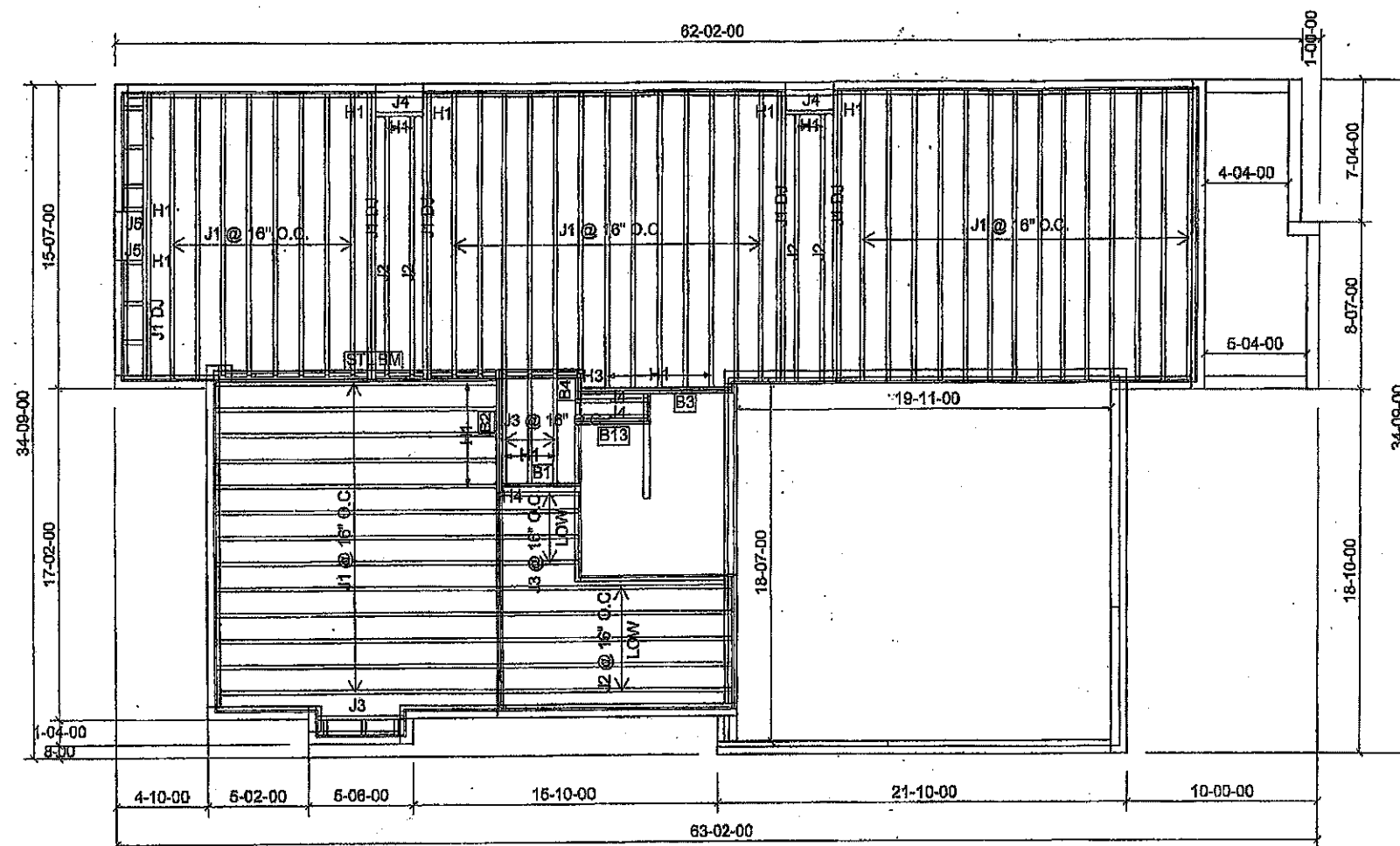
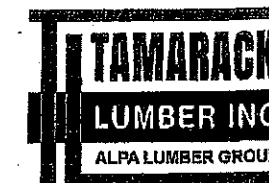




Products				
PlotID	Length	Product	Piles	Net Qty
J1	16-00-00	9 1/2" NI-40x	1	48
J1 DJ	16-00-00	9 1/2" NI-40x	2	10
J2	14-00-00	9 1/2" NI-40x	1	9
J3	6-00-00	9 1/2" NI-40x	1	8
J4	4-00-00	9 1/2" NI-40x	1	4
J5	2-00-00	9 1/2" NI-40x	1	2
B2	8-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	2	2
B3	8-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	2	2
B1	6-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	1	1
B13	4-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	1	1
B4	2-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	1	1

Connector Summary		
Qty	Manuf	Product
3	H1	IUS2.56/9.5
10	H1	IUS2.56/9.5
6	H1	IUS2.56/9.5
4	H1	IUS2.56/9.5
1	H3	HGUS410
1	H4	HUS1.81/10

ET0000652 – ET0000671



FROM PLAN DATED: SEPT 2018

BUILDER: GREENPARK HOMES

SITE: LAMBERTS LANE HOME

MODEL: KINMOUNT 6A

ELEVATION: 1

LOT:

CITY: CALEDON

SALESMAN: MD

DESIGNER: PL

REVISION:

NOTES:

REFER TO THE NORDIC INSTALLATION GUIDE FOR PROPER STORAGE AND INSTALLATION.

SQUASH BLOCKS OF 2x4, 2x6, 2x8 #2 S.P.F. REQ'D UNDER INTERIOR UNIFORM LOAD BEARING WALLS. MULTIPLE SQUASH BLOCKS REQ'D UNDER CONCENTRATED LOADS. SEE FIGURE 1. CANTILEVERED JOISTS INCLUDING CANT' OVER BRICK REQ. I-JOIST BLOCKING ALONG BEARING AND RIMBOARD CLOSURE AT ENDS. SEE FIGURES 4 & 5 FOR REINFORCEMENT REQUIREMENTS. FOR HOLES INCLUDING DUCT CHASE AND FIELD CUT OPENINGS SEE FIGURE 7, TABLES 1 & 2. CERAMIC TILE APPLICATION AS PER O.B.C 9.30.6.

LOADING:

DESIGN LOADS: L/480.000

LIVE LOAD: 40.0 lb/ft²

DEAD LOAD: 15.0 lb/ft²

TILED AREAS: 20 lb/ft²

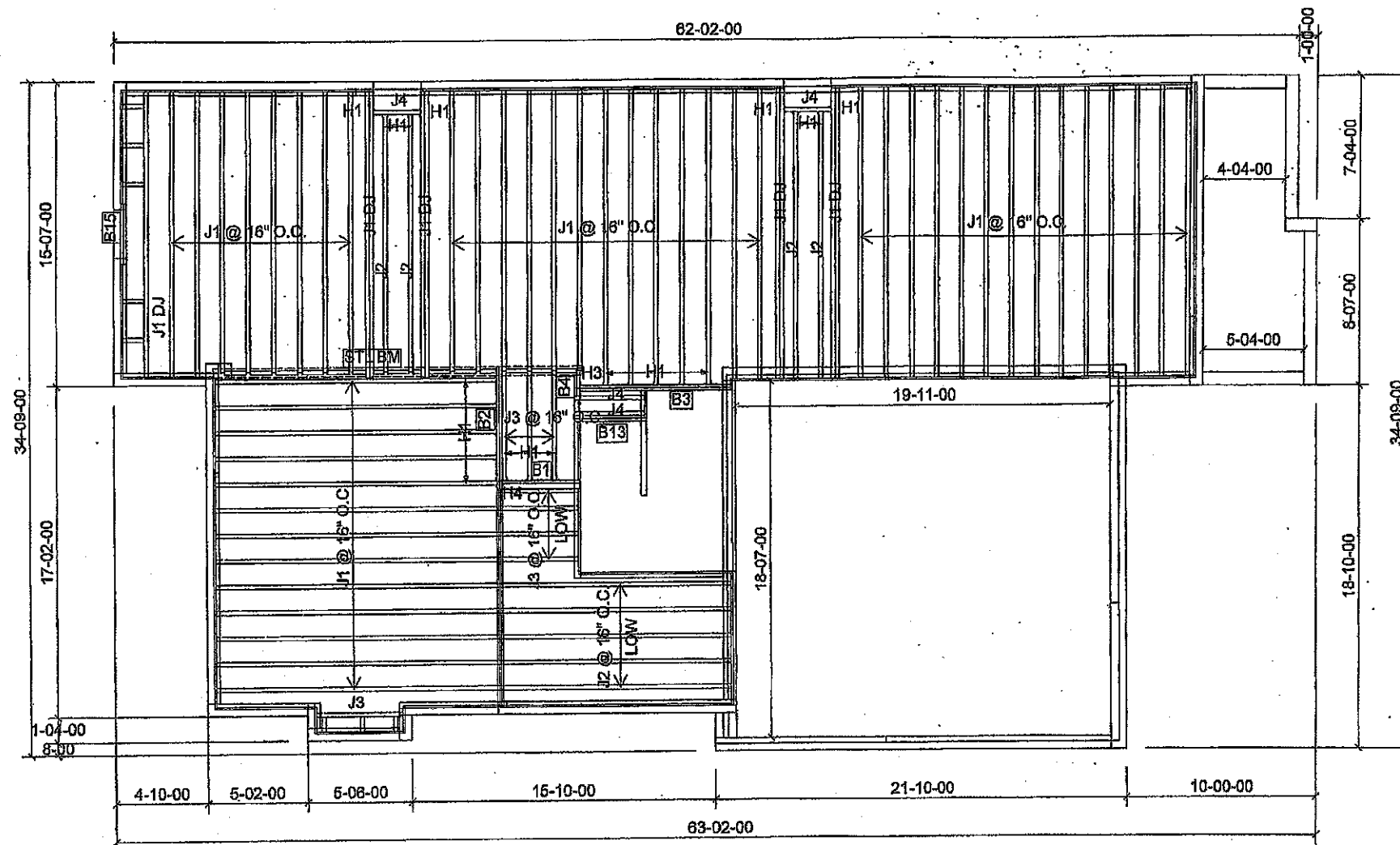
SUBFLOOR: 3/4" GLUED AND NAILED

DATE: 11/17/2018

1st FLOOR

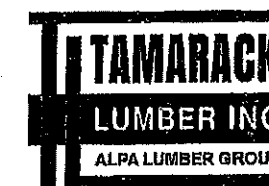
RECEIVED
JUL 30 2019

TOWN OF CALEDON
BUILDING SECTION
FILE NO



Products				
PlotID	Length	Product	Piles	Net Qty
J1	16-00-00	9 1/2" NI-40x	1	48
J1 DJ	16-00-00	9 1/2" NI-40x	1	1
J1 DJ	16-00-00	9 1/2" NI-40x	2	8
J2	14-00-00	9 1/2" NI-40x	1	9
J3	6-00-00	9 1/2" NI-40x	1	8
J4	4-00-00	9 1/2" NI-40x	1	4
B2	8-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	2	2
B3	8-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	2	2
B1	6-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	1	1
B13	4-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	1	1
B15	4-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	2	2
B4	2-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	1	1

Connector Summary		
Qty	Manuf	Product
3	H1	IUS2.56/9.5
10	H1	IUS2.56/9.5
4	H1	IUS2.56/9.5
4	H1	IUS2.56/9.5
1	H3	HGUS410
1	H4	HUS1.81/10



FROM PLAN DATED: SEPT 2018

BUILDER: GREENPARK HOMES

SITE: LAMBERTS LANE HOME

MODEL: KINMOUNT 6A

ELEVATION: 1

LOT:

CITY: CALEDON

SALESMAN: MD

DESIGNER: PL

REVISION:

NOTES:

REFER TO THE NORDIC INSTALLATION GUIDE FOR PROPER STORAGE AND INSTALLATION.

SQUASH BLOCKS OF 2x4, 2x6, 2x8 #2 S.P.F REQ'D UNDER INTERIOR UNIFORM LOAD BEARING WALLS. MULTIPLE SQUASH BLOCKS REQ'D UNDER CONCENTRATED LOADS. SEE FIGURE 1. CANTILEVERED JOISTS INCLUDING CANT' OVER BRICK REQ. JOIST BLOCKING ALONG BEARING AND RIMBOARD CLOSURE AT ENDS. SEE FIGURES 4 & 5 FOR REINFORCEMENT REQUIREMENTS. FOR HOLES INCLUDING DUCT CHASE AND FIELD CUT OPENINGS SEE FIGURE 7, TABLES 1 & 2. CERAMIC TILE APPLICATION AS PER O.B.C 9.30.6.

LOADING:

DESIGN LOADS: L/480.000

LIVE LOAD: 40.0 lb/ft²

DEAD LOAD: 15.0 lb/ft²

TILED AREAS: 20 lb/ft²

SUBFLOOR: 3/4" GLUED AND NAILED

DATE: 2019-04-12

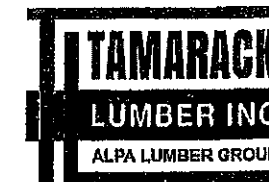
1st FLOOR

DECK COND

RECEIVED
JUL 30 2019

TOWN OF CALEDON
BUILDING SECTION
FILE NO

THIS STRUCTURE MUST BE
CONSTRUCTED TO MEET OR
EXCEED THE PROVISIONS OF
THE ONTARIO BUILDING CODE



FROM PLAN DATED: SEPT 2018

BUILDER: GREENPARK HOMES

SITE: LAMBERTS LANE HOME

MODEL: KINMOUNT 6A

ELEVATION: 2

LOT:

CITY: CALEDON

SALESMAN: MD

DESIGNER: PL

REVISION:

NOTES:

REFER TO THE NORDIC INSTALLATION GUIDE FOR PROPER STORAGE AND INSTALLATION.

SQUASH BLOCKS OF 2x4, 2x6, 2x8 #2 S.P.F. REQ'D UNDER INTERIOR UNIFORM LOAD BEARING WALLS. MULTIPLE SQUASH BLOCKS REQ'D UNDER CONCENTRATED LOADS. SEE FIGURE 1. CANTILEVERED JOISTS INCLUDING CANT' OVER BRICK REQ. JOIST BLOCKING ALONG BEARING AND RIMBOARD CLOSURE AT ENDS. SEE FIGURES 4 & 5 FOR REINFORCEMENT REQUIREMENTS. FOR HOLES INCLUDING DUCT CHASE AND FIELD CUT OPENINGS SEE FIGURE 7, TABLES 1 & 2. CERAMIC TILE APPLICATION AS PER O.B.C 9.30.6.

LOADING:

DESIGN LOADS: L/480.000

LIVE LOAD: 40.0 lb/ft²

DEAD LOAD: 15.0 lb/ft²

TILED AREAS: 20 lb/ft²

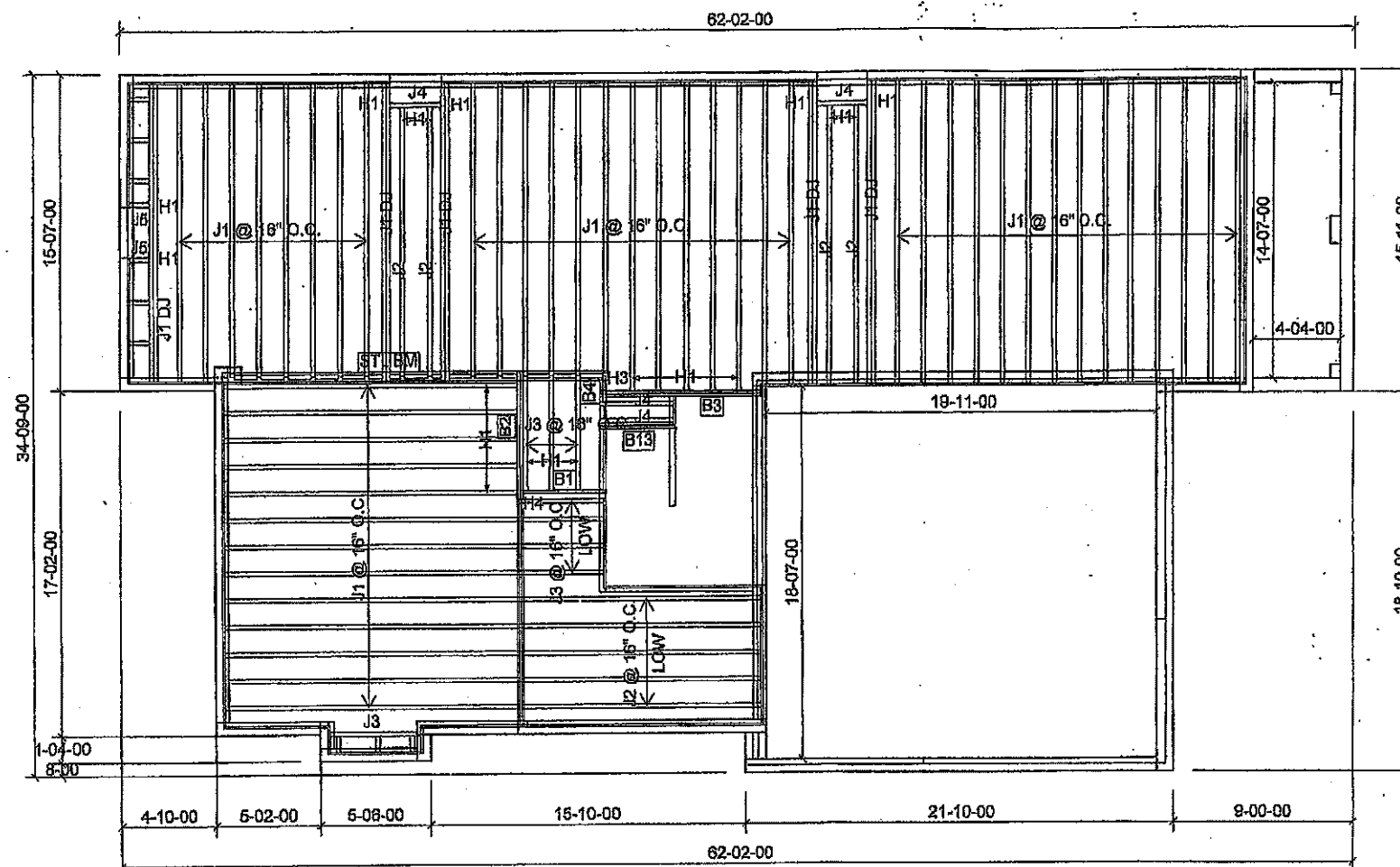
SUBFLOOR: 3/4" GLUED AND NAILED

DATE: 11/19/2018

1st FLOOR

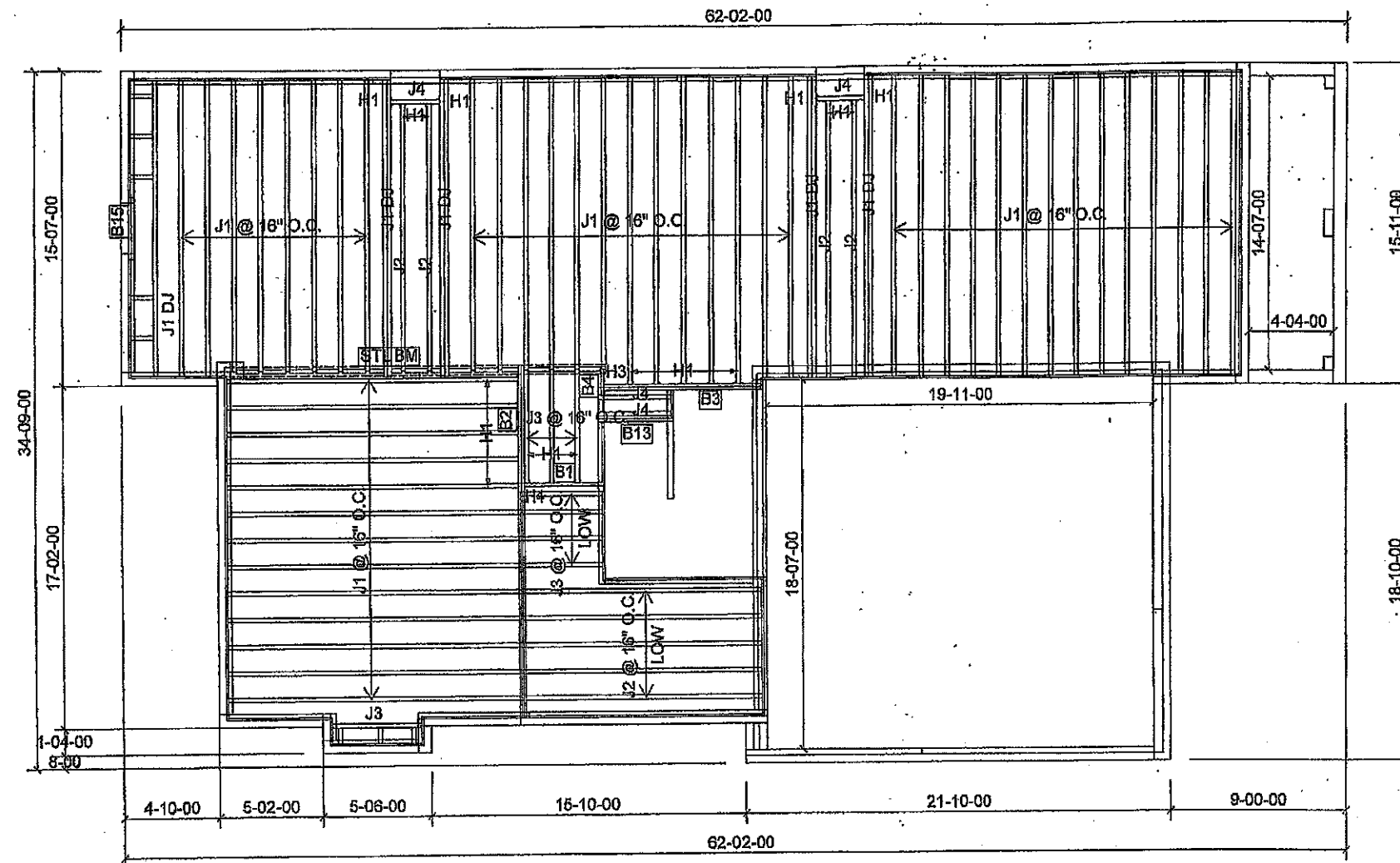
RECEIVED
JUL 30 2019

TOWN OF CALEDON
BUILDING SECTION
FILE NO.



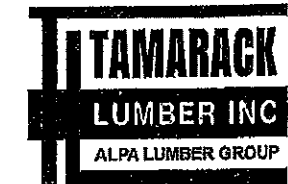
Products				
PlotID	Length	Product	Piles	Net Qty
J1	16-00-00	9 1/2" NI-40x	1	48
J1 DJ	16-00-00	9 1/2" NI-40x	2	10
J2	14-00-00	9 1/2" NI-40x	1	9
J3	6-00-00	9 1/2" NI-40x	1	8
J4	4-00-00	9 1/2" NI-40x	1	4
J5	2-00-00	9 1/2" NI-40x	1	2
B2	8-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	2	2
B3	8-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	2	2
B1	8-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	1	1
B13	4-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	1	1
B4	2-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	1	1

Connector Summary		
Qty	Manuf	Product
3	H1	IUS2.56/9.5
10	H1	IUS2.56/9.5
6	H1	IUS2.56/9.5
4	H1	IUS2.56/9.5
1	H3	HGUS410
1	H4	HUS1.81/10



Products				
PlotID	Length	Product	Plies	Net Qty
J1	16-00-00	9 1/2" NI-40x	1	48
J1 DJ	16-00-00	9 1/2" NI-40x	1	1
J1 DJ	16-00-00	9 1/2" NI-40x	2	8
J2	14-00-00	9 1/2" NI-40x	1	9
J3	6-00-00	9 1/2" NI-40x	1	8
J4	4-00-00	9 1/2" NI-40x	1	4
B2	8-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2
B3	8-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2
B1	6-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1
B13	4-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1
B15	4-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2
B4	2-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1

Connector Summary		
Qty	Manuf	Product
3	H1	IUS2.56/9.5
10	H1	IUS2.56/9.5
4	H1	IUS2.56/9.5
4	H1	IUS2.56/9.5
1	H3	HGUS410
1	H4	HUS1.81/10



FROM PLAN DATED: SEPT 2018

BUILDER: GREENPARK HOMES

SITE: LAMBERT'S LANE HOME

MODEL: KINMOUNT 6A

ELEVATION: 2

LOT:

CITY: CALEDON

SALESMAN: MD

DESIGNER: PL

REVISION:

NOTES:

REFER TO THE NORDIC INSTALLATION GUIDE FOR PROPER STORAGE AND INSTALLATION.

SQUASH BLOCKS OF 2x4, 2x6, 2x8 #2 S.P.F. REQ'D UNDER INTERIOR UNIFORM LOAD BEARING WALLS. MULTIPLE SQUASH BLOCKS REQ'D UNDER CONCENTRATED LOADS. SEE FIGURE 1. CANTILEVERED JOISTS INCLUDING CANT' OVER BRICK REQ. JOIST BLOCKING ALONG BEARING AND RIMBOARD CLOSURE AT ENDS. SEE FIGURES 4 & 5 FOR REINFORCEMENT REQUIREMENTS. FOR HOLES INCLUDING DUCT CHASE AND FIELD CUT OPENINGS SEE FIGURE 7, TABLES 1 & 2. CERAMIC TILE APPLICATION AS PER O.B.C 9.30.6.

LOADING:

DESIGN LOADS: L/480.000

LIVE LOAD: 40.0 lb/ft²

DEAD LOAD: 15.0 lb/ft²

TILED AREAS: 20 lb/ft²

SUBFLOOR: 3/4" GLUED AND NAILED

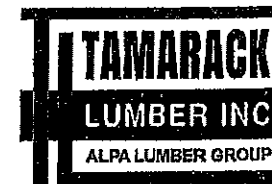
DATE: 2019-04-12

1st FLOOR

DECK CONDITION

RECEIVED
JUL 30 2019

TOWN OF CALEDON
BUILDING SECTION
FILE NO.



FROM PLAN DATED: SEPT 2018

BUILDER: GREENPARK HOMES

SITE: LAMBERTS LANE HOME

MODEL: KINMOUNT 6A

ELEVATION: 3

LOT:

CITY: CALEDON

SALESMAN: MD

DESIGNER: PL

REVISION:

NOTES:

REFER TO THE NORDIC INSTALLATION GUIDE FOR PROPER STORAGE AND INSTALLATION.

SQUASH BLOCKS OF 2x4, 2x6, 2x8 #2 S.P.F REQ'D UNDER INTERIOR UNIFORM LOAD BEARING WALLS. **MULTIPLE SQUASH BLOCKS** REQ'D UNDER CONCENTRATED LOADS. SEE FIGURE 1. **CANTILEVERED JOISTS** INCLUDING CANT' OVER BRICK REQ. **JOIST BLOCKING** ALONG BEARING AND RIMBOARD CLOSURE AT ENDS. SEE FIGURES 4 & 5 FOR REINFORCEMENT REQUIREMENTS. FOR HOLES INCLUDING DUCT CHASE AND FIELD CUT OPENINGS SEE FIGURE 7, TABLES 1 & 2. **CERAMIC TILE** APPLICATION AS PER O.B.C 9.30.3.

LOADING:

DESIGN LOADS: L/480.000

LIVE LOAD: 40.0 lb/ft²

DEAD LOAD: 15.0 lb/ft²

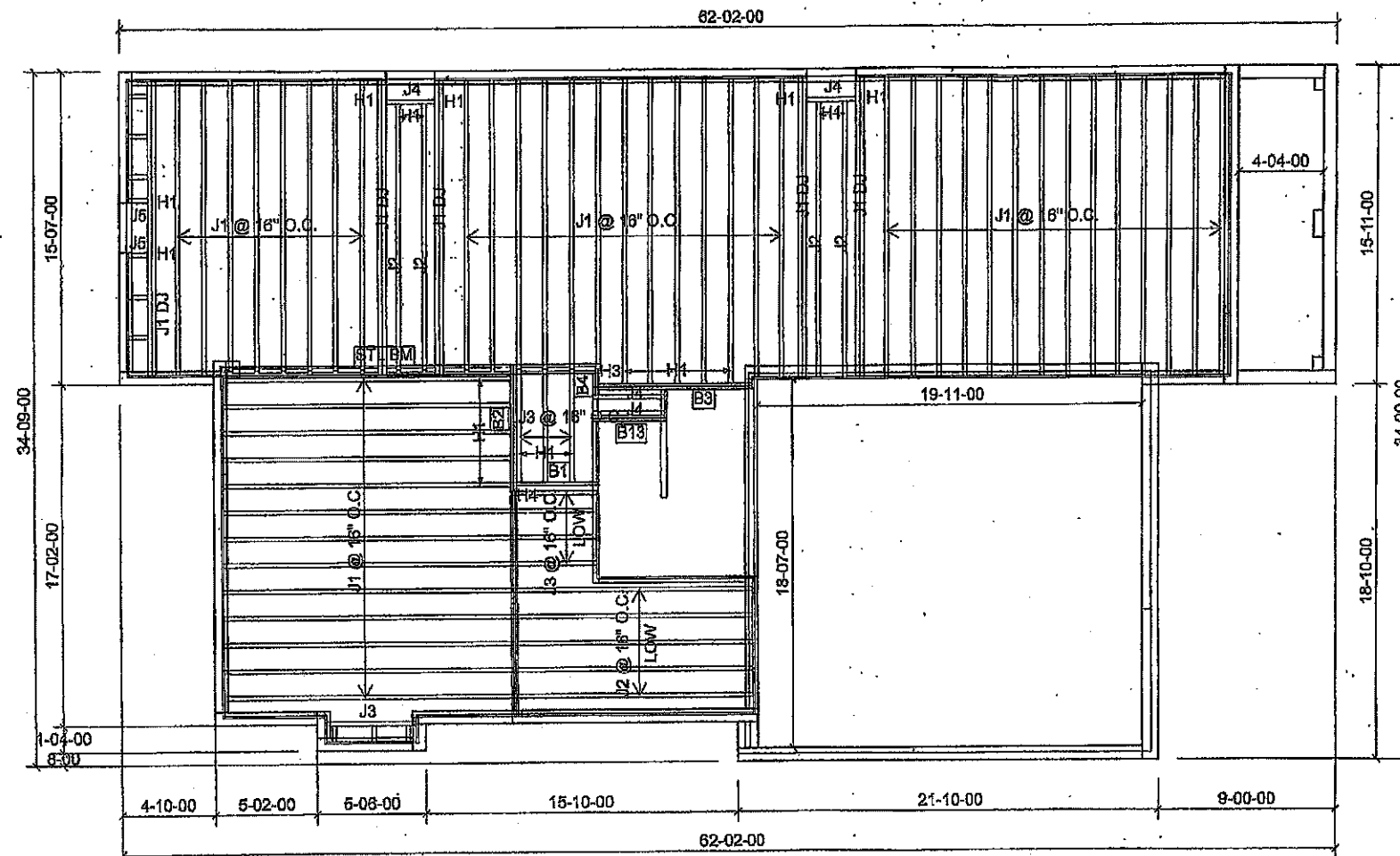
TILED AREAS: 20 lb/ft²

SUBFLOOR: 3/4" GLUED AND NAILED

DATE: 11/19/2018

1st FLOOR

**THIS STRUCTURE MUST BE
CONSTRUCTED TO MEET OR
EXCEED THE PROVISIONS OF
THE ONTARIO BUILDING CODE**

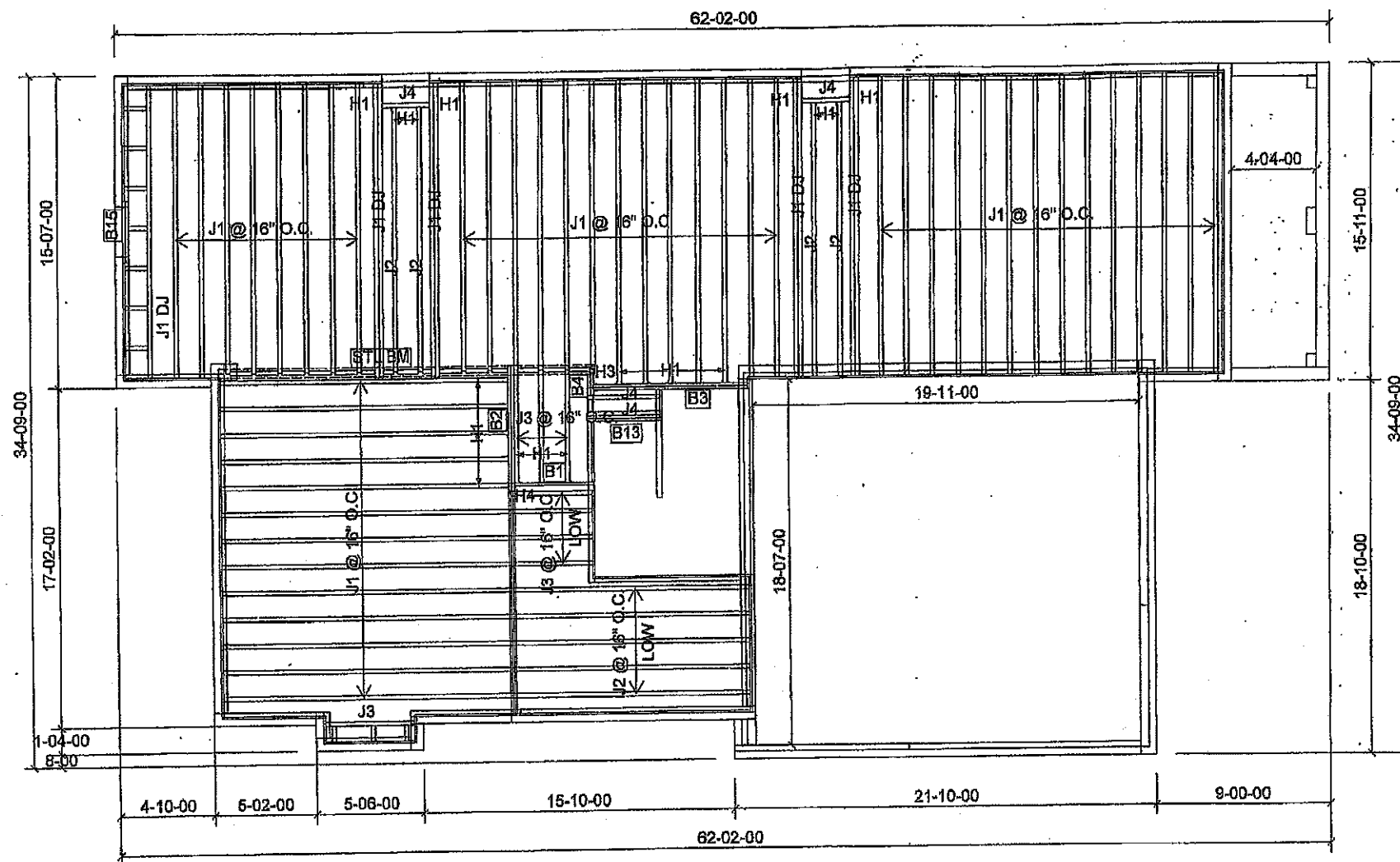


Products				
PlotID	Length	Product	Plies	Net Qty
J1	16-00-00	9 1/2" NI-40x	1	48
J1 DJ	16-00-00	9 1/2" NI-40x	2	10
J2	14-00-00	9 1/2" NI-40x	1	9
J3	6-00-00	9 1/2" NI-40x	1	8
J4	4-00-00	9 1/2" NI-40x	1	4
J5	2-00-00	9 1/2" NI-40x	1	2
B2	8-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2
B3	8-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2
B1	6-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1
B13	4-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1
B4	2-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1

Connector Summary		
Qty	Manuf	Product
3	H1	IUS2.56/9.5
10	H1	IUS2.56/9.5
6	H1	IUS2.56/9.5
4	H1	IUS2.56/9.5
1	H3	HGUS410
1	H4	HUS1.81/10

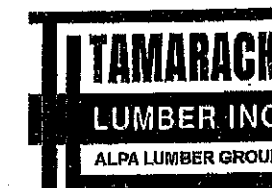
RECEIVED
JUL 30 2019

TOWN OF CALEDON
BUILDING SECTION
FILE NO



Products				
PlotID	Length	Product	Piles	Net Qty
J1	16-00-00	9 1/2" NI-40x	1	48
J1 DJ	16-00-00	9 1/2" NI-40x	1	1
J1 DJ	16-00-00	9 1/2" NI-40x	2	8
J2	14-00-00	9 1/2" NI-40x	1	9
J3	6-00-00	9 1/2" NI-40x	1	8
J4	4-00-00	9 1/2" NI-40x	1	4
B2	8-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2
B3	8-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2
B1	6-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1
B13	4-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1
B15	4-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2
B4	2-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1

Connector Summary		
Qty	Manuf	Product
3	H1	IUS2.56/9.5
10	H1	IUS2.56/9.5
4	H1	IUS2.56/9.5
4	H1	IUS2.56/9.5
1	H3	HGUS410
1	H4	HUS1.81/10



FROM PLAN DATED: SEPT 2018

BUILDER: GREENPARK HOMES

SITE: LAMBERTS LANE HOME

MODEL: KINMOUNT 6A

ELEVATION: 3

LOT:

CITY: CALEDON

SALESMAN: MD

DESIGNER: PL

REVISION:

NOTES:

REFER TO THE NORDIC INSTALLATION GUIDE FOR PROPER STORAGE AND INSTALLATION.

SQUASH BLOCKS OF 2x4, 2x6, 2x8 #2 S.P.F. REQ'D UNDER INTERIOR UNIFORM LOAD BEARING WALLS. **MULTIPLE SQUASH BLOCKS** REQ'D UNDER CONCENTRATED LOADS. SEE FIGURE 1. **CANTILEVERED JOISTS** INCLUDING CANT' OVER BRICK REQ. I-JOIST BLOCKING ALONG BEARING AND RIMBOARD CLOSURE AT ENDS. SEE FIGURES 4 & 5 FOR REINFORCEMENT REQUIREMENTS. FOR HOLES INCLUDING DUCT CHASE AND FIELD CUT OPENINGS SEE FIGURE 7, TABLES 1 & 2. **CERAMIC TILE** APPLICATION AS PER O.B.C 9.30.6.

LOADING:

DESIGN LOADS: L/480.000

LIVE LOAD: 40.0 lb/ft²

DEAD LOAD: 15.0 lb/ft²

TILED AREAS: 20 lb/ft²

SUBFLOOR: 3/4" GLUED AND NAILED

DATE: 2019-04-12

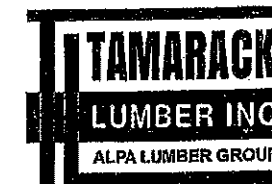
1st FLOOR

DECK CONDITION

RECEIVED
JUL 30 2019

TOWN OF CALEDON
BUILDING SECTION
FILE NO.

**THIS STRUCTURE MUST BE
CONSTRUCTED TO MEET OR
EXCEED THE PROVISIONS OF
THE ONTARIO BUILDING CODE**



FROM PLAN DATED: SEPT 2018

BUILDER: GREENPARK HOMES

SITE: LAMBERTS LANE HOME

MODEL: KINMOUNT 6A

ELEVATION: 1

LOT:

CITY: CALEDON

SALESMAN: MD

DESIGNER: PL

REVISION:

THIS STRUCTURE MUST BE
CONSTRUCTED TO MEET OR
EXCEED THE PROVISIONS OF
THE ONTARIO BUILDING CODE

NOTES:

REFER TO THE NORDIC INSTALLATION
GUIDE FOR PROPER STORAGE AND
INSTALLATION. SQUASH BLOCKS OF 2x4,
2x6, 2x8 #2 S.P.F. REQ'D UNDER INTERIOR
UNIFORM LOAD BEARING WALLS. MULTIPLE
SQUASH BLOCKS REQ'D UNDER
CONCENTRATED LOADS. SEE FIGURE 1.
CANTILEVERED JOISTS INCLUDING CANT'
OVER BRICK REQ. JOIST BLOCKING ALONG
BEARING AND RIMBOARD CLOSURE AT
ENDS. SEE FIGURE 7 TABLES 4 & 5 FOR
REINFORCEMENT REQUIREMENTS. FOR
HOLES INCLUDING DUCT CHASE AND FIELD
CUT OPENINGS SEE FIGURE 7 TABLES 1 & 2
OF THE INSTALLATION GUIDE. CERAMIC TILE
APPLICATION AS PER O.B.C. 9.30.6

LOADING:

DESIGN LOADS: L/480.000

LIVE LOAD: 40.0 lb/ft²

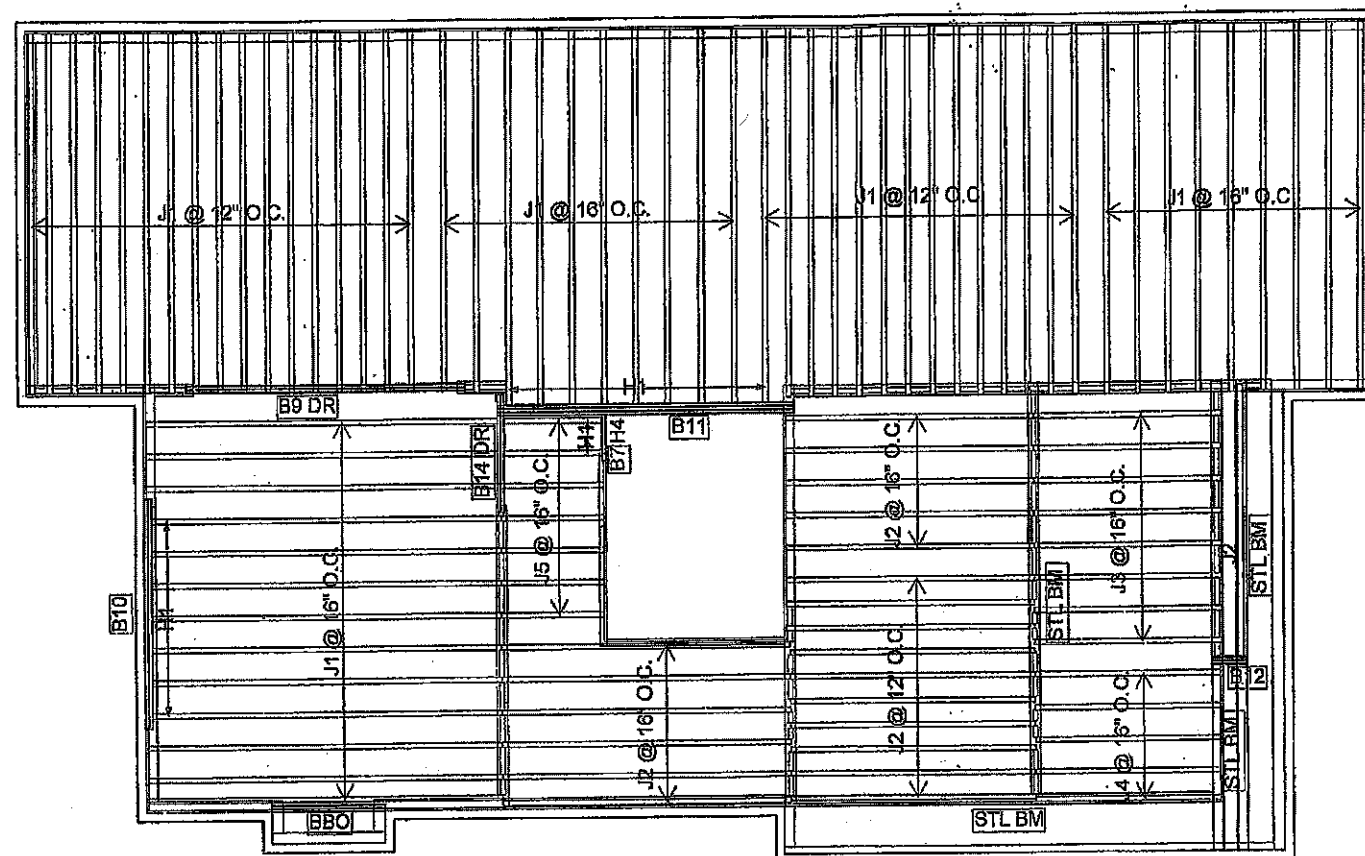
DEAD LOAD: 15.0 lb/ft²

TILED AREAS: 20 lb/ft²

SUBFLOOR: 5/8" GLUED AND NAILED

DATE: 11/19/2018

2nd FLOOR

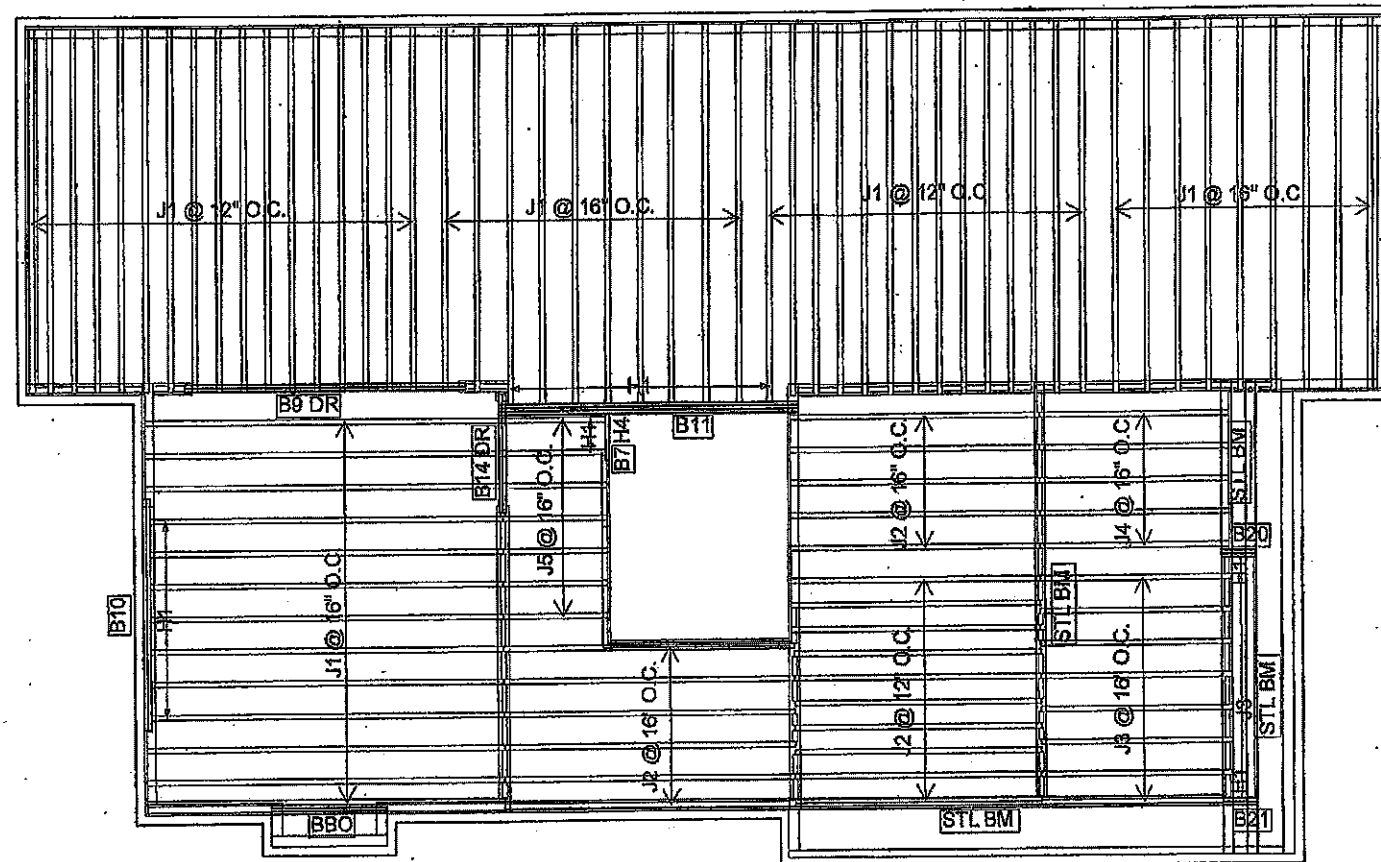


Products				
PlotID	Length	Product	Piles	Net Qty
J1	16-00-00	9 1/2" NI-40x	1	63
J2	12-00-00	9 1/2" NI-40x	1	22
J3	10-00-00	9 1/2" NI-40x	1	8
J4	8-00-00	9 1/2" NI-40x	1	5
J5	6-00-00	9 1/2" NI-40x	1	7
B11	14-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	3	3
B9 DR	12-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	2	2
B10	10-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	2	2
B14 DR	6-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	2	2
B7	2-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	1	1
B12	2-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	2	2

Connector Summary		
Qty	Manuf	Product
2	H1	IUS2.56/9.5
7	H1	IUS2.56/9.5
9	H1	IUS2.56/9.5
1	H4	HUS1.81/10

RECEIVED
JUL 30 2019

TOWN OF CALEDON
BUILDING SECTION
FILE NO



Products				
PlotID	Length	Product	Piles	Net Qty
J1	16-00-00	9 1/2" NI-40x	1	63
J2	12-00-00	9 1/2" NI-40x	1	21
J3	10-00-00	9 1/2" NI-40x	1	9
J4	8-00-00	9 1/2" NI-40x	1	5
J5	6-00-00	9 1/2" NI-40x	1	7
B11	14-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	3	3
B9 DR	12-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	2	2
B10	10-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	2	2
B14 DR	6-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	2	2
B7	2-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	1	1
B20	2-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	2	2
B21	2-00-00	1-3/4" x 9-1/2" VERSA-LAM@ 2.0 3100 SP	2	2

Connector Summary		
Qty	Manuf	Product
2	H1	IUS2.56/9.5
9	H1	IUS2.56/9.5
9	H1	IUS2.56/9.5
1	H4	HUS1.81/10



FROM PLAN DATED: SEPT 2018

BUILDER: GREENPARK HOMES

SITE: LAMBERTS LANE HOME

MODEL: KINMOUNT 6A

ELEVATION: 2

LOT:

CITY: CALEDON

SALESMAN: MD

DESIGNER: PL

REVISION:

NOTES:

REFER TO THE NORDIC INSTALLATION GUIDE FOR PROPER STORAGE AND INSTALLATION. SQUASH BLOCKS OF 2x4, 2x6, 2x8 #2 S.P.F. REQ'D UNDER INTERIOR UNIFORM LOAD BEARING WALLS. MULTIPLE SQUASH BLOCKS REQ'D UNDER CONCENTRATED LOADS. SEE FIGURE 1. CANTILEVERED JOISTS INCLUDING CANT' OVER BRICK REQ. JOIST BLOCKING ALONG BEARING AND RIMBOARD CLOSURE AT ENDS. SEE FIGURE 7 TABLES 4 & 5 FOR REINFORCEMENT REQUIREMENTS. FOR HOLES INCLUDING DUCT CHASE AND FIELD CUT OPENINGS SEE FIGURE 7 TABLES 1 & 2 OF THE INSTALLATION GUIDE. CERAMIC TILE APPLICATION AS PER O.B.C. 9.30.6

LOADING:

DESIGN LOADS: L/480.000

LIVE LOAD: 40.0 lb/ft²

DEAD LOAD: 15.0 lb/ft²

TILED AREAS: 20 lb/ft²

SUBFLOOR: 5/8" GLUED AND NAILED

DATE: 11/19/2018

2nd FLOOR

RECEIVED
JUL 30 2019

TOWN OF CALEDON
BUILDING SECTION
FILE NO.

THIS STRUCTURE MUST BE
CONSTRUCTED TO MEET OR
EXCEED THE PROVISIONS OF
THE ONTARIO BUILDING CODE

3b LUMBER CANTILEVER DETAIL FOR BALCONIES (No Wall Load)

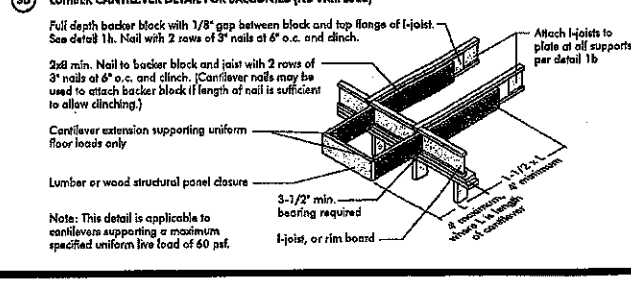
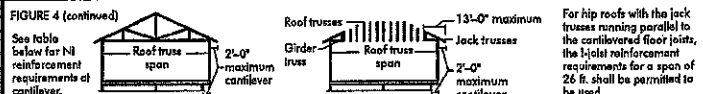
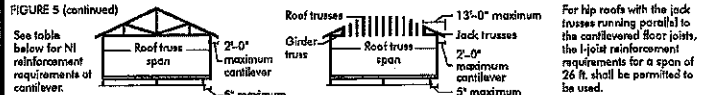


FIGURE 4 (continued)



JOIST DEPTH [in.]	X/OFF TUBES SPAN [in.]	ROOF LOADING (UNIPAC FORT)																		
		U = 30 psf, D1 = 15 psf JOIST SPACING [in.]						U = 40 psf, D1 = 15 psf JOIST SPACING [in.]						U = 50 psf, D1 = 15 psf JOIST SPACING [in.]						
		12	14	16	18	24	24	12	14	16	18	24	24	12	14	16	18	24	24	
9 1/2"	26	N	N	N	1	2	N	N	1	2	X	X	N	N	2	X	X	X	X	
	28	N	N	N	1	2	N	N	1	2	X	X	N	N	2	X	X	X	X	
	30	N	N	1	1	2	X	X	N	1	2	X	X	N	N	2	X	X	X	
	32	N	N	1	1	2	X	X	N	2	2	X	X	N	N	1	X	X	X	
	34	N	N	1	1	2	X	X	N	2	2	X	X	N	N	1	X	X	X	
11 7/8"	26	N	N	1	2	X	X	N	2	2	X	X	N	N	1	X	X	X	X	
	28	N	N	N	1	2	N	N	N	1	2	N	N	N	1	X	X	X	X	
	30	N	N	N	N	1	N	N	N	1	2	N	N	N	1	1	X	X	X	
	32	N	N	N	N	1	2	N	N	1	1	2	N	N	1	1	2	X	X	
	34	N	N	N	1	2	N	N	1	1	2	X	N	N	1	2	2	X	X	
14"	26	N	N	N	1	2	N	N	1	2	X	N	N	2	X	X	X	X	X	
	28	N	N	N	N	N	N	N	N	1	1	N	N	N	N	1	1	1	1	
	30	N	N	N	N	N	N	N	N	N	1	N	N	N	N	1	1	2	2	
	32	N	N	N	N	N	1	N	N	N	1	1	N	N	N	1	1	2	2	
	34	N	N	N	N	N	1	N	N	N	1	1	N	N	1	1	2	X	X	
16"	26	N	N	N	N	1	N	N	N	1	2	N	N	1	2	N	1	2	X	X
	28	N	N	N	N	N	N	N	N	N	1	N	N	N	N	1	N	N	N	
	30	N	N	N	N	N	N	N	N	N	1	N	N	N	N	1	1	1	1	
	32	N	N	N	N	N	1	N	N	N	1	1	N	N	N	1	1	2	2	
	34	N	N	N	N	N	1	N	N	N	1	1	N	N	1	1	2	2	2	
18"	26	N	N	N	N	1	N	N	N	1	2	N	N	1	2	N	1	2	X	X
	28	N	N	N	N	N	N	N	N	N	1	N	N	N	N	1	N	N	N	
	30	N	N	N	N	N	N	N	N	N	1	N	N	N	N	1	1	1	1	
	32	N	N	N	N	N	N	N	N	N	1	N	N	N	N	1	1	2	2	
	34	N	N	N	N	N	N	N	N	N	1	N	N	N	1	1	2	2	2	
20"	26	N	N	N	N	1	N	N	N	1	2	N	N	1	2	N	1	2	X	X
	28	N	N	N	N	N	N	N	N	N	1	N	N	N	N	1	N	N	N	
	30	N	N	N	N	N	N	N	N	N	1	N	N	N	N	1	1	1	1	
	32	N	N	N	N	N	N	N	N	N	1	N	N	N	N	1	1	2	2	
	34	N	N	N	N	N	N	N	N	N	1	N	N	N	1	1	2	2	2	

- | | | |
|--|--|---|
| <p>1. N = No mechanical required.</p> <p>2. $\geq$ NI miniframed with 3/4" wood structural panel on one side only.</p> <p>3. $\geq$ NI miniframed with 3/4" wood structural panel on both sides, or double joist.</p> <p>4. X = Try a deeper joist or closer spacing.</p> <p>5. Maximum design load shall be 15 psf and maximum deflection shall be 1/40 of span.</p> <p>6. $\geq$ 60 psf wind. Wind load is based on 30° maximum wind angle at door opening.</p> | <p>For largest openings, or multiple 30° wind openings spaced less than 60'-0", add: floor joists beneath the openings' cripples</p> <p>7. $\geq$ 12" max. spacing between joists.</p> <p>8. Table applies to joists 12" to 24" or that meet the floor joist requirements for a design live load of 40 psf and a deflection limit of a live load deflection limit of 1/40th. Use 12" or less requirements for lesser spacing.</p> | <p>For conventional roof construction using a ridge beam, the Roof Truss Span column values are equivalent to the distance between the supporting wall and the ridge beam. When the roof is framed using a ridge board, the Roof Truss Span is equivalent to the distance between the supporting walls as if there were a beam.</p> <p>9. Crossbraced joists supporting gable trusses or roof beams may require additional reinforcing.</p> |
|--|--|---|

 SHEATHING REINFORCEMENT

JOIST DEPTH (in.)	ROOF RAIS. SPAN (ft)	JOIST SPACING (in.)												ROOF LOADING (UNFACTORED)											
		11 ~ 30 psf, 14 ~ 15 psf						11 ~ 40 psf, DL ~ 15 psf						11 ~ 50 psf, DL ~ 15 psf											
		12	16	18	24	30	36	12	16	18	24	30	36	12	16	19.2	24								
5-1/2"	26			X	X	X	X	2	2	X	X	X	X	2	X	X	X	X							
	28	1						2	2	X	X	X	X	X	X	X	X	X							
	30	X	X	X	X	X	X	2	2	X	X	X	X	X	X	X	X	X							
	32	X	X	X	X	X	X	2	2	X	X	X	X	X	X	X	X	X							
	34	X	X	X	X	X	X	2	2	X	X	X	X	X	X	X	X	X							
	36	2	2	X	X	X	X	2	2	X	X	X	X	X	X	X	X	X							
11 7/8"	26			X	X	X	X			X	X	X	X		X	X	X	X							
	28	N		2	X	X	X	1	1	X	X	X	X	2	X	X	X	X							
	30			2	X	X	X	1	1	X	X	X	X	2	X	X	X	X							
	32	1		2	X	X	X	1	1	X	X	X	X	2	X	X	X	X							
	34	1		2	X	X	X	2	2	X	X	X	X	2	X	X	X	X							
	36	1		2	X	X	X	2	2	X	X	X	X	2	X	X	X	X							
14"	26	N	1	2	X	X	X	N	2	2	X	X	X	1	1	X	X	X							
	28	N		2	X	X	X	1	1	2	X	X	X	1	1	X	X	X							
	30	N		2	X	X	X	1	1	2	X	X	X	1	1	X	X	X							
	32	N	N	2	X	X	X	1	1	2	X	X	X	2	2	X	X	X							
	34	N	N	2	X	X	X	1	1	2	X	X	X	2	2	X	X	X							
	36	N	N	2	X	X	X	1	1	2	X	X	X	2	2	X	X	X							
16"	26	N	1	2	X	X	X	2	2	X	X	X	X	N	2	X	X	X							
	28	N	1	2	X	X	X	N	2	2	X	X	X	N	1	2	X	X							
	30	N	1	2	X	X	X	N	2	2	X	X	X	N	1	2	X	X							
	32	N	1	2	X	X	X	N	2	2	X	X	X	N	1	2	X	X							
	34	N	N	2	X	X	X	1	1	2	X	X	X	1	1	X	X	X							
	36	N	N	2	X	X	X	1	1	2	X	X	X	1	1	X	X	X							

1. **N** = No reinforcement required;
 1 = $\frac{1}{8}$ " reinforced with $\frac{3}{4}$ " wood structural post on one side only;
 2 = $\frac{1}{8}$ " reinforced with $\frac{3}{4}$ " wood structural post on both sides, or double $\frac{1}{8}$ " reinforced with $\frac{3}{4}$ " wood structural post on one side only;
 3 = Maximum design load should be 15 psf roof dead load, 5 psf roof live load, and 80 psf wind load to be based on horizontal projection of windward or leeward roof surface.
 4. For conventional roof construction using a ridge beam, the Roof Truss Span column above is equivalent to the distance between the supporting wall and the ridge beam. When the roof is supported by the Roof Truss Span the supporting wall is the distance between the supporting walls as if a truss is used.
 5. For roof truss supporting girders, trusses or roof beams may require additional bracing.

-
- 5a SET-BACK CONNECTION**
- Vertical solid sawn block (2x6 S-P-F No. 2 or better) nailed through joist web and web of girder using 2-1/2" nails. Alternate for opposite side.
- Nail joist and using 3" nails, toe-nail at top and bottom flanges.
- Hanger may be used in lieu of solid sawn block.
- Notes:**
- Verify girder joist capacity if the back span exceeds the joist spacing.
 - Attach double I-joist per detail 1p, if required.

Vertical solid sawn blocks (2x6 S-P-F No. 2 or better) nailed through joint web and web of girder using 2-1/2" nails. Alternate for opposite side.

Nails, toe-nail at top and bottom flanges.

Hanger may be used in lieu of solid sawn block.

Notes:

- Verify girder joint capacity if the block span exceeds the joint spacing.
- Attach double L-plate per detail 1p, if required.

RULES FOR CUTTING HOLES AND DUCT CHASE OPENINGS:

1. The distance between the inside edge of the support and the centreline of any holes or duct chase opening shall be in compliance with the requirements of Table 1 and 2, respectively.
2. I-joint top and bottom flanges must NEVER be cut, notched, or otherwise modified.
3. Whenever possible, field-cut holes should be centred on the middle of the web.
4. The maximum size hole or the maximum depth of a duct chase opening that can be cut into an I-joint web shall equal the clear distance between the flanges of the I-joint minus 1/4 inch. A minimum of 1/8 inch should always be maintained between the top or bottom of the hole or opening and the adjacent I-joint flange.
5. The sides of square holes or longest sides of rectangular holes should not exceed 3/4 of the diameter of the maximum round hole permitted at that location.
6. Where more than one hole is necessary, the distance between adjacent hole edges shall exceed twice the diameter of the largest round hole, or twice the size of the largest square hole, or twice the length of the longest side of the longest rectangular hole or duct chase opening) and each hole and duct chase opening shall be sized and located in compliance with the requirements of Tables 1 and 2, respectively.
7. A knothole is not considered a hole, may be utilized anywhere it occurs, and may be ignored for purposes of calculating minimum distances between holes and/or duct chase openings.
8. Holes measuring 1-1/2 inches or smaller shall be permitted anywhere in a cantilevered section of a joint. Holes of greater size may be permitted as subject to various restrictions.
9. A 1-1/2 inch hole or smaller can be placed anywhere in the web provided that it meets the restrictions of rule number 6 above.
10. All holes and duct chase openings shall be cut in a workmanlike manner in accordance with the restrictions stated above and as illustrated in Figure 7.
11. Limit three maximum size holes per span, of which one may be a duct chase opening.
12. A group of round holes at approximately the same location shall be permitted if they meet the maximum limits for a single round hole encircled around them.

FIELD-CUT HOLE LOCATOR

See Table 1 for minimum distance from bearing

2x diameter of larger hole

2x duct chase length or hole diameter, whichever is larger

Duct chase opening (see Table 2 for minimum distance from bearing)

3/8" diameter

Knockouts

See rule 12

Maintain minimum 1/8" space between top and bottom flange — all duct chase openings and holes

A knockout is **NOT** considered a hole, may be utilized wherever it occurs and may be ignored for purposes of calculating minimum distances between holes.

1. Wipe any mud, dirt, water, or ice from I-joint flanges before gluing.
2. Snap a chalk line across the I-joints four feet in from the wall for panel edge alignment and as a boundary for spreading glue.
3. Spread only enough glue to lay one or two panels at a time, or follow specific recommendations from the glue manufacturer.
4. Lay the first panel with tongue side to the wall, and nail in place. This protects the tongue of the next panel from damage when tapped into place with a black and sledgehammer.
5. Apply a continuous line of glue (about 1/4-inch diameter) to the top flange of a single I-joint. Apply glue in a winding pattern on wide areas, such as with double I-joints.
6. Apply two lines of glue on I-joint panel ends but to assure proper gluing of each end.
7. After the first row of panels is in place, spread glue in the groove of one or two panels at a time along the rest of the row. Glue line may be walking or spread, but avoid squaring-cut by applying a thinner line (1/8 inch) then used on I-joint flanges.
8. Tap the second row of panels into place, using a block to protect groove edges.
9. Stagger end joints in each succeeding row of panels. A 1/8-inch space between all end joints and 1/8-inch of all edges, including T&G edges, is recommended. (Use a spacer tool or an 2-1/2" common nail to assure accurate and consistent spacing.)
10. Complete all nailing of each panel before glue sets. Check the manufacturer's recommendations for nailing. (Nailing may be done by using 2" ring- or screw-shank nails for panel 3/4-inch thick or less, and 2-1/2" ring- or screw-shank nails for thicker panels. Space nails per the table below. Closer nail spacing may be required by some codes, or for diaphragm construction. The finished deck can be walked an right away and will carry construction loads without damage to the

Maximum Joint Separation (in.)	Minimum Panel Thickness (in.)	Nail Size and Type			Maximum Spacing of Fasteners	
		Common Nails or Spiral Nails	Ring Thread Nails or Screws	Staples	Edges	Interiors
16	5/8	2"	1-3/4"	2"	6"	12"
20	5/8	2"	1-2/4"	2"	6"	12"
24	3/4	2"	1-3/4"	2"	6"	12"

1. Fasteners of sheathing and subflooring shall conform to the above table.
2. Staples shall not be less than 1/16-inch in diameter or thickness, with not less than a 3/8-inch crown driven with the crown parallel to framing.
3. Flooring screws shall not be less than 1/8-inch in diameter.
4. Special conditions may impose heavy traffic and concentrated loads that require construction in excess of the minimums shown.
5. Use only adhesives conforming to CAN/CGSB-71.26 Standard, Adhesives for Field-Gluing Plywood to Lumber Framing for Floor System, applied in accordance with the manufacturer's recommendations. If CGS panels with sealed surfaces and edges are to be used, use only solvent-based glues; check with

Ref.: NRC-CNRC, National Building Code of Canada 2010, Table 9.23.3.5.

Floor sheathing must be field glued to the I-joist flanges in order to achieve the maximum spans shown in this document. If sheathing is nailed only, I-joist spans must be verified with your local distributor.

Joint Depth	Joint Series	Minimum distance from point face of any support to centre of back (ft/in.)												Spun adjustment Factor			
		1	2	3	4	5	6	6-1/4	7	8	8-3/4	9	10	10-3/4	11	12	12-3/4
5-1/2"	N-20	0-7	1-0	2-10	4-3	5-8	6-9	7-0	7-1	7-1	7-1	7-1	7-1	7-1	7-1	7-1	7-1
	N-20	0-7	1-0	2-10	4-3	5-8	6-9	7-0	7-1	7-1	7-1	7-1	7-1	7-1	7-1	7-1	7-1
	N-20	1-15	1-8	4-9	5-4	7-9	7-5	7-5	7-5	7-5	7-5	7-5	7-5	7-5	7-5	7-5	7-5
	N-20	1-15	1-8	4-9	5-4	7-9	7-5	7-5	7-5	7-5	7-5	7-5	7-5	7-5	7-5	7-5	7-5
	N-20	1-15	1-8	4-9	5-4	7-9	7-5	7-5	7-5	7-5	7-5	7-5	7-5	7-5	7-5	7-5	7-5
11-7/8"	N-20	0-7	0-8	1-3	2-4	3-8	4-0	5-0	5-4	6-0	6-4	7-0	7-0	7-0	7-0	7-0	7-0
	N-20	0-7	0-8	1-3	2-4	3-8	4-0	5-0	5-4	6-0	6-4	7-0	7-0	7-0	7-0	7-0	7-0
	N-20	1-15	1-4	3-0	3-0	4-3	5-9	6-0	7-3	8-10	10-9	11-3	11-3	11-3	11-3	11-3	11-3
	N-20	1-15	1-4	3-0	3-0	4-3	5-9	6-0	7-3	8-10	10-9	11-3	11-3	11-3	11-3	11-3	11-3
	N-20	1-15	1-4	3-0	3-0	4-3	5-9	6-0	7-3	8-10	10-9	11-3	11-3	11-3	11-3	11-3	11-3
14"	N-20	0-7	0-8	1-3	2-4	3-8	4-0	5-0	5-4	6-0	6-4	7-0	7-0	7-0	7-0	7-0	7-0
	N-20	0-7	0-8	1-3	2-4	3-8	4-0	5-0	5-4	6-0	6-4	7-0	7-0	7-0	7-0	7-0	7-0
	N-20	1-15	1-4	3-0	3-0	4-3	5-9	6-0	7-3	8-10	10-9	11-3	11-3	11-3	11-3	11-3	11-3
	N-20	1-15	1-4	3-0	3-0	4-3	5-9	6-0	7-3	8-10	10-9	11-3	11-3	11-3	11-3	11-3	11-3
	N-20	1-15	1-4	3-0	3-0	4-3	5-9	6-0	7-3	8-10	10-9	11-3	11-3	11-3	11-3	11-3	11-3
16"	N-20	0-7	0-8	1-3	2-4	3-8	4-0	5-0	5-4	6-0	6-4	7-0	7-0	7-0	7-0	7-0	7-0
	N-20	0-7	0-8	1-3	2-4	3-8	4-0	5-0	5-4	6-0	6-4	7-0	7-0	7-0	7-0	7-0	7-0
	N-20	1-15	1-4	3-0	3-0	4-3	5-9	6-0	7-3	8-10	10-9	11-3	11-3	11-3	11-3	11-3	11-3
	N-20	1-15	1-4	3-0	3-0	4-3	5-9	6-0	7-3	8-10	10-9	11-3	11-3	11-3	11-3	11-3	11-3
	N-20	1-15	1-4	3-0	3-0	4-3	5-9	6-0	7-3	8-10	10-9	11-3	11-3	11-3	11-3	11-3	11-3

1. Above table may be used for joint spacing of 24 inches on centre or less.
2. Hole location distance is measured from inside face of supports to centre of hole.
3. Distances in this chart are based on uniformly loaded joists.

The above table is based on the I-holes used at their maximum span. If the I-holes are placed at less than their full maximum span (see Appendix B for the minimum distances from the centreline of the hole to the face of any support (D)) or when above may be reduced as follows:

- D reduced to $\frac{1}{2} \text{ reduced } I \times D$

Where:

- $\text{reduced } I$ = Distance from the inside face of any support to centre hole, reduced for less-than-maximum span applications. This distance shall not be less than 6 inches from the face of the support to edge of the hole.
- I = The actual measured span distance between the inside faces of supports (S).
- D = Specified Adjusted Factor given in this table.
- Q = The minimum distance from the inside face of any support to centre of hole from this table.

If $\frac{1}{2} \text{ reduced } I$ is greater than 1, use 1 in the above calculation for $\text{reduced } I$.

[illegible]

1. Above table may be used for I-pole spacing of 24 inches on centre or less.
2. Duct shoes opening location distance is measured from inside face of supports to centre of opening.
3. The above table is based on simple-span joists only. For other applications, contact your local distributor.
4. Distances are based on uniformly loaded floor joists that meet the span requirements for a design live load of 40 psf and dead load of 18 psf. For braced end deflection limit of L/600, see above application; contact your local distributor.

8a ATTACHMENT DETAILS WHERE RIM BOARDS ABUT

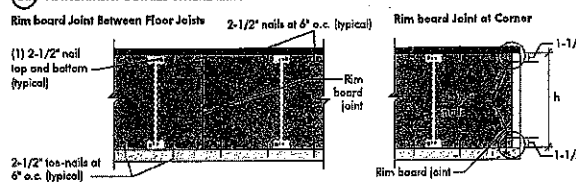


Diagram illustrating the construction of a rim board and its connection to the deck joists. The diagram shows the rim board, floor sheathing, joist, exterior sheathing, continuous flashing, deck joist, joist hanger, and existing foundation wall. Dimensions are provided for the rim board (30" high, 6/3" thick) and the deck joist (2" min. thick, 1-5/8" min. wide). A note indicates that the 2x ledger board must be greater than or equal to the depth of the deck joist.

Chanelier Chloé's answer guarantees that, in accordance with our specifications, their products are free from manufacturing defects in material and workmanship.

Furthermore, Chanelier Chloé's answer warrants that our products, utilized in accordance with our handling and installation instructions, will meet or exceed our specifications for the lifetime of the structure.

NORDIC STRUCTURES	COMPANY TAMARACK LUMBER INC. 3269 NORTH SERVICE ROAD BURLINGTON ONTARIO Nov. 17, 2018 11:22	PROJECT J1 1ST FLOOR @ STAIRS				
Design Check Calculation Sheet Nordic Sizer - Canada 7.1						
Loads:						
Load	Type	Distribution	Pat-tern	Location [ft] Start End	Magnitude Start End	Unit
Load1	Dead	Full Area			20.00	psf
Load2	Live	Full Area			40.00	psf
Maximum Reactions (lbs), Bearing Resistances (lbs) and Bearing Lengths (in) :						
Unfactored:						
Dead	200					200
Live	400					400
Factored:						
Total	850					850
Bearing:						
Resistance						
Joist	1865					1859
Support	3971					-
Des ratio						
Joist	0.46					0.46
Support	0.21					-
Load case	#2					#2
Length	2-3/8					2
Min req'd	1-3/4					1-3/4
Stiffener	No					No
KD	1.00					1.00
KB support	1.00					-
fcp sup	769					-
Kzcp sup	1.09					-

DESIGN CONFORMS TO OBC2012

Bearing for wall supports is perpendicular-to-grain bearing on top plate. No stud design included.

Nordic Joist 9-1/2" NI-40x Floor joist @ 16" o.c.

Supports: 1 - Lumber Wall, No.1/No.2; 2 - Hanger;

Total length: 15' 2-5/8"; Clear span: 14' 10-1/4"; 3/4" nailed and glued OSB sheathing

This section **PASSES** the design code check.

THIS STRUCTURE MUST BE
CONSTRUCTED TO MEET OR
EXCEED THE PROVISIONS OF
THE ONTARIO BUILDING CODE

ET0000652

Limit States Design using CSA O86-14 and Vibration Criterion:

Criterion	Analysis Value	Design Value	Unit	Analysis/Design
Shear	Vf = 850	Vr = 1895	lbs	Vf/Vr = 0.45
Moment (+)	Mf = 3188	Mr = 4824	lbs-ft	Mf/Mr = 0.66
Perm. Defl'n	0.12 = < L/999	0.50 = L/360	in	0.25
Live Defl'n	0.25 = L/721	0.37 = L/480	in	0.67
Total Defl'n	0.37 = L/481	0.75 = L/240	in	0.50
Bare Defl'n	0.31 = L/585	0.50 = L/360	in	0.62
Vibration	Lmax = 15'-0	Lv = 16'-2.1	ft	0.93
Defl'n	= 0.034	= 0.044	in	0.79

Additional Data:

FACTORS:	f/E	KD	KH	KZ	KL	KT	KS	KN	LC#
Vr	1895	1.00	1.00	-	-	-	-	-	#2
Mr+	4824	1.00	1.00	-	1.000	-	-	-	#2
EI	218.1 million	-	-	-	-	-	-	-	#2

CRITICAL LOAD COMBINATIONS:

Shear : LC #2 = 1.25D + 1.5L
 Moment (+) : LC #2 = 1.25D + 1.5L
 Deflection: LC #1 = 1.0D (permanent)
 LC #2 = 1.0D + 2.0L (live)
 LC #2 = 1.0D + 1.0L (total)
 LC #2 = 1.0D + 1.0L (bare joist)

Bearing : Support 1 - LC #2 = 1.25D + 1.5L
 Support 2 - LC #2 = 1.25D + 1.5L

Load Types: D=dead W=wind S=snow H=earth, groundwater E=earthquake
 L=live (use, occupancy) Ls=live (storage, equipment)

Load Patterns: s=S/2 L=L+Ls =no pattern load in this span.

All Load Combinations (LCs) are listed in the Analysis output

CALCULATIONS:

Deflection: E_Ieff = 276e06 lb-in² K= 4.94e06 lbs
 "Live" deflection = Deflection from all non-dead loads (live, snow...)

Design Notes:

1. WoodWorks analysis and design are in accordance with the 2015 National Building Code of Canada (NBC), Division B, Part 4, and the CSA O86-14 Engineering Design in Wood standard, Update No. 2 (June 2017).
2. Please verify that the default deflection limits are appropriate for your application.
3. Refer to Nordic Structures technical documentation for installation guidelines and construction details.
4. Nordic I-joists are listed in CCMC evaluation report 13032-R.
5. Joists shall be laterally supported at supports and continuously along the compression edge.
6. The design assumptions and specifications have been provided by the client. Any damages resulting from faulty or incorrect information, specifications, and/or designs furnished, and the correctness or accuracy of this information is their responsibility. This analysis does not constitute a record of the structural integrity of the building nor suitability of the design assumptions made. Nordic Structures is responsible only for the structural adequacy of this component based on the design criteria and loadings shown.



DESIGN CONFORMS TO OBC2012

ET0000653

NORDIC STRUCTURES

COMPANY
TAMARACK LUMBER INC.
3269 NORTH SERVICE ROAD
BURLINGTON ONTARIO
Nov. 17, 2018 11:24

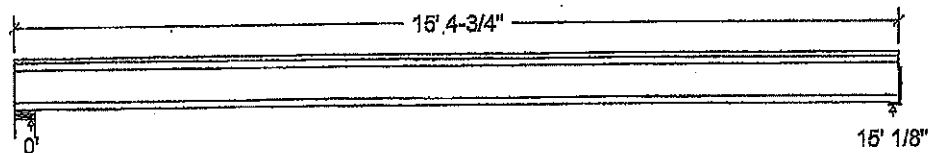
PROJECT
J1 2ND FLOOR @ STAIRS

Design Check Calculation Sheet Nordic Sizer - Canada 7.1

Loads:

Load	Type	Distribution	Pat-tern	Location [ft] Start End	Magnitude Start End	Unit
Load1	Dead	Full Area			20.00	psf
Load2	Live	Full Area			40.00	psf

Maximum Reactions (lbs), Bearing Resistances (lbs) and Bearing Lengths (in) :



Unfactored:			
Dead	200		200
Live	400		400
Factored:			
Total	851		851
Bearing:			
Resistance			
Joist	1893		1859
Support	7744		-
Des ratio			
Joist	0.45		0.46
Support	0.11		-
Load case	#2		#2
Length	4-3/8		2
Min req'd	1-3/4		1-3/4
Stiffener	No		No
KD	1.00		1.00
KB support	1.00		-
fcp sup	769		-
K2cp sup	1.15		-



DESIGN CONFORMS TO OBC2012

Bearing for wall supports is perpendicular-to-grain bearing on top plate. No stud design included.

Nordic Joist 9-1/2" NI-40x Floor joist @ 16" o.c.

Supports: 1 - Lumber Wall, No.1/No.2; 2 - Hanger;

Total length: 15' 4-3/4"; Clear span: 14' 10-3/8"; 5/8" nailed and glued OSB sheathing with 1/2" gypsum ceiling

This section PASSES the design code check.

Limit States Design using CSA O86-14 and Vibration Criterion:

Criterion	Analysis Value	Design Value	Unit	Analysis/Design
Shear	Vf = 851	Vr = 1895	lbs	Vf/Vr = 0.45
Moment (+)	Mf = 3192	Mr = 4824	lbs-ft	Mf/Mr = 0.66
Perm. Defl'n	0.13 = < L/999	0.50 = L/360	in	0.26
Live Defl'n	0.26 = L/701	0.38 = L/480	in	0.68
Total Defl'n	0.39 = L/467	0.75 = L/240	in	0.51
Bare Defl'n	0.31 = L/583	0.50 = L/360	in	0.62
Vibration	Imax = 15'-0.1	Lv = 15'-9.3	ft	0.95
Defl'n	= 0.037	= 0.044	in	0.85

ET0000654

Additional Data:

FACTORS:	f/E	KD	KH	KZ	KL	KT	KS	KN	LC#
Vr	1895	1.00	1.00	-	-	-	-	-	#2
Mr+	4824	1.00	1.00	-	1.000	-	-	-	#2
EI	218.1 million	-	-	-	-	-	-	-	#2

CRITICAL LOAD COMBINATIONS:

Shear : LC #2 = 1.25D + 1.5L

Moment(+) : LC #2 = 1.25D + 1.5L

Deflection: LC #1 = 1.0D (permanent)

LC #2 = 1.0D + 1.0L (live)

LC #2 = 1.0D + 1.0L (total)

LC #2 = 1.0D + 1.0L (bare joist)

Bearing : Support 1 - LC #2 = 1.25D + 1.5L

Support 2 - LC #2 = 1.25D + 1.5L

Load Types: D=dead W=wind S=snow H=earth,groundwater E=earthquake
L=live(use,occupancy) Ls=live(storage,equipment) f=fire

Load Patterns: s=S/2 L=L+Ls =no pattern load in this span

All Load Combinations (LCs) are listed in the Analysis output

CALCULATIONS:Deflection: E_{IEff} = 268e06 lb-in² K= 4.94e06 lbs

"Live" deflection = Deflection from all non-dead loads (live, wind, snow...)

Design Notes:

1. WoodWorks analysis and design are in accordance with the 2015 National Building Code of Canada (NBC), Division B, Part 4, and the CSA O86-14 Engineering Design in Wood standard, Update No. 2 (June 2017).
2. Please verify that the default deflection limits are appropriate for your application.
3. Refer to Nordic Structures technical documentation for installation guidelines and construction details.
4. Nordic I-joists are listed in CCMC evaluation report 13032-R.
5. Joists shall be laterally supported at supports and continuously along the compression edge.
6. The design assumptions and specifications have been provided by the client. Any damages resulting from faulty or incorrect information, specifications, and/or designs furnished, and the correctness or accuracy of this information is their responsibility. This analysis does not constitute a record of the structural integrity of the building nor suitability of the design assumptions made. Nordic Structures is responsible only for the structural adequacy of this component based on the design criteria and loadings shown.



DESIGN CONFORMS TO OBC2012



Single 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP
1ST FLOOR FRAMING\Flush Beams\B1(15363)

PASSED

BC CALC® Member Report

Build 8475

Job name:

Address:

City, Province, Postal Code: CALEDON

Customer:

Code reports: CCMC 12472-R

Dry | 1 span | No cant.

November 17, 2018 11:42:15

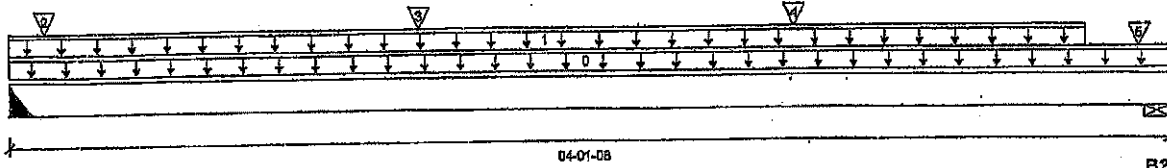
File name: KINMOUNT 6A.mmdl

Description: 1ST FLOOR FRAMING\Flush Beams\B1(15363)

Specifier:

Designer: PL

Company:



Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 3"	484 / 0	253 / 0		
B2, 3-1/2"	380 / 0	216 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live	Dead	Snow	Wind	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	04-01-08	Top	1.00	0.66	1.00	1.15	00-00-00
1	STAIRS	Unf. Lin. (lb/ft)	L	00-00-00	03-10-00	Top	120	60			n/a
2	J3(14949)	Conc. Pt. (lbs)	L	00-01-08	00-01-08	Top	93	47			n/a
3	J3(14932)	Conc. Pt. (lbs)	L	01-05-08	01-05-08	Top	155	78			n/a
4	J3(14952)	Conc. Pt. (lbs)	L	02-09-08	02-09-08	Top	150	75			n/a
5	15(1378)	Conc. Pt. (lbs)	L	04-00-04	04-00-04	Top	17	18			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	834 ft-lbs	11,610 ft-lbs	7.2%	1	01-11-08
End Shear	598 lbs	5,785 lbs	10.3%	1	03-00-08
Total Load Deflection	L/999 (0.006")	n/a	n/a	4	02-00-08
Live Load Deflection	L/999 (0.004")	n/a	n/a	5	02-00-08
Max Defl.	0.006"	n/a	n/a	4	02-00-08
Span / Depth	4.7				

Bearing Supports	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Hanger 3" x 1-3/4"	1,043 lbs	n/a	16.3%	HUS1.81/10
B2	Wall/Plate 3-1/2" x 1-3/4"	854 lbs	26.1%	11.4%	Unspecified

Cautions

Header for the hanger HUS1.81/10 at B1 is a Double 1-3/4" x 9-1/2" VERSA-LAM® 1.7 2400 DF. Hanger model HUS1.81/10 and seat length were input by the user.

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
Design meets Code minimum (L/360) Live load deflection criteria.
Calculations assume member is fully braced.
Hanger Manufacturer: Unassigned
Resistance Factor phi has been applied to all presented results per CSA O86.
BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA O86.
Design based on Dry Service Condition.
Importance Factor: Normal Part code: Part 9



DESIGN CONFORMS TO OBC2012

Disclosure

Use of the Boise Cascade Software is subject to the terms of the End User License Agreement (EULA). Completeness and accuracy of input must be reviewed and verified by a qualified engineer or other appropriate expert to assure its adequacy, prior to anyone relying on such output as evidence of suitability for a particular application. The output here is based on building code-accepted design properties and analysis methods. Installation of Boise Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call (800)232-0788 before installation.

BC CALC®, BC FRAMER®, AJS™, ALLJOIST®, BC RIM BOARD™, BCI®, BOISE GLULAM™, BC FloorValue®, VERSA-LAM®, VERSA-RIM PLUS®,

ET0000656



Single 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP

PASSED

1ST FLOOR FRAMING\Flush Beams\B13(5528)

Dry | 1 span | No cant.

November 17, 2018 11:42:15

BC CALC® Member Report

Build 6475

Job name:

Address:

City, Province, Postal Code: CALEDON

Customer:

Code reports: CCMC 12472-R

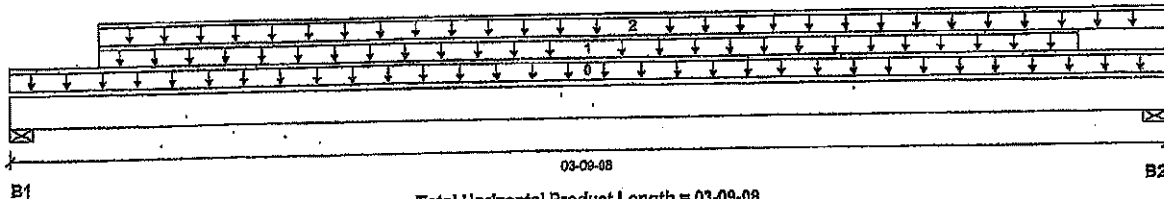
File name: KINMOUNT 6A.mmdl

Description: 1ST FLOOR FRAMING\Flush Beams\B13(5528)

Specifier:

Designer: PL

Company:



Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 3-1/2"	402 / 0	210 / 0		
B2, 3-1/2"	405 / 0	212 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live	Dead	Snow	Wind	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	03-09-08	Top	1.00	0.65	1.00	1.15	00-00-00
1	STAIRS	Unf. Lin. (lb/ft)	L	00-03-08	03-06-00	Top	240	120			n/a
2	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-03-08	03-09-08	Top	10	5			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	747 ft-lbs	11,810 ft-lbs	6.4%	1	01-10-12
End Shear	458 lbs	5,785 lbs	7.9%	1	02-08-08
Total Load Deflection	L/999 (0.004")	n/a	n/a	4	01-10-12
Live Load Deflection	L/999 (0.003")	n/a	n/a	5	01-10-12
Max Defl.	0.004"	n/a	n/a	4	01-10-12
Span / Depth	4.2				

Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Wall/Plate 3-1/2" x 1-3/4"	865 lbs	26.5%	11.6%	Unspecified
B2	Wall/Plate 3-1/2" x 1-3/4"	873 lbs	26.7%	11.7%	Unspecified

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
Design meets Code minimum (L/360) Live load deflection criteria.
Calculations assume member is fully braced.
Resistance Factor phi has been applied to all presented results per CSA O86.
BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA O86.
Design based on Dry Service Condition.
Importance Factor: Normal Part code: Part 9



DESIGN CONFORMS TO OBC2012

Disclosure

Use of the Boise Cascade Software is subject to the terms of the End User License Agreement (EULA).
Completeness and accuracy of input must be reviewed and verified by a qualified engineer or other appropriate expert to assure its adequacy, prior to anyone relying on such output as evidence of suitability for a particular application. The output here is based on building code-accepted design properties and analysis methods.
Installation of Boise Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call (800)232-0788 before installation.

BC CALC®, BC FRAMER®, AJS™, ALLJOIST®, BC RIM BOARD™, BCJ®, BOISE GLULAM™, BC FloorValue®, VERSA-LAM®, VERSA-RIM PLUS®,

ET0000657



Double 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP
1ST FLOOR FRAMING Flush Beams B2 (5357)

PASSED

BC CALCO Member Report

Dry | 1 span | No cant.

November 17, 2018 11:42:16

Build 6476

Job name:

Address:

City, Province, Postal Code: CALEDON

Customer:

Code reports: CCMC 12472-R

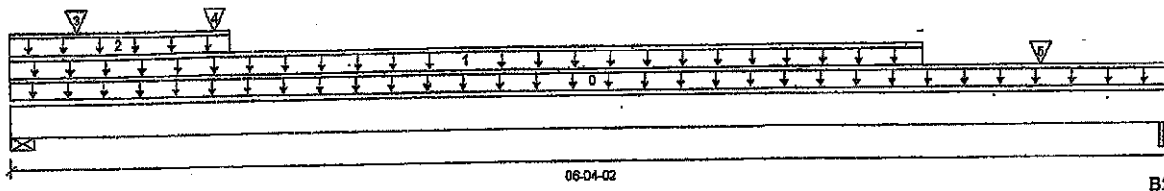
File name: KINMOUNT 6A.mmdl

Description: 1ST FLOOR FRAMING Flush Beams B2 (5357)

Specifier:

Designer: PL

Company:



Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 5-1/4"	2,970 / 0	1,655 / 0		
B2, 5-1/2"	3,740 / 0	2,060 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live	Dead	Snow	Wind	Tributary
0	Self-Weight	Unif. Lin. (lb/ft)	L	00-00-00	08-04-02	Top	10				00-00-00
1	Smoothed Load	Unif. Lin. (lb/ft)	L	00-00-00	04-11-14	Top	317	159			n/a
2	14(346)	Unif. Lin. (lb/ft)	L	00-00-00	01-02-06	Top	380	271			n/a
3	B1(5353)	Conc. Pt. (lbs)	L	00-04-06	00-04-06	Top	467	244			n/a
4	14(346)	Conc. Pt. (lbs)	L	01-01-06	01-01-06	Top	985	525			n/a
5	-	Conc. Pt. (lbs)	L	05-07-10	05-07-10	Top	3,165	1,726			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	4,474 ft-lbs	23,220 ft-lbs	19.3%	1	02-11-14
End Shear	3,953 lbs	11,571 lbs	34.2%	1	01-02-12
Total Load Deflection	1/999 (0.037")	n/a	n/a	4	03-01-14
Live Load Deflection	1/999 (0.024")	n/a	n/a	5	03-01-14
Max Defl.	0.037"	n/a	n/a	4	03-01-14
Span / Depth	7.0				

Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Wall/Plate 5-1/4" x 3-1/2"	6,625 lbs	66.5%	29.1%	Unspecified
B2	Beam 5-1/2" x 3-1/2"	8,185 lbs	79.6%	34.9%	Unspecified

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
Design meets Code minimum (L/360) Live load deflection criteria.
Calculations assume unbraced length of Top: 00-00-00, Bottom: 00-00-00.
Resistance Factor phi has been applied to all presented results per CSA O86.
BC CALCO analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA O86.
Design based on Dry Service Condition.
Importance Factor: Normal Part code: Part 9
Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record.

Nail one ply to another with
3 1/2" spiral nails @ 4"
o.c., staggered in 2 rows



DESIGN CONFORMS TO OBC2012

ET0000658

**Double 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP****PASSED****1ST FLOOR FRAMING\Flush Beams\B3(15524)**

Dry | 1 span | No cant.

November 17, 2018 11:42:15

BC CALC® Member Report

Build# 6475

Job name:

Address:

City, Province, Postal Code: CALEDON

Customer:

Code reports: CCMC 12472-R

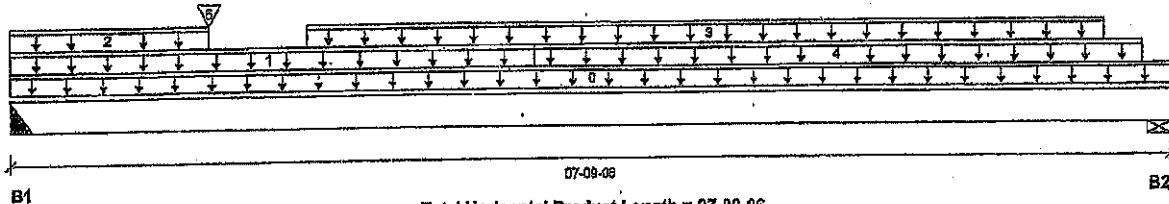
File name: KINMOUNT 8A.mmdl

Description: 1ST FLOOR FRAMING\Flush Beams\B3(15524)

Specifier:

Designer: PL

Company:

**Reaction Summary (Down / Uplift) (lbs)**

Bearing	Live	Dead	Snow	Wind
B1, 4"	1,368 / 0	715 / 0		
B2, 2-3/8"	1,773 / 0	922 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live	Dead	Snow	Wind	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	07-09-06	Top	1.00	0.65	1.00	1.15	00-00-00
1	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	03-06-00	Top	10	5			n/a
2	FG1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	01-04-00	Top	37	18			n/a
3	Smoothed Load	Unf. Lin. (lb/ft)	L	02-00-00	07-04-00	Top	308	154			n/a
4	STAIRS	Unf. Lin. (lb/ft)	L	03-06-00	07-07-00	Top	240	120			n/a
5	J1(15531)	Conc. Pt. (lbs)	L	01-04-00	01-04-00	Top	387	193			n/a

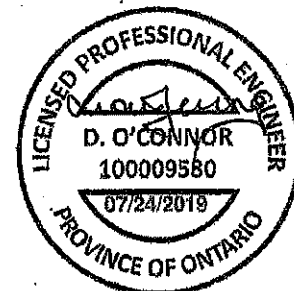
Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	6,892 ft-lbs	23,220 ft-lbs	29.7%	1	04-00-00
End Shear	3,358 lbs	11,571 lbs	29.0%	1	06-09-08
Total Load Deflection	L/999 (0.093")	n/a	n/a	4	04-00-00
Live Load Deflection	L/999 (0.061")	n/a	n/a	5	04-00-00
Max Defl.	0.093"	n/a	n/a	4	04-00-00
Span / Depth	9.3				

Bearing Supports	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Hanger 4" x 3-1/2"	2,928 lbs	n/a	17.1%	HGUS410
B2	Wall/Plate 2-3/8" x 3-1/2"	3,812 lbs	85.9%	37.6%	Unspecified

Cautions

Header for the hanger HGUS410 at B1 is a Single 1-3/4" x 9-1/2" VERSA-LAM® 1.7 2400 DF. Hanger model HGUS410 and seat length were input by the user. Nail one ply to another with 3 1/2" spiral nails @ 9" o.c. staggered in 2 rows



DESIGN CONFORMS TO OBC2012

ET0000659



Single 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP
1ST FLOOR FRAMING\Flush Beams\B4(i5522)

PASSED

BC CALC® Member Report

Dry | 1 span | No cant.

November 17, 2018 11:42:15

Build 6475

Job name:

Address:

City, Province, Postal Code: CALEDON

Customer:

Code reports: CCMC 12472-R

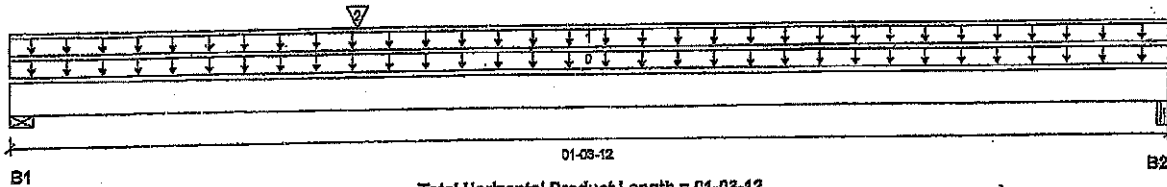
File name: KINMOUNT 8A.mmdl

Description: 1ST FLOOR FRAMING\Flush Beams\B4(i5522)

Specifier:

Designer: PL

Company:



Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 4-3/4"	1,233 / 0	653 / 0		
B2, 2-3/4"	115 / 0	63 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live	Dead	Snow	Wind	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	01-03-12	Top	1.00	0.65	1.00	1.15	00-00-00
1	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	01-03-12	Top	25	13			n/a
2	B3(i5524)	Conc. Pt. (lbs)	L	00-04-12	00-04-12	Top	1,315	693			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	165 ft-lbs	11,610 ft-lbs	1.4%	1	00-04-12
End Shear	197 lbs	5,785 lbs	3.4%	1	00-04-12
Span / Depth	1.0				

Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Wall/Plate 4-3/4" x 1-3/4"	2,686 lbs	50.0%	26.3%	Unspecified
B2	Beam 2-3/4" x 1-3/4"	252 lbs	9.8%	4.3%	Unspecified

Notes

Calculations assume unbraced length of Top: 00-00-00, Bottom: 00-00-00.

Resistance Factor phi has been applied to all presented results per CSA O86.

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA O86.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9

DESIGN CONFORMS TO OBC2012

Disclosure

Use of the Boise Cascade Software is subject to the terms of the End User License Agreement (EULA). Completeness and accuracy of input must be reviewed and verified by a qualified engineer or other appropriate expert to assure its adequacy, prior to anyone relying on such output as evidence of suitability for a particular application. The output here is based on building code-accepted design properties and analysis methods. Installation of Boise Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call (800)232-0788 before installation.

BC CALC®, BC FRAMER®, AJST™, ALLJOIST®, BC RIM BOARD™, BC®, BOISE GLULAM™, BC FloorValue®, VERSA-LAM®, VERSA-RIM PLUS®,

ET0000660



Double 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP
2ND FLOOR FRAMING Dropped Beams B14 DR(5478)

PASSED

BC CALC® Member Report

Dry | 1 span | No cant.

November 17, 2018 11:42:15

Buld 8476

Job name:

File name: KINMOUNT 8A.ramd

Address:

Description: 2ND FLOOR FRAMING Dropped Beams B14 DR(5478)

City, Province, Postal Code: CALEDON

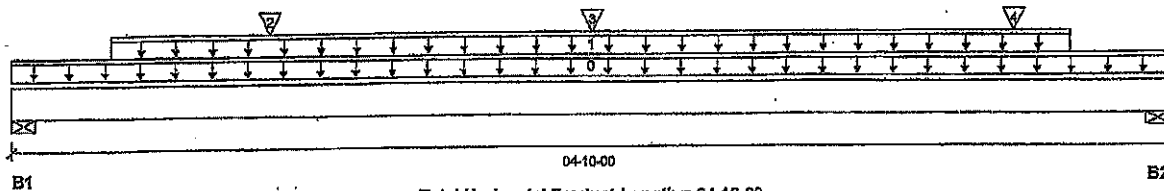
Specifier:

Customer:

Designer: PL

Code reports: CCMC 12472-R

Company:



Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 3-1/2"	877 / 0	520 / 0		
B2, 3-1/2"	2,927 / 0	1,867 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live	Dead	Snow	Wind	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	04-10-00	Top	1.00	0.66	1.00	1.15	00-00-00
1	Smoothed Load	Unf. Lin. (lb/ft)	L	00-05-00	04-05-00	Top	292	148			n/a
2	J5(I5383)	Conc. Pt. (lbs)	L	01-01-00	01-01-00	Top	113	57			n/a
3	J5(I5378)	Conc. Pt. (lbs)	L	02-05-00	02-05-00	Top	115	57			n/a
4		Conc. Pt. (lbs)	L	04-02-01	04-02-01	Top	2,510	1,344			n/a

Controls Summary

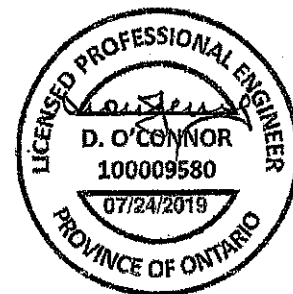
	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	3,177 ft-lbs	23,220 ft-lbs	13.7%	1	02-05-00
End Shear	3,419 lbs	11,571 lbs	29.5%	1	03-09-00
Total Load Deflection	L/999 (0.016")	n/a	n/a	4	02-06-00
Live Load Deflection	L/999 (0.01")	n/a	n/a	5	02-06-00
Max Defl.	0.016"	n/a	n/a	4	02-06-00
Span / Depth	5.5				

Bearing Supports	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Wall/Plate 3-1/2" x 3-1/2"	2,116 lbs	21.3%	14.2%	Unspecified
B2	Wall/Plate 3-1/2" x 3-1/2"	6,350 lbs	63.8%	42.5%	Unspecified

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
Design meets Code minimum (L/360) Live load deflection criteria.
Calculations assume unbraced length of Top: 00-04-00, Bottom: 00-04-00.
Resistance Factor phi has been applied to all presented results per CSA 086.
BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA 086.
Design based on Dry Service Condition.
Importance Factor: Normal Part code: Part 9
Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record.
Member has no side loads.

Nail one ply to another with
3 1/2" spiral nails @ 4"
o.c. staggered in 2 rows.



DESIGN CONFORMS TO OBC2012

ET0000661



Double 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP
2ND FLOOR FRAMING/Dropped Beams/B9 DR(15311)

PASSED

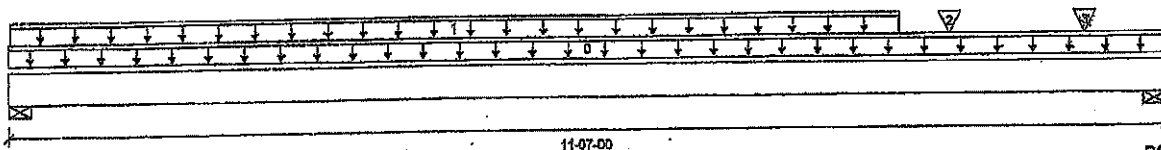
BC CALC® Member Report
Build 6475

Dry | 1 span | No cant.

November 17, 2018 11:42:15

Job name:
Address:
City, Province, Postal Code: CALEDON
Customer:
Code reports: CCMC 12472-R

File name: KINMOUNT 8A.mmdl
Description: 2ND FLOOR FRAMING/Dropped Beams/B9 DR(15311)
Specifier:
Designer: PL
Company:



B1
Total Horizontal Product Length = 11-07-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 3-1/2"	1,835 / 0	968 / 0		
B2, 3-1/2"	1,757 / 0	930 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live	Dead	Snow	Wind	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	11-07-00	Top	1.00	0.68	1.00	1.15	00-00-00
1	Smoothed Load	Unf. Lin. (lb/ft)	L	00-00-04	08-11-00	Top	293	146			n/a
2	J1(15298)	Conc. Pt. (lbs)	L	09-05-00	09-05-00	Top	332	166			n/a
3	J1(15284)	Conc. Pt. (lbs)	L	10-09-00	10-09-00	Top	379	190			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	10,488 ft-lbs	23,220 ft-lbs	45.1%	1	05-05-00
End Shear	3,451 lbs	11,571 lbs	29.8%	1	10-08-00
Total Load Deflection	L/406 (0.329")	n/a	59.2%	4	05-08-04
Live Load Deflection	L/820 (0.215")	n/a	58.1%	5	06-08-04
Max Defl.	0.329"	n/a	n/a	4	05-08-04
Span / Depth	14.1				

Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Wall/Plate 3-1/2" x 3-1/2"	3,962 lbs	39.8%	26.5%	Unspecified
B2	Wall/Plate 3-1/2" x 3-1/2"	3,799 lbs	38.2%	25.4%	Unspecified

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
Design meets Code minimum (L/360) Live load deflection criteria.
Calculations assume unbraced length of Top: 00-02-08, Bottom: 00-02-08.
Resistance Factor phi has been applied to all presented results per CSA O86.
BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA O86.
Design based on Dry Service Condition.
Importance Factor: Normal Part code: Part 9
Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record.
Member has no side loads.

Nail one ply to another with
3 1/2" spiral nails @ 10"
n.c. staggered in 2 rows (Top Load)



DESIGN CONFORMS TO OBC2012

ET0000662



Double 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP

PASSED

2ND FLOOR FRAMING Flush Beams B10 (I5406)

Dry | 1 span | No cant.

November 17, 2018 11:42:15

BC.CALC® Member Report

Build 6475

Job name:

Address:

City, Province, Postal Code: CALEDON

Customer:

Code reports: GCMC 12472-R

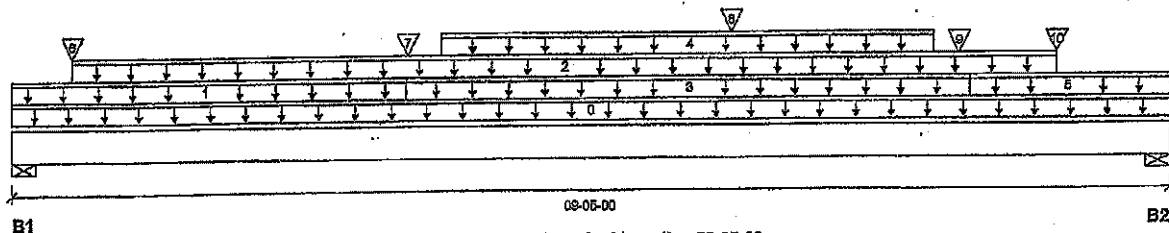
File name: KINMOUNT 6A.mmdf

Description: 2ND FLOOR FRAMING Flush Beams B10 (I5406)

Specifier:

Designer: PL

Company:



Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 3-1/2"	1,562 / 0	1,225 / 0	432 / 0	
B2, 3-1/2"	1,475 / 0	1,272 / 0	620 / 0	

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	09-05-00	Top		10			00-00-00
1	E33(I4574)	Unf. Lin. (lb/ft)	L	00-00-00	03-02-08	Top		41			n/a
2	Smoothed Load	Unf. Lin. (lb/ft)	L	00-06-00	08-06-00	Top	150	75			n/a
3	E32(I4573)	Unf. Lin. (lb/ft)	L	03-02-08	07-09-08	Top		81			n/a
4	E32(I4573)	Unf. Lin. (lb/ft)	L	03-08-00	07-06-00	Top	29	45	125		n/a
5	E31(I4572)	Unf. Lin. (lb/ft)	L	07-09-08	09-05-00	Top		41			n/a
6	J1(I5420)	Conc. Pt. (lbs)	L	00-06-00	00-06-00	Top	399	199			n/a
7	-	Conc. Pt. (lbs)	L	03-02-11	03-02-11	Top	463	331	274		n/a
8	J1(I5426)	Conc. Pt. (lbs)	L	05-10-00	05-10-00	Top	399	199			n/a
9	E32(I4573)	Conc. Pt. (lbs)	L	07-08-08	07-08-08	Top	64	133	278		n/a
10	J1(I5402)	Conc. Pt. (lbs)	L	08-06-00	08-06-00	Top	399	199			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	10,175 ft-lbs	23,220 ft-lbs	43.8%	1	04-08-00
End Shear	4,176 lbs	11,571 lbs	36.1%	1	08-04-00
Total Load Deflection	L/484 (0.222")	n/a	49.6%	35	04-08-00
Live Load Deflection	L/776 (0.139")	n/a	46.4%	51	04-08-00
Max Defl.	0.222"	n/a	n/a	35	04-08-00
Span / Depth	11.3				

Bearing Supports	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Wall/Plate 3-1/2" x 3-1/2"	4,306 lbs	65.8%	28.8%	Unspecified
B2	Wall/Plate 3-1/2" x 3-1/2"	4,423 lbs	67.6%	29.6%	Unspecified

Nail one ply to another with
3 1/2" spiral nails @ 9"

p.c. staggered in 2 rows

THIS STRUCTURE MUST BE
CONSTRUCTED TO MEET OR
EXCEED THE PROVISIONS OF
THE ONTARIO BUILDING CODE



DESIGN CONFORMS TO OBC2012

ET0000663



Triple 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP

PASSED

2ND FLOOR FRAMING\Flush Beams\B11(i5392)

Dry | 1 span | No cant.

November 17, 2018 11:42:15

BC CALCO® Member Report

Build 8475

Job name:

Address:

City, Province, Postal Code: CALEDON

Customer:

Code reports:

CCMC 12472-R

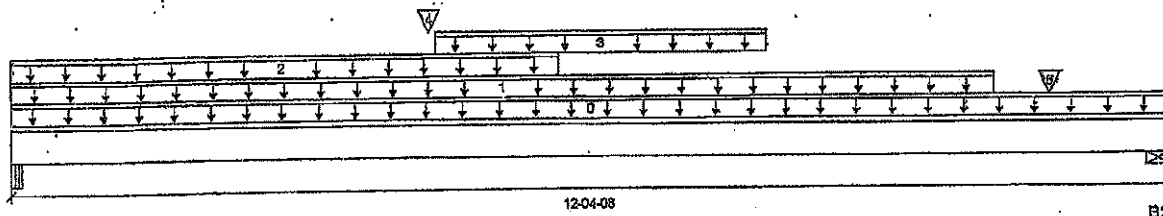
File name: KINMOUNT 6A.mmdl

Description: 2ND FLOOR FRAMING\Flush Beams\B11(i5392)

Specifier:

Designer: PL

Company:



Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 3-1/2"	2,427 / 0	1,303 / 0		
B2, 5-1/2"	2,206 / 0	1,194 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live	Dead	Snow	Wind	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	12-04-08	Top	1.00	0.65	1.00	1.15	00-00-00
1	Smoothed Load	Unf. Lin. (lb/ft)	L	00-00-00	10-06-00	Top	314	156			n/a
2	FC3 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	05-10-00	Top	9	4			n/a
3	STAIRS	Unf. Lin. (lb/ft)	L	04-06-08	08-00-08	Top	240	120			n/a
4	B7(i5414)	Conc. Pt. (lbs)	L	04-05-10	04-05-10	Top	79	44			n/a
5	J1(i5507)	Conc. Pt. (lbs)	L	11-01-04	11-01-04	Top	348	174			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	16,749 ft-lbs	36,222 ft-lbs	46.2%	1	05-10-00
End Shear	4,766 lbs	17,356 lbs	27.5%	1	11-01-08
Total Load Deflection	L/370 (0.381")	n/a	64.8%	4	06-02-00
Live Load Deflection	L/568 (0.248")	n/a	63.4%	5	06-02-00
Max Defl.	0.381"	n/a	n/a	4	06-02-00
Span / Depth	14.8				

Bearing Supports	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1 Beam	3-1/2" x 5-1/4"	6,269 lbs	28.2%	23.4%	Unspecified
B2 Wall/Plate	5-1/2" x 5-1/4"	4,802 lbs	31.0%	13.6%	Unspecified

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
Design meets Code minimum (L/360) Live load deflection criteria.
Calculations assume unbraced length of Top: 00-00-00, Bottom: 00-00-00.
Resistance Factor phi has been applied to all presented results per CSA O86.
BC CALCO analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA O86.
Design based on Dry Service Condition.
Importance Factor: Normal Part code: Part 9
Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record.
Nailing schedule applies to both sides of the member.

Nail one ply to another with
3 1/2" spiral nails @ 8" o.c. staggered in 2 rows



DESIGN CONFORMS TO OBC2012

ET0000664

**Double 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP****PASSED****2ND FLOOR FRAMING\Flush Beams\B12(15328)**

Dry | 1 span | No cant.

November 17, 2018 11:42:15

BC CALC® Member Report

Build 6475

Job name:

Address:

City, Province, Postal Code: CALEDON

Customer:

Code reports:

CCMC 12472-R

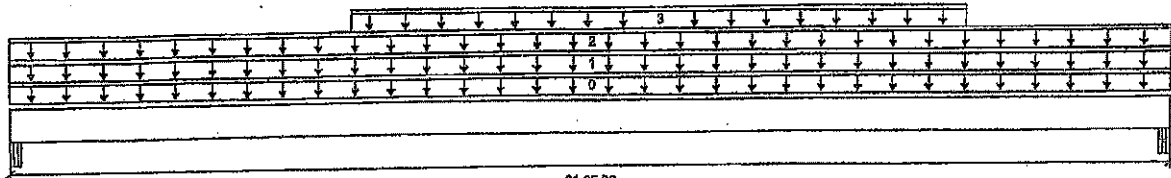
File name: KINMOUNT 6A.mmdf

Description: 2ND FLOOR FRAMING\Flush Beams\B12(15328)

Specifier:

Designer: PL

Company:



B1

Total Horizontal Product Length = 01-05-00

B2

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 5"	142 / 0	182 / 0	434 / 0	
B2, 5"	143 / 0	193 / 0	433 / 0	

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live	Dead	Snow	Wind	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	01-05-00	Top	1.00	0.65	1.00	1.15	00-00-00
1	E29(14570)	Unf. Lin. (lb/ft)	L	00-00-00	01-05-00	Top	165	231	510		n/a
2	LOW ROOF	Unf. Lin. (lb/ft)	L	00-00-00	01-05-00	Top	33	30	102		n/a
3	PC3 Floor Material	Unf. Lin. (lb/ft)	L	00-05-00	01-02-00	Top	6				n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	92 ft-lbs	23,220 ft-lbs	0.4%	13	00-08-08
End Shear	427 lbs	11,571 lbs	3.7%	13	00-05-00
Span / Depth	0.9				

Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Beam 5" x 3-1/2"	1,033 lbs	11.1%	4.8%	Unspecified
B2	Beam 5" x 3-1/2"	1,034 lbs	11.1%	4.8%	Unspecified

Notes

Calculations assume member is fully braced.

Resistance Factor phi has been applied to all presented results per CSA 086.

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA 086.

Unbalanced snow loads determined from building geometry were used in selected product's verification.

Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 9

Member has no side loads.

Nail one ply to another with

3 1/2" spiral nails @ 16"

o.c. staggered in 2 rows



DESIGN CONFORMS TO OBC2012

ET0000665

**Single 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP****PASSED****2ND FLOOR FRAMING\Flush Beams\B7\B5414**

Dry | 1 span | No cant

November 17, 2018 11:42:15

BC CALC® Member Report

Build 6475

Job name:

Address:

City, Province, Postal Code: CALEDON

Customer:

Code reports: CCMC 12472-R

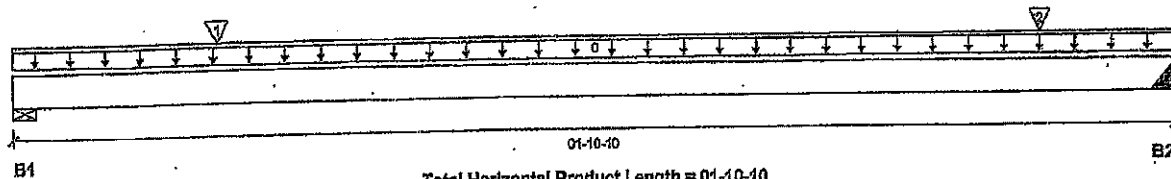
File name: KINMOUNT 8A.mmdl

Description: 2ND FLOOR FRAMING\Flush Beams\B7\B5414

Specifier:

Designer: PL

Company:

**Reaction Summary (Down / Uplift) (lbs)**

Bearing	Live	Dead	Snow	Wind
B1, 3-1/2"	112 / 0	61 / 0		
B2, 3"	86 / 0	48 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live	Dead	Snow	Wind	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	01-10-10	Top	1.00	0.65	1.00	1.15	00-00-00
1	J5(B5379)	Conc. Pt. (lbs)	L	00-04-00	00-04-00	Top	119	60			n/a
2	J5(B5437)	Conc. Pt. (lbs)	L	01-08-00	01-08-00	Top	79	40			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	25 ft-lbs	11,810 ft-lbs	0.2%	1	00-04-00
End Shear	14 lbs	5,785 lbs	0.2%	1	00-10-02
Span / Depth	1.9				

Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Wall/Plate 3-1/2" x 1-3/4"	245 lbs	7.5%	3.3%	Unspecified
B2	Hanger 3" x 1-3/4"	189 lbs	n/a	2.9%	HUS1.81/10

Cautions

Header for the hanger HUS1.81/10 at B2 is a Triple 1-3/4" x 9-1/2" VERSA-LAM® 1.7 2400 DF.
Hanger model HUS1.81/10 and seat length were input by the user.

Notes

Calculations assume unbraced length of Top: 00-00-00, Bottom: 00-00-00.
Hanger Manufacturer: Unassigned
Resistance Factor phi has been applied to all presented results per CSA O86.
BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA O86.
Design based on Dry Service Condition.
Importance Factor : Normal Part code : Part 9



DESIGN CONFORMS TO OBC2012

Disclosure

Use of the Boise Cascade Software is subject to the terms of the End User License Agreement (EULA).
Completeness and accuracy of input must be reviewed and verified by a qualified engineer or other appropriate expert to assure its adequacy, prior to anyone relying on such output as evidence of suitability for a particular application. The output here is based on building code-accepted design properties and analysis methods.
Installation of Boise Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call (800)232-0788 before installation.

BC CALC®, BC FRAMER®, AJS™, ALLJOIST®, BC RIM BOARD™, BC®, BOISE GLULAM™, BC FloorValue®, VERSA-LAM®, VERSA-RIM PLUS®,

ET0000666

**Double 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP****PASSED****2ND FLOOR FRAMING/Flush Beams/B20(I5638)**

BC CALC® Member Report

Dry | 1 span | No cant.

November 19, 2018 07:37:33

Build 6475

Job name:

File name: KINMOUNT 6A ELEV 2.mxd

Address:

Description: 2ND FLOOR FRAMING/Flush Beams/B20(I5638)

City, Province, Postal Code: CALEDON

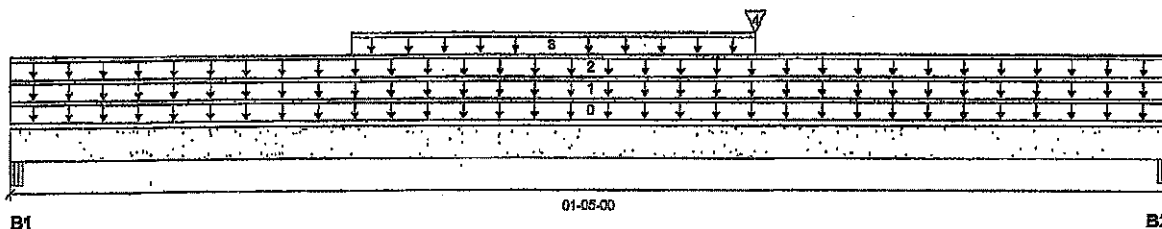
Specifier:

Customer:

Designer: PL

Code reports: CCMC 12472-R

Company:

**Reaction Summary (Down / Uplift) (lbs)**

Bearing	Live	Dead	Snow	Wind
B1, 5"	76 / 0	121 / 0	145 / 0	
B2, 5"	144 / 0	155 / 0	144 / 0	

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 1.00	Dead 0.85	Snow 1.00	Wind 1.15	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	01-05-00	Top		10			00-00-00
1	E36(I6078)	Unf. Lin. (lb/ft)	L	00-00-00	01-05-00	Top	33	111	102		n/a
2	LOW ROOF	Unf. Lin. (lb/ft)	L	00-00-00	01-05-00	Top	33	30	102		n/a
3	FC3 Floor Material	Unf. Lin. (lb/ft)	L	00-05-00	00-10-14	Top	6				n/a
4	J3(I6049)	Conc. Pt. (lbs)	L	00-10-14	00-10-14	Top	124	62			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	56 ft-lbs	23,220 ft-lbs	0.2%	1	00-09-14
End Shear	145 lbs	11,571 lbs	1.2%	13	00-02-08
Span / Depth	0.9				

Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Beam 5" x 3-1/2"	444 lbs	4.8%	2.1%	Unspecified
B2	Beam 5" x 3-1/2"	556 lbs	5.9%	2.6%	Unspecified

Notes

Calculations assume member is fully braced.

Resistance Factor phi has been applied to all presented results per CSA O86.

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA O86.

Unbalanced snow loads determined from building geometry were used in selected product's verification.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9

Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record.

Nail one ply to another, with
3 1/2" spiral nails @ 4"
o.c. staggered in 2 rows

DESIGN CONFORMS TO OBC2012

ET0000667

**Double 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP****PASSED****2ND FLOOR FRAMING Flush Beams B21 (I6068)**

Dry | 1 span | No cant

November 18, 2018 07:37:33

BC CALC® Member Report

Build 6475

Job name:

Address:

City, Province, Postal Code: CALEDON

Customer:

Code reports: CCMC 12472-R

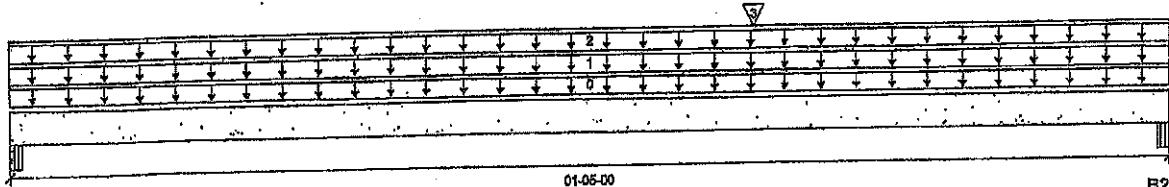
File name: KINMOUNT 6A ELEV 2.mmdl

Description: 2ND FLOOR FRAMING Flush Beams B21 (I6068)

Specifier:

Designer: PL

Company:



Total Horizontal Product Length = 01-05-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 5"	75 / 0	121 / 0	144 / 0	
B2, 5"	145 / 0	155 / 0	145 / 0	

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 1.00	Dead 0.85	Snow 1.00	Wind 1.15	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	01-05-00	Top		10			00-00-00
1	E37(I6077)	Unf. Lin. (lb/ft)	L	00-00-00	01-05-00	Top	33	111	102		n/a
2	LOW ROOF	Unf. Lin. (lb/ft)	L	00-00-00	01-05-00	Top	33	30	102		n/a
3	J3(I6049)	Conc. Pt. (lbs)	L	00-10-14	00-10-14	Top	125	63			n/a

Controls Summary	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	55 ft-lbs	23,220 ft-lbs	0.2%	1	00-09-15
End Shear	142 lbs	11,571 lbs	1.2%	13	00-02-08
Span / Depth	0.9				

Bearing Supports	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1 Beam	5" x 3-1/2"	442 lbs	4.7%	2.1%	Unspecified
B2 Beam	5" x 3-1/2"	556 lbs	6.0%	2.6%	Unspecified

Notes

Calculations assume member is fully braced.

Resistance Factor phi has been applied to all presented results per CSA O86.

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA O86.

Unbalanced snow loads determined from building geometry were used in selected products verification.

Design based on Dry Service Condition.

Importance Factor: Normal Part code; Part 9

Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of record.

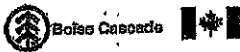
Nail one ply to another with
3 1/2" spiral nails @ 4"

o.c. staggered in 2 rows



DESIGN CONFORMS TO OBC2012

ET0000668



Double 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP
2ND FLOOR FRAMING\Flush Beams\B23\15728

PASSED

BC CALCO® Member Report

Build 6475

Job name:

Address:

City, Province, Postal Code: CALEDON

Customer:

Code reports: CCMC 12472-R

Dry | 1 span | No cant

November 19, 2018 08:01:38

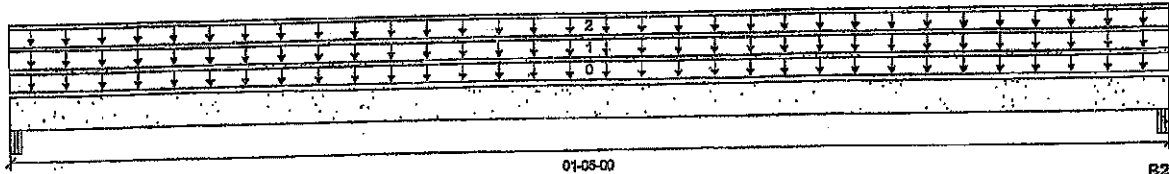
File name: KINMOUNT 6A ELEV 3.mmdl

Description: 2ND FLOOR FRAMING\Flush Beams\B23\15728

Specifier:

Designer: PL

Company:



B1

Total Horizontal Product Length = 01-05-00

B2

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 5"	47 / 0	107 / 0	144 / 0	
B2, 5"	47 / 0	107 / 0	145 / 0	

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live	Dead	Snow	Wind	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	01-06-00	Top	1.00	0.65	1.00	1.15	00-00-00
1	E36(16192)	Unf. Lin. (lb/ft)	L	00-00-00	01-05-00	Top	33	111	102		n/a
2	LOW ROOF	Unf. Lin. (lb/ft)	L	00-00-00	01-05-00	Top	33	30	102		n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	35 ft-lbs	23,220 ft-lbs	0.2%	13	00-08-08
End Shear	183 lbs	11,571 lbs	1.4%	13	00-05-00
Span / Depth	0.9				

Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1 Beam	5" x 3-1/2"	397 lbs	4.2%	1.9%	Unspecified
B2 Beam	5" x 3-1/2"	397 lbs	4.2%	1.9%	Unspecified

Notes

Calculations assume member is fully braced.

Resistance Factor phi has been applied to all presented results per CSA O86.

BC CALCO® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA O86.

Unbalanced snow loads determined from building geometry were used in selected product's verification.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9

Member has no side loads.



DESIGN CONFORMS TO OBC2012

Nail one ply to another with
 3 1/2" spiral nails @ 4"
 o.c., staggered in 2 rows

ET0000669



Double 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP 2ND FLOOR FRAMING\Flush Beams\B24\6145

PASSED

November 19, 2018 08:01:38

BC CALCO Member Report

Build 6475

Job name:

Address:

City, Province, Postal Code: CALEDON

Customer:

Code reports: CCMC 12472-R

Dry | 1 span | No cant.

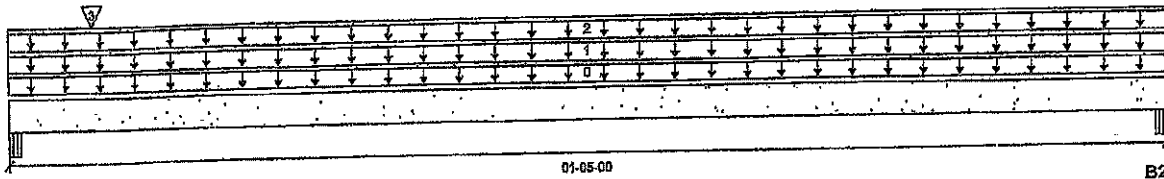
File name: KINMOUNT 6A ELEV 3.mmdl

Description: 2ND FLOOR FRAMING\Flush Beams\B24\6145

Specifier:

Designer: PL

Company:



Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 6"	48 / 0	107 / 0	144 / 0	
B2, 5"	47 / 0	107 / 0	145 / 0	

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live	Dead	Snow	Wind	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	01-05-00	Top	1.00	0.65	1.00	1.15	00-00-00
1	E28(4570)	Unf. Lin. (lb/ft)	L	00-00-00	01-05-00	Top	33	111	102		n/a
2	LOW ROOF	Unf. Lin. (lb/ft)	L	00-00-00	01-05-00	Top	33	30	102		n/a
3	FC3 Floor Material	Conc. Pt. (lbs)	L	00-01-04	00-01-04	Top	2				n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	35 ft-lbs	23,220 ft-lbs	0.2%	13	00-08-08
End Shear	163 lbs	11,571 lbs	1.4%	13	00-06-00
Span / Depth	0.9				

Bearing Supports	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1 Beam	5" x 3-1/2"	388 lbs	4.3%	1.9%	Unspecified
B2 Beam	5" x 3-1/2"	397 lbs	4.2%	1.9%	Unspecified

Notes

Calculations assume member is fully braced.

Resistance Factor phi has been applied to all presented results per CSA O86.

BC CALCO analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA O86.

Unbalanced snow loads determined from building geometry were used in selected product's verification.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9

Member has no side loads.

Nail one ply to another with

3 1/2" spiral nails @ 4"

o.c. staggered in 2 rows



DESIGN CONFORMS TO OBC2012

**THIS STRUCTURE MUST BE
CONSTRUCTED TO MEET OR
EXCEED THE PROVISIONS OF
THE ONTARIO BUILDING CODE**

ET0000670



Double 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP 1ST FLOOR FRAMING\Flush Beams\B15\16015

PASSED

BC CALCO® Member Report

Dry | 1 span | No cant.

April 12, 2019 10:29:12

Build 6766

Job name:

Address:

City, Province, Postal Code: CALEDON

Customer:

Code reports: CCMC 12472-R

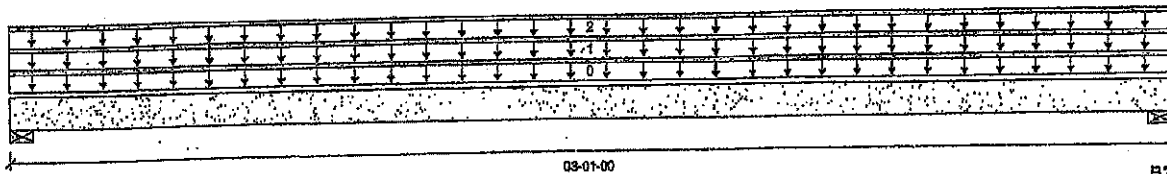
File name: KINMOUNT 8A DECK CONDITION.mmdl

Description: 1ST FLOOR FRAMING\Flush Beams\B15\16015

Specifier:

Designer: PL

Company:



Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 3-1/2"	80 / 0	187 / 0		
B2, 3-1/2"	80 / 0	187 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live	Dead	Snow	Wind	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	03-01-00	Top	10	98			00-00-00
1	E14(1241)	Unf. Lin. (lb/ft)	L	00-00-00	03-01-00	Top	26	98			n/a
2	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	03-01-00	Top	27	13			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	146 ft-lbs	15,093 ft-lbs	1.0%	0	01-06-10
End Shear	78 lbs	7,521 lbs	1.0%	0	01-01-00
Total Load Deflection	L/999 (0")	n/a	n/a	4	01-06-10
Live Load Deflection	L/999 (0")	n/a	n/a	5	01-06-10
Max Defl.	0"	n/a	n/a	4	01-06-10
Span / Depth	3.3				

Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Wall/Plate 3-1/2" x 3-1/2"	262 lbs	6.2%	2.7%	Unspecified
B2	Wall/Plate 3-1/2" x 3-1/2"	262 lbs	6.2%	2.7%	Unspecified

Notes

Design meets Code minimum (L/240) Total load deflection criteria.

Design meets Code minimum (L/360) Live load deflection criteria.

Calculations assume member is fully braced.

Resistance Factor phi has been applied to all presented results per CSA O86.

BC CALCO® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA O86.

Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 9

Member has no side loads.

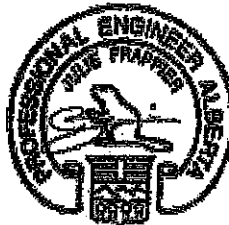
Nail one ply to another with

3 1/2" spiral nails @ 4'

O.C. staggered in 2 rows



DESIGN CONFORMS TO OBC2012



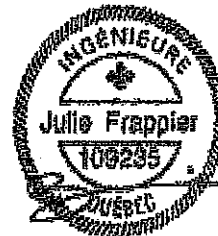
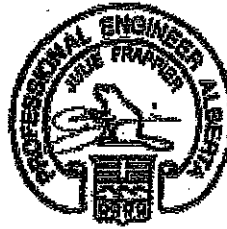
Maximum Floor Spans

Live Load = 40 psf, Dead Load = 15 psf
Simple Spans, L/480 Deflection Limit
5/8" OSB G&N Sheathing

Depth	Series	Bare				1/2" Gypsum Ceiling			
		On Centre Spacing				On Centre Spacing			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
9-1/2"	NI-20	15'-1"	14'-2"	13'-9"	N/A	15'-7"	14'-8"	14'-2"	N/A
	NI-40x	16'-1"	15'-2"	14'-8"	N/A	16'-7"	15'-7"	15'-1"	N/A
	NI-60	16'-3"	15'-4"	14'-10"	N/A	16'-8"	15'-9"	15'-3"	N/A
	NI-70	17'-1"	16'-1"	15'-6"	N/A	17'-5"	16'-5"	15'-10"	N/A
	NI-80	17'-3"	16'-3"	15'-8"	N/A	17'-8"	16'-7"	16'-0"	N/A
11-7/8"	NI-20	16'-11"	16'-0"	15'-5"	N/A	17'-6"	16'-6"	16'-0"	N/A
	NI-40x	18'-1"	17'-0"	16'-5"	N/A	18'-9"	17'-6"	16'-11"	N/A
	NI-60	18'-4"	17'-3"	16'-7"	N/A	19'-0"	17'-8"	17'-1"	N/A
	NI-70	19'-6"	18'-0"	17'-4"	N/A	20'-1"	18'-7"	17'-9"	N/A
	NI-80	19'-9"	18'-3"	17'-6"	N/A	20'-4"	18'-10"	17'-11"	N/A
14"	NI-90x	20'-4"	18'-9"	17'-11"	N/A	20'-10"	19'-3"	18'-5"	N/A
	NI-40x	20'-1"	18'-7"	17'-10"	N/A	20'-10"	19'-4"	18'-6"	N/A
	NI-60	20'-5"	18'-11"	18'-1"	N/A	21'-2"	19'-7"	18'-9"	N/A
	NI-70	21'-7"	20'-0"	19'-1"	N/A	22'-3"	20'-7"	19'-8"	N/A
	NI-80	21'-11"	20'-3"	19'-4"	N/A	22'-7"	20'-11"	20'-0"	N/A
16"	NI-90x	22'-7"	20'-11"	19'-11"	N/A	23'-3"	21'-6"	20'-6"	N/A
	NI-60	22'-3"	20'-8"	19'-9"	N/A	23'-1"	21'-5"	20'-6"	N/A
	NI-70	23'-6"	21'-9"	20'-9"	N/A	24'-3"	22'-5"	21'-5"	N/A
	NI-80	23'-11"	22'-1"	21'-1"	N/A	24'-8"	22'-10"	21'-9"	N/A
	NI-90x	24'-8"	22'-9"	21'-9"	N/A	25'-4"	23'-5"	22'-4"	N/A

Depth	Series	Mid-Span Blocking				Mid-Span Blocking and 1/2" Gypsum Ceiling			
		On Centre Spacing				On Centre Spacing			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
9-1/2"	NI-20	16'-8"	15'-3"	14'-5"	N/A	16'-8"	15'-3"	14'-5"	N/A
	NI-40x	17'-11"	16'-11"	16'-1"	N/A	18'-5"	17'-1"	16'-1"	N/A
	NI-60	18'-2"	17'-1"	16'-4"	N/A	18'-7"	17'-4"	16'-4"	N/A
	NI-70	19'-2"	17'-10"	17'-2"	N/A	19'-7"	18'-3"	17'-7"	N/A
	NI-80	19'-5"	18'-0"	17'-4"	N/A	19'-10"	18'-5"	17'-8"	N/A
11-7/8"	NI-20	19'-6"	18'-1"	17'-3"	N/A	19'-11"	18'-3"	17'-3"	N/A
	NI-40x	21'-0"	19'-6"	18'-8"	N/A	21'-7"	20'-2"	19'-2"	N/A
	NI-60	21'-4"	19'-9"	18'-11"	N/A	21'-11"	20'-4"	19'-6"	N/A
	NI-70	22'-6"	20'-10"	19'-11"	N/A	23'-0"	21'-5"	20'-5"	N/A
	NI-80	22'-9"	21'-1"	20'-1"	N/A	23'-3"	21'-7"	20'-8"	N/A
14"	NI-90x	23'-4"	21'-8"	20'-8"	N/A	23'-10"	22'-2"	21'-2"	N/A
	NI-40x	23'-7"	21'-11"	20'-11"	N/A	24'-3"	22'-7"	21'-7"	N/A
	NI-60	24'-0"	22'-3"	21'-3"	N/A	24'-8"	22'-11"	21'-11"	N/A
	NI-70	25'-3"	23'-4"	22'-3"	N/A	25'-10"	24'-0"	22'-11"	N/A
	NI-80	25'-7"	23'-8"	22'-7"	N/A	26'-2"	24'-4"	23'-2"	N/A
16"	NI-90x	26'-4"	24'-4"	23'-3"	N/A	26'-10"	24'-11"	23'-9"	N/A
	NI-60	26'-5"	24'-6"	23'-4"	N/A	27'-2"	25'-3"	24'-2"	N/A
	NI-70	27'-9"	25'-8"	24'-6"	N/A	28'-5"	26'-5"	25'-2"	N/A
	NI-80	28'-2"	26'-1"	24'-10"	N/A	28'-10"	26'-9"	25'-6"	N/A
	NI-90x	29'-0"	26'-10"	25'-7"	N/A	29'-7"	27'-5"	26'-2"	N/A

1. Maximum clear span applicable to simple-span residential floor construction with a design live load of 40 psf and dead load of 15 psf. The ultimate limit states are based on the factored loads of 1.50L + 1.25D. The serviceability limit states include the consideration for floor vibration, a live load deflection limit of L/480 and a total load deflection limit of L/240.
2. Spans are based on a composite floor with glued-nailed oriented strand board (OSB) sheathing with a minimum thickness of 5/8 inch for a joist spacing of 19.2 inches or less. The composite floor may include 1/2 inch gypsum ceiling and/or one row of blocking at mid-span with strapping. Strapping shall be minimum 1x4 inch strap applied to underside of joists at blocking line or 1/2 inch gypsum ceiling attached to joists.
3. Minimum bearing length shall be 1-3/4 inches for the end bearings.
4. Bearing stiffeners are not required when I-joists are used with the spans and spacings given in this table, except as required for hangers.
5. This span chart is based on uniform loads. For applications with other than uniformly distributed loads, an engineering analysis may be required based on the use of the design properties. Tables are based on Limit States Design per CSA O86-09, NBC 2010, and OBC 2012.
6. Joists shall be laterally supported at supports and continuously along the compression edge. Refer to technical documentation for installation guidelines and construction details. Nordic I-joists are listed in CCMC evaluation report 13032-R and APA Product Report PR-1274C.



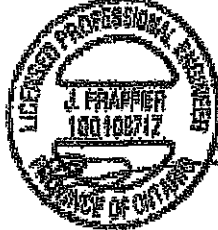
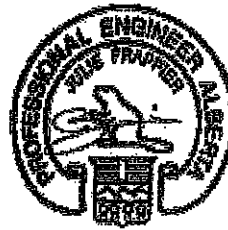
Maximum Floor Spans

Live Load = 40 psf, Dead Load = 15 psf
Simple Spans, L/480 Deflection Limit
3/4" OSB G&N Sheathing

Depth	Series	Bare				1/2" Gypsum Ceiling			
		On Centre Spacing				On Centre Spacing			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
9-1/2"	NI-20	15'-10"	15'-0"	14'-5"	13'-5"	16'-4"	15'-5"	14'-6"	13'-5"
	NI-40x	17'-0"	16'-0"	15'-5"	14'-9"	17'-5"	16'-5"	15'-10"	15'-2"
	NI-60	17'-2"	16'-2"	15'-7"	14'-11"	17'-6"	16'-7"	15'-11"	15'-3"
	NI-70	18'-0"	16'-11"	16'-3"	15'-7"	18'-5"	17'-3"	16'-7"	15'-11"
	NI-80	18'-3"	17'-1"	16'-5"	15'-9"	18'-8"	17'-5"	16'-9"	16'-1"
11-7/8"	NI-20	17'-10"	16'-10"	16'-2"	15'-6"	18'-6"	17'-4"	16'-9"	16'-1"
	NI-40x	19'-4"	17'-11"	17'-3"	16'-6"	19'-11"	18'-6"	17'-9"	17'-0"
	NI-60	19'-7"	18'-2"	17'-5"	16'-9"	20'-2"	18'-9"	17'-11"	17'-2"
	NI-70	20'-9"	19'-2"	18'-3"	17'-5"	21'-4"	19'-9"	18'-10"	17'-10"
	NI-80	21'-1"	19'-5"	18'-6"	17'-7"	21'-7"	20'-0"	19'-0"	18'-0"
14"	NI-90x	21'-8"	20'-0"	19'-1"	18'-0"	22'-2"	20'-6"	19'-6"	18'-6"
	NI-40x	21'-5"	19'-10"	18'-11"	17'-11"	22'-1"	20'-6"	19'-7"	18'-7"
	NI-60	21'-10"	20'-2"	19'-3"	18'-2"	22'-5"	20'-10"	19'-11"	18'-10"
	NI-70	23'-0"	21'-3"	20'-3"	19'-2"	23'-8"	21'-11"	20'-10"	19'-9"
	NI-80	23'-5"	21'-7"	20'-7"	19'-5"	24'-0"	22'-3"	21'-2"	20'-0"
16"	NI-90x	24'-1"	22'-3"	21'-2"	20'-0"	24'-8"	22'-10"	21'-9"	20'-7"
	NI-60	23'-9"	22'-0"	20'-11"	19'-10"	24'-6"	22'-9"	21'-8"	20'-6"
	NI-70	25'-1"	23'-2"	22'-0"	20'-10"	25'-9"	23'-10"	22'-9"	21'-6"
	NI-80	25'-6"	23'-6"	22'-4"	21'-2"	26'-1"	24'-2"	23'-1"	21'-10"
	NI-90x	26'-4"	24'-3"	23'-1"	21'-10"	26'-11"	24'-11"	23'-8"	22'-5"

Depth	Series	Mid-Span Blocking				Mid-Span Blocking and 1/2" Gypsum Ceiling			
		On Centre Spacing				On Centre Spacing			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
9-1/2"	NI-20	16'-10"	15'-5"	14'-6"	13'-5"	16'-10"	15'-5"	14'-6"	13'-5"
	NI-40x	18'-8"	17'-2"	16'-3"	15'-2"	18'-10"	17'-2"	16'-3"	15'-2"
	NI-60	18'-11"	17'-6"	16'-6"	15'-5"	19'-2"	17'-6"	16'-6"	15'-5"
	NI-70	20'-0"	18'-7"	17'-9"	16'-7"	20'-5"	18'-11"	17'-10"	16'-7"
	NI-80	20'-3"	18'-10"	17'-11"	16'-10"	20'-8"	19'-3"	18'-2"	16'-10"
11-7/8"	NI-20	20'-1"	18'-5"	17'-5"	16'-2"	20'-1"	18'-5"	17'-5"	16'-2"
	NI-40x	21'-10"	20'-4"	19'-4"	17'-8"	22'-5"	20'-6"	19'-4"	17'-8"
	NI-60	22'-1"	20'-7"	19'-7"	18'-4"	22'-8"	20'-10"	19'-8"	18'-4"
	NI-70	23'-4"	21'-8"	20'-8"	19'-7"	23'-10"	22'-3"	21'-2"	19'-9"
	NI-80	23'-7"	21'-11"	20'-11"	19'-9"	24'-1"	22'-6"	21'-5"	20'-0"
14"	NI-90x	24'-3"	22'-6"	21'-6"	20'-4"	24'-8"	23'-0"	22'-0"	20'-9"
	NI-40x	24'-5"	22'-9"	21'-8"	19'-5"	25'-1"	23'-2"	21'-9"	19'-5"
	NI-60	24'-10"	23'-1"	22'-0"	20'-10"	25'-6"	23'-8"	22'-4"	20'-10"
	NI-70	26'-1"	24'-3"	23'-2"	21'-10"	26'-8"	24'-11"	23'-9"	22'-4"
	NI-80	26'-6"	24'-7"	23'-5"	22'-2"	27'-1"	25'-3"	24'-1"	22'-9"
16"	NI-90x	27'-3"	25'-4"	24'-1"	22'-9"	27'-9"	25'-11"	24'-8"	23'-4"
	NI-60	27'-3"	25'-5"	24'-2"	22'-10"	28'-0"	26'-2"	24'-9"	23'-1"
	NI-70	28'-8"	26'-8"	25'-4"	23'-11"	29'-3"	27'-4"	26'-1"	24'-8"
	NI-80	29'-1"	27'-0"	25'-9"	24'-4"	29'-8"	27'-9"	26'-5"	25'-0"
	NI-90x	29'-11"	27'-10"	26'-6"	25'-0"	30'-6"	28'-5"	27'-2"	25'-8"

- Maximum clear span applicable to simple-span residential floor construction with a design live load of 40 psf and dead load of 15 psf. The ultimate limit states are based on the factored loads of 1.50L + 1.25D. The serviceability limit states include the consideration for floor vibration, a live load deflection limit of L/480 and a total load deflection limit of L/240.
- Spans are based on a composite floor with glued-nailed oriented strand board (OSB) sheathing with a minimum thickness of 3/4 inch for a joist spacing of 24 inches or less. The composite floor may include 1/2 inch gypsum ceiling and/or one row of blocking at mid-span with strapping. Strapping shall be minimum 1x4 inch strap applied to underside of joists at blocking line or 1/2 inch gypsum ceiling attached to joists.
- Minimum bearing length shall be 1-3/4 inches for the end bearings.
- Bearing stiffeners are not required when I-joists are used with the spans and spacings given in this table, except as required for hangers.
- This span chart is based on uniform loads. For applications with other than uniformly distributed loads, an engineering analysis may be required based on the use of the design properties. Tables are based on Limit States Design per CSA O86-09, NBC 2010, and OBC 2012.
- Joists shall be laterally supported at supports and continuously along the compression edge. Refer to technical documentation for installation guidelines and construction details. Nordic I-joists are listed in CCMC evaluation report 13032-R and APA Product Report PR-L274C.



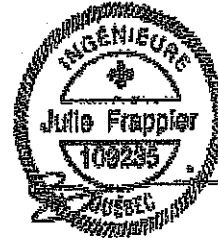
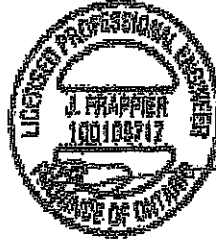
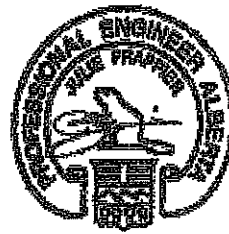
Maximum Floor Spans

Live Load = 40 psf; Dead Load = 30 psf
Simple Spans, L/480 Deflection Limit
5/8" OSB G&N Sheathing

Depth	Series	Bare				1/2" Gypsum Ceiling			
		On Centre Spacing				On Centre Spacing			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
9-1/2"	NI-20	15'-1"	14'-1"	13'-3"	N/A	15'-7"	14'-1"	13'-3"	N/A
	NI-40x	16'-1"	15'-2"	14'-8"	N/A	16'-7"	15'-7"	15'-1"	N/A
	NI-60	16'-3"	15'-4"	14'-10"	N/A	16'-8"	15'-9"	15'-3"	N/A
	NI-70	17'-1"	16'-1"	15'-6"	N/A	17'-5"	16'-5"	15'-10"	N/A
	NI-80	17'-3"	16'-3"	15'-8"	N/A	17'-8"	16'-7"	16'-0"	N/A
11-7/8"	NI-20	16'-11"	16'-0"	15'-5"	N/A	17'-6"	16'-6"	16'-0"	N/A
	NI-40x	18'-1"	17'-0"	16'-5"	N/A	18'-9"	17'-6"	16'-11"	N/A
	NI-60	18'-4"	17'-3"	16'-7"	N/A	19'-0"	17'-8"	17'-1"	N/A
	NI-70	19'-6"	18'-0"	17'-4"	N/A	20'-1"	18'-7"	17'-9"	N/A
	NI-80	19'-9"	18'-3"	17'-6"	N/A	20'-4"	18'-10"	17'-11"	N/A
14"	NI-90x	20'-4"	19'-9"	17'-11"	N/A	20'-10"	19'-3"	18'-5"	N/A
	NI-40x	20'-1"	18'-7"	17'-10"	N/A	20'-10"	19'-4"	18'-6"	N/A
	NI-60	20'-5"	18'-11"	18'-1"	N/A	21'-2"	19'-7"	18'-9"	N/A
	NI-70	21'-7"	20'-0"	19'-1"	N/A	22'-3"	20'-7"	19'-8"	N/A
	NI-80	21'-11"	20'-3"	19'-4"	N/A	22'-7"	20'-11"	20'-0"	N/A
16"	NI-90x	22'-7"	20'-11"	19'-11"	N/A	23'-3"	21'-6"	20'-6"	N/A
	NI-60	22'-3"	20'-8"	19'-9"	N/A	23'-1"	21'-5"	20'-6"	N/A
	NI-70	23'-6"	21'-9"	20'-9"	N/A	24'-3"	22'-5"	21'-5"	N/A
	NI-80	23'-11"	22'-1"	21'-1"	N/A	24'-8"	22'-10"	21'-9"	N/A
	NI-90x	24'-8"	22'-9"	21'-9"	N/A	25'-4"	23'-5"	22'-4"	N/A

Depth	Series	Mid-Span Blocking				Mid-Span Blocking and 1/2" Gypsum Ceiling			
		On Centre Spacing				On Centre Spacing			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
9-1/2"	NI-20	15'-7"	14'-1"	13'-3"	N/A	15'-7"	14'-1"	13'-3"	N/A
	NI-40x	17'-9"	16'-1"	15'-1"	N/A	17'-9"	16'-1"	15'-1"	N/A
	NI-60	18'-1"	16'-4"	15'-4"	N/A	18'-1"	16'-4"	15'-4"	N/A
	NI-70	19'-2"	17'-10"	16'-9"	N/A	19'-7"	17'-10"	16'-9"	N/A
	NI-80	19'-5"	18'-0"	17'-1"	N/A	19'-10"	18'-3"	17'-1"	N/A
11-7/8"	NI-20	18'-9"	17'-0"	16'-0"	N/A	18'-9"	17'-0"	16'-0"	N/A
	NI-40x	21'-0"	19'-3"	17'-9"	N/A	21'-3"	19'-3"	17'-9"	N/A
	NI-60	21'-4"	19'-8"	18'-5"	N/A	21'-8"	19'-8"	18'-5"	N/A
	NI-70	22'-6"	20'-10"	19'-11"	N/A	23'-0"	21'-4"	20'-0"	N/A
	NI-80	22'-9"	21'-1"	20'-1"	N/A	23'-3"	21'-7"	20'-5"	N/A
14"	NI-90x	23'-4"	21'-8"	20'-8"	N/A	23'-10"	22'-2"	21'-2"	N/A
	NI-40x	23'-7"	21'-5"	19'-6"	N/A	24'-1"	21'-5"	19'-6"	N/A
	NI-60	24'-0"	22'-3"	21'-0"	N/A	24'-8"	22'-5"	21'-0"	N/A
	NI-70	25'-3"	23'-4"	22'-3"	N/A	25'-10"	24'-0"	22'-9"	N/A
	NI-80	25'-7"	23'-8"	22'-7"	N/A	26'-2"	24'-4"	23'-2"	N/A
16"	NI-90x	26'-4"	24'-4"	23'-3"	N/A	26'-10"	24'-11"	23'-9"	N/A
	NI-60	26'-5"	24'-6"	23'-4"	N/A	27'-2"	24'-10"	23'-4"	N/A
	NI-70	27'-9"	25'-8"	24'-6"	N/A	28'-5"	26'-5"	25'-2"	N/A
	NI-80	28'-2"	26'-1"	24'-10"	N/A	28'-10"	26'-9"	25'-6"	N/A
	NI-90x	29'-0"	26'-10"	25'-7"	N/A	29'-7"	27'-5"	26'-2"	N/A

- Maximum clear span applicable to simple-span residential floor construction with a design live load of 40 psf and dead load of 30 psf. The ultimate limit states are based on the factored loads of 1.50L + 1.25D. The serviceability limit states include the consideration for floor vibration, a live load deflection limit of L/480 and a total load deflection limit of L/240.
- Spans are based on a composite floor with glued-nailed oriented strand board (OSB) sheathing with a minimum thickness of 5/8 inch for a joist spacing of 19.2 inches or less. The composite floor may include 1/2 inch gypsum ceiling and/or one row of blocking at mid-span with strapping. Strapping shall be minimum 1x4 inch strap applied to underside of joists at blocking line or 1/2 inch gypsum ceiling attached to joists.
- Minimum bearing length shall be 1-3/4 inches for the end bearings.
- Bearing stiffeners are not required when I-joists are used with the spans and spacings given in this table, except as required for hangers.
- This span chart is based on uniform loads. For applications with other than uniformly distributed loads, an engineering analysis may be required based on the use of the design properties. Tables are based on Limit States Design per CSA O86-09, NBC 2010, and CBC 2012.
- Joists shall be laterally supported at supports and continuously along the compression edge. Refer to technical documentation for installation guidelines and construction details. Nordic I-joists are listed in CCMC evaluation report 13032-R and APA Product Report PR-L274C.



Maximum Floor Spans

Live Load = 40 psf, Dead Load = 30 psf
Simple Spans, L/480 Deflection Limit
3/4" OSB G&N Sheathing

Depth	Series	Bare				1/2" Gypsum Ceiling			
		On Centre Spacing				On Centre Spacing			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
9-1/2"	NI-20	15'-7"	14'-2"	13'-4"	12'-4"	15'-7"	14'-2"	13'-4"	12'-4"
	NI-40x	17'-0"	16'-0"	15'-1"	13'-11"	17'-5"	16'-1"	15'-1"	13'-11"
	NI-60	17'-2"	16'-2"	15'-5"	14'-3"	17'-6"	16'-5"	15'-5"	14'-3"
	NI-70	18'-0"	16'-11"	16'-3"	15'-6"	18'-5"	17'-3"	16'-7"	15'-6"
	NI-80	18'-3"	17'-1"	16'-5"	15'-9"	18'-8"	17'-5"	16'-9"	15'-10"
11-7/8"	NI-20	17'-10"	16'-10"	16'-0"	14'-10"	18'-6"	17'-1"	16'-0"	14'-10"
	NI-40x	19'-4"	17'-11"	17'-3"	15'-10"	19'-11"	18'-6"	17'-9"	15'-10"
	NI-60	19'-7"	18'-2"	17'-5"	16'-9"	20'-2"	18'-9"	17'-11"	17'-1"
	NI-70	20'-9"	19'-2"	18'-3"	17'-5"	21'-4"	19'-9"	18'-10"	17'-10"
	NI-80	21'-1"	19'-5"	18'-6"	17'-7"	21'-7"	20'-0"	19'-0"	18'-0"
	NI-90x	21'-8"	20'-0"	19'-1"	18'-0"	22'-2"	20'-6"	19'-6"	18'-6"
14"	NI-40x	21'-5"	19'-10"	18'-11"	17'-5"	22'-1"	20'-6"	19'-6"	17'-5"
	NI-60	21'-10"	20'-2"	19'-3"	18'-2"	22'-5"	20'-10"	19'-11"	18'-10"
	NI-70	23'-0"	21'-3"	20'-3"	19'-2"	23'-8"	21'-11"	20'-10"	19'-9"
	NI-80	23'-5"	21'-7"	20'-7"	19'-5"	24'-0"	22'-3"	21'-2"	20'-0"
	NI-90x	24'-1"	22'-3"	21'-2"	20'-0"	24'-8"	22'-10"	21'-9"	20'-7"
16"	NI-60	23'-9"	22'-0"	20'-11"	19'-10"	24'-6"	22'-9"	21'-9"	20'-6"
	NI-70	25'-1"	23'-2"	22'-0"	20'-10"	25'-9"	23'-10"	22'-9"	21'-6"
	NI-80	25'-6"	23'-6"	22'-4"	21'-2"	26'-1"	24'-2"	23'-1"	21'-10"
	NI-90x	26'-4"	24'-3"	23'-1"	21'-10"	26'-11"	24'-11"	23'-8"	22'-5"

Depth	Series	Mid-Span Blocking				Mid-Span Blocking and 1/2" Gypsum Ceiling			
		On Centre Spacing				On Centre Spacing			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
9-1/2"	NI-20	15'-7"	14'-2"	13'-4"	12'-4"	15'-7"	14'-2"	13'-4"	12'-4"
	NI-40x	17'-9"	16'-1"	15'-1"	13'-11"	17'-9"	16'-1"	15'-1"	13'-11"
	NI-60	18'-1"	16'-5"	15'-5"	14'-3"	18'-1"	16'-5"	15'-5"	14'-3"
	NI-70	19'-10"	17'-11"	16'-9"	15'-6"	19'-10"	17'-11"	16'-9"	15'-6"
	NI-80	20'-2"	18'-3"	17'-1"	15'-10"	20'-2"	18'-3"	17'-1"	15'-10"
11-7/8"	NI-20	18'-10"	17'-1"	16'-0"	14'-10"	18'-10"	17'-1"	16'-0"	14'-10"
	NI-40x	21'-3"	19'-3"	17'-9"	15'-10"	21'-3"	19'-3"	17'-9"	15'-10"
	NI-60	21'-9"	19'-8"	18'-5"	17'-1"	21'-9"	19'-8"	18'-5"	17'-1"
	NI-70	23'-4"	21'-5"	20'-1"	18'-6"	23'-8"	21'-5"	20'-1"	18'-6"
	NI-80	23'-7"	21'-10"	20'-5"	18'-11"	24'-1"	21'-10"	20'-5"	18'-11"
	NI-90x	24'-3"	22'-6"	21'-3"	19'-7"	24'-8"	22'-7"	21'-3"	19'-7"
14"	NI-40x	24'-2"	21'-5"	19'-6"	17'-5"	24'-2"	21'-5"	19'-6"	17'-5"
	NI-60	24'-9"	22'-5"	21'-0"	19'-6"	24'-9"	22'-5"	21'-0"	19'-6"
	NI-70	26'-1"	24'-3"	22'-9"	21'-0"	26'-8"	24'-3"	22'-9"	21'-0"
	NI-80	26'-6"	24'-7"	23'-3"	21'-6"	27'-1"	24'-10"	23'-3"	21'-6"
	NI-90x	27'-3"	25'-4"	24'-1"	22'-4"	27'-9"	25'-10"	24'-3"	22'-4"
16"	NI-60	27'-3"	24'-11"	23'-5"	21'-7"	27'-6"	24'-11"	23'-5"	21'-7"
	NI-70	28'-8"	26'-8"	25'-3"	23'-4"	29'-3"	26'-11"	25'-3"	23'-4"
	NI-80	29'-1"	27'-0"	25'-9"	23'-10"	29'-8"	27'-5"	25'-10"	23'-10"
	NI-90x	29'-11"	27'-10"	26'-6"	24'-10"	30'-6"	28'-5"	26'-11"	24'-10"

- Maximum clear span applicable to simple-span residential floor construction with a design live load of 40 psf and dead load of 30 psf. The ultimate limit states are based on the factored loads of 1.50L + 1.25D. The serviceability limit states include the consideration for floor vibration, a live load deflection limit of L/480 and a total load deflection limit of L/240.
- Spans are based on a composite floor with glued-nailed oriented strand board (OSB) sheathing with a minimum thickness of 3/4 inch for a joist spacing of 24 inches or less. The composite floor may include 1/2 inch gypsum ceiling and/or one row of blocking at mid-span with strapping. Strapping shall be minimum 1x4 inch strap applied to underside of joists at blocking line or 1/2 inch gypsum ceiling attached to joists.
- Minimum bearing length shall be 1-3/4 inches for the end bearings.
- Bearing stiffeners are not required when I-joists are used with the spans and spacings given in this table, except as required for hangers.
- This span chart is based on uniform loads. For applications with other than uniformly distributed loads, an engineering analysis may be required based on the use of the design properties. Tables are based on Limit States Design per CSA O86-09, NBC 2010, and OBC 2012.
- Joists shall be laterally supported at supports and continuously along the compression edge. Refer to technical documentation for installation guidelines and construction details. Nordic I-joists are listed in CCMC evaluation report 13032-R and APA Product Report PR-L274C.



Construction Detail

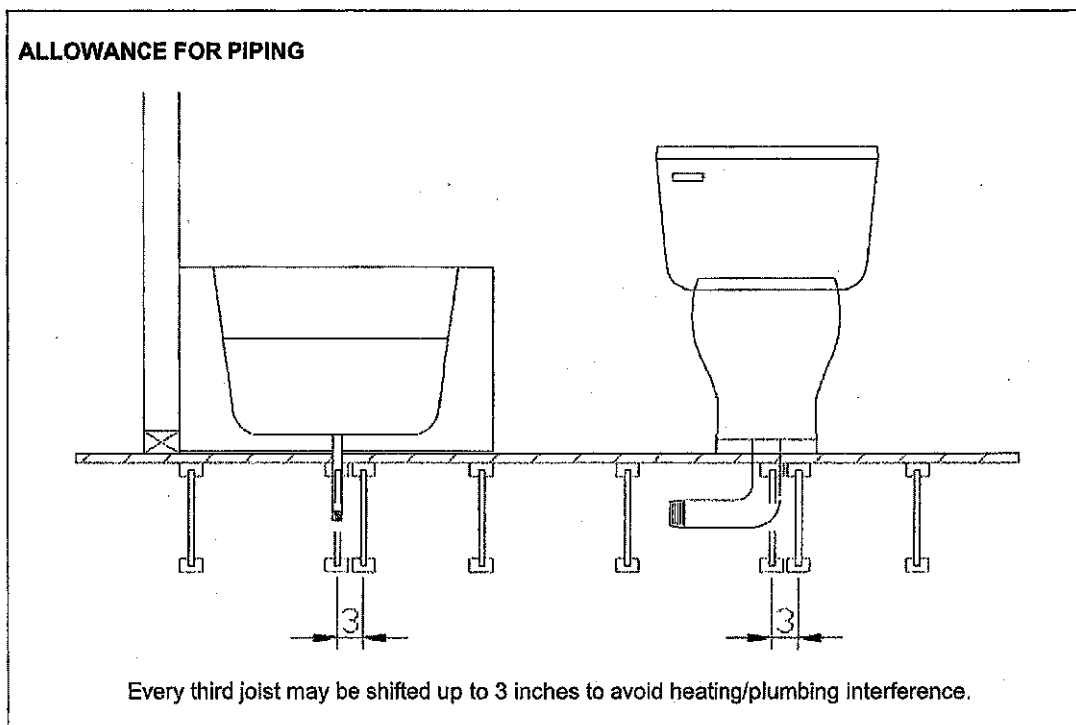
Limit States Design

Allowance for Piping (Installation Notes)

The floor layouts have usually not been checked for heating and/or plumbing interference. On-site adjustment of joists of up to 3 inches is permitted to avoid interferences. When moving a joist, the subfloor thickness shall be checked with code requirements when the joist spacing exceeds 19.2 inches. Except for cutting to length, I-joist flanges should never be cut, drilled, or notched.

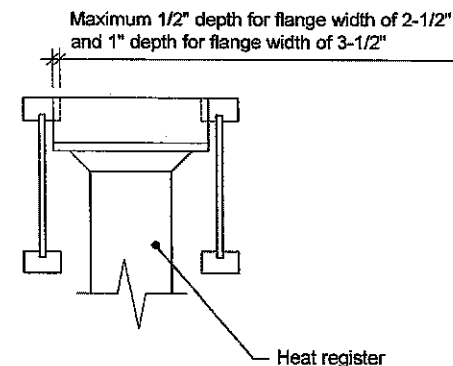
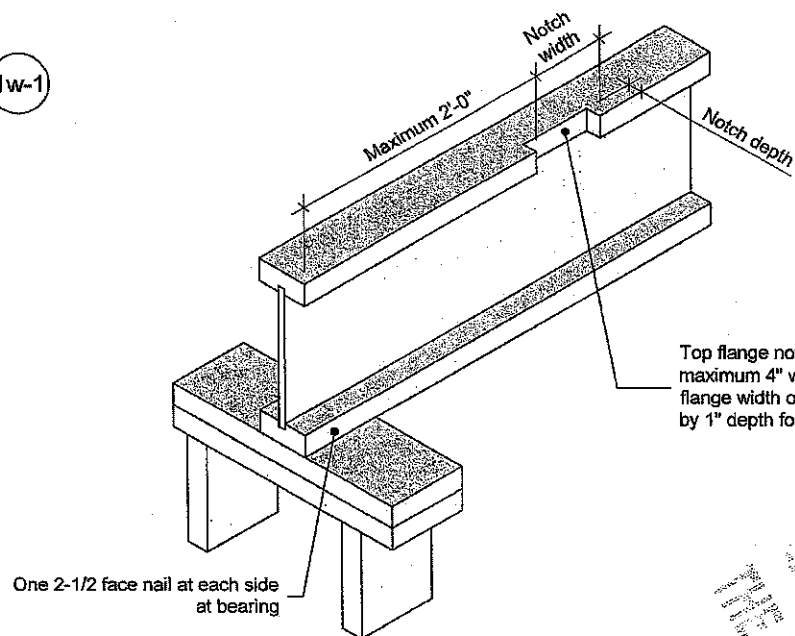
Installation of Nordic I-joists shall be as per *Nordic Joist Installation Guide for Residential Floors*. Refer to Tables 1 and 2 for maximum web hole and duct chase openings, respectively. These tables are based on the I-joists being used at their maximum spans. The minimum distance given may be reduced for shorter spans; contact your distributor for additional information.

The detail below shows the 3-inch allowance for piping. Every third joist may be shifted up to 3 inches to avoid heating/plumbing interference. For other applications, please contact your distributor.



Revised April 12, 2012

1w-1



Notes:

1. Blocking required at bearing for lateral support, not shown for clarity.
2. The maximum dimensions for a notch on the side of the top flange are 4-inch width by 1/2-inch depth for flange width of 2-1/2 inches, and 4-inch width by 1-inch depth for flange width of 3-1/2 inches.
3. This detail applies to simple-span joists and multiple-span joists where the notch is located at the end half-span.
4. For other applications, contact Nordic Structures.

THIS STRUCTURE MUST BE
CONSTRUCTED TO MEET OR
EXCEED THE PROVISIONS OF
THE CANADIAN BUILDING CODE

This document supersedes all previous versions. If the document has been in effect for more than one year, consult nordic.ca or contact Nordic Structures.

All nails shown in the details are assumed to be common nails unless otherwise noted. Nails shall have a diameter not less than 0.128 inch for 2-1/2-inch nails, or 0.144 inch for 3-inch nails. Individual components not shown to scale for clarity.

NORDIC
STRUCTURES

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TITLE

Notch in I-joist for Heat Register

CATEGORY

I-joist - Typical Floor Framing and Construction Details

DOCUMENT

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DATE

2018-04-10

NUMBER

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