

Job: 0877

Client: A McRaeway Home

Site: BISHOP BUILDERS LTD

Description: 0877 - BISHOP BUILDERS LTD

Phone:

48 FERNBROOK ROAD

Building Consent No.:

OAMARU

MiTek 20/20 - Engineering 4.4 Gamma1.5 (build 1597-52)

MiTek New Zealand Ltd.

Phone:

Printed: 11:08:28 23 Jul 2007

PRODUCER STATEMENT

MiTek 2000™ TRUSS DESIGN PROGRAM

Certification of MiTek 2000™ Truss Design Program

The MiTek 2000™ truss design program has been developed by Gang-Nail Group Ltd for the design of Gang-Nail timber roof, floor and attic trusses in New Zealand. The truss designs computed by this program are prepared using sound and widely accepted engineering principles, and in accordance with NZS 4203, NZS 3603 and NZS 3604 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. This computer design for the proposed building complies with the relevant provisions of the NZ Building Code. This is subject to all proprietary products meeting their performance specification requirements, the provision of adequate bracing, fixings and the correct input of design data carried out by suitably trained personnel.

Summary of MiTek 2000™ Truss Design Data and Output

The MiTek 2000™ computer design output for this job titled and located at the site identified on the top of this page is based on the following parameters entered into the program. The owner must ensure that the following job details below are current and relevant to the project before fabrication and erection of the Gang-Nail trusses.

Job Details

Roof Truss

Timber Group: MHNZO

Roof

Material: Galv Iron .5mm
Dead Load: 0.210 kPa
Restraints: 900 mm centres
Live Load: Q_{ur} = 0.250 kPa
Q_c = 1.000 kN

Pitch: 25.000 deg

Ceiling

Material: Gib Board 12mm
Dead Load: 0.200 kPa
Restraints: 1800 mm centres

Std Overhang: 600 mm

Wind

Area: Medium (37.0 m/s)
Pressure Coeff: C_{pe} = varies; C_{pi} = -0.30, 0.20

Snow

Location: Oamaru at 40 m
Open Ground Load: 0.400 kPa
Basic Roof Load: 0.323 kPa

These trusses must be fabricated and erected in accordance with the Gang-Nail manual. Proper erection bracing must be installed to hold the components true and plumb and in a safe condition until permanent bracing is fixed. All permanent bracing and fixing must be installed before any loads are applied. The specifications for timber shall be as shown on the output. The timber shall be standard gauged and treated to the requirements of NZMP 3640. Unless otherwise noted, this design assumes that the steel fixings and timber connectors are situated in a closed environment, as defined by NZS3604:1999 Section 4.

Truss List

Legend: * = detail only, ? = input only, Txx = failed design, Unmarked trusses = designed successfully, LB = lateral bracing required

Truss	Qty	Span (mm)	Pitch (deg)	Spacing (mm)	Truss	Qty	Span (mm)	Pitch (deg)	Spacing (mm)	Truss	Qty	Span (mm)	Pitch (deg)	Spacing (mm)	Truss	Qty	Span (mm)	Pitch (deg)	Spacing (mm)
T3	1	6945	25.000	900	TG3	1	4574	25.000	900	J2C	1	2457	25.000	900	J3	1	1500	25.000	900
T3A	1	6945	25.000	900	TR1	1	4574	25.000	900	J2D	1	2457	25.000	900	J3A	1	1500	25.000	900
*HB7	1	8097	18.249	900	TR2	1	4574	25.000	900	*R7	1	2393	25.000	900	J3B	1	1500	25.000	900
S1	1	6945	0.000	900	GT1	1	3580	25.000	900	J4	1	2367	25.000	900	J3C	1	1500	25.000	900
S2	1	6945	0.000	900	TG1	1	3580	25.000	900	J4A	1	2367	25.000	900	J3D	1	1500	25.000	900
S3	4	6945	25.000	900	T2	2	2915	25.000	900	J4B	1	2367	25.000	900	J5	1	1467	25.000	900
S4	1	6945	0.000	900	HG1	1	3505	25.000	900	J4C	1	2367	25.000	900	J5A	1	1467	25.000	900
SG1	1	6945	0.000	900	T4	3	3505	25.000	900	J4D	1	2367	25.000	900	J5B	1	1467	25.000	900
T1	4	6580	25.000	900	T4A	1	3505	25.000	900	J7	1	2015	25.000	900	J5C	1	1467	25.000	900
TG2	1	6580	25.000	900	*HB1	1	3448	18.249	900	J7A	1	2015	25.000	900	*R5	1	1270	25.000	900
*FLYRAF	1	6575	25.000	900	*R6	1	3429	18.249	900	V4	1	2001	25.000	900	*OUTRIG	14	1245	0.000	524
GT2	1	5876	25.000	900	*HB3	2	3303	18.249	900	V2	1	1993	25.000	900	*R1	1	1213	25.000	900
HT1	1	5876	25.000	900	J6	1	2915	25.000	900	*HB5	1	1731	18.249	900	*R1A	1	1213	25.000	900
HT2	1	5876	25.000	900	J6A	1	2915	25.000	900	J1	1	1291	25.000	900	*R3	1	1180	25.000	900
T5	1	5876	25.000	900	J6B	1	2915	25.000	900	J1A	1	1291	25.000	900	*R3A	1	1180	25.000	900
*HB4	2	5425	18.249	900	V1	1	2893	25.000	900	J1B	1	1291	25.000	900	V5	1	1147	25.000	900
CGT1	1	5375	25.000	900	T6	1	2688	25.000	900	J1C	1	1291	25.000	900	V6	1	1108	25.000	900
CT1	3	5375	25.000	900	*HB2	1	2501	18.249	900	*R4	1	1728	25.000	900	V3	1	1093	25.000	900
CT1A	2	5375	25.000	900	J2	1	2457	25.000	900	J8	1	1557	25.000	900	*R2	6	913	25.000	900
CT1B	1	5375	25.000	900	J2A	1	2457	25.000	900	J8A	1	1557	25.000	900	*R2A	6	913	25.000	900
*HB6	1	4927	18.249	900	J2B	1	2457	25.000	900	*R8	1	1506	25.000	900	*R9	1	606	25.000	900

Total quantity : 121

The computer design input has been carried out by:

Signed:



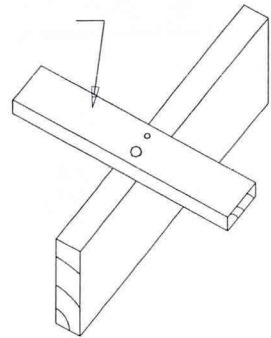
Date: Monday, 23 July 2007

Name of Computer Operator:
Qualifications and Title:
Company:

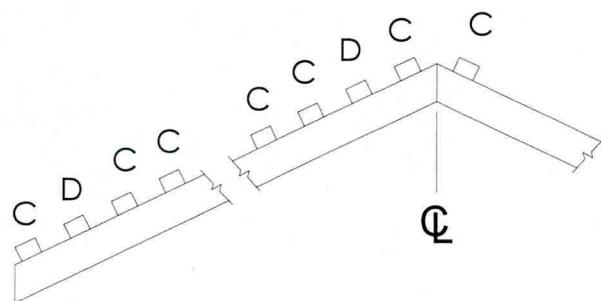
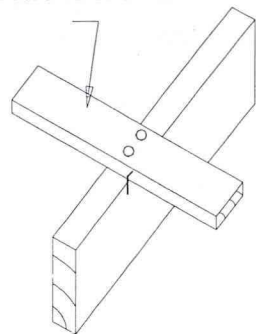
Brett Jordan
MiTek 101,201,301-C.O.C.-2007

MiTek Detailer.

Either 1 x 90 x 3.15 power driven nail and 1 x 80 x 10 gauge LUMBERLOK Purlin Blue Screw or 1 x 100 x 3.75 hand driven nail and 1 x 80 x 10 gauge LUMBERLOK Purlin Blue Screw



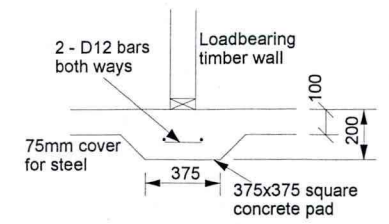
2 x 80 x 10 gauge LUMBERLOK
Purlin Blue Screws



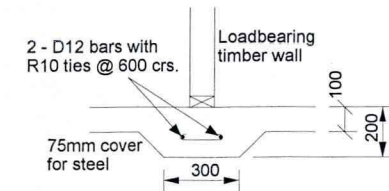
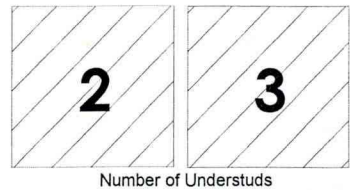
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For Building Consent Buildable Truss Layout	
Date : 23 Jul,2007	Drawn : Brett Jordan
Scale : 1: 100	System : MiTek 20/20

	Job Title :
	0877
	Sheet :
	1
	Revision Number :

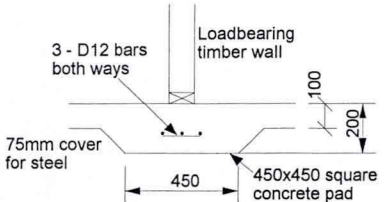
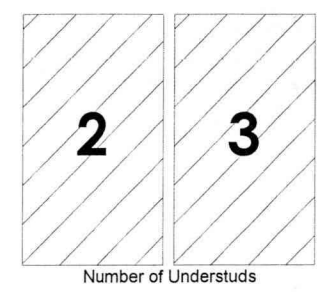
Slab Thickening Details



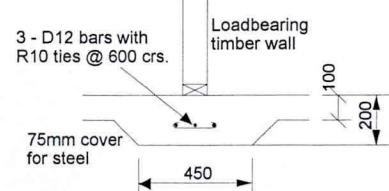
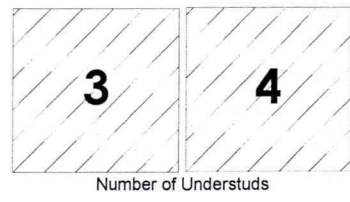
TYPE FP1 - 375x375mm Pad



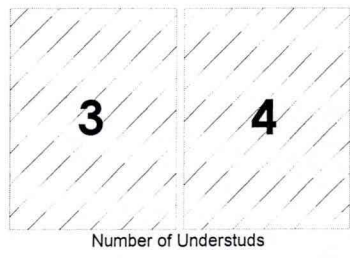
TYPE FS1 - 300mm Strip footing



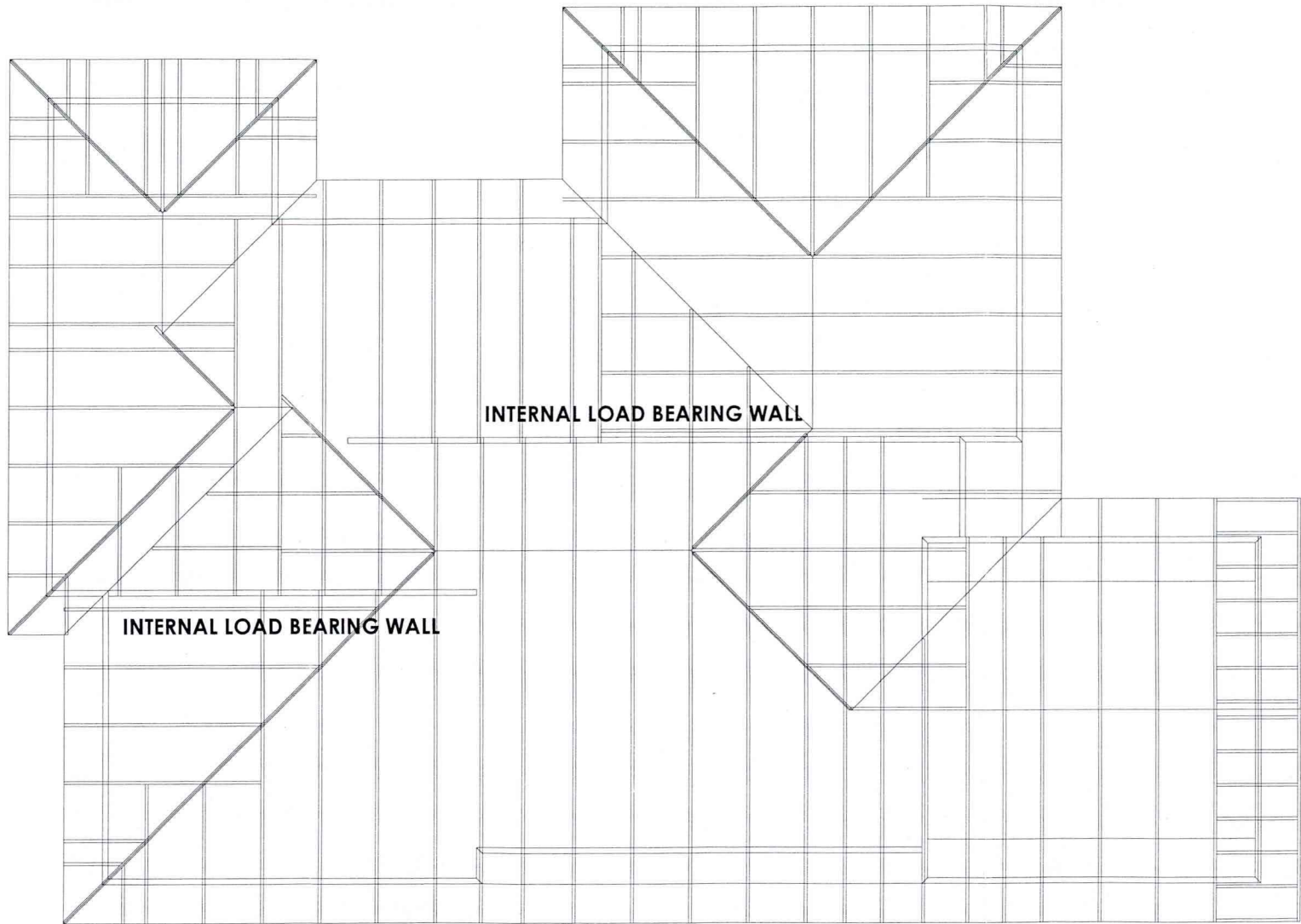
TYPE FP2 - 450x450mm Pad



TYPE FS2 - 450mm Strip footing

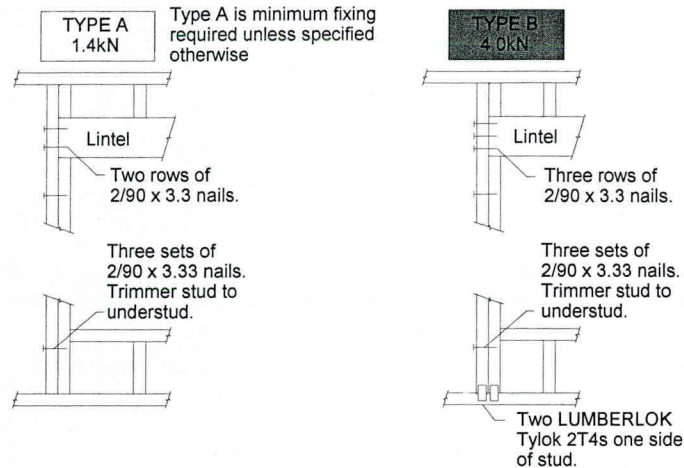


NOTES:
The numbers found within the hatched area is the number of studs required below each truss. Refer to: GANG-NAIL Internal Load Bearing on Concrete Floor Slabs brochure 12/2006



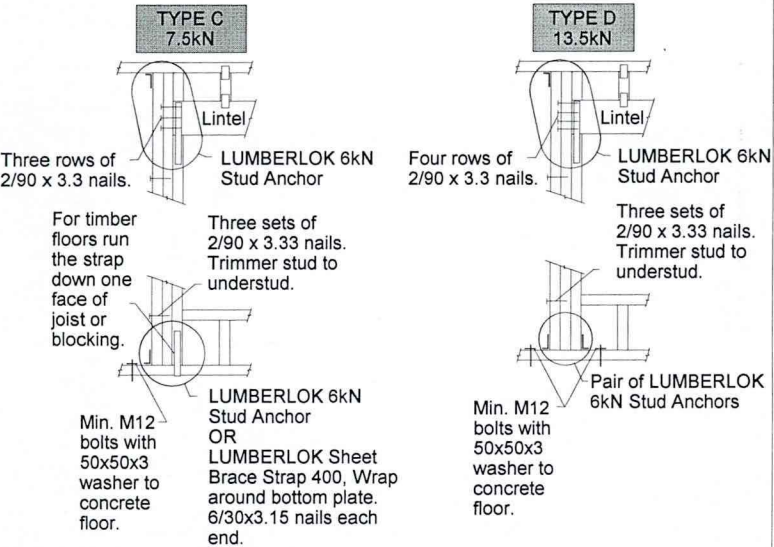
NO SLAB THICKENING REQUIRED

Lintel Fixing Details



NOTE:
Fixing of jack stud to lintel & top plate is as per the top plate schedule. All other nailing as per NZS 3604:1999 Table 8.19.

NOTE:
For lintel Type C and D LUMBERLOK 6kN Stud Anchor to top plate fixing may be replaced with a LUMBERLOK Tylok Stud Tie or a LUMBERLOK Sheet Brace Strap 400 on one face of stud and lintel, 6/30x3.15 nails each end as alternative fixings.

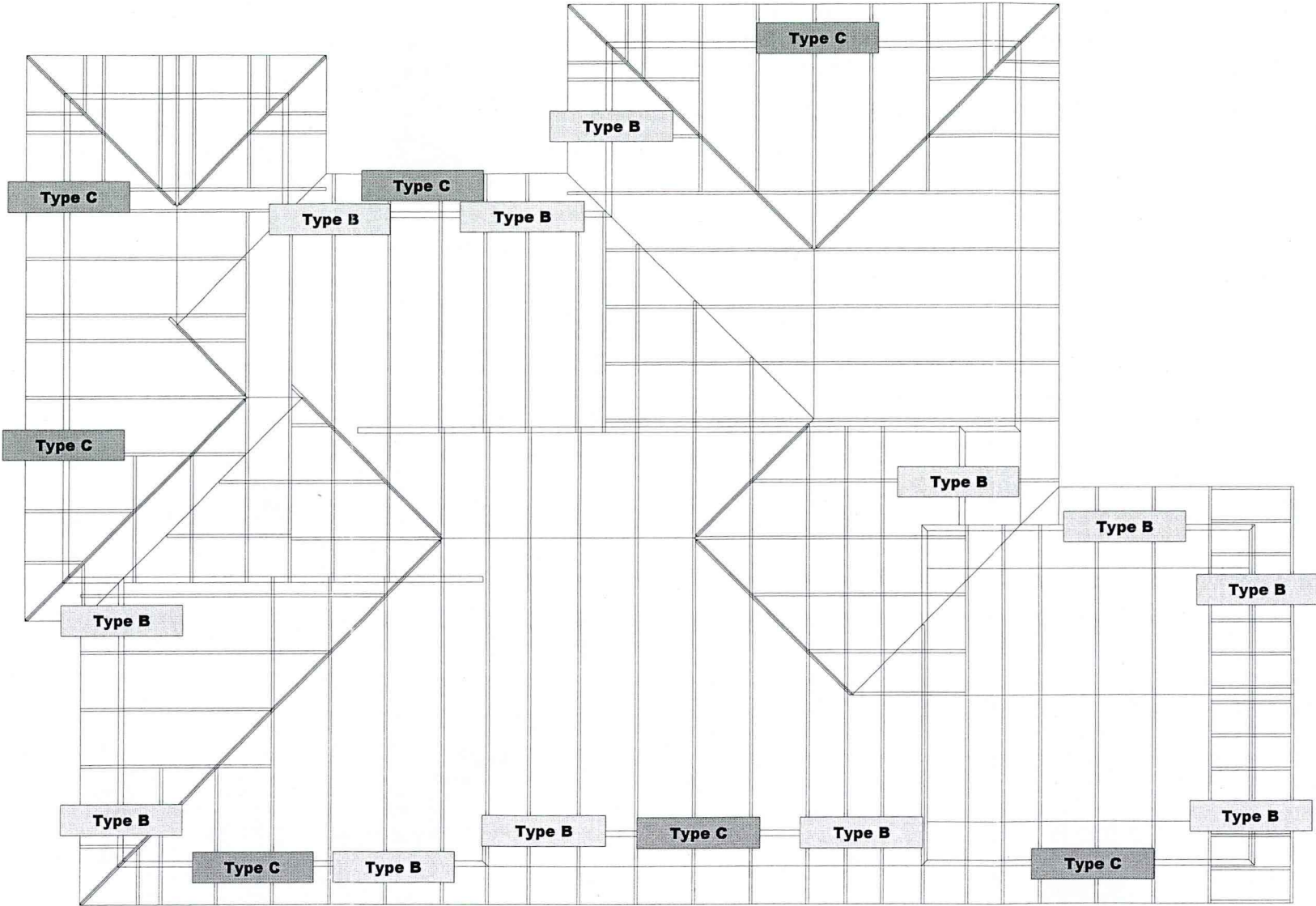


NOTE:
Fixing of jack stud to lintel & top plate is as per the top plate schedule. All other nailing as per NZS 3604:1999 Table 8.19.

NOTES:

Refer to:
LUMBERLOK Wall Fixing Chart - Lintel Fixing
Schedule 01/10

(Alternative to NZS 3604:1999 Table 8.14 &
Figure 8.12)



Site Address :
BISHOP BUILDERS LTD
48 FERNBROOK ROAD
OAMARU

Sheet Title :
For Building Consent
Lintel Fixing

Date : 23 Jul,2007
Scale : 1: 100

Drawn : Brett Jordan
System : MiTek 20/20

Job Details:
Roof Pitch : 25.0 Deg
Roof Material : Galv Iron .5mm
Ceiling Material : Gib Board 12mm
Wind Zone : Medium
Roof Snow Load : 0.323 kPa

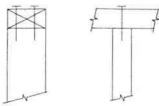
Truss Centres : 900 mm
Roof Live Load : 0.250kPa
Floor Live Load : kPa
Wind Speed : 37 m/s



Job Title :
0877
Sheet :
3
Revision Number :

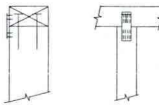
Stud to top plate fixing details

Type A is minimum fixing
required unless specified
otherwise



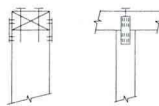
FIXING TYPE A
0.7kN

2/90x3.33 plain steel wire
nails driven vertically into
stud.



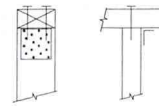
FIXING TYPE B
1.7kN

2/90x3.33 plain steel wire
nails driven vertically into
stud, plus single LUMBERLOK
Tylok 2T4 plate.



FIXING TYPE C
2.7kN

2/90x3.33 plain steel wire
nails driven vertically into
stud, plus pair LUMBERLOK
Tylok 2T4 plates.

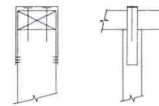


FIXING TYPE D
6.0kN

2/90x3.33 plain steel wire
nails driven vertically into
stud, plus LUMBERLOK
6kN Stud Anchor.

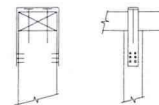
OR

2/90x3.33 plain steel wire
nails driven vertically into
stud, plus LUMBERLOK
Tylok Stud Tie



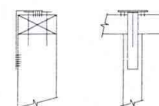
OR

LUMBERLOK Sheet Brace
Strap 400 with 6/30x3.15
nails each stud face



OR

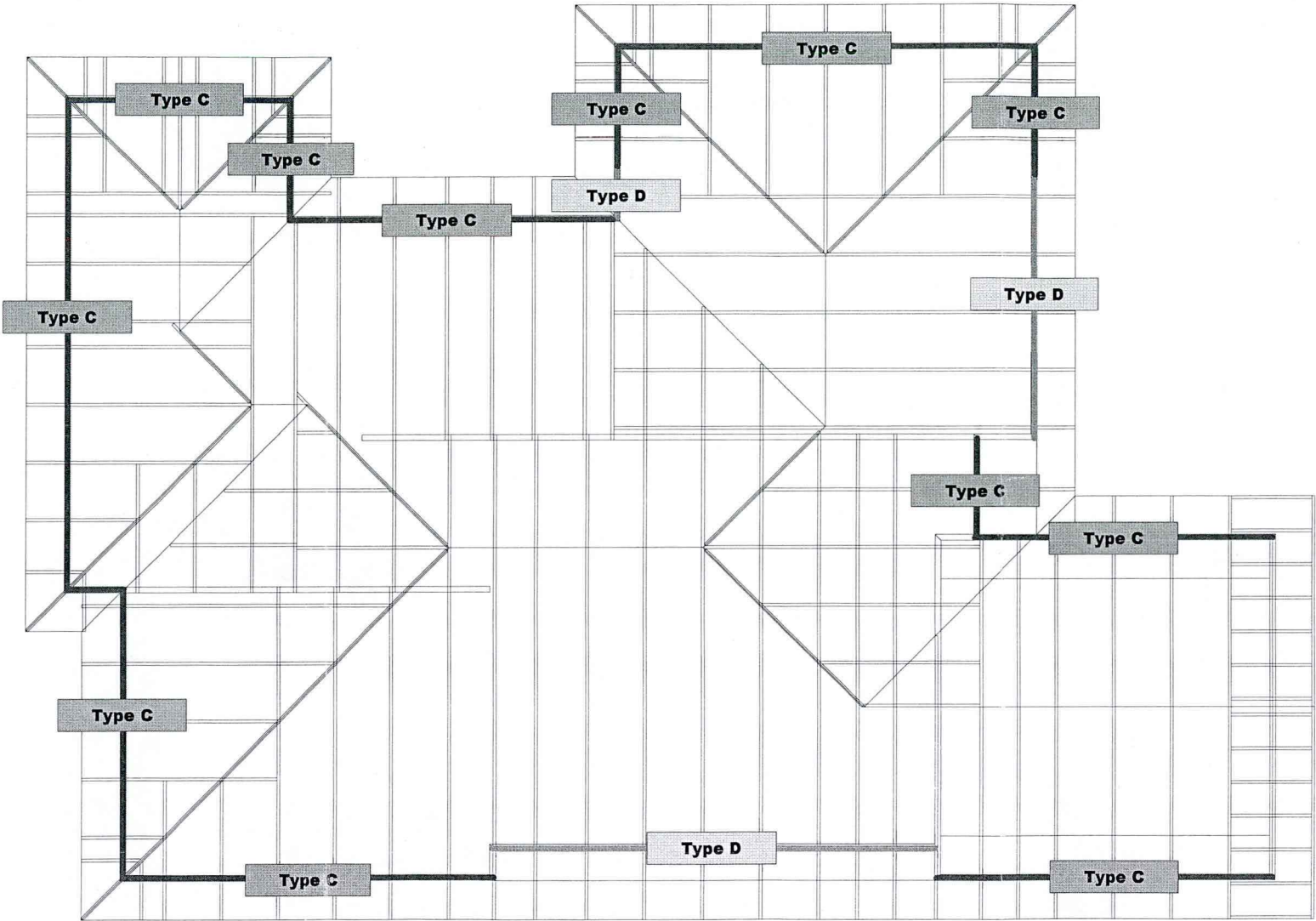
LUMBERLOK Stud Strap



NOTES:

Refer to:
LUMBERLOK Wall Fixing Chart - Stud to Top Plate
Fixing Schedule 01/10

(Alternative to NZS3604:1999 Table 8.18)



	Site Address : BISHOP BUILDERS LTD 48 FERNBROOK ROAD OAMARU	Sheet Title : For Building Consent Stud To Top Plate Fixing Date : 23 Jul,2007 Drawn : Brett Jordan Scale : 1: 100 System : MiTek 20/20	Job Details: Roof Pitch : 25.0 Deg Roof Material : Galv Iron .5mm Ceiling Material : Gib Board 12mm Wind Zone : Medium Roof Snow Load : 0.323 kPa	Truss Centres : 900 mm Roof Live Load : 0.250kPa Floor Live Load : kPa Wind Speed : 37 m/s	PrimeCad v4.4.1597.52  MiTek™ Job Title : 0877 Sheet : 4 Revision Number :
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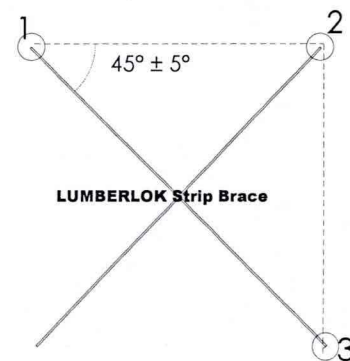
Truss Fixings

-  D - Pair of LUMBERLOK Wire Dogs
-  X - LUMBERLOK JH47x90 Joist Hanger
-  Z - LUMBERLOK JH47x120 Joist Hanger
-  P - LUMBERLOK JH47x190 Joist Hanger
-  E - LUMBERLOK JH95x165 Joist Hanger
-  O - Pair of LUMBERLOK CT200 Ceiling Ties
-  H - LUMBERLOK CT400 Cyclone Tie
-  B - LUMBERLOK CT600 Cyclone Tie
-  M - Pair of LUMBERLOK Multi Grips
-  NP - LUMBERLOK Nailon Plate
-  N - LUMBERLOK N21 Diagonal Cleat
-  W - Pair of LUMBERLOK CPC40 Cleats
-  K - LUMBERLOK TTP 16kN Truss to Top Plate set

Roof Bracing

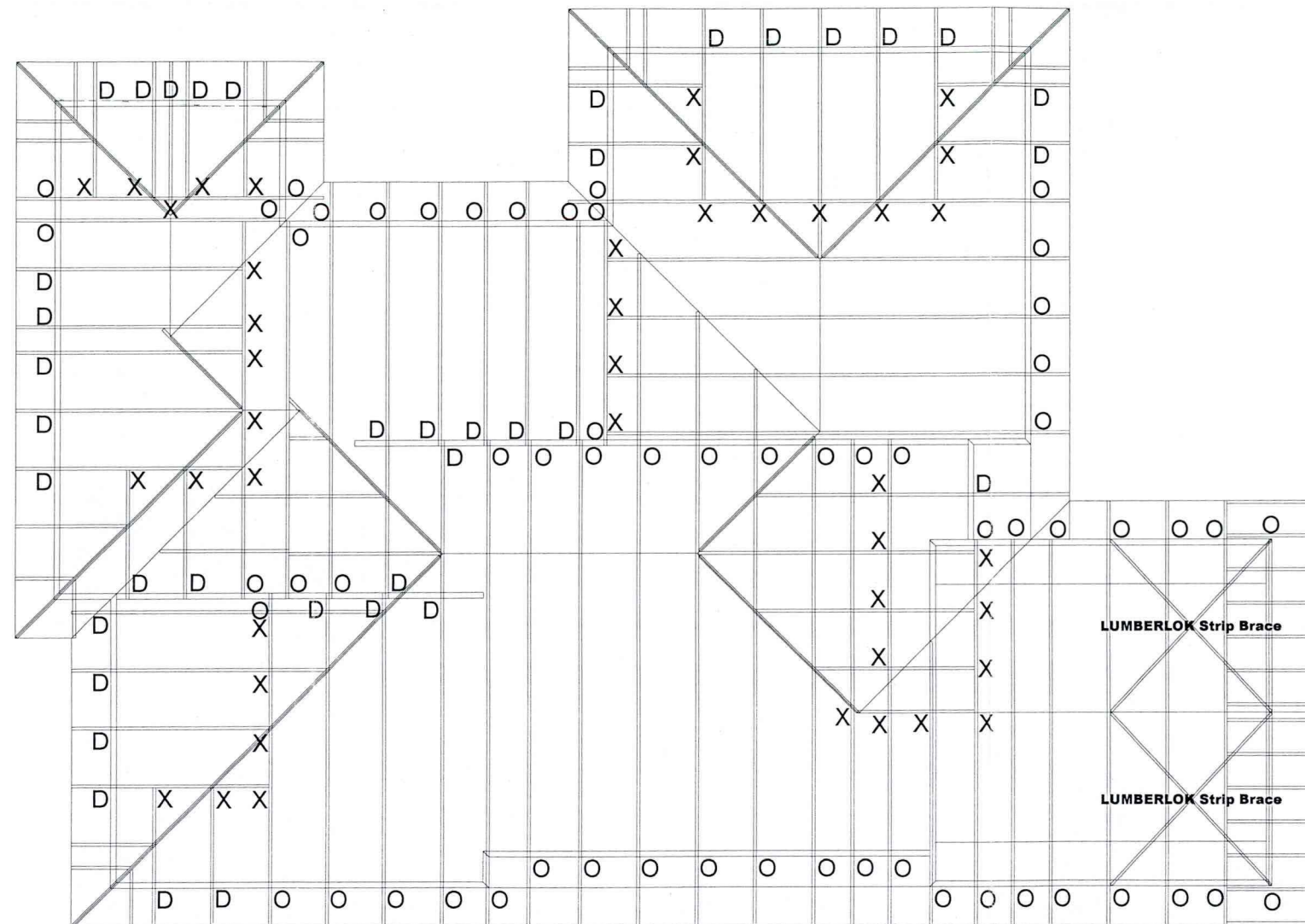
Refer to:
LUMBERLOK Roof Bracing Specifications
brochure 08/2006 for end fixing details.

The brace must be located such that it forms an angle of $45^\circ \pm 5^\circ$ to the wall



NOTES:

All other areas must have a minimum of a pair of 90mm skew nails for truss to top plate connections.
Refer to:
LUMBERLOK Timber Connectors Characteristic Loadings Data brochure 03/4



Site Address :

BISHOP BUILDERS LTD
48 FERNBROOK ROAD
OAMARU

Sheet Title :

For Building Consent
Truss Fixings & Roof Bracing

Date : 23 Jul, 2007

Scale : 1: 100

Drawn : Brett Jordan

System : MiTek 20/20

Job Details:

Roof Pitch : 25.0 Deg
Roof Material : Galv Iron .5mm
Ceiling Material : Gib Board 12mm
Wind Zone : Medium
Roof Snow Load : 0.323 kPa

Truss Centres : 900 mm
Roof Live Load : 0.250kPa
Floor Live Load : kPa
Wind Speed : 37 m/s

PrimeCad v4.4.1597.52

MiTek
MiTek

Job Title :

0877

Sheet :

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Revision Number :