STANDARD CONNECTION, SIZE REQUIRED:.....

2. Sewer Connection

- ☐ PROVIDE STANDARD 100mm CONNECTION
- ☐ PROVIDE NON-STANDARD CONNECTION, SIZE REQUIRED

3. Stormwater Connection

- ☐ STORMWATER DISPOSAL TO BE CONNECTED TO SERVICED DRAIN
- ☐ STORMWATER DISPOSAL TO BE CONNECTED TO SOAKAGE PIT

4. Vehicle Crossings

- ☐ EXISTING CROSSINGS
- ☐ NEW CROSSING TO BE INSTALLED BY COUNCIL
- ☐ NEW CROSSING BY OWNER
(A bond may be held & refunded when the crossing has been completed to Carterton District Council specifications)

YOU MUST SUBMIT IN SUPPORT OF YOUR APPLICATION:

[✓ BOX AS REQUIRED]

- | | | |
|---|--|--------------------------|
| 1 | Two sets of specifications | ☐ |
| 2 | Two sets of Bracing calculations per NZS 3604 | ☐ |
| 3 | Two full site plans: Scale 1:100 showing | ☐ |
| | (a) Position of the building(s) in relation to the boundaries of the full site and existing buildings on the site | ☐ |
| | (b) Site frontage and road name | ☐ |
| 4 | Two sets of construction drawings: Scale 1:100 or 1:50 showing | ☐ |
| | (a) Elevations | ☐ |
| | (b) Sectional elevations at each change of detail | ☐ |
| | (c) Plans of all floors, windows and ventilation, fireplaces and chimneys. But for additions and alterations, the existing shall be shown separately and alongside the "proposed" to the same scale for comparison | ☐ |
| | (d) Foundation details, showing reinforcing details | ☐ |
| | (e) Structural details with Engineers Calcs. where required | ☐ |
| | (f) The position of all plumbing and sanitary fittings | ☐ |
| 5 | Two sets of drainage plans showing | ☐ |
| | (a) Existing and proposed stormwater disposal | ☐ |
| | (b) Existing and proposed sewer drains and connections | ☐ |

SWIMMING/ SPA POOL INSTALLATIONS

Sections 3, 4 & 5 above to be completed

☐

SCHEDULE OF PIM/BUILDING DEPOSITS

ALL CHARGES INCLUSIVE OF GST

(Deposits must be paid with Application)

Logburners and Demolition Permits	\$80.00
Garden Sheds, Garages, Carports - Alterations/Additions up to \$5,000	\$175.00
Haysheds, Implement Sheds - Alterations/Additions \$5,001 to \$10,000	\$225.00
Alterations/Additions \$10,001 to \$15,000	\$330.00
Granny Flats, Batches- Alterations/Additions over \$15,001	\$435.00
Dwellings	\$595.00
Commercial/Industrial	\$750.00
Plus or minus assessed additional hourly input dependent on scale of project plus recovery of disbursements (e.g. consultants reports) where applicable.	

RURAL EFFLUENT FIELD ASSESSMENTS

For each assessment \$105.00. The basic charge being assessed at 2 hours minimum work for each application. Labour in excess of 2 hours being assessed at \$13.00 per ¼ hour units.

DANGEROUS GOODS SITE ASSESSMENT

For each assessment \$105.00. The basic charge being assessed at 2 hours minimum work for each application. Labour in excess of 2 hours being assessed at \$13.00 per ¼ hour units.

BUILDING RESEARCH LEVY

Construction \$20,000 and over a levy of \$1.00 per \$1,000 or part thereof is payable.

BUILDING INDUSTRY AUTHORITY LEVY

Construction \$20,000 and over a levy of 65c per \$1,000 or part thereof is payable.

SEWER & WATER CONNECTION FEES (All new Dwellings - Urban area only)

Water Connection	Full connection (unserviced and cross leases)	\$550.00
	Administration Fee (unserviced)	\$25.00
Sewer Connection	Full connection (unserviced and cross leases)	\$1,400.00
	Administration Fee (unserviced)	\$25.00
Combined Water & Sewer Connection		\$1,600.00
Vehicle Run Up Charge		\$450.00

NOTE: For the purpose of GST the Receipt Form issued will be the Tax Invoice

BUILDING DEPOSIT	\$ 435.00
BUILDING RESEARCH LEVY FEE	\$ 80.00
BUILDING INDUSTRY LEVY	\$ 52.00
FULL SEWER CONNECTION FEE (New Buildings Urban area only)	\$
FULL WATER CONNECTION FEE	\$
SEWER ADMINISTRATION FEE	\$
WATER ADMINISTRATION FEE	\$
VEHICLE RUN UP FEE (If Required)	\$
TOTAL	\$ 567.00

Receipt No. Date Paid + 90

Date Application Submitted

PLAN OF ALLOTMENT

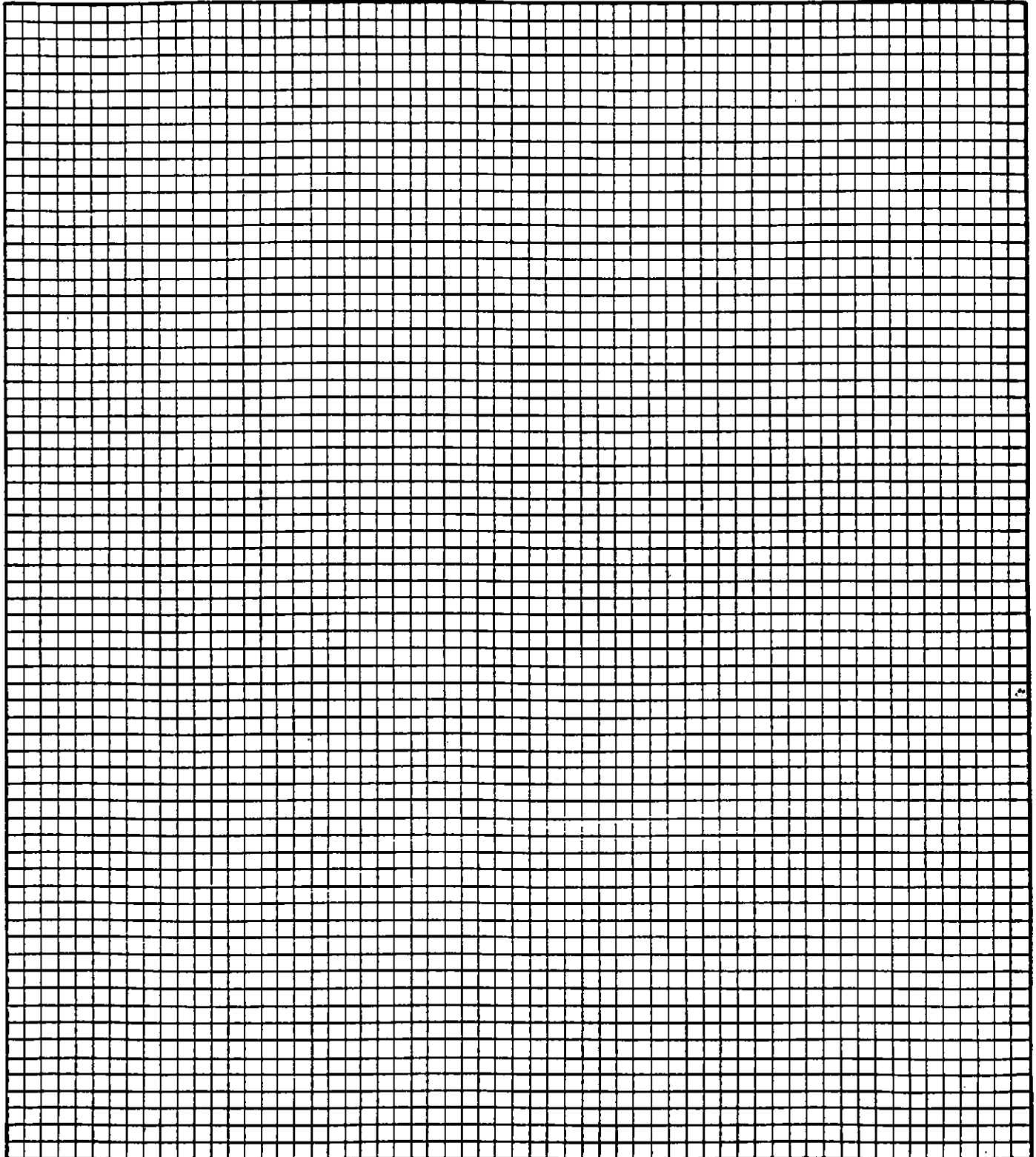
Showing position of proposed building on such allotment.

NOTE: Distances of each building from boundary lines must be clearly indicated.

(Scale: One metre to a square)

BOUNDARY LINES TO BE SHOWN THUS: _____

FRONTAGE TO _____ Street/Road/Avenue/Place



ALL EXISTING BUILDINGS TO BE SHOWN IN RED ON THIS PLAN

COMPLIANCE SCHEDULE DETAILS

E1: SYSTEMS NECESSITATING A COMPLIANCE SCHEDULE

[Complete for all new buildings and alterations, except single residential dwellings]

The building will contain the following [Cross each applicable box and attach proposed inspection, maintenance and reporting procedures]:

- ☐ Automatic sprinkler systems or other systems of automatic fire protection.
- ☐ Automatic doors which form part of any fire wall and which are designed to close shut and remain shut on an alarm of fire.
- ☐ Emergency warning systems for fire and other dangers.
- ☐ Emergency lighting systems.
- ☐ Escape route pressurisation systems.
- ☐ Riser mains for fire service use.
- ☐ Any automatic back-flow preventer connected to a portable water supply.
- ☐ Lifts, escalators or travelators or other similar systems.
- ☐ Mechanical ventilation or air conditioning system serving all or a major part of the building.
- ☐ Any other mechanical, electrical, hydraulic or electronic system whose proper operation is necessary for compliance with the building code.
- ☐ Building maintenance units for providing access to the exterior and interior walls of buildings.
- ☐ Such signs as are required by the building code in respect of the above mentioned systems.
- ☐ None of the above.

E2: OTHER SYSTEMS AND FEATURES TO BE INCLUDED IN THE COMPLIANCE SCHEDULE

[Complete Part E2 only if the building contains one or more of the systems listed in Part E1].

The building will contain the following [Cross each applicable box and attach proposed inspection, maintenance and reporting procedures]:

- ☐ Means of escape from fire.
- ☐ Safety barriers.
- ☐ Means of access and facilities for use by persons with disabilities which meet the requirements of S.25 of the Disabled Persons Community Welfare Act, 1975.
- ☐ Hand held hoses for fire fighting.
- ☐ Such signs as are required by the building code or S.25 of the Disabled Persons Community Welfare Act, 1975.

RESIDENTIAL ZONE

DEVELOPMENT STANDARDS

The following standards apply in respect of one dwelling unit per site or one granny flat per site in addition to an already existing dwelling house or dwelling unit or accessory buildings not exceeding a maximum size of 75m²

FRONT YARDS

4.5 metres

SIDE YARDS

One side 3 metres (to allow for rear access). One side 1.5 metres

REAR YARDS

4.5 metres

HEIGHT

Maximum height 10 metres. No part of any building shall be higher than 3 metres plus the horizontal distance between that part of the building and the boundary of the site

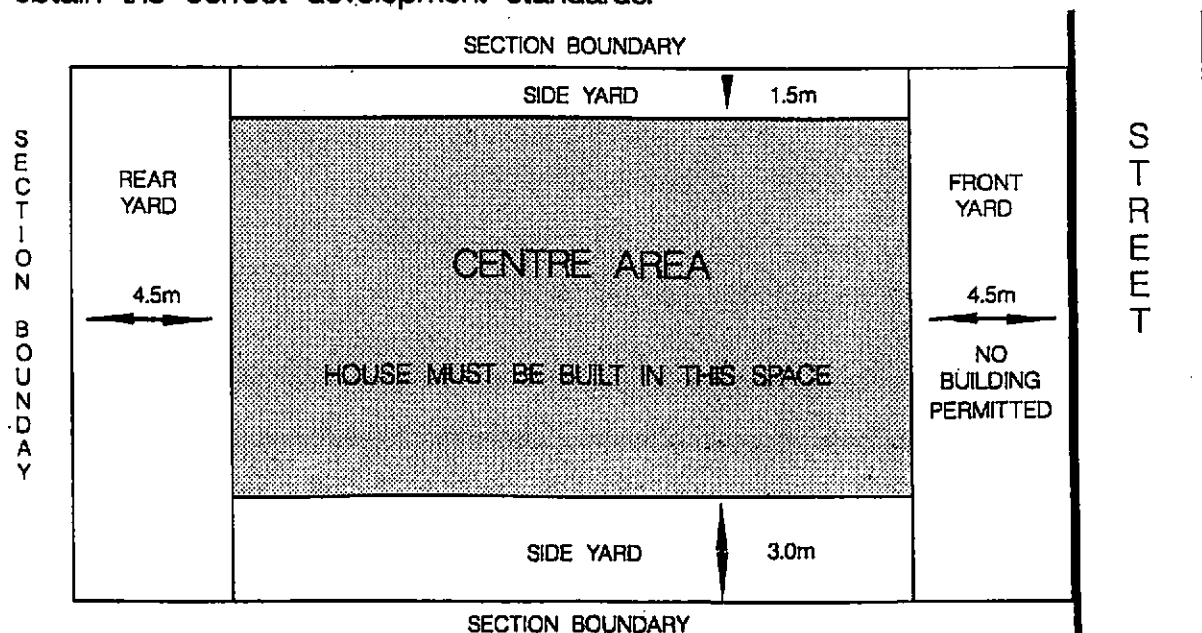
COVERAGE

35%

REAR SITES

The above standards apply except in the case of yard requirements, these may be reduced to 3 metres

In a case where two to four dwelling units or dwelling houses are proposed on one site, the applicant will be required to contact the Council Office to obtain the correct development standards.



GARAGES

Garages may be located within the side and rear yards with the written consent of the adjoining owner where necessary.

ANCILLARY BUILDINGS

Ancillary buildings may be located within the rear yard with the written consent of the adjoining owner where necessary.

RURAL/RESIDENTIAL ZONE

Standards as for Residential Zone with the following exceptions:

Rear Yards	7.5 metres
Coverage	No specification

RURAL ZONES: DEVELOPMENT STANDARDS

No building shall be erected within 10 metres of a water course.

BULK AND LOCATION REQUIREMENTS

TYPE OF BUILDING	FRONT BOUNDARY	REAR BOUNDARY	SIDE BOUNDARY	MAXIMUM PERMITTED HT
Residential Buildings	8m	8m	5m	10m
Other Buildings	16m	12m	12m	20m

Buildings or enclosures for the housing and keeping of animals in confinement shall not be within 28m from any residential building or less than 20m from any boundary of the site.

Private garages and accessory buildings may be erected on rear yards provided they do not occupy more than one fifth of the rear yard area.

Private garages may be erected within the side yard of residential sized allotments so long as it does not exceed 3m in height and provided the written consent of the adjoining owner is first obtained.

DEVELOPMENT STANDARDS OF ALL OTHER ZONES:

Enquiries to District Council Office.

PLEASE NOTE:

Before any building operations commence the owner must obtain authority in writing from the District Engineer for any work contemplated between the existing road formation and the boundary. This work includes crossings, drives, obstruction to water tables, footpaths, etc. Builders and Owners are liable for any damage to footpaths or kerbing and channelling.

Memo: Building Inspectors

From: G.M.

re Building Consent - R.C Skylete

Have conditions:

The proposal involves a reduced setback from the side boundary.

The neighbour's written consent to that reduced setback has been provided.

The appropriate Building Consent will be able to issue subject to technical compliance.



29/7/98

R. C. Stapleton
Josephs Road,
R.D.1
Carterton

The General Manager

Carterton District Council
Carterton

28 July, 1998

For the attention of the Town Planning Committee

Dear Sir,

Proposed Extensions to house, Josephs Road, R.D.1 Carterton

Attached are some sketches which indicate extensions which we would like to make at the above address. These sketches at this time are preliminary and undeveloped.

Dispensation is requested from the Council Ordinances in respect of:

1. Reducing the side boundary to the Saywell property to approximately 1200 millimetres.
2. Penetrating the light envelope which we believe is required even in a rural situation

In substantiation of these requests we suggest that in this rural environment no person is disadvantaged. Our neighbours Pam and Rex Saywell also support our application and their letter of such support is herewith.

We look forward to your favourable consideration.

Yours faithfully,



R. C. Stapleton F.N.Z.I.A.,
Chartered Architect.

R. Saywell
Josephs Road,
R. D. 1
Carterton.

The General Manager
Carterton District Council,
Carterton

28 July, 1998

Dear Sir,

Extensions to Stapleton Property, Josephs Road

I have had explained to me and have sighted drawings of the extensions that the Stapletons wish to make on the North West side of their property.

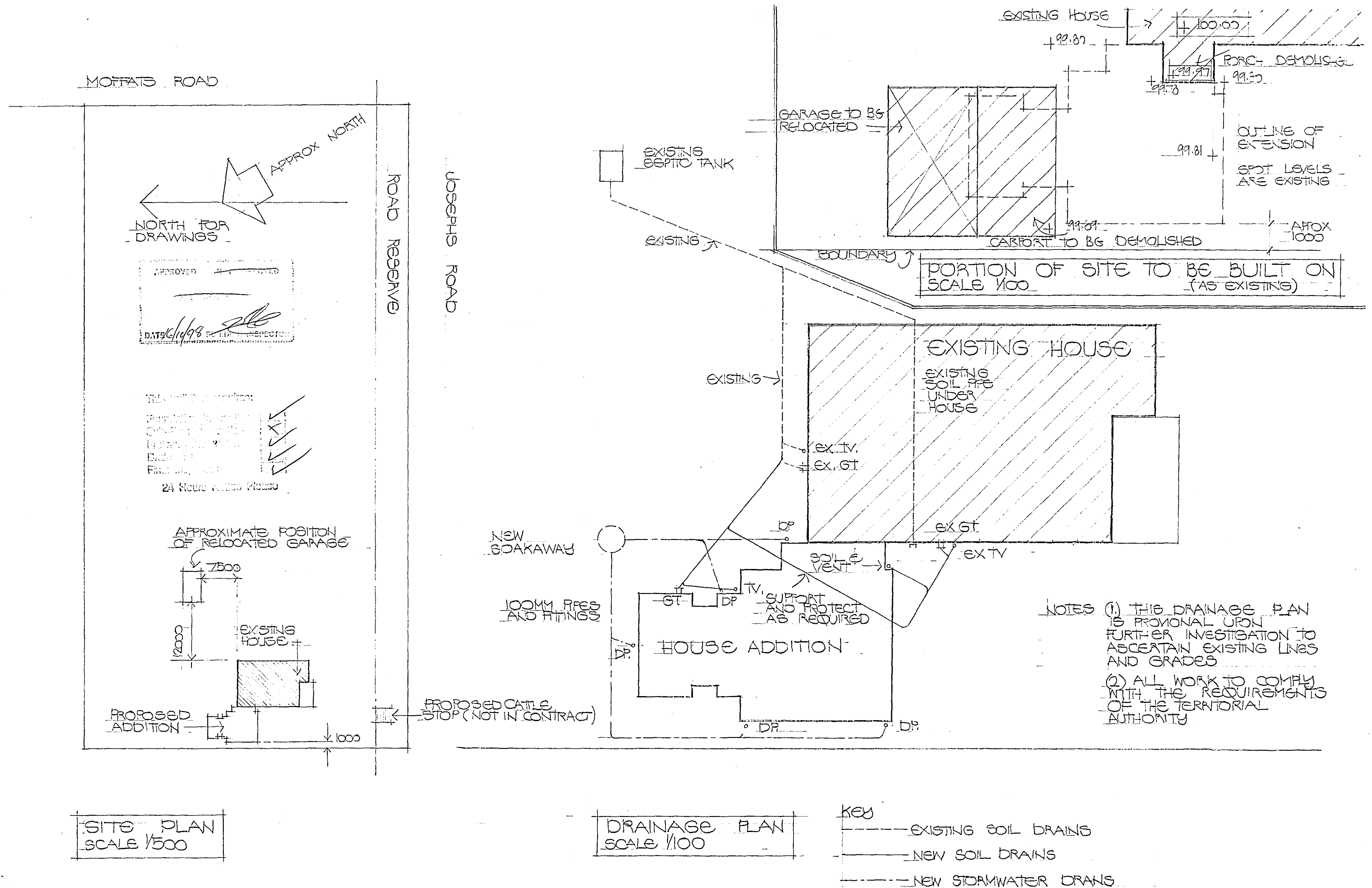
It is understood that a dispensation is required in terms of the distance to the boundary and impingement into the building envelope lines.

Being a rural situation, what is required does not in any way disadvantage me.

I therefore have no objections to their proposal and do in fact support it.

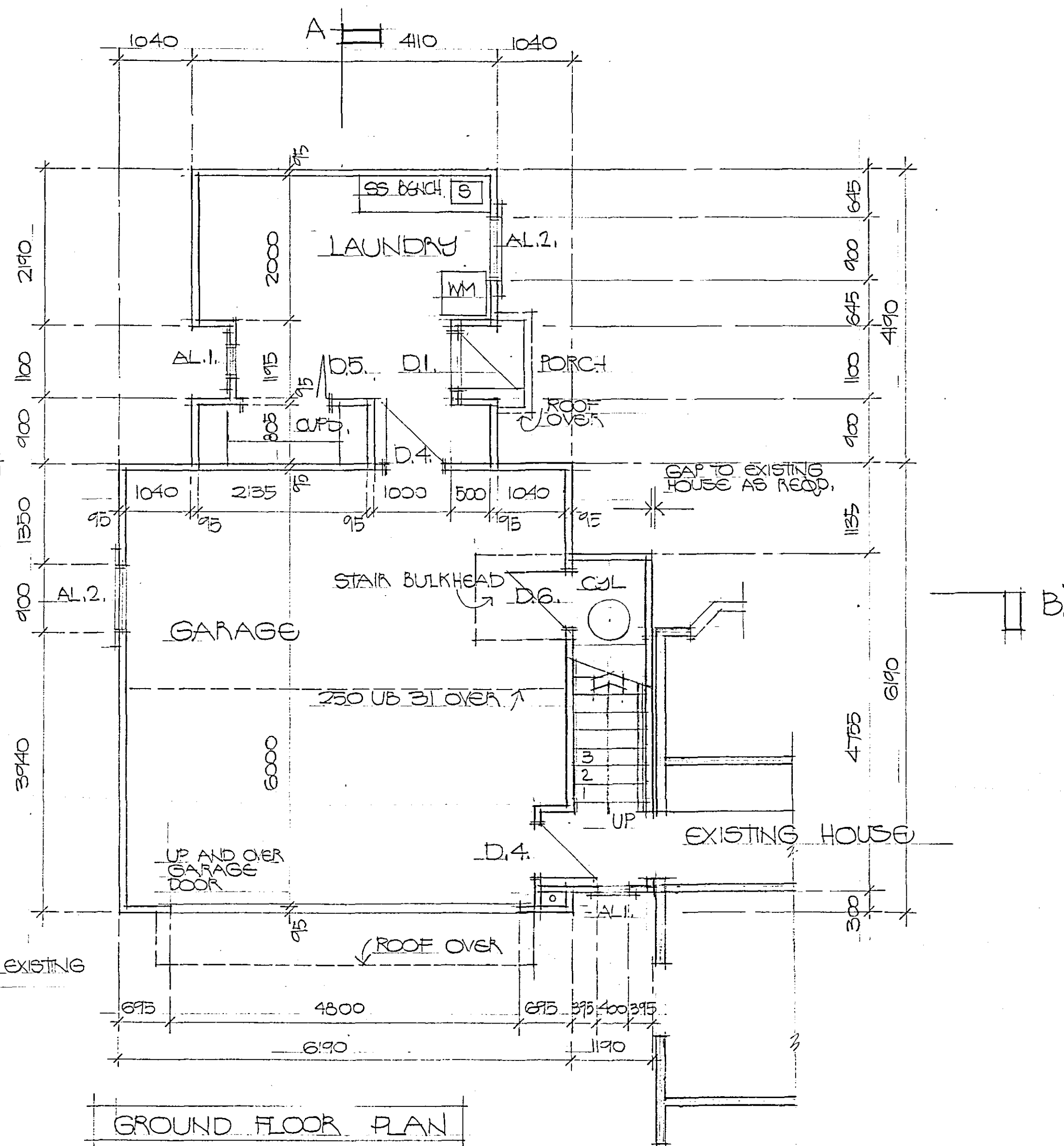
Yours faithfully,

R W Saywell



EXTENSIONS TO HOUSE AT JOSEPHS ROAD CARTERTON SITING AND DRAINAGE PLANS

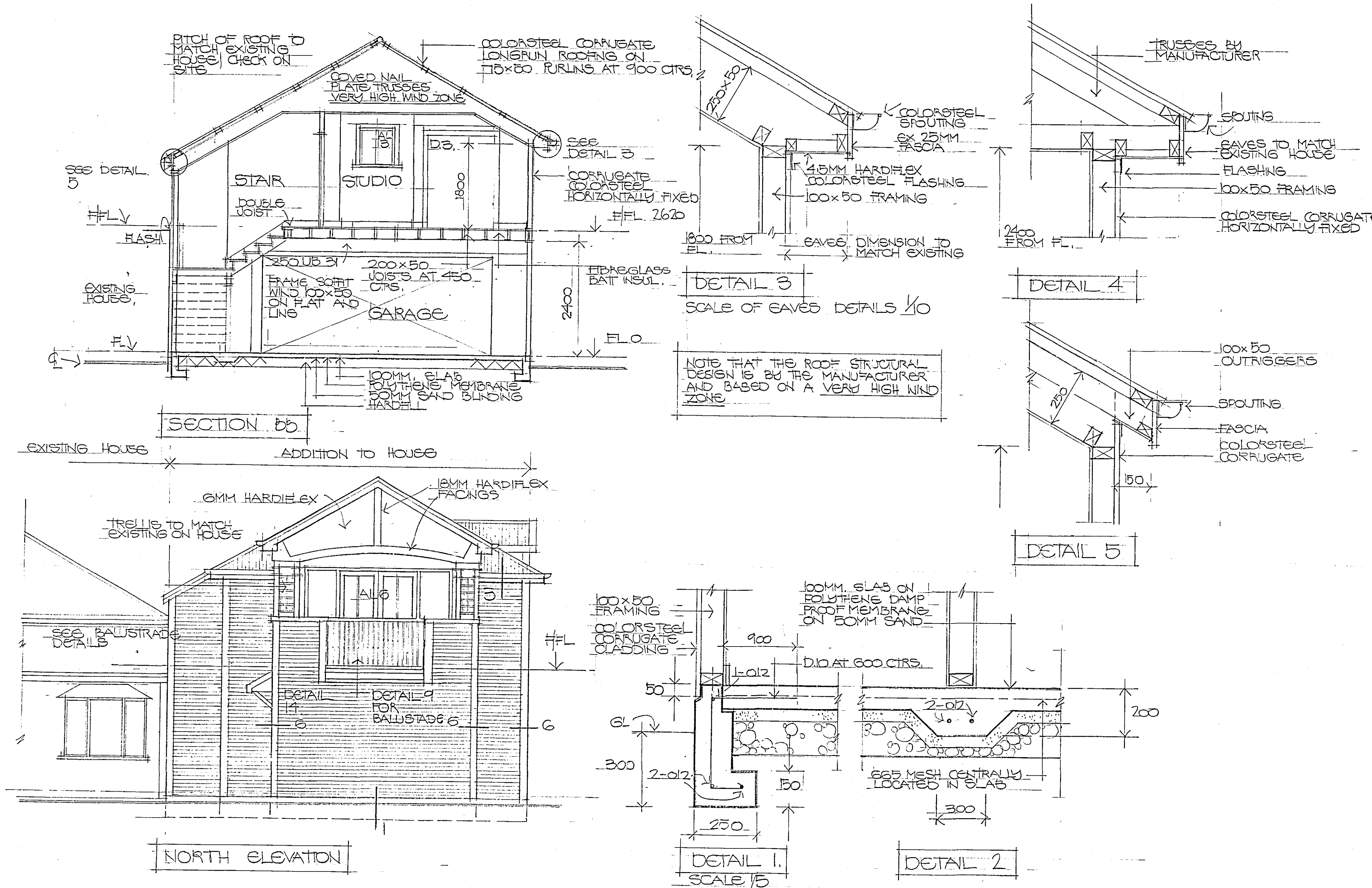
R.C. STAPLETON FZIA,
 ARCHITECT
 JOSEPHS ROAD, CARTERTON
 TELEPHONE 06 319 8734
 SEPTEMBER 1998



EXTENSIONS TO HOUSE AT JOSEPHS ROAD CARTERTON
PLANS
DRAWING 98/011

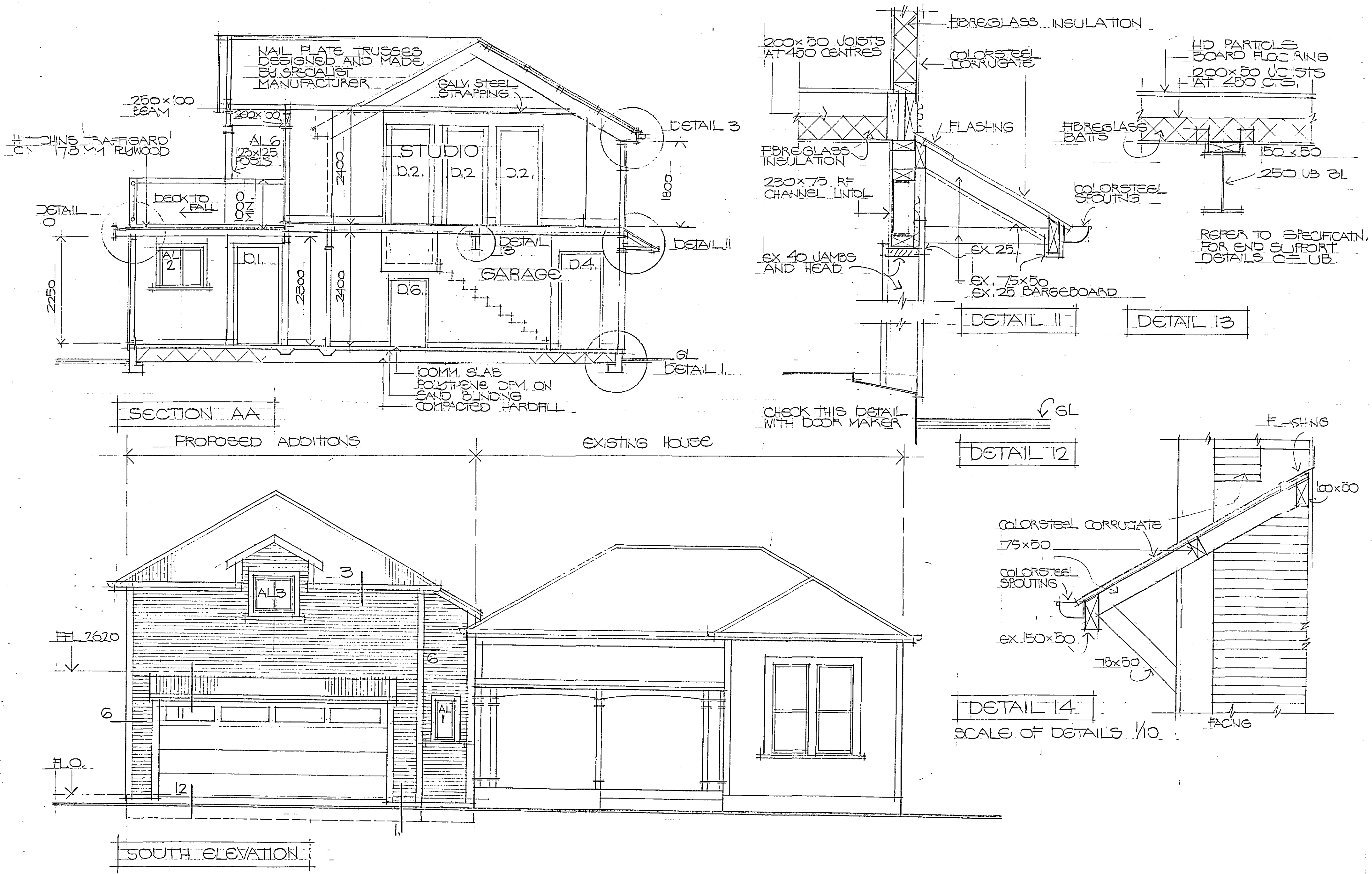
DRAWING 98/011

ROSTAPLETON F.R.Z.A.,
ARCHITECT
JOSEPHS ROAD, CARTERTON
TELEPHONE 06 375 8734
SEPTEMBER 1978



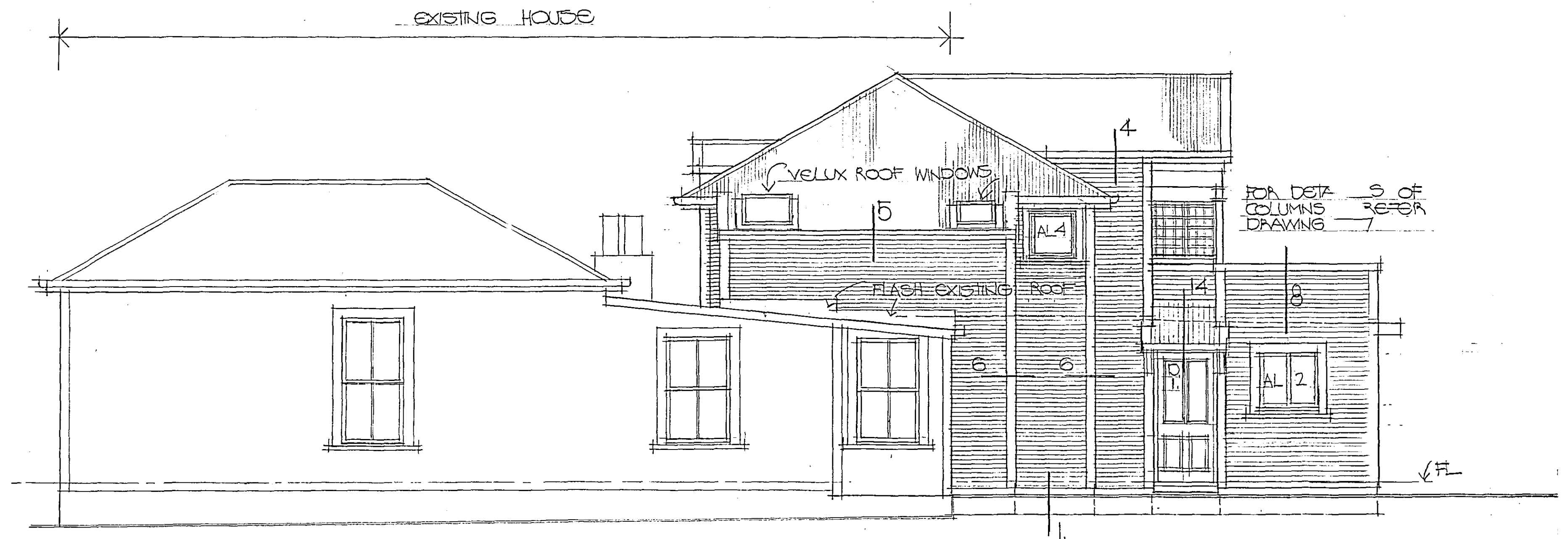
EXTENSIONS TO HOUSE AT JOSEPHS ROAD CARTERTON SECTIONS ELEVATIONS AND DETAILS DRAWING 08/012

RO STAPLETON FNZIA
 ARCHITECT
 JOSEPHS ROAD, CARTERTON
 TELEPHONE 06 371 8734
 SEPTEMBER 1998

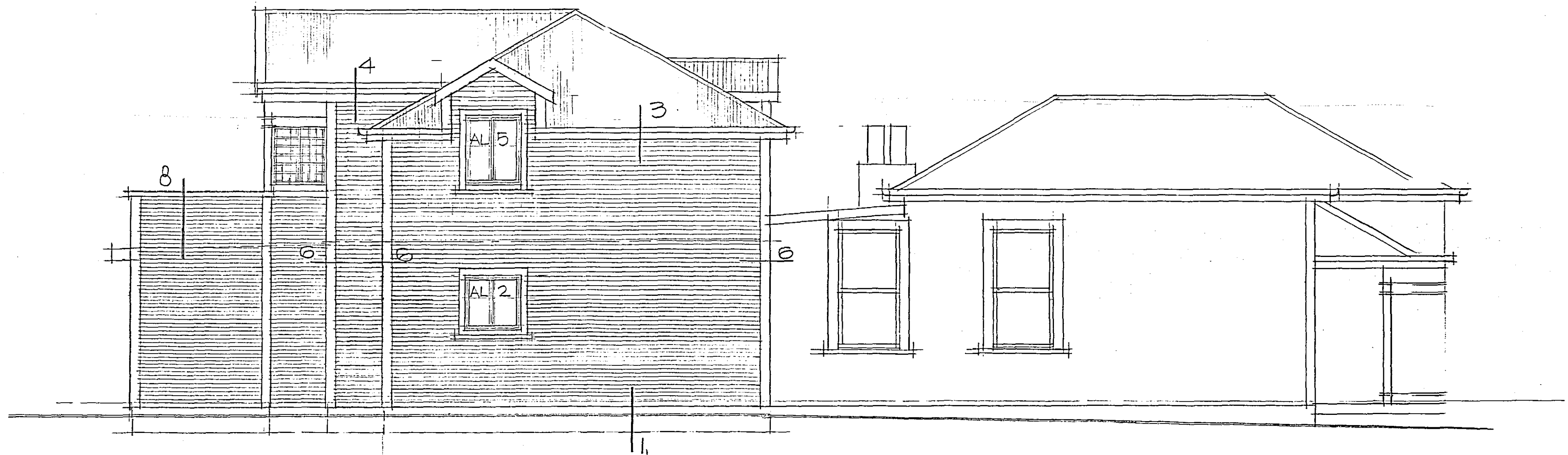


EXTENSIONS TO HOUSE AT JOSEPH'S ROAD CARTERTON SECTIONS ELEVATIONS AND DETAILS DRAWING 98/013

B.C. STAPLETON FNZIA,
ARCHITECT
JOSEPH'S ROAD, CARTERTON
TELEPHONE 06 371 6734
SEPTEMBER 1990



EAST ELEVATION

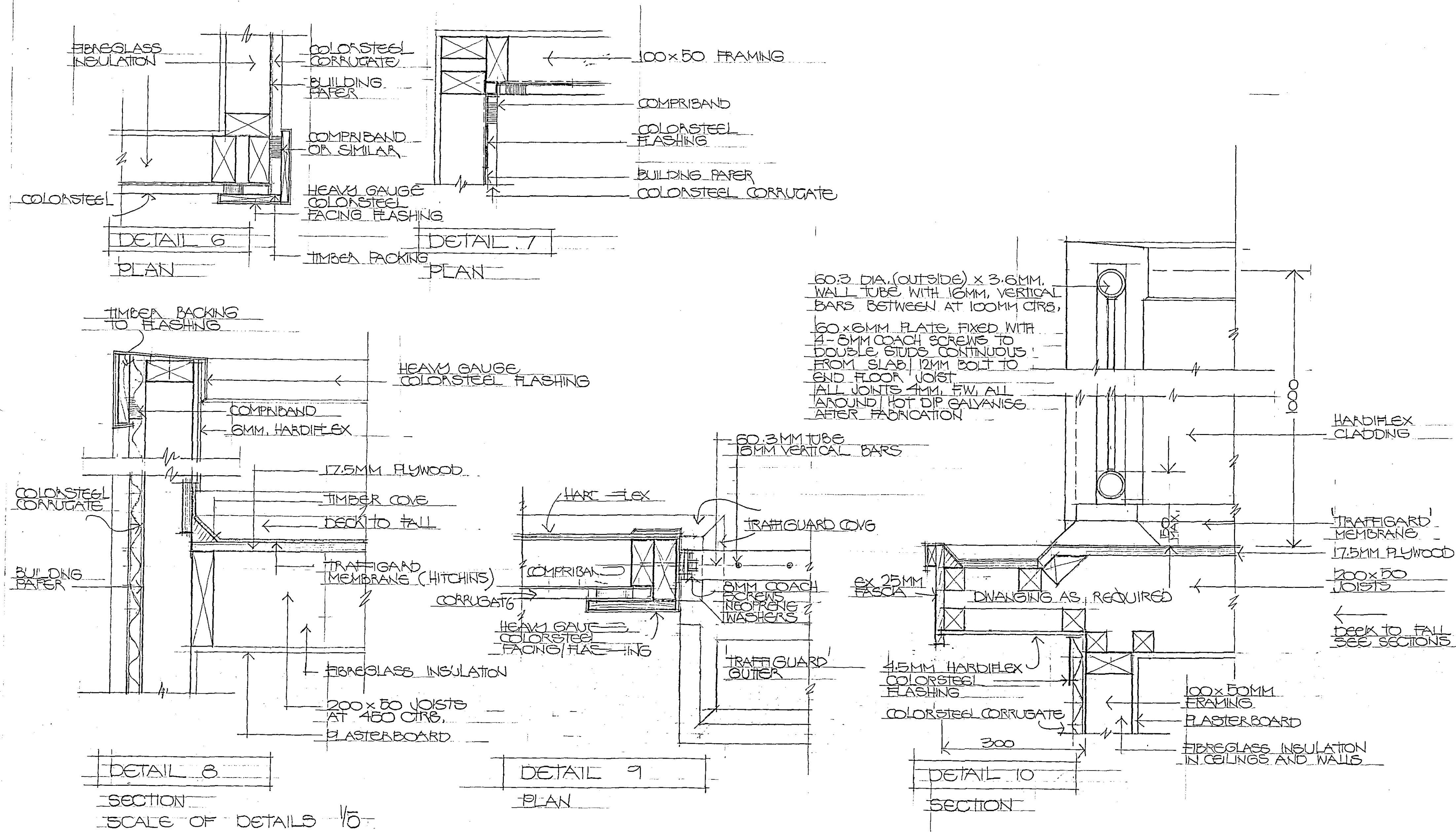


WEST ELEVATION

EXTENSIONS TO HOUSE AT JOSEPHS ROAD CARTERTON
ELEVATIONS

DRAWING 98/014

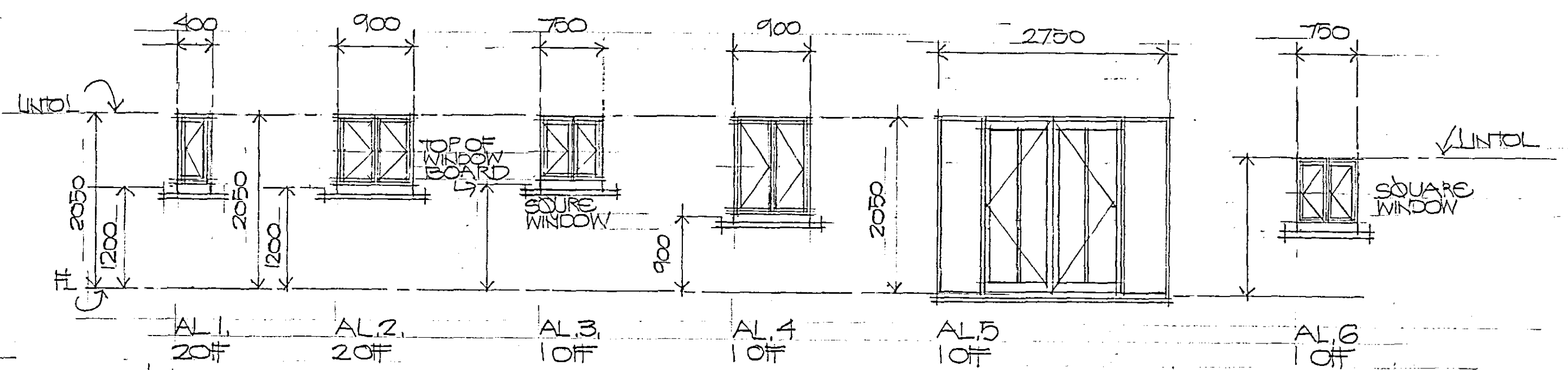
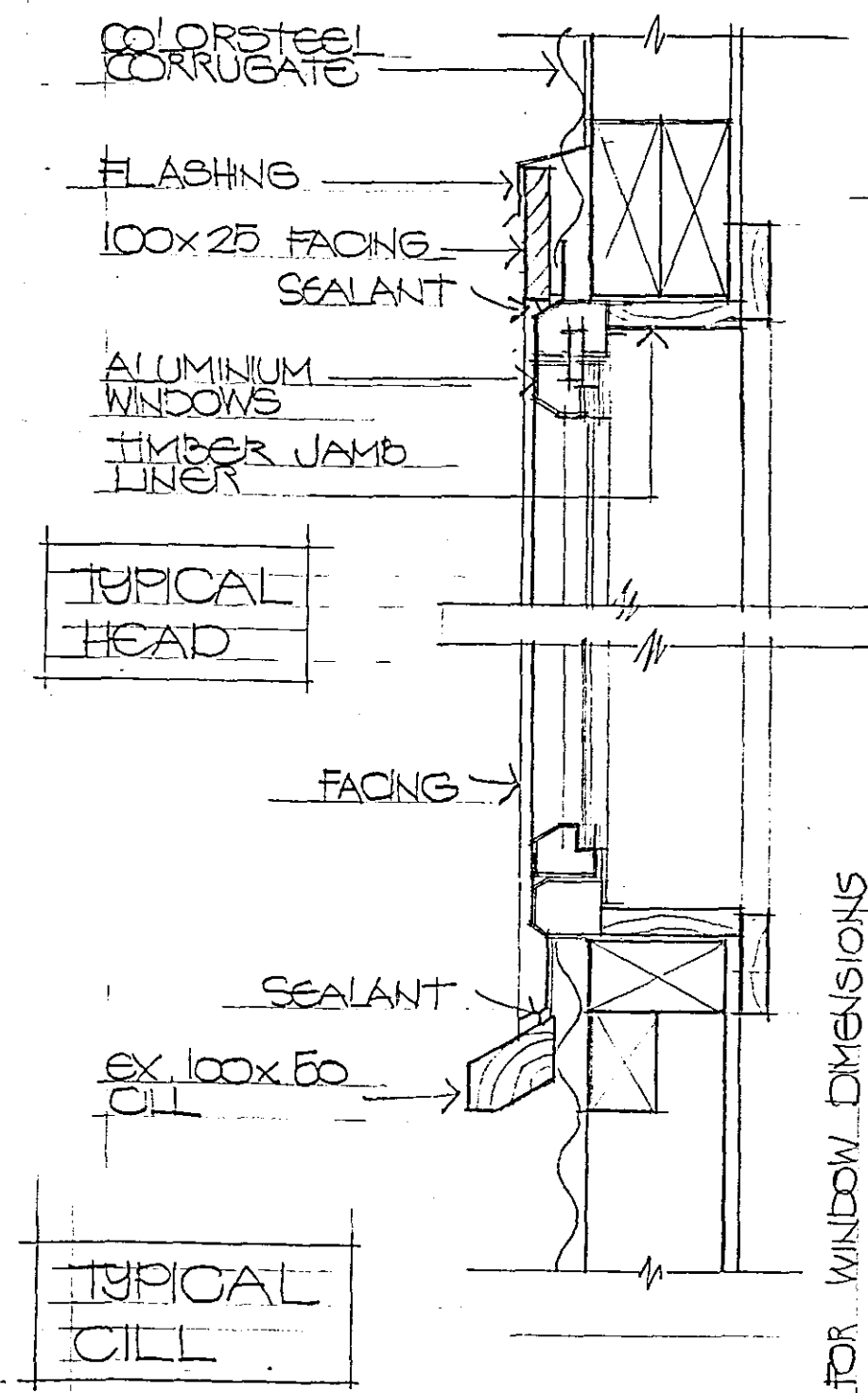
RO STAPLETON FNZIA,
ARC TEST
JOSEPHS ROAD, CARTERTON
TELEPHONE 06 379 234
SEPEMBER 1998



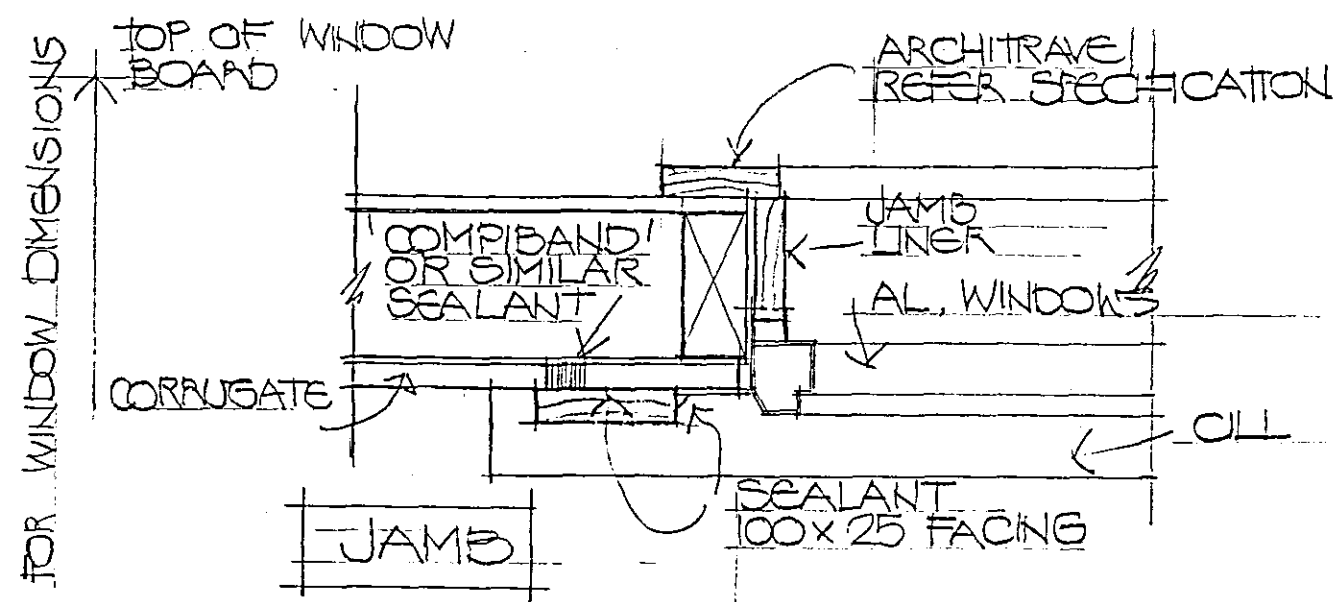
EXTENSIONS TO HOUSE AT JOSEPHS ROAD CARTERTON DETAILS

DRAWING 98/015

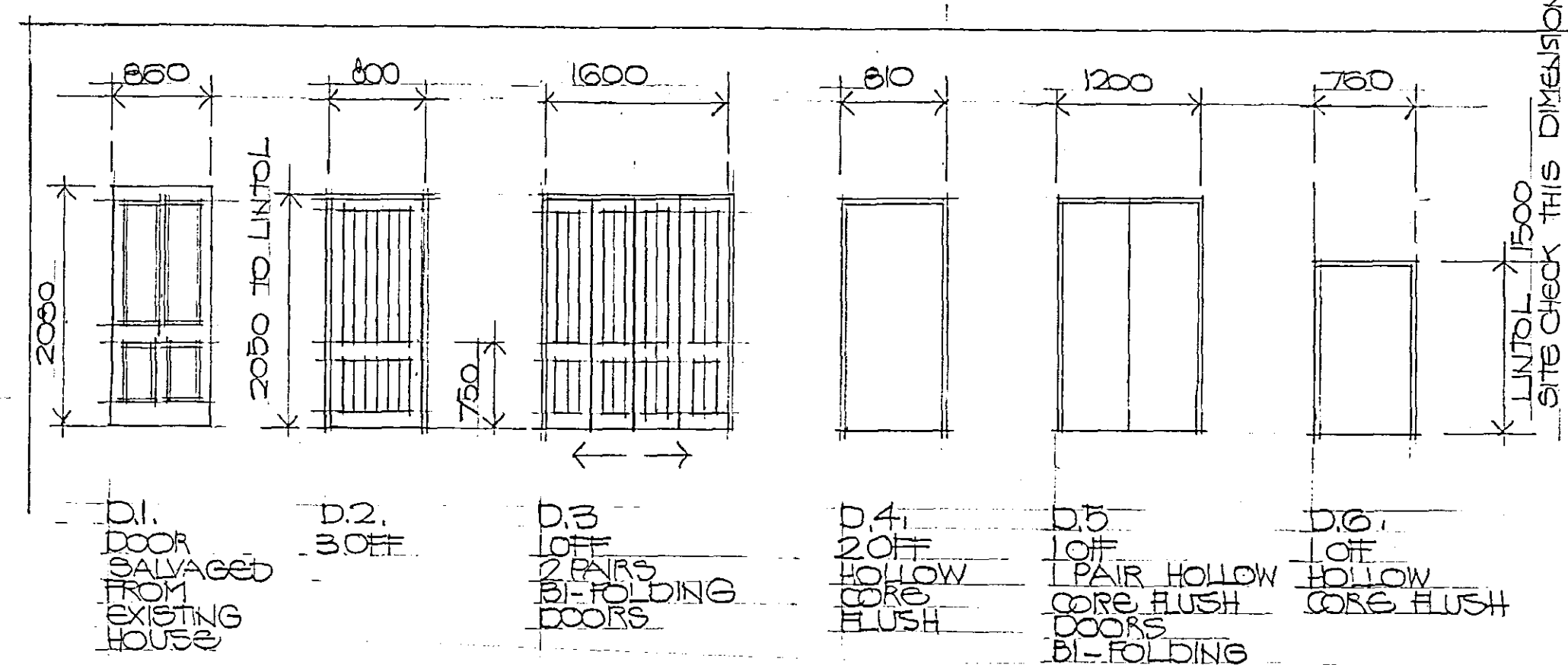
R.C. STAPLETON FNZIA
ARCHITECT
JOSEPHS ROAD, CARTERTON
TELEPHONE 06.379.8734
SEPTEMBER 1996



SCHEDULE OF WINDOWS
SCALE 1/50



WINDOW DETAILS
SCALE 1/5

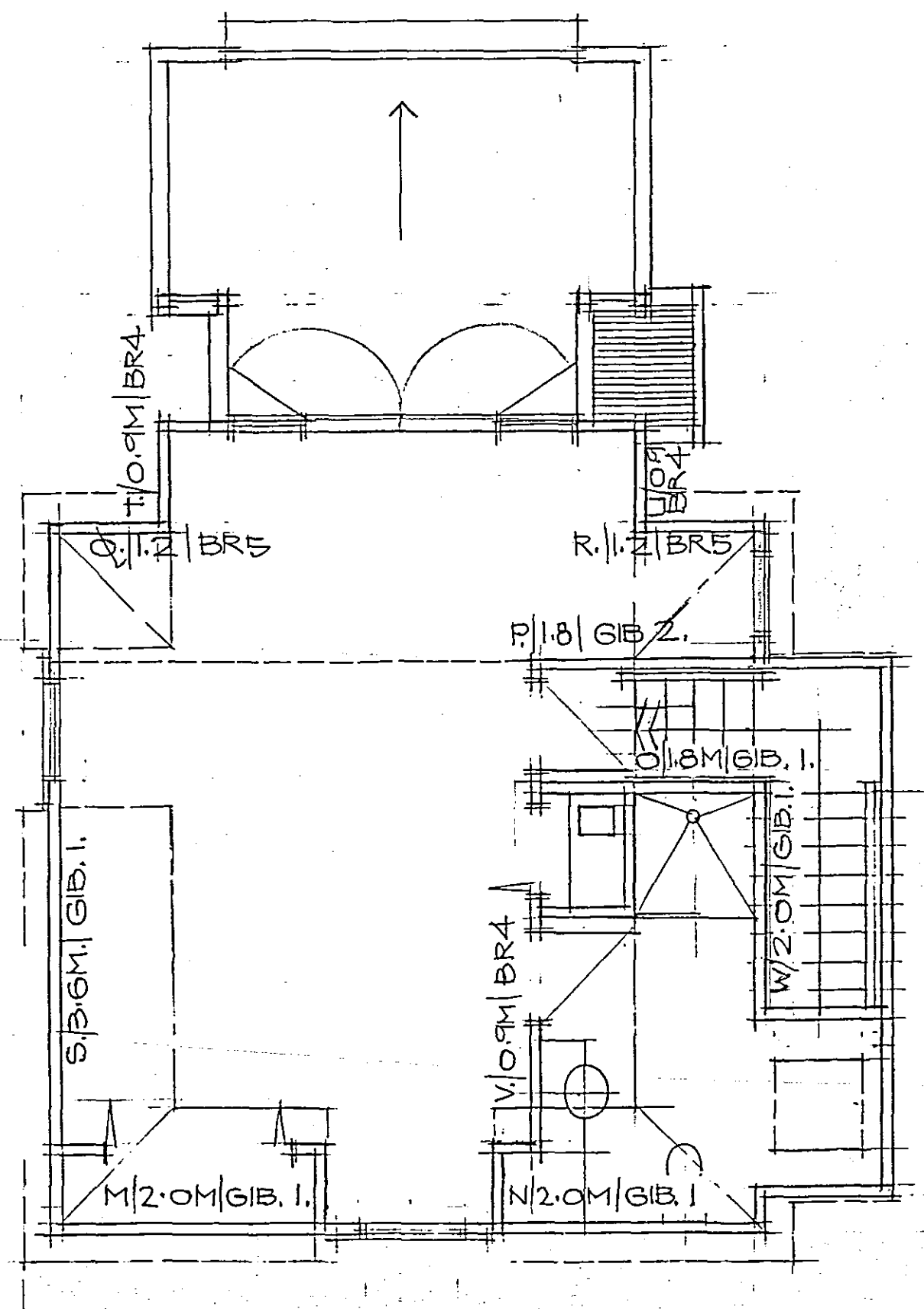


SCHEDULE OF DOORS
SCALE 1/50

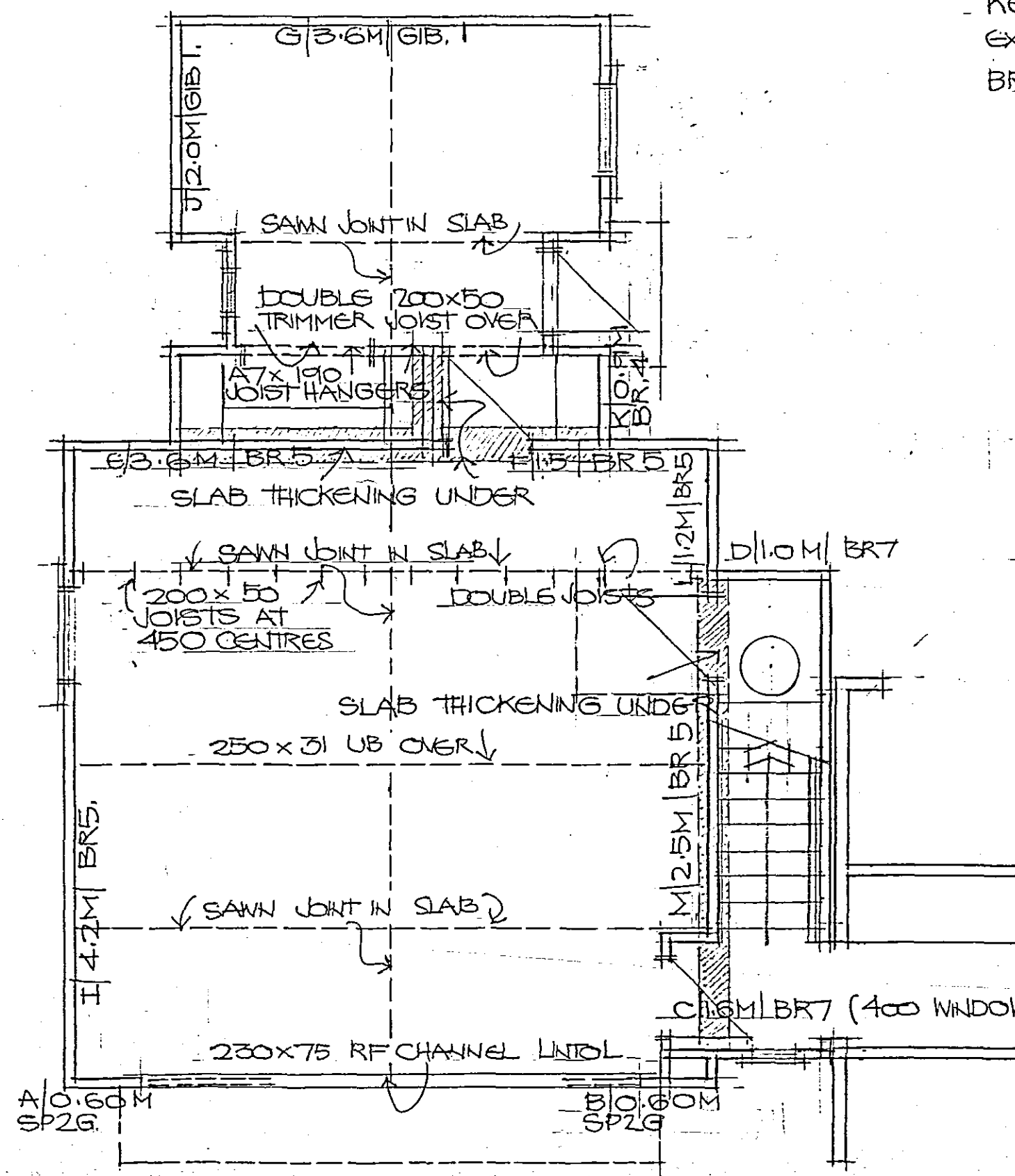
EXTENSIONS TO HOUSE AT JOSEPHS ROAD
WINDOW AND DOOR SCHEDULES

CARTERTON
DRAWING 98/016

RO STAPLETON FNZIA,
ARCHITECT
JOSEPHS ROAD, CARTERTON
TELEPHONE 06 379 8734
SEPTEMBER 1998



FIRST FLOOR PLAN
SCALE OF PLANS 1/50



GROUND FLOOR PLAN

KEY TO BRACING SCHEDULE
EXAMPLE: A/10.6M/SP2G
BRACE REFERENCE BRACE LENGTH

BRACE TYPE/SEC
ATTACHED GIB BOARD
DETAILS
SP2G BRACE IS
CONSTRUCTED AS A BR7
BRACE, 10.7MM RY
ONE FACE BRACING
OTHER FACE WITH END
STUD STRAPS

EXTENSIONS TO HOUSE AT JOSEPHS ROAD CARTERTON

BRACING SCHEDULE

DRAWING 98/017

RC STAPLETON FNZIA,
ARCHITECT
JOSEPHS ROAD,
CARTERTON

TELEPHONE 06 3798734
SEPTEMBER 1998

SPECIFICATION

OF MATERIALS AND WORKMANSHIP REQUIRED

FOR AN ADDITION TO A HOUSE AT

FIRE NUMBER 4 JOSEPHS ROAD

R.D.1 CARTERTON

FOR MR. AND MRS. R. C. STAPLETON

OCTOBER 1998

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SECTION I

PRELIMINARY AND GENERAL

1.1 SCOPE

The contract is to construct an addition to an existing house. The scope of the work is contained within the accompanying drawings with file numbers 98/010 to 98/017 inclusive and this specification.

1.2 SITE

The site is at fire No. 4 Josephs Road, R.D.1 Carterton.
The legal description is : DP 67695:BLK IX TIFFIN SD

1.3 TENDER

- (i) The lowest or any tender shall not necessarily be accepted.
- (ii) Tenders shall state in their form of tender the following information:
 - (a) The time in which the Work would commence on site.
 - (b) A guarantee that once Work is started it shall be carried out with due diligence until complete
 - (c) The time within which the Work will be completed.
 - (d) A priced summary of trades is to be supplied which adds to the tendered sum.

1.4 CONDITIONS OF CONTRACT

The Conditions of Contract shall be those of the New Zealand Institute of Architects.

1.5 BYLAWS

THE Contractor shall conform in all respects to the Bylaws of the Territorial Authority. He shall also be familiar with and comply with the requirements of the Building Code. Give all notices and obtain all the necessary consents to enable the work to be executed, paying such fees to the authorities as required.

1.6 DRAWINGS

The drawings and specifications are solely instruments of service, are the property of the Architect and shall be returned to him at the completion of the contract.

Figured dimensions are between rough framing unless specifically stated otherwise and shall be used in preference to scaled dimensions.

It shall be the responsibility of the Contractor to verify all dimensions and levels on site and report any discrepancies to the Architect before proceeding.

1.7 AMBIGUITIES

Should there be any doubt regarding omissions or ambiguities within the contract documents the Contractor shall refer such queries to the Architect.

1.8 INSURANCES

(i) Employers' Liability Act

The Contractor shall take out an accident insurance comprehensive policy and indemnify the Owner against any claim for compensation and for damages in

respect of all workers, and all other persons employed upon or around the Works.

(ii) Public Liability Insurance

The Contractor shall take out a Public Liability Insurance as required by the General Conditions of Contract and Specific Conditions, in the joint names of the Employer and Contractor against claims in respect of death or injuries or damages arising from his operations.

(iii) Insurance of the Works

The Owner shall be responsible for extending the present insurance on the house to include the value of the additional Work and for keeping the whole premises insured for the duration of the Contract.

(iv) Additional Insurances

The Contractor shall take out any additional insurances that he considers necessary to provide cover for his plant and equipment and for materials on site.

1.9 PROTECTION OF PROPERTY

The Contractor shall take precautions to protect all property and shall make good at his own expense any damage caused by and during his operations.

All operations must be suspended during weather which would affect the quality of the Work in progress. Should the roadway be disturbed by the works make good to the satisfaction of the Territorial Authority.

Repair any damage that may be caused during the Contract to the many parts of the Works. Repair or make good any defect that may appear in the Works during the Contract or over the length of the maintenance period.

Care shall be taken to protect wanted trees and plants around the periphery of the site.

1.10 PLANT AND LABOUR

Provide all materials, labour, cartage, plant, tackles, tools and other equipment as may be necessary for the proper carrying out of the Works.

The Contractor shall erect and maintain all scaffolding when and where required by all trades in accordance with the relevant code requirements.

1.11 MATERIALS AND WORKMANSHIP

All work shall be carried out in strict accordance with the plans and specifications, no deviation will be allowed without approval of the Architect.

All materials shall comply with the relevant NZ Standards where they exist and workmanship shall be of the highest quality.

1.12 COMPLETION

At completion of the Contract, the Contractor shall remove all rubbish caused by the work from the building site. Any cracked or broken glass shall be replaced and the whole of the building left clean. During the progress of the Work the building shall be kept broom clean at all times.

1.13 SETTING OUT AND LEVELLING

Perform ALL SETTING OUT OF THE Works. No mistake in setting out or levelling shall be allowed as a basis for claim for extra work. Check all dimensions and levels given on the drawings.

1.14 WORK SHOWN AND MENTIONED

The attached specifications and drawings show the extent of the Work but there is no warranty expressed or implied that they show each and every minor detail required to be included in the contract.

Should any material, work or structural member appear to be inadequately described yet obviously necessary for the neat, strong and obviously satisfactory completion of the Work, the Contractor shall include and allow for same in his tender.

1.15 SHEDS AND TOILET FACILITIES

Provide on site a temporary toilet and sheds as required. These may be provided on the lawn on the north side of the house (or further away if desired)

The Contractor shall arrange the location of these facilities with the Architect and clear away on completion.

Note: The lawn will be relaid after termination of the contract at the Employer's expense.

1.16 POWER AND WATER

Power and water are available from the house, the cost of which will be paid by the Employer. Any temporary extensions of such services shall be at the Contractor's cost.

1.17 SITE ACCESS

The site may be accessed on the east and west sides of the house, through the existing gates.

On the west side of the addition the boundary is quite close. Should additional space be required it may be arranged with the neighbour provided all fences are reinstated at the conclusion of the contract. Also during the contract fences must securely contain stock.

The lawn area on the north side of the house may be used for storage of materials.

1.18 EXTRAS AND OMISSIONS

No instructions shall be considered as extra work and if any shall be furnished, showing in the opinion of the Contractor an extra over and above the Work specified or shown the same shall be queried with the Architect. Extras and/or deductions must be authorised and agreed upon by the Architect before proceeding.

1.19 PROTECTION OF SURFACE FINISHED AND COMPLETED WORKS

The Contractor must ;take all necessary precautions to protect and maintain all surface finished completed Works from damage, marking or disfigurement during the progress of the Works. In the event of such damage, the Contractor shall repair, replace or make good the damaged part of the Works.

1.20 ACCOUNTS TO BE PRODUCED

At the time of settling the various accounts, the Contractor shall produce receipted account and time sheets for any authorised extras or variations to the work.

Receipted accounts must also be submi tted for expenditure of netr sums.

1.21 ATTEND UPON ALL TRADES

The Cointractor shall attend upon all trades and render reasonable assistance to sub-contractors and the tradesmen employed on the job.

1.22 PROVIDE AND FIX

The word "provide" and the word "fix" used separately in this specification shall be taken to mean "provide and fix" unless otherwise stated.

1.23 MAINTENANCE

The maintenance period shall be three calendar months after the Owner has taken final possession. Any defects in materials, workmanship or any other parts that require adjusting or replacing, which have been included in the work shall be adjusted or replaced at the contractor's expense.

1.24 MAINTENANCE RETENTIONS

A maintenance retention of 10% will be withheld from progress payments. Upon acceptance of Practical Completion by the Architect, half of this retained sum of monies will be released.

The maintenance period is ninety days. At the end of the maintenance period the monies still retained will be released subject to the completion of the maintenance items.

1.25 COMPLETION DATE

The contract shall be completed to Practical Completion stage by 15 March 1999.

1.26 PLANNING OF THE WORK

The Employer will be in residence during the period of the contract. Whilst inconvenience is accepted, as a consequence of the work, this shall be minimised as much as possible.

SECTION 2

DEMOLITIONS AND REMOVALS

2.1 PRELIMINARY AND GENERAL

See Preliminary and General clauses. All applicable clauses apply to this part of the contract.

2.2 GENERAL

Carry out all removal and demolition work as scheduled and indicated on the drawings or as necessary.

All materials from the demolitions shall be the property of the Employer and shall be stored on site as directed by the Architect.

In all cases provide suitable protection to area that may be exposed to inclement weather.

2.3 MAKING GOOD

It shall be the Contractors' responsibility to make good all surfaces, fittings and materials damaged by or during any demolition work. This shall also apply to structural work which in all cases must finish in a sound structural condition.

2.4 DEMOLITION AND REMOVAL WORK

Demolish the following:

Existing porch together with obsolete services that may be removed or sealed off.

Prior to demolition remove washing machine and seal off services. Also remove gun cabinet. Employer to take possession of both.

- (ii) Eaves to monopitch on west side of house
- (iii) Carport. Remove water supply pipe to carport
Do not leave deadleg.
- (iv) Conduit and electrical wiring on west side of existing house. It is believed this is obsolete.

Note: Before commencement of the contract, the small gum and lucerne trees, together with roots will be removed.

Remove the garage from its present location and reposition where indicated on the drawings. Pour 100 mm slab with thickened edges on which to place it.

SECTION 3

EXCAVATIONS AND EARTHWORKS

3.1 PRELIMINARY AND GENERAL

See Preliminary and General clauses. All applicable clauses apply to this part of the contract.

3.2 SCOPE

The site is basically flat. The Contractor to satisfy himself as to the scope of the work.

The work comprises:

1. Small trees currently cover part of the site. These will be removed prior to the contract commencing. Any soft spots left by tree roots to be excavated and hardfilled.
2. Strip the site of all vegetation and to soil Stockpile topsoil on lawn where directed.
3. Excavate, trench and trim as necessary to prepare the site for the construction work.
4. Hardfilling and other preparation for the ground floor slab
5. Backfilling after completion of construction.

3.3 EXCAVATIONS

Excavate and backfill to required levels, true to grade. Backfilling shall be compacted.

3.4 COMPACTED FILL

Hardfill with 200 mm layer of stone soiling and 150 mm layers of no fines crushed stone of nominal size 12.-30 mm. Compact to 90% British Standard Compaction to depths required

Alternat ive local specifications will be considered.
Any overbreak to be brought up to the necessary levels
with hardfill as specified.

SECTION 4

CONCRETOR

4.1 PRELIMINARY AND GENERAL

See Preliminary and General clauses. All applicable clauses apply to this part of the contract.

4.2 NEW ZEALAND STANDARDS

4.2.01 Materials

The following standards apply to this specification:

NZSD 3122 Portland Cement

NZS 3121 Water and Aggregate

NZS 3108 Concrete Production

4.2.02 Formwork

NZS 3109 Concrete Construction

4.2.03 Reinforcing

NZS 3402P Reinforcing

4.3 CONCRETE

All concrete shall be 17.5 Mpa strength

4.4 FOOTINGS AND FOUNDATION WALLS

Place steel, build in metalwork, pipe sleeves etc. as required. Cast rebates as necessary. Pour footings in accordance with drawings.

4.5 FLOOR SLABS

Blind hardfill specified with 50 mm sand. Lay 'Moistop' 748 underlay moisture barrier to manufacturers instructions. Firmly fix screeds and lay in position 665 mesh reinforcing steel. Support mesh on blocks. Pour concrete and fully compact. After the initial set has occurred a smooth ~~had~~ steel float finish shall be applied. Properly cure slabs by an approved process.

Within 48 hours sawcut joints in slabs as indicated on the drawings. Portions of footing walls to view shall have a smooth and regular "fairface " finish

SECTION 5

STRUCTURAL STEEL AND METALWORK

5.1 PRELIMINARY AND GENERAL

Refer to Preliminary and General clauses.
All applicable clauses apply to this part of the contract.

5.2 STANDARDS

The following standards are applicable:

Structural Steel	:	BS 4360 grade 43A
Bolts and Nuts	:	AS 1111:1971, AS1112:1972 AS 1252:1973
Structural Steel Connections (welding)	:	NZS 4701:1981
Galvanising Steel (quality)	:	BS 779 Part I

5.3 STEEL BEAMS

Supply beams as follows :-

- (i) Over garage door a 230 x 75 RF channel lintol
- (ii) At mid span of garage ceiling a 250 UB 31 beam

Beams shall be drilled for bolting timber attachments
and chain for operating garage door.

Steelwork brushed clean and primed.

5.4 BALUSTRADE

Balustrade as detailed on the drawings. Balustrade and
coach screws hot dip galvanised.

SECTION 6

CARPENTER AND JOINER

6.1 PRELIMINARY AND GENERAL

See Preliminary and General clauses. All applicable clauses apply to this part of the contract.

6.2 STANDARDS

The NZ Building Code must be adhered to as part of this contract, together with related Standards. Of particular relevance to NZS 3604 with its amendments.

6.3 TIMBER TREATMENTS

Timber treatments to comply with the relevant T.P.A specification.

6.4 SEASONING

Finishing timbers properly kiln seasoned to appropriate moisture content.

6.5 TIMBER GRADING

Refer to NZS 3631 (1988)

6.6 MACHINE DRESSING

All framing timbers gauged. Dress finishing timbers to a smooth even surface with no machine marks or other defects.

6.7 ADHESIVES AND FASTENINGS

Use adhesives appropriate to their circumstance. Provide all nails, screws, bolts, nailplates etc.

Where proprietary fixings are necessary they shall be used in strict accordance with their manufacturers' directions.

Nails, screws, bolts and other ironwork used externally shall be galvanised.

6.8 WORKMANSHIP

All work by skilled tradesmen.

The Carpenter shall attend upon and co-ordinate the work or of other trades.

6.9 DAMP PROOF COURSE

Between all faces of timber in contact with concrete place a 3 ply bituminous DPC ;

6.10 FRAMING TIMBER SCHEDULE

Timbers shall be treated as follows :

- (i) Exterior wallplates III Tanalised No.1 framing grade Pinus Radiata.

Studs, noggings, lintols, plates.

- (ii) Roof rafters, ridges, hip rafters, overpur lins, Joists supporting 1113: Tanalised No.1 framing grade Radiata pine.

6.11 WALL FRAMING

Framing timber uniformly gauged, be straight and true to provide a flush surface for wall linings. Framing shall be erected true to line and plumb and shall be temporarily braced in position until finally fixed.

6.11.1 STUDS

Construct studs at centres required. Form all corners and changes of direction with three studs to suit linings and claddings.

Trim openings by single or double trimming studs as necessary.

Support steel beam over garage and steel lintol beam over the garage door with studs as detailed on Drawing 2733/D1

6.11.2 LINTOLS AND BEAMS

Fix lintols of sizes required in NZS 3604

6.12 BUILDING PAPER

Shall be flamestop 650 fire retardent heavy building paper. Lap 100 mm at joints and angles and fix with clouts or galvanised staples.

6.13 FIRST FLOOR CONSTRUCTION

Joists 200 x 50 mm spanning north to south at 450 mm centres. Trim openings with double joists where required. Attach to wall plates at perimeters and lap over beam at centre span. Dwang at 600 mm centres for ceiling linings with not less than 50 x 50 mm material. Dwang at top edge as required to suit the laps of the flooring.

Solid block joists at mid span.

6.14 DECK CONSTRUCTION

Joists 200 x 50 mm spaced at 450 mm centres. laid to fall 50 mm to the gutter constructed as detailed at the north end

Dwang for ceiling linings and as required on the top surface so as to support the butt joints of the plywood substrate.

6.15 FLOORING

Particle board flooring shall be 20 mm thick "PYNEFLOOR" or similar high density particle board. Fix and protect the flooring in strict accordance with the manufacturers' directions.

6.16 PLYWOOD SUBSTRATE FOR MEMBRANE ROOFING

Product specification for the plywood is:

Veneer species	Radiata pine
	Grade face C (plugged)
	Grade D back.
	Adhesive type "A" bond
	(phenotic)

Refer NZS 3611 and NZS 1154

Fix this 17.5 mm plywood fully in accordance with the manufacturer directions and in total satisfaction of the roofing contractor.

Provide coves and upstands as detailed.

The floor to the shower is to fall as detailed. Check joists for fall, pack and fix plywood as above.

6.17 ROOF CONSTRUCTION

Check to ensure same pitch as the existing house. The roof shall be designed and manufactured by a specialist contractor, and shall comprise nail plate trusses. Trusses in compliance with the requirements of NZS 3604 and shall be designed for VERY HIGH WIND ZONE compliance.

6.17.1 CEILING JOISTS

100 x 500 mm joists at 600 mm centres. Trim for roof access. Provide and fix ceiling runners as necessary. Dwg as required for ceiling linings.

6.17.2 ROOF WINDOWS

Trim roof for Velux roof windows and form well for window R.W2 R.W.3. Provide and fix as follows :

(i) R.W1 to be located over the stair landing and be a 550 x 700 mm MODEL TYPE FS 101

(ii) R.W2 to be located within the bathroom and be a 550 x 980 mm MODEL TYPE GGLH 104

(iii) R.W.3 to be located within the Studio/ bedroom 550 x 980 mm MODEL TYPE GGLH 104
Incorporate blackout blinds type DIL

Together with skylights provide EDH flashings kits which the Roofer shall fix.

6.18 FASCIAS FACINGS AND EXTERNAL GENERAL TRIM

Fit all fascias and other exterior trim or beads required. Nails galvanised and punched, below the surface. Mitre all exterior corners and joints within the length of the item. Seal joints.

6.19 SEALANTS

Seal where specified detailed or necessary with approved silicone sealant appropriate to the purpose.

6.20 INSULATION

Install 100 mm fibreglass batts in all exterior walls and ceilings, including skillion roofs. Ensure a tight fit. Fibreglass batts shall comply with the appropriate standards and be placed in accordance with the latest in recommended trade practice. Similarly insulate first floor to garage with batts as specified.

6.21 EXTERIOR LININGS

For corrugate exterior linings see Roofer.

Other exterior linings are as follows :

(i) Linings to balustrade facing into deck together with linings above AL.6 and north gable: 6 MM Hardiflex

(ii) Lining of soffit over deck: 6 MM Hardiflex

The soffit over the deck shall be comprised of two sheets of 6 mm Hardiflex with one central joint running north south and centrally located over AL5. Make joint over polyurethane tape with 3 mm gap.

Fix 6 mm Hardiflex cladding in accordance with the manufacturers directions. Vertical joint only permitted and these shall be neatly set out and be close butt joints with 2 mm gaps.

The curve to the bottom of the gable shall be made by bending an ex 25 mm soffit to the desired curve over prepared framing. Cut the curved facing from ex 18 mm Hardiflex and fix all as shown.

apply further decorative facing as shown.

6.22 INTERIOR LININGS

Refer to drawing no. 98/017 for the bracing schedule.

Fix wall and ceiling linings as follows :

- (i) Gib Braceline sheet brace panels shall be applied to sections of the walls indicated on the drawings.
- (ii) 7.5 mm plywood bracing
- (iii) Gib water resistant board shall be applied to the Bathroom walls (except shower) and laundry walls.
- (iv) All other wall and ceiling surfaces shall be GIB board.

6.22.1 MOISTURE CONTENT

Ensure framing complies with the Building Code (1993) before the application of linings. Moisture content must be 16% or lower.

6.22.2 PLYWOOD LININGS

Fix 7.5 mm bracing plywood and nail as required.

6.22.3 GIB-BOARD LININGS

Full and detailed specifications are available from the manufacturers and the contractor shall comply with these specifications.

The levels of finish required to the Gib. Board surfaces are :

Garage walls and ceiling: Level 3 is required

All other surfaces shall be to Level 5

For the definition of levels refer to the Gib.Board document titled "Levels of Gib.Board finish"

All exterior corner shall be reinforced with slim line angle. No scotias are required and a neat wall to ceiling junction is necessary.

6.23 STEEL BALUSTRADE TO DECK

This item is specified under Structural Steel and Metalwork Take delivery, pack plumb and level and bolt in position with 4/8 mm galvanised coach screws. Fixings made using washers and neoprene washers to ensure water exclusion

6.24 GARAGE DOOR

A sectional garage door is to be supplied and fixed. Allow the nett sum of \$2,000.00 (two thousand dollars) (plus g.s.t) for this item and attend upon the contractor nominated.

6.25 INSTALLING JOINERY

Allow to install doors and frames, staircase and cupboard units specified in this section subsequently.

6.26 ROOF ACCESS

Provide a roof access manhole located where shown ex 150 x 25 mm frame with planted stops and 20 mm custom-wood removeable panel.

6.27 INTERIOR FINISHING

Architraves : 75 x 20 mm moulded Customwood
to be selected.

Skirtings: 100 x 20 mm moulded Customwood

Complete all other sundry trim. Neatly fix using mitre joints and scribing where necessary.

6. 28 JOINERY

6.28.1 SCOPE

The scope of the Joinery comprises:

- (i) Glue laminated exterior posts to deck
- (ii) Salvaging door D.1 from the existing house. Stripping paintwork. Patching as required and constructing new frame and cill
- (iii) All interior doors and frames
- (iv) Cabinet fittings in laundry bathroom and cupboard
- (v) Staircase
- (vi) Timber cills for windows

6.28.2 STANDARDS

The relevant New Zealand Standards shall apply to the following items:

Kiln drying of Timber	Wood Screws
Butt Hinges	Synthetic resin
Particle Board	Plywood
Classification and Grading of NZ Timber	PVA Glues for Wood

6.28.3 TIMBER TREATMENTS

Boric Timber shall be used for interior timbers only and tanalised H3 treated timber shall be used for exterior timbers.

A non-staining timber shall be used for clear finished timber

6.28.4 PRIMING

Factory prime exterior joinery in accordance with good trade practice.

Take care that priming is not showing in surfaces that are to be clear finished or stained.

6.28.5 SEASONING

All timbers shall be seasoned whether in a kiln or in the open air, by approved processes, and shall be reduced to a moisture content of 12% based upon oven dry weight all such seasoning to take place before any machining.

6.28.6 HARDWARE

Fit all hinges and hardware as is customary and necessary and adjust correctly.

6.28.7 TIMBER SCHEDULE

The following timbers shall be used:

Exterior frames and cills : DA Rimu treated to H.3

Interior doors and frames
(painted) Cabinet : Dressing Quality Radiata
fittings and staircase Pine

Handrail to staircase : DA Rimu treated

Exterior posts : Finishing Grade Radiata
Pine, treated to required
exterior useage

6.28.8 FINISH

Dress timbers to a smooth even surface and remove sanding and planing marks. Ensure that all coarse factory sanding marks are removed. Finish with fine grade sandpaper to remove any cross grain factory sanding marks to new doors etc.

with paint

Hammer bruises and other dents or chips shall be raised and other dents or chips shall be raised by suitable methods or if too deep to raise filled with hard stopping and all lumps smoothed off. Stopping as specified is not acceptable where clear finishes are to be used.

6.28.9 EXTERIOR WINDOW CILLS

Run to profile shown and prime.

6.28.10 DOOR AND FRAME D.1

Hang renovated door in ex 50 mm rebated frame on 1½ pairs brass hinges. Run new cill as required.

6.28.11 INTERIOR DOORS AND FRAMES

Construct doors and frames to the details indicated. Neatly set out t. and g. vertical boards symmetrically.

Flush doors of paint quality with both edges clashed.

Hang doors on 1½ pairs of bronze finished loose pin butts.

Provide hardware for bi-fold door.

6.28.12 CABINET FITTINGS

(i) Employer will supply stainless steel sinktop with sink.

(ii) Construct 16 mm Customwood bench with 3 hinged doors centre shelf and toespace

(ii) Cabinet fitting off studio shall be constructed as above with centre shelf but with sliding hardwood doors. Provide laminated plastic top with 300 x 25 mm ss sink set in (supplied by Plumber), 100 mm. upstand at the back and Rimu half round edging at front.

(iii) Bathroom cabinet as detailed. Constructed as previously with laminated plastic top as above. Set in wash hand basin supplied by Plumber.

6.28.13 STAIRCASE

Fabricate stair with ex 250 x 40 mm strings in Radiata Pine or treated rimu. Risers shall be 20 mm Customwood and treads 25 mm Customwood. Risers and treads rebated 10 mm into strings and glued and wedged.

Handrail of ex 75 x 50 mm rimu with rounded top. Support on BMA handrail brackets (supplied by contractor)

6.28.14 EXTERIOR POSTS

Scope : Four only

Posts shall be laminated and finish not less than 110 x 110 mm square. Adhesive shall be an approved synthetic resin. Bevel corners and apply beads to form capitals.

6.29. TRELLIS PANELS

Trellis shall match that already existing on the house.
i.e. 45 x 9 mm lathe.

Trellis shall be Radiata Pine treated to A.3 Retain in position with beads.

6.30 HARDWARE

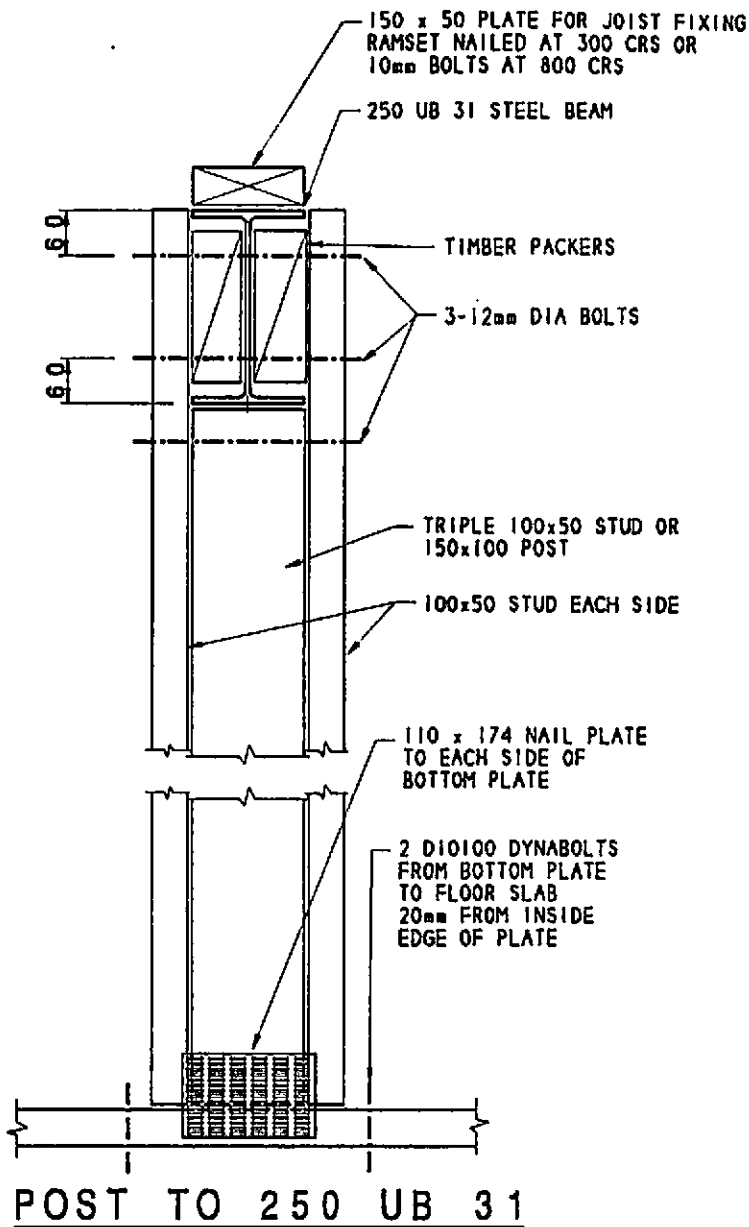
The Employer will supply hardware in the form of locks, latches, door furniture etc. The Contractor to allow for fixing of this hardware.

6.31 EXISTING GARAGE

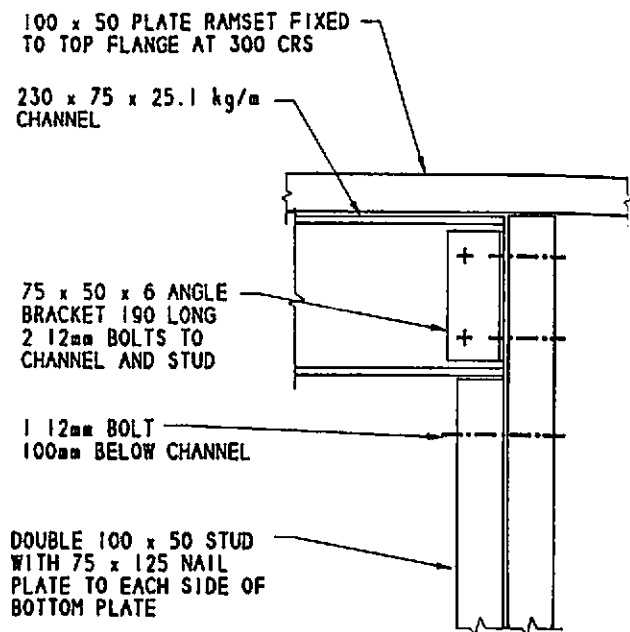
Refer to clause 2.4 of this specification. Pour 100 mm slab with thickened edge and relocate existing garage upon this slab. Refer to drawing for location.

6.32 IRONING CENTRE

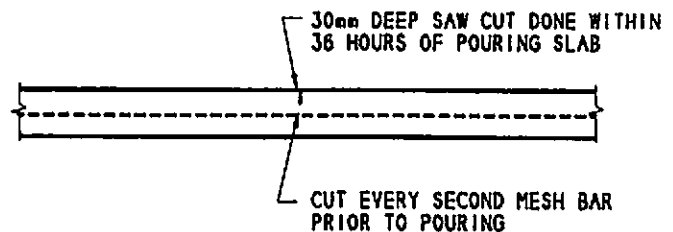
Provide and fix a "Robinhood" Ironing centre, Model ICEWH Recess mount within the stud thickness. Locate within the laundry as decided on site.



AN 80mm DIA ROUND HOLE MAY BE CUT IN THE CENTRE
OF THE UB WEB TO ACCOMMODATE THE AUTOMATIC GARAGE
DOOR OPENING MECHANISM IF REQUIRED.



POST TO STEEL CHANNEL OVER GARAGE DOOR



SLAB SAWN JOINT DETAIL

PROPOSED ADDITION TO STAPLETON RESIDENCE
AT JOSEPHS ROAD, RD1, CARTERTON.

SILCOCK CONSULTANTS
CONSULTING STRUCTURAL ENGINEERS
181 HIGH STREET LOWER HUTT TELEPHONE 569 1783

SCALE 1:10

DATE 16 SEPT 1998

DRAWN G.R.S.

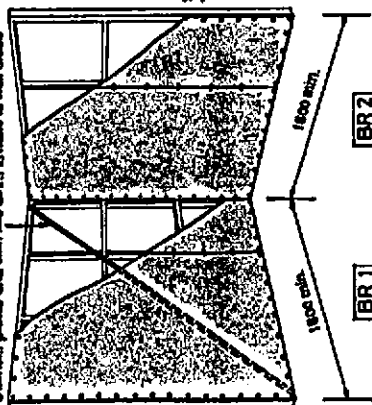
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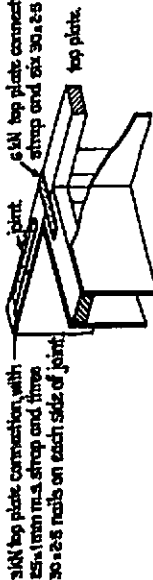
D1

GIBRALTAR BOARD Wall Bracing Systems Construction Guide (complies with NZS 3604: 1984 & 1990)

galv steel angle brace, fixed with three 60 x 3.5 nails to top and bottom plates and with two 60 x 3.5 nails to wall studs.



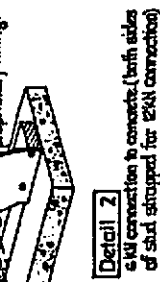
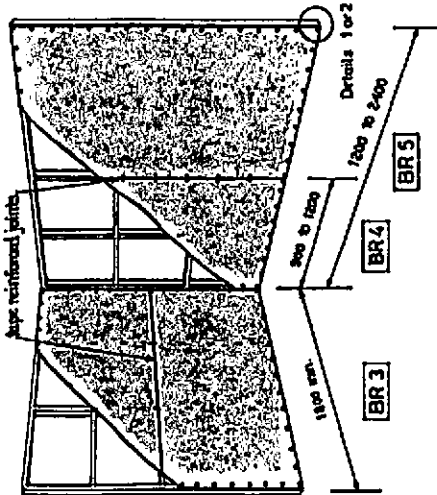
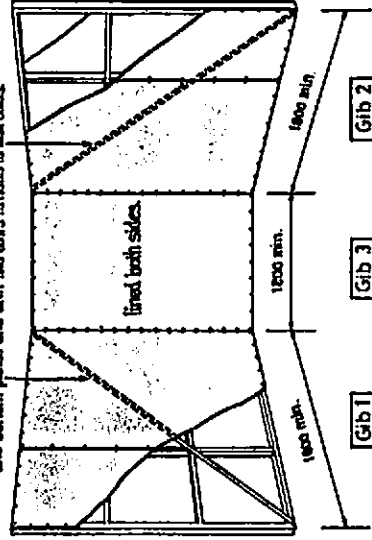
see specifications for nailing requirements



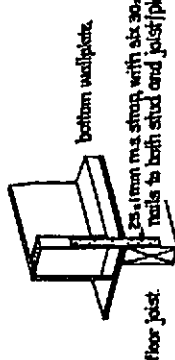
Top Plate Connections



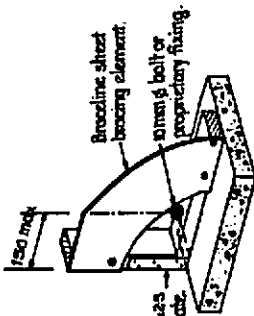
see specifications for nailing requirements



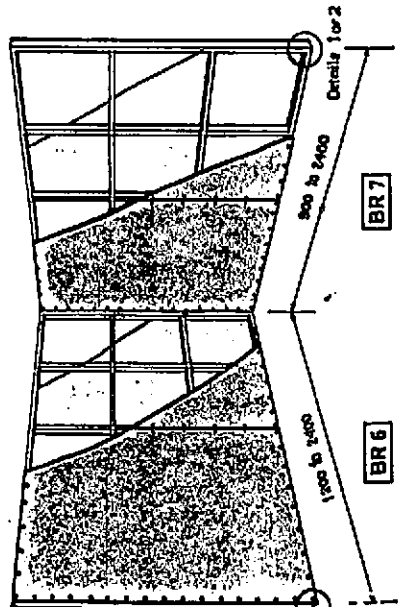
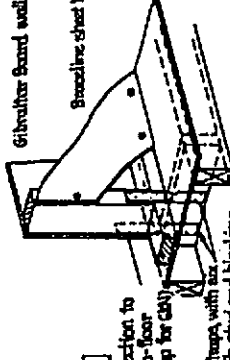
Detail 1
60mm connection to timber sub-floor
(both sides of stud stopped for 12kN)



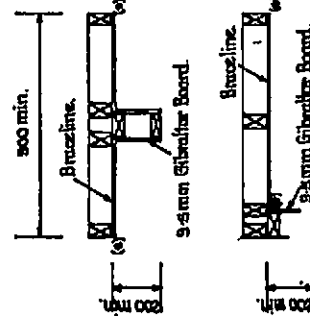
Detail 2
60mm connection to concrete (both sides of stud stopped for 25kN connection)



Detail 3
12kN connection to timber sub-floor (single stop for 6kN)



Detail 3



Types BR 1 to BR 7 may have standard 9.5mm Gibraltar Board intersecting walls with a min. length of 200mm. Brace line nails and washers are required around the perimeter of the bracing element (*). Intermediate vertical joining may be nailed with standard Gib clouts of 300mm c/s and should be type reinforced and stopped.

Guidelines For Intersecting Walls

Type	Description	Additional Requirements	Nailing & Stopping
Gib 1	9.5mm GIBALTAR BOARD on one face, min. length 1800.	Diagonal brace.	Gib 1, 2 and 3
Gib 2	9.5mm GIBALTAR BOARD on both sides, min. length 1800.	Diagonal brace.	30 x 2.5 Gib clouts at 150mm c/s around the perimeter of the bracing element and at 300mm c/s to intermediate framing. Type and stop all joints within the bracing element.
Gib 3	9.5mm GIBALTAR BOARD on both sides, min. length 1200.	No additional requirement.	BR 1, 2, 3, 4, 5, 6 and 7
BR 1	BRACELINE on one face, min. length 1800.	Diagonal brace.	30 x 2.5 Gib clouts fitted with BRACELINE washers at 150mm c/s around the perimeter of the bracing element and at 300mm c/s to intermediate framing. Type and stop all joints within the bracing element.
BR 2	BRACELINE vertical on one face, min. length 1800.	No additional requirement.	
BR 3	BRACELINE horizontal on one face, min. length 1800.	No additional requirement.	
BR 4	BRACELINE on one face, length 900 to 1200.	6 kN end-stud fixings.	
BR 5	BRACELINE on one face, length 1200 to 2400.	6 kN end-stud fixings.	
BR 6	BRACELINE # GIBALTAR BOARD on opp sides, length 1200 to 2400.	12 kN end-stud fixings.	
BR 7	BRACELINE on one face, min. ply on offset, 3rd 900 to 2400.	6 kN end-stud fixings.	



WINSTONE WALLBOARDS LTD

AUCKLAND
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CHRISTCHURCH
Telephone (03) 333-3168
Fax (03) 337-1014

SECTION 7

ROOFING AND CLADDING

7.1 PRELIMINARY AND GENERAL

See Preliminary and General clauses. All applicable clauses apply to this part of the contract.

7.2 SCOPE

The scope of this trade comprises:

1. The roofing and cladding of the additions together with all roof and cladding underlays, flashings and spoutings.
2. The surfacing of the deck with a specialised membrane together with all coving and flashing.

7.3 RESPONSIBILITY

The base construction to which roofing and cladding is fixed is by others. Upon commencement of such roofing and cladding the contractor for this work accepts the condition of the construction to which his work is attached.

No subsequent claim as to the adequacy of this base will be recognised.

The Roofing and Cladding sub-contractor shall provide the Employer with a two year guarantee for his work which shall date from the Architect's acceptance of the Contract.

7.4 MATERIALS

The materials shall be:

1. Roofing and Cladding shall be 0.55 B.M.T of profile and be Coloursteel 5000 as manufactured by BALFOUR or similar.
2. All Flashings exposed to view shall be of the same material as above. Pipe flashings may be effected by "Aquaseal" pipe flashings. All fixings, sealing and jointing sealants, touch up paint and other accessories shall be to the specification of the manufacturer of the roofing

Fl ashings not to view shall be "Zincalume"
GF 0.40 B.M.T

3. Roof and cladding underlay shall be Flamestop 650. Roof underlay shall be supported on 2 mm galv. wire netting.
4. Spoutings shall be "quarter round" , Colorcoat finished to match the roofing. Fix on purpose made brackets. Mitre and scribe as required.

7.5 CORRUGATE ROOFING

Fix galvanised netting. Stretch tight, lap and staple Lay roof underlay, lap not less than 50 mm. Staple with galvanised staples.

Lay roofing in long lengths spanning full length. Side laps one and a half corrugations. Crest fix to manufacturers specification.

Trim for skylights and penetrations.

7.6 CORRUGATE CLADDING

Fix material specified in long lengths all as recommended by the manufacturer of the material, over underlay as specified. Flash exterior and interior corners as detailed together with window penetrations to properly exclude the ingress of water. Ensure that "creep" of the material does not occur. Lines of corrugations must horizontally align around the building.

7.7 FLASHINGS

The Roofer and Cladder is responsible for all flashings to render the roofing and cladding waterproof, birdproof and insect proof. Flashings accurately machine cut and bent in long lengths. The site may be regarded as a very high wind zone and careful attention is necessary when fixing roof peripheries or excluding wind driven rain.

Birdproofing and insect proofing is to be effected with profiled strip bitumen such as "Compriband"

7.8 MEMBRANE ROOFING

The sub-contractor for this work will be an Agent Fixer accredited by Hitchins N.Z. Ltd.

The roofing shall be Hitchins TRAFFIGARD laid upon the substrate and covings specified.

The TRAFFIGARD to be laid entirely to the manufacturers' specification.

The colour required will be supplied by the Architect early in the contract.

A ten year warranty is required for this work.

7.9 COLOURS OF ROOFING AND CLADDING

Colours are as follows:

- (i) Roofing and spoutings together with all flashings to view:

colour: Permanent Green G.2

- (ii) All corrugated cladding, except as 3 hereafter, together with external and mitred corner flashings and any other flashings to view in connection with the cladding:

colour: Titania G.2

- (iii) Corrugated cladding and flashings to the eastern wall adjacent to the house and the two small return walls:

colour: Permanent Green G.2

SECTION 8

PLUMBER

8.1 PRELIMINARY AND GENERAL

This sub-contractor is referred to the Preliminary clauses and other trade sections of this specification.

8.2 REGULATIONS

All work shall comply with the building code or Australian Standard AS 3500, work must also be in compliance with any specific requirements of the Territorial Authority.

8.3 MATERIALS

All materials shall be the best of their respective kinds, and the kinds of materials listed below shall be at least equal in quality to the ;following.

- (i) Copper Tubing shall comply with the requirements of NZS 3501
- (ii) Unplasticised PVC pipes (IPVC) shall comply with NZS 7648
- (iii) UPVS pipes and tubes for sanitary plumbing must comply with the plumbing requirements of NZS 7641 and NZS 7642
- (iv) "Zincalume" coated steel for downpipes and flashings where not to view shall be G300 grade and of 0.55 mm base metal thickness
- (v) All fixings, fastenings, sealents, etc. used in connection with the previous shall be as recommended by the manufacturer of the material.
- (vi) Polybutylene tubing shall conform with the manufacturers code of practice for installation.
- (vii) Traps shall be S or P traps in white polypropylene with proper cleaning facilities

- (vii) Coloursteel shall be of 0.55 BMT as manufactured by BALFOURS (or similar)
- (ix) Trap to shower shall be an Easyclean trap and waste as manufactured by Englefield.

8.4 LAYOUT AND FIXING OF PIPES AND TUBES

water pipes and tubes shall be in straight runs and of even gradients, avoiding all places where air locks may occur. Easy bends are to be used throughout, elbow fittings shall not be used.

Copper tubing shall be secured in position by means of copper straps or clips not less than 25 mm wide, fixed to wood framing with brass screws or Muntz metal clouts..

Copper pipework must not be temporarily fixed with steel nails. Straps shall be spaced at not more than 1200 mm centres and wherever necessary to make solid fixing.

Pipework must not be laid under concrete floors but must be run in timber framed walls or roof spaces. Hanger straps for hot water pipes shall be fixed over the lagging and not make contact with the bare pipes. All piping (water supply, waste and vents) shall be concealed from view.

8.5 TESTS

Before wall linings are fixed, subject hot and cold water pipework to the full head of water constituting the normal cold supply. The test shall be of not less than twelve hours duration and leaks if any made good.

8.6 DOWNPIPES

Downpipes shall be seamed from 0.55 BMT Coloursteel (Colour Permanent Green G.2) Strap to the walls with purpose made straps at centres not greater than 1400 mm.

Connect downpipes to spouting droppers at the top (by Roofer) and to the stormwater drains at the bottom.

8.7 FLASHINGS

The Roofer and Cladder is responsible for all flashings in connection with his own trade. Refer to that section of the specification.

The Plumber shall also complete any flashing necessary that is necessary that is not otherwise specified to render the building weathertight.

Flashings shall be 0.55 mm BMT "Zincalume" and shall accurately fit the work and be machine cut and bent. Flashings shall be as long a length as possible and joints made by soldering as specified. Flashings shall be true in plane, free from buckles, wrinkles or dents.

8.8 SANITARY WASTES

The installation of wastes shall be in accordance with NZS 7643. All waste pipes and traps shall be of materials specified and of diameter required by the Regulations, waste pipes shall connect to gully traps beneath the grating.

Complete all venting in connection with the waste system and finish with bronze wire balloons capping the tops where vents terminate above the roof.

Properly support or hang waste pipes and allow for expansion

Locate terminal vents where shown, finish above the roof with galvanised wire balloons

8.9 HIGH PRESSURE COLD WATER SUPPLY

The cold water to the house is currently pressurised by a Davey pressure pump which raises the water from a bore.

The Plumbing sub-contractor is required to assess the adequacy of this pump and existing pipework so as to ensure existing and new fittings receive suitable water pressure.

Should the contractor believe modifications are necessary to achieve required pressure, he shall allow a nett sum for this purpose.

Ext end the existing cold water reticulation in polybutylene-tubing, with stop cocks, pressure reducing valve etc. all as required to supply a high pressure cold water branches to the following:

2 hosetaps
washing machine
sinkbench
sink (first floor)
wash hand basin
W.C
Shower

8.10 HOT WATER SUPPLY

Refer clause 8.9 with particular reference to pressure.

Supply and fix a Rheem mains pressure hot water cylinder of 135 litre capacity. Locate cylinder in cupboard where indicated.

Cylinder to be factory fitted with pre-wired element, thermostate and energy cut out. Make connections to the cylinder in accordance with the manufacturers' directions.

All high pressure hot water service pipework shall be copper tubing as specified complete with all necessary valves.

Hot water branches shall service the following :

washing machine
sink bench
sink (first floor)
wash hand basin
shower

8.11 HOT AND COLD WATER TAPS AND CONT ROL VALVES

Provide and fix in accordance with the following schedule:

Hosetaps	:	Brass cocks with screw ruff but without hose connection
Stopcocks	:	As required

The Architect/Employer will arrange to purchase and supply taps and faucets for the following:

Laundry sink
First floor sink
Wash hand basin
Shower set and mixer
Stop cocks to view

The contractor shall take delivery and fix.

8.12 WASHING MACHINE

Remove washing machine, taps and pipework from the existing location before demolition of the porch. Refix washing machine within the laundry together with taps and necessary pipework.

Note: During the contract period, some washing machine facilities will be required. Architect/Employer to discuss temporary connection at commencement of the contract.

8.13 SANITARY FITTINGS

The Plumbing sub-contractor shall supply and fix the following sanitary fittings.

(i) W.C and cistern. American Standard, Porcelain side outlet P trap.

- (ii) CAROMA Concorde 500 vitreous china semi-recessed vanity basin (one taphole)
- (iii) 300 x 300 mm s.s. sink unit for unit within cup board

The Employer will supply the s.s. bench and sink for the laundry

SECTION 9

ALUMINIUM WINDOWS AND DOORS

9.1 PRELIMINARY AND GENERAL

See Preliminary and General clauses. All applicable clauses apply to this part of the contract.

9.2 STANDARDS

DOCUMENTS:	The following documents shall apply, unless expressly modified herein:-
NZS 3503	Anodic Oxide Coatings on Wrought Aluminium for External Architectural Applications.
NZS 3504	Aluminium Windows
NZS 4211	Performance of Windows
NZS 4223	Code of Practice for Glazing of Buildings
BS 4842	Liquid Organic Coatings for Applications to Aluminium Alloy Extrusions. Sheet and Preformed Sections for External Architecture Purposes, and for the finish on Aluminium Alloy Extrusions, Sheet and Preformed Sections Coated with Liquid Organic Coatings.
BS 6496	Powder Organic Coatings for Applications and Stoving to Aluminium Alloy Extrusions. Sheet and Preformed Sections for External Architectural Purposes, and for the finish on Aluminum Alloy Extrusions, Sheet and Preformed Sections Coated with Powder Organic Coatings.
AS 1866	Wrought Aluminum and Aluminum Alloy Extruded Rod, Bar, Solid and Hollow Shapes for General Engineering Purposes.

9.3 GENERAL

- (i) ASSEMBLE AND INSTALL windows and doors complete with all accessories necessary to make the whole sound, weather and watertight.
- (ii) DESIGN AND PERFORMANCE OF WINDOWS shall comply with NZS 4211 and 3504.
- (iii) SUBMIT SHOP DRAWINGS indicating layouts, materials, fixings, seals, sealants and general details of the proposed systems for approval prior to the programmed commencement of the work.
- (iv) SUBMIT FOR APPROVAL three (3) samples representative of the materials to be supplied, showing colour range to which production materials will be processed. Colour of installed materials to be within the range of the approved samples.

9.4 MATERIALS

- (i) WINDOW AND DOOR SECTIONS shall comply with AS 1866- Table3.1 alloy designation 6063 aluminium alloy extrusion having a 1.4 mm minimum wall thickness and maximum hardness temper T5.
- (ii) WEATHER SEALS, GLAZING WEDGES, FILLETS and the like shall be approved synthetic rubber having long life and where exposed highly resistant to ozone and ultra violet light, Polychloroprene, EPDM or equal. These materials shall not be prone to shrinkage in service.

9.5 WINDOWS AND DOOR ACCESSORIES

- (i) HINGES shall be aluminium having stainless steel pins and finished to match the window frames and sashes.
- (ii) FIXINGS AND FASTENINGS shall be AJC Type as supplied by the manufacturer of the component being fixed.

- (iii) **HARDWARE FINISH** where not otherwise specified shall be an approved electrostatically applied Epoxy powder, cured to the manufacturers specification, over casting which are chemically cleaned and pre-tested to inhibit corrosion.

9.6 DESIGN

- (i) **MANDATORY DESIGN REQUIREMENTS:** Follow the fenestration design shown. Ensure complete sealing in accordance with the Window classification throughout the climatic range including exterior/interior temperature differential.
- (ii) **ALL GLAZING SHALL BE REPLACEABLE** without dismantling of the sash or the frame.

9.7 TESTING

- (i) **CERTIFY FRAMES AND COMPONENTS** satisfy all test requirements of NZS 4211.
- (ii) **PROVIDE TEST CERTIFICATES** issued by a Telarc registered laboratory before production of the frames commences.
- (iii) **CERTIFICATION OF QUALITY:** Certify after 20,000 complete operations all opening lights and other moving parts are still in sound operating condition.

9.8 ASSEMBLING AND INSTALLATION

- (i) **ASSEMBLY** of frames and sashes shall comply with NZS 3504. Corners shall be mitred and secured in position by two screws through each leg at corners firmly engaged into screw traces.
- (ii) **GLAZING WEDGES AND FILLETS** shall be cut to fit each side of the opening perimeter, 10% over-length to ensure that they are installed under compression.
- (iii) **SEAL ALL CUT ENDS** to provide a barrier between the base metal and the environment.
- (iv) **FIT ALL HARDWARE** as necessary.

- (v) **FIX AND SEAL FRAME PERIPHERIES** by methods and with materials which ensure that the installed frames meet the test requirements stated herein.
- (vi) **FIXING:** Fix frames in openings plumb, square in proper alignment without strain. Use fastenings recommended by the manufacturer and in accordance with the details.
- (vii) **ALTERNATIVE DETAILS** may be submitted to those shown for boundary conditions, to ensure the frames proposed meet the test requirements specified.
- (viii) **SEALANTS:** Use those with evidence of proven ageing, ultra violet and ozone resistant characteristics having a 25% plus or minus movement factor.
- (ix) **SEALANT PREPARATION:** Ensure that joints are dry. Remove all loose material, dust and grease. Prepare joints in accordance with the sealant manufacturers recommendations, using recommended solvents and primers where necessary. Mask adjoining surfaces to avoid contamination of excess sealant.
- (x) **SEALANT BACKING:** Insert backing strips in all joints to be pointed with sealant. When using backing strips do not leave gaps and do not reduce depth of joint for sealant to less than minimum recommended by the manufacturer.
- (xi) **SEALANT APPLICATION:** Fill joint cavity with sealant in accordance with the manufacturers recommendations.
- (xii) **SEALANT FINISH:** Remove excess sealant from adjoining surfaces, using cleaning materials recommended by the sealant manufacturers. Leave adjoining surfaces clean.

9.9 GLAZING

Glass and glazing shall comply with NZS 4223 except as modified by the specification.

9.10 FINISHES

STOVED ORGANIC COATINGS:-

- (a) **STOVED ORGANIC COATING:** Powder organic coatings shall comply with BS 6496.

- (b) COAT ALL ALUMINIUM JOINERY with an approved stoved organic coating in accordance with the recommendation of the Architectural Association of New Zealand-"Stoved Organic Finishes".
- (c) COLOUR OF FINISH COAT: See drawings
- (d) DEGREASE BASE MATERIAL with an approved degreaser before applying coating.
- (e) FUTURE RE-COATING: Ensure finish used has this capability.
- (f) MAINTAIN ADEQUATE TEST RECORDS to ensure a consistent finish and quality control. Produce acceptable test records, certified as correct, if required.

SECTION 10

DRAINLAYER

10.1 PRELIMINARY AND GENERAL

See Preliminary and General clauses. All applicable clauses apply to this part of the contract.

10.2 GENERAL

The whole of the drainage work shall be carried out complete and tested in accordance with the building code and the requirements of the Territorial Authority. Drains shall not be backfilled until inspected, tested and approved by the Territorial Authority Inspector.

10.3 SCOPE

The scope of the drainage work comprises :

- 10.3.1 A soil drainage system which connects the wastes from the various sanitary fittings and connect them to the existing septic tank.
- 10.3.2 A stormwater drainage system which collects the stormwater from the roofs by downpipes and conveys it to a stormwater soakpit.

10.4 MATERIALS

- 10.4.1 Soil and stormwater drains shall be first quality salt glazed earthenware complying with the requirements of NZS 365. These shall be jointed with 60 mm sleeves tied with FMB Stainless steel ties. Alternatively U.P.V.C. pipes complying with the requirements of NZS 7649 shall be used.
- 10.4.2 Gully traps, inspections, bends etc. shall be of the materials specified in (1) above.
- 10.4.3 Concrete may be site mixed with a minimum standard of 6 parts of aggregate to 1 part of cement.

10.5 DRAINLAYING

Excavations for drains shall wherever possible be not less than 600 mm below permanent ground levels at the highest point.

Drains shall be laid with inverts true and even with suitable grades. The interiors of pipes and fittings shall be thoroughly cleaned out as the work proceeds. Drainage pipes and fittings shall be set with a continuous solid bearing on a sand bedding.

Before commencing work the sub-contractor shall determine the depth and condition of the soil drain.

10.6 GULLY TRAPS

Set on a level bed of concrete 100 mm thick. Kerbs shall not be less than 50 mm thick, carried not less than 150 mm below ground level and shall finish 75 mm above the finished ground level.

Gully traps shall be of the "closed" type with wastes discharging below a grating.

10.7 INSPECTION FITTINGS

Provide adequate inspection fittings as follows:

- (i) As close as possible to the septic tank
- (ii) At every branch serving a WC pan
- (iii) At every change in direction
- (iv) At every junction with a branch more than 1800 mm in length
- (v) At intervals of not more than 12 metres.

10.8 DOWNPIPES

Downpipes shall deliver to an Earthenware bend connected to the stormwater drain. The socket or the bend shall terminate 75 mm above finished ground or paving level and shall be protected by a concrete kerb not less than 50 mm thick. The kerb shall extend 150 mm below ground level and shall cover the top of the socket.

The lower end of the downpipe shall be wrapped in building paper and sealed into the socket with cement compo.

10.9 SEPTIC TANK

This sub-contractor shall inspect the existing septic tank. Ensure it is in good order and that the soakage is properly functioning.

10.10 NETT SUM:

The existing soil drain and line are uncertain in their gradients and depth. The Drainage Plan is therefore indicative only and it will be necessary to uncover drains to ascertain the practicability of the new connections indicated.

This Contractor then shall include a nett sum for the soil drainage contract based upon the drawings provided.

10.11 SOAKAWAY

The soakaway shall be excavated and constructed to the specification of the Territorial Authority.

Connect stormwater drains to this soakaway

10.12 BACKFILLING

This sub-contractor shall backfill with care, compacting layers as the work progresses.

SECTION 12

PAINTER

12.1 PRELIMINARY AND GENERAL

See Preliminary and General clauses. All applicable clauses apply to this part of the contract.

12.2 SCOPE OF THE WORK

The scope includes:

12.2.1 Exterior Painting

Door, frame and cill to D.1

Timber facings and cills to windows

Posts and trellis on North, East and West elevations.

Bargeboards, fascias and soffits.

North elevation gable

Hardiflex internal linings to deck and adjacent and over AL6

Underside of corrugated roofing and framing timbers to rear porch (Detail 14) and roof over Garage door (Detail 12)

Galvanised steel balustrade to deck

Downpipes

All of the above in three coat work

12.2.2 Interior Painting

All walls and ceilings of the first floor but excluding Bathroom walls (vinyl) (one colour only) including wardrobe and cupboard.

All walls and ceilings of laundry, laundry cupboard and stairwell. One colour only. Jamb liners, architraves, skirtings, doors, cabinets. Stair strings, UB over garage.

All of the above three coat work

Garage walls and ceiling

This work two coat work

Stair handrail

Velux window frames

Gloss polyurethane

This schedule is intended as a guide only and does not claim to be totally complete.

12.3 STANDARDS

All painting shall be carried out in accordance with NZS 7703 Painting of Buildings

12.4 PREPARATION

Properly prepare surfaces by scraping, filling and sanding. The application of a primer coat will indicate acceptance of a satisfactory finish for this sub-contractors work.

12.5 WORKMANSHIP

All work by competent tradesmen in accordance with sound trade practice using tools and equipment to ensure a first class job.

Evenly spread paints. Neatly cut in where required.

Each coating free of brush marks and runs. Sand between coats. All successive coats to be compatible with previous coats.

12.6 STOPPING

After priming, fill all nail holes and cracks with a suitable filler.

12.7 UNDERCOATS AND FINISHING COATS

Apply to the instructions of the manufacturer

12.8 PAINT TYPES

Paint surfaces as follows :

12.8.1 EXTERIOR PAINTING

Finishing timbers and galvanised steel requiring painting, Hardiflex Linings:

Three coats of exterior gloss acrylic.

Galvanised steel two coats over a recommended primer.

12.8.2 INTERIOR PAINTING

Plaster coved ceiling and wall linings:

Three coats of s.g. interior acrylic paint (not garage - two coats)

Doors, architraves, skirtings, window boards, cabinets, stair strings:

Prime, undercoats and finishing coat of s.g enamel

SECTION 13

VINYL FLOORING AND CLADDING

13.1 PRELIMINARY AND GENERAL

See Preliminary and General clauses. All applicable clauses apply to this part of the contract.

13.2 SCOPE

The scope comprises :

13.2.1 Forbo "Safestop" 2mm thick p.v.c flooring to Bathroom and shower floors.

13.2.2 Forbo Onyx wallcovering to shower and bathroom walls.

Both products are marketed by Skellerup Flooring Ltd.

13.3 FLOORING

Supply and install flooring to particle board base fully in accordance with the manufacturers' specification, using all primers adhesives and methods appropriate. The shower base is to fall. Properly seal to shower wastge. Provide 100 mm upstands at the walls and pencil round angle corners.

Weld all joints.

The finished surface shall be perfectly adhering with straight welded joints and free of any irregularities, lumps or other imperfections.

The flooring shall also be entirely wat erproof.

13.4 WALL CLADDING

Apply cladding to manufacturers' specification. Welded joints truly plumb and neatly cut around and sealed at pipe penetrations, shower controls, cistern etc.

the specification of the previous clause is generally applicable.

13.5 AT COMPLETION

Clean and leave in perfect condition at completion

**PROPOSED ADDITIONS TO STAPLETON RESIDENCE
AT JOSEPHS ROAD, RD1, CARTERTON**

STRUCTURAL DESIGN & BRACING CALCULATIONS

Project No. **2733**

Sep-98

COUNCILS COPY

G. R. SILCOCK.

B.E. M.I.P.E.N.Z.

SILCOCK CONSULTANTS

CONSULTING STRUCTURAL ENGINEERS

181 HIGH STREET LOWER HUTT TELEPHONE 569 1783

SILCOCK CONSULTANTS

CONSULTING STRUCTURAL ENGINEERS

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Work carried out by Silcock Consultants on this project consists of structural design of areas falling outside the scope of "Code of Practice for Light Timber Framed Buildings not Requiring Specific Design" (NZS 3604:1990) for which structural design calculations are herewith enclosed. Sizes of members and details arising from this design have been incorporated onto drawings by your architectural designer.

We have assumed that design within the scope of NZS 3604:1990 has been carried out by the architectural designer involved.

Silcock Consultants has not carried out a foundation investigation for this project. A safe bearing pressure of 100kPa as required in NZS 3604:1990 has been assumed. If the ground is found to be soft when excavation is carried out it will be necessary for a foundation investigation and specific foundation design to be carried out.

Inspections during construction will not be carried out by Silcock Consultants unless we are contacted and engaged to do so.

We will be happy to provide these services if necessary at an additional charge.

SILCOCK CONSULTANTS

CONSULTING STRUCTURAL ENGINEERS
181 HIGH STREET LOWER HUTT TELEPHONE 569 1783

Project **STAPLETON RESIDENCE**
JOSEPHS ROAD
RD 1
CARTERTON

Page No. **1**
Project No. **2733**
Date **Sep-98**
By **GRS**

LOADINGS

G+Q

SERVICEABILITY		ULTIMATE	
G+Q Short Term	G+Q Long Term	1.4G	1.2G+1.6Q

ROOF

Iron 0.15
Timber 0.15
Ceiling 0.10
0.40 kPa
30 degree slope 1.15
Dead Load G= 0.46 kPa

Live Load Q= 0.25 kPa
Load factor 1.00

0.71 kPa

0.46	0.46	0.65	0.55
0.25	0.25	0.00	0.40
0.70	0.00	1.00	1.00
0.64 kPa	0.46 kPa	0.65 kPa	0.95 kPa

FLOOR

Flooring 0.15
Timber etc. 0.25
Ceiling 0.10
Dead Load G= 0.50 kPa

Live Load Q= 1.50 kPa
Load factor 1.00

2.00 kPa

0.50	0.50	0.70	0.60
1.50	1.50	0.00	2.40
0.70	0.40	1.00	1.00
1.55 kPa	1.10 kPa	0.70 kPa	3.00 kPa

WALLS

Framing 0.15
Linings 0.25
0.40 kPa

0.40 kPa	0.40 kPa	0.56 kPa	0.48 kPa

FLOOR SLAB

Slab 100mm 2.40
Tiling etc. 0.00
Dead Load G= 2.40 kPa

Live Load Q= 2.50 kPa
Load factor 1.00

4.90 kPa

2.40	2.40	3.36	2.88
2.50	2.50	0.00	4.00
0.70	0.40	1.00	1.00
4.15 kPa	3.40 kPa	3.36 kPa	6.88 kPa

Project **STAPLETON RESIDENCE**
JOSEPHS ROAD
RD 1
CARTERTON

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By **GRS**

STEEL BEAM DESIGN OVER GARAGE

Span $L = 6.0$ m
Short distance to point load $a = 2.0$ m
Long distance to point load $b = 4.0$ m

ULTIMATE STRENGTH

UDL

0.0 m Roof
2.4 m Wall
3.0 m Floor

1.4G			
0.0 *	0.65 =	0.00	
2.4 *	0.56 =	1.34	
3.0 *	0.70 =	<u>2.10</u>	
w		=	3.44 kN/m
9.0 *	0.65 =	5.82	
7.2 *	0.56 =	4.03	
0.0 *	0.70 =	<u>0.00</u>	
P		=	9.85 kN
		=	15.5 kNm
		=	<u>13.1</u> kNm
M		=	28.6 kNm

1.2G+1.6Q			
0.0 *	0.95 =	0.00	
2.4 *	0.48 =	1.15	
3.0 *	3.00 =	<u>9.00</u>	
w		=	10.15 kN/m
9.0 *	0.95 =	8.59	
7.2 *	0.48 =	3.46	
0.0 *	3.00 =	<u>0.00</u>	
P		=	12.04 kN
		=	45.7 kNm
		=	<u>16.1</u> kNm
M		=	61.7 kNm

Point Load

3.0 * 3.0 m Roof
3.0 * 2.4 m Wall
0.0 * 0.0 m Floor

Moment - U.D.L. $w*L^2/8$
Moment - point load $P*a*b/L$
TOTAL MOMENT

Try

250 UB 31

Plastic modulus $S = 4.0E+05$ mm³
Moment of inertia $I = 4.4E+07$ mm⁴
Modulus of elasticity $E = 2E+05$ N/mm²
Yield stress $f_y = 250$ MPa Strength reduction factor $\phi = 0.9$
Effective length $/$ = Full lateral restraint

Moment Capacity $S*f_y*\phi$ **89.1 kNm**
Therefore strength is acceptable

89.1 kNm
Therefore strength is acceptable

SERVICEABILITY

UDL

0.0 m Roof
2.4 m Wall
3.0 m Floor

G+Q Short Term			
0.0 *	0.64 =	0.00	
2.4 *	0.40 =	0.96	
3.0 *	1.55 =	<u>4.65</u>	
w		=	5.61 kN/m
9.0 *	0.64 =	5.73	
7.2 *	0.40 =	2.88	
0.0 *	1.55 =	<u>0.00</u>	
P		=	8.61 kN
		=	10.7 mm
		=	<u>3.7</u> mm
		=	14.4 mm
		=	0.0024
		=	417
Therefore deflection is acceptable			

G+Q Long Term			
0.0 *	0.46 =	0.00	
2.4 *	0.40 =	0.96	
3.0 *	1.10 =	<u>3.30</u>	
w		=	4.26 kN/m
9.0 *	0.46 =	4.16	
7.2 *	0.40 =	2.88	
0.0 *	1.10 =	<u>0.00</u>	
P		=	7.04 kN
		=	8.1 mm
		=	<u>3.0</u> mm
		=	11.1 mm
		=	0.0019
		=	539
Therefore deflection is acceptable			

Point Load

3.0 * 3.0 m Roof
3.0 * 2.4 m Wall
0.0 * 0.0 m Floor

Defl U.D.L. $5*W*L^4/384*E*I$
Defl Point $x*P*L^3/48*E*I$
 $x = 3a/L-4(a/L)^3 = 0.85$
TOTAL DEFLECTION
Deflection over span d/L
Span over deflection L/d

Therefore deflection is acceptable

Therefore deflection is acceptable

Project **STAPLETON RESIDENCE**
JOSEPHS ROAD
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STEEL BEAM DESIGN OVER GARAGE DOOR

Span **L** = **4.9 m**
Short distance to point load **a** = **1.4 m**
Long distance to point load **b** = **3.5 m**

ULTIMATE STRENGTH
UDL

2.0 m Roof
2.4 m Wall
1.5 m Floor

Point Load

1.5 * 3.0 m Roof
1.5 * 2.4 m Wall
0.0 * 0.0 m Floor

Moment - U.D.L. $w \cdot L^2/8$
Moment - point load $P \cdot a \cdot b/L$
TOTAL MOMENT

1.4G				1.2G+1.6Q			
2.0 *	0.65 =	1.29		2.0 *	0.95 =	1.91	
2.4 *	0.56 =	1.34		2.4 *	0.48 =	1.15	
1.5 *	0.70 =	<u>1.05</u>		1.5 *	3.00 =	<u>4.50</u>	
w		=	3.69 kN/m	w		=	7.56 kN/m
4.5 *	0.65 =	2.91		4.5 *	0.95 =	4.29	
3.6 *	0.56 =	2.02		3.6 *	0.48 =	1.73	
0.0 *	0.70 =	<u>0.00</u>		0.0 *	3.00 =	<u>0.00</u>	
P		=	4.93 kN	P		=	6.02 kN
		=	11.1 kNm			=	22.7 kNm
		=	4.9 kNm			=	6.0 kNm
M		=	16.0 kNm	M		=	28.7 kNm

Try **230 PFC**

Plastic modulus **S** = **2.7E+05 mm³**
Moment of inertia **I** = **2.7E+07 mm⁴**
Modulus of elasticity **E** = **2E+05 N/mm²**
Yield stress **f_y** = **250 MPa** Strength reduction factor **φ** = **0.9**
Effective length **l** = **Full lateral restraint**

Moment Capacity S*φ*f_y

61.0 kNm

Therefore strength is acceptable

61.0 kNm

Therefore strength is acceptable

SERVICEABILITY
UDL

2.0 m Roof
2.4 m Wall
1.5 m Floor

Point Load

1.5 * 3.0 m Roof
1.5 * 2.4 m Wall
0.0 * 0.0 m Floor

Defl U.D.L. $5 \cdot W \cdot L^4 / 384 \cdot E \cdot I$
Defl Point $x \cdot P \cdot L^3 / 48 \cdot E \cdot I$
 $x = 3a/L - 4(a/L)^3 = 0.76$

TOTAL DEFLECTION

Deflection over span **d/L**
Span over deflection **L/d**

G+Q Short Term				G+Q Long Term			
2.0 *	0.64 =	1.27		2.0 *	0.46 =	0.92	
2.4 *	0.40 =	0.96		2.4 *	0.40 =	0.96	
1.5 *	1.55 =	<u>2.33</u>		1.5 *	1.10 =	<u>1.65</u>	
w		=	4.56 kN/m	w		=	3.53 kN/m
4.5 *	0.64 =	2.87		4.5 *	0.46 =	2.08	
3.6 *	0.40 =	1.44		3.6 *	0.40 =	1.44	
0.0 *	1.55 =	<u>0.00</u>		0.0 *	1.10 =	<u>0.00</u>	
P		=	4.31 kN	P		=	3.52 kN
		=	6.4 mm			=	4.9 mm
		=	1.5 mm			=	1.2 mm
		=	7.9 mm			=	6.2 mm
		=	0.0016			=	0.0013
		=	621			=	793
Therefore deflection is acceptable				Therefore deflection is acceptable			

Project STAPLETON RESIDENCE
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STEEL BEAM DESIGN HANDRAIL TO DECK

Span L = 3.0 m

ULTIMATE STRENGTH

UDL 1.2G +1.6Q Residential w = 0.36 * 1.6 = 0.576 kN/m

Moment - U.D.L. = 0.0 M = $w \cdot L^2 / 8$ = 0.6 kNm

Try 60.3 o.dia by 3.6 mm wall tube

Plastic modulus S = 8.7E+03 mm³
Moment of inertia I = 2.6E+05 mm⁴
Modulus of elasticity E = 2E+05 N/mm²
Yield stress fy = 250 MPa Strength reduction factor ϕ = 0.9
Effective length l = Full lateral restraint

Moment Capacity $S \cdot fy \cdot \phi$

2.0 kNm

Therefore strength is acceptable

SERVICEABILITY

UDL G + Q Residential w = 0.36 * 1.0 = 0.36 kN/m

Defl U.D.L. $5 \cdot W \cdot L^4 / 384 \cdot E \cdot I$ 7.2 mm

Deflection over span d/L 0.0024

Span over deflection L/d 414

Therefore deflection is acceptable

Project **STAPLETON RESIDENCE**
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BRACING CALCULATIONS To NZS3604:1990

BRACING UNITS REQUIRED **UPPER** **STOREY**
ADDITION ONLY

EARTHQUAKE

Storey	Top
Roof	Light
Wall	Light
Roof slope	30
Earthquake Zone	A

Bracing units required per m² $E = 4 \text{ BU/m}^2$

Area of storey $GPA = 46 \text{ m}^2$

TOTAL BRACING UNITS REQUIRED $E \cdot GPA = 184 \text{ BU}$

WIND

Storey	Top
Building height	6.0
Roof height	2.0
Storey height	2.4

Formation	: Valley floor	}	
Slope	: Flat	}	Topographic
Crest/Outer	: NA	}	zone T1

Region	: R1
Roughness	: Rural
Exposure	: Exposed

WIND SPEED : High

Design for Very High to suit local conditions

Bracing units required per metre across $W = 69 \text{ BU/m}$

Building length $BL = 8 \text{ m}$

TOTAL BRACING UNITS REQUIRED ACROSS $W \cdot BL = 552 \text{ BU}$

Bracing units required per metre along $W = 81 \text{ BU/m}$

Building width $BW = 7.2 \text{ m}$

TOTAL BRACING UNITS REQUIRED ALONG $W \cdot BW = 583 \text{ BU}$

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Project **STAPLETON RESIDENCE**
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BRACING ELEMENTS PROVIDED ACROSS UPPER STOREY ADDITION ONLY

Brace Ref.	Length m	Type	Height h m	Angle degrees	Factor 2.4/h	Factor cos angle	FOR WIND LOAD		FOR E'QUAKE	
							BU/m	Achieved	BU/m	Achieved
M	2.0	GIB1	2.40	0	1.00	1.00	55	110	50	100
N	2.0	GIB1	2.40	0	1.00	1.00	55	110	50	100
O	1.8	GIB1	2.40	0	1.00	1.00	55	99	50	90
P	1.8	GIB2	2.40	0	1.00	1.00	75	135	60	108
Q	1.2	BR5	2.40	0	1.00	1.00	115	138	85	102
R	1.2	BR5	2.40	0	1.00	1.00	115	138	85	102
ACROSS							Wind	730	E'quake	602
UPPER STOREY							Wind	552	E'quake	184

BRACING ELEMENTS PROVIDED ALONG UPPER STOREY

Brace Ref.	Length m	Type	Height h m	Angle degrees	Factor 2.4/h	Factor cos angle	FOR WIND LOAD		FOR E'QUAKE	
							BU/m	Achieved	BU/m	Achieved
S	3.6	GIB1	2.40	0	1.00	1.00	75	270	50	180
T	0.9	BR4	2.40	0	1.00	1.00	100	90	85	76
U	0.9	BR4	2.40	0	1.00	1.00	100	90	85	76
V	0.9	BR4	2.40	0	1.00	1.00	100	90	85	76
W	2.0	GIB1	2.40	0	1.00	1.00	55	110	50	100
ALONG							Wind	650	E'quake	509
UPPER STOREY							Wind	583	E'quake	184

Project **STAPLETON RESIDENCE**
JOSEPHS ROAD
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CARTERTON

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BRACING CALCULATIONS To NZS3604:1990

BRACING UNITS REQUIRED **LOWER** **STOREY**
ADDITION ONLY

EARTHQUAKE

Storey	Lower of two
Roof	Light
Wall	Light
Roof slope	30
Earthquake Zone	A

Bracing units required per m² **E = 8 BU/m²**

Area of storey **GPA = 54 m²**

TOTAL BRACING UNITS REQUIRED **E*GPA = 432 BU**

WIND

Storey	Lower of two
Building height	6.0
Roof height	2.0
Storey height	2.4
Wind speed	Very High

Bracing units required per metre across **W = 128 BU/m**

Building length **BL = 10 m**

TOTAL BRACING UNITS REQUIRED ACROSS **W*BL = 1280 BU**

Bracing units required per metre along **W = 141 BU/m**

Building width **BW = 7.2 m**

TOTAL BRACING UNITS REQUIRED ALONG **W*BW = 1015 BU**

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Project STAPLETON RESIDENCE
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BRACING ELEMENTS PROVIDED ACROSS LOWER STOREY ADDITION ONLY

Brace Ref.	Length m	Type	Height h m	Angle degrees	Factor 2.4/h	Factor cos angle	FOR WIND LOAD		FOR E'QUAKE	
							BU/m	Achieved	BU/m	Achieved
A	0.6	SP2G	2.40	0	1.00	1.00	95	57	95	57
B	0.6	SP2G	2.40	0	1.00	1.00	95	57	95	57
C*	1.2	BR7	2.40	0	1.00	1.00	145	174	145	174
D	1.0	BR7	2.40	0	1.00	1.00	145	145	145	145
E	3.6	BR5	2.40	0	1.00	1.00	115	414	85	306
F	1.5	BR5	2.40	0	1.00	1.00	115	172	85	127
G	3.6	GIB1	2.40	0	1.00	1.00	75	270	50	180
* 1.6m long wall with a high 0.4m long window										
ACROSS					PROVIDED		Wind	1289	E'quake	1046
LOWESTOREY					REQUIRED		Wind	1280	E'quake	432

BRACING ELEMENTS PROVIDED ALONG LOWER STOREY

Brace Ref.	Length m	Type	Height h m	Angle degrees	Factor 2.4/h	Factor cos angle	FOR WIND LOAD		FOR E'QUAKE	
							BU/m	Achieved	BU/m	Achieved
I	4.2	BR5	2.40	0	1.00	1.00	115	483	85	357
J	2.0	GIB1	2.40	0	1.00	1.00	55	110	50	100
K	0.9	BR4	2.40	0	1.00	1.00	100	90	85	76
L	1.2	BR5	2.40	0	1.00	1.00	115	138	85	102
M	2.4	BR5	2.40	0	1.00	1.00	115	276	85	204
ALONG					PROVIDED		Wind	1097	E'quake	839
LOWESTOREY					REQUIRED		Wind	1015	E'quake	432

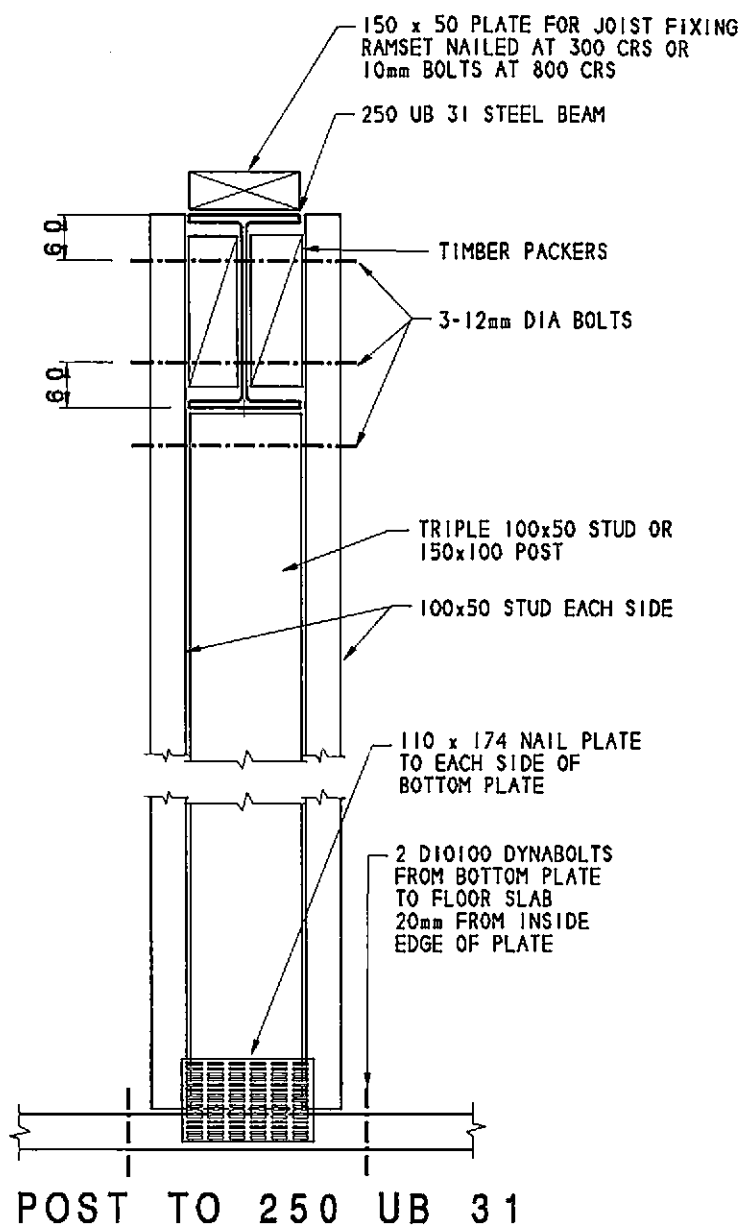
Project STAPLETON RESIDENCE
JOSEPHS ROAD
RD1
CARTERTON

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Project No. 2733
Date Sep-98
By GRS

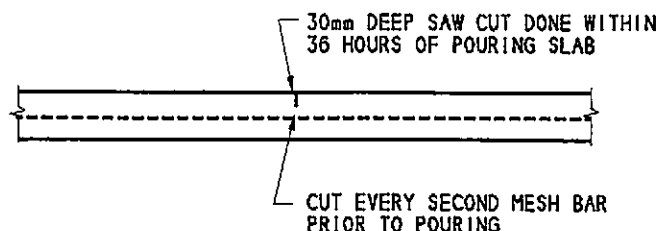
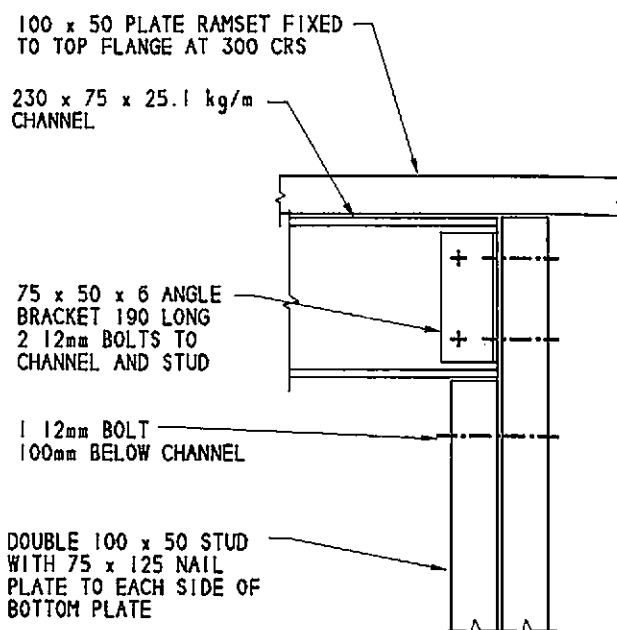
BRACING ELEMENT TYPES AND RATINGS

Type	Description	Minimum Length	Maximum Length	WIND BU per metre	EQUAKE
GIB1	Gib board one face plus diagonal brace	1.8 m to 2.4 m and over	2.4 m	55 75	50 50
GIB2	Gib board both faces plus diagonal brace	1.8 m to 2.4 m and over	2.4 m	75 80	60 70
GIB3	Gib board both faces	1.2 m and over		65	60
BR1	Braceline one face plus diagonal brace	1.8 m to 2.4 m and over	2.4 m	70 90	60 75
BR2	Braceline one face fixed vertically	1.8 m to 2.4 m and over	2.4 m	75 85	60 60
BR3	Braceline one face fixed horizontally	1.8 m to 2.4 m and over	2.4 m	60 95	45 65
BR4	Braceline one face with end stud straps	0.9 m to 1.2 m	1.2 m	100	85
BR5	Braceline one face with end stud straps	1.2 m and over		115	85
BR6	Braceline one face, gib-board other double end stud straps	1.2 m and over		150	110
BR7	Braceline one face, 7.5 ply other with end stud straps	0.9 m and over		145	145
BR8	Braceline one face, 4.75 hardboard other with end stud straps	0.9 m and over		120	95
BR9	Braceline one face with end stud straps and special fixings, 0.6 to 1.2m long	0.6 m to 1.2 m	1.2 m	110	95
SP2G	7mm plywood one face, gib board other with end stud straps	0.6 m to 0.9 m	0.9 m	95	95

GRS
17 SEPT 1998



AN 80mm DIA ROUND HOLE MAY BE CUT IN THE CENTRE
OF THE UB WEB TO ACCOMMODATE THE AUTOMATIC GARAGE
DOOR OPENING MECHANISM IF REQUIRED.



SLAB SAWN JOINT DETAIL

PROPOSED ADDITION TO STAPLETON RESIDENCE
AT JOSEPHS ROAD, RD1, CARTERTON.

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SCALE 1:10

DATE 16 SEPT 1998

DRAWN G.R.S.

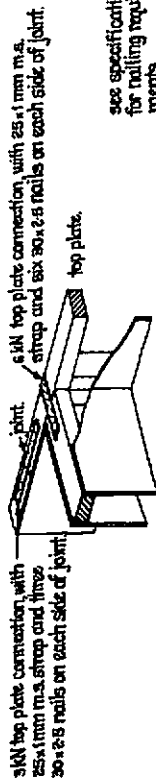
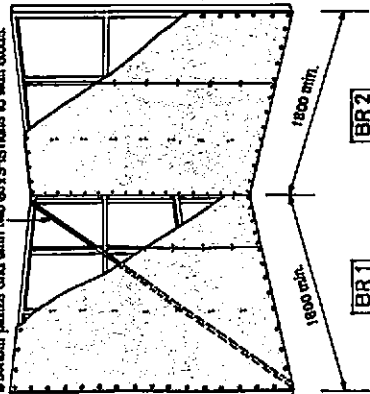
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D1

GIBRALTAR BOARD Wall Bracing Systems Construction Guide (complies with NZS 3604: 1984 & 1990)

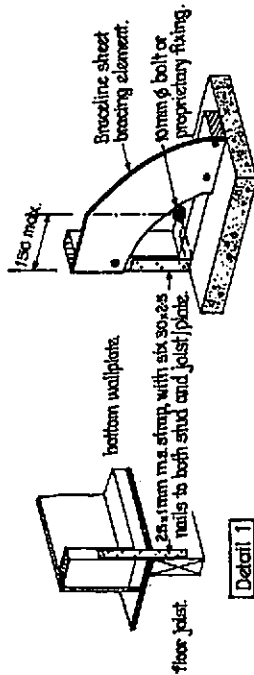
gale shed angle brace, fixed with three 60 x 3-15 nails to top & bottom plates and with two 60 x 3-15 nails to wall studs.



Top Plate Connections

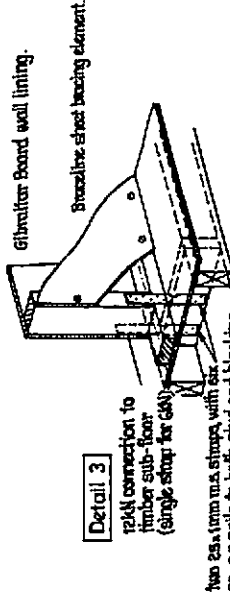
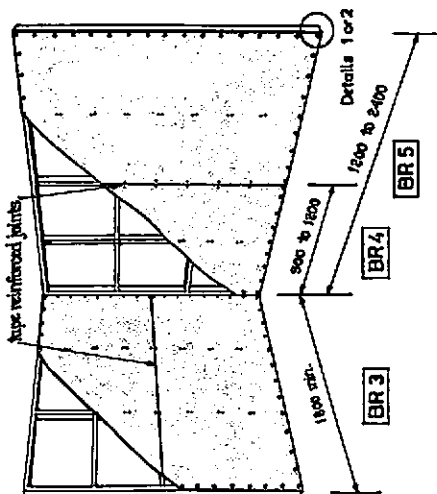
see specifications for nailing requirements.

see specifications for nailing requirements.

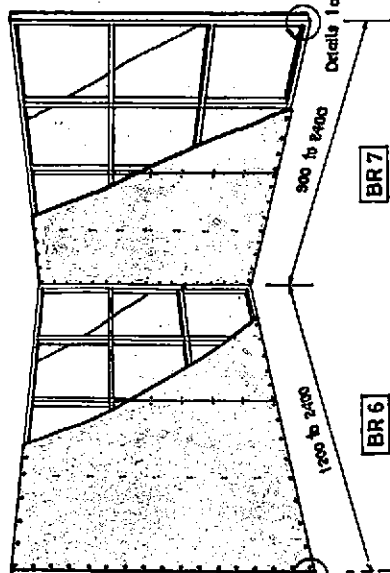


Detail 1
6kN connection to timber sub-floor.
(both sides of stud stopped for 12kN)

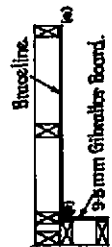
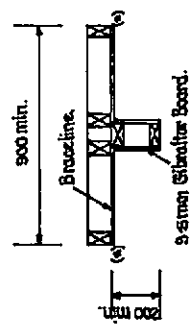
Detail 2
6kN connection to concrete (both sides of stud stopped for 12kN connection)



Detail 3
12kN connection to timber sub-floor.
(single strap for 6kN)

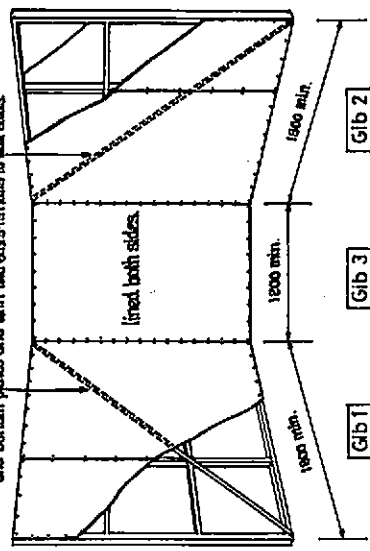


Detail 3



Guidelines For
Intersecting Walls

Types BR1 to BR7 may have standard 9.5mm Gibraltar Board intersecting walls with a min. length of 200mm. Brace nails and washers are required around the perimeter of the bracing element (s). Intermediate vertical joints may be nailed with standard 60 x 3-15 nails to both stud and blocking plate between floor joists.



gale shed angle brace, fixed with three 60 x 3-15 nails to top & bottom plates and with two 60 x 3-15 nails to wall studs.

Type	Description	Additional Requirements	Nailing & Stopping
Gib 1	9.5mm GIBRALTAR BOARD on one face. min. length 1800.	Diagonal brace.	Gib 1, 2 and 3 30 x 2.5 Gib clouts at 180mm o.c. around the perimeter of the bracing element and at 300mm o.c. to intermediate framing. Type and stop all joints within the bracing element.
Gib 2	9.5mm GIBRALTAR BOARDS on both sides. min. length 1800.	Diagonal brace.	
Gib 3	9.5mm GIBRALTAR BOARDS on both sides. min. length 1200.	No additional requirement.	
BR 1	BRACELINE on one face. min. length 1800.	Diagonal brace.	BR 1, 2, 3, 4, 5, 6 and 7 30 x 2.5 Gib clouts fitted with BRACELINE washers at 180mm o.c. around the perimeter of the bracing element and at 300mm o.c. to intermediate framing. Type and stop all joints within the bracing element.
BR 2	BRACELINE vertical on one face. min. length 1800.	No additional requirement.	
BR 3	BRACELINE horizontal on one face. min. length 1800.	No additional requirement.	
BR 4	BRACELINE on one face. length 900 to 1200.	6kN end-stud fixings.	
BR 5	BRACELINE on one face. length 1200 to 2400.	6kN end-stud fixings.	
BR 6	BRACELINE & GIBRALTAR BOARDS on opp. sides. length 1200 to 2400.	12kN end-stud fixings.	
BR 7	BRACELINE on one face 7.5mm ply on other. length 900 to 2400.	6kN end-stud fixings.	



GIB BOARD®

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CHRISTCHURCH
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Fax (03) 337-1014

FOR FULL DETAILS REFER. "GIBRALTAR BOARD™ WALL BRACING SYSTEMS"

Building Regulations 1992

SECOND SCHEDULE

FORM 2

Project Information Memorandum No.

Schedule of Attachments

This project information memorandum includes [Cross each applicable box, attach relevant documents, and send a copy to any relevant network utility operators and organisations having the power to classify land and buildings]:

NA
..... Information identifying relevant special features of the land concerned

NA
..... Information about the land or buildings concerned notified to the Council by any statutory organisation having the power to classify land or buildings

NA
..... Details of relevant utility systems

1
..... Details of authorisations which have been granted
*Neighbours consent to reduce
see yard setbacks*

NA
..... Details of authorisations which must be obtained before a building consent will be issued

NA
..... Details of authorisations which have been refused
*Zoned Rural Environment
Additions & Alterations Permitted.*

Signed for and on behalf of the Council:

Name: *Jennie Hale*
Position: *Promotions & Publicity Officer* Date: *8. 10. 98*
Time Taken: