Building Consent Approval Process

Owners Name: Greg

Location Address: 15 Naimui Street

Valuation Number: 1349009806

		Rec' Date	Action Date	Signed	Target
A	Owner or owners agent submits plans & specs	14/11/05	14/11/05	B. [illegible]	
	Application logged onto NCS system — Start Clock	✓	✓	B. [illegible]	
	Building consent number	055511			
	Due Date	9/12/05			
	Print letter and stop clock				
B	Records staff find/make up building file	✓	✓		4 hrs
C	Planning Check			B. [illegible]	4 hrs

Permitted ~~Resource Consent~~

Processing Times

	Date	Time	Date	Time	Total
Vicki	14/11/05	10mins			
Alina	16/4/05	10 mins			
Graham	23-11-05	15 mins			
WDC	7/12	10 mins			
Asset Mge					
				Total	
				@ $	
				Cost	

OK TO ISSUE

		Rec' Date	Action Date	Signed	Target
D	To Wanganui				
E	Check Value Re: BRANZ & DBH Levy				
	Check Building				
	Check Plumbing				
	Check Structural				
	Check Fire Regs				
	Check Drainage from file				
	Other				
	Print Letter and Phone to Stop Clock — Date		Return to RDC		
	Print Conditions and Inspections		Return to RDC		
F	Quick check of Inspections by RDC Building Officer				4 hrs
G	Issue Consent				4 hrs
H	Building Officer to Sign and Forward to Applicant				

COMMENTS IF ANY TO BE ATTACHED UNDER SPERATE REPORT

JOB: Greig - BC 055511

C/- 27 Moana Road ZONE: Koitiata Rural Settlement

VALUE: $ 10,000 STATUS: FR CONFIDENTIAL:

PIM Conditions

- ☐ 26 All services to be connected to local authority requirements.
- ☐ 27 All services as per local authority requirements.
- ☐ 28 All services to existing systems.
- ☐ 29 A "Section C73" Certificate has been registered with Land Information New Zealand (property subject to inundation)
- ☐ 30 New septic tank as per the Manawatu Wanganui Regional Council General Authorisation for Septic Tank Discharge

PIM Conditions

Standard Conditions

- ☑ 29 24 Hours Notice: When work commences.
- ☐ 32 24 Hours Notice: Prior to pouring foundations.
- ☑ 30 24 Hours Notice: Prior to pouring concrete floors.
- ☐ 33 24 Hours Notice: Prior to lining buildings.
- ☑ 31 24 Hours Notice : Prior to covering of drains.
- ☑ 34 24 Hours Notice: When works completed.
- ☐ 01 Stormwater as per NZBC to approved outfall.
- ☐ 04 All works as per NZS 3604:1999.
- ☐ 05 Contractors Names and addresses required before works commence.
- ☑ 06 All works as per structural engineers details.
- ☑ 07 All works as per the New Zealand Building Code.
- ☑ 08 All works as per the Building Act 2004.
- ☑ 10 All works strictly in accordance with plans and specifications.
- ☐ 12 A letter accepting responsibility for all damage to footpath and berm area required.
- ☑ 14 Foundation to have adequate bearing on original ground.
- ☐ 15 Effluent discharge as per Horizons requirements.
- ☐ 17 Floor height above ground to be as per Horizons recommendations.
- ☐ 19 Adequate access for people with disabilities as per New Zealand Building Code is required.
- ☐ 20 Effluent discharge consent from Horizon is required.
- ☐ 21 Stormwater water and sewer services are available to the property for connection, please contact Mr James Torrie Asset Engineer at the Council Office telephone 06-327-8174.
- ☐ 23 No works to the berm or footpath area without prior arrangement from the Rangitikei District Council Asset Manager Mr Barry Strichen or Permission from GHD Consultants, please contact Mr Roger Coles on telephone 06-327-4360.

☐ 25 Make and model of woodburner required.

☐ 35 Heater to be attached to fireplace as per the Building Act 2004 and NZS 7421:1990.

☐ 36 Heater to be installed strictly to Manufacturer's installation instructions.

☐ 37 Heater and hearth slab to be attached to floor as per the Building Act 2004 and NZS 7421:1990.

☐ 18 No works to commence until resource consent is issued. Section 35 Certificate attached.

☐ 03 Note: Consent issued as per the attached inspections.

☐ 40 All services to be disconnected and sealed to RDC requirements.

☐ 41 All debris to be removed and site left in clean and tidy condition.

☐ 44 As per attached it is now a requirement to fit smoke alarms in all dwellings when internal alteration consents are issued, this includes fires.

Non Standard Conditions

Inspections Sheet

☐	01	SITING	☐	16	INSULATION
☐	02	FOOTINGS	☐	17	INTERNAL SERVICES
☐	03	REINFORCING	☐	13	TIMBER MOISTURE
☑	05	CONCRETE SLAB PRE POUR	☐	21	PRELINE
☐	28	FOUNDATION	☐	29	POSTLINE
☐	06	FLOOR HEIGHT	☐	18	EXTERNAL SERVICES
☐	08	P & D SUB FLOOR	☐	30	CAVITY
☐	04	SUB FLOOR FRAMING	☐	19	EXTERNAL CLADDING
☐	07	SUB FLOOR BRACING	☑	23	DRAINAGE
☐	09	WALL FRAMING	☐	27	BLOCK FILL
☐	11	ROOF FRAMING	☐	25	TANK INSTALLATION
☐	10	STRUCTURAL CONNECTIONS	☐	24	TANK REMOVAL
☐	12	ROOF BRACING	☐	26	FIRE REQUIREMENTS
☐	14	WALL BRACING	☐	22	SITE INSPECTION (FIRE)
☐	15	WALL BRACING – SHEET	☑	20	FINAL INSPECTION

PIM Notes (when printing building consent)

☐ Information identifying relevant special features of land.

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

☐ Details of relevant utility systems.

☐ Details of authorisations which gave been granted.

☐ Details of authorisations which must be obtained before consent issued.

☐ Details of authorisations which have been refused.

OKAY TO ISSUE

AUTHORISED OFFICER.....G. C. Wait.....**DATE**.....7...../...12./...05.....

Rangitikei District Council
Private Bag 1102
MARTON

Attention: Graham Wait/Vicki Hodds

Dear Sir/Madam

The following building consent has been received and processed as requested.

BC 055511 **Received:** 18·11·05 **Processing Completed**

Approved: Yes/No **Further Information Required:** Yes/No

Building:

Plumbing and Drainage:

Structural:

Approval Conditions:

PIM Comments:

Office Use Only

Processing Costs: Building 15min **P & D** **Structural**
Administration Costs:
Tolls and ancillary costs:

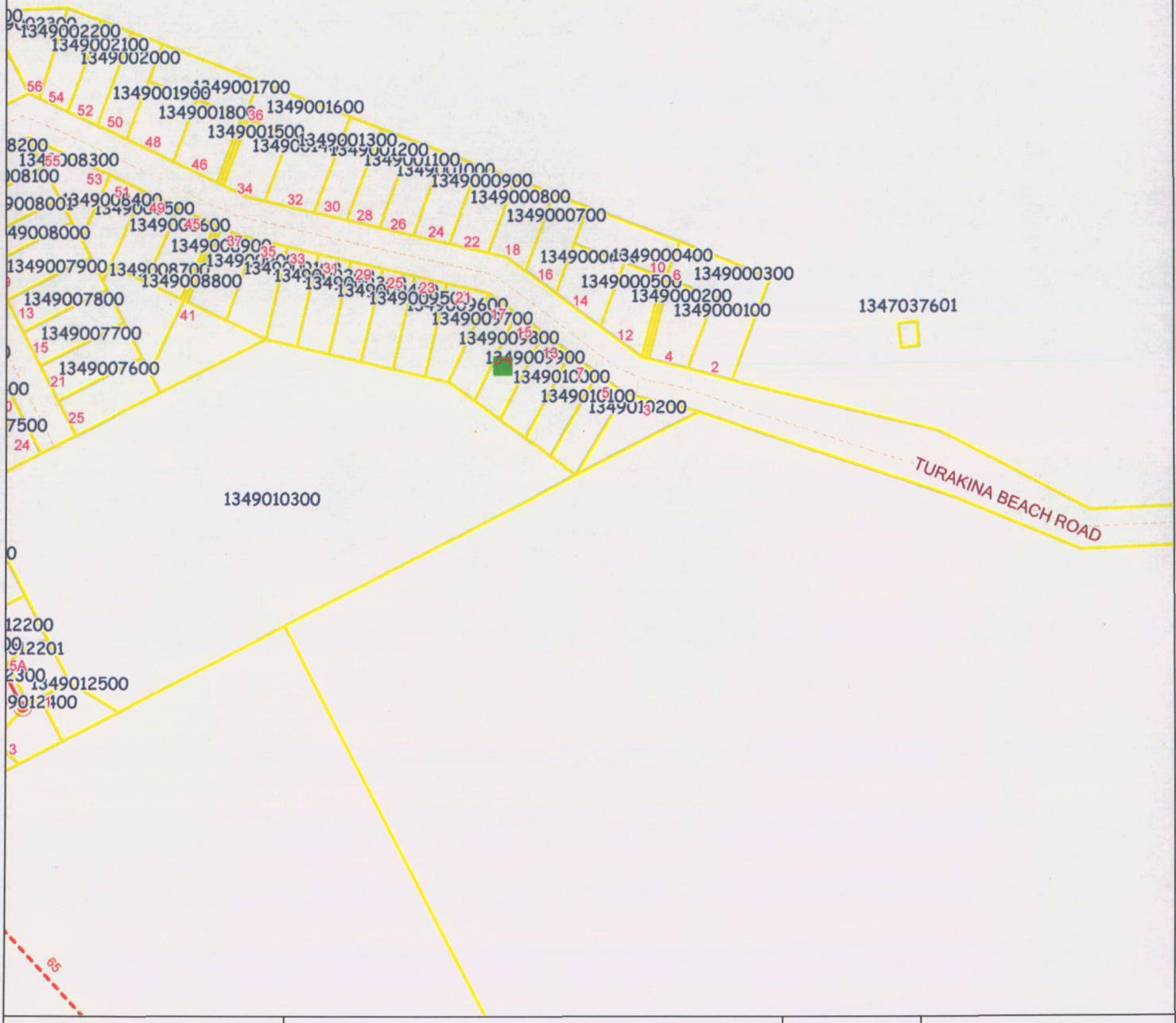
Total Fee (Incl GST)

Rangitikei District Council
46 High Street
Private Bag 1102, Marton

Telephone (06) 327 0099
Facsimile (06) 327 6970

info@rangitikei.govt.nz
www.rangitikei.govt.nz

Rangitikei
UNSPOILT...



Rangitikei
UNSPOILT...

Rangitikei District Council provides this information as a representation of the reticulation services where their location is known.
All reasonable efforts are taken to ensure the accuracy of this information, but confirmation on site is recommended before initiating any work
Date Printed : 14/11/2005 10:14

N

RANGITIKEI DISTRICT COUNCIL
Rates Account Enquiry - 2005/06

Prev Transactions Next

GREIG TREVOR ALLAN
GREIG JULIE ELIZABETH
15 WAINUI STREET
R D 11
WANGANUI
Old Owner: CHERITON EC
Sale Date: 20/08/04

Valuation No: 1349009800

Post Code: 5001

Sale Price: $ 58,000

PROPERTY DESCRIPTION (Other Property Links)

Location: (GIS) 15 WAINUI STREET, KOITIATA
Legal Desc: LOT 39 DP 26255 BLK I KOITIATA SD
Cert of Title: 37B/58
Ward: 3 **Region:** 8 **Zone:** 1G
Use: 97 **Category:** RD196 **TORAS:** 11100
Change Dates: RatePayer:27/05/05, Maint:27/05/05
Change Reason: Correct address **Chg Source:** TLA

VALUATIONS

	CURRENT	NEW
Area (Ha):	0.0822	
Land Value:	$ 14,000	
Improvements: (BACH OBS OI)	$ 26,000	
Capital Value:	$ 40,000	
Valuation Date:	1/09/03	**Valuation Date:** 1/09/03

RATES for Current Year - 2005/06 (Next Year - 2006/07)

Type	Description (Basis)	Factor	Estimated Amt
003:	Uniform Annual General - - (SU)	1.00	$ 235.00
004:	General Rate - - (C)	40000.00	$ 6.30
016:	Community Services - Rural (C)	40000.00	$ 4.10
017:	Community Services - District (C)	40000.00	$ 15.50
021:	Roading - Southern (C)	40000.00	$ 76.10
025:	Solid Waste - District (SU)	1.00	$ 79.00
	Total Rates Levied		**$ 416.00**
	(GST on Rates Levied)		$ 46.22
	Rates Last Year		$ 415.45

VB2000

PRODUCER STATEMENT DESIGN

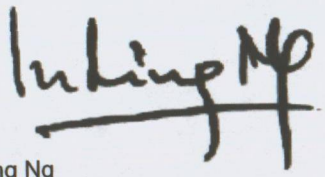
The building design VB2000 has been compiled using sound and widely accepted engineering principles and in accordance with NZS4203:1992 and NZS 3603:1993 as verification methods and acceptable solutions of the approved documents issued by the Building Industry Authority to satisfy the requirements of clause B1: Structure of the Building Regulations 1992.

As independent design professionals covered by a current policy of Professional Indemnity Insurance to a minimum value of $2,000,000. I BELIEVE ON REASONABLE GROUNDS that subject to:

1. The verification of all design assumptions detailed in the drawings and: -

2. All proprietary products meeting the performance specification requirements.

The proposed building is to be constructed in accordance with the drawings, specifications and other attached documents, which comply with all relevant provisions of the Building Code



In Ling Ng
B.E. (Hons) MIPENZ (Structural)
CPEng, IntPE
Member ID 146585
for MiTek New Zealand Ltd.
20 Kotzikas Place
Christchurch
New Zealand

23rd June 2005

VB2000

PRODUCER STATEMENT DURABILITY

To satisfy the requirements of Clause B2:'Durability' of the New Zealand Building Code, the metal cladding material needs to meet a 15-year durability life. To achieve that, the following provisions must apply:

Range of Product and Use.

Specification:	AS1397:2001
Coating type:	Zinc/Aluminium & painted
Steel thickness range:	0.35mm - 0.95mm BMT
Steel grade range:	G300 - G550
Application:	Standard Versatile Walls on Class IV Building category as per NZS4203:1992
Fasteners:	Heavy Zinc or Zinc-tin coated clouts to comply with AS3566.2-2002 Classes 3 & 4. Aluminium rivets for all steel components. IFI114:1986

Requirements, Limitations and Exclusions.

- Applicable to buildings in Sea-Spray zone and exposure zones 1,2,3 & 4 in accordance with Clause 4, Durability, NZS 3604:1999 which is an acceptable solution under clause B2 of the NZBC
- Fixing and installation of the cladding must be done exactly in accordance with Versatile Buildings Specifications.
- Normal and regular maintenance must be carried out on the exterior surface of the cladding and the following guide must be followed to ensure the durability requirements are met.

Regular Maintenance.

Exposure zones 1,2,3 & 4. (All areas other than sea spray zones - see below)

- Rain washing only required on exposed sections, sheltered or protected areas such as under spouting, top cladding boards and tops of doors require washing every 3 months.

Sea spray zones (Within 500m from the sea or 100m from sheltered harbours or inlets) and areas of Geothermal activity.

- Rain washing only required on exposed areas. Sheltered and protected areas such as under spouting, top cladding boards and tops of doors require washing down every month and when corrosive salts are present.

Extended Maintenance, Painting or Repainting.

- **Extended Durability**

Once the metallic coating or the paint system has weathered away, signs of red rust for bare material or signs of the metallic coating for painted material, painting of the entire surface is required to extend the life of the cladding product. Paint manufacturer's recommendations are to be followed for surface preparation and paint type to be used.

- **Evident Corrosion**

Areas the show signs of white or red rust/ corrosion (typically in unwashed areas) require cleaning back with a stiff brush and cleaner to remove all dust, surface contaminants and corrosion products and present a sound substrate for painting. Priming of the surface and application of two coats of paint as per the Paint Manufacturer's recommendations is then required. Particular attention needs to be paid to laps (side, end, flashing etc) where earkier corrosion may start due to moisture and dirt entrapment.
If evident corrosion is not treated quickly rapid deterioration of the sheet may occur which could result in perforation. At this stage replacement of the affected sheet is the best option.

References.

1. NZS 3604:1999, clause 4, Durability.
2. Versatile Buildings Assembly Instructions.
3. New Zealand Building Code 1992

Jeffrey Geayley
for Versatile Buildings Ltd
112 Waterloo Road, Christchurch
New Zealand
Dated: 24th February 2005

VB2000 EXPLANATION

The following designs cover the structural aspects (excluding floor details) of the construction of Versatile Buildings Ltd standard range of garages for both the 600 and 1000 Series. The sequence of design information is broken down into the following categories:

- Wall Framing.
- Truss Design.
- All Structural Fixings.
- Building Stability Design for both roof and walls.

All other aspects of the Structure are constructed in accordance with the standard Versatile Buildings Ltd details for garages.

BRANZ Note: Copies of Bracing Test Report for wall cladding, Test number STR346, available for inspection from Versatile Buildings Ltd., 112 Waterloo Road, Christchurch.

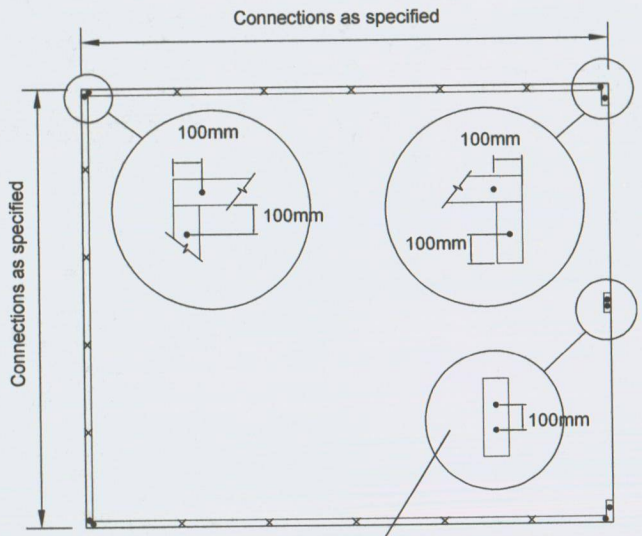
Building Classification: Buildings designed for Class 5 Category as defined in NZS4203:1992 Table 2.3.1

Patent: 'FlexiBrace' subject to Patent No: 504428 MiTek N.Z. Ltd.

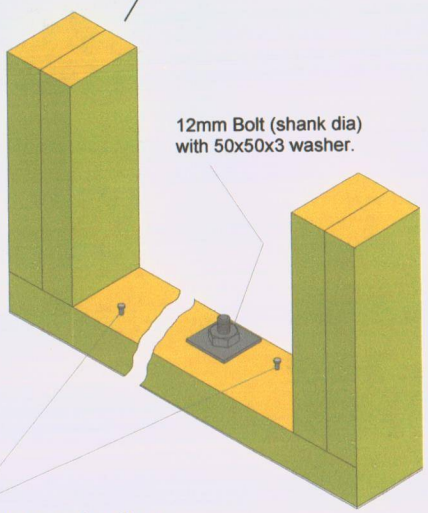
Steel 'Stud Saver' subject to registered Patent No's 330803 & 314494

VB2000 FOUNDATION DETAILS

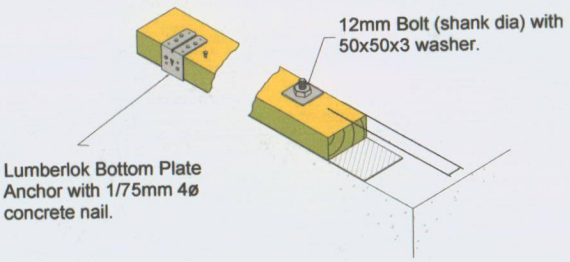
2.4m WALL HEIGHT BOTTOM PLATE FIXING LOCATIONS



NOTE: Connections must be applied to all corners and door openings shown and then spaced, as per layout above, between these points



BOTTOM PLATE CONNECTION TYPE



NOTE: For fastener spacing @ 900 ctrs, truss spans building width can be increased by 25%

Wind Load	Max Building	Fixing Spacing
High	9600 12000	1200 900

VB2000 DESIGN INFORMATION

Design Scope

The VB2000 design series covers the structural requirements for the Purlin fixing, Truss fixing, Truss design, Truss bracing, Wall & Roof Bracing, Lintels, Verandah / decks & Garaports. All other structural requirements are as per NZS3604: 1999

Building Erection

Proper bracing must be installed to hold the components true and plumb and in a safe condition until permanent bracing is fixed. All permanent bracing and fixings must be installed before applying any loads.

Design References

NZS3603:2005
NZS3604:1999
NZS4203:1992
NZS3602:2003
TP1.85

Truss Joints

GANG-NAIL plates are to be pressed into both sides at each joint by a licensed GANG-NAIL fabricator

Load Details

These drawings have been prepared using the above design loads.
It is the responsibility of the user to ensure that the design data and loads are still correct at the time of construction.

Design Loads

Dead loads for Light Roof
0.15kPa (includes weight of trusses, purlins, associated framing and zincalume roof).

Live loads
1.0kN concentrated load, 0.25kPa uniform load on roof section & 2.0kPa uniform load for decks.

Wind loads
Buildings designed for UP TO VERY HIGH wind conditions as per the attached selection charts and as defined by NZS3604:1999.

Seismic loads
Siesmic Zones A, B or C.

Snow loads
Buildings designed for up to 1.00kPa Snow load as shown on the attached selection chart.

Refer to MiTek New Zealand Limited for any design modifications required for increase in snow loads or wind loads above those stated on the drawings.
Buildings designed for class IV category as NZS4203:1992 Table 2.3.1

VB2000 WALL FRAME DETAIL

Wall Frame Sizes

Wind Load	Wall Height (mm)	Stud Ctrs (mm)	Size & Grade
High	2400	600	90X35 MGP10

Timber Grade & Design

- Top plates, bottom plates & studs are to be constructed in 90 x 35 minimum grade to be MGP10 or MSG10 or better in all situations as described in the table shown above.
- All other timber not specified can be non standard grade.
- All purlins and stiffening added to the lintels to be minimum 90x45 MSG8 grade.

Timber Treatment

- Treated Timber is to be used in the construction of the buildings as defined by the frame and truss requirements in NZS3602:2003. All treated timber is to meet the required standards.
- Minimum H1.2 timber treatment is to be used in all frames & including areas of the building where it it to be enclosed with GIB board lining, i.e. sleepouts etc.
- Treatment of Verandah & Deck construction refer to Verandah and Deck details in this document (if included)
- Trusses including Gable Ends can be untreated.

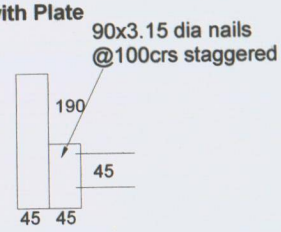
VB2000 LINTEL SELECTION

Side Entry: Aluminium Joinery.

2.4m Stud Height

Opening Width	Building Width	Lintel Size
865 mm Clear Span 1765 mm Clear Span	3.6m 3.6m	2 x 90 x 45 2 x 140 x 45

Lintel with Plate

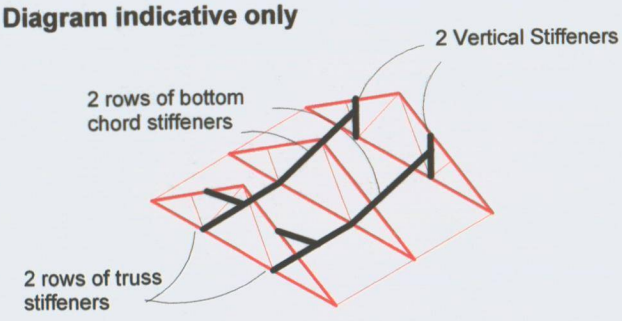


VB2000

SPAN, LOAD AND TRUSS DETAILS

Truss Stiffener Position

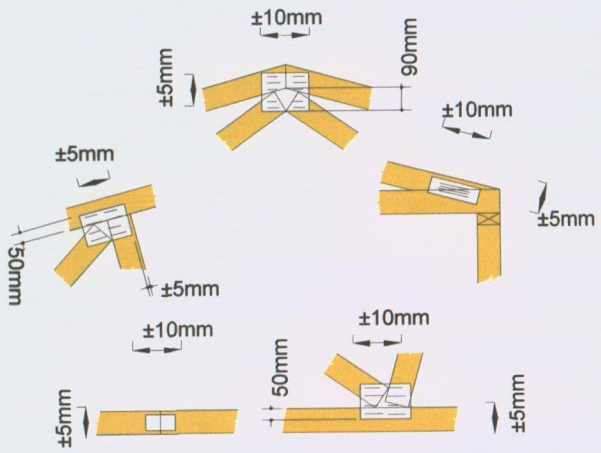
Diagram indicative only



Span Chart

Truss Centers	Wind Load	Snow Load (kPa)
1800	High	0.5

Construction Tolerances



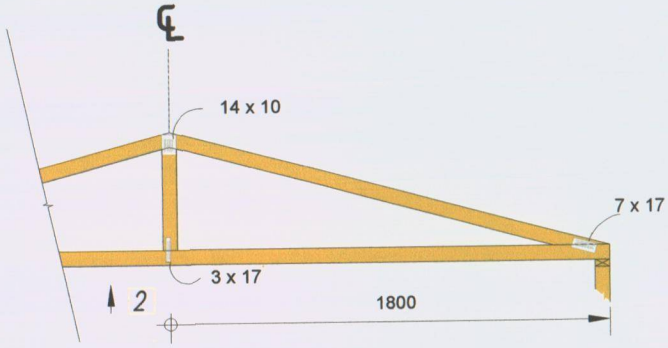
NOTE:

Plates are to be fully pressed home on both sides of joints.

The plate axis must be located in the specified or indicated direction.

Typical positioning tolerances for plates

3,600 Span

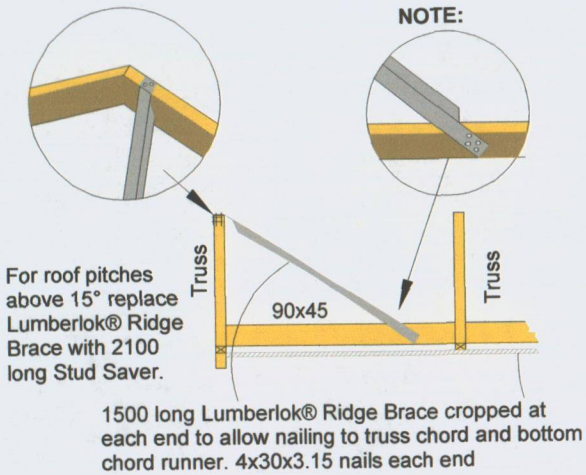


NOTE:

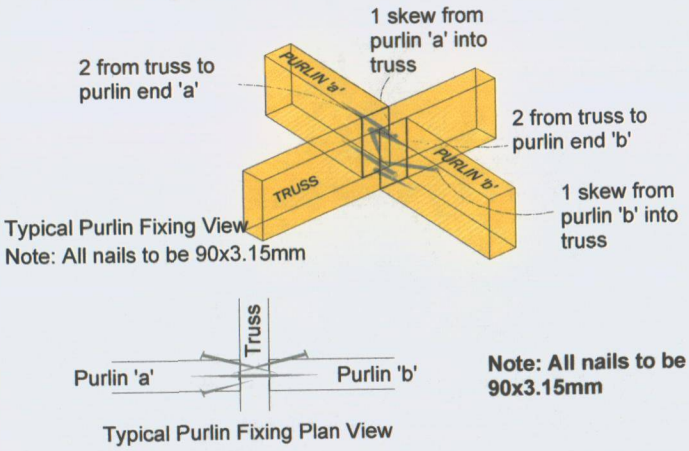
1. Truss Top Chord pitch range is 15°, 20°, 25°, 30°
2. ● Indicates location of Bottom chord brace (truss stiffener)
3. ↑ 6 Indicates the truss camber (typical)
4. All truss plates are Gang-Nail® GN10 type
5. All top & bottom chords are to be MGP10 90x35 Radiata pine
6. All webs are to be a min. MSG8 - 70x35 Radiata pine

VB2000 TRUSS DETAILS

Ridge Brace



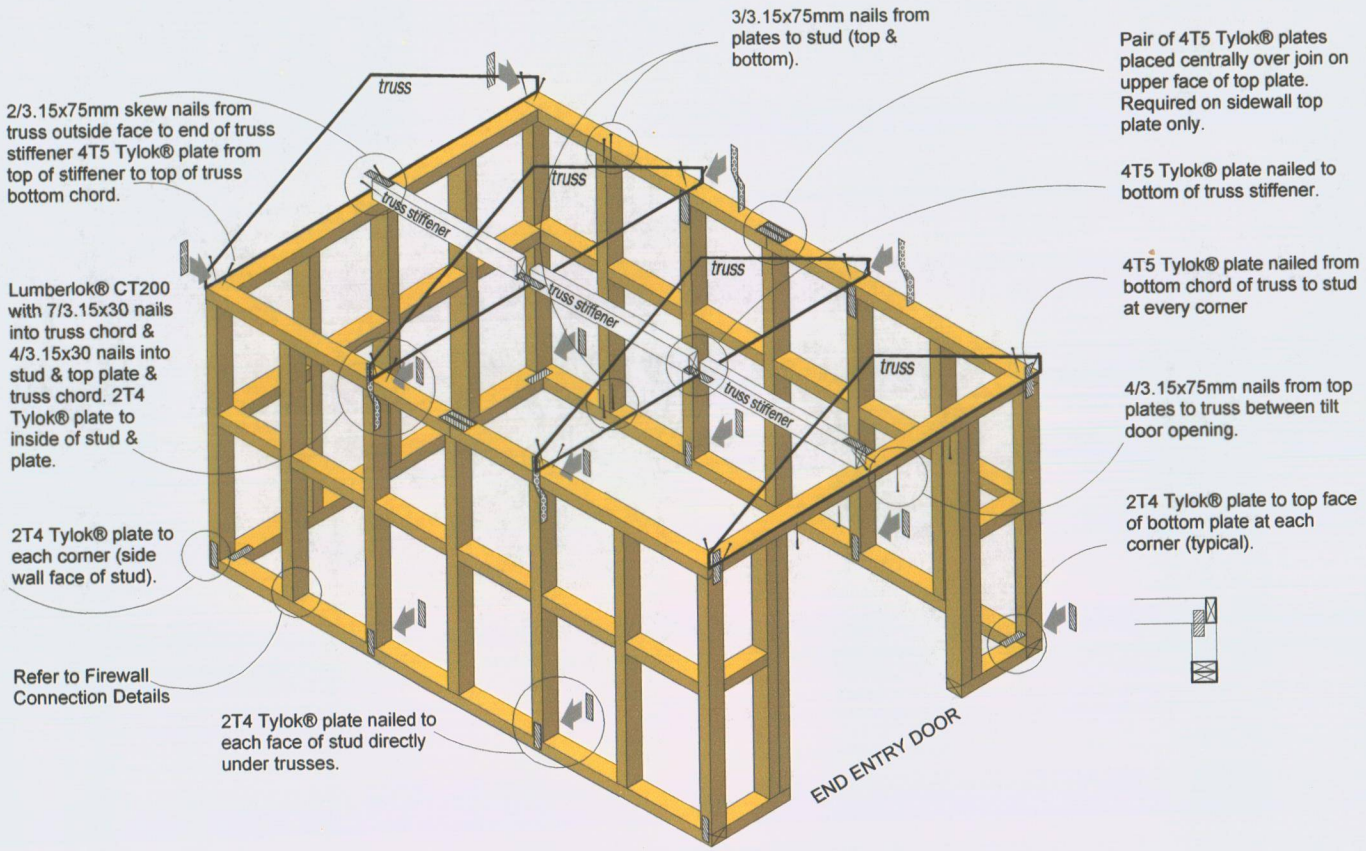
Purlin Fixing Detail



Note: All nails to be 90x3.15mm

VB2000 HARDWARE FIXING DETAILS

Hardware Fixing Locations



NOTE: Hardware fixings apply to both 600 & 1000 series buildings.

VB2000 EXPLANATION

The Building Stability Design of the standard range of garages is broken down into two separate areas, and are as follows: -

Roof Bracing

Using a diaphragm approach, the roof is braced using a series of Strip Brace and / or Multibrace patterns in the plane of the truss top chords to transfer the wall and roof wind demand to the top plates. The loads at the top plate level are then transferred to the foundation through the wall bracing system.

The layouts of Strip Brace and Multibrace patterns are determined by the size and shape of the building plus the relevant wind zones appropriate for that design. These layouts are determined on the VB2000 Series drawings on the following pages.

Wall Bracing

Using a Bracing Units approach the tables shown on the following pages give the loading demand of the respective buildings dimensions and wind loads. The use of wall cladding and / or Secondary Bracing systems provides the method of achieving the required bracing demand. These cladding and secondary bracing units are detailed on the following pages also.

Within allowable side wall and end wall length ratio there is an ability to brace buildings on all three sides only when large door openings make installation of braces impossible. The bracing demand in these situations is laid out in the tables on the following pages.

The VB2000 Series covers stand alone buildings up to but no greater than a width and or length of 12m. In cases where partion walls are available, buildings can be over the 12m overall dimension provided the rules on the following page are followed and installed as per the diagram shown on the following page.

All Angle Brace, Strip Brace, Multibrace & Flexi-Brace options can be located anywhere along the braced wall provided they fit the required dimensions.

VB2000 BRACING DEMAND RULES

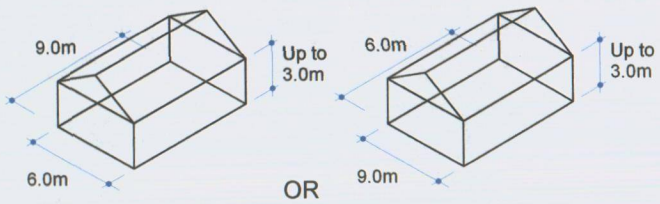
1. BUILDING DIMENSIONS

The maximum building dimensions must not exceed 12m in width and or length.

2. SIDE/END WALL RATIOS DEFINITION

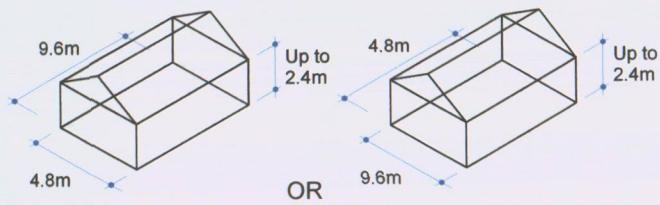
a. 1 to 1.5 Ratio applies only when 3 walls of bracing are available (See rule 4a) on L,M,H & V/High Wind Loads up to 3.0m high.

e.g.



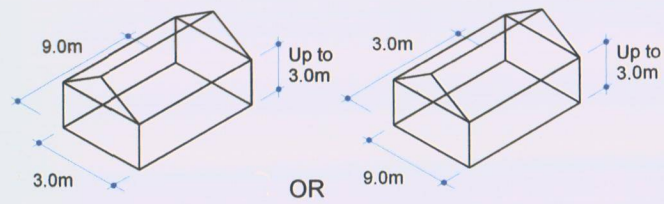
b. 1 to 2 Ratio applies only when 3 walls of bracing is available (See rule 3a) on L, M,H & V/High Wind Loads up to 2.4m high.

e.g.



c. 1 to 3 Ratio applies only when 4 walls of bracing is available (See rule 3b) on L, M,H & V/High Wind Loads up to 3.0m high.

e.g.



3. WALL BRACING DEMAND OPTIONS

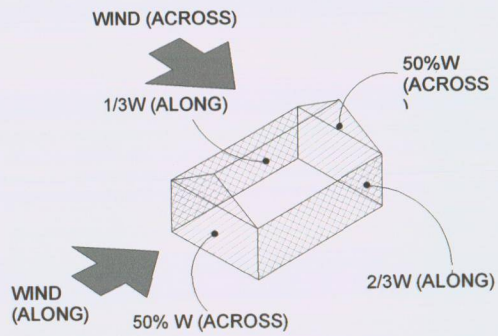
4a. Where 3 walls only are available , establish the demand for ALONG & ACROSS for the specific tables on the following pages. Apply the full bracing unit required to the respective walls and brace accordingly.

4b. Where four walls can be used for bracing, establish the demand on the following pages) by using the tables called "Both end walls available" and "Both side walls available.

NOTE

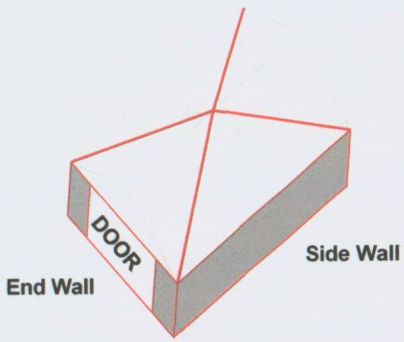
The shortest two walls must have bracing equally distributed between them.

If that is achieved the Total Bracing Units in the longer walls maybe distributed on a 2/3 to 1/3 split, e.g. A total of 150 Bu's can be distributed in one of the longer walls and the remaining BU's distibuted to the other longer wall. (See below)



VB2000 ROOF BRACING

BRACING 3.6m Width, 6.0m Length, High Wind Zone



ROOF BRACING NOTES

Indicates a single row of Lumberlok Strip Brace tensioned up and laid over the top of the purlins, fix each end with 3 x 30 x 3.15 nails (typical) Fix at ridge crossing with 2/30x3.15 nails.

VB2000 WALL BRACING

VERSATILE BUILDINGS

Engineered by:

consulting engineers, civil - structural

F R Smith Consultants

Producer Statement Structural Details

CARPORTS

SINGLE & DOUBLE

Notes

Copyright: These drawings must not be reproduced without express permission from Fred R. Smith Consultants and Versatile Buildings Ltd.

Building Classification: Buildings designed for Class 5 Category as defined in NZS4203:1992 Table 2.3.1

Building Sizes: Single carports are 3.0mx5.5m. Double Carports are 5.9m x 5.5m.

Index

CONVENTIONS:

'High Wind' refers to buildings up to and including V=45m/s in New Zealand

'Very High Wind' refers to buildings up to and including V=50m/s in New Zealand

VB3100 SERIES

Apr 2001 Version 1.1

BHP **BHP New Zealand Steel**

VERSATILE BUILDINGS

VERSATILE BUILDINGS NZ LTD

PRODUCER STATEMENT – DURABILITY

The building designs VB 3100 have been designed using the external metal cladding on the roof to assist in their structural stability.

To satisfy the requirements of Clause B2:"Durability" of the NZBC 1992 and to ensure the cladding material meets a 50-year durability life the following provisions must apply:

Range of Product and Use

- Specification: AS1397: 1994
- Coating Type: Zincalume & G2z
- Steel thickness range: 0.35mm – 0.95mm BMT
- Steel grade range: G300 – G550
- Application: Standard Totalspan Roof Cladding on Class V Building category as per NZS4203: 1992 an AS11702:1989 Table 3.2.9
- Fasteners: Screws to be #10 x 16 Tek screws, Class 3 Zinc plated to comply with AS1111
  Bolts to be M10 & M12- 4.6.3 Hex commercial zinc plated to comply with AS 1111
  Screwbolts to be M10x75 Zinc plated complying with AS 3566

Requirements, Limitations and Exclusions

- Applicable to buildings in Coastal Very Severe, Coastal Severe, Coastal Moderate and Inland Moderate environments as described in BHP New Zealand Steel Environment Categories March 2000.
- Fixing and installation of the cladding must be done exactly in accordance with Totalspan Buildings Fixing Guide
- Normal and regular maintenance must be carried out on the exterior surface of the cladding and the following guide must be followed to ensure the durability requirements are met.

Regular Maintenance

- **Moderate Marine Environment**
  Rain washing only required on exposed sections, sheltered or protected areas require washing every 3 months.
- **Severe and Very Severe Environment**
  Rain-washing only required on exposed areas. Sheltered and protected areas require washing down every month and whenever corrosive salts are present.

Extended Maintenance, Painting or Repainting

- **Extended Durability**
  Once the metallic coating or the paint system has weathered away, signs of red rust for bare material or signs of the metallic coating for painted material, painting of the entire surface is required to extend the life of the cladding product. Paint manufacturers recommendations are to be followed for surface preparation and paint type to be used.
- **Evident Corrosion**
  Areas that show signs of white or red rust/corrosion (typically in unwashed areas) require cleaning back with a stiff brush and cleaner to remove all dust, surface contaminants and corrosion products and present a sound substrate for painting. Priming of the surface and application of two coats of paint as per the Paint Manufacturer's recommendations is then required.
  Particular attention needs to be paid to laps (side, end, flashing etc) where earlier corrosion may start due to moisture and dirt entrapment.
  If evident corrosion is not treated quickly rapid deterioration of the sheet may occur which could result in perforation. At this stage replacement of the affected sheet is the best option.

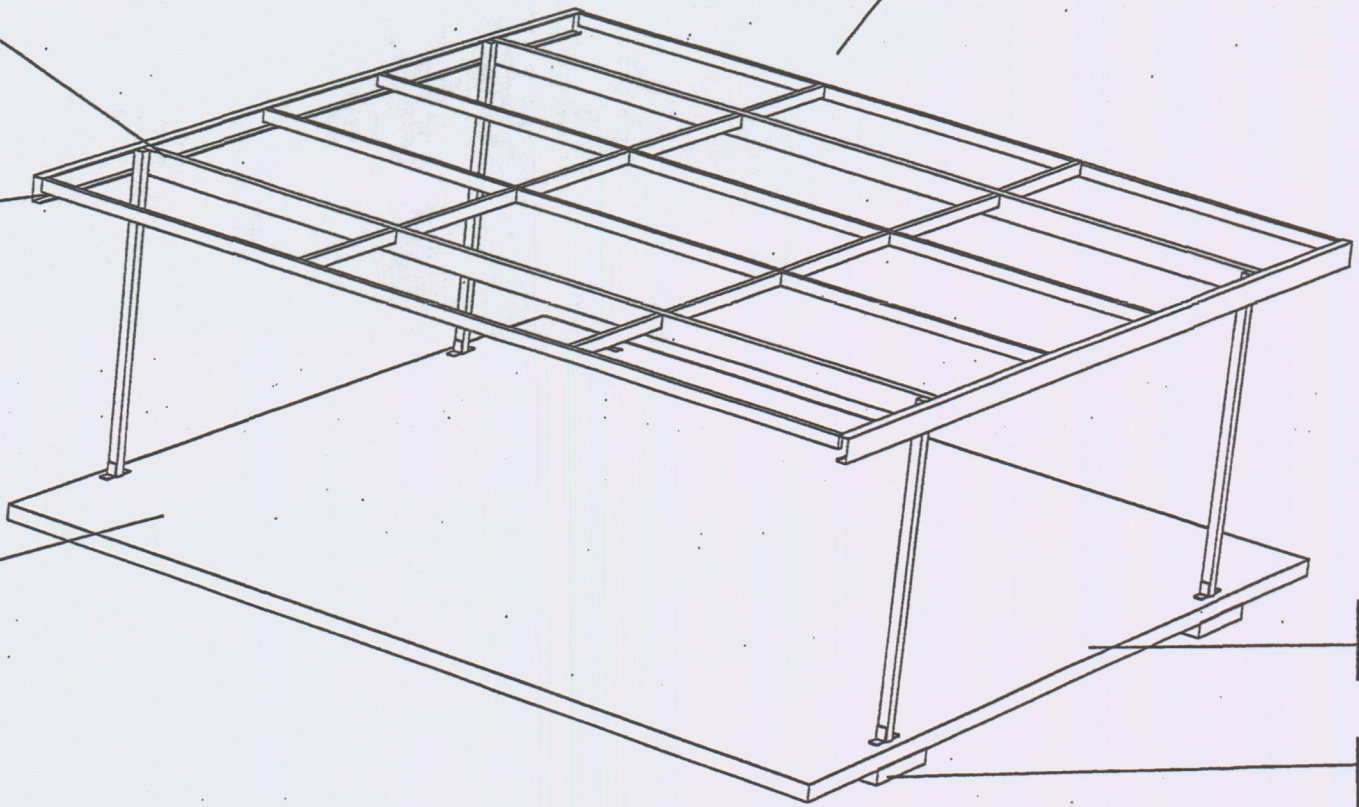
References

1. BHP New Zealand Steel
   "Environmental Categories" March 2000
2. Totalspan Buildings Assembly Instructions
3. New Zealand Building Code 1992
4. Australian Building Code 1989

Brett Waterfield
for Totalspan Buildings Ltd
112 Waterloo Road
Christchurch
NEW ZEALAND

Gary Bonniface
for BHP New Zealand Steel
Private Bag 92121
Auckland
NEW ZEALAND

Dated: 2nd April 2001



detail Sheet 6
ROOF FRAME

detail Sheet 7
POST FIXING

detail Sheet 7
PURLIN FIXING

Speci. Sheet 4
SOIL/SLAB DETAILS

detail Sheet 5
FOUNDATION

detail Sheet 5
PAD DETAILS

REVISED JUNE 03

VERSATILE BUILDINGS
MANUFACTURING: 112 WATERLOO ROAD PH: (03) 348-6555 FAX: (03) 348-1288

F R Smith Consultants
CONSULTING ENGINEERS CIVIL/STRUCTURAL
504 BLENHEIM RD
CHRISTCHURCH
PH: 03 348 1521

VERSATILE BUILDINGS LTD
ENGINEERING DETAILS

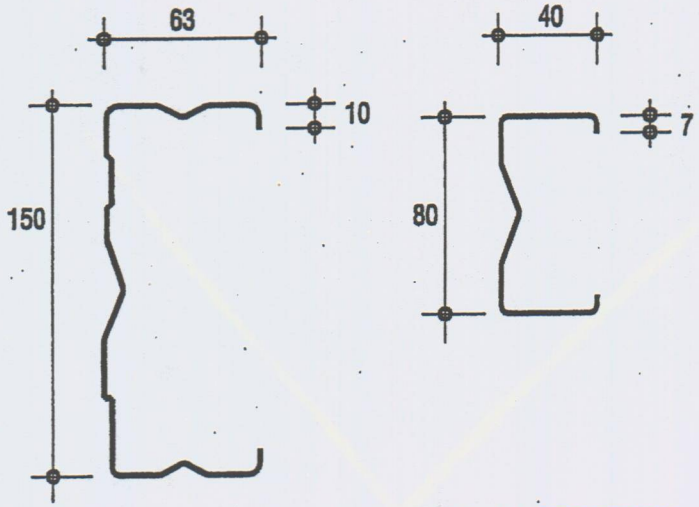
VERSATILE CARPORT

DRAWING TITLE:
Detail Index

DESIGN:	DRAWN:
F.R. Smith	B.O'Connor
DRAWING:	DATE:
VB3100/3	Apr '01

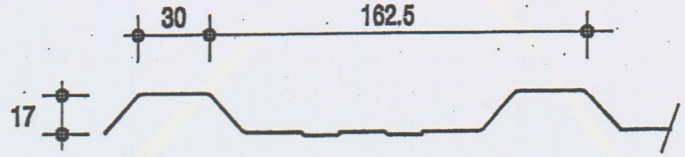
SHEET: 3 OF SHEET: 7

SECTION PROPERTIES



C150 SECTION 1.2mm BMT

80x40 SECTION 0.8mm BMT



SHEETING PROFILE 0.35mm BMT

DURABILITY NOTE:

All fasteners/fixings in sea spray zone shall be Type 304 Stainless steel, all other zones use Hot-Dip Galvanised, Refer 'Mitek group durability answers – Oct 02'

CARPORT SPECIFICATIONS

GENERAL
1–All work shall conform to the New Zealand Building Code.
2– Check diagonals to ensure building is square.

LOADINGS
1– Buildings are designed to NZS 4203 for NZS 3604 HIGH and VERY HIGH. Design Wind Speeds to limit state levels of 45 and 50 m/s, T.C.2; roof live load of 0.25 kPa, and Basic Roof Snow loads of. 1.2kPa (600mm thick snow). Heavier snow loads will be specific design, as will buildings for sites above 1000m altitude.
2– The roofing is not designed for point loads of 1 Kn.

FOUNDATIONS
1– Support ground to have a safe bearing capacity of at least 75 kPa. In weaker ground or expansive clays, building loads to be taken to subsoil which has a bearing capacity of at least 75 kPa.

CONCRETE
1– Remove vegetation and loose material from the site of the building, backfill with compacted hardfill if required, and lay a blinding of sand to the underside of the concrete slab. Ensure the surface of the slab will be at least 100mm above the highest level of cleared ground around the slab.
2– Concrete shall have a maximum aggregate size of 20mm, slump of 80mm maximum and a 17.5 MPa compression strength at 28 days.
3– The concrete floor slab shall be 100mm thick with a edge thickening and a D16 rod continuous around the perimeter of the slab or with pads under posts as per detail.
4– Fix SHS legs to roof frames to concrete with M10 galvanised screwbolts screwed into holes drilled in the slab.

STEELWORK
1– All structural framing members shall be G500 grade steel galvanised to Z150 (G550 for 80 x 40 boxed and single channels).
2. Purlins and girts shall be 80 x 40 x 0.8 BMT. lipped, crimped channel located at centres shown on the drawings.
3– Screws to be #10x.16 Tek screws Class 3 zinc plated, fixed at a minimum edge distance of 6mm and to a 12mm minimum pitch.
4– Steelwork shall conform to:
NZS 4203 Loadings Code NZ/AS 4600 Cold Formed Steel Structures Code
NZ/AS 1397:1993, AS 1562:1962 Design and Installation of Metal Roofing
AS 111111112 Hex Commercial Bolts and Screws AS 3566 Self Drilling Screws for Building

CLADDING
1– Roof sheeting shall be 0.35 B.M.T., G550 grade steel zincalumed to AZ150 and rolled to profile as detailed.
2– Roof sheets shall be fixed to purlins with a Tek screw at the edge of every pan and a Tek screw to every pan , all complete with neoprene washers.
3– Ridges, barges and all penetrations to be flashed with 0.35mm zincalumed steel.
4– Guttering to be sealed with silicone and fixed with Tek screws. Fit guttering to downpipes to discharge to an approved stormwater drainage system.

REVISED JUNE 03

VERSATILE BUILDINGS
MANUFACTURING: 112 WATERLOO ROAD PH: (03) 348-6666 FAX: (03) 348-7366

F R Smith Consultants
CONSULTING ENGINEERS CIVIL/STRUCTURAL
504 Blenheim Rd
CHRISTCHURCH
PH: 03 348 1521

VERSATILE BUILDINGS LTD
ENGINEERING DETAILS

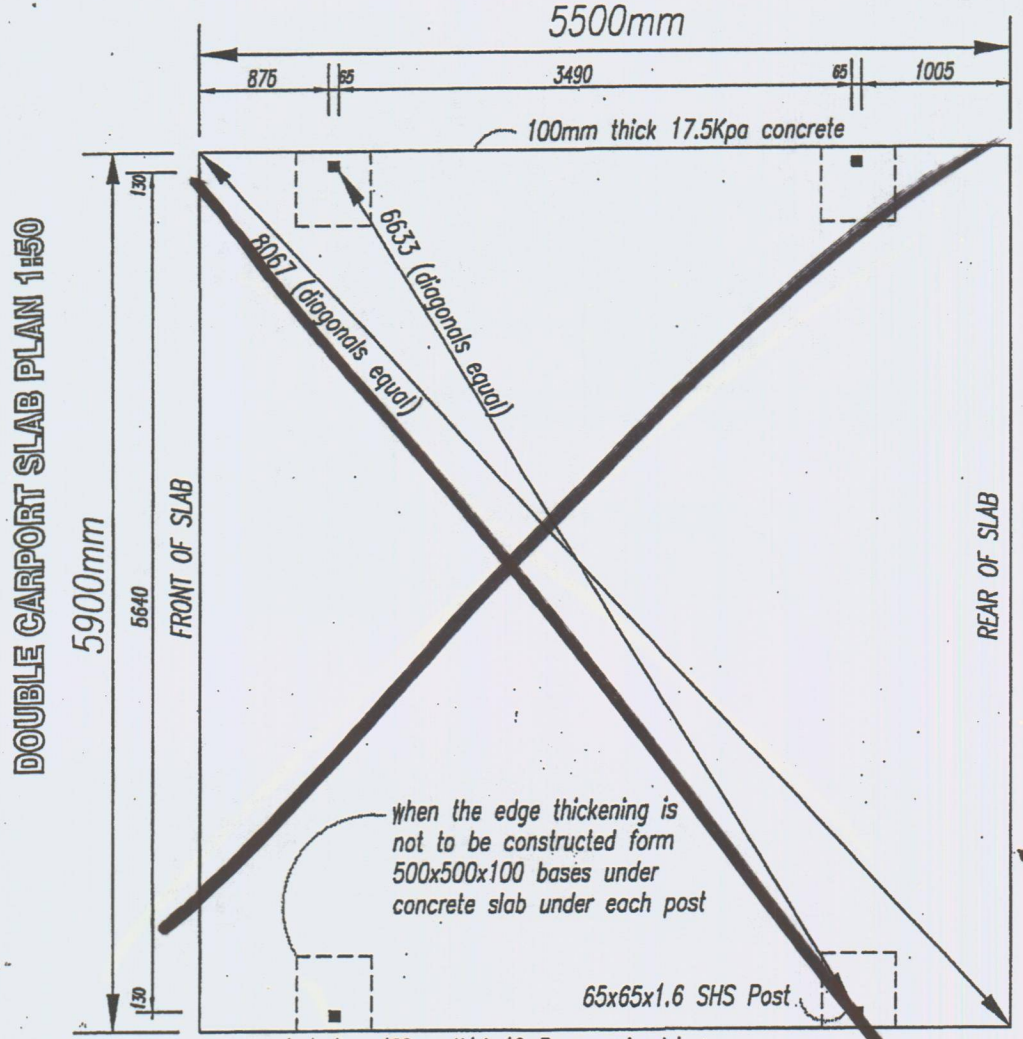
VERSATILE CARPORTS

DRAWING TITLE: Specification Single & Double

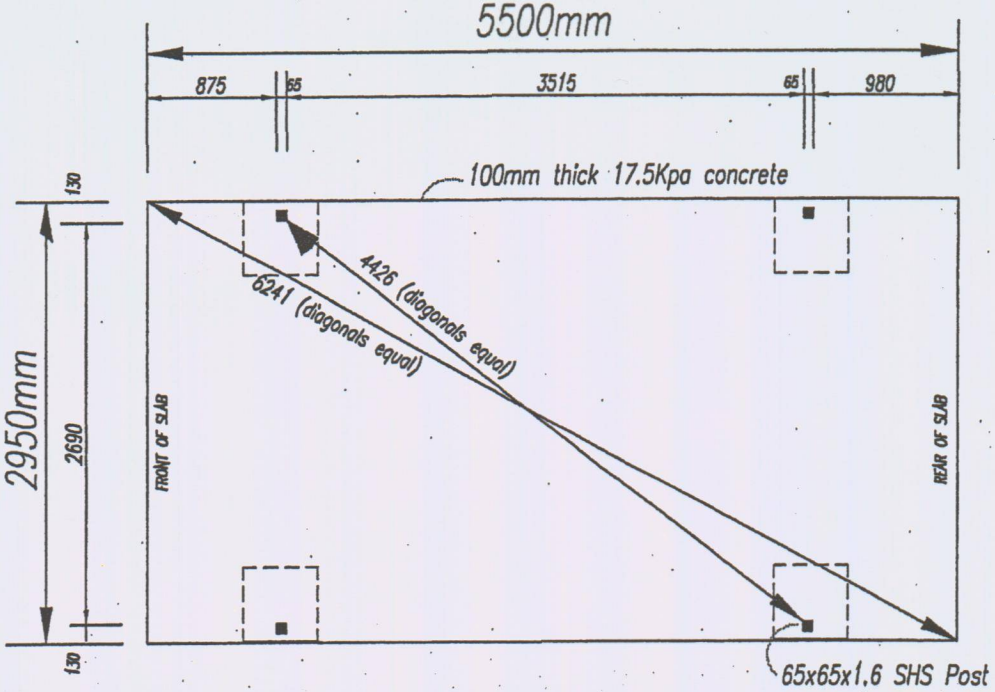
DESIGN: F.R. Smith DRAWN: B.O'Connor
DRAWING: VB3100/4 DATE: Apr '01

SHEET: 4 OF SHEET: 7

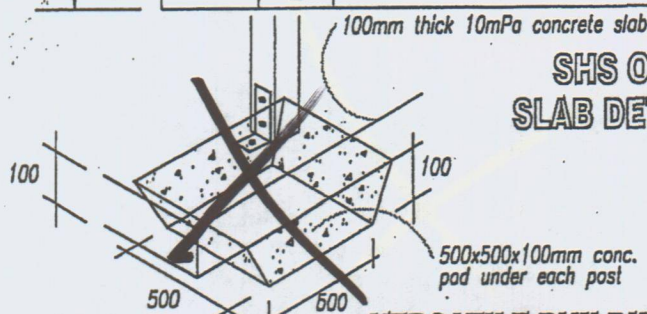
DOUBLE CARPORT SLAB PLAN 1:50



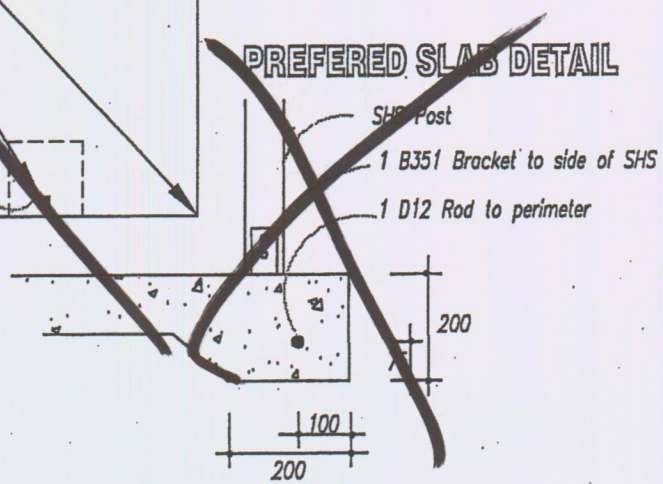
SINGLE CARPORT SLAB PLAN 1:50



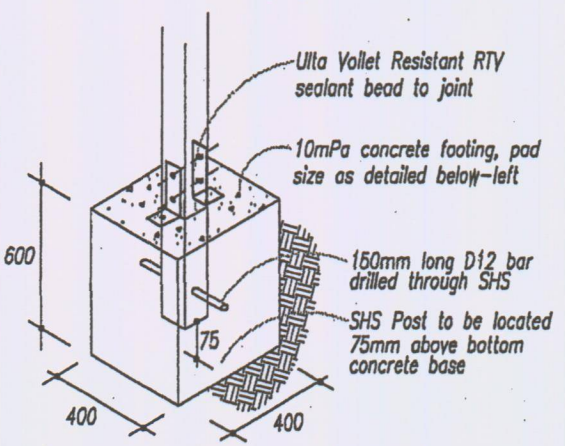
SHS ON SLAB DETAIL



PREFERED SLAB DETAIL



SHS INTO FOOTING DETAIL



REVISED JUNE 03

VERSATILE BUILDINGS
MANUFACTURING 118 WATERLOO ROAD PH: (03) 348-6888 FAX: (03) 348-1886

F R Smith Consultants
CONSULTING ENGINEERS CIVIL/STRUCTURAL
504 BLENHEIM RD CHRISTCHURCH PH: 03 348 1521

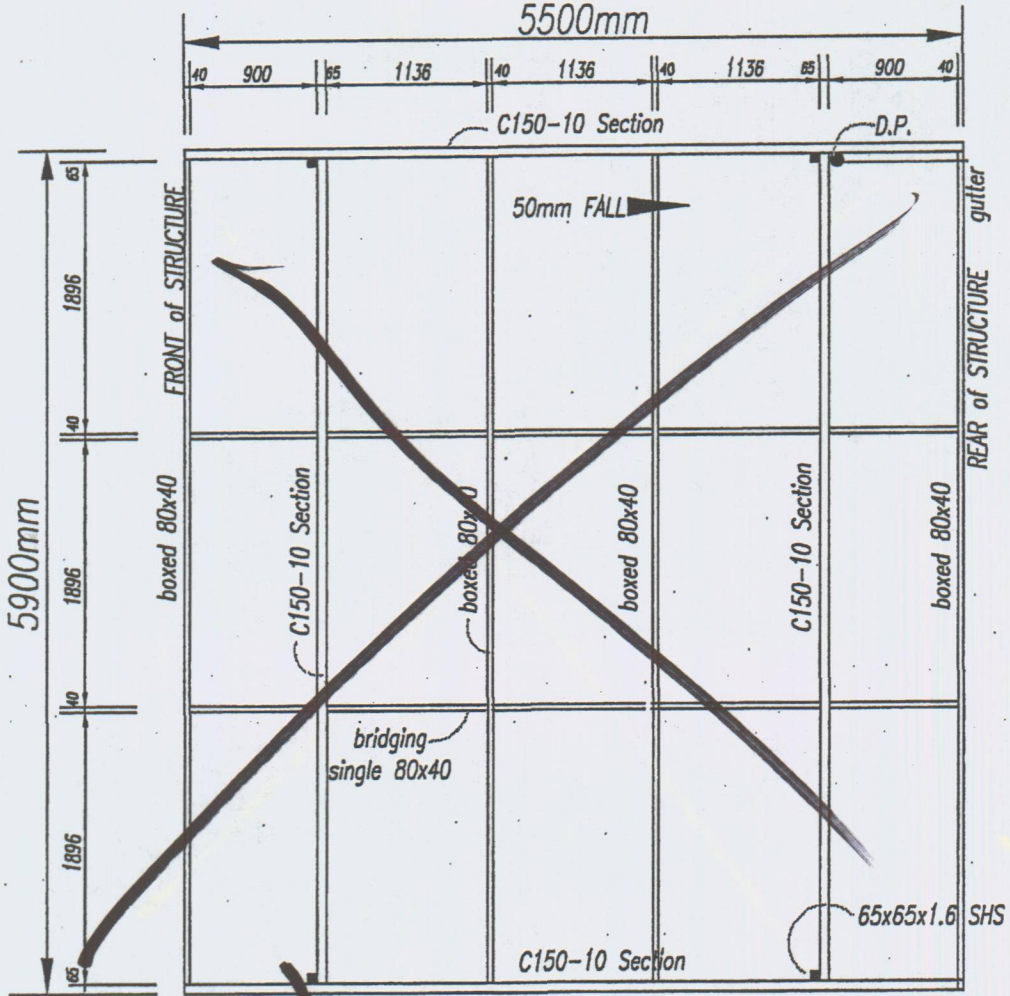
VERSATILE BUILDINGS LTD
ENGINEERING DETAILS

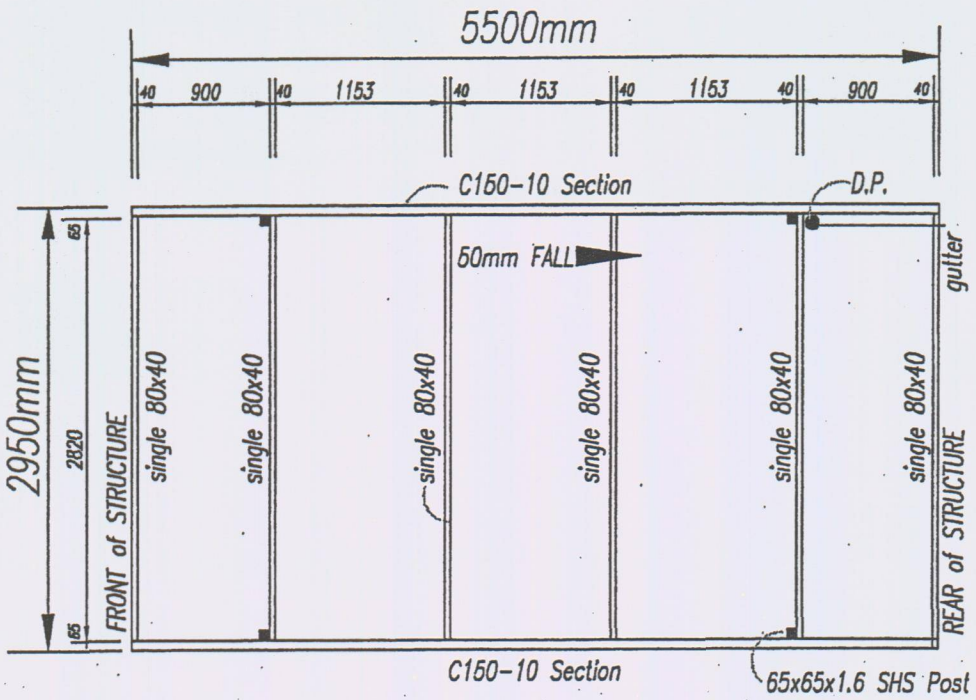
VERSATILE CARPORTS

DRAWING TITLE: Foundation

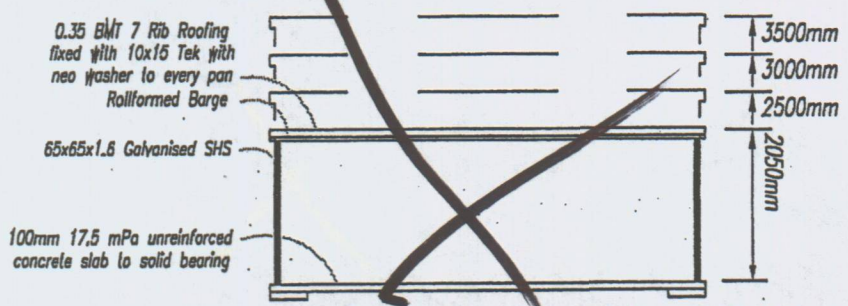
DESIGN:	DRAWN:
F.R. Smith	B.O'Connor
DRAWING:	DATE:
VB3100/5	Apr '01

SHEET: 5 OF SHEET: 7



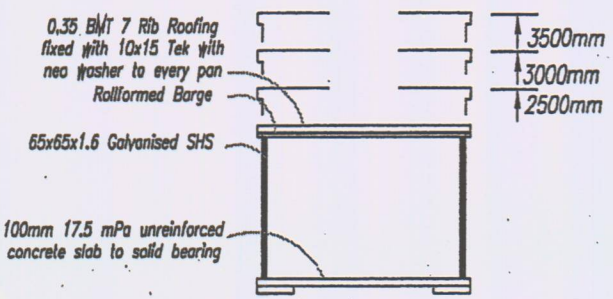


ROOF FRAME - SINGLE 1:50



ROOF FRAME DOUBLE 1:50

FRONT ELEVATION DOUBLE 1:100



FRONT ELEVATION - SINGLE 1:100

REVISED JUNE 03

VERSATILE BUILDINGS
MANUFACTURING: 113 WATERLOO ROAD PH: (03) 348-9999 FAX: (03) 348-1885

F R Smith Consultants
CONSULTING ENGINEERS CIVIL/STRUCTURAL
504 BLENHEIM RD CHRISTCHURCH PH: 03 348 1521

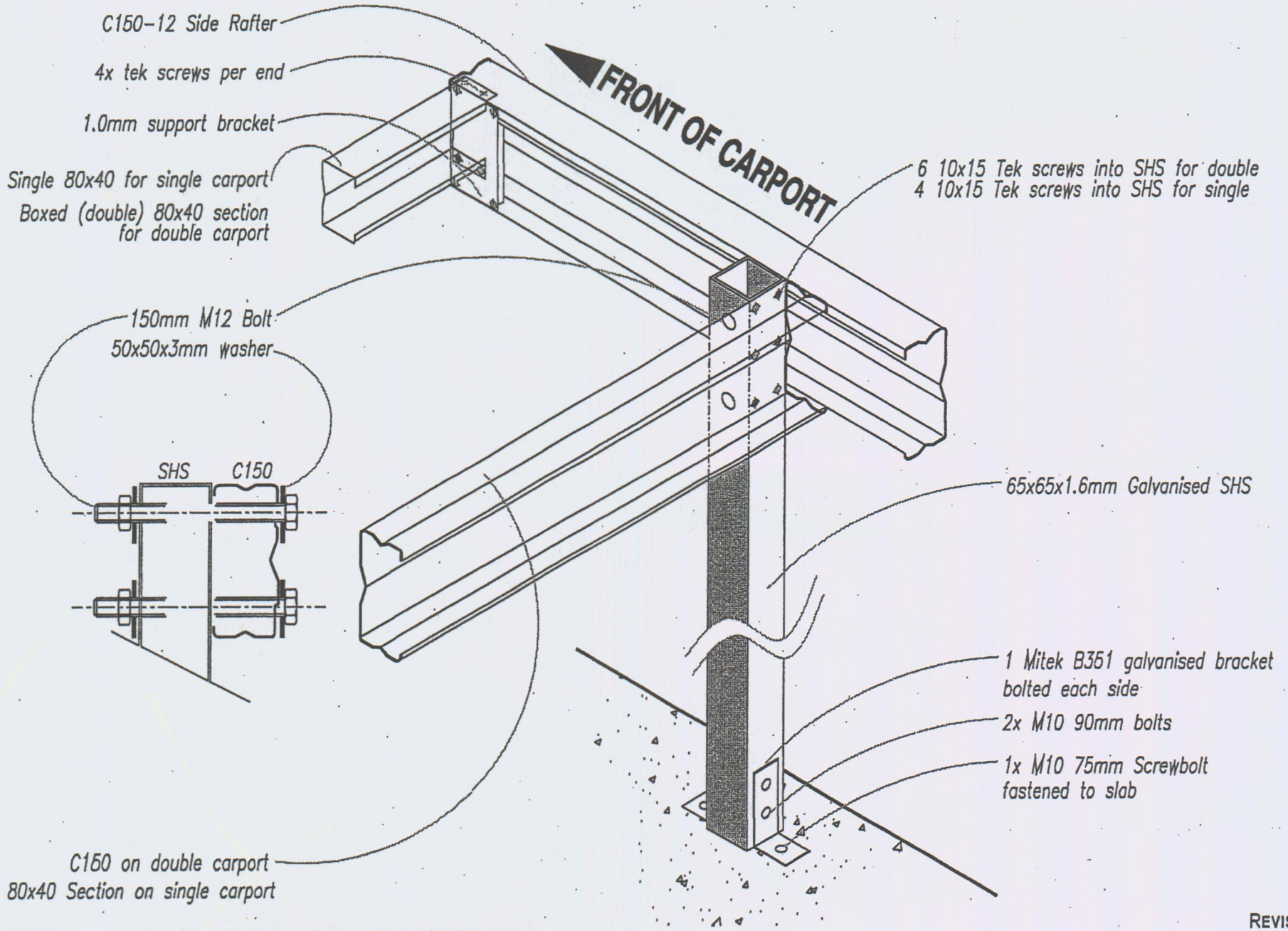
VERSATILE BUILDINGS LTD
ENGINEERING DETAILS

VERSATILE CARPORTS

DRAWING TITLE: Elevations & Cross Sections

DESIGN: F.R. Smith DRAWN: B.O'Connor
DRAWING: YB3100/6 DATE: Apr '01

SHEET: 6 OF SHEET: 7



REVISED JUNE 03

VERSATILE BUILDINGS
MANUFACTURING: 113 WATERLOO ROAD

F R Smith Consultants
CONSULTING ENGINEERS CIVIL/STRUCTURAL
504 BURNHAM RD
CHRISTCHURCH
PH: 03 348 1521

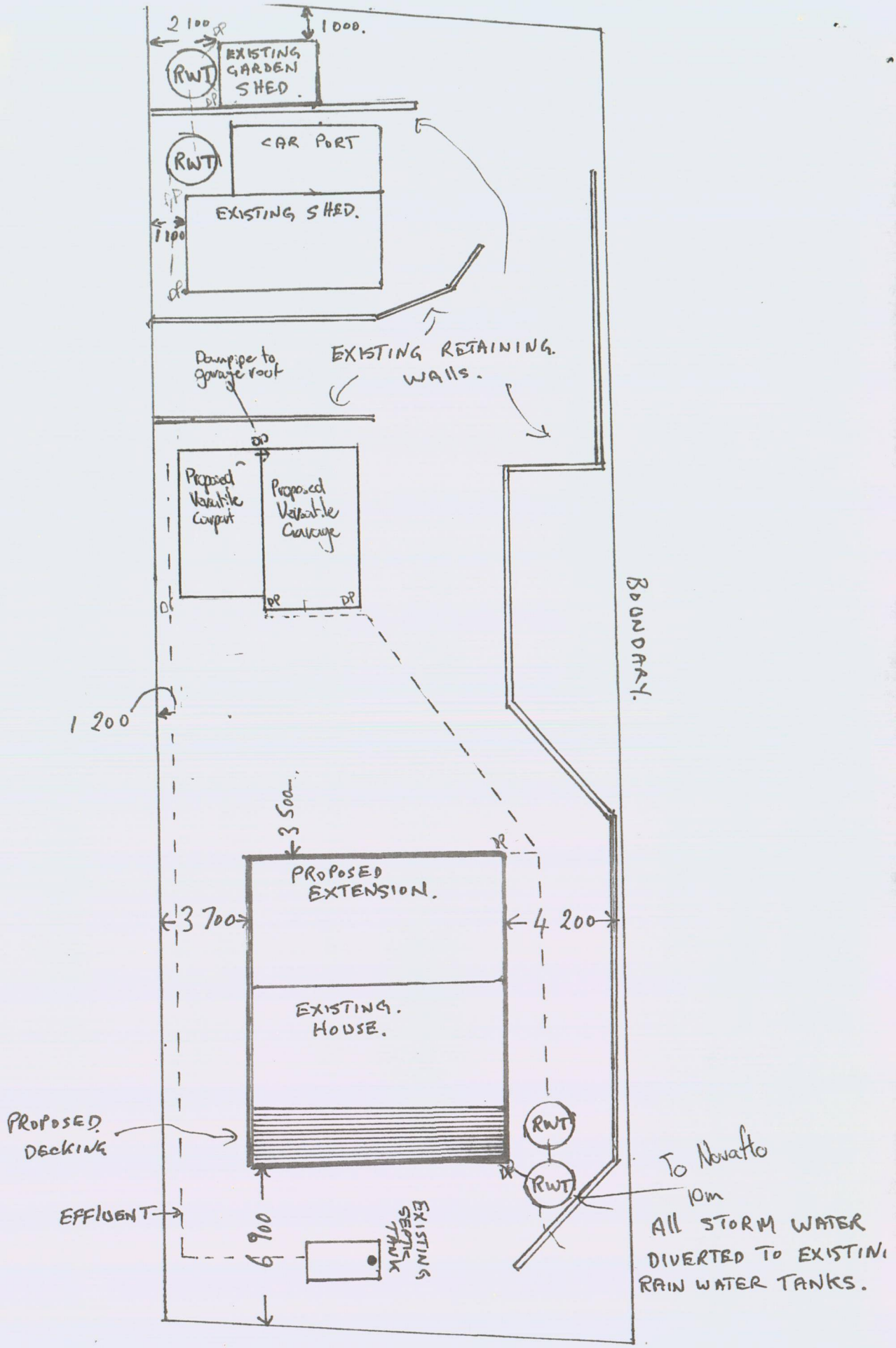
VERSATILE BUILDINGS LTD
ENGINEERING DETAILS

VERSATILE CARPORTS

DRAWING TITLE: Connection Details Single & Double

DESIGN:	DRAWN:
F.R. Smith	B.O'Connor
DRAWING:	DATE:
YB3100/7	Apr '01

SHEET: 7 OF SHEET: 7



SITE PLAN PROPOSED ADDITION LOT 39 DP26255

15 WAINUI ST TURAKINA BEACH Scale 1:200

Versatile Buildings 600 Series Specifications
Customer: Mr. & Mrs. Trevor & Julie Greig
Site Address: 15 Wainui St, Turakina Beach
Reference: wdj-463
Contact: Warren Johnson, Wanganui, 06 3433466

Model:	Versatile 600 Series
Size & Stud Height:	6.0m long x 3.6m wide, with 2.4m stud height
Floor Type:	Concrete floor
Roof Details:	15 degree pitch
Trusses:	90mm x 35mm kiln dried, stress graded timber as per floor plan
Wall Framing:	H1.2 treated 90mm x 35mm kiln dried, stress graded timber
Wind Zone:	High wind zone
Cladding Type:	Shadowclad supplied by client
Gable Cladding:	Cladding profile
Gable Soffit:	None
Downpipes Location:	As per Instruction

Notes:

GENERAL: Construction to comply with Mitek Producer Statement, VB 2000 and in all other respects NZS 3604:1999 and the NZ Building Code.

FOUNDATIONS: Concrete floor shall be 20Mpa, 100mm thick. Footing as detailed

WALL FRAMING: All timber shall be machine stress graded, gauged and treated to minimum TPA Specification H1.2 for habitable buildings or C.F, MGP 10 framing for garages. Studs shall be 90 x 35mm at 600mm crs and housed into 90 x 35mm plates. Lay Supercoarse DPC under all plates. Refer Producer Statement VB 2000, Sheet 4 for timber grade options and specification. Fix proprietary nail plates and hardware in accordance with Producer Statement VB 2000, Sheets 4 and 5.

ROOF FRAMING: Purlins shall be 90 x 45mm on edge at 1500mm crs fixed to Gangnail 15 degree roof trusses. Fix purlins and ridge braces as detailed in Producer Statement VB 2000, Sheet 13. See Gangnail truss details and specification on Sheets 14 and 15. For raking ceiling (skillion roof) refer VB 2000, Sheet 13.

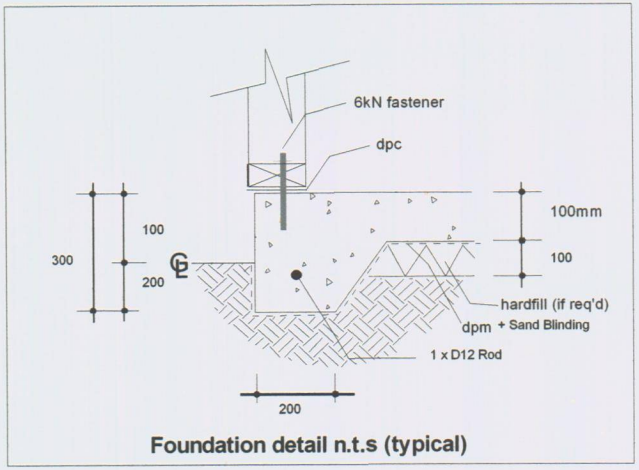
SIDE ENTRY OPENING LINTELS: LVL beam sizes and spans are specified in VB 2000, sheet 4. Fixing details are shown on Sheet 9 of VB 2000.

ROOFING: Shall be Versatile 6 rib longrun metal roofing fixed with 75mm spiral shank weatherseal roof nails, over bituminous type building paper supported by ultra-violet fast lashing.

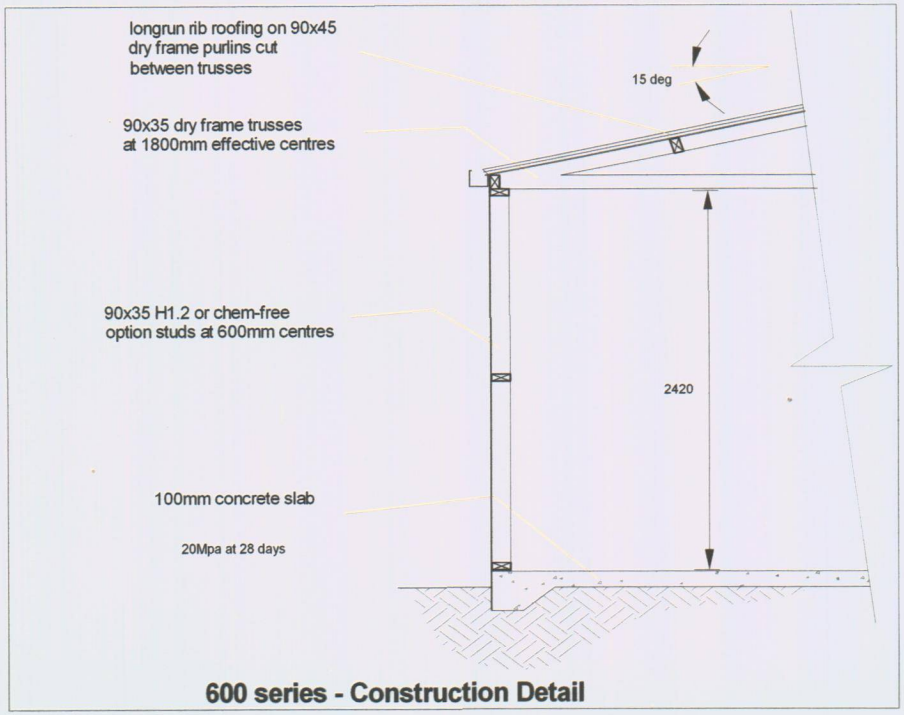
WALL CLADDING: Fix with galvanised clouts as specified in VB 2000 sheet 6.

ROOF BRACING: For all buildings fix Lumberlok roof plane strap bracing in accordance with VB 2000 Producer Statement, Sheet 7.
For 2.7 & 3.0m stud buildings refer VB 2000, Sheet 8.

WALL BRACING: Fix bracing in accordance with VB 2000, Sheet 6. Bracing panel locations and fixing refer to "Wall Bracing: 600 Series, Feb 04 Ver1.4."
For 2.7 & 3.0m stud buildings refer VB 2000, Sheet 8.

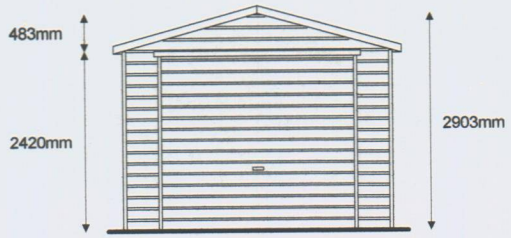


Foundation detail n.t.s (typical)

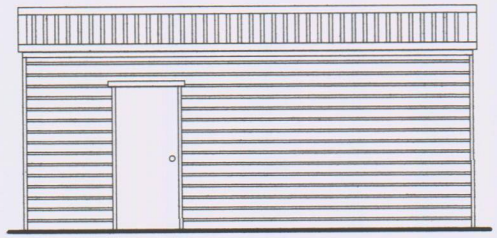


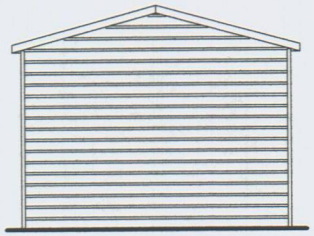
600 series - Construction Detail

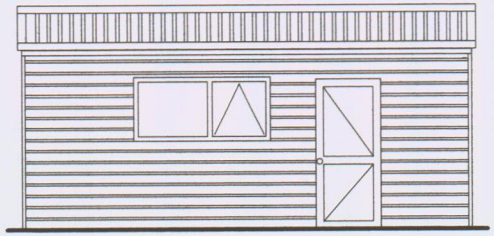
Versatile Buildings 600 Series Elevations
Customer: Mr. & Mrs. Trevor & Julie Greig
Site Address: 15 Wainui St, Turakina Beach
Reference: wdj-463
Contact: Warren Johnson, Wanganui, 06 3433466



Front Elevation
3600mm

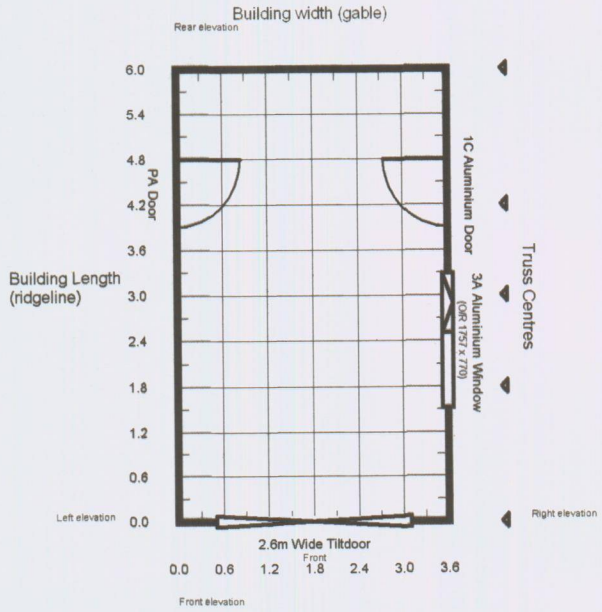

Left Elevation
6000mm


Rear Elevation


Right Elevation

Scale 1:100

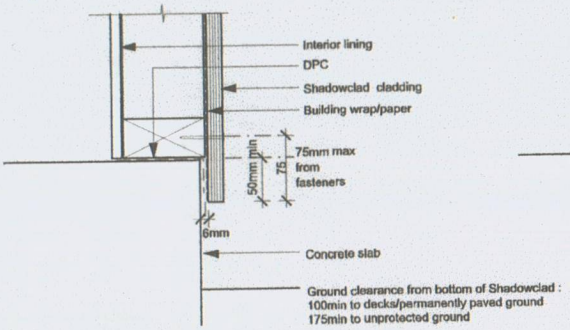
Versatile Buildings 600 Series Floor Plan
Customer: Mr. & Mrs. Trevor & Julie Greig
Site Address: 15 Wainui St, Turakina Beach
Reference: wdj-463
Contact: Warren Johnson, Wanganui, 06 3433466



Scale 1:100

Direct Fix

Figure 1a: Overhangs and ground clearance



Cavity

Figure 1b: Overhangs and ground clearance

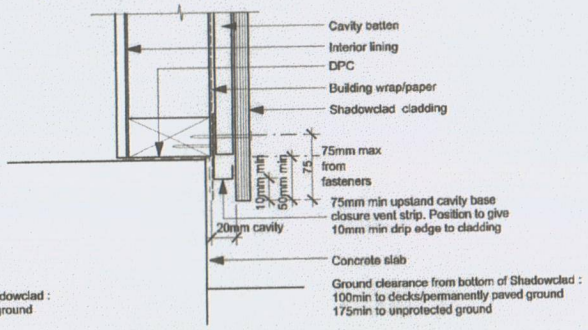


Figure 2: Wall Sections (2745 Sheet)

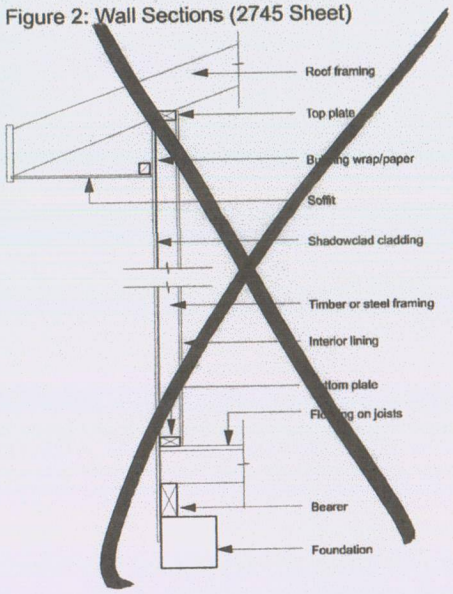


Figure 3: Wall Sections (2440 sheet alternative)

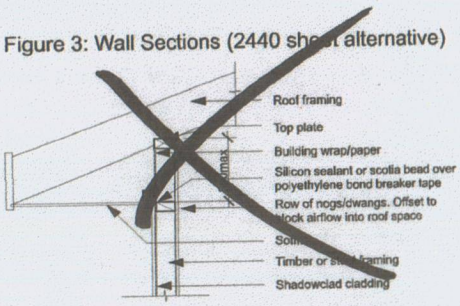


Figure 4: Wall Sections (2440 sheet alternative)

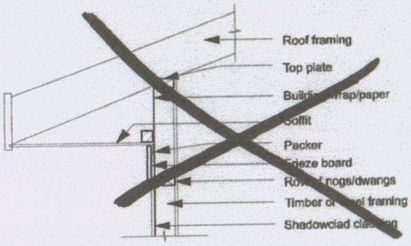
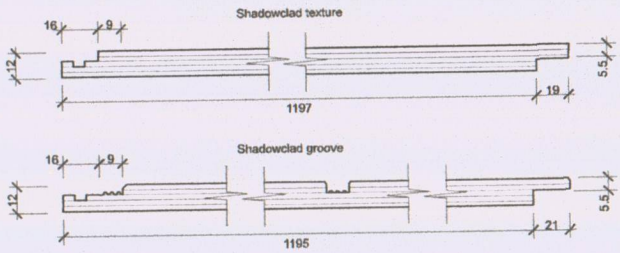
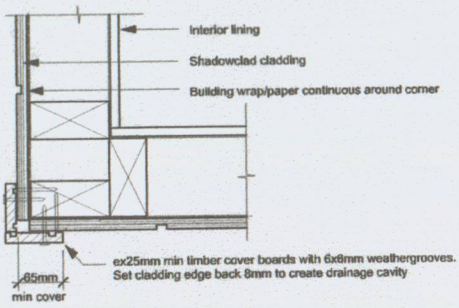


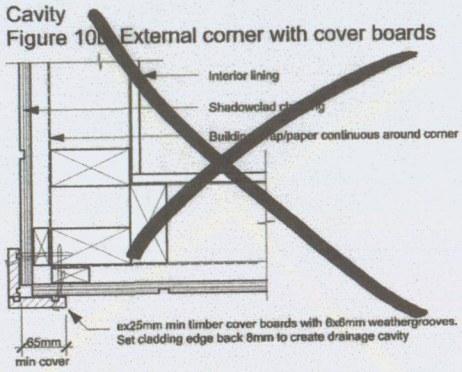
Figure 5: Shadowclad sheet dimensions



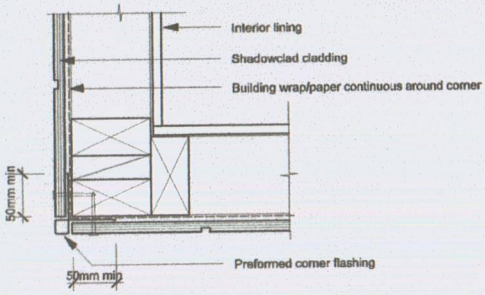
Direct fix
Figure 10a: External corner with cover boards



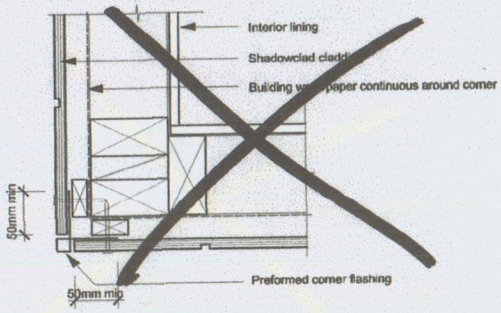
Cavity
Figure 10b: External corner with cover boards



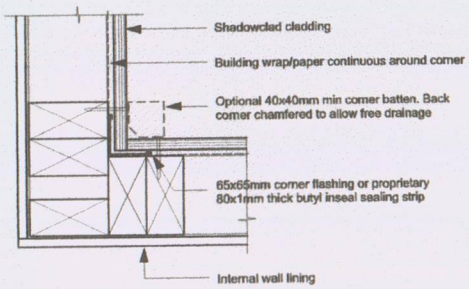
Direct fix
Figure 11a: External corner with preformed flashing



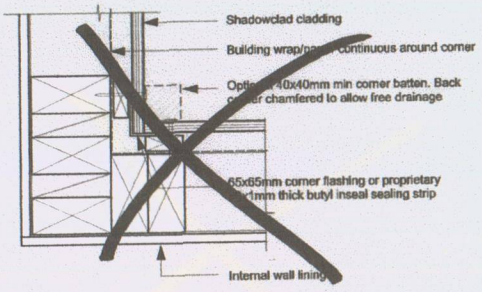
Cavity
Figure 11b: External corner with preformed flashing



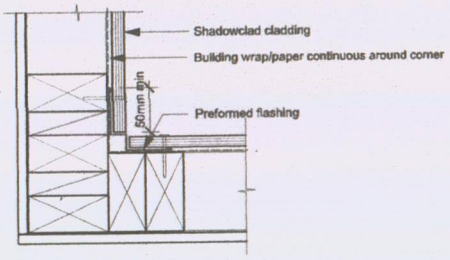
Direct fix
Figure 12a: Internal corner



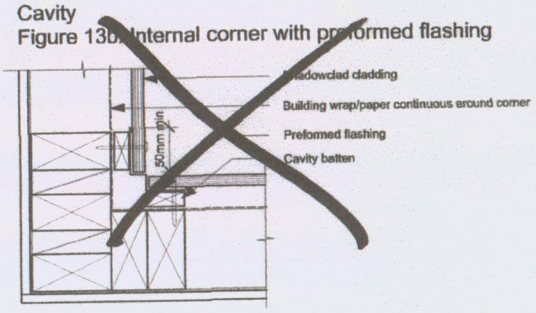
Cavity
Figure 12b: Internal corner



Direct fix
Figure 13a: Internal corner with preformed flashing

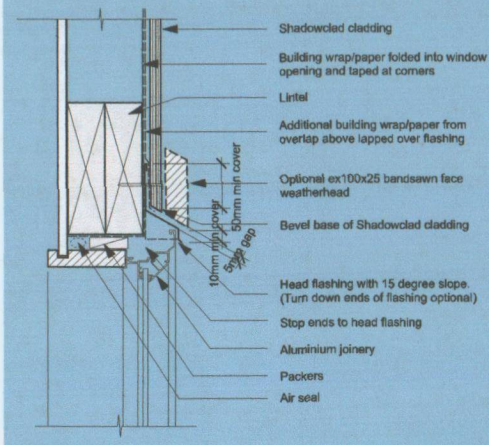


Cavity
Figure 13b: Internal corner with preformed flashing

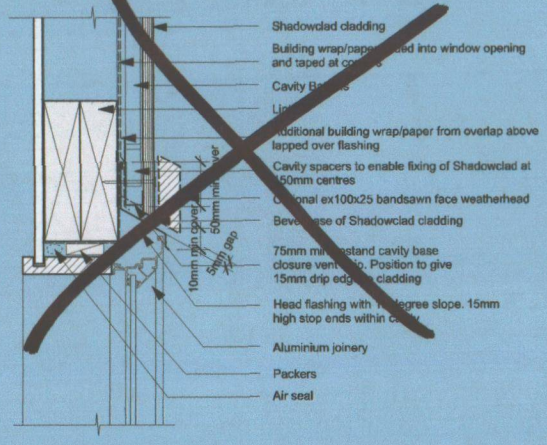


10.0 SUGGESTED DETAILS

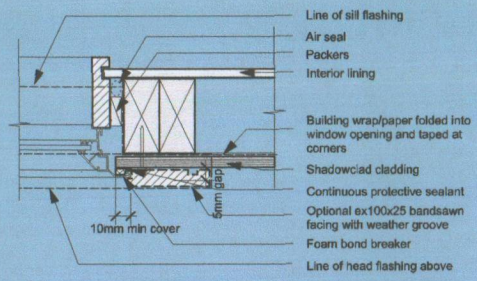
Direct fix
Figure 24a: Aluminium Window Head Detail



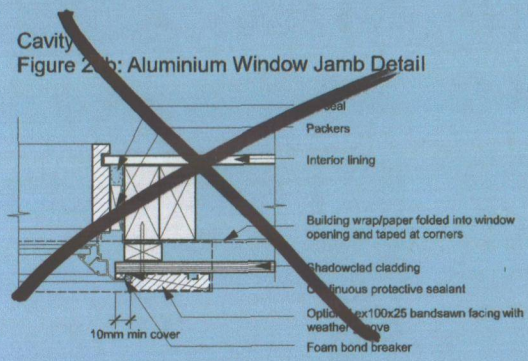
Cavity
Figure 24b: Aluminium Window Head Detail



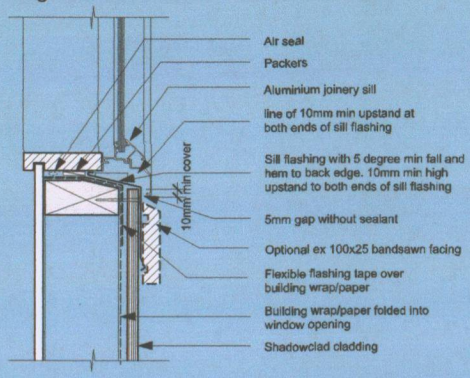
Direct fix
Figure 25a: Aluminium Window Jamb Detail



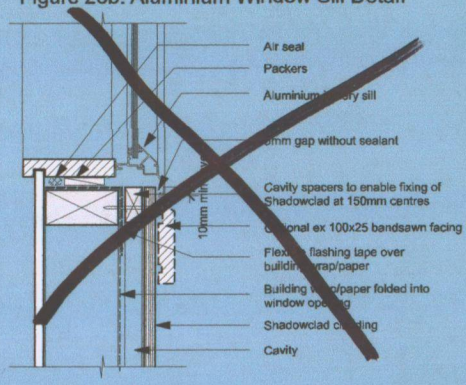
Cavity
Figure 25b: Aluminium Window Jamb Detail



Direct fix
Figure 26a: Aluminium Window Sill Detail



Cavity
Figure 26b: Aluminium Window Sill Detail



VERSATILE BUILDINGS

MiTek™ MiTek New Zealand Ltd.
PO Box 3887
Riccarton, CHRISTCHURCH
www.miteknz.co.nz
HOME OF GANG-NAIL® BUILDING SYSTEMS

Gib® Bracing Calculation Sheet A — single storey — V56A

Job Details

Name	Greig	
Street and Number	Turakina Beach	
Lot and DP Number		
City/Town/District	Turakina	
Designer and date	Mitek NZ Ltd	1/09/2003
Company Name	VERSATILE BUILDINGS	

Building Specification

Location of Storey	single	
Floor Loading	2 kPa	
Foundation Type	slab	
Building Height to Apex (m)	4	
Roof Height above Eaves (m)	1	
Stud Height (m)	2.4	
Cladding Weight (top or single)	light	
Cladding Weight (lower)	light	*not applicable (single storey building)*
Cladding Weight (subfloor)	light	*not applicable (slab)*
Roof Weight	light	
Roof Pitch (degrees)	0-25	
Room in Roof Space	no	
Building Length (m)	6	
Building Width (m)	3.6	
Gross Building Plan Area (m2)	21.6	

Building Location

Wind Zone	***Very High***	**Earthquake Zone**
Region	R1	A
Terrain	Coastal	
Exposure	Exposed	
Topography	Moderate	

Bracing Units required for Wind

per m	subfloor	walls
W along	n/a	63 BUs/m
W across	n/a	44 BUs/m

Totals	subfloor	walls
W along	n/a	227 BUs
W across	n/a	264 BUs

Bracing Units required for Earthquake

per m2	subfloor	walls
E	n/a	3.6 BUs/m2

Totals	subfloor	walls
E along	n/a	78 BUs
E across	n/a	78 BUs

VERSATILE BUILDINGS

MiTek™ MiTek New Zealand Ltd.
PO Box 3887
Riccarton, CHRISTCHURCH
www.miteknz.co.nz
HOME OF **GANG-NAIL**® BUILDING SYSTEMS

Gib® Wall Bracing Sheet B — Greig — single storey

V56A

Along

Wall or Bracing Line		*Bracing Elements provided*					*Wind*	*Earthq.*
1	2	3	4	5	6	7	8W	9EQ
Line Label	Minimum BUs Req/Ach	Bracing Element No.	Supplier	Bracing Type	Element Length L (m)	Element Height H (m)	BUs Achieved	BUs Achieved
A	102	1	Plywood	SP2	3.6	2.4	306	306
		2						
		3						
line totals		4						
W	306	5						
EQ	306	6						
B		1						
		2						
		3						
line totals		4						
W		5						
EQ		6						
C		1						
		2						
		3						
line totals		4						
W		5						
EQ		6						
D		1						
		2						
		3						
line totals		4						
W		5						
EQ		6						
E		1						
		2						
		3						
line totals		4						
W		5						
EQ		6						

	Wind	Earthq.
Totals Achieved	306	306
	OK	*OK*
Totals Required (from Sheet A)	227	78

VERSATILE BUILDINGS

MiTek™ MiTek New Zealand Ltd.
PO Box 3887
Riccarton, CHRISTCHURCH
www.miteknz.co.nz
HOME OF GANG-NAIL® BUILDING SYSTEMS

Gib® Wall Bracing Sheet B — Greig — single storey

V56A

Across							Wind	Earthq.
Wall or Bracing Line		Bracing Elements provided					8W	9EQ
1	2	3	4	5	6	7		
Line Label	Minimum BUs Req/Ach	Bracing Element No.	Supplier	Bracing Type	Element Length L (m)	Element Height H (m)	BUs Achieved	BUs Achieved
M	66	1	Plywood	Sp2	4.8	2.4	408	408
		2						
		3						
line totals		4						
W	408	5						
EQ	408	6						
N		1	Plywood	Sp2	3	2.4	255	255
		2						
		3						
line totals		4						
W	255	5						
EQ	255	6						
O		1						
		2						
		3						
line totals		4						
W		5						
EQ		6						
P		1						
		2						
		3						
line totals		4						
W		5						
EQ		6						
Q		1						
		2						
		3						
line totals		4						
W		5						
EQ		6						

						Wind	Earthq.
Totals Achieved						663	663
						OK	OK
Totals Required (from Sheet A)						264	78

Gib® Bracing Systems (1999)

For details see Gib® Bracing Systems, 1999 and appropriate manufacturer's literature

Supplier	System	Minimum Length (m)	BUs W/m	BUs EQ/m
	none			
Gib®	Gib1a	1.8	55	50
Gib®	Gib1b	2.4	75	50
Gib®	Gib2a	1.8	75	60
Gib®	Gib2b	2.4	80	70
Gib®	Gib3	1.2	65	60
Gib®	Gib10	1.8	65	60
Gib®	Gib11	1.2	65	65
Gib®	UL1	1.2	70	60
Gib®	UL2	1.2	100	85
Gib®	BR1a	1.8	70	60
Gib®	BR1b	2.4	90	75
Gib®	BR2a	1.8	75	60
Gib®	BR2b	2.4	85	60
Gib®	BR3a	1.8	60	45
Gib®	BR3b	2.4	95	65
Gib®	BR4	0.9	100	85
Gib®	BR5	1.2	115	85
Gib®	BR6	1.2	150	110
Gib®	BR7	0.9	145	145
Gib®	BR8	0.9	120	95
Gib®	BR9	0.6	110	95
MiTex	VF7	0.6	83	67
Plywood	Sp2	0.6	85	85
Custom	Custom			
Custom	Custom			
Custom	Custom			
Custom	Custom			
Custom	Custom			
Custom	Custom			
Custom	Custom			
Custom	Custom			
Custom	Custom			