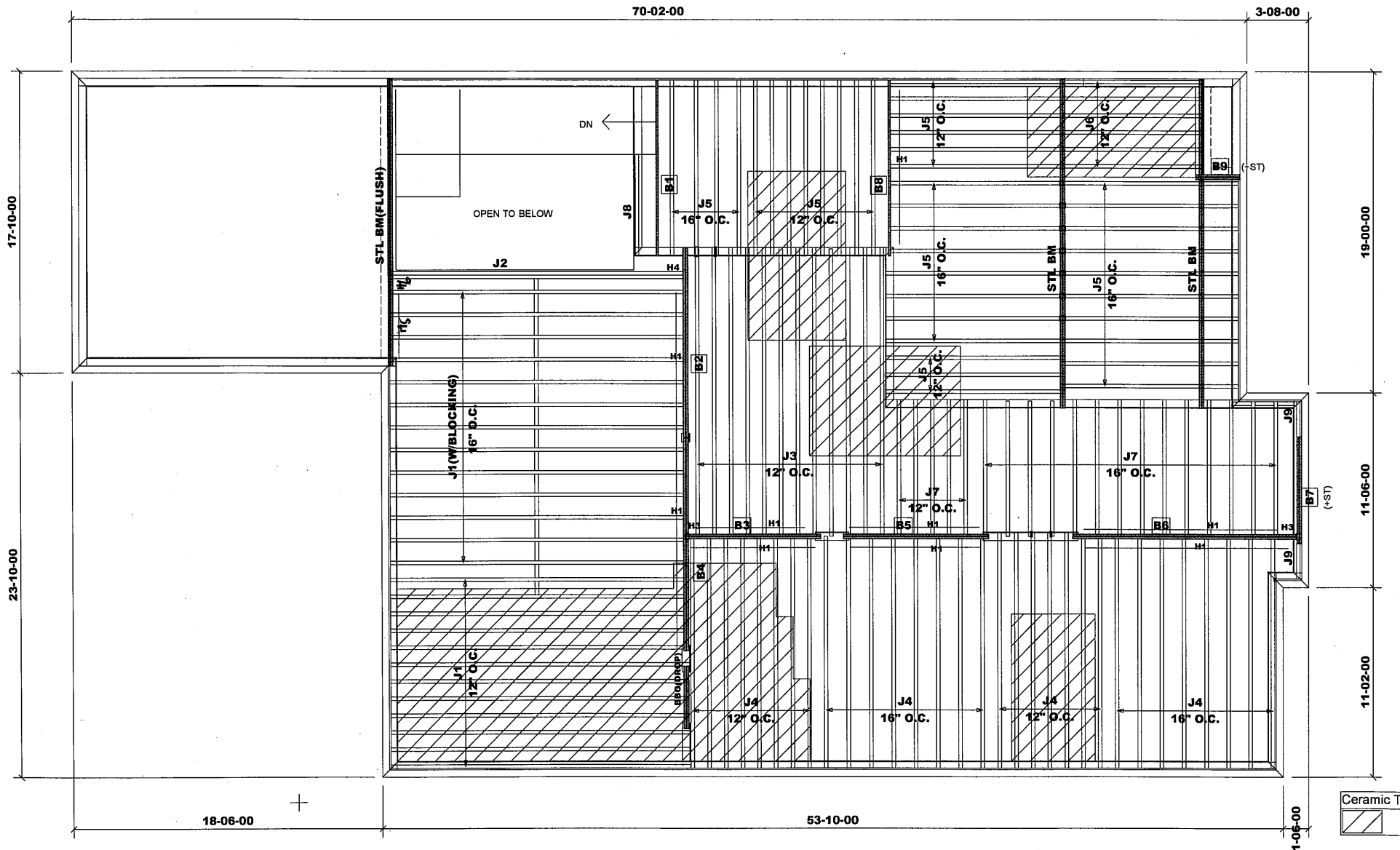




| Products |          |                  |       |         |
|----------|----------|------------------|-------|---------|
| PlotID   | Length   | Product          | Plies | Net Qty |
| J1       | 18-00-00 | 11 7/8" NI-20    | 1     | 25      |
| J2       | 18-00-00 | 11 7/8" NI-20    | 2     | 2       |
| J3       | 17-00-00 | 11 7/8" NI-20    | 1     | 12      |
| J4       | 14-00-00 | 11 7/8" NI-20    | 1     | 31      |
| J5       | 11-00-00 | 11 7/8" NI-20    | 1     | 39      |
| J6       | 9-00-00  | 11 7/8" NI-20    | 1     | 6       |
| J7       | 8-00-00  | 11 7/8" NI-20    | 1     | 19      |
| J8       | 6-00-00  | 11 7/8" NI-20    | 1     | 1       |
| J9       | 3-00-00  | 11 7/8" NI-20    | 1     | 2       |
| B6       | 14-00-00 | VERSALAM-12 2.0E | 2     | 2       |
| B4       | 13-00-00 | VERSALAM-12 2.0E | 2     | 2       |
| B2       | 12-00-00 | VERSALAM-12 2.0E | 2     | 2       |
| B1       | 11-00-00 | VERSALAM-12 2.0E | 1     | 1       |
| B8       | 11-00-00 | VERSALAM-12 2.0E | 1     | 1       |
| B3       | 9-00-00  | VERSALAM-12 2.0E | 2     | 2       |
| B5       | 9-00-00  | VERSALAM-12 2.0E | 2     | 2       |
| B7       | 7-00-00  | VERSALAM-12 2.0E | 2     | 2       |
| B9       | 3-00-00  | VERSALAM-12 2.0E | 2     | 2       |

**HANGER SCHEDULE**

H6 - H0310-2 (FM)

H1 - LT251188 (TM)

H3 - HGUS410 (FM)

H4 - MIT311 88-2 (TM)

H5 - LF2311 (FM)

**NOTE:**

TM - TOP MOUNT HANGERS

FM - FACE MOUNT HANGERS

**RIMBOARD**

1- 1/8" X 11 7/8" O.S.B.

SUBFLOOR - 3/4" NAILED & GLUED

APP - AS PER PLAN

BBO - BEAM BY OTHERS

Ceramic tile application as per O.B.C. 9.30.6

1-2X6 SPF#2 Squash Block req'd on one side of each joist under interior load bearing wall. Multiple Squash Blocks are req'd under concentrated loads.

REV: July 3, 2018

MODEL: UNIT 5004 - EL.A

+ OPT. LOGGIA

**Second Floor Framing**

Do not scale - refer to architectural plans for dimensions

11 7/8" BLOCKING

TOTAL LENGTH: 19'

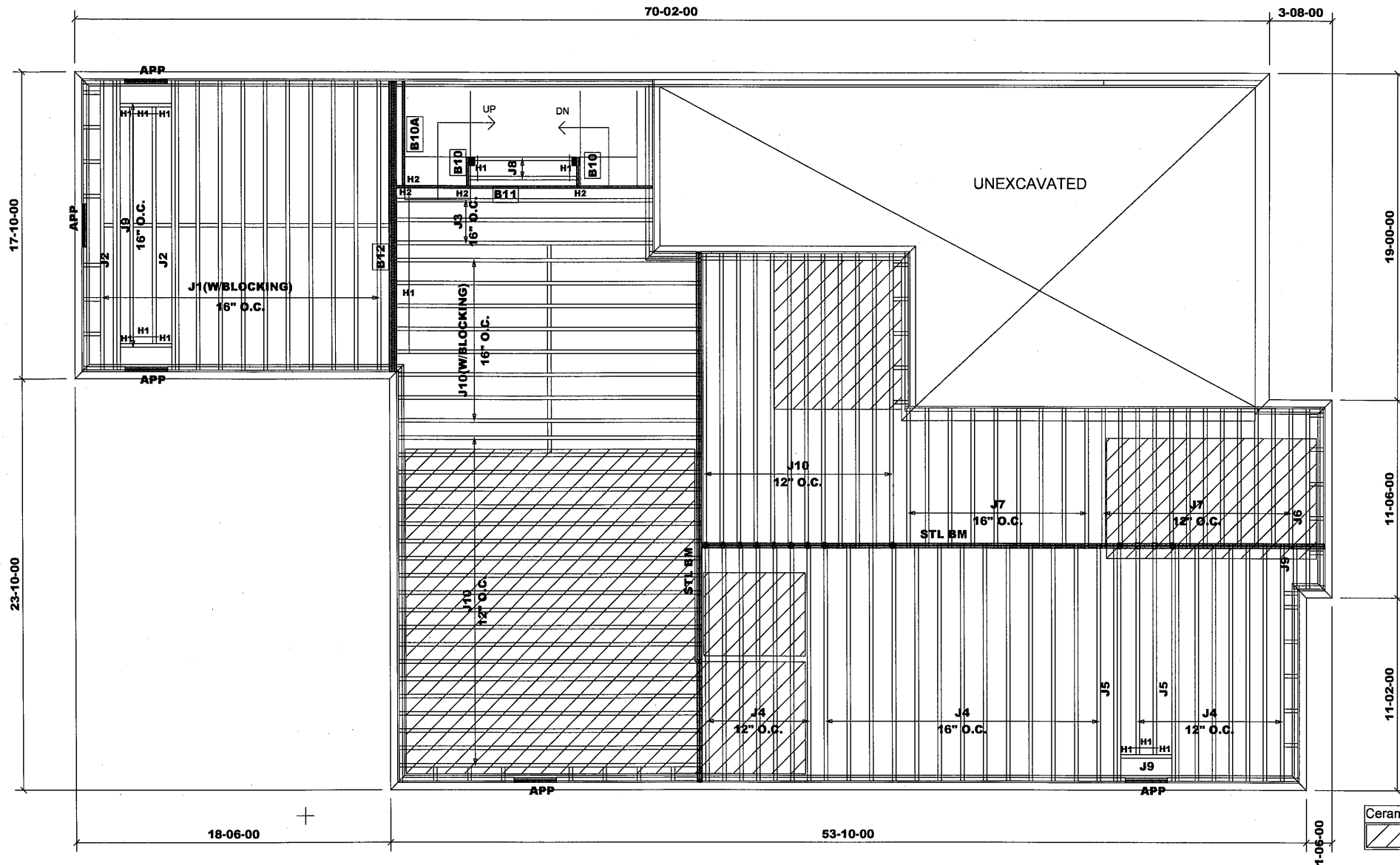
S. 152508 - S. 152546

98879 / July 3, 2018

95915 / Jan. 2, 2018

299731

|                    |                      |                         |               |                        |                    |
|--------------------|----------------------|-------------------------|---------------|------------------------|--------------------|
| JT/PL: 45147/95234 | Builder: Gold Park   | Location: Vaughan       | Designer: NL  | Alpa Roof Trusses Inc. | Salesperson: Derek |
| LI: (290673)       | Project: Pine Valley | Date: November 12, 2017 | Sheet: 1 of 2 | Maple, Ontario         | Home Lumber        |



| Products |            |                  |       |         |
|----------|------------|------------------|-------|---------|
| PlotID   | Length     | Product          | Plies | Net Qty |
| J1       | 17'-00'-00 | 11 7/8" NI-20    | 1     | 12      |
| J2       | 17'-00'-00 | 11 7/8" NI-20    | 2     | 4       |
| J3       | 16'-00'-00 | 11 7/8" NI-20    | 1     | 3       |
| J4       | 14'-00'-00 | 11 7/8" NI-20    | 1     | 28      |
| J5       | 14'-00'-00 | 11 7/8" NI-20    | 2     | 4       |
| J6       | 11'-00'-00 | 11 7/8" NI-20    | 1     | 1       |
| J7       | 9'-00'-00  | 11 7/8" NI-20    | 1     | 21      |
| J8       | 7'-00'-00  | 11 7/8" NI-20    | 1     | 2       |
| J9       | 3'-00'-00  | 11 7/8" NI-20    | 1     | 4       |
| J10      | 18'-00'-00 | 11 7/8" NI-40x   | 1     | 40      |
| B12      | 17'-00'-00 | VERSALAM-12 2.0E | 3     | 3       |
| B11      | 16'-00'-00 | VERSALAM-12 2.0E | 1     | 1       |
| B10A     | 7'-00'-00  | VERSALAM-12 2.0E | 1     | 1       |
| B10      | 2'-00'-00  | VERSALAM-12 2.0E | 1     | 2       |

| HANGER SCHEDULE |                    |
|-----------------|--------------------|
| H1-----         | LT251188 (TM)      |
| H2-----         | HUS1.81/10(FM)     |
| NOTE:           |                    |
| TM -----        | TOP MOUNT HANGERS  |
| FM -----        | FACE MOUNT HANGERS |

| RIMBOARD                       |  |
|--------------------------------|--|
| 1- 1/8" X 11 7/8" O.S.B.       |  |
| SUBFLOOR - 3/4" NAILED & GLUED |  |
| APP - AS PER PLAN              |  |
| BBO - BEAM BY OTHERS           |  |

Ceramic tile application as per O.B.C. 9.30.6  
 1-2X6 SPF#2 Squash Block req'd on one side of each joist under interior load bearing wall. Multiple Squash Blocks are req'd under concentrated loads.

MODEL: UNIT 5004 - EL.A  
 + OPT. LOGGIA

### First Floor Framing

Do not scale - refer to architectural plans for dimensions

11 7/8" BLOCKING  
 TOTAL LENGTH: 74'

REVISION: December 15, 2017

98839/July 3, 2018  
 95915

JT/PL: 45147/95234  
 LI: (290673)  
 299731

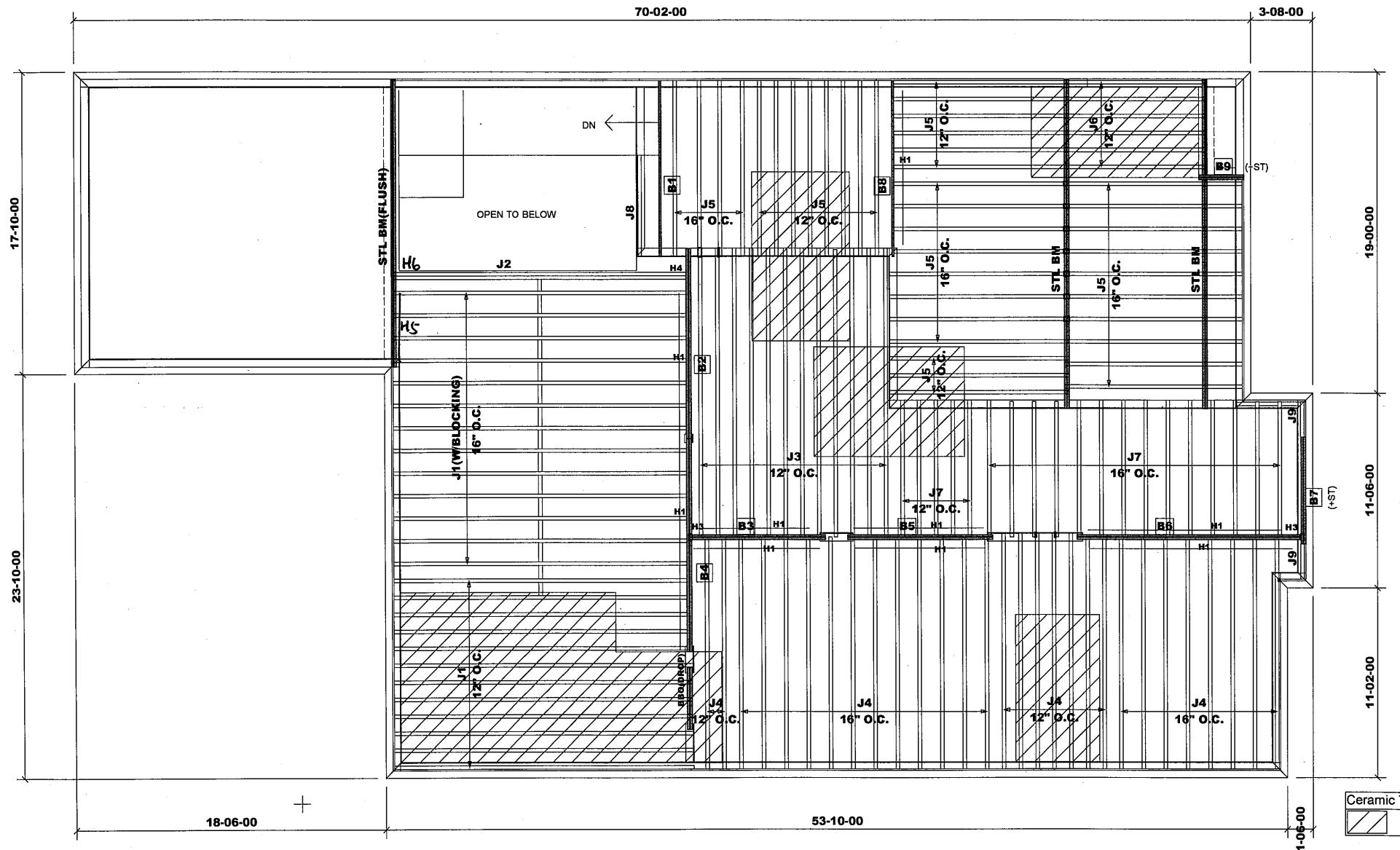
Builder: Gold Park  
 Project: Pine Valley

Location: Vaughan  
 Date: November 12, 2017

Designer: NL  
 Sheet: 2 of 2}

Alpa Roof Trusses Inc.  
 Maple, Ontario

Salesperson: Derek  
 Home Lumber



| Products |          |                  |       |         |
|----------|----------|------------------|-------|---------|
| PlotID   | Length   | Product          | Plies | Net Qty |
| J1       | 18-00-00 | 11 7/8" NI-20    | 1     | 25      |
| J2       | 18-00-00 | 11 7/8" NI-20    | 2     | 2       |
| J3       | 17-00-00 | 11 7/8" NI-20    | 1     | 12      |
| J4       | 14-00-00 | 11 7/8" NI-20    | 1     | 29      |
| J5       | 11-00-00 | 11 7/8" NI-20    | 1     | 39      |
| J6       | 9-00-00  | 11 7/8" NI-20    | 1     | 6       |
| J7       | 8-00-00  | 11 7/8" NI-20    | 1     | 19      |
| J8       | 6-00-00  | 11 7/8" NI-20    | 1     | 1       |
| J9       | 3-00-00  | 11 7/8" NI-20    | 1     | 2       |
| B6       | 14-00-00 | VERSALAM-12 2.0E | 2     | 2       |
| B4       | 13-00-00 | VERSALAM-12 2.0E | 2     | 2       |
| B2       | 12-00-00 | VERSALAM-12 2.0E | 2     | 2       |
| B1       | 11-00-00 | VERSALAM-12 2.0E | 1     | 1       |
| B8       | 11-00-00 | VERSALAM-12 2.0E | 1     | 1       |
| B3       | 9-00-00  | VERSALAM-12 2.0E | 2     | 2       |
| B5       | 9-00-00  | VERSALAM-12 2.0E | 2     | 2       |
| B7       | 7-00-00  | VERSALAM-12 2.0E | 2     | 2       |
| B9       | 3-00-00  | VERSALAM-12 2.0E | 2     | 2       |

| HANGER SCHEDULE |                          |
|-----------------|--------------------------|
| H6              | --- H0310-2 (FM)         |
| H1              | ----- LT251188 (TM)      |
| H3              | ----- HGUS410 (FM)       |
| H4              | ----- MIT311.88-2 (TM)   |
| H5              | --- LP2511 (FM)          |
| NOTE:           |                          |
| TM              | ----- TOP MOUNT HANGERS  |
| FM              | ----- FACE MOUNT HANGERS |

| RIMBOARD                       |                       |
|--------------------------------|-----------------------|
| 1-                             | 1/8" X 11 7/8" O.S.B. |
| SUBFLOOR - 3/4" NAILED & GLUED |                       |
| APP                            | - AS PER PLAN         |
| BBO                            | - BEAM BY OTHERS      |

Ceramic tile application as per O.B.C. 9.30.6

1-2X6 SPF#2 Squash Block req'd on one side of each joist under interior load bearing wall. Multiple Squash Blocks are req'd under concentrated loads.

MODEL: UNIT 5004 - EL.A  
+OPT. LOGGIA(W/OPT. 5 BEDRM)

## Second Floor Framing

Do not scale - refer to architectural plans for dimensions

11 7/8" BLOCKING  
TOTAL LENGTH: 19"

JT/PL: 45147/95234

Builder: Gold Park

Location: Vaughan

Designer: NL

Alpa Roof Trusses Inc.

Salesperson: Derek

LI: (290673)

Project: Pine Valley

Date: November 15, 2017

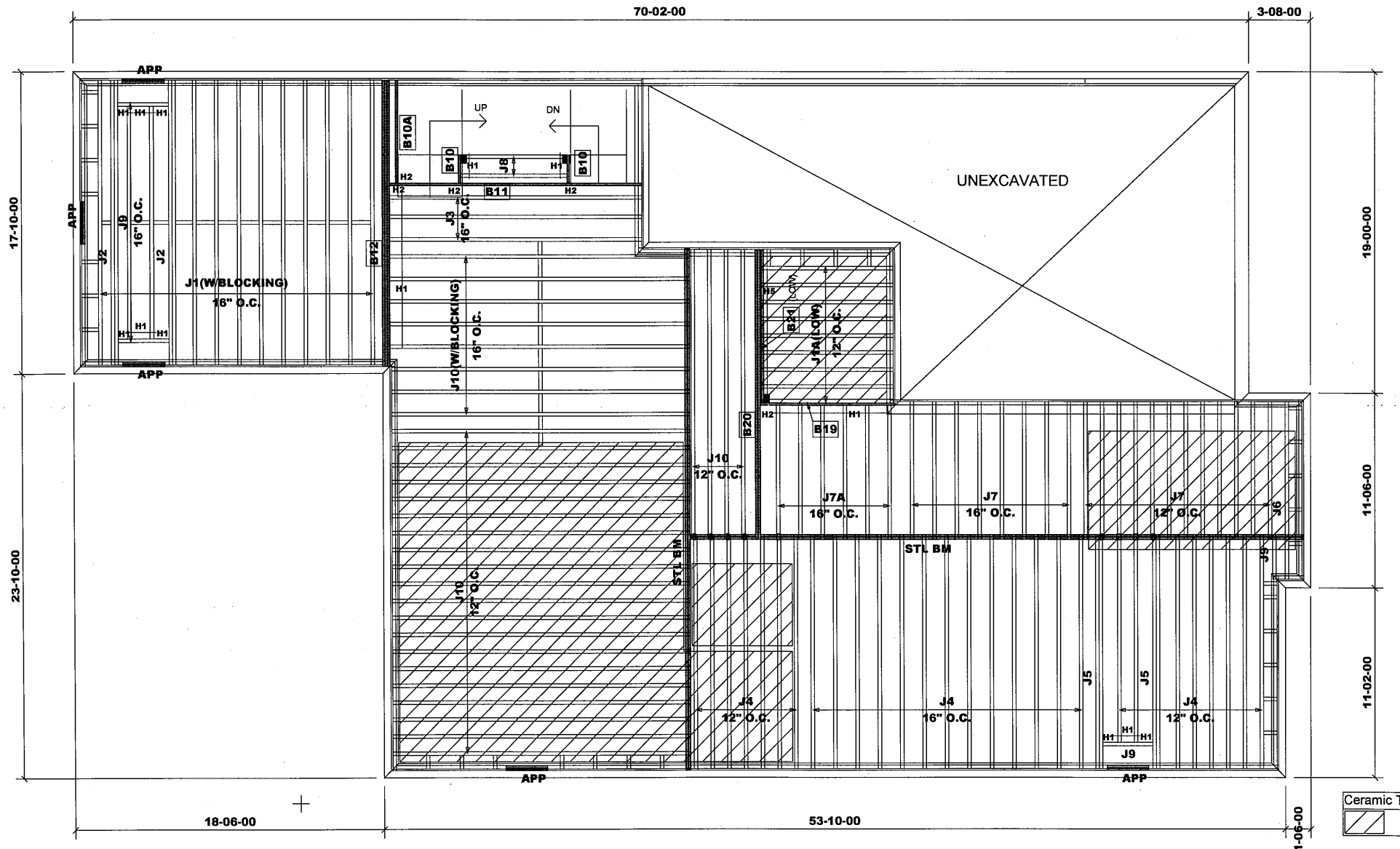
Sheet: 3 of 21

Maple, Ontario

Home Lumber

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| Products |          |                  |       |         |
|----------|----------|------------------|-------|---------|
| PlotID   | Length   | Product          | Plies | Net Qty |
| J1A      | 8-00-00  | 9 1/2" NI-20     | 1     | 9       |
| J1       | 17-00-00 | 11 7/8" NI-20    | 1     | 12      |
| J2       | 17-00-00 | 11 7/8" NI-20    | 2     | 4       |
| J3       | 16-00-00 | 11 7/8" NI-20    | 1     | 3       |
| J4       | 14-00-00 | 11 7/8" NI-20    | 1     | 28      |
| J5       | 14-00-00 | 11 7/8" NI-20    | 2     | 4       |
| J6       | 11-00-00 | 11 7/8" NI-20    | 1     | 1       |
| J7       | 9-00-00  | 11 7/8" NI-20    | 1     | 20      |
| J7A      | 8-00-00  | 11 7/8" NI-20    | 1     | 6       |
| J8       | 7-00-00  | 11 7/8" NI-20    | 1     | 2       |
| J9       | 3-00-00  | 11 7/8" NI-20    | 1     | 4       |
| J10      | 18-00-00 | 11 7/8" NI-40x   | 1     | 32      |
| B20      | 18-00-00 | VERSALAM-12 2.0E | 2     | 2       |
| B12      | 17-00-00 | VERSALAM-12 2.0E | 3     | 3       |
| B11      | 16-00-00 | VERSALAM-12 2.0E | 1     | 1       |
| B21      | 10-00-00 | VERSALAM-10 2.0E | 1     | 1       |
| B19      | 9-00-00  | VERSALAM-12 2.0E | 1     | 1       |
| B10A     | 7-00-00  | VERSALAM-12 2.0E | 1     | 1       |
| B10      | 2-00-00  | VERSALAM-12 2.0E | 1     | 2       |

| HANGER SCHEDULE |                |
|-----------------|----------------|
| H1              | LT251188 (TM)  |
| H2              | HUS1.81/10(FM) |
| H5              | LT259(TM)      |

NOTE:  
 TM -----TOP MOUNT HANGERS  
 FM-----FACE MOUNT HANGERS

**RIMBOARD**  
 1- 1/8" X 9 1/2" O.S.B.  
 1- 1/8" X 11 7/8" O.S.B.

**SUBFLOOR - 3/4" NAILED & GLUED**

APP - AS PER PLAN  
 BBO - BEAM BY OTHERS

Ceramic tile application as per O.B.C. 9.30.6

1-2X6 SPF#2 Squash Block req'd on one side of each joist under interior load bearing wall. Multiple Squash Blocks are req'd under concentrated loads.

MODEL: UNIT 5004 - EL.A  
 + OPT. LOGGIA(W/SUNKEN)

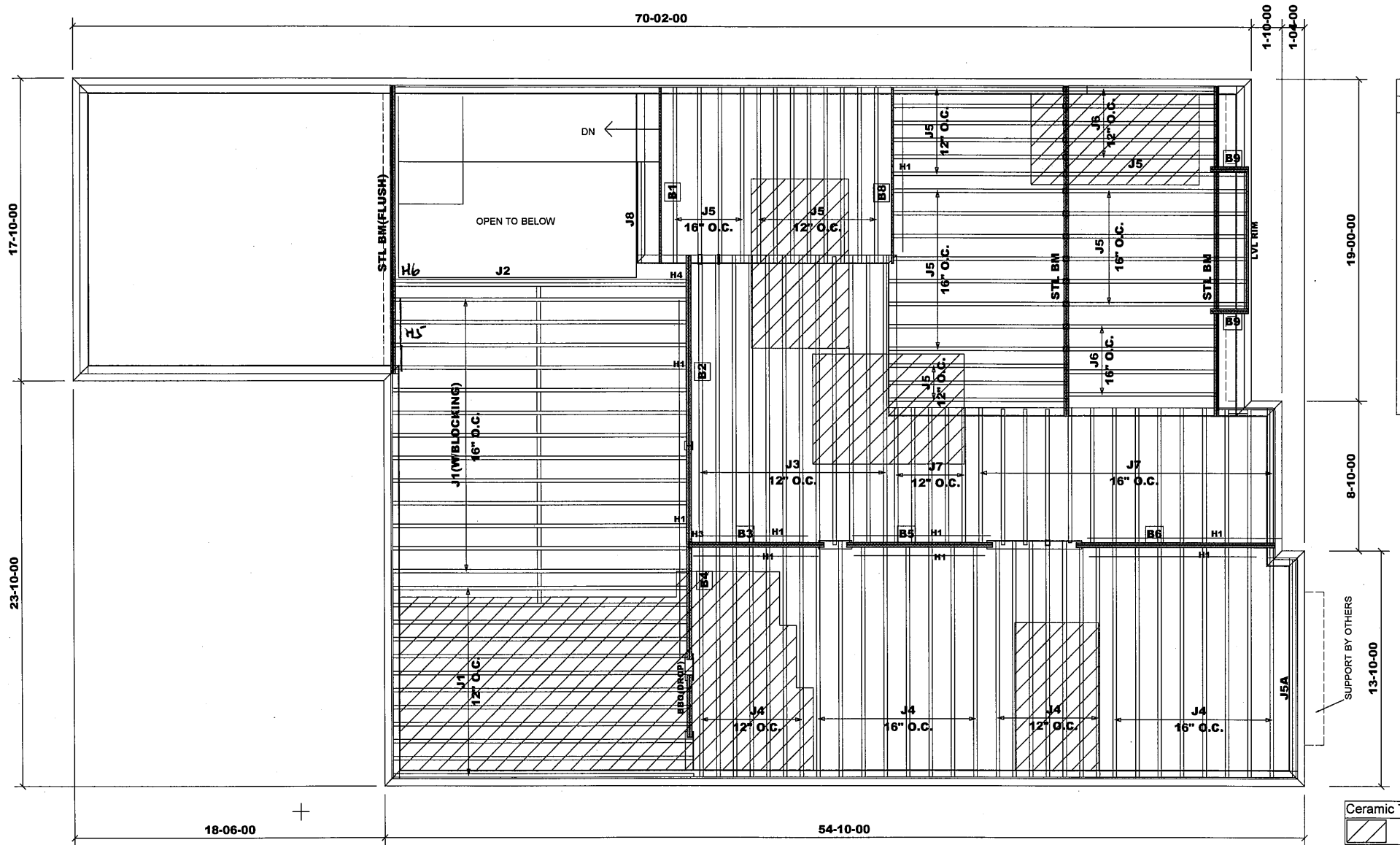
**First Floor Framing**

Do not scale - refer to architectural plans for dimensions

11 7/8" BLOCKING  
 TOTAL LENGTH: 74'

REVISION: December 15, 2017

98839  
 95915



| Products |          |                  |       |         |
|----------|----------|------------------|-------|---------|
| PlotID   | Length   | Product          | Plies | Net Qty |
| J1       | 18-00-00 | 11 7/8" NI-20    | 1     | 25      |
| J2       | 18-00-00 | 11 7/8" NI-20    | 2     | 2       |
| J3       | 17-00-00 | 11 7/8" NI-20    | 1     | 12      |
| J4       | 14-00-00 | 11 7/8" NI-20    | 1     | 30      |
| J5A      | 13-00-00 | 11 7/8" NI-20    | 1     | 1       |
| J5       | 11-00-00 | 11 7/8" NI-20    | 1     | 36      |
| J6       | 10-00-00 | 11 7/8" NI-20    | 1     | 9       |
| J7       | 8-00-00  | 11 7/8" NI-20    | 1     | 19      |
| J8       | 6-00-00  | 11 7/8" NI-20    | 1     | 1       |
| B4       | 13-00-00 | VERSALAM-12 2.0E | 2     | 2       |
| B2       | 12-00-00 | VERSALAM-12 2.0E | 2     | 2       |
| B6       | 12-00-00 | VERSALAM-12 2.0E | 2     | 2       |
| B1       | 11-00-00 | VERSALAM-12 2.0E | 1     | 1       |
| B8       | 11-00-00 | VERSALAM-12 2.0E | 1     | 1       |
| LVL RIM  | 9-00-00  | VERSALAM-12 2.0E | 1     | 1       |
| B3       | 9-00-00  | VERSALAM-12 2.0E | 2     | 2       |
| B5       | 9-00-00  | VERSALAM-12 2.0E | 2     | 2       |
| B9       | 3-00-00  | VERSALAM-12 2.0E | 2     | 4       |

HANGER SCHEDULE

H6 - --- HD310-2(FM)

H1 - --- LT251188(TM)

H3 - --- HGUS410(FM)

H4 - --- MIT311.88-2(TM)

H5 - --- LF2511(FM)

NOTE:

TM - TOP MOUNT HANGERS

FM - FACE MOUNT HANGERS

RIMBOARD

1- 1/8" X 11 7/8" O.S.B.

SUBFLOOR - 3/4" NAILED & GLUED

APP - AS PER PLAN

BBO - BEAM BY OTHERS

Ceramic tile application as per O.B.C. 9.30.6

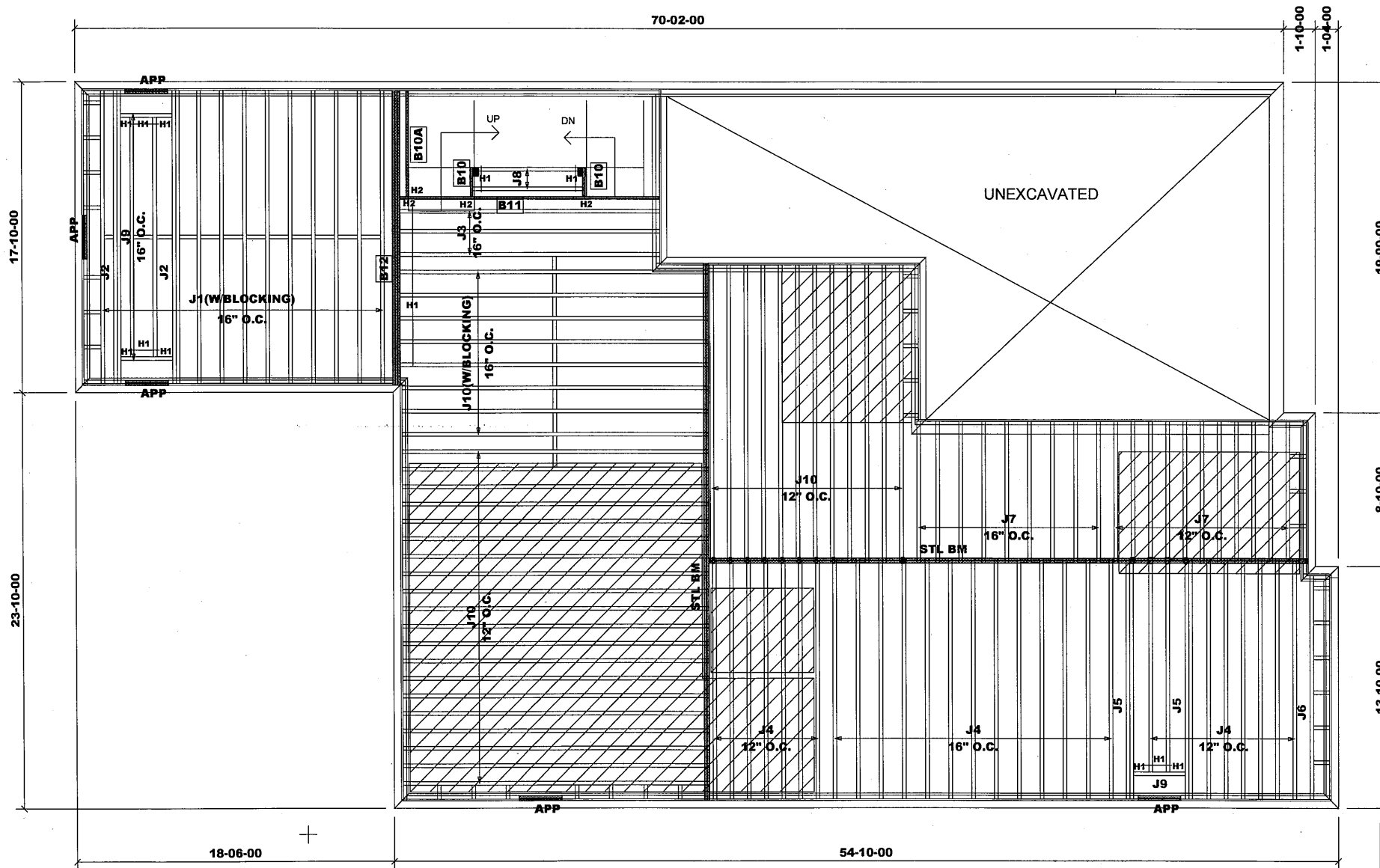
1-2X6 SPF#2 Squash Block req'd on one side of each joist under interior load bearing wall. Multiple Squash Blocks are req'd under concentrated loads.

MODEL: UNIT 5004 - EL.B  
+ OPT. LOGGIA

Second Floor Framing

Do not scale - refer to architectural plans for dimensions

98839  
95915



| Products |          |                  |       |         |
|----------|----------|------------------|-------|---------|
| PlotID   | Length   | Product          | Plies | Net Qty |
| J1       | 17-00-00 | 11 7/8" NI-20    | 1     | 12      |
| J2       | 17-00-00 | 11 7/8" NI-20    | 2     | 4       |
| J3       | 16-00-00 | 11 7/8" NI-20    | 1     | 3       |
| J4       | 14-00-00 | 11 7/8" NI-20    | 1     | 28      |
| J5       | 14-00-00 | 11 7/8" NI-20    | 2     | 4       |
| J6       | 13-00-00 | 11 7/8" NI-20    | 1     | 1       |
| J7       | 9-00-00  | 11 7/8" NI-20    | 1     | 20      |
| J8       | 7-00-00  | 11 7/8" NI-20    | 1     | 2       |
| J9       | 3-00-00  | 11 7/8" NI-20    | 1     | 3       |
| J10      | 18-00-00 | 11 7/8" NI-40x   | 1     | 40      |
| B12      | 17-00-00 | VERSALAM-12 2.0E | 3     | 3       |
| B11      | 16-00-00 | VERSALAM-12 2.0E | 1     | 1       |
| B10A     | 7-00-00  | VERSALAM-12 2.0E | 1     | 1       |
| B10      | 2-00-00  | VERSALAM-12 2.0E | 1     | 2       |

#### HANGER SCHEDULE

H1-----LT251188 (TM)  
H2-----HUS1.81/10(FM)

#### NOTE:

TM -----TOP MOUNT HANGERS  
FM-----FACE MOUNT HANGERS

#### RIMBOARD

1- 1/8" X 11 7/8" O.S.B.  
SUBFLOOR -  $\frac{3}{4}$ " NAILED & GLUED  
APP - AS PER PLAN  
BBO - BEAM BY OTHERS

Ceramic tile application as per O.B.C. 9.30.6

1-2X6 SPF#2 Squash Block req'd on one side of each joist under interior load bearing wall. Multiple Squash Blocks are req'd under concentrated loads.



MODEL: UNIT 5004 - EL.B  
+ OPT. LOGGIA

### First Floor Framing

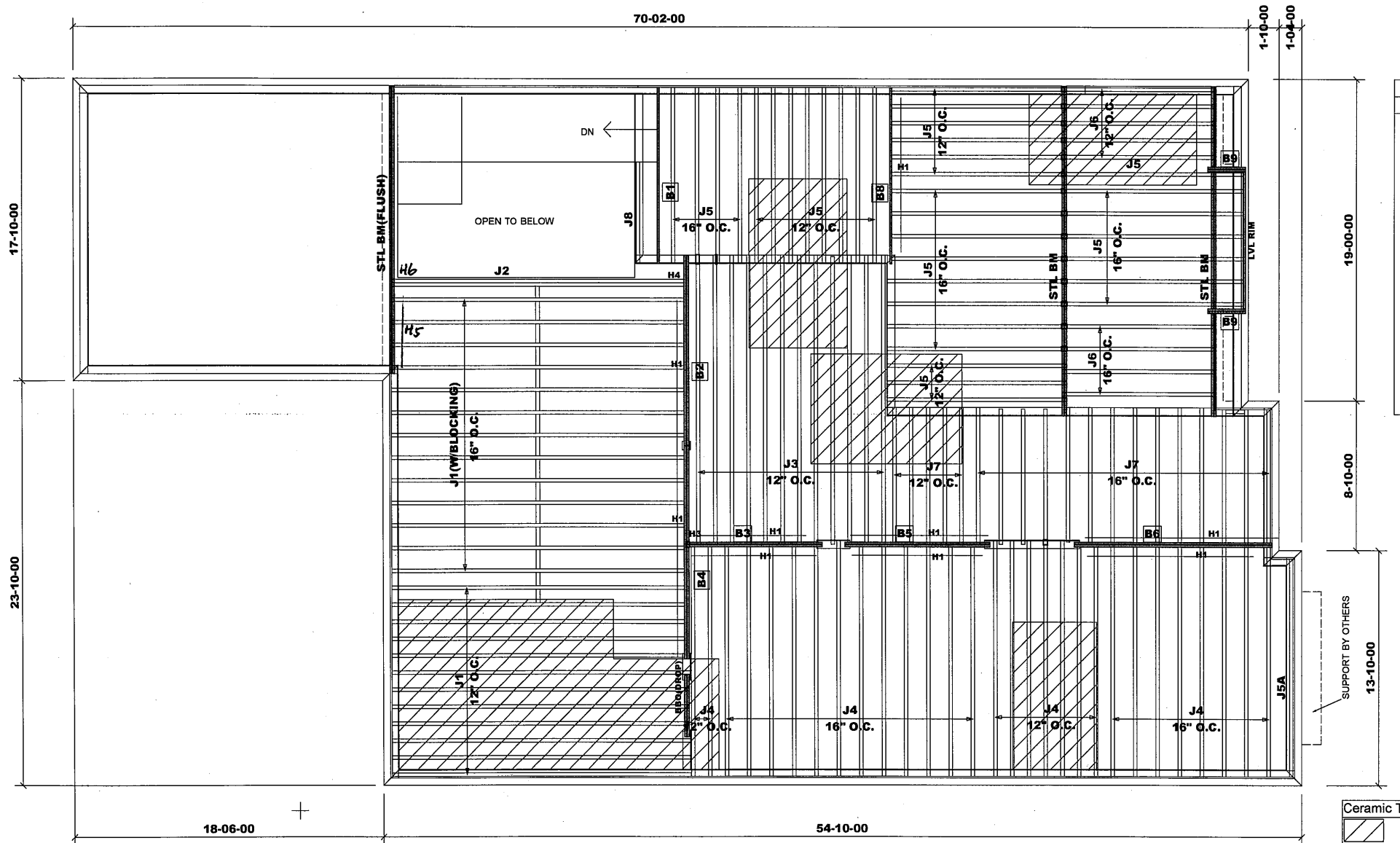
Do not scale - refer to architectural plans for dimensions

11 7/8" BLOCKING  
TOTAL LENGTH: 74'

REVISION: December 15, 2017

98839  
98915

|                        |                      |                         |                |                        |                    |
|------------------------|----------------------|-------------------------|----------------|------------------------|--------------------|
| JT/PL: 45147/95234     | Builder: Gold Park   | Location: Vaughan       | Designer: NL   | Alpa Roof Trusses Inc. | Salesperson: Derek |
| LI: (290673)<br>299731 | Project: Pine Valley | Date: November 12, 2017 | Sheet: 6 of 21 | Maple, Ontario         | Home Lumber        |



| Products |          |                  |       |         |
|----------|----------|------------------|-------|---------|
| PlotID   | Length   | Product          | Plies | Net Qty |
| J1       | 18-00-00 | 11 7/8" NI-20    | 1     | 25      |
| J2       | 18-00-00 | 11 7/8" NI-20    | 2     | 2       |
| J3       | 17-00-00 | 11 7/8" NI-20    | 1     | 12      |
| J4       | 14-00-00 | 11 7/8" NI-20    | 1     | 29      |
| J5A      | 13-00-00 | 11 7/8" NI-20    | 1     | 1       |
| J5       | 11-00-00 | 11 7/8" NI-20    | 1     | 36      |
| J6       | 10-00-00 | 11 7/8" NI-20    | 1     | 9       |
| J7       | 8-00-00  | 11 7/8" NI-20    | 1     | 19      |
| J8       | 6-00-00  | 11 7/8" NI-20    | 1     | 1       |
| B4       | 13-00-00 | VERSALAM-12 2.0E | 2     | 2       |
| B2       | 12-00-00 | VERSALAM-12 2.0E | 2     | 2       |
| B6       | 12-00-00 | VERSALAM-12 2.0E | 2     | 2       |
| B1       | 11-00-00 | VERSALAM-12 2.0E | 1     | 1       |
| B8       | 11-00-00 | VERSALAM-12 2.0E | 1     | 1       |
| LVL RIM  | 9-00-00  | VERSALAM-12 2.0E | 1     | 1       |
| B3       | 9-00-00  | VERSALAM-12 2.0E | 2     | 2       |
| B5       | 9-00-00  | VERSALAM-12 2.0E | 2     | 2       |
| B9       | 3-00-00  | VERSALAM-12 2.0E | 2     | 4       |

**HANGER SCHEDULE**

H6 --- HU310-2(FM)  
H1-----LT251188(TM)  
H3-----HGUS410(FM)  
H4-----MIT311.88-2(TM)  
H5 --- LF2511(FM)

**NOTE:**  
TM -----TOP MOUNT HANGERS  
FM-----FACE MOUNT HANGERS

**RIMBOARD**

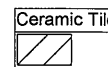
1- 1/8" X 11 7/8" O.S.B.

SUBFLOOR - 3/4" NAILED & GLUED

APP - AS PER PLAN  
BBO - BEAM BY OTHERS

Ceramic tile application as per O.B.C. 9.30.6

1-2X6 SPF#2 Squash Block req'd on one side of each joist under interior load bearing wall. Multiple Squash Blocks are req'd under concentrated loads.



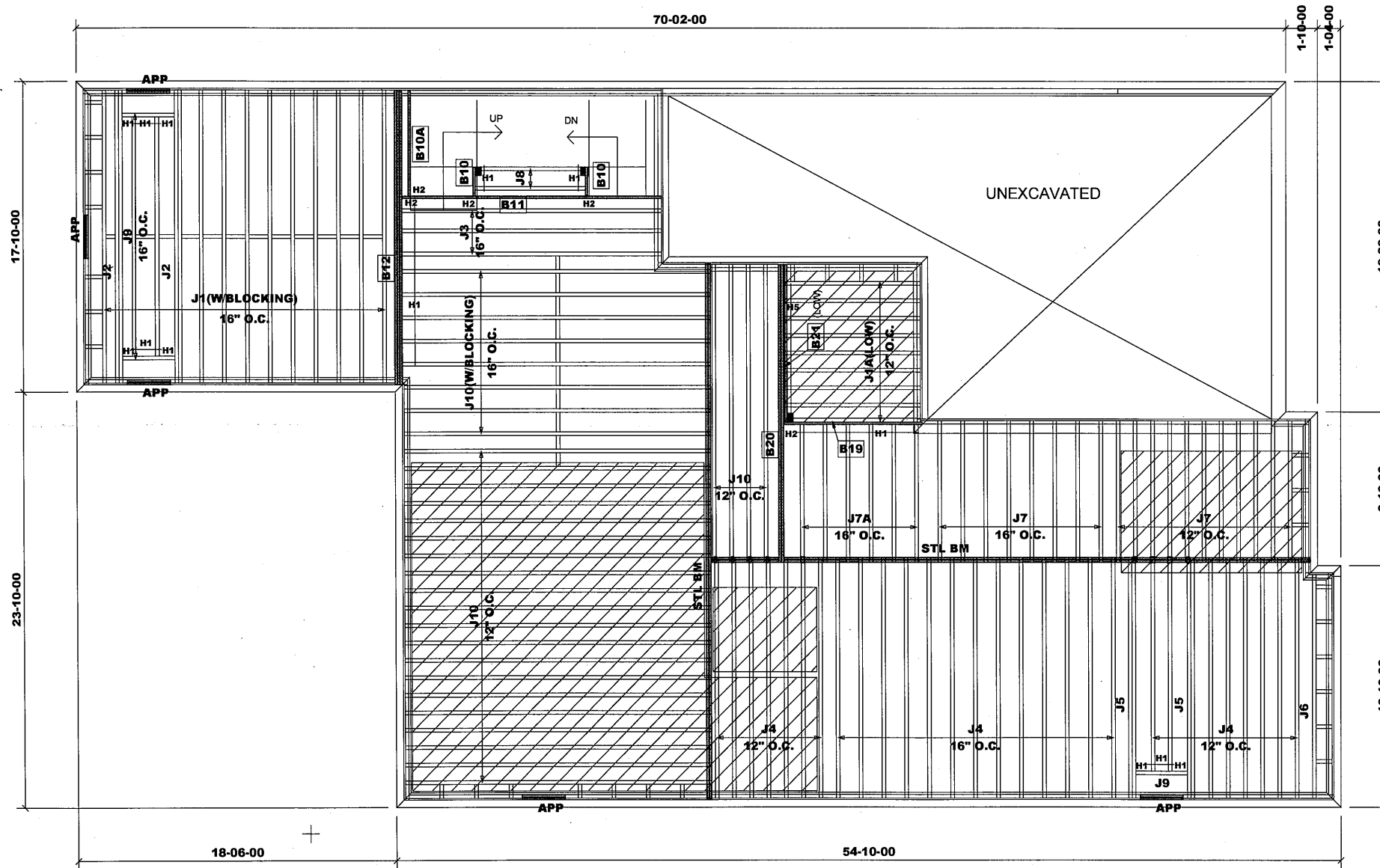
MODEL: UNIT 5004 - EL.B  
+OPT. LOGGIA(W/OPT. 5 BEDRM)

**Second Floor Framing**

Do not scale - refer to architectural plans for dimensions

11 7/8" BLOCKING  
TOTAL LENGTH: 19'

98839  
95915



| Products |          |                  |       |         |
|----------|----------|------------------|-------|---------|
| PlotID   | Length   | Product          | Plies | Net Qty |
| J1A      | 8-00-00  | 9 1/2" NI-20     | 1     | 9       |
| J1       | 17-00-00 | 11 7/8" NI-20    | 1     | 12      |
| J2       | 17-00-00 | 11 7/8" NI-20    | 2     | 4       |
| J3       | 16-00-00 | 11 7/8" NI-20    | 1     | 3       |
| J4       | 14-00-00 | 11 7/8" NI-20    | 1     | 28      |
| J5       | 14-00-00 | 11 7/8" NI-20    | 2     | 4       |
| J6       | 13-00-00 | 11 7/8" NI-20    | 1     | 1       |
| J7       | 9-00-00  | 11 7/8" NI-20    | 1     | 19      |
| J7A      | 8-00-00  | 11 7/8" NI-20    | 1     | 6       |
| J8       | 7-00-00  | 11 7/8" NI-20    | 1     | 2       |
| J9       | 3-00-00  | 11 7/8" NI-20    | 1     | 3       |
| J10      | 18-00-00 | 11 7/8" NI-40x   | 1     | 32      |
| B20      | 18-00-00 | VERSALAM-12 2.0E | 2     | 2       |
| B12      | 17-00-00 | VERSALAM-12 2.0E | 3     | 3       |
| B11      | 16-00-00 | VERSALAM-12 2.0E | 1     | 1       |
| B21      | 10-00-00 | VERSALAM-10 2.0E | 1     | 1       |
| B19      | 9-00-00  | VERSALAM-12 2.0E | 1     | 1       |
| B10A     | 7-00-00  | VERSALAM-12 2.0E | 1     | 1       |
| B10      | 2-00-00  | VERSALAM-12 2.0E | 1     | 2       |

**HANGER SCHEDULE**

H1-----LT251188 (TM)  
H2-----HUS1.81/10(FM)  
H5-----LT259(TM)

**NOTE:**  
TM -----TOP MOUNT HANGERS  
FM-----FACE MOUNT HANGERS

**RIMBOARD**

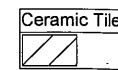
1- 1/8" X 9 1/2" O.S.B.  
1- 1/8" X 11 7/8" O.S.B.

**SUBFLOOR - 3/4" NAILED & GLUED**

APP - AS PER PLAN  
BBO - BEAM BY OTHERS

Ceramic tile application as per O.B.C. 9.30.6

1-2X6 SPF#2 Squash Block req'd on one side of each joist under interior load bearing wall. Multiple Squash Blocks are req'd under concentrated loads.



**MODEL: UNIT 5004 - EL.B  
+ OPT. LOGGIA(W/SUNKEN)**

**First Floor Framing**

Do not scale - refer to architectural plans for dimensions

11 7/8" BLOCKING

TOTAL LENGTH: 74'

**REVISION: December 15, 2017**

98829  
95915

JT/PL: 45147/95234  
LI:(290673)  
299731

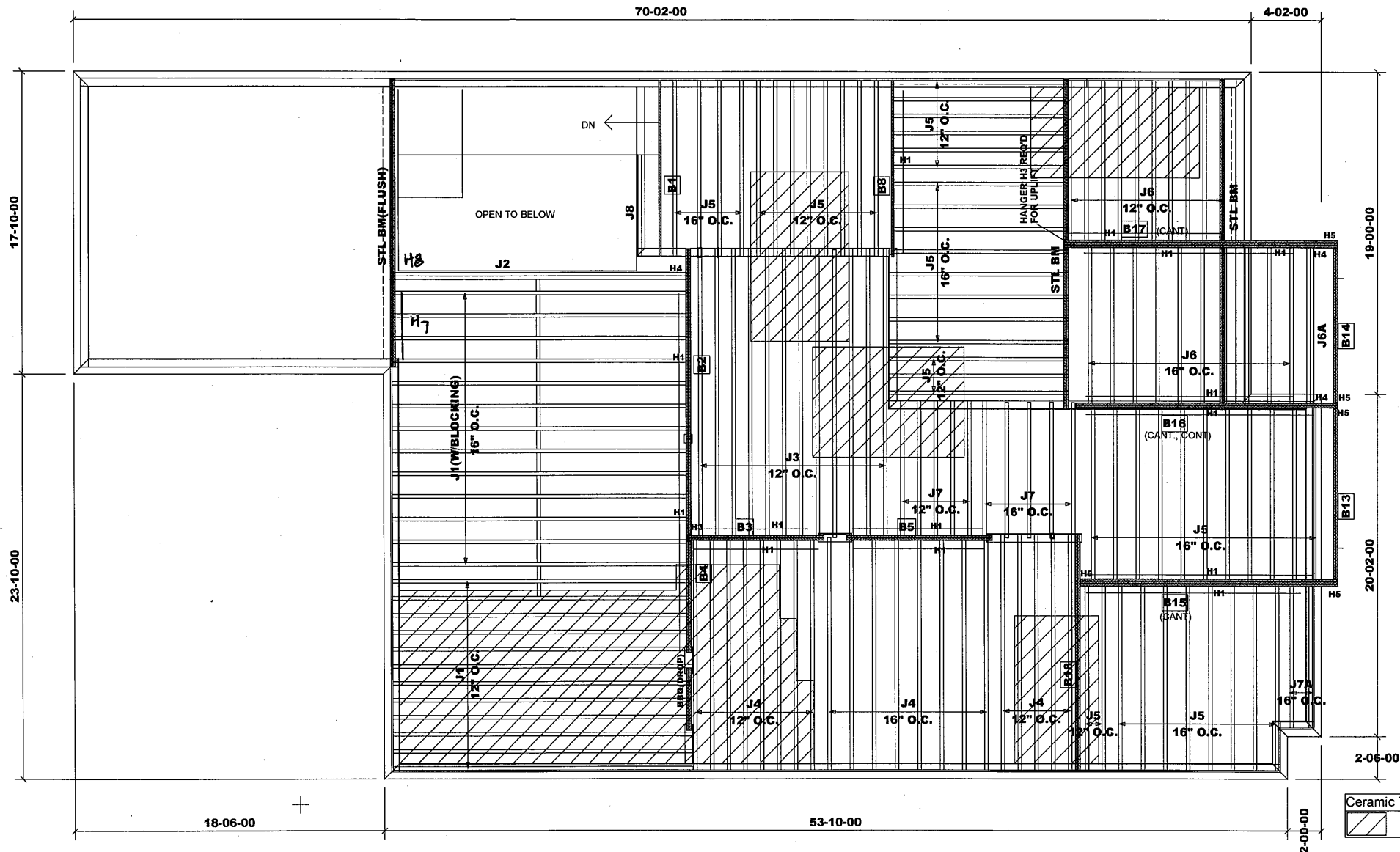
Builder: Gold Park  
Project: Pine Valley

Location: Vaughan  
Date: November 15, 2017

Designer: NL  
Sheet: 8 of 21

Alpa Roof Trusses Inc.  
Maple, Ontario

Salesperson: Derek  
Home Lumber



| Products |          |                  |       |         |
|----------|----------|------------------|-------|---------|
| PlotID   | Length   | Product          | Plies | Net Qty |
| J1       | 18-00-00 | 11 7/8" NI-20    | 1     | 25      |
| J2       | 18-00-00 | 11 7/8" NI-20    | 2     | 2       |
| J3       | 17-00-00 | 11 7/8" NI-20    | 1     | 12      |
| J4       | 14-00-00 | 11 7/8" NI-20    | 1     | 21      |
| J5       | 11-00-00 | 11 7/8" NI-20    | 1     | 50      |
| J6       | 10-00-00 | 11 7/8" NI-20    | 1     | 20      |
| J6A      | 10-00-00 | 11 7/8" NI-20    | 2     | 2       |
| J7A      | 9-00-00  | 11 7/8" NI-20    | 1     | 2       |
| J7       | 8-00-00  | 11 7/8" NI-20    | 1     | 10      |
| J8       | 6-00-00  | 11 7/8" NI-20    | 1     | 1       |
| B17      | 17-00-00 | VERSALAM-12 2.0E | 3     | 3       |
| B16      | 16-00-00 | VERSALAM-12 2.0E | 2     | 2       |
| B15      | 16-00-00 | VERSALAM-12 2.0E | 3     | 3       |
| B18      | 14-00-00 | VERSALAM-12 2.0E | 2     | 2       |
| B4       | 13-00-00 | VERSALAM-12 2.0E | 2     | 2       |
| B2       | 12-00-00 | VERSALAM-12 2.0E | 2     | 2       |
| B1       | 11-00-00 | VERSALAM-12 2.0E | 1     | 1       |
| B8       | 11-00-00 | VERSALAM-12 2.0E | 1     | 1       |
| B13      | 11-00-00 | VERSALAM-12 2.0E | 2     | 2       |
| B14      | 10-00-00 | VERSALAM-12 2.0E | 2     | 2       |
| B3       | 9-00-00  | VERSALAM-12 2.0E | 2     | 2       |
| B5       | 9-00-00  | VERSALAM-12 2.0E | 2     | 2       |

| HANGER SCHEDULE |                        |
|-----------------|------------------------|
| H2              | --- HU210-2 (FM)       |
| H1              | --- LT251188 (TM)      |
| H3              | --- HGUS410 (FM)       |
| H4              | --- MIT311.88-2 (TM)   |
| H5              | --- HUC410 (FM)        |
| H6              | --- HGUS5.5/10 (FM)    |
| H7              | --- LT2511 (FM)        |
| NOTE:           |                        |
| TM              | --- TOP MOUNT HANGERS  |
| FM              | --- FACE MOUNT HANGERS |

RIMBOARD  
 1- 1/8" X 11 7/8" O.S.B.  
 SUBFLOOR - 3/4" NAILED & GLUED  
 APP - AS PER PLAN  
 BBO - BEAM BY OTHERS

Ceramic tile application as per O.B.C. 9.30.6  
 1-2X6 SPF#2 Squash Block req'd on one side of each joint under interior load bearing wall. Multiple Squash Blocks are req'd under concentrated loads.

MODEL: UNIT 5004 - E.L.C  
 + OPT. LOGGIA

### Second Floor Framing

Do not scale - refer to architectural plans for dimensions

11 7/8" BLOCKING  
 TOTAL LENGTH: 19'

JT/PL: 45147/95234

Builder: Gold Park

Location: Vaughan

Designer: NL

Alpa Roof Trusses Inc.

Salesperson: Derek

LI(290673 )

Project: Pine Valley

Date: November 13, 2017

Sheet: 9 of 21

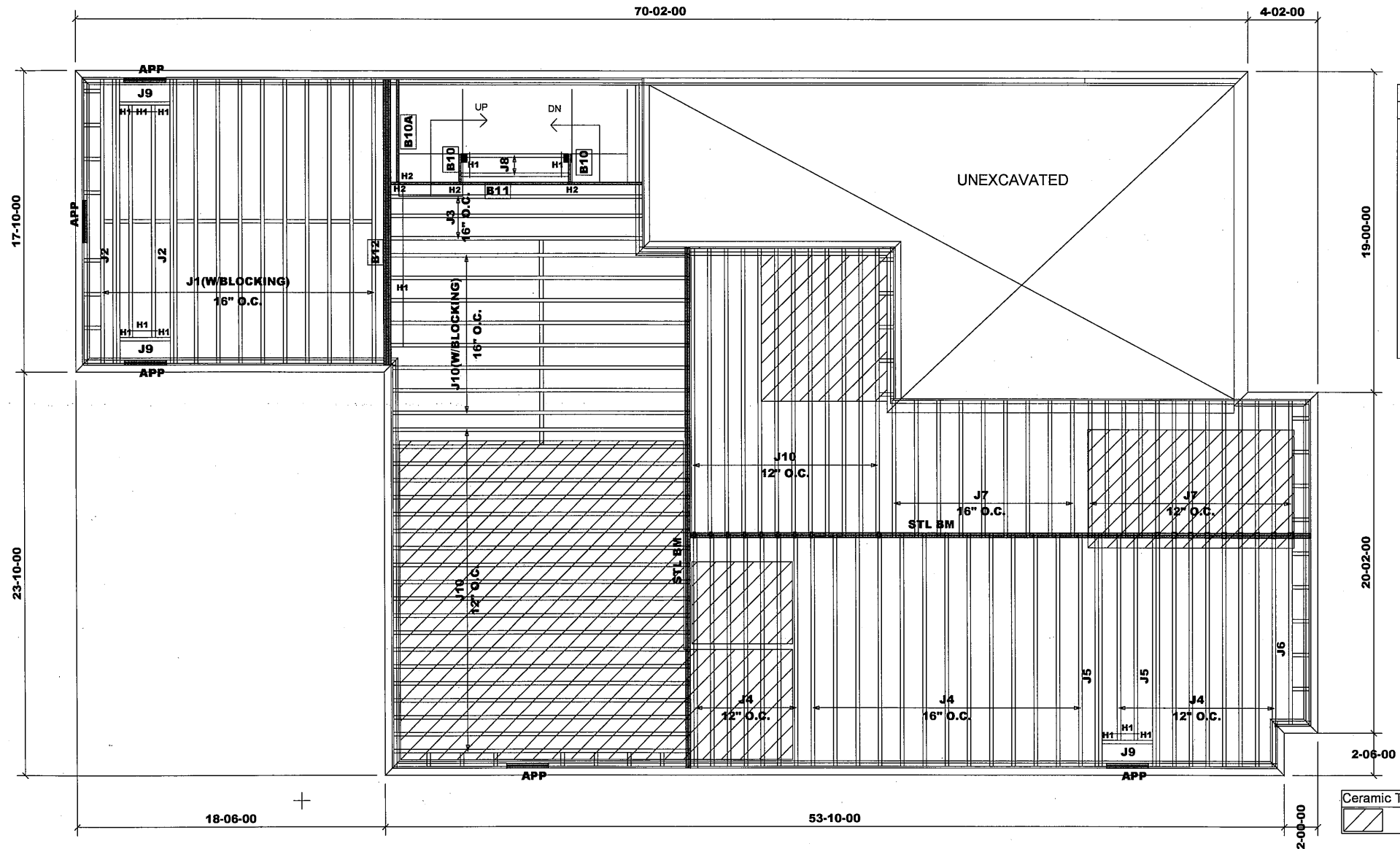
Maple, Ontario

Home Lumber

REV: July 3, 2018

98839  
 95915

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| Products |          |                  |       |         |
|----------|----------|------------------|-------|---------|
| PlotID   | Length   | Product          | Plies | Net Qty |
| J1       | 17-00-00 | 11 7/8" NI-20    | 1     | 12      |
| J2       | 17-00-00 | 11 7/8" NI-20    | 2     | 4       |
| J3       | 16-00-00 | 11 7/8" NI-20    | 1     | 3       |
| J4       | 14-00-00 | 11 7/8" NI-20    | 1     | 29      |
| J5       | 14-00-00 | 11 7/8" NI-20    | 2     | 4       |
| J6       | 12-00-00 | 11 7/8" NI-20    | 1     | 1       |
| J7       | 9-00-00  | 11 7/8" NI-20    | 1     | 22      |
| J8       | 7-00-00  | 11 7/8" NI-20    | 1     | 2       |
| J9       | 3-00-00  | 11 7/8" NI-20    | 1     | 3       |
| J10      | 18-00-00 | 11 7/8" NI-40x   | 1     | 40      |
| B12      | 17-00-00 | VERSALAM-12 2.0E | 3     | 3       |
| B11      | 16-00-00 | VERSALAM-12 2.0E | 1     | 1       |
| B10A     | 7-00-00  | VERSALAM-12 2.0E | 1     | 1       |
| B10      | 2-00-00  | VERSALAM-12 2.0E | 1     | 2       |

#### HANGER SCHEDULE

H1-----LT251188 (TM)  
H2-----HUS1.81/10(FM)

#### NOTE:

TM -----TOP MOUNT HANGERS  
FM-----FACE MOUNT HANGERS

#### RIMBOARD

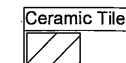
1- 1/8" X 11 7/8" O.S.B.

SUBFLOOR - 3/4" NAILED & GLUED

APP - AS PER PLAN  
BBO - BEAM BY OTHERS

Ceramic tile application as per O.B.C. 9.30.6

1-2X6 SPF#2 Squash Block req'd on one side of each joist under interior load bearing wall. Multiple Squash Blocks are req'd under concentrated loads.



MODEL: UNIT 5004 - EL.C  
+ OPT. LOGGIA

### First Floor Framing

Do not scale - refer to architectural plans for dimensions

11 7/8" BLOCKING

TOTAL LENGTH: 74'

REVISION: December 15, 2017

JT/PL: 45147/95234

Builder: Gold Park

Location: Vaughan

Designer: NL

Alpa Roof Trusses Inc.

Salesperson: Derek

LI:(290673)

Project: Pine Valley

Date: November 13, 2017

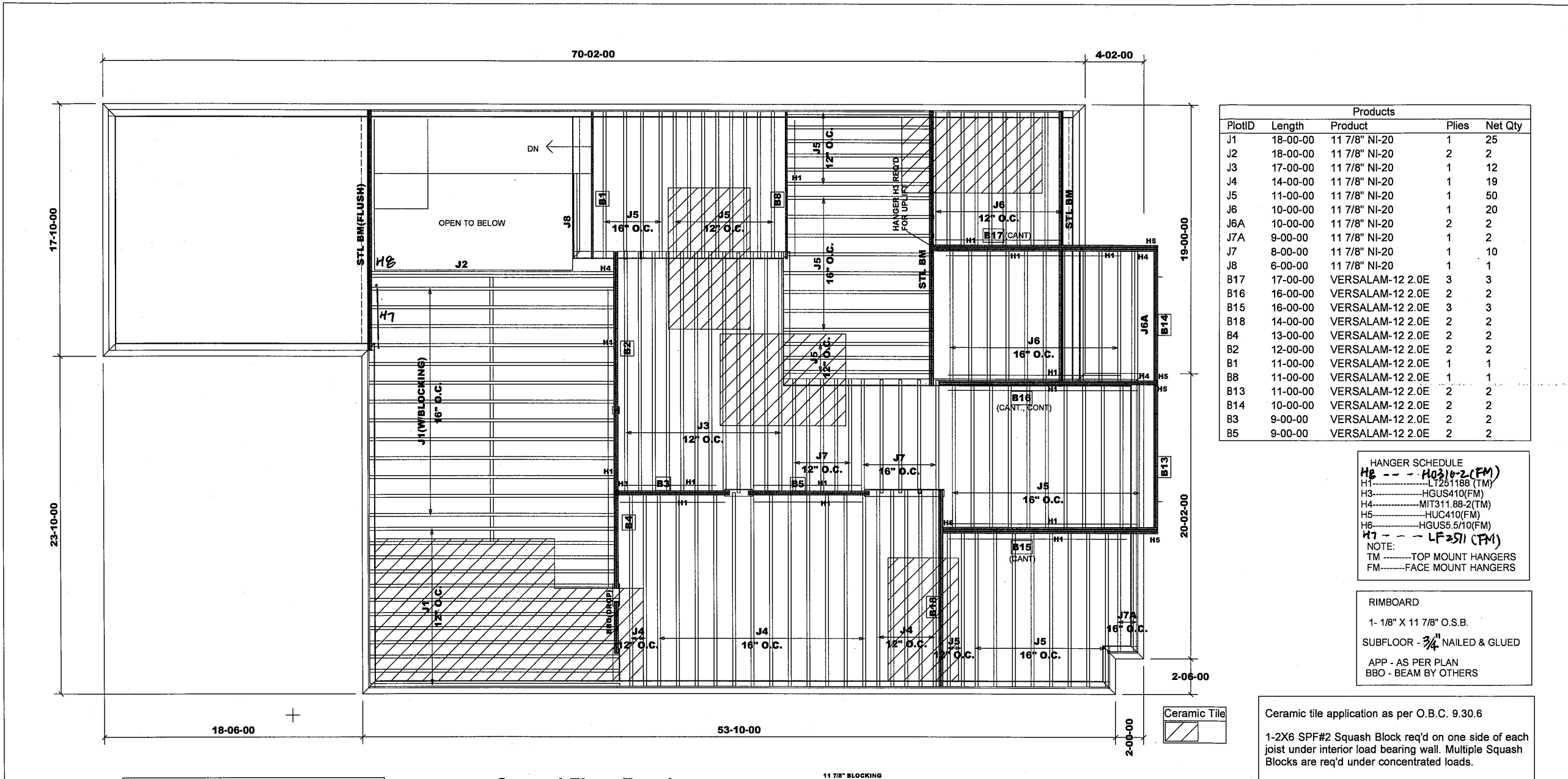
Sheet: 10 of 21

Maple, Ontario

Home Lumber

988379  
95915

299731



98839  
95915

JT/PL: 45147/95234

Builder: Gold Park

Location: Vaughan

Designer: NL

Alpa Roof Trusses Inc.

Salesperson: Derek

LI: (290673)

Project: Pine Valley

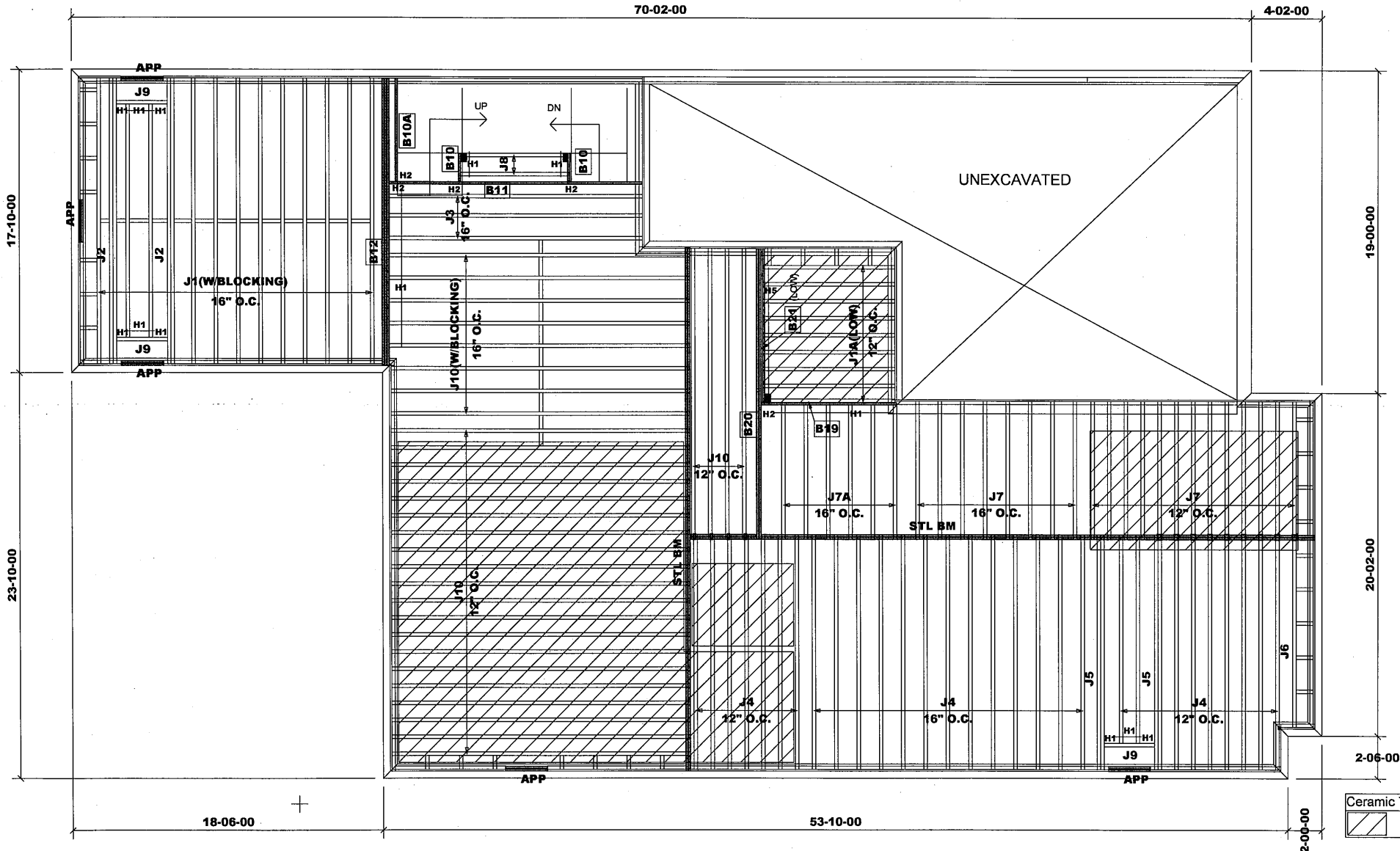
Date: November 15, 2017

Sheet: 11 of 21

Maple, Ontario

Home Lumber

299731



| Products |         |                  |       |         |
|----------|---------|------------------|-------|---------|
| PlotID   | Length  | Product          | Plies | Net Qty |
| J1A      | 8'-00"  | 9 1/2" NI-20     | 1     | 9       |
| J1       | 17'-00" | 11 7/8" NI-20    | 1     | 12      |
| J2       | 17'-00" | 11 7/8" NI-20    | 2     | 4       |
| J3       | 16'-00" | 11 7/8" NI-20    | 1     | 3       |
| J4       | 14'-00" | 11 7/8" NI-20    | 1     | 29      |
| J5       | 14'-00" | 11 7/8" NI-20    | 2     | 4       |
| J6       | 12'-00" | 11 7/8" NI-20    | 1     | 1       |
| J7       | 9'-00"  | 11 7/8" NI-20    | 1     | 21      |
| J7A      | 8'-00"  | 11 7/8" NI-20    | 1     | 1       |
| J8       | 7'-00"  | 11 7/8" NI-20    | 1     | 2       |
| J9       | 3'-00"  | 11 7/8" NI-20    | 1     | 3       |
| J10      | 18'-00" | 11 7/8" NI-40x   | 1     | 32      |
| J7A      | 8'-00"  | 11 7/8" NI-40x   | 1     | 5       |
| B20      | 18'-00" | VERSALAM-12 2.0E | 2     | 2       |
| B12      | 17'-00" | VERSALAM-12 2.0E | 3     | 3       |
| B11      | 16'-00" | VERSALAM-12 2.0E | 1     | 1       |
| B21      | 10'-00" | VERSALAM-10 2.0E | 1     | 1       |
| B19      | 9'-00"  | VERSALAM-12 2.0E | 1     | 1       |
| B10A     | 7'-00"  | VERSALAM-12 2.0E | 1     | 1       |
| B10      | 2'-00"  | VERSALAM-12 2.0E | 1     | 2       |

**HANGER SCHEDULE**

H1-----LT251188 (TM)  
H2-----HUS1.81/10(FM)  
H5-----LT259(TM)

**NOTE:**  
TM-----TOP MOUNT HANGERS  
FM-----FACE MOUNT HANGERS

**RIMBOARD**

1- 1/8" X 9 1/2" O.S.B.  
1- 1/8" X 11 7/8" O.S.B.

**SUBFLOOR - 3/4" NAILED & GLUED**

APP - AS PER PLAN  
BBO - BEAM BY OTHERS

Ceramic tile application as per O.B.C. 9.30.6

1-2X6 SPF#2 Squash Block req'd on one side of each joist under interior load bearing wall. Multiple Squash Blocks are req'd under concentrated loads.

**First Floor Framing**

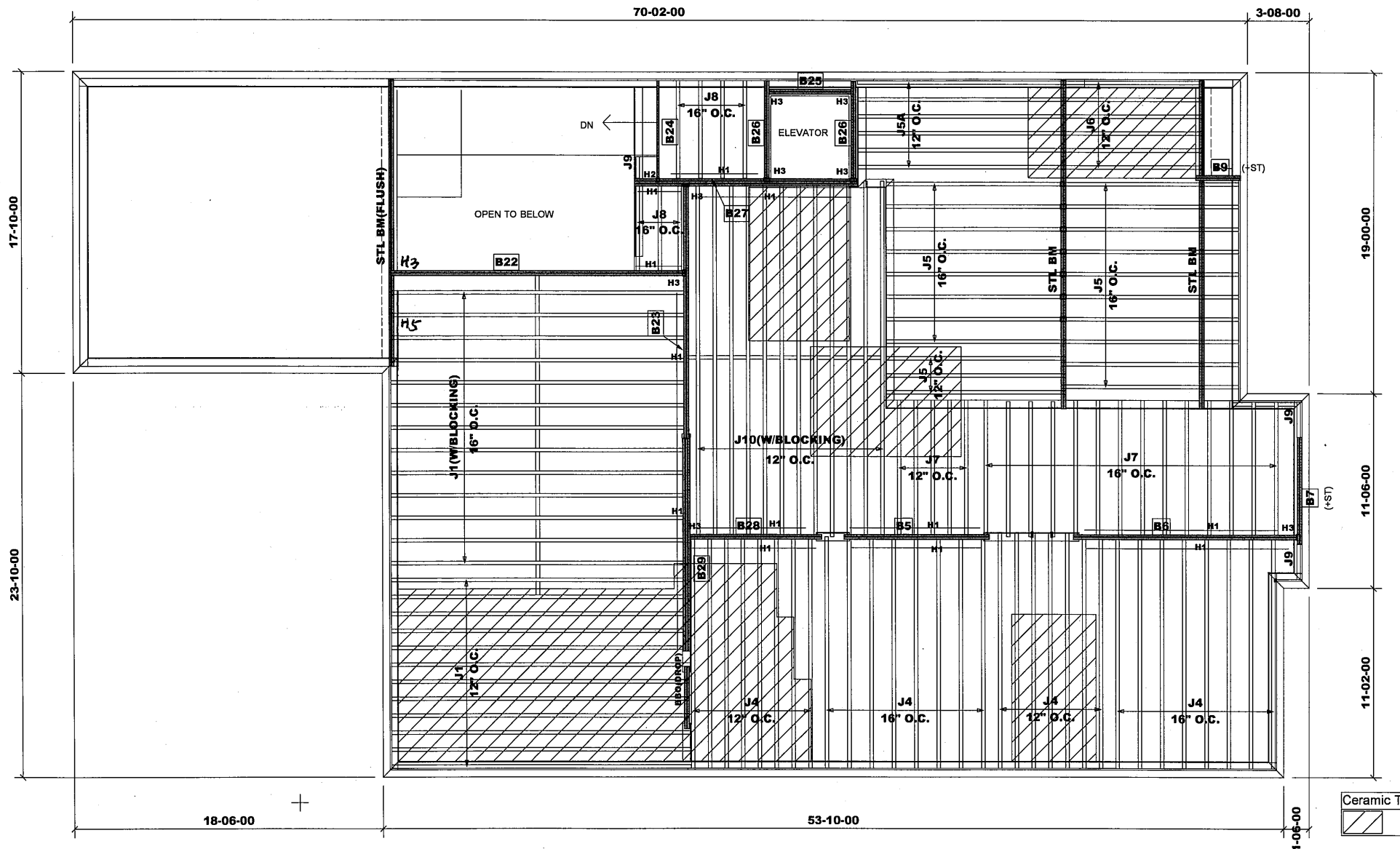
Do not scale - refer to architectural plans for dimensions

11 7/8" BLOCKING  
TOTAL LENGTH: 74'

**REVISION: December 15, 2017**

**MODEL: UNIT 5004 - EL.C  
+ OPT. LOGGIA(W/SUNKEN)**

98839  
95915



| Products |          |                  |       |         |
|----------|----------|------------------|-------|---------|
| PlotID   | Length   | Product          | Plies | Net Qty |
| J1       | 18-00-00 | 11 7/8" NI-20    | 1     | 25      |
| J4       | 14-00-00 | 11 7/8" NI-20    | 1     | 31      |
| J5A      | 13-00-00 | 11 7/8" NI-20    | 1     | 6       |
| J5       | 11-00-00 | 11 7/8" NI-20    | 1     | 21      |
| J6       | 9-00-00  | 11 7/8" NI-20    | 1     | 6       |
| J7       | 8-00-00  | 11 7/8" NI-20    | 1     | 19      |
| J8       | 6-00-00  | 11 7/8" NI-20    | 1     | 7       |
| J9       | 3-00-00  | 11 7/8" NI-20    | 1     | 3       |
| J10      | 21-00-00 | 11 7/8" NI-40x   | 1     | 12      |
| B22      | 18-00-00 | VERSALAM-12 2.0E | 2     | 2       |
| B23      | 15-00-00 | VERSALAM-12 2.0E | 2     | 2       |
| B6       | 14-00-00 | VERSALAM-12 2.0E | 2     | 2       |
| B27      | 14-00-00 | VERSALAM-12 2.0E | 3     | 3       |
| B29      | 13-00-00 | VERSALAM-12 2.0E | 3     | 3       |
| B5       | 9-00-00  | VERSALAM-12 2.0E | 2     | 2       |
| B28      | 8-00-00  | VERSALAM-12 2.0E | 2     | 2       |
| B7       | 7-00-00  | VERSALAM-12 2.0E | 2     | 2       |
| B24      | 6-00-00  | VERSALAM-12 2.0E | 1     | 1       |
| B26      | 6-00-00  | VERSALAM-12 2.0E | 2     | 4       |
| B25      | 5-00-00  | VERSALAM-12 2.0E | 2     | 2       |
| B9       | 3-00-00  | VERSALAM-12 2.0E | 2     | 2       |

| HANGER SCHEDULE |                    |
|-----------------|--------------------|
| H1              | LT251188 (TM)      |
| H2              | HUS1.81/10(FM)     |
| H3              | HGUS410(FM)        |
| H5              | LT2511 (FM)        |
| NOTE:           |                    |
| TM              | TOP MOUNT HANGERS  |
| FM              | FACE MOUNT HANGERS |

| RIMBOARD                       |  |
|--------------------------------|--|
| 1- 1/8" X 11 7/8" O.S.B.       |  |
| SUBFLOOR - 3/4" NAILED & GLUED |  |
| APP - AS PER PLAN              |  |
| BBO - BEAM BY OTHERS           |  |

Ceramic tile application as per O.B.C. 9.30.6

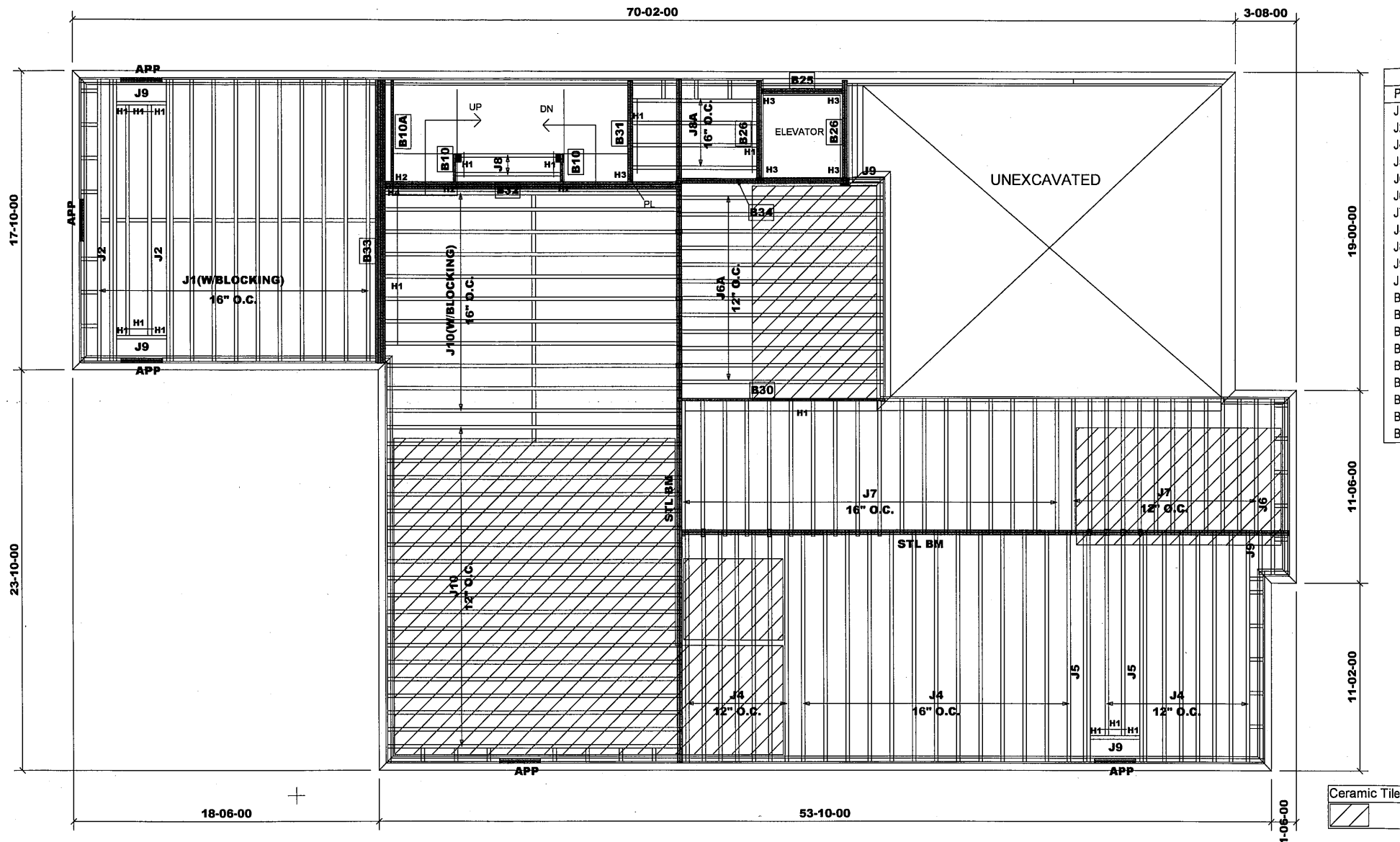
1-2X6 SPF#2 Squash Block req'd on one side of each joist under interior load bearing wall. Multiple Squash Blocks are req'd under concentrated loads.

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95915  
MODEL: UNIT 5004 - EL.A  
W/OPT. ELEVATOR  
REV: July 3, 2018

**Second Floor Framing**

Do not scale - refer to architectural plans for dimensions

11 7/8" BLOCKING  
TOTAL LENGTH: 30'



| Products |          |                  |       |         |
|----------|----------|------------------|-------|---------|
| PlotID   | Length   | Product          | Plies | Net Qty |
| J1       | 17-00-00 | 11 7/8" NI-20    | 1     | 12      |
| J2       | 17-00-00 | 11 7/8" NI-20    | 2     | 4       |
| J4       | 14-00-00 | 11 7/8" NI-20    | 1     | 28      |
| J5       | 14-00-00 | 11 7/8" NI-20    | 2     | 4       |
| J6A      | 13-00-00 | 11 7/8" NI-20    | 1     | 12      |
| J6       | 11-00-00 | 11 7/8" NI-20    | 1     | 1       |
| J7       | 9-00-00  | 11 7/8" NI-20    | 1     | 30      |
| J8A      | 8-00-00  | 11 7/8" NI-20    | 1     | 4       |
| J8       | 7-00-00  | 11 7/8" NI-20    | 1     | 2       |
| J9       | 3-00-00  | 11 7/8" NI-20    | 1     | 5       |
| J10      | 18-00-00 | 11 7/8" NI-40x   | 1     | 31      |
| B32      | 18-00-00 | VERSALAM-12 2.0E | 3     | 3       |
| B33      | 17-00-00 | VERSALAM-12 2.0E | 4     | 4       |
| B30      | 13-00-00 | VERSALAM-12 2.0E | 1     | 1       |
| B34      | 11-00-00 | VERSALAM-12 2.0E | 2     | 2       |
| B10A     | 7-00-00  | VERSALAM-12 2.0E | 1     | 1       |
| B31      | 7-00-00  | VERSALAM-12 2.0E | 2     | 2       |
| B26      | 6-00-00  | VERSALAM-12 2.0E | 2     | 4       |
| B25      | 5-00-00  | VERSALAM-12 2.0E | 2     | 2       |
| B10      | 2-00-00  | VERSALAM-12 2.0E | 1     | 2       |

#### HANGER SCHEDULE

H1-----LT251188 (TM)  
H2-----HUS1.81/10(FM)  
H3-----HGUS410(FM)  
H4-----HGUS5.5/10(FM)

#### NOTE:

TM-----TOP MOUNT HANGERS  
FM-----FACE MOUNT HANGERS

#### RIMBOARD

1- 1/8" X 11 7/8" O.S.B.  
SUBFLOOR - 3/4" NAILED & GLUED  
APP - AS PER PLAN  
BBO - BEAM BY OTHERS

Ceramic tile application as per O.B.C. 9.30.6

1-2X6 SPF#2 Squash Block req'd on one side of each joist under interior load bearing wall. Multiple Squash Blocks are req'd under concentrated loads.

MODEL: UNIT 5004 - EL.A  
W/OPT. ELEVATOR

### First Floor Framing

Do not scale - refer to architectural plans for dimensions

11 7/8" BLOCKING

TOTAL LENGTH: 74'

REVISION: December 15, 2017

JT/PL: 45147/95234

Builder: Gold Park

Location: Vaughan

Designer: NL

Alpa Roof Trusses Inc.

Salesperson: Derek

LI: 290673

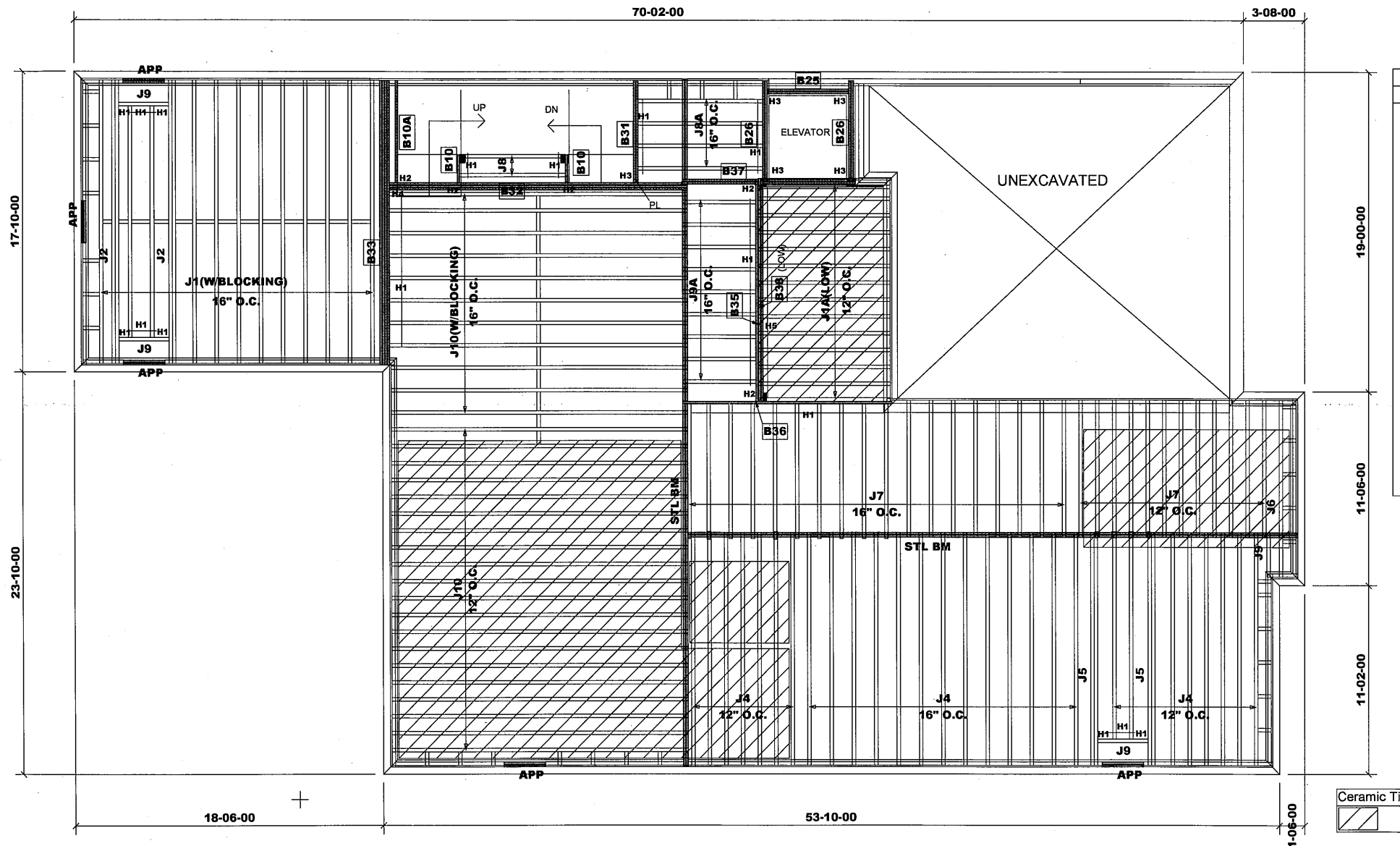
Project: Pine Valley

Date: November 16, 2017

Sheet: 14 of 21

Maple, Ontario

Home Lumber



| Products |          |                  |       |         |
|----------|----------|------------------|-------|---------|
| PlotID   | Length   | Product          | Plies | Net Qty |
| J1A      | 8-00-00  | 9 1/2" NI-20     | 1     | 14      |
| J1       | 17-00-00 | 11 7/8" NI-20    | 1     | 12      |
| J2       | 17-00-00 | 11 7/8" NI-20    | 2     | 4       |
| J4       | 14-00-00 | 11 7/8" NI-20    | 1     | 28      |
| J5       | 14-00-00 | 11 7/8" NI-20    | 2     | 4       |
| J6       | 11-00-00 | 11 7/8" NI-20    | 1     | 1       |
| J7       | 9-00-00  | 11 7/8" NI-20    | 1     | 30      |
| J8A      | 8-00-00  | 11 7/8" NI-20    | 1     | 4       |
| J8       | 7-00-00  | 11 7/8" NI-20    | 1     | 2       |
| J9A      | 5-00-00  | 11 7/8" NI-20    | 1     | 9       |
| J9       | 3-00-00  | 11 7/8" NI-20    | 1     | 4       |
| J10      | 18-00-00 | 11 7/8" NI-40x   | 1     | 31      |
| B32      | 18-00-00 | VERSALAM-12 2.0E | 3     | 3       |
| B33      | 17-00-00 | VERSALAM-12 2.0E | 4     | 4       |
| B35      | 14-00-00 | VERSALAM-12 2.0E | 1     | 1       |
| B38      | 14-00-00 | VERSALAM-10 2.0E | 2     | 2       |
| B36      | 13-00-00 | VERSALAM-12 2.0E | 1     | 1       |
| B37      | 11-00-00 | VERSALAM-12 2.0E | 2     | 2       |
| B10A     | 7-00-00  | VERSALAM-12 2.0E | 1     | 1       |
| B31      | 7-00-00  | VERSALAM-12 2.0E | 2     | 2       |
| B26      | 6-00-00  | VERSALAM-12 2.0E | 2     | 4       |
| B25      | 5-00-00  | VERSALAM-12 2.0E | 2     | 2       |
| B10      | 2-00-00  | VERSALAM-12 2.0E | 1     | 2       |

#### HANGER SCHEDULE

H1-----LT251188 (TM)  
H2-----HUS1.81/10(FM)  
H3-----HGUS410(FM)  
H4-----HGUS5.5/10(FM)  
H5-----LT259(TM)

#### NOTE:

TM -----TOP MOUNT HANGERS  
FM-----FACE MOUNT HANGERS

#### RIMBOARD

1- 1/8" X 9 1/2" O.S.B.  
1- 1/8" X 11 7/8" O.S.B.

SUBFLOOR- 3/4" NAILED & GLUED

APP - AS PER PLAN  
BBO - BEAM BY OTHERS

Ceramic tile application as per O.B.C. 9.30.6

1-2X6 SPF#2 Squash Block req'd on one side of each joist under interior load bearing wall. Multiple Squash Blocks are req'd under concentrated loads.

MODEL: UNIT 5004 - EL.A  
W/OPT. ELEVATOR(SUNKEN)

### First Floor Framing

Do not scale - refer to architectural plans for dimensions

11 7/8" BLOCKING

TOTAL LENGTH: 74'

REVISION: December 15, 2017

JT/PL: 45147/95234

Builder: Gold Park

Location: Vaughan

Designer: NL

Alpa Roof Trusses Inc.

Salesperson: Derek

LI: (290673)

Project: Pine Valley

Date: November 16, 2017

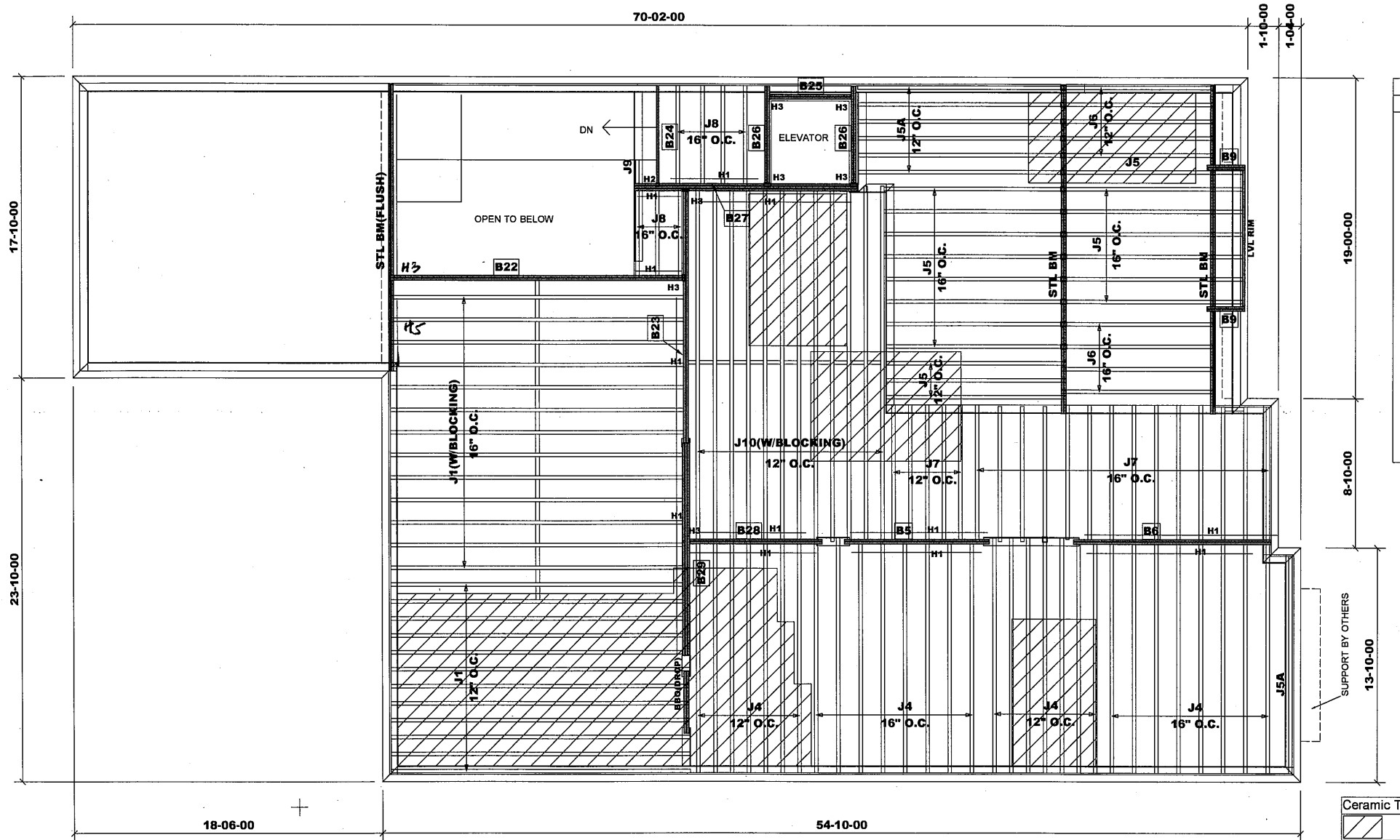
Sheet: 15 of 21

Maple, Ontario

Home Lumber

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95915

299731



| Products |          |                  |       |         |
|----------|----------|------------------|-------|---------|
| PlotID   | Length   | Product          | Plies | Net Qty |
| J1       | 18-00-00 | 11 7/8" NI-20    | 1     | 25      |
| J4       | 14-00-00 | 11 7/8" NI-20    | 1     | 30      |
| J5A      | 13-00-00 | 11 7/8" NI-20    | 1     | 7       |
| J5       | 11-00-00 | 11 7/8" NI-20    | 1     | 18      |
| J6       | 10-00-00 | 11 7/8" NI-20    | 1     | 9       |
| J7       | 8-00-00  | 11 7/8" NI-20    | 1     | 19      |
| J8       | 6-00-00  | 11 7/8" NI-20    | 1     | 7       |
| J9       | 2-00-00  | 11 7/8" NI-20    | 1     | 1       |
| J10      | 21-00-00 | 11 7/8" NI-40x   | 1     | 12      |
| B22      | 18-00-00 | VERSALAM-12 2.0E | 2     | 2       |
| B23      | 15-00-00 | VERSALAM-12 2.0E | 2     | 2       |
| B27      | 14-00-00 | VERSALAM-12 2.0E | 3     | 3       |
| B29      | 13-00-00 | VERSALAM-12 2.0E | 3     | 3       |
| B6       | 12-00-00 | VERSALAM-12 2.0E | 2     | 2       |
| LVL RIM  | 9-00-00  | VERSALAM-12 2.0E | 1     | 1       |
| B5       | 9-00-00  | VERSALAM-12 2.0E | 2     | 2       |
| B28      | 8-00-00  | VERSALAM-12 2.0E | 2     | 2       |
| B24      | 6-00-00  | VERSALAM-12 2.0E | 1     | 1       |
| B26      | 6-00-00  | VERSALAM-12 2.0E | 2     | 4       |
| B25      | 5-00-00  | VERSALAM-12 2.0E | 2     | 2       |
| B9       | 3-00-00  | VERSALAM-12 2.0E | 2     | 4       |

| HANGER SCHEDULE |                         |
|-----------------|-------------------------|
| H1              | -----LT251188 (TM)      |
| H2              | -----HUS1.81/10(FM)     |
| H3              | -----HGUS410(FM)        |
| H5              | -----LF250 (FM)         |
| NOTE:           |                         |
| TM              | -----TOP MOUNT HANGERS  |
| FM              | -----FACE MOUNT HANGERS |

| RIMBOARD                       |                       |
|--------------------------------|-----------------------|
| 1-                             | 1/8" X 11 7/8" O.S.B. |
| SUBFLOOR - 3/4" NAILED & GLUED |                       |
| APP                            | - AS PER PLAN         |
| BBO                            | - BEAM BY OTHERS      |

Ceramic tile application as per O.B.C. 9.30.6

1-2X6 SPF#2 Squash Block req'd on one side of each joist under interior load bearing wall. Multiple Squash Blocks are req'd under concentrated loads.

MODEL: UNIT 5004 - EL.B  
W/OPT. ELEVATOR

### Second Floor Framing

Do not scale - refer to architectural plans for dimensions

11 7/8" BLOCKING  
TOTAL LENGTH: 30'

REV: July 3, 2018

JT/PL: 45147/95234

Builder: Gold Park

Location: Vaughan

Designer: NL

Alpa Roof Trusses Inc.

Salesperson: Derek

LI: (290673)

Project: Pine Valley

Date: November 16, 2017

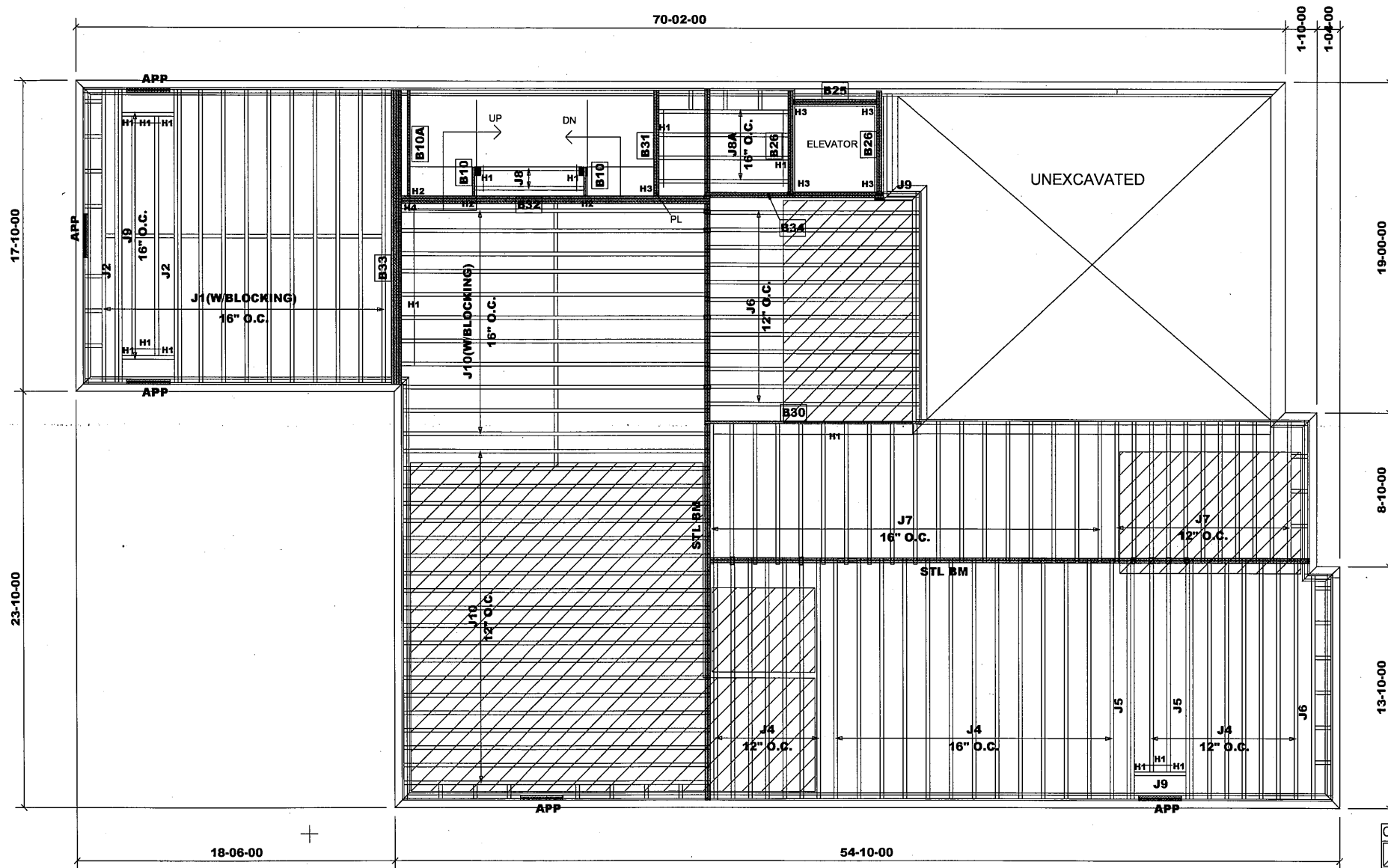
Sheet: 16 of 21

Maple, Ontario

Home Lumber

98879  
95915

299771



| Products |          |                  |       |         |
|----------|----------|------------------|-------|---------|
| PlotID   | Length   | Product          | Plies | Net Qty |
| J1       | 17-00-00 | 11 7/8" NI-20    | 1     | 12      |
| J2       | 17-00-00 | 11 7/8" NI-20    | 2     | 4       |
| J4       | 14-00-00 | 11 7/8" NI-20    | 1     | 28      |
| J5       | 14-00-00 | 11 7/8" NI-20    | 2     | 4       |
| J6       | 13-00-00 | 11 7/8" NI-20    | 1     | 13      |
| J7       | 9-00-00  | 11 7/8" NI-20    | 1     | 29      |
| J8A      | 8-00-00  | 11 7/8" NI-20    | 1     | 4       |
| J8       | 7-00-00  | 11 7/8" NI-20    | 1     | 2       |
| J9       | 3-00-00  | 11 7/8" NI-20    | 1     | 4       |
| J10      | 18-00-00 | 11 7/8" NI-40x   | 1     | 31      |
| B32      | 18-00-00 | VERSALAM-12 2.0E | 3     | 3       |
| B33      | 17-00-00 | VERSALAM-12 2.0E | 4     | 4       |
| B30      | 13-00-00 | VERSALAM-12 2.0E | 1     | 1       |
| B34      | 11-00-00 | VERSALAM-12 2.0E | 2     | 2       |
| B10A     | 7-00-00  | VERSALAM-12 2.0E | 1     | 1       |
| B31      | 7-00-00  | VERSALAM-12 2.0E | 2     | 2       |
| B26      | 6-00-00  | VERSALAM-12 2.0E | 2     | 4       |
| B25      | 5-00-00  | VERSALAM-12 2.0E | 2     | 2       |
| B10      | 2-00-00  | VERSALAM-12 2.0E | 1     | 2       |

| HANGER SCHEDULE |                    |
|-----------------|--------------------|
| H1-----         | LT251188 (TM)      |
| H2-----         | HUS1.81/10(FM)     |
| H3-----         | HGUS410(FM)        |
| H4-----         | HGUS5.5/10(FM)     |
| NOTE:           |                    |
| TM -----        | TOP MOUNT HANGERS  |
| FM -----        | FACE MOUNT HANGERS |

RIMBOARD  
 1- 1/8" X 11 7/8" O.S.B.  
 SUBFLOOR - 3/4" NAILED & GLUED  
 APP - AS PER PLAN  
 BBO - BEAM BY OTHERS

Ceramic tile application as per O.B.C. 9.30.6  
 1-2X6 SPF#2 Squash Block req'd on one side of each joist under interior load bearing wall. Multiple Squash Blocks are req'd under concentrated loads.

MODEL: UNIT 5004 - EL.B  
 W/OPT. ELEVATOR

First Floor Framing  
 Do not scale - refer to architectural plans for dimensions

11 7/8" BLOCKING  
 TOTAL LENGTH: 74'

REVISION: December 15, 2017

98839  
 95915

JT/PL: 45147/95234  
 LI:(290673)  
 299721

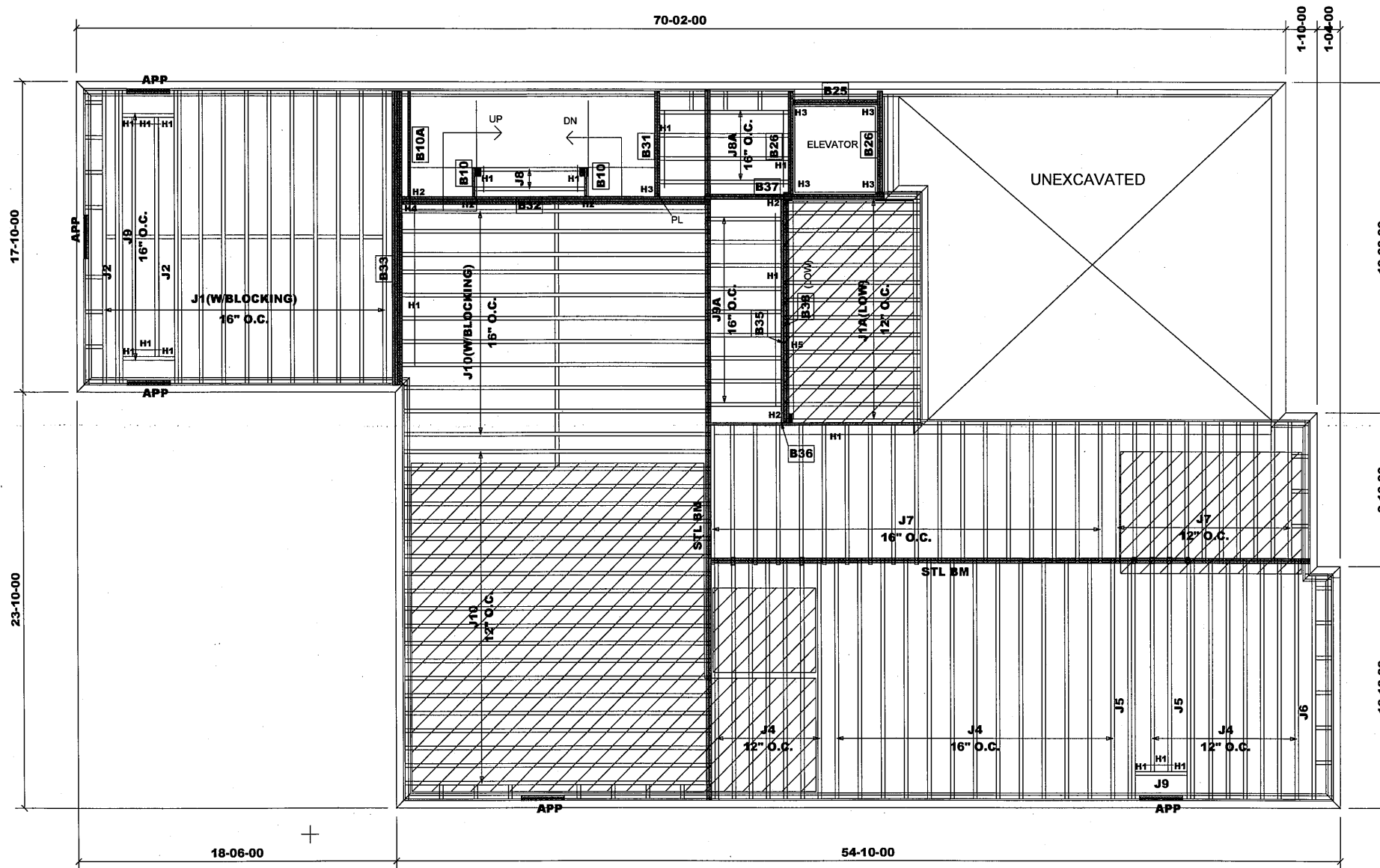
Builder: Gold Park  
 Project: Pine Valley

Location: Vaughan  
 Date: November 16, 2017

Designer: NL  
 Sheet: 17 of 21

Alpa Roof Trusses Inc.  
 Maple, Ontario

Salesperson: Derek  
 Home Lumber



| Products |          |                  |       |         |
|----------|----------|------------------|-------|---------|
| PlotID   | Length   | Product          | Plies | Net Qty |
| J1A      | 8-00-00  | 9 1/2" NI-20     | 1     | 14      |
| J1       | 17-00-00 | 11 7/8" NI-20    | 1     | 12      |
| J2       | 17-00-00 | 11 7/8" NI-20    | 2     | 4       |
| J4       | 14-00-00 | 11 7/8" NI-20    | 1     | 28      |
| J5       | 14-00-00 | 11 7/8" NI-20    | 2     | 4       |
| J6       | 13-00-00 | 11 7/8" NI-20    | 1     | 1       |
| J7       | 9-00-00  | 11 7/8" NI-20    | 1     | 29      |
| J8A      | 8-00-00  | 11 7/8" NI-20    | 1     | 4       |
| J8       | 7-00-00  | 11 7/8" NI-20    | 1     | 2       |
| J9A      | 5-00-00  | 11 7/8" NI-20    | 1     | 9       |
| J9       | 3-00-00  | 11 7/8" NI-20    | 1     | 3       |
| J10      | 18-00-00 | 11 7/8" NI-40x   | 1     | 31      |
| B32      | 18-00-00 | VERSALAM-12 2.0E | 3     | 3       |
| B33      | 17-00-00 | VERSALAM-12 2.0E | 4     | 4       |
| B35      | 14-00-00 | VERSALAM-12 2.0E | 1     | 1       |
| B38      | 14-00-00 | VERSALAM-10 2.0E | 2     | 2       |
| B36      | 13-00-00 | VERSALAM-12 2.0E | 1     | 1       |
| B37      | 11-00-00 | VERSALAM-12 2.0E | 2     | 2       |
| B10A     | 7-00-00  | VERSALAM-12 2.0E | 1     | 1       |
| B31      | 7-00-00  | VERSALAM-12 2.0E | 2     | 2       |
| B26      | 6-00-00  | VERSALAM-12 2.0E | 2     | 4       |
| B25      | 5-00-00  | VERSALAM-12 2.0E | 2     | 2       |
| B10      | 2-00-00  | VERSALAM-12 2.0E | 1     | 2       |

#### HANGER SCHEDULE

H1-----LT251188 (TM)  
H2-----HUS1.81/10(FM)  
H3-----HGUS410(FM)  
H4-----HGUS5.5/10(FM)  
H5-----LT259(TM)

#### NOTE:

TM -----TOP MOUNT HANGERS  
FM-----FACE MOUNT HANGERS

#### RIMBOARD

1- 1/8" X 9 1/2" O.S.B.  
1- 1/8" X 11 7/8" O.S.B.

SUBFLOOR - 3/4" NAILED & GLUED

APP - AS PER PLAN  
BBO - BEAM BY OTHERS

Ceramic tile application as per O.B.C. 9.30.6

1-2X6 SPF#2 Squash Block req'd on one side of each joist under interior load bearing wall. Multiple Squash Blocks are req'd under concentrated loads.

MODEL: UNIT 5004 - EL.B  
W/OPT. ELEVATOR(SUNKEN)

### First Floor Framing

Do not scale - refer to architectural plans for dimensions

11 7/8" BLOCKING

TOTAL LENGTH: 74'

REVISION: December 15, 2017

JT/PL: 45147/95234

Builder: Gold Park

Location: Vaughan

Designer: NL

Alpa Roof Trusses Inc.

Salesperson: Derek

LI: (290673)

Project: Pine Valley

Date: November 16, 2017

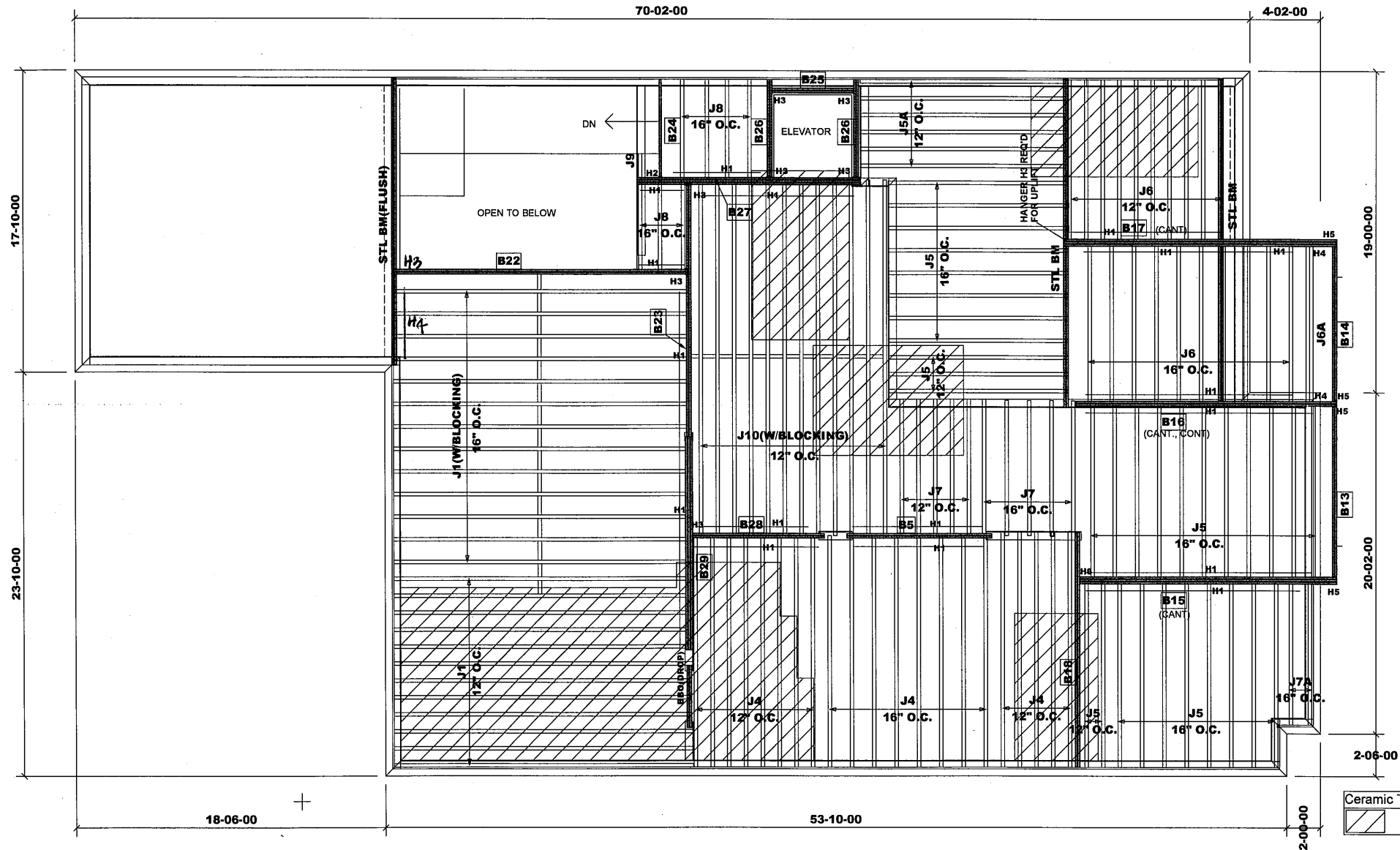
Sheet: 18 of 21

Maple, Ontario

Home Lumber

988379  
95915

299731



| Products |          |                  |       |         |
|----------|----------|------------------|-------|---------|
| PlotID   | Length   | Product          | Plies | Net Qty |
| J1       | 18-00-00 | 11 7/8" NI-20    | 1     | 25      |
| J4       | 14-00-00 | 11 7/8" NI-20    | 1     | 21      |
| J5A      | 13-00-00 | 11 7/8" NI-20    | 1     | 6       |
| J5       | 11-00-00 | 11 7/8" NI-20    | 1     | 32      |
| J6       | 10-00-00 | 11 7/8" NI-20    | 1     | 20      |
| J6A      | 10-00-00 | 11 7/8" NI-20    | 2     | 2       |
| J7A      | 9-00-00  | 11 7/8" NI-20    | 1     | 2       |
| J7       | 8-00-00  | 11 7/8" NI-20    | 1     | 10      |
| J8       | 6-00-00  | 11 7/8" NI-20    | 1     | 7       |
| J9       | 2-00-00  | 11 7/8" NI-20    | 1     | 1       |
| J10      | 21-00-00 | 11 7/8" NI-40x   | 1     | 12      |
| B22      | 18-00-00 | VERSALAM-12 2.0E | 2     | 2       |
| B17      | 17-00-00 | VERSALAM-12 2.0E | 3     | 3       |
| B16      | 16-00-00 | VERSALAM-12 2.0E | 2     | 2       |
| B15      | 16-00-00 | VERSALAM-12 2.0E | 3     | 3       |
| B23      | 15-00-00 | VERSALAM-12 2.0E | 2     | 2       |
| B18      | 14-00-00 | VERSALAM-12 2.0E | 2     | 2       |
| B27      | 14-00-00 | VERSALAM-12 2.0E | 3     | 3       |
| B29      | 13-00-00 | VERSALAM-12 2.0E | 3     | 3       |
| B13      | 11-00-00 | VERSALAM-12 2.0E | 2     | 2       |
| B14      | 10-00-00 | VERSALAM-12 2.0E | 2     | 2       |
| B5       | 9-00-00  | VERSALAM-12 2.0E | 2     | 2       |
| B28      | 8-00-00  | VERSALAM-12 2.0E | 2     | 2       |
| B24      | 6-00-00  | VERSALAM-12 2.0E | 1     | 1       |
| B26      | 6-00-00  | VERSALAM-12 2.0E | 2     | 4       |
| B25      | 5-00-00  | VERSALAM-12 2.0E | 2     | 2       |

| HANGER SCHEDULE |                     |
|-----------------|---------------------|
| H1              | -----LT251188 (TM)  |
| H2              | -----HUS1.81/10(FM) |
| H3              | -----HGUS410(FM)    |
| H4              | -----LT2511(FM)     |
| H5              | -----HUC410(FM)     |
| H6              | -----HGUS5.5/10(FM) |

NOTE:  
 TM -----TOP MOUNT HANGERS  
 FM -----FACE MOUNT HANGERS

RIMBOARD  
 1- 1/8" X 11 7/8" O.S.B.  
 SUBFLOOR - 3/4" NAILED & GLUED  
 APP - AS PER PLAN  
 BBO - BEAM BY OTHERS

Ceramic tile application as per O.B.C. 9.30.6  
 1-2X6 SPF#2 Squash Block req'd on one side of each joist under interior load bearing wall. Multiple Squash Blocks are req'd under concentrated loads.

MODEL: UNIT 5004 - E.L.C  
 W/OPT. ELEVATOR

## Second Floor Framing

Do not scale - refer to architectural plans for dimensions

11 7/8" BLOCKING  
 TOTAL LENGTH: 30'

REV: July 3, 2018

JT/PL: 45147/95234

Builder: Gold Park

Location: Vaughan

Designer: NL

Alpa Roof Trusses Inc.

Salesperson: Derek

LI: (290673)

Project: Pine Valley

Date: November 16, 2017

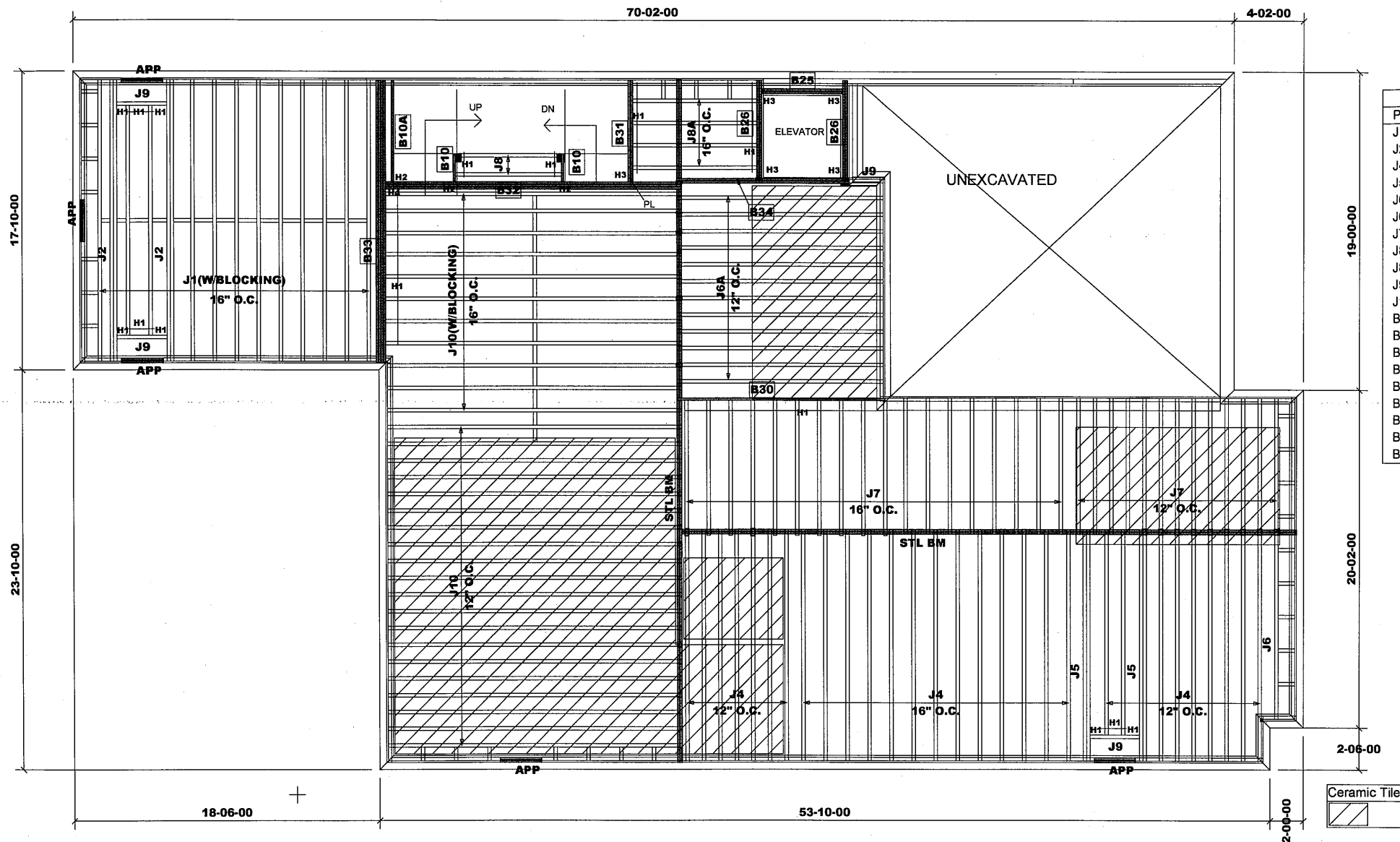
Sheet: 19 of 21

Maple, Ontario

Home Lumber

98839  
 95915

299731



| Products |          |                  |       |         |
|----------|----------|------------------|-------|---------|
| PlotID   | Length   | Product          | Plies | Net Qty |
| J1       | 17-00-00 | 11 7/8" NI-20    | 1     | 12      |
| J2       | 17-00-00 | 11 7/8" NI-20    | 2     | 4       |
| J4       | 14-00-00 | 11 7/8" NI-20    | 1     | 29      |
| J5       | 14-00-00 | 11 7/8" NI-20    | 2     | 4       |
| J6A      | 13-00-00 | 11 7/8" NI-20    | 1     | 12      |
| J6       | 12-00-00 | 11 7/8" NI-20    | 1     | 1       |
| J7       | 9-00-00  | 11 7/8" NI-20    | 1     | 31      |
| J8A      | 8-00-00  | 11 7/8" NI-20    | 1     | 4       |
| J8       | 7-00-00  | 11 7/8" NI-20    | 1     | 2       |
| J9       | 3-00-00  | 11 7/8" NI-20    | 1     | 4       |
| J10      | 18-00-00 | 11 7/8" NI-40x   | 1     | 31      |
| B32      | 18-00-00 | VERSALAM-12 2.0E | 3     | 3       |
| B33      | 17-00-00 | VERSALAM-12 2.0E | 4     | 4       |
| B30      | 13-00-00 | VERSALAM-12 2.0E | 1     | 1       |
| B34      | 11-00-00 | VERSALAM-12 2.0E | 2     | 2       |
| B10A     | 7-00-00  | VERSALAM-12 2.0E | 1     | 1       |
| B31      | 7-00-00  | VERSALAM-12 2.0E | 2     | 2       |
| B26      | 6-00-00  | VERSALAM-12 2.0E | 2     | 4       |
| B25      | 5-00-00  | VERSALAM-12 2.0E | 2     | 2       |
| B10      | 2-00-00  | VERSALAM-12 2.0E | 1     | 2       |

#### HANGER SCHEDULE

H1-----LT251188 (TM)  
H2-----HUS1.81/10(FM)  
H3-----HGUS410(FM)  
H4-----HGUS5.5/10(FM)

#### NOTE:

TM -----TOP MOUNT HANGERS  
FM-----FACE MOUNT HANGERS

#### RIMBOARD

1- 1/8" X 11 7/8" O.S.B.

SUBFLOOR - 3/4" NAILED & GLUED

APP - AS PER PLAN  
BBO - BEAM BY OTHERS

Ceramic tile application as per O.B.C. 9.30.6

1-2X6 SPF#2 Squash Block req'd on one side of each joist under interior load bearing wall. Multiple Squash Blocks are req'd under concentrated loads.

MODEL: UNIT 5004 - EL.C  
W/OPT. ELEVATOR

### First Floor Framing

Do not scale - refer to architectural plans for dimensions

11 7/8" BLOCKING  
TOTAL LENGTH: 74'

REVISION: December 15, 2017

JT/PL: 45147/95234

Builder: Gold Park

Location: Vaughan

Designer: NL

Alpa Roof Trusses Inc.

Salesperson: Derek

LI: (290673)

Project: Pine Valley

Date: November 16, 2017

Sheet: 20 of 21

Maple, Ontario

Home Lumber

98839  
95915

299731





Boise Cascade

Single 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP

Floor Beam\B01



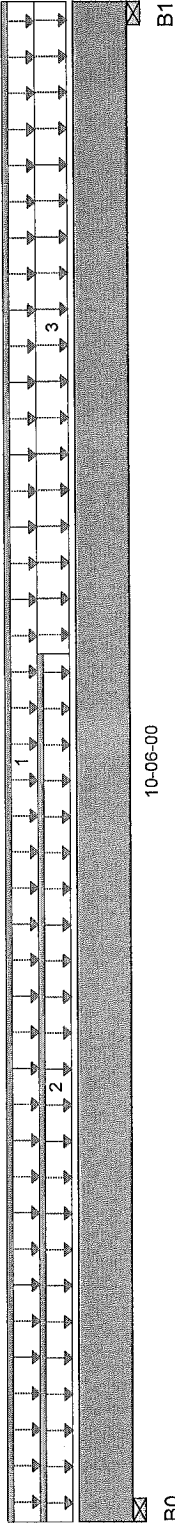
BC CALC® Design Report

Dry | 1 span | No cantilevers | 0/12 slope (deg)

November 15, 2017 14:14:59

Build 6080  
Job Name: 45147 (5004)  
Address: Pine Valley  
City, Province, Postal Code: Vaughan, ON  
Customer: Gold Park  
Code reports: CCMC 12472-R

File Name: 290673.bcc  
Description: Second Floor Framing  
Specifier:  
Designer: NL  
Company: Alpa Roof Trusses  
Misc:



Total Horizontal Product Length = 10-06-00

Reaction Summary (Down / Uplift) (lbs )

| Bearing    | Live      | Dead    |
|------------|-----------|---------|
| B0, 3-1/2" | 513 / 0   | 261 / 0 |
| B1, 3-1/2" | 1,192 / 0 | 505 / 0 |

Load Summary

| Tag Description | Load Type           | Ref. | Start    | End      | Live | Dead | Snow | Wind | Trib.    |
|-----------------|---------------------|------|----------|----------|------|------|------|------|----------|
| 1               | Unf. Lin. (lb/ft)   | L    | 00-00-00 | 10-06-00 | 27   | 14   |      |      | n/a      |
| 2               | Unf. Lin. (lb/ft)   | L    | 00-00-00 | 06-00-00 | 27   | 14   |      |      | n/a      |
| 3               | Unf. Area (lb/ft^2) | L    | 06-00-00 | 10-06-00 | 40   | 15   |      |      | 07-00-00 |

Controls Summary

| Pos.             | Factored Demand | Factored Resistance | Demand / Resistance | Load Case | Location |
|------------------|-----------------|---------------------|---------------------|-----------|----------|
| Pos. Moment      | 4,209 ft-lbs    | 17,696 ft-lbs       | 23.8%               | 1         | 06-07-04 |
| End Shear        | 1,630 lbs       | 7,232 lbs           | 22.5%               | 1         | 09-02-10 |
| Total Load Defl. | L/999 (0.103")  | n/a                 | n/a                 | 4         | 05-06-11 |
| Live Load Defl.  | L/999 (0.071")  | n/a                 | n/a                 | 5         | 05-06-11 |
| Max Defl.        | 0.103"          | n/a                 | n/a                 | 4         | 05-06-11 |
| Span / Depth     | 10.1            | n/a                 | n/a                 |           | 00-00-00 |
| Squash Blocks    | Valid           |                     |                     |           |          |

Disclosure

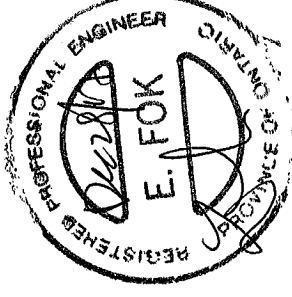
Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of Boise Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call 1-800-964-6999 before installation.

Bearing Supports

|               | Dim. (L x W)    | Demand    | Demand/Resistance Support | Demand/Resistance Member | Material        |
|---------------|-----------------|-----------|---------------------------|--------------------------|-----------------|
| B0 Wall/Plate | 3-1/2" x 1-3/4" | 1,096 lbs | 29.1%                     | 14.7%                    | Spruce Pine Fir |
| B1 Wall/Plate | 3-1/2" x 1-3/4" | 2,420 lbs | 64.2%                     | 32.4%                    | Spruce Pine Fir |

Notes

Design meets Code minimum (L/240) Total load deflection criteria.  
Design meets Code minimum (L/360) Live load deflection criteria.  
Design meets User specified (1") Maximum Total 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 2010 and CSA O86.  
Design based on Dry Service Condition.  
Importance Factor : Normal Part code : Part 4



BC CALC®, BC FRAMER®, AJS™, ALLJOIST®, BC RIM BOARD™, BC®, BOISE GLULAM™, SIMPLE FRAMING SYSTEM®, VERSA-LAM®, VERSA-RIM PLUS®, VERSA-RIM®, VERSA-STRAND®, VERSA-STUD® are trademarks of Boise Cascade Wood Products L.L.C.

S.152508



Boise Cascade

# Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP

Floor Beam\B02

Dry | 1 span | No cantilevers | 0/12 slope (deg)

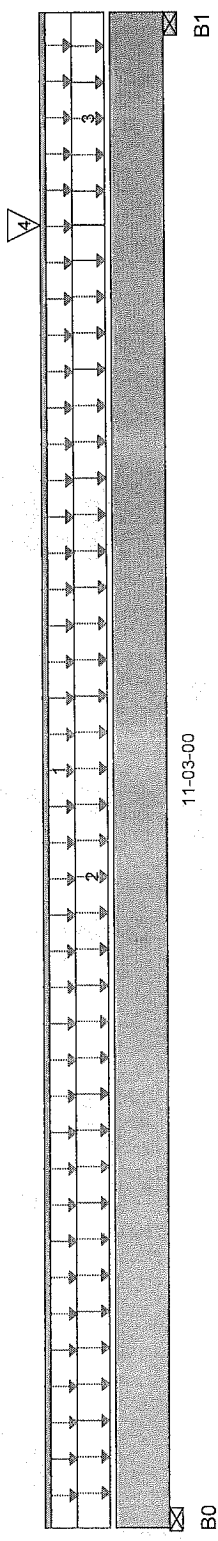
November 15, 2017 14:15:00

## BC CALCO® Design Report



Build 6080  
Job Name: 45147 (5004)  
Address: Pine Valley  
City, Province, Postal Code: Vaughan, ON  
Customer: Gold Park  
Code reports: CCMC 12472-R

File Name: 290673.bcc  
Description: Second Floor Framing  
Specifier:  
Designer: NL  
Company: Alpa Roof Trusses  
Misc:



Total Horizontal Product Length = 11-03-00

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

| Bearing    | Live      | Dead      | Snow | Wind |
|------------|-----------|-----------|------|------|
| B0, 3"     | 2,143 / 0 | 1,297 / 0 |      |      |
| B1, 3-1/2" | 1,735 / 0 | 1,552 / 0 |      |      |

## Load Summary

| Tag Description | Load Type          | Ref. | Start    | End      | Live | Dead | Snow | Wind | Trib.    |
|-----------------|--------------------|------|----------|----------|------|------|------|------|----------|
| 1               | Unf. Lin. (lb/ft)  | L    | 00-00-00 | 11-03-00 | 27   | 74   |      |      | n/a      |
| 2               | Unf. Area (lb/ft²) | L    | 00-00-00 | 09-08-00 | 40   | 15   |      |      | 09-00-00 |
| 3               | Unf. Area (lb/ft²) | L    | 09-08-00 | 11-03-00 | 40   | 15   |      |      | 01-06-00 |
| 4               | Conc. Pt. (lbs)    | L    | 09-08-00 | 09-08-00 |      | 540  |      |      | n/a      |

## Controls Summary

|                  | Factored Demand | Factored Resistance | Demand / Resistance | Load Case | Location |
|------------------|-----------------|---------------------|---------------------|-----------|----------|
| Pos. Moment      | 12,755 ft-lbs   | 35,392 ft-lbs       | 36%                 | 1         | 05-07-00 |
| End Shear        | 4,201 lbs       | 14,464 lbs          | 29%                 | 1         | 09-11-10 |
| Total Load Defl. | L/659 (0.197")  | 0.542"              | 36.4%               | 4         | 05-07-00 |
| Live Load Defl.  | L/999 (0.119")  | n/a                 | n/a                 | 5         | 05-07-00 |
| Max Defl.        | 0.197"          | 1"                  | 19.7%               | 4         | 05-07-00 |
| Span / Depth     | 10.9            | n/a                 | n/a                 |           | 00-00-00 |
| Squash Blocks    | Valid           |                     |                     |           |          |

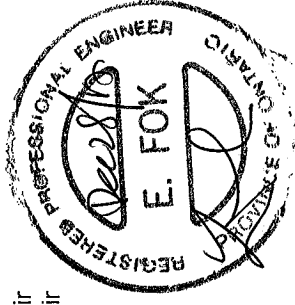
## Bearing Supports

|               | Dim. (L x W)    | Demand    | Demand/ Resistance Support | Demand/ Resistance Member | Material        |
|---------------|-----------------|-----------|----------------------------|---------------------------|-----------------|
| B0 Wall/Plate | 3" x 3-1/2"     | 4,836 lbs | 74.9%                      | 37.8%                     | Spruce Pine Fir |
| B1 Wall/Plate | 3-1/2" x 3-1/2" | 4,542 lbs | 60.3%                      | 30.4%                     | Spruce Pine Fir |

## Notes

Design meets Code minimum (L/240) Total load deflection criteria.  
Design meets Code minimum (L/360) Live load deflection criteria.  
Design meets User specified (1") Maximum Total 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 2010 and CSA

O86.  
Design based on Dry Service Condition.  
Importance Factor : Normal Part code : Part 4  
Nail one ply to another with  
3 1/2" spiral nails @ 10"  
o.c, staggered in 2 rows



S.152509



Dry | 1 span | No cantilevers | 0/12 slope (deg)

November 15, 2017 14:15:00



BC CALCO Design Report

Build 6080

Job Name: 45147 (5004)

Address: Pine Valley

City, Province, Postal Code: Vaughan, ON

Customer: Gold Park

Code reports: CCMC 12472-R

File Name: 290673.bcc

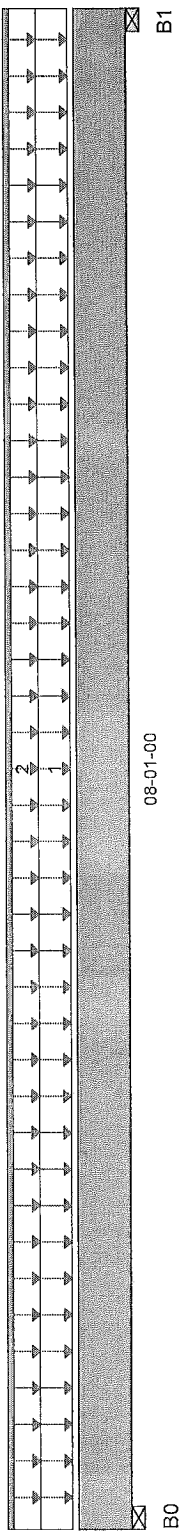
Description: Second Floor Framing

Specifier: NL

Designer: ALPA

Company: Alpha Roof Trusses

Misc:



Total Horizontal Product Length = 08-01-00

| Reaction Summary (Down / Uplift) ( lbs ) |           |           |      |      |  |
|------------------------------------------|-----------|-----------|------|------|--|
| Bearing                                  | Live      | Dead      | Snow | Wind |  |
| B0, 3-1/2"                               | 2,506 / 0 | 1,544 / 0 |      |      |  |
| B1, 3-1/2"                               | 2,506 / 0 | 1,544 / 0 |      |      |  |

| Load Summary    |                     |      |          |          |          |
|-----------------|---------------------|------|----------|----------|----------|
| Tag Description | Load Type           | Ref. | Start    | End      | Live     |
| 1               | Unf. Area (lb/ft^2) | L    | 00-00-00 | 08-01-00 | 40       |
| 2               | Unf. Lin. (lb/ft)   | L    | 00-00-00 | 08-01-00 | 60       |
|                 |                     |      |          |          | Dead     |
|                 |                     |      |          |          | 20       |
|                 |                     |      |          |          | 60       |
|                 |                     |      |          |          | 15-06-00 |
|                 |                     |      |          |          | n/a      |

| Controls Summary |                |                 |                     |                     |           |
|------------------|----------------|-----------------|---------------------|---------------------|-----------|
| Pos.             | Moment         | Factored Demand | Factored Resistance | Demand / Resistance | Load Case |
| 1                | 10,229 ft-lbs  | 35,392 ft-lbs   | 28.9%               | 1                   | 04-00-08  |
| End Shear        | 3,885 lbs      | 14,464 lbs      | 26.9%               | 1                   | 01-03-06  |
| Total Load Defl. | L/999 (0.078") | n/a             | n/a                 | 4                   | 04-00-08  |
| Live Load Defl.  | L/999 (0.048") | n/a             | n/a                 | 5                   | 04-00-08  |
| Max Defl.        | 0.078"         | n/a             | n/a                 | 4                   | 04-00-08  |
| Span / Depth     | 7.7            | n/a             | n/a                 |                     | 00-00-00  |
| Squash Blocks    | Valid          |                 |                     |                     |           |

| Bearing Supports |                 |           |                             |                            |                 |
|------------------|-----------------|-----------|-----------------------------|----------------------------|-----------------|
|                  | Dim. (L x W)    | Demand    | Demand / Resistance Support | Demand / Resistance Member | Material        |
| B0               | 3-1/2" x 3-1/2" | 5,689 lbs | 75.5%                       | 38.1%                      | Spruce Pine Fir |
| B1               | 3-1/2" x 3-1/2" | 5,689 lbs | 75.5%                       | 38.1%                      | Spruce Pine Fir |

Notes

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

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

Design meets User specified (1") Maximum Total 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 2010 and CSA O86.

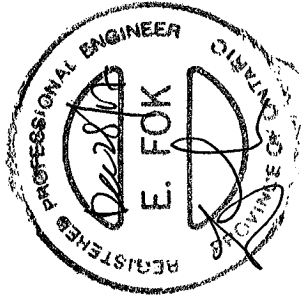
Design based on Dry Service Condition.

Importance Factor : Normal

Part code : Part 4

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

O.C, staggered in 2 rows



S152510



Boise Cascade

# Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP

Floor Beam\B04

Dry | 1 span | No cantilevers | 0/12 slope (deg)

November 15, 2017 14:15:01



BC CALC® Design Report

Build 6080

Job Name: 45147 (5004)

Address: Pine Valley

City, Province, Postal Code: Vaughan, ON

Customer: Gold Park

Code reports: CCMC 12472-R

File Name: 290673.bcc

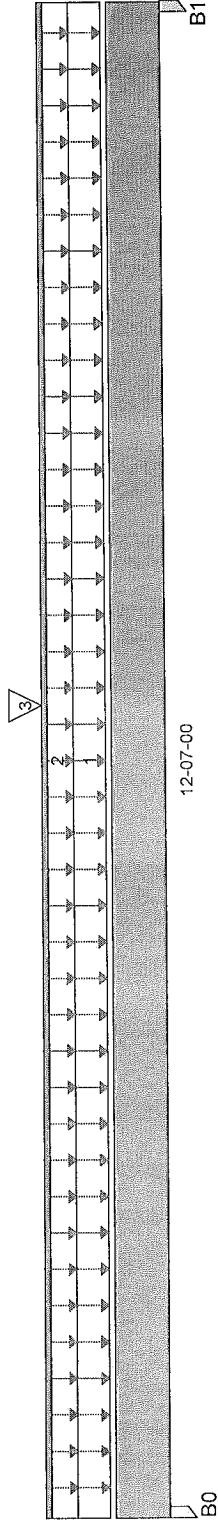
Description: Second Floor Framing

Specifier:

Designer: NL

Company: Alpa Roof Trusses

Misc:



Total Horizontal Product Length = 12-07-00

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

| Bearing    | Live      | Dead      | Snow | Wind |
|------------|-----------|-----------|------|------|
| B0, 3-1/2" | 3,561 / 0 | 2,370 / 0 |      |      |
| B1, 3"     | 3,726 / 0 | 2,471 / 0 |      |      |

## Load Summary

| Tag Description | Load Type          | Ref. | Start    | End      | Live  | Dead  | Snow | Wind | Trib.    |
|-----------------|--------------------|------|----------|----------|-------|-------|------|------|----------|
| 1               | Unf. Area (lb/ft²) | L    | 00-00-00 | 12-07-00 | 40    | 20    |      |      | 09-06-00 |
| 2               | Unf. Lin. (lb/ft)  | L    | 00-00-00 | 12-07-00 |       | 60    |      |      | n/a      |
| 3               | Conc. Pt. (lbs)    | L    | 06-09-00 | 06-09-00 | 2,506 | 1,544 |      |      | n/a      |

## Controls Summary

|                  | Factored Demand | Factored Resistance | Demand / Resistance | Load Case | Location |
|------------------|-----------------|---------------------|---------------------|-----------|----------|
| Pos. Moment      | 33,735 ft-lbs   | 35,392 ft-lbs       | 95.3%               | 1         | 06-09-00 |
| End Shear        | 7,566 lbs       | 14,464 lbs          | 52.3%               | 1         | 11-04-02 |
| Total Load Defl. | L/247 (0.591")  | 0.608"              | 97.1%               | 4         | 06-04-14 |
| Live Load Defl.  | L/409 (0.357")  | 0.406"              | 88%                 | 5         | 06-04-14 |
| Max Defl.        | 0.591"          | 1"                  | 59.1%               | 4         | 06-04-14 |
| Span / Depth     | 12.3            | n/a                 | n/a                 |           | 00-00-00 |
| Squash Blocks    | Valid           |                     |                     |           |          |

## Bearing Supports

|         | Dim. (L x W)    | Demand    | Demand/ Resistance Support | Demand/ Resistance Member | Material        |
|---------|-----------------|-----------|----------------------------|---------------------------|-----------------|
| B0 Post | 3-1/2" x 3-1/2" | 8,305 lbs | 39.1%                      | 55.6%                     | Spruce Pine Fir |
| B1 Post | 3" x 3-1/2"     | 8,678 lbs | 47.6%                      | 67.7%                     | Spruce Pine Fir |

## Notes

Design meets Code minimum (L/240) Total load deflection criteria.  
 Design meets Code minimum (L/360) Live load deflection criteria.  
 Design meets User specified (1") Maximum Total 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 2010 and CSA O86.

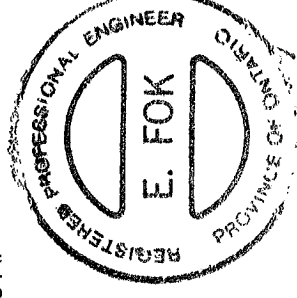
Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 4

Nail one ply to another with

3 1/2" spiral nails @ 8"

O.C. staggered in 2 rows



S-152511



Boise Cascade

# Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP

Floor Beam\B05



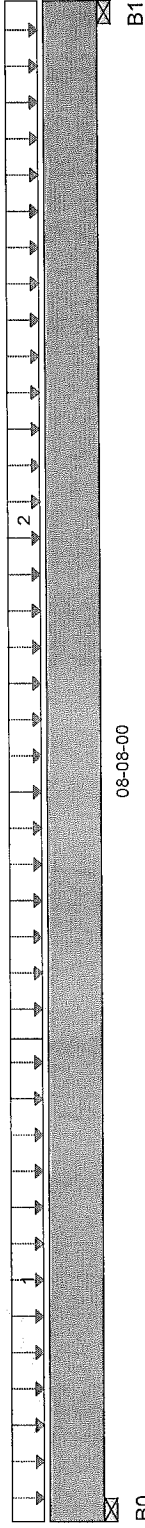
BC CALC® Design Report

Dry | 1 span | No cantilevers | 0/12 slope (deg)

November 15, 2017 14:15:02

Build 6080  
Job Name: 45147 (5004)  
Address: Pine Valley  
City, Province, Postal Code: Vaughan, ON  
Customer: Gold Park  
Code reports: CCMC 12472-R

File Name: 290673.bcc  
Description: Second Floor Framing  
Specifier:  
Designer: NL  
Company: Alpa Roof Trusses  
Misc:



Total Horizontal Product Length = 08-08-00

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

| Bearing    | Live      | Dead      | Snow | Wind |
|------------|-----------|-----------|------|------|
| B0, 3-1/2" | 2,332 / 0 | 1,218 / 0 |      |      |
| B1, 3-1/2" | 1,976 / 0 | 1,040 / 0 |      |      |

## Load Summary

| Tag Description | Load Type           | Ref. | Start    | End      | Live | Dead | Snow | Wind | Trib.    |
|-----------------|---------------------|------|----------|----------|------|------|------|------|----------|
| 1               | Unf. Area (lb/ft^2) | L    | 00-00-00 | 02-09-00 | 40   | 20   |      |      | 15-06-00 |
| 2               | Unf. Area (lb/ft^2) | L    | 02-09-00 | 08-08-00 | 40   | 20   |      |      | 11-00-00 |

## Controls Summary

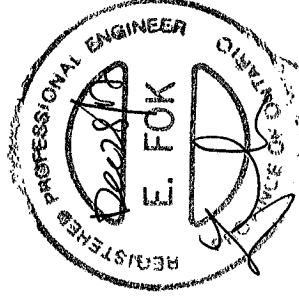
| Pos.             | Factored Demand | Factored Resistance | Demand / Resistance | Load Case | Location |
|------------------|-----------------|---------------------|---------------------|-----------|----------|
| Moment           | 8,620 ft-lbs    | 35,392 ft-lbs       | 24.4%               | 1         | 04-02-06 |
| End Shear        | 3,313 lbs       | 14,464 lbs          | 22.9%               | 1         | 01-03-06 |
| Total Load Defl. | L/999 (0.076")  | n/a                 | n/a                 | 4         | 04-03-04 |
| Live Load Defl.  | L/999 (0.05")   | n/a                 | n/a                 | 5         | 04-03-04 |
| Max Defl.        | 0.076"          | n/a                 | n/a                 | 4         | 04-03-04 |
| Span / Depth     | 8.3             | n/a                 | n/a                 |           | 00-00-00 |
| Squash Blocks    | Valid           |                     |                     |           |          |

## Bearing Supports

|               | Dim. (L x W)    | Demand    | Demand/Resistance Support | Demand/Resistance Member | Material        |
|---------------|-----------------|-----------|---------------------------|--------------------------|-----------------|
| B0 Wall/Plate | 3-1/2" x 3-1/2" | 5,020 lbs | 66.6%                     | 33.6%                    | Spruce Pine Fir |
| B1 Wall/Plate | 3-1/2" x 3-1/2" | 4,265 lbs | 56.6%                     | 28.5%                    | Spruce Pine Fir |

## Notes

Design meets Code minimum (L/240) Total load deflection criteria.  
Design meets Code minimum (L/360) Live load deflection criteria.  
Design meets User specified (1") Maximum Total 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 2010 and CSA O86.  
Design based on Dry Service Condition.  
Importance Factor : Normal Part code : Part 4



Nail one ply to another with  
3 1/2" spiral nails @ 9"  
o.c. staggered in 2 rows

5152512



Boise Cascade

Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP

Floor Beam\B06



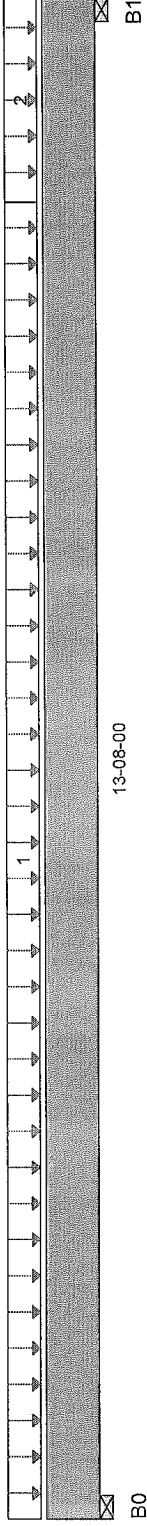
BC CALC® Design Report

Dry | 1 span | No cantilevers | 0/12 slope (deg)

November 15, 2017 14:15:02

Build 6080  
Job Name: 45147 (5004)  
Address: Pine Valley  
City, Province, Postal Code: Vaughan, ON  
Customer: Gold Park  
Code reports: CCMC 12472-R

File Name: 290673.bcc  
Description: Second Floor Framing  
Specifier:  
Designer: NL  
Company: Alpa Roof Trusses  
Misc:



13-08-00  
Total Horizontal Product Length = 13-08-00

Reaction Summary (Down / Uplift) ( lbs )

| Bearing    | Live      | Dead      | Snow | Wind |
|------------|-----------|-----------|------|------|
| B0, 3-1/2" | 2,985 / 0 | 1,572 / 0 |      |      |
| B1, 3-1/2" | 2,625 / 0 | 1,347 / 0 |      |      |

Load Summary

| Tag Description | Load Type           | Ref. | Start    | End      | Live | Dead | Snow | Wind | Trib.    |
|-----------------|---------------------|------|----------|----------|------|------|------|------|----------|
| 1               | Unf. Area (lb/ft^2) | L    | 00-00-00 | 11-10-00 | 40   | 20   |      |      | 11-00-00 |
| 2               | Unf. Area (lb/ft^2) | L    | 11-10-00 | 13-08-00 | 40   | 15   |      |      | 05-06-00 |

Controls Summary

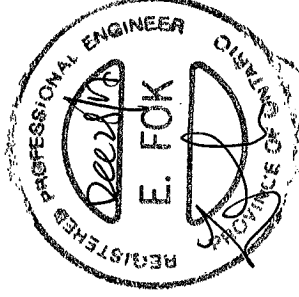
|                  | Factored Demand | Factored Resistance | Demand / Resistance | Load Case | Location |
|------------------|-----------------|---------------------|---------------------|-----------|----------|
| Pos. Moment      | 20,395 ft-lbs   | 35,392 ft-lbs       | 57.6%               | 1         | 06-08-11 |
| End Shear        | 5,226 lbs       | 14,464 lbs          | 36.1%               | 1         | 01-03-06 |
| Total Load Defl. | L/343 (0.462")  | 0.66"               | 70%                 | 4         | 06-10-10 |
| Live Load Defl.  | L/523 (0.303")  | 0.44"               | 68.8%               | 5         | 06-10-10 |
| Max Defl.        | 0.462"          | 1"                  | 46.2%               | 4         | 06-10-10 |
| Span / Depth     | 13.3            | n/a                 | n/a                 |           | 00-00-00 |
| Squash Blocks    | Valid           |                     |                     |           |          |

Bearing Supports

|               | Dim. (L x W)    | Demand    | Demand/ Resistance Support | Demand/ Resistance Member | Material        |
|---------------|-----------------|-----------|----------------------------|---------------------------|-----------------|
| B0 Wall/Plate | 3-1/2" x 3-1/2" | 6,443 lbs | 85.5%                      | 43.1%                     | Spruce Pine Fir |
| B1 Wall/Plate | 3-1/2" x 3-1/2" | 5,621 lbs | 74.6%                      | 37.6%                     | Spruce Pine Fir |

Notes

Design meets Code minimum (L/240) Total load deflection criteria.  
Design meets Code minimum (L/360) Live load deflection criteria.  
Design meets User specified (1") Maximum Total 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 2010 and CSA O86.  
Design based on Dry Service Condition.  
Importance Factor : Normal Part code : Part 4  
Nail one ply to another with 3 1/2" spiral nails @ 9" o.c. staggered in 2 rows



S152513



Boise Cascade

# Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP

Floor Beam\B07

November 15, 2017 14:15:03

BC CALC® Design Report



Dry | 1 span | No cantilevers | 0/12 slope (deg)

Build 6080

Job Name:

Address:

City, Province, Postal Code: Vaughan, ON

Customer:

Code reports:

45147 (5004)

Pine Valley

Gold Park

CCMC 12472-R

File Name: 290673.bcc

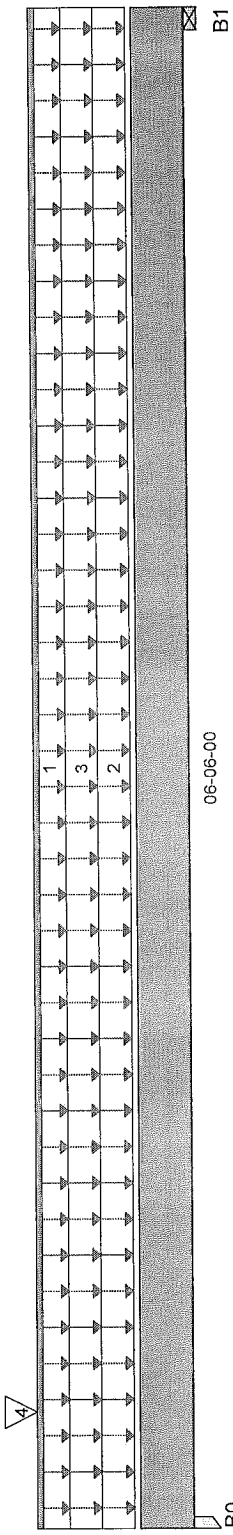
Description: Second Floor Framing

Specifier:

Designer: NL

Company: Alpa Roof Trusses

Misc:



Total Horizontal Product Length = 06-06-00

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

| Bearing    | Live      | Dead      | Snow    | Wind |
|------------|-----------|-----------|---------|------|
| B0, 3-1/2" | 2,594 / 0 | 1,930 / 0 | 770 / 0 |      |
| B1, 3-1/2" | 206 / 0   | 704 / 0   | 770 / 0 |      |

## Load Summary

| Tag Description | Load Type           | Ref. | Start    | End      | Live  | Dead  | Snow | Wind | Trib.    |
|-----------------|---------------------|------|----------|----------|-------|-------|------|------|----------|
| 1               | Unf. Lin. (lb/ft)   | L    | 00-00-00 | 06-06-00 | 27    | 114   |      |      | n/a      |
| 2               | Unf. Area (lb/ft^2) | L    | 00-00-00 | 06-06-00 |       | 20    |      | 78   | 02-06-00 |
| 3               | Unf. Area (lb/ft^2) | L    | 00-00-00 | 06-06-00 |       | 11    |      | 21   | 02-00-00 |
| 4               | Conc. Pt. (lbs)     | L    | 00-06-00 | 00-06-00 | 2,625 | 1,347 |      |      | n/a      |

## Controls Summary

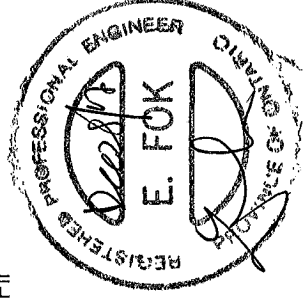
|                  | Factored Demand | Factored Resistance | Demand / Resistance | Load Case | Location |
|------------------|-----------------|---------------------|---------------------|-----------|----------|
| Pos. Moment      | 3,236 ft-lbs    | 35,392 ft-lbs       | 9.1%                | 5         | 03-00-01 |
| End Shear        | 1,730 lbs       | 14,464 lbs          | 12%                 | 1         | 01-03-06 |
| Total Load Defl. | L/999 (0.016")  | n/a                 | n/a                 | 13        | 03-02-04 |
| Live Load Defl.  | L/999 (0.008")  | n/a                 | n/a                 | 17        | 03-02-04 |
| Max Defl.        | 0.016"          | n/a                 | n/a                 | 13        | 03-02-04 |
| Span / Depth     | 6.1             | n/a                 | n/a                 |           | 00-00-00 |
| Squash Blocks    | Valid           |                     |                     |           |          |

## Bearing Supports

|               | Dim. (L x W)    | Demand    | Demand/ Resistance Support | Demand/ Resistance Member | Material        |
|---------------|-----------------|-----------|----------------------------|---------------------------|-----------------|
| B0 Post       | 3-1/2" x 3-1/2" | 6,689 lbs | 31.5%                      | 44.8%                     | Spruce Pine Fir |
| B1 Wall/Plate | 3-1/2" x 3-1/2" | 2,139 lbs | 28.4%                      | 14.3%                     | Spruce Pine Fir |

## Notes

Design meets Code minimum (L/240) Total load deflection criteria.  
 Design meets Code minimum (L/360) Live load deflection criteria.  
 Design meets User specified (1") Maximum Total 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 2010 and CSA O86.  
 Design based on Dry Service Condition.  
 Importance Factor : Normal Part code : Part 4  
 Nail one ply to another with  
 3 1/2" spiral nails @ 12"  
 o.c. staggered in 2 rows



S.152514



Boise Cascade

Single 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP

Floor Beam\B08

Dry | 1 span | No cantilevers | 0/12 slope (deg)

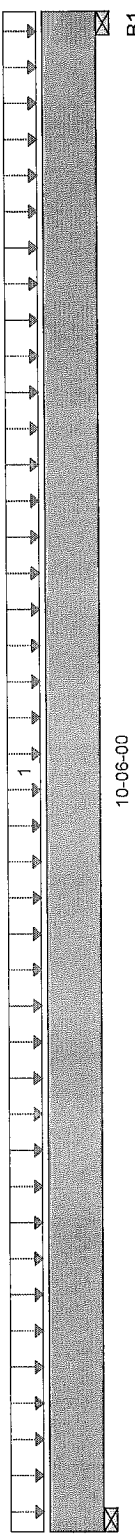
November 15, 2017 14:15:04

BC CALC® Design Report



Build 6080  
Job Name: 45147 (5004)  
Address: Pine Valley  
City, Province, Postal Code: Vaughan, ON  
Customer: Gold Park  
Code reports: CCMC 12472-R

File Name: 290673.bcc  
Description: Second Floor Framing  
Specifier:  
Designer: NL  
Company: Alpa Roof Trusses  
Misc:



10-06-00

B1

Total Horizontal Product Length = 10-06-00

Reaction Summary (Down / Uplift) ( lbs )

| Bearing    | Live      | Dead    | Snow | Wind |
|------------|-----------|---------|------|------|
| B0, 3-1/2" | 1,260 / 0 | 662 / 0 |      |      |
| B1, 3-1/2" | 1,260 / 0 | 662 / 0 |      |      |

Load Summary

| Tag Description | Load Type           | Ref. | Start    | End      | Live | Dead | Snow | Wind      | Trib.    |
|-----------------|---------------------|------|----------|----------|------|------|------|-----------|----------|
| 1               | Unf. Area (lb/ft^2) | L    | 00-00-00 | 10-06-00 | 40   | 20   |      | 1.00 1.15 | 06-00-00 |

Controls Summary

|                  |                |               |       |   |          |
|------------------|----------------|---------------|-------|---|----------|
| Pos. Moment      | 6,523 ft-lbs   | 17,696 ft-lbs | 36.9% | 1 | 05-03-00 |
| End Shear        | 2,054 lbs      | 7,232 lbs     | 28.4% | 1 | 01-03-06 |
| Total Load Defl. | L/703 (0.171") | 0.502"        | 34.1% | 4 | 05-03-00 |
| Live Load Defl.  | L/999 (0.112") | n/a           | n/a   | 5 | 05-03-00 |
| Max Defl.        | 0.171"         | 1"            | 17.1% | 4 | 05-03-00 |
| Span / Depth     | 10.1           | n/a           | n/a   |   | 00-00-00 |
| Squash Blocks    | Valid          |               |       |   |          |

Disclosure

Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here 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 1-800-964-6999 before installation.

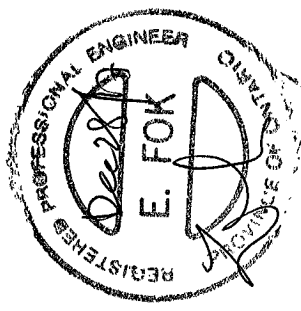
Bearing Supports

|               | Dim. (L x W)    | Demand    | Demand/Resistance Support | Demand/Resistance Member | Material        |
|---------------|-----------------|-----------|---------------------------|--------------------------|-----------------|
| B0 Wall/Plate | 3-1/2" x 1-3/4" | 2,717 lbs | 72.1%                     | 36.4%                    | Spruce Pine Fir |
| B1 Wall/Plate | 3-1/2" x 1-3/4" | 2,717 lbs | 72.1%                     | 36.4%                    | Spruce Pine Fir |

Notes

Design meets Code minimum (L/240) Total load deflection criteria.  
Design meets Code minimum (L/360) Live load deflection criteria.  
Design meets User specified (1") Maximum Total 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 2010 and CSA O86.

Design based on Dry Service Condition.  
Importance Factor : Normal Part code : Part 4



BC CALC®, BC FRAMER®, AJS™, ALLJOIST®, BC RIM BOARD™, BC®, BOISE GLULAM™, SIMPLE FRAMING SYSTEM®, VERSA-LAM®, VERSA-RIM PLUS®, VERSA-RIM®, VERSA-STRAND®, VERSA-STUD® are trademarks of Boise Cascade Wood Products L.L.C.

5152515



Boise Cascade

# Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP

Floor Beam\B09

November 15, 2017 14:15:04

## BC CALC® Design Report



Dry | 1 span | No cantilevers | 0/12 slope (deg)

Build 6080

Job Name:

Address:

City, Province, Postal Code: Vaughan, ON

Customer:

Code reports:

45147 (5004)

Pine Valley

Gold Park

CCMC 12472-R

File Name: 290673.bcc

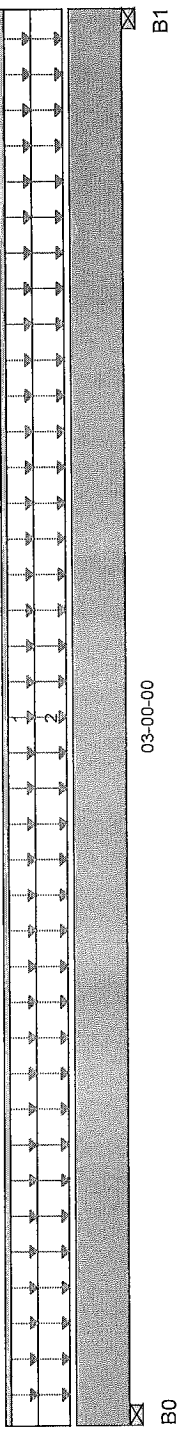
Description: Second Floor Framing

Specifier:

Designer: NL

Company: Alpa Roof Trusses

Misc:



Total Horizontal Product Length = 03-00-00

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

| Bearing    | Live   | Dead    | Snow    | Wind |
|------------|--------|---------|---------|------|
| B0, 3-1/2" | 40 / 0 | 338 / 0 | 283 / 0 |      |
| B1, 3-1/2" | 41 / 0 | 338 / 0 | 283 / 0 |      |

## Load Summary

| Tag Description | Load Type           | Ref. | Start    | End      | Live | Dead | Snow | Wind | Trib.    |
|-----------------|---------------------|------|----------|----------|------|------|------|------|----------|
| 1               | Unf. Lin. (lb/ft)   | L    | 00-00-00 | 03-00-00 | 27   | 114  |      |      | n/a      |
| 2               | Unf. Area (lb/ft^2) | L    | 00-00-00 | 03-00-00 | 11   |      |      | 21   | 09-00-00 |

## Controls Summary

| Pos.             | Factored Demand | Factored Resistance | Demand / Resistance | Load Case | Location |
|------------------|-----------------|---------------------|---------------------|-----------|----------|
| Moment           | 467 ft-lbs      | 35,392 ft-lbs       | 1.3%                | 5         | 01-06-00 |
| End Shear        | 127 lbs         | 14,464 lbs          | 0.9%                | 5         | 01-03-06 |
| Total Load Defl. | L/999 (0")      | n/a                 | n/a                 | 13        | 01-06-00 |
| Live Load Defl.  | L/999 (0")      | n/a                 | n/a                 | 17        | 01-06-00 |
| Max Defl.        | 0"              | n/a                 | n/a                 | 13        | 01-06-00 |
| Span / Depth     | 2.6             | n/a                 | n/a                 |           | 00-00-00 |
| Squash Blocks    | Valid           |                     |                     |           |          |

## Bearing Supports

|               | Dim. (L x W)    | Demand  | Demand/ Resistance Support | Demand/ Resistance Member | Material        |
|---------------|-----------------|---------|----------------------------|---------------------------|-----------------|
| B0 Wall/Plate | 3-1/2" x 3-1/2" | 867 lbs | 11.5%                      | 5.8%                      | Spruce Pine Fir |
| B1 Wall/Plate | 3-1/2" x 3-1/2" | 867 lbs | 11.5%                      | 5.8%                      | Spruce Pine Fir |

## Notes

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

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

Design meets User specified (1") Maximum Total 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 2010 and CSA

O86.

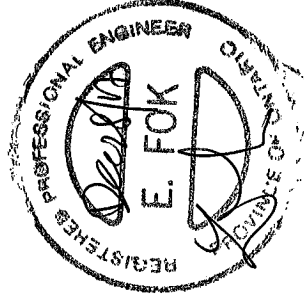
Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 4

Nail one ply to another with

3 1/2" spiral nails @ 6"

o.c, staggered in 2 rows



5152516



Boise Cascade

# Single 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP

Floor Beam\B10



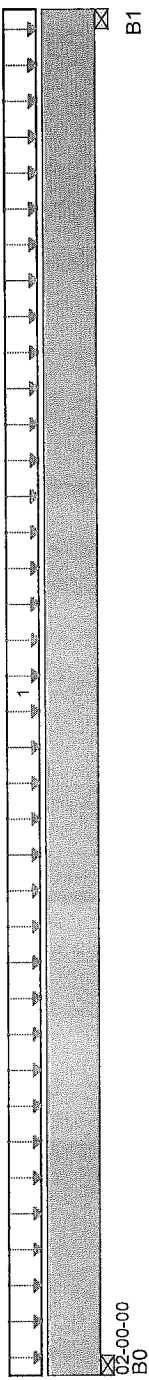
BC CALC® Design Report

Dry | 1 span | No cantilevers | 0/12 slope (deg)

November 15, 2017 14:15:05

Build 6080  
Job Name: 45147 (5004)  
Address: Pine Valley  
City, Province, Postal Code: Vaughan, ON  
Customer: Gold Park  
Code reports: CCMC 12472-R

File Name: 290673.bcc  
Description: First Floor Framing  
Specifier:  
Designer: NL  
Company: Alpa Roof Trusses  
Misc:



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

| Bearing    | Live    | Dead   | Snow | Wind |
|------------|---------|--------|------|------|
| B0, 3-1/2" | 140 / 0 | 59 / 0 |      |      |
| B1, 3-1/2" | 140 / 0 | 59 / 0 |      |      |

## Load Summary

| Tag Description | Load Type          | Ref. | Start    | End      | Live | Dead | Snow | Wind | Trib.    |
|-----------------|--------------------|------|----------|----------|------|------|------|------|----------|
| 1               | Unf. Area (lb/ft²) | L    | 00-00-00 | 02-00-00 | 40   | 15   | 1.00 | 1.15 | 03-06-00 |

## Controls Summary

|                  | Factored Demand | Factored Resistance | Demand / Resistance | Load Case | Location |
|------------------|-----------------|---------------------|---------------------|-----------|----------|
| Pos. Moment      | 84 ft-lbs       | 17,696 ft-lbs       | 0.5%                | 1         | 01-00-00 |
| End Shear        | 80 lbs          | 7,232 lbs           | 1.1%                | 1         | 01-03-06 |
| Total Load Defl. | L/999 (0")      | n/a                 | n/a                 | 4         | 01-00-00 |
| Max Defl.        | 0"              | n/a                 | n/a                 | 4         | 01-00-00 |
| Span / Depth     | 1.6             | n/a                 | n/a                 |           | 00-00-00 |
| Squash Blocks    | Valid           |                     |                     |           |          |

## Disclosure

Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here 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 1-800-964-6999 before installation.

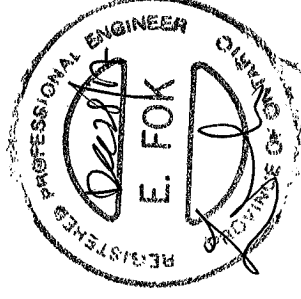
BC CALC®, BC FRAMER®, AJS™, ALLJOIST®, BC RIM BOARD™, BCI®, BOISE GLULAM™, SIMPLE FRAMING SYSTEM®, VERSA-LAM®, VERSA-RIM PLUS®, VERSA-RIM®, VERSA-STRAND®, VERSA-STUD® are trademarks of Boise Cascade Wood Products L.L.C.

## Bearing Supports

|               | Dim. (L x W)    | Demand  | Demand/Resistance Support | Demand/Resistance Member | Material        |
|---------------|-----------------|---------|---------------------------|--------------------------|-----------------|
| B0 Wall/Plate | 3-1/2" x 1-3/4" | 283 lbs | 7.5%                      | 3.8%                     | Spruce Pine Fir |
| B1 Wall/Plate | 3-1/2" x 1-3/4" | 283 lbs | 7.5%                      | 3.8%                     | Spruce Pine Fir |

## Notes

Design meets Code minimum (L/240) Total load deflection criteria.  
Design meets User specified (1") Maximum Total 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 2010 and CSA O86.  
Design based on Dry Service Condition.  
Importance Factor : Normal Part code : Part 4



S. 152567



Boise Cascade

Single 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP

Floor Beam\B10A

Dry | 1 span | No cantilevers | 0/12 slope (deg)

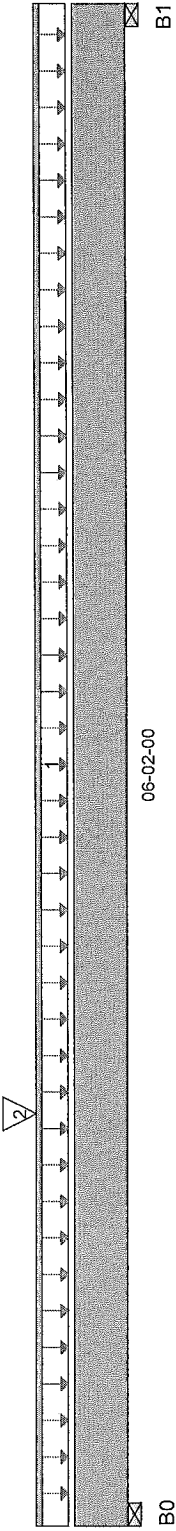
December 15, 2017 14:45:34



BC CALC® Design Report

Build 6080  
Job Name: 45147 (5004)  
Address: Pine Valley  
City, Province, Postal Code: Vaughan, ON  
Customer: Gold Park  
Code reports: CCMC 12472-R

File Name: 290673.bcc  
Description: First Floor Framing  
Specifier:  
Designer: NL  
Company: Alpa Roof Trusses  
Misc:



Total Horizontal Product Length = 06-02-00

Reaction Summary (Down / Uplift) (lbs)

| Bearing    | Live    | Dead    | Snow | Wind |
|------------|---------|---------|------|------|
| B0, 3-1/2" | 331 / 0 | 335 / 0 |      |      |
| B1, 3-1/2" | 152 / 0 | 268 / 0 |      |      |

Load Summary

| Tag Description | Load Type         | Ref. | Start    | End      | Live | Dead | Snow | Wind | Trib. |
|-----------------|-------------------|------|----------|----------|------|------|------|------|-------|
| 1               | Unf. Lin. (lb/ft) | L    | 00-00-00 | 06-02-00 | 20   | 70   |      | 1.00 | 1.15  |
| 2               | Conc. Pt. (lbs)   | L    | 01-08-00 | 01-08-00 | 360  | 135  |      |      | n/a   |

Controls Summary

| Pos.             | Factored Demand | Factored Resistance | Demand / Resistance | Load Case | Location |
|------------------|-----------------|---------------------|---------------------|-----------|----------|
| Pos. Moment      | 1,146 ft-lbs    | 17,696 ft-lbs       | 6.5%                | 1         | 01-08-00 |
| End Shear        | 756 lbs         | 7,232 lbs           | 10.4%               | 1         | 01-03-06 |
| Total Load Defl. | L/999 (0.009")  | n/a                 | n/a                 | 4         | 02-10-08 |
| Live Load Defl.  | L/999 (0.004")  | n/a                 | n/a                 | 5         | 02-09-04 |
| Max Defl.        | 0.009"          | n/a                 | n/a                 | 4         | 02-10-08 |
| Span / Depth     | 5.8             | n/a                 | n/a                 |           | 00-00-00 |
| Squash Blocks    | Valid           |                     |                     |           |          |

Disclosure

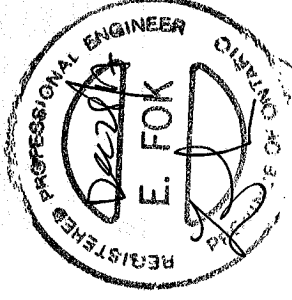
Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of Boise Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call 1-800-964-6999 before installation.

Bearing Supports

|               | Dim. (L x W)    | Demand  | Demand/Resistance Support | Demand/Resistance Member | Material        |
|---------------|-----------------|---------|---------------------------|--------------------------|-----------------|
| B0 Wall/Plate | 3-1/2" x 1-3/4" | 916 lbs | 24.3%                     | 12.3%                    | Spruce Pine Fir |
| B1 Wall/Plate | 3-1/2" x 1-3/4" | 376 lbs | 15.3%                     | 7.7%                     | Spruce Pine Fir |

Notes

Design meets Code minimum (L/240) Total load deflection criteria.  
Design meets Code minimum (L/360) Live load deflection criteria.  
Design meets User specified (1") Maximum Total 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 2010 and CSA O86.  
Design based on Dry Service Condition.  
Importance Factor : Normal Part code : Part 4



S.152518



Boise Cascade

Single 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP

Floor Beam\B11



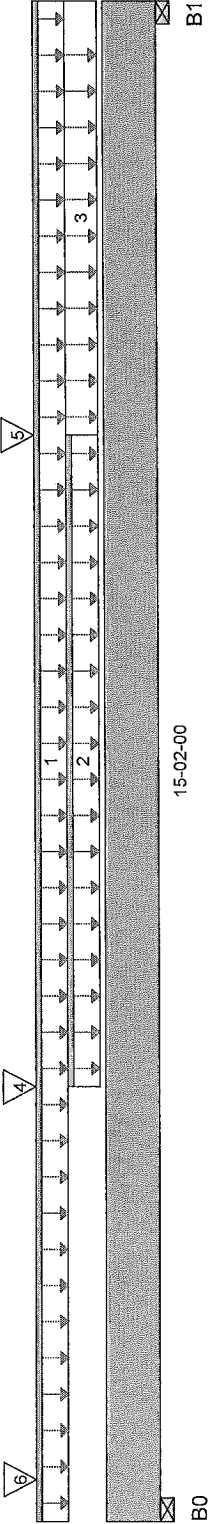
BC CALC® Design Report

Dry | 1 span | No cantilevers | 0/12 slope (deg)

December 15, 2017 13:44:19

Build 6080  
Job Name: 45147 (5004)  
Address: Pine Valley  
City, Province, Postal Code: Vaughan, ON  
Customer: Gold Park  
Code reports: CCMC 12472-R

File Name: 290673.bcc  
Description: First Floor Framing  
Specifier:  
Designer: NL  
Company: Alpa Roof Trusses  
Misc:



Total Horizontal Product Length = 15-02-00

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

| Bearing    | Live    | Dead    | Snow | Wind |
|------------|---------|---------|------|------|
| B0, 3-1/2" | 782 / 0 | 596 / 0 |      |      |
| B1, 3-1/2" | 587 / 0 | 317 / 0 |      |      |

### Load Summary

| Tag Description | Load Type          | Ref. | Start    | End      | Live | Dead | Snow | Wind      | Trib.    |
|-----------------|--------------------|------|----------|----------|------|------|------|-----------|----------|
| 1               | Unf. Lin. (lb/ft)  | L    | 00-00-00 | 15-02-00 | 27   | 14   |      | 1.00 1.15 | n/a      |
| 2               | Unf. Lin. (lb/ft)  | L    | 04-04-00 | 10-10-00 | 27   | 14   |      |           | n/a      |
| 3               | Unf. Area (lb/ft²) | L    | 10-10-00 | 15-02-00 | 40   | 15   |      |           | 01-00-00 |
| 4               | Conc. Pt. (lbs)    | L    | 04-04-00 | 04-04-00 | 140  | 59   |      |           | n/a      |
| 5               | Conc. Pt. (lbs)    | L    | 10-10-00 | 10-10-00 | 140  | 59   |      |           | n/a      |
| 6               | Conc. Pt. (lbs)    | L    | 00-05-00 | 00-05-00 | 331  | 335  |      |           | n/a      |

### Controls Summary

|                  | Factored Demand  | Factored Resistance | Demand / Resistance | Load Case | Location |
|------------------|------------------|---------------------|---------------------|-----------|----------|
| Pos. Moment      | 4,438 ft-lbs     | 17,696 ft-lbs       | 25.1%               | 1         | 07-09-07 |
| End Shear        | 1,092 lbs        | 7,232 lbs           | 15.1%               | 1         | 13-10-10 |
| Total Load Defl. | L/691 (0.255")   | 0.735"              | 34.7%               | 4         | 07-07-00 |
| Live Load Defl.  | L/1,081 (0.163") | 0.49"               | 33.3%               | 5         | 07-07-00 |
| Max Defl.        | 0.255"           | 1"                  | 25.5%               | 4         | 07-07-00 |
| Span / Depth     | 14.9             | n/a                 | n/a                 |           | 00-00-00 |
| Squash Blocks    | Valid            |                     |                     |           |          |

### Disclosure

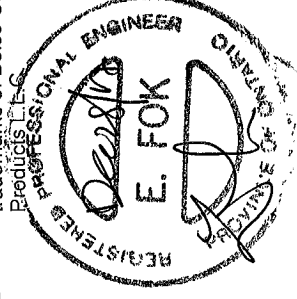
Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of Boise Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call 1-800-964-6999 before installation.

| Bearing       | Dim. (L x W)    | Demand    | Demand / Resistance Support | Demand / Resistance Member | Material        |
|---------------|-----------------|-----------|-----------------------------|----------------------------|-----------------|
| B0 Wall/Plate | 3-1/2" x 1-3/4" | 1,918 lbs | 50.9%                       | 25.7%                      | Spruce Pine Fir |
| B1 Wall/Plate | 3-1/2" x 1-3/4" | 1,277 lbs | 33.9%                       | 17.1%                      | Spruce Pine Fir |

### Notes

Design meets Code minimum (L/240) Total load deflection criteria.  
Design meets Code minimum (L/360) Live load deflection criteria.  
Design meets User specified (1") Maximum Total 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 2010 and CSA O86.

Design based on Dry Service Condition.  
Importance Factor : Normal Part code : Part 4



S-152519



Boise Cascade



BC CALC® Design Report

Triple 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP

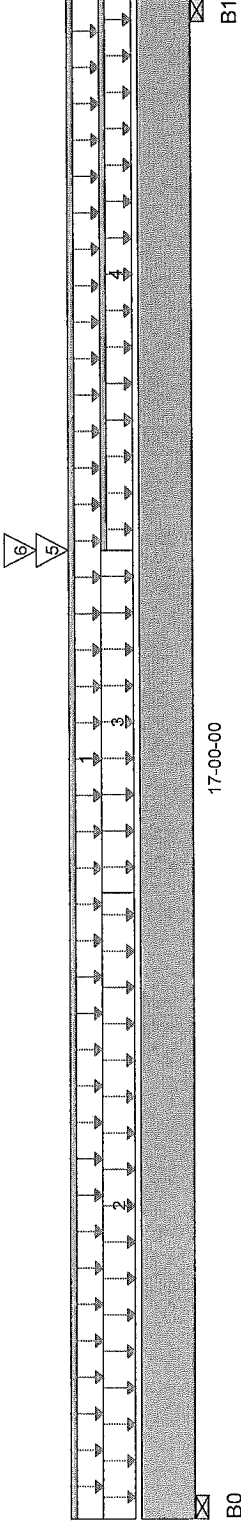
Floor Beam\B12

Dry | 1 span | No cantilevers | 0/12 slope (deg)

December 15, 2017 13:46:26

Build 6080  
Job Name: 45147 (5004)  
Address: Pine Valley  
City, Province, Postal Code: Vaughan, ON  
Customer: Gold Park  
Code reports: CCMC 12472-R

File Name: 290673.bcc  
Description: First Floor Framing  
Specifier:  
Designer: NL  
Company: Alpa Roof Trusses  
Misc:



Total Horizontal Product Length = 17'-00'-00"

Reaction Summary (Down / Uplift) (lbs)

| Bearing    | Live      | Dead      | Snow | Wind |
|------------|-----------|-----------|------|------|
| B0, 3-1/2" | 3,263 / 0 | 1,552 / 0 |      |      |
| B1, 3-1/2" | 2,229 / 0 | 1,278 / 0 |      |      |

Load Summary

| Tag Description | Load Type           | Ref. | Start    | End      | Live | Dead | Snow | Wind | Trib.    |
|-----------------|---------------------|------|----------|----------|------|------|------|------|----------|
| 1               | Unf. Lin. (lb/ft)   | L    | 00-00-00 | 17-00-00 | 27   | 14   |      |      | n/a      |
| 2               | Unf. Area (lb/ft^2) | L    | 00-00-00 | 07-00-00 | 40   | 15   |      |      | 09-00-00 |
| 3               | Unf. Area (lb/ft^2) | L    | 07-00-00 | 10-10-00 | 40   | 15   |      |      | 07-06-00 |
| 4               | Unf. Lin. (lb/ft)   | L    | 10-10-00 | 17-00-00 | 20   | 8    |      |      | n/a      |
| 5               | Conc. Pt. (lbs)     | L    | 10-10-00 | 10-10-00 | 782  | 596  |      |      | n/a      |
| 6               | Conc. Pt. (lbs)     | L    | 10-10-00 | 10-10-00 | 457  | 264  |      |      | n/a      |

Controls Summary

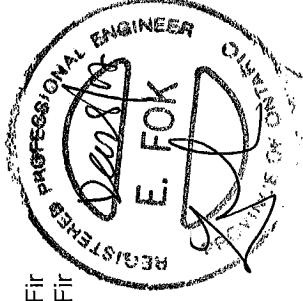
|                  | Factored Demand | Factored Resistance | Demand / Resistance | Load Case | Location |
|------------------|-----------------|---------------------|---------------------|-----------|----------|
| Pos. Moment      | 28,235 ft-lbs   | 55,212 ft-lbs       | 51.1%               | 1         | 08-11-00 |
| End Shear        | 5,823 lbs       | 21,696 lbs          | 26.8%               | 1         | 01-03-06 |
| Total Load Defl. | L/301 (0.659")  | 0.827"              | 79.7%               | 4         | 08-05-04 |
| Live Load Defl.  | L/459 (0.433")  | 0.551"              | 78.4%               | 5         | 08-05-04 |
| Max Defl.        | 0.659"          | 1"                  | 65.9%               | 4         | 08-05-04 |
| Span / Depth     | 16.7            | n/a                 | n/a                 |           | 00-00-00 |
| Squash Blocks    | Valid           |                     |                     |           |          |

Bearing Supports

|               | Dim. (L x W)    | Demand    | Demand/Resistance Support | Demand/Resistance Member | Material        |
|---------------|-----------------|-----------|---------------------------|--------------------------|-----------------|
| B0 Wall/Plate | 3-1/2" x 5-1/4" | 6,835 lbs | 60.5%                     | 30.5%                    | Spruce Pine Fir |
| B1 Wall/Plate | 3-1/2" x 5-1/4" | 4,940 lbs | 43.7%                     | 22%                      | Spruce Pine Fir |

Notes

Design meets Code minimum (L/240) Total load deflection criteria.  
Design meets Code minimum (L/360) Live load deflection criteria.  
Design meets User specified (1") Maximum Total 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 2010 and CSA O86.  
Design based on Dry Service Condition.  
Importance Factor : Normal Part code : Part 4  
Nail one ply to another with  
3 1/2" spiral nails @ 6"  
o.c., staggered in 2 rows



S-152520



Boise Cascade

# Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP Floor Beam\B13

November 15, 2017 14:15:06

Dry | 1 span | No cantilevers | 0/12 slope (deg)



BC CALC® Design Report

Build 6080

Job Name:

Address: 45147 (5004) Pine Valley

City, Province, Postal Code: Vaughan, ON

Customer: Gold Park

Code reports: CCMC 12472-R

File Name: 290673.bcc

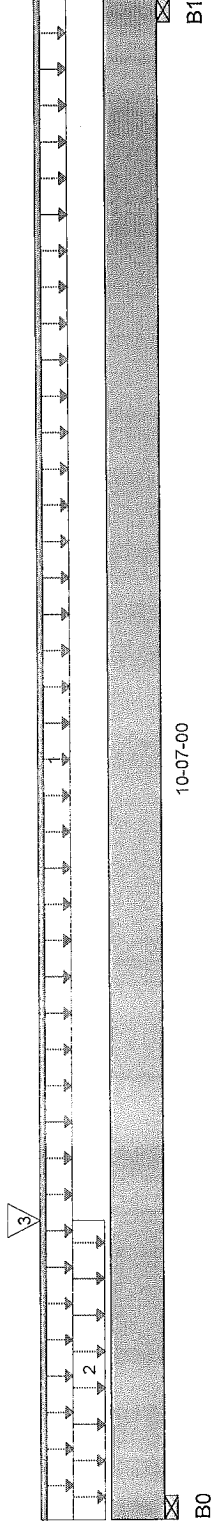
Description: Second Floor Framing

Specifier:

Designer: NL

Company: Alpa Roof Trusses

Misc:



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

| Bearing    | Live    | Dead      | Snow    | Wind |
|------------|---------|-----------|---------|------|
| B0, 3-1/2" | 143 / 0 | 1,258 / 0 | 828 / 0 |      |
| B1, 3-1/2" | 143 / 0 | 781 / 0   | 160 / 0 |      |

## Load Summary

| Tag Description | Load Type          | Ref. | Start    | End      | Live | Dead | Snow | Wind | Trib.    |
|-----------------|--------------------|------|----------|----------|------|------|------|------|----------|
| 1               | Unf. Lin. (lb/ft)  | L    | 00-00-00 | 10-07-00 | 27   | 114  |      |      | n/a      |
| 2               | Unf. Area (lb/ft²) | L    | 00-00-00 | 02-01-00 | 20   | 28   |      |      | 03-06-00 |
| 3               | Conc. Pt. (lbs)    | L    | 02-01-00 | 02-01-00 | 560  | 784  |      |      | n/a      |

## Controls Summary

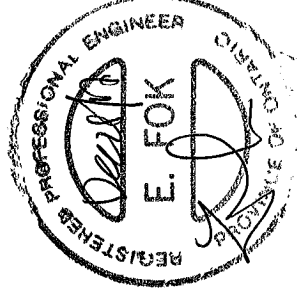
|                  | Factored Demand | Factored Resistance | Demand / Resistance | Load Case | Location |
|------------------|-----------------|---------------------|---------------------|-----------|----------|
| Pos. Moment      | 3,144 ft-lbs    | 23,005 ft-lbs       | 13.7%               | 0         | 04-04-01 |
| End Shear        | 2,367 lbs       | 14,464 lbs          | 16.4%               | 5         | 01-03-06 |
| Total Load Defl. | L/999 (0.062")  | n/a                 | n/a                 | 13        | 05-00-03 |
| Live Load Defl.  | L/999 (0.019")  | n/a                 | n/a                 | 17        | 04-08-02 |
| Max Defl.        | 0.062"          | n/a                 | n/a                 | 13        | 05-00-03 |
| Span / Depth     | 10.2            | n/a                 | n/a                 |           | 00-00-00 |
| Squash Blocks    | Valid           |                     |                     |           |          |

## Bearing Supports

|               | Dim. (L x W)    | Demand    | Demand/ Resistance Support | Resistance Member | Material        |
|---------------|-----------------|-----------|----------------------------|-------------------|-----------------|
| B0 Wall/Plate | 3-1/2" x 3-1/2" | 2,886 lbs | 38.3%                      | 19.3%             | Spruce Pine Fir |
| B1 Wall/Plate | 3-1/2" x 3-1/2" | 1,094 lbs | 22.3%                      | 11.3%             | Spruce Pine Fir |

## Notes

Design meets Code minimum (L/240) Total load deflection criteria.  
 Design meets Code minimum (L/360) Live load deflection criteria.  
 Design meets User specified (1") Maximum Total 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 2010 and CSA O86.  
 Design based on Dry Service Condition.  
 Importance Factor : Normal Part code : Part 4  
 Nail one ply to another with  
 3 1/2" spiral nails @ 12"  
 o.c, staggered in 2 rows





Boise Cascade

# Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP

Floor Beam\B14

Dry | 1 span | No cantilevers | 0/12 slope (deg)

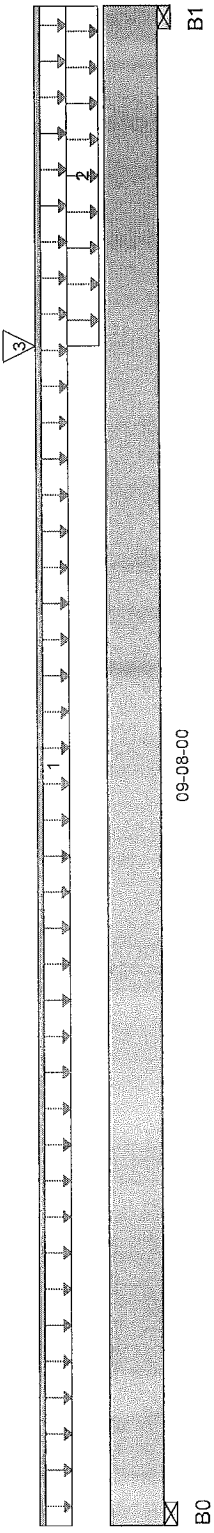
November 15, 2017 14:15:07



BC CALC® Design Report

Build 6080  
Job Name: 45147 (5004)  
Address: Pine Valley  
City, Province, Postal Code: Vaughan, ON  
Customer: Gold Park  
Code reports: CCMC 12472-R

File Name: 290673.bcc  
Description: Second Floor Framing  
Specifier:  
Designer: NL  
Company: Alpa Roof Trusses  
Misc:



Total Horizontal Product Length = 09-08-00

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

| Bearing    | Live    | Dead      | Snow    | Wind |
|------------|---------|-----------|---------|------|
| B0, 3-1/2" | 130 / 0 | 741 / 0   | 185 / 0 |      |
| B1, 3-1/2" | 131 / 0 | 1,189 / 0 | 811 / 0 |      |

## Load Summary

| Tag Description | Load Type          | Ref. | Start    | End      | Live | Dead | Snow | Wind | Trib.    |
|-----------------|--------------------|------|----------|----------|------|------|------|------|----------|
| 1               | Unf. Lin. (lb/ft)  | L    | 00-00-00 | 09-08-00 | 27   | 114  |      |      | n/a      |
| 2               | Unf. Area (lb/ft²) | L    | 07-06-00 | 09-08-00 |      | 20   |      | 28   | 03-06-00 |
| 3               | Conc. Pt. (lbs)    | L    | 07-06-00 | 07-06-00 |      | 560  |      | 784  | n/a      |

## Controls Summary

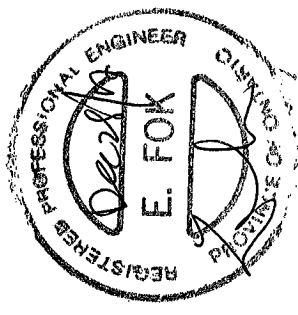
|                  | Factored Demand | Factored Resistance | Demand / Resistance | Load Case | Location |
|------------------|-----------------|---------------------|---------------------|-----------|----------|
| Pos. Moment      | 4,424 ft-lbs    | 35,392 ft-lbs       | 12.5%               | 5         | 07-04-13 |
| End Shear        | 2,249 lbs       | 14,464 lbs          | 15.5%               | 5         | 08-04-10 |
| Total Load Defl. | L/999 (0.048")  | n/a                 | n/a                 | 13        | 05-02-00 |
| Live Load Defl.  | L/999 (0.016")  | n/a                 | n/a                 | 17        | 05-04-06 |
| Max Defl.        | 0.048"          | n/a                 | n/a                 | 13        | 05-02-00 |
| Span / Depth     | 9.3             | n/a                 | n/a                 |           | 00-00-00 |
| Squash Blocks    | Valid           |                     |                     |           |          |

## Bearing Supports

|               | Dim. (L x W)    | Demand    | Demand/Resistance Support | Demand/Resistance Member | Material        |
|---------------|-----------------|-----------|---------------------------|--------------------------|-----------------|
| B0 Wall/Plate | 3-1/2" x 3-1/2" | 1,038 lbs | 21.2%                     | 10.7%                    | Spruce Pine Fir |
| B1 Wall/Plate | 3-1/2" x 3-1/2" | 2,768 lbs | 36.7%                     | 18.5%                    | Spruce Pine Fir |

## Notes

Design meets Code minimum (L/240) Total load deflection criteria.  
Design meets Code minimum (L/360) Live load deflection criteria.  
Design meets User specified (1") Maximum Total 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 2010 and CSA O86.  
Design based on Dry Service Condition.  
Importance Factor : Normal Part code : Part 4  
Nail one ply to another with  
3 1/2" spiral nails @ 12"  
o.c. staggered in 2 rows



S152522



Boise Cascade

BC CALC® Design Report



Triple 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP

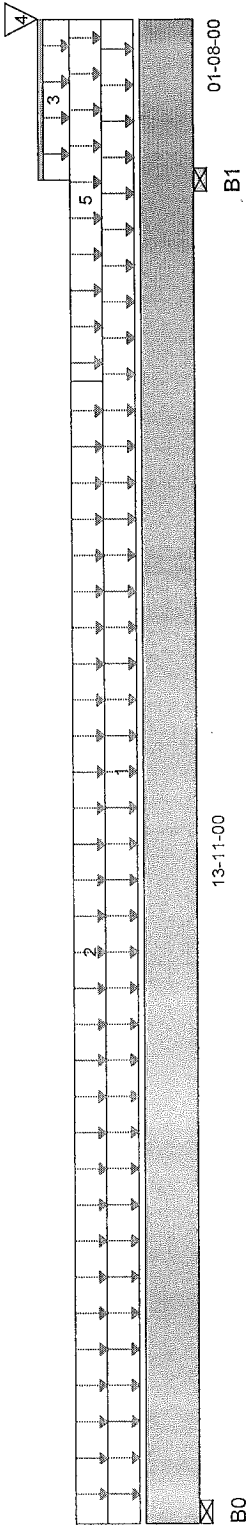
Floor Beam\B15

Dry | 2 spans | Right cantilever | 0/12 slope (deg)

November 15, 2017 14:15:07

Build 6080  
Job Name: 45147 (5004)  
Address: Pine Valley  
City, Province, Postal Code: Vaughan, ON  
Customer: Gold Park  
Code reports: CCMC 12472-R

File Name: 290673.bcc  
Description: Second Floor Framing  
Specifier:  
Designer: NL  
Company: Alpa Roof Trusses  
Misc:



Total Horizontal Product Length = 15.07-00

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

| Bearing    | Live       | Dead      | Snow    | Wind |
|------------|------------|-----------|---------|------|
| B0, 3-1/2" | 3,057 / 56 | 1,282 / 0 | 0 / 104 |      |
| B1, 3-1/2" | 3,708 / 0  | 3,244 / 0 | 978 / 0 |      |

### Load Summary

| Tag Description | Load Type           | Ref. | Start    | End      | Live | Dead  | Snow | Wind | Trib.    |
|-----------------|---------------------|------|----------|----------|------|-------|------|------|----------|
| 1               | Unf. Area (lb/ft^2) | L    | 00-00-00 | 15-07-00 | 40   | 15    |      |      | 05-04-00 |
| 2               | Unf. Area (lb/ft^2) | L    | 00-00-00 | 11-10-00 | 40   | 20    |      |      | 05-06-00 |
| 3               | Unf. Lin. (lb/ft)   | L    | 13-11-00 | 15-07-00 |      | 120   |      | 28   | n/a      |
| 4               | Conc. Pt. (lbs)     | L    | 15-07-00 | 15-07-00 | 143  | 1,258 |      | 828  | n/a      |
| 5               | Unf. Area (lb/ft^2) | L    | 11-10-00 | 15-07-00 | 40   | 15    |      |      | 04-03-00 |

### Controls Summary

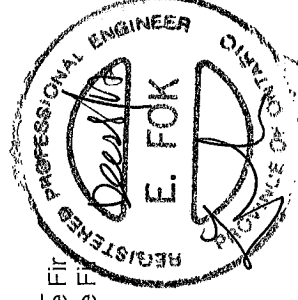
|                  | Factored Demand     | Factored Resistance | Demand / Resistance | Load Case | Location |
|------------------|---------------------|---------------------|---------------------|-----------|----------|
| Pos. Moment      | 19,644 ft-lbs       | 55,212 ft-lbs       | 35.6%               | 8         | 06-08-11 |
| Neg. Moment      | -5,624 ft-lbs       | -55,212 ft-lbs      | 10.2%               | 15        | 13-11-00 |
| End Shear        | 5,023 lbs           | 21,696 lbs          | 23.1%               | 8         | 01-03-06 |
| Cont. Shear      | 5,454 lbs           | 21,696 lbs          | 25.1%               | 1         | 12-09-06 |
| Total Load Defl. | L/532 (0.309")      | 0.684"              | 45.1%               | 23        | 06-10-10 |
| Live Load Defl.  | L/708 (0.232")      | 0.456"              | 50.9%               | 33        | 07-00-10 |
| Total Neg. Defl. | 2xL/1,998 (-0.108") | n/a                 | n/a                 | 23        | 15-07-00 |
| Max Defl.        | 0.309"              | 1"                  | 30.9%               | 23        | 06-10-10 |
| Cant. Max Defl.  | -0.108"             | n/a                 | n/a                 | 23        | 15-07-00 |
| Span / Depth     | 13.8                | n/a                 | n/a                 |           | 00-00-00 |
| Squash Blocks    | Valid               |                     |                     |           |          |

### Bearing Supports

|               | Dim. (L x W)    | Demand     | Demand/Resistance Support | Demand/Resistance Member | Material        |
|---------------|-----------------|------------|---------------------------|--------------------------|-----------------|
| B0 Wall/Plate | 3-1/2" x 5-1/4" | 6,189 lbs  | 54.7%                     | 27.6%                    | Spruce Pine Fir |
| B1 Wall/Plate | 3-1/2" x 5-1/4" | 10,106 lbs | 89.4%                     | 45.1%                    | Spruce Pine Fir |

### Notes

Nail one ply to another with  
3 1/2" spiral nails @ 60"  
o.c, staggered in 2 rows



S152523



Boise Cascade



Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP

Floor Beam\B16

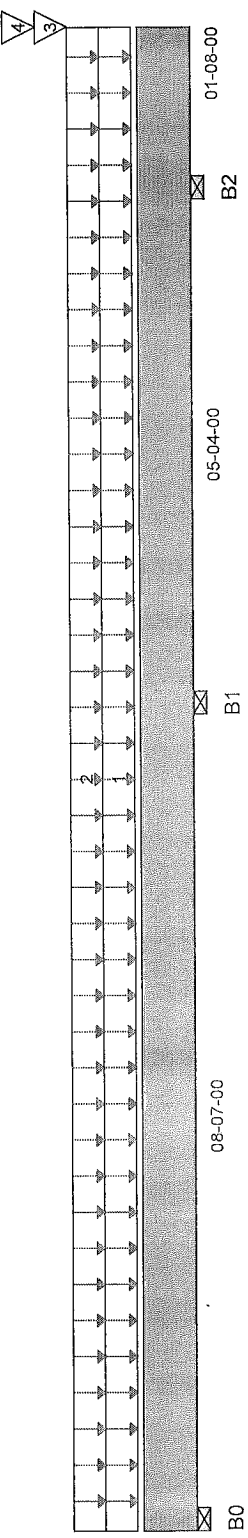
Dry | 3 spans | Right cantilever | 0/12 slope (deg)

November 15, 2017 14:15:08

BC CALC® Design Report

Build 6080  
Job Name: 45147 (5004)  
Address: Pine Valley  
City, Province, Postal Code: Vaughan, ON  
Customer: Gold Park  
Code reports: CCMC 12472-R

File Name: 290673.bcc  
Description: Second Floor Framing  
Specifier:  
Designer: NL  
Company: Alpa Roof Trusses  
Misc:



Total Horizontal Product Length = 15-07-00

Reaction Summary (Down / Uplift) ( lbs )

| Bearing    | Live       | Dead      | Snow    | Wind |
|------------|------------|-----------|---------|------|
| B0, 3-1/2" | 1,582 / 69 | 666 / 0   | 13 / 0  |      |
| B1, 3-1/2" | 3,681 / 0  | 803 / 0   | 0 / 142 |      |
| B2, 3-1/2" | 2,187 / 0  | 2,656 / 0 | 474 / 0 |      |

Load Summary

| Tag Description | Load Type           | Ref. | Start    | End      | Live | Dead | Snow | Wind | Trib.    |
|-----------------|---------------------|------|----------|----------|------|------|------|------|----------|
| 1               | Unf. Area (lb/ft^2) | L    | 00-00-00 | 15-07-00 | 40   | 15   |      |      | 05-04-00 |
| 2               | Unf. Area (lb/ft^2) | L    | 00-00-00 | 15-07-00 | 40   | 15   |      |      | 05-00-00 |
| 3               | Conc. Pt. (lbs)     | L    | 15-07-00 | 15-07-00 | 143  | 781  |      | 160  | n/a      |
| 4               | Conc. Pt. (lbs)     | L    | 15-07-00 | 15-07-00 | 130  | 741  |      | 185  | n/a      |

Controls Summary

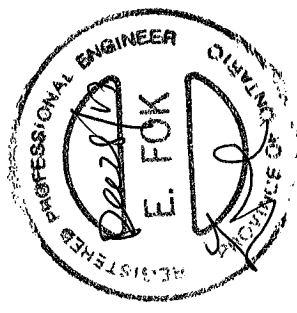
|                  | Factored Demand | Factored Resistance | Demand / Resistance | Load Case | Location |
|------------------|-----------------|---------------------|---------------------|-----------|----------|
| Pos. Moment      | 5,511 ft-lbs    | 35,392 ft-lbs       | 15.6%               | 2         | 03-10-10 |
| Neg. Moment      | -3,876 ft-lbs   | -23,005 ft-lbs      | 16.8%               | 0         | 13-11-00 |
| End Shear        | 2,151 lbs       | 14,464 lbs          | 14.9%               | 2         | 01-03-06 |
| Cont. Shear      | 2,255 lbs       | 9,401 lbs           | 24%                 | 0         | 15-00-10 |
| Total Load Defl. | L/999 (0.046")  | n/a                 | n/a                 | 40        | 04-02-01 |
| Live Load Defl.  | L/999 (0.031")  | n/a                 | n/a                 | 56        | 04-02-01 |
| Total Neg. Defl. | L/999 (-0.018") | n/a                 | n/a                 | 40        | 11-04-12 |
| Max Defl.        | 0.046"          | n/a                 | n/a                 | 40        | 04-02-01 |
| Cant. Max Defl.  | 0.031"          | n/a                 | n/a                 | 40        | 15-07-00 |
| Span / Depth     | 8.4             | n/a                 | n/a                 | 40        | 00-00-00 |
| Squash Blocks    | Valid           |                     |                     |           |          |

Bearing Supports

|               | Dim. (L x W)    | Demand    | Demand/Resistance Support | Demand/Resistance Member | Material        |
|---------------|-----------------|-----------|---------------------------|--------------------------|-----------------|
| B0 Wall/Plate | 3-1/2" x 3-1/2" | 3,212 lbs | 42.6%                     | 21.5%                    | Spruce Pine Fir |
| B1 Wall/Plate | 3-1/2" x 3-1/2" | 6,524 lbs | 86.6%                     | 43.7%                    | Spruce Pine Fir |
| B2 Wall/Plate | 3-1/2" x 3-1/2" | 6,838 lbs | 90.7%                     | 45.8%                    | Spruce Pine Fir |

Notes

Nail one ply to another with  
3 1/2" spiral nails @ 12"  
o.c, staggered in 2 rows



5152524



Boise Cascade

Triple 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP

Floor Beam\B17



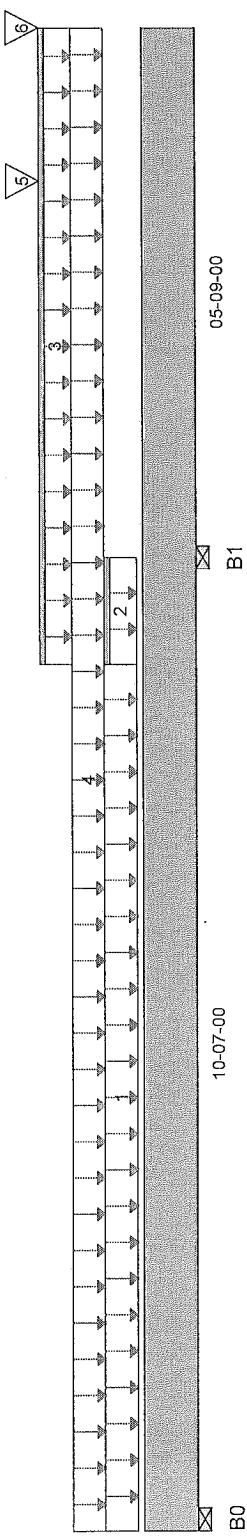
BC CALC® Design Report

Dry | 2 spans | Right cantilever | 0/12 slope (deg)

November 15, 2017 14:35:52

Build 6080  
Job Name: 45147 (5004)  
Address: Pine Valley  
City, Province, Postal Code: Vaughan, ON  
Customer: Gold Park  
Code reports: CCMC 12472-R

File Name: 290673.bcc  
Description: Second Floor Framing  
Specifier:  
Designer: NL  
Company: Alpa Roof Trusses  
Misc:



Total Horizontal Product Length = 16-04-00

Reaction Summary (Down / Uplift) (lbs)

| Bearing    | Live        | Dead      | Snow      | Wind |
|------------|-------------|-----------|-----------|------|
| B0, 3-1/2" | 2,060 / 381 | 0 / 73    | 0 / 450   |      |
| B1, 5-1/2" | 3,399 / 0   | 4,625 / 0 | 1,285 / 0 |      |

Load Summary

| Tag Description | Load Type          | Ref. | Start    | End      | Live | Dead  | Snow | Wind | Trib.    |
|-----------------|--------------------|------|----------|----------|------|-------|------|------|----------|
| 1               | Unf. Area (lb/ft²) | L    | 00-00-00 | 09-05-00 | 40   | 20    |      |      | 04-09-00 |
| 2               | Unf. Lin. (lb/ft)  | L    | 09-05-00 | 10-07-00 |      | 11    |      | 21   | n/a      |
| 3               | Unf. Lin. (lb/ft)  | L    | 09-05-00 | 16-04-00 |      | 100   |      |      | n/a      |
| 4               | Unf. Area (lb/ft²) | L    | 00-00-00 | 16-04-00 | 40   | 15    |      |      | 04-10-00 |
| 5               | Conc. Pt. (lbs)    | L    | 14-08-00 | 14-08-00 |      | 285   |      |      | n/a      |
| 6               | Conc. Pt. (lbs)    | L    | 16-04-00 | 16-04-00 | 131  | 1,189 |      | 811  | n/a      |

Controls Summary

|                  | Factored Demand  | Factored Resistance | Demand / Resistance | Load Case | Location |
|------------------|------------------|---------------------|---------------------|-----------|----------|
| Pos. Moment      | 5,490 ft-lbs     | 55,212 ft-lbs       | 9.9%                | 23        | 04-00-12 |
| Neg. Moment      | -15,611 ft-lbs   | -35,887 ft-lbs      | 43.5%               | 0         | 10-07-00 |
| End Shear        | 2,074 lbs        | 21,696 lbs          | 9.6%                | 23        | 01-03-06 |
| Cont. Shear      | 5,515 lbs        | 21,696 lbs          | 25.4%               | 7         | 09-04-06 |
| Total Load Defl. | 2xL/249 (0.554") | 0.575"              | 96.3%               | 70        | 16-04-00 |
| Live Load Defl.  | 2xL/629 (0.219") | 0.383"              | 57.2%               | 94        | 16-04-00 |
| Total Neg. Defl. | L/999 (-0.109")  | n/a                 | n/a                 | 70        | 06-05-08 |
| Max Defl.        | -0.109"          | n/a                 | n/a                 | 70        | 06-05-08 |
| Cant. Max Defl.  | 0.554"           | 1"                  | 55.4%               | 70        | 16-04-00 |
| Span / Depth     | 10.5             | n/a                 | n/a                 |           | 00-00-00 |
| Squash Blocks    | Valid            |                     |                     |           |          |

Bearing Supports

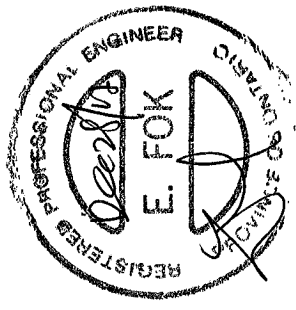
|               | Dim. (L x W)    | Demand     | Demand/Resistance Support | Demand/Resistance Member | Material        |
|---------------|-----------------|------------|---------------------------|--------------------------|-----------------|
| B0 Wall/Plate | 3-1/2" x 5-1/4" | 3,024 lbs  | 26.8%                     | 13.5%                    | Spruce Pine Fir |
| B1 Wall/Plate | 5-1/2" x 5-1/4" | 11,522 lbs | 64.9%                     | 32.7%                    | Spruce Pine Fir |

Cautions

Uplift of 956 lbs found at span 1 - Left.  
Long Cantilever: Sheathing required on bottom flange and adjacent back span or bracing designed by the design professional of record. Design professional of record must address uplift at supports.

Notes

Nail one ply to another with  
3 1/2" spiral nails @ 12"  
o.c. staggered in 2 rows



S152525



Boise Cascade

# Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP

Floor Beam\B18

Dry | 1 span | No cantilevers | 0/12 slope (deg)

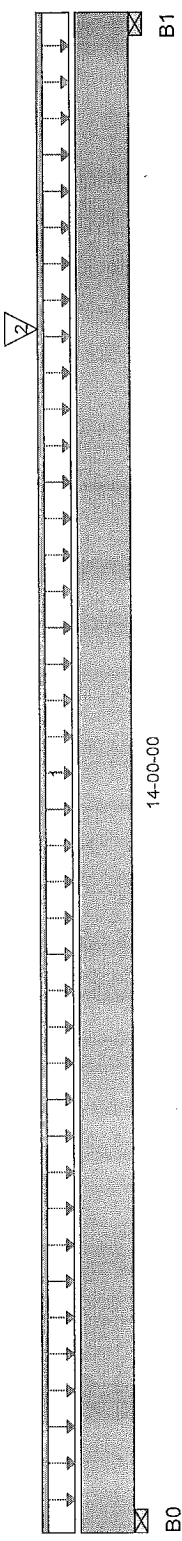
November 15, 2017 13:54:07



## BC CALC® Design Report

Build 6080  
Job Name: 45147 (5004)  
Address: Pine Valley  
City, Province, Postal Code: Vaughan, ON  
Customer: Gold Park  
Code reports: CCMC 12472-R

File Name: 290673.bcc  
Description: Second Floor Framing  
Specifier:  
Designer: NL  
Company: Alpa Roof Trusses  
Misc:



Total Horizontal Product Length = 14-00-00

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

| Bearing    | Live      | Dead      | Snow   | Wind |
|------------|-----------|-----------|--------|------|
| B0, 3-1/2" | 985 / 0   | 528 / 0   | 21 / 0 |      |
| B1, 3-1/2" | 2,828 / 0 | 1,301 / 0 | 83 / 0 |      |

### Load Summary

| Tag Description | Load Type         | Ref. | Start    | End      | Live  | Dead  | Snow | Wind | Trib. |
|-----------------|-------------------|------|----------|----------|-------|-------|------|------|-------|
| 1               | Unf. Lin. (lb/ft) | L    | 00-00-00 | 14-00-00 | 54    | 27    |      |      | n/a   |
| 2               | Conc. Pt. (lbs)   | L    | 11-01-00 | 11-01-00 | 3,057 | 1,282 |      | 104  | n/a   |

### Controls Summary

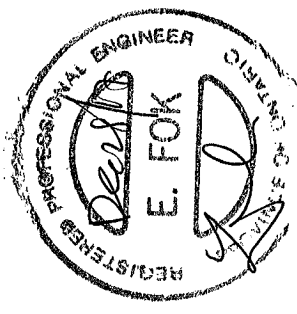
|                  | Factored Demand | Factored Resistance | Demand / Resistance | Load Case | Location |
|------------------|-----------------|---------------------|---------------------|-----------|----------|
| Pos. Moment      | 15,340 ft-lbs   | 35,392 ft-lbs       | 43.3%               | 1         | 11-01-00 |
| End Shear        | 5,743 lbs       | 14,464 lbs          | 39.7%               | 1         | 12-08-10 |
| Total Load Defl. | L/538 (0.302")  | 0.677"              | 44.6%               | 11        | 07-08-09 |
| Live Load Defl.  | L/794 (0.205")  | 0.451"              | 45.3%               | 15        | 07-08-09 |
| Max Defl.        | 0.302"          | 1"                  | 30.2%               | 11        | 07-08-09 |
| Span / Depth     | 13.7            | n/a                 | n/a                 |           | 00-00-00 |
| Squash Blocks    | Valid           |                     |                     |           |          |

### Bearing Supports

|               | Dim. (L x W)    | Demand    | Demand/ Resistance Support | Demand/ Resistance Member | Material        |
|---------------|-----------------|-----------|----------------------------|---------------------------|-----------------|
| B0 Wall/Plate | 3-1/2" x 3-1/2" | 2,147 lbs | 28.5%                      | 14.4%                     | Spruce Pine Fir |
| B1 Wall/Plate | 3-1/2" x 3-1/2" | 5,910 lbs | 78.4%                      | 39.5%                     | Spruce Pine Fir |

### Notes

Design meets Code minimum (L/240) Total load deflection criteria.  
Design meets Code minimum (L/360) Live load deflection criteria.  
Design meets User specified (1") Maximum Total 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 2010 and CSA O86.  
Design based on Dry Service Condition.  
Importance Factor : Normal Part code : Part 4  
Nail one ply to another with 3 1/2" spiral nails @ 12" o.c, staggered in 2 rows





Boise Cascade

Single 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP

Floor Beam\B19



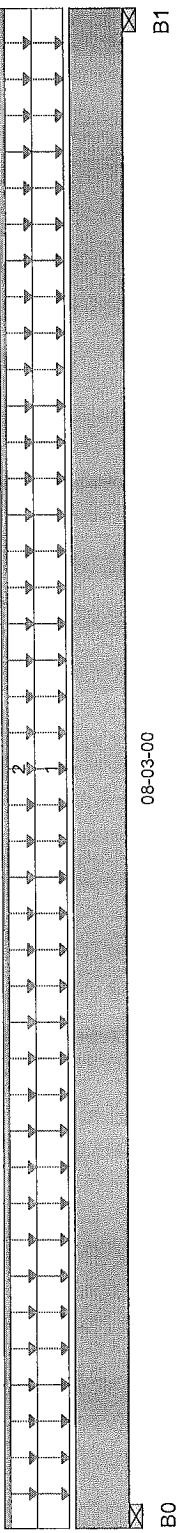
BC CALCO® Design Report

Dry | 1 span | No cantilevers | 0/12 slope (deg)

November 15, 2017 13:58:50

Build 6080  
Job Name: 45147 (5004)  
Address: Pine Valley  
City, Province, Postal Code: Vaughan, ON  
Customer: Gold Park  
Code reports: CCMC 12472-R

File Name: 290673.bcc  
Description: First Floor Framing  
Specifier:  
Designer: NL  
Company: Alpa Roof Trusses  
Misc:



08-03-00

B1

Total Horizontal Product Length = 08-03-00

Reaction Summary (Down / Uplift) ( lbs )

| Bearing    | Live    | Dead    | Snow | Wind |
|------------|---------|---------|------|------|
| B0, 3-1/2" | 687 / 0 | 530 / 0 |      |      |
| B1, 3-1/2" | 687 / 0 | 530 / 0 |      |      |

Load Summary

| Tag Description | Load Type           | Ref. | Start    | End      | Live | Dead | Snow | Wind | Trib.    |
|-----------------|---------------------|------|----------|----------|------|------|------|------|----------|
| 1               | Unf. Area (lb/ft^2) | L    | 00-00-00 | 08-03-00 | 40   | 15   |      |      | 04-02-00 |
| 2               | Unf. Lin. (lb/ft)   | L    | 00-00-00 | 08-03-00 | 60   |      |      |      | n/a      |

Controls Summary

| Pos.             | Factored Demand | Factored Resistance | Demand / Resistance | Load Case | Location |
|------------------|-----------------|---------------------|---------------------|-----------|----------|
| Moment           | 3,116 ft-lbs    | 17,696 ft-lbs       | 17.6%               | 1         | 04-01-08 |
| End Shear        | 1,168 lbs       | 7,232 lbs           | 16.1%               | 1         | 01-03-06 |
| Total Load Defl. | L/999 (0.05")   | n/a                 | n/a                 | 4         | 04-01-08 |
| Live Load Defl.  | L/999 (0.028")  | n/a                 | n/a                 | 5         | 04-01-08 |
| Max Defl.        | 0.05"           | n/a                 | n/a                 | 4         | 04-01-08 |
| Span / Depth     | 7.9             | n/a                 | n/a                 |           | 00-00-00 |
| Squash Blocks    | Valid           |                     |                     |           |          |

Disclosure

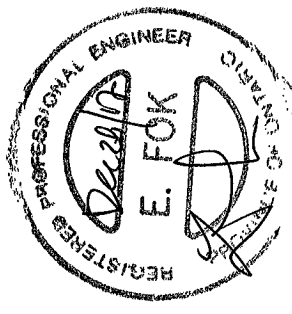
Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of Boise Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call 1-800-964-6999 before installation.

Bearing Supports

|               | Dim. (L x W)    | Demand    | Demand/ Resistance Support | Demand/ Resistance Member | Material        |
|---------------|-----------------|-----------|----------------------------|---------------------------|-----------------|
| B0 Wall/Plate | 3-1/2" x 1-3/4" | 1,694 lbs | 45%                        | 22.7%                     | Spruce Pine Fir |
| B1 Wall/Plate | 3-1/2" x 1-3/4" | 1,694 lbs | 45%                        | 22.7%                     | Spruce Pine Fir |

Notes

Design meets Code minimum (L/240) Total load deflection criteria.  
Design meets Code minimum (L/360) Live load deflection criteria.  
Design meets User specified (1") Maximum Total 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 2010 and CSA O86.  
Design based on Dry Service Condition.  
Importance Factor : Normal Part code : Part 4

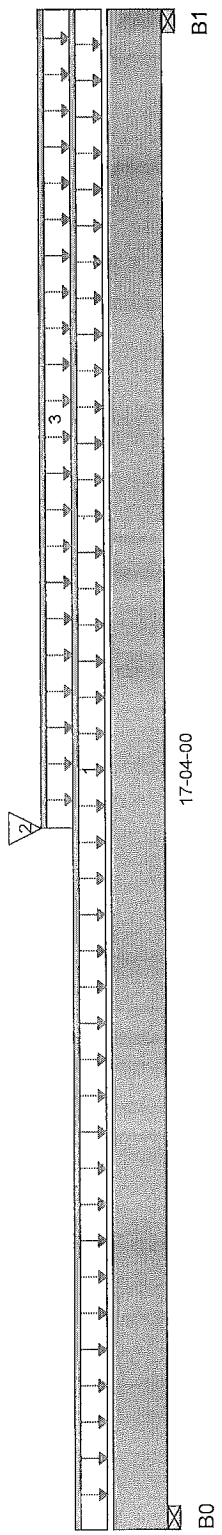


152527



BC CALCO Design Report  
Build 6080  
Job Name: 45147 (5004)  
Address: Pine Valley  
City, Province, Postal Code: Vaughan, ON  
Customer: Gold Park  
Code reports: CCMC 12472-R

File Name: 290673.bcc  
Description: First Floor Framing  
Specifier:  
Designer: NL  
Company: Alpa Roof Trusses  
Misc:



Total Horizontal Product Length = 17-04-00

Reaction Summary (Down / Uplift) (lbs )

| Bearing    | Live    | Dead    | Snow | Wind |
|------------|---------|---------|------|------|
| B0, 3-1/2" | 839 / 0 | 772 / 0 |      |      |
| B1, 3-1/2" | 784 / 0 | 995 / 0 |      |      |

Load Summary

| Tag Description | Load Type         | Ref. | Start    | End      | Live | Dead | Snow | Wind | Trib. |
|-----------------|-------------------|------|----------|----------|------|------|------|------|-------|
| 1               | Unf. Lin. (lb/ft) | L    | 00-00-00 | 17-04-00 | 54   | 27   |      |      | n/a   |
| 2               | Conc. Pt. (lbs)   | L    | 08-00-00 | 08-00-00 | 687  | 530  |      |      | n/a   |
| 3               | Unf. Lin. (lb/ft) | L    | 08-00-00 | 17-04-00 |      | 60   |      |      | n/a   |

Controls Summary

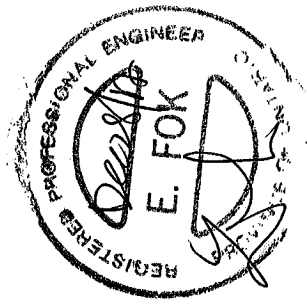
|                  | Factored Demand | Factored Resistance | Demand / Resistance | Load Case | Location |
|------------------|-----------------|---------------------|---------------------|-----------|----------|
| Pos. Moment      | 13,121 ft-lbs   | 35,392 ft-lbs       | 37.1%               | 1         | 08-00-00 |
| End Shear        | 2,158 lbs       | 14,464 lbs          | 14.9%               | 1         | 16-00-10 |
| Total Load Defl. | L/450 (0.45")   | 0.844"              | 53.4%               | 4         | 08-07-09 |
| Live Load Defl.  | L/914 (0.221")  | 0.562"              | 39.4%               | 5         | 08-06-01 |
| Max Defl.        | 0.45"           | 1"                  | 45%                 | 4         | 08-07-09 |
| Span / Depth     | 17.1            | n/a                 | n/a                 |           | 00-00-00 |
| Squash Blocks    | Valid           |                     |                     |           |          |

Bearing Supports

|               | Dim. (L x W)    | Demand    | Demand/Resistance Support | Demand/Resistance Member | Material        |
|---------------|-----------------|-----------|---------------------------|--------------------------|-----------------|
| B0 Wall/Plate | 3-1/2" x 3-1/2" | 2,222 lbs | 29.5%                     | 14.9%                    | Spruce Pine Fir |
| B1 Wall/Plate | 3-1/2" x 3-1/2" | 2,420 lbs | 32.1%                     | 16.2%                    | Spruce Pine Fir |

Notes

Design meets Code minimum (L/240) Total load deflection criteria.  
Design meets Code minimum (L/360) Live load deflection criteria.  
Design meets User specified (1") Maximum Total 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 2010 and CSA O86.  
Design based on Dry Service Condition.  
Importance Factor : Normal Part code : Part 4  
Nail one ply to another with 3 1/2" spiral nails @ 12" o.c. staggered in 2 rows



S152528



Boise Cascade

# Single 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP

Floor Beam\B21

Dry | 1 span | No cantilevers | 0/12 slope (deg)

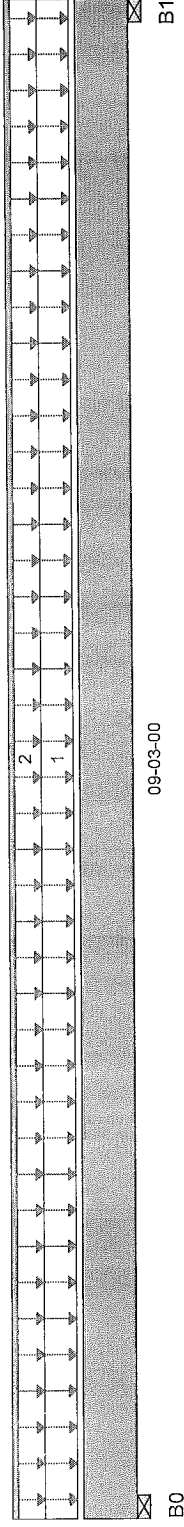
November 15, 2017 14:14:55

BC CALCO Design Report



Build 6080  
Job Name: 45147 (5004)  
Address: Pine Valley  
City, Province, Postal Code: Vaughan, ON  
Customer: Gold Park  
Code reports: CCMC 12472-R

File Name: 290673.bcc  
Description: First Floor Framing  
Specifier:  
Designer: NL  
Company: Alpa Roof Trusses  
Misc:



Total Horizontal Product Length = 09-03-00

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

| Bearing    | Live    | Dead    | Snow | Wind |
|------------|---------|---------|------|------|
| B0, 3-1/2" | 740 / 0 | 675 / 0 |      |      |
| B1, 3-1/2" | 740 / 0 | 675 / 0 |      |      |

## Load Summary

| Tag Description | Load Type          | Ref. | Start    | End      | Live | Dead | Snow | Wind | Trib.    |
|-----------------|--------------------|------|----------|----------|------|------|------|------|----------|
| 1               | Unf. Area (lb/ft²) | L    | 00-00-00 | 09-03-00 | 40   | 20   |      |      | 04-00-00 |
| 2               | Unf. Lin. (lb/ft)  | L    | 00-00-00 | 09-03-00 |      | 60   |      |      | n/a      |

## Controls Summary

|                  | Factored Demand | Factored Resistance | Demand / Resistance | Load Case | Location |
|------------------|-----------------|---------------------|---------------------|-----------|----------|
| Pos. Moment      | 4,082 ft-lbs    | 17,696 ft-lbs       | 23.1%               | 1         | 04-07-08 |
| End Shear        | 1,413 lbs       | 7,232 lbs           | 19.5%               | 1         | 01-03-06 |
| Total Load Defl. | L/999 (0.084")  | n/a                 | n/a                 | 4         | 04-07-08 |
| Live Load Defl.  | L/999 (0.044")  | n/a                 | n/a                 | 5         | 04-07-08 |
| Max Defl.        | 0.084"          | n/a                 | n/a                 | 4         | 04-07-08 |
| Span / Depth     | 8.9             | n/a                 | n/a                 |           | 00-00-00 |
| Squash Blocks    | Valid           |                     |                     |           |          |

## Disclosure

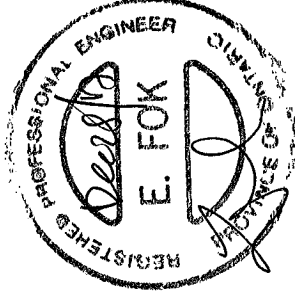
Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of Boise Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call 1-800-964-6999 before installation.

## Bearing Supports

|               | Dim. (L x W)    | Demand    | Demand/Resistance Support | Demand/Resistance Member | Material        |
|---------------|-----------------|-----------|---------------------------|--------------------------|-----------------|
| B0 Wall/Plate | 3-1/2" x 1-3/4" | 1,954 lbs | 51.9%                     | 26.2%                    | Spruce Pine Fir |
| B1 Wall/Plate | 3-1/2" x 1-3/4" | 1,954 lbs | 51.9%                     | 26.2%                    | Spruce Pine Fir |

## Notes

Design meets Code minimum (L/240) Total load deflection criteria.  
Design meets Code minimum (L/360) Live load deflection criteria.  
Design meets User specified (1") Maximum Total 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 2010 and CSA O86.  
Design based on Dry Service Condition.  
Importance Factor : Normal Part code : Part 4



S.152529



Boise Cascade

Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP

Floor Beam\B22



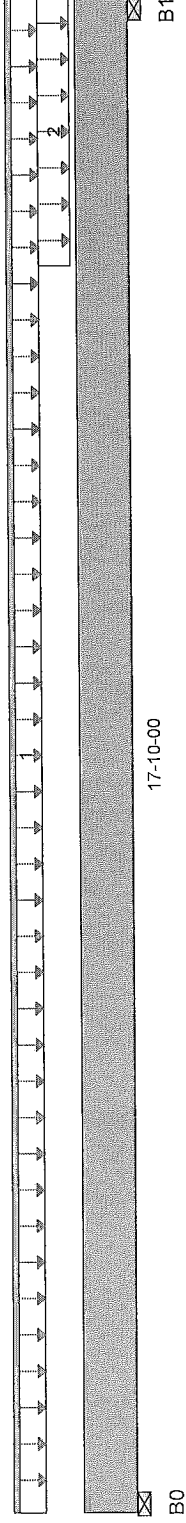
BC CALC® Design Report

Dry | 1 span | No cantilevers | 0/12 slope (deg)

November 16, 2017 08:43:45

Build 6080  
Job Name: 45147 (5004)  
Address: Pine Valley  
City, Province, Postal Code: Vaughan, ON  
Customer: Gold Park  
Code reports: CCMC 12472-R

File Name: 290673.bcc  
Description: Second Floor Framing  
Specifier:  
Designer: NL  
Company: Alpa Roof Trusses  
Misc:



Total Horizontal Product Length = 17'-10'-00"

Reaction Summary (Down / Uplift) (lbs )

| Bearing    | Live    | Dead    | Snow | Wind | Trib. |
|------------|---------|---------|------|------|-------|
| B0, 3"     | 270 / 0 | 777 / 0 |      |      |       |
| B1, 3-1/2" | 592 / 0 | 900 / 0 |      |      |       |

Load Summary

| Tag Description | Load Type           | Ref. | Start    | End      | Live | Dead | Snow | Wind | Trib.    |
|-----------------|---------------------|------|----------|----------|------|------|------|------|----------|
| 1               | Unf. Lin. (lb/ft)   | L    | 00-00-00 | 17-10-00 | 27   | 74   |      |      | n/a      |
| 2               | Unf. Area (lb/ft^2) | L    | 14-08-00 | 17-10-00 | 40   | 15   |      |      | 03-00-00 |

Controls Summary

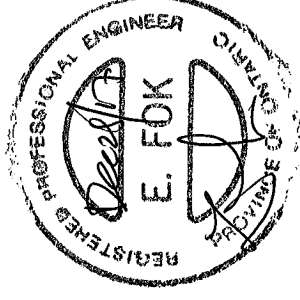
| Pos.             | Factored Demand | Factored Resistance | Demand / Resistance | Load Case | Location |
|------------------|-----------------|---------------------|---------------------|-----------|----------|
| Pos. Moment      | 4,704 ft-lbs    | 23,005 ft-lbs       | 20.4%               | 0         | 09-00-00 |
| End Shear        | 1,025 lbs       | 9,401 lbs           | 10.9%               | 0         | 16-06-10 |
| Total Load Defl. | L/795 (0.263")  | 0.871"              | 30.2%               | 4         | 09-00-00 |
| Live Load Defl.  | L/999 (0.074")  | n/a                 | n/a                 | 5         | 09-02-09 |
| Max Defl.        | 0.263"          | 1"                  | 26.3%               | 4         | 09-00-00 |
| Span / Depth     | 17.6            | n/a                 | n/a                 |           | 00-00-00 |
| Squash Blocks    | Valid           |                     |                     |           |          |

Bearing Supports

|               | Dim. (L x W)    | Demand    | Demand/Resistance Support | Demand/Resistance Member | Material        |
|---------------|-----------------|-----------|---------------------------|--------------------------|-----------------|
| B0 Wall/Plate | 3" x 3-1/2"     | 1,087 lbs | 25.9%                     | 13.1%                    | Spruce Pine Fir |
| B1 Wall/Plate | 3-1/2" x 3-1/2" | 2,013 lbs | 26.7%                     | 13.5%                    | Spruce Pine Fir |

Notes

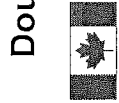
Design meets Code minimum (L/240) Total load deflection criteria.  
Design meets Code minimum (L/360) Live load deflection criteria.  
Design meets User specified (1") Maximum Total load deflection criteria.  
Calculations assume member is fully braced.  
Resistance Factor phi has been applied to all presented results per CSA O86.  
BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.  
Design based on Dry Service Condition.  
Importance Factor : Normal Part code : Part 4 Nail one ply to another with 3 1/2" spiral nails @ 12" o.c. staggered in 2 rows



8152530



Boise Cascade



Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP

Floor Beam\B23



BC CALC® Design Report

Dry | 1 span | No cantilevers | 0/12 slope (deg)

November 16, 2017 09:05:33

Build 6080

Job Name:

Address:

City, Province, Postal Code: Vaughan, ON

Customer: Gold Park

Code reports:

45147 (5004)

Pine Valley

CCMC 12472-R

File Name: 290673.bcc

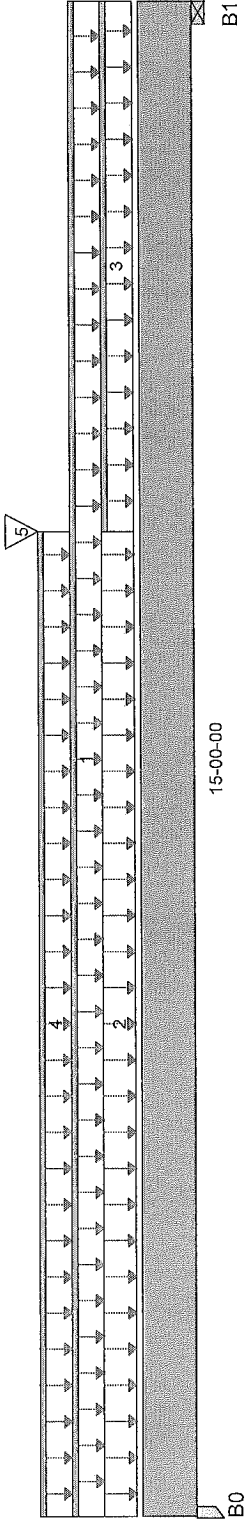
Description: Second Floor Framing

Specifier:

Designer: NL

Company: Alpa Roof Trusses

Misc:



Total Horizontal Product Length = 15-00-00

Reaction Summary (Down / Uplift) (lbs)

| Bearing    | Live      | Dead      | Snow | Wind |
|------------|-----------|-----------|------|------|
| B0, 3"     | 2,810 / 0 | 1,806 / 0 |      |      |
| B1, 3-1/2" | 1,838 / 0 | 1,458 / 0 |      |      |

Load Summary

| Tag Description | Load Type          | Ref. | Start    | End      | Live | Dead | Snow | Wind | Trib.    |
|-----------------|--------------------|------|----------|----------|------|------|------|------|----------|
| 1               | Unf. Lin. (lb/ft)  | L    | 00-00-00 | 15-00-00 | 27   | 14   |      |      | n/a      |
| 2               | Unf. Area (lb/ft²) | L    | 00-00-00 | 09-09-00 | 40   | 15   |      |      | 09-00-00 |
| 3               | Unf. Lin. (lb/ft)  | L    | 09-09-00 | 15-00-00 | 27   | 14   |      |      | n/a      |
| 4               | Unf. Lin. (lb/ft)  | L    | 00-00-00 | 09-09-00 |      | 60   |      |      | n/a      |
| 5               | Conc. Pt. (lbs)    | L    | 09-09-00 | 09-09-00 | 591  | 898  |      |      | n/a      |

Controls Summary

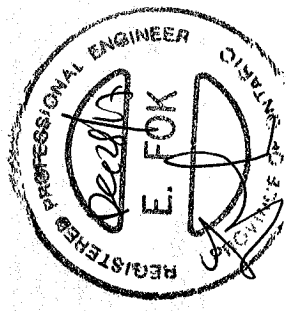
|                  | Factored Demand | Factored Resistance | Demand / Resistance | Load Case | Location |
|------------------|-----------------|---------------------|---------------------|-----------|----------|
| Pos. Moment      | 23,248 ft-lbs   | 35,392 ft-lbs       | 65.7%               | 1         | 07-05-14 |
| End Shear        | 5,411 lbs       | 14,464 lbs          | 37.4%               | 1         | 01-02-14 |
| Total Load Defl. | L/273 (0.641")  | 0.729"              | 87.9%               | 4         | 07-05-14 |
| Live Load Defl.  | L/472 (0.371")  | 0.486"              | 76.4%               | 5         | 07-04-04 |
| Max Defl.        | 0.641"          | 1"                  | 64.1%               | 4         | 07-05-14 |
| Span / Depth     | 14.7            | n/a                 | n/a                 |           | 00-00-00 |
| Squash Blocks    | Valid           |                     |                     |           |          |

Bearing Supports

|               | Dim. (L x W)    | Demand    | Demand/Resistance Support | Demand/Resistance Member | Material        |
|---------------|-----------------|-----------|---------------------------|--------------------------|-----------------|
| B0 Post       | 3" x 3-1/2"     | 6,473 lbs | 35.5%                     | 50.5%                    | Spruce Pine Fir |
| B1 Wall/Plate | 3-1/2" x 3-1/2" | 4,579 lbs | 60.8%                     | 30.6%                    | Spruce Pine Fir |

Notes

Design meets Code minimum (L/240) Total load deflection criteria.  
Design meets Code minimum (L/360) Live load deflection criteria.  
Design meets User specified (1") Maximum Total 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 2010 and CSA O86.  
Design based on Dry Service Condition.  
Importance Factor : Normal Part code : Part 4  
Nail one ply to another with 3 1/2" spiral nails @ 10"  
o.c., staggered in 2 rows



S.152531



Boise Cascade

Single 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP

Floor Beam\B24



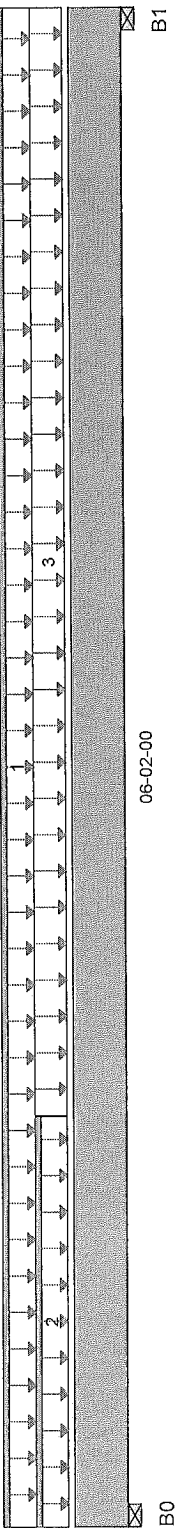
BC CALC® Design Report

Dry | 1 span | No cantilevers | 0/12 slope (deg)

November 16, 2017 09:05:39

Build 6080  
Job Name: 45147 (5004)  
Address: Pine Valley  
City, Province, Postal Code: Vaughan, ON  
Customer: Gold Park  
Code reports: CCMC 12472-R

File Name: 290673.bcc  
Description: Second Floor Framing  
Specifier:  
Designer: NL  
Company: Alpa Roof Trusses  
Misc:



Total Horizontal Product Length = 06-02-00

Reaction Summary (Down / Uplift) (lbs )

| Bearing    | Live    | Dead    | Snow | Wind |
|------------|---------|---------|------|------|
| B0, 3-1/2" | 603 / 0 | 262 / 0 |      |      |
| B1, 3-1/2" | 959 / 0 | 391 / 0 |      |      |

Load Summary

| Tag Description | Load Type           | Ref. | Start    | End      | Live | Dead | Snow | Wind | Trib.    |
|-----------------|---------------------|------|----------|----------|------|------|------|------|----------|
| 1               | Unf. Lin. (lb/ft)   | L    | 00-00-00 | 06-02-00 | 27   | 14   |      |      | n/a      |
| 2               | Unf. Lin. (lb/ft)   | L    | 00-00-00 | 01-08-00 | 27   | 14   |      |      | n/a      |
| 3               | Unf. Area (lb/ft^2) | L    | 01-08-00 | 06-02-00 | 40   | 15   |      |      | 07-06-00 |

Controls Summary

|                  | Factored Demand | Factored Resistance | Demand / Resistance | Load Case | Location |
|------------------|-----------------|---------------------|---------------------|-----------|----------|
| Pos. Moment      | 2,404 ft-lbs    | 17,696 ft-lbs       | 13.6%               | 1         | 03-03-05 |
| End Shear        | 1,086 lbs       | 7,232 lbs           | 15%                 | 1         | 04-10-10 |
| Total Load Defl. | L/999 (0.02")   | n/a                 | n/a                 | 4         | 03-01-08 |
| Live Load Defl.  | L/999 (0.014")  | n/a                 | n/a                 | 5         | 03-01-08 |
| Max Defl.        | 0.02"           | n/a                 | n/a                 | 4         | 03-01-08 |
| Span / Depth     | 5.8             | n/a                 | n/a                 |           | 00-00-00 |
| Squash Blocks    | Valid           |                     |                     |           |          |

Disclosure

Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here 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 1-800-964-6999 before installation.

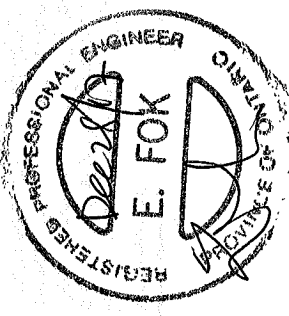
Bearing Supports

|               | Dim. (L x W)    | Demand    | Demand/Resistance Support | Resistance Member | Material        |
|---------------|-----------------|-----------|---------------------------|-------------------|-----------------|
| B0 Wall/Plate | 3-1/2" x 1-3/4" | 1,232 lbs | 32.7%                     | 16.5%             | Spruce Pine Fir |
| B1 Wall/Plate | 3-1/2" x 1-3/4" | 1,927 lbs | 51.1%                     | 25.8%             | Spruce Pine Fir |

Notes

Design meets Code minimum (L/240) Total load deflection criteria.  
Design meets Code minimum (L/360) Live load deflection criteria.  
Design meets User specified (1") Maximum Total 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 2010 and CSA O86.

Design based on Dry Service Condition.  
Importance Factor : Normal Part code : Part 4



S.152532



Boise Cascade

Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP

Floor Beam\B25



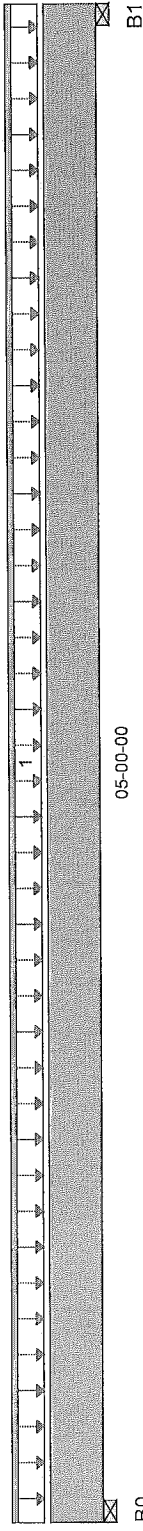
BC CALCO Design Report

Dry | 1 span | No cantilevers | 0/12 slope (deg)

November 16, 2017 09:06:08

Build 6080  
Job Name: 45147 (5004)  
Address: Pine Valley  
City, Province, Postal Code: Vaughan, ON  
Customer: Gold Park  
Code reports: CCMC 12472-R

File Name: 290673.bcc  
Description: Second Floor Framing  
Specifier:  
Designer: NL  
Company: Alpa Roof Trusses  
Misc:



05-00-00

B1

Total Horizontal Product Length = 05-00-00

Reaction Summary (Down / Uplift) (lbs)

| Bearing    | Live   | Dead    | Snow | Wind |
|------------|--------|---------|------|------|
| B0, 3-1/2" | 68 / 0 | 215 / 0 |      |      |
| B1, 3-1/2" | 68 / 0 | 215 / 0 |      |      |

Load Summary

| Tag Description | Load Type         | Ref. | Start    | End      | Live | Dead | Snow | Wind      | Trib. |
|-----------------|-------------------|------|----------|----------|------|------|------|-----------|-------|
| 1               | Unf. Lin. (lb/ft) | L    | 00-00-00 | 05-00-00 | 27   | 74   |      | 1.00 1.15 | n/a   |

Controls Summary

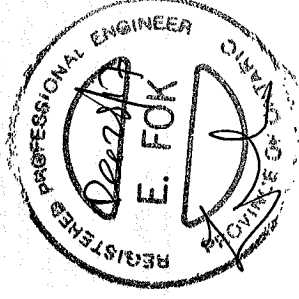
| Pos.             | Factored Demand | Factored Resistance | Demand / Resistance | Load Case | Location |
|------------------|-----------------|---------------------|---------------------|-----------|----------|
| Moment           | 311 ft-lbs      | 23,005 ft-lbs       | 1.3%                | 0         | 02-06-00 |
| End Shear        | 147 lbs         | 9,401 lbs           | 1.6%                | 0         | 01-03-06 |
| Total Load Defl. | L/999 (0.001")  | n/a                 | n/a                 | 4         | 02-06-00 |
| Live Load Defl.  | L/999 (0")      | n/a                 | n/a                 | 5         | 02-06-00 |
| Max Defl.        | 0.001"          | n/a                 | n/a                 | 4         | 02-06-00 |
| Span / Depth     | 4.6             | n/a                 | n/a                 |           | 00-00-00 |
| Squash Blocks    | Valid           |                     |                     |           |          |

Bearing Supports

|               | Dim. (L x W)    | Demand  | Demand/ Resistance Support | Demand/ Resistance Member | Material        |
|---------------|-----------------|---------|----------------------------|---------------------------|-----------------|
| B0 Wall/Plate | 3-1/2" x 3-1/2" | 301 lbs | 6.1%                       | 3.1%                      | Spruce Pine Fir |
| B1 Wall/Plate | 3-1/2" x 3-1/2" | 301 lbs | 6.1%                       | 3.1%                      | Spruce Pine Fir |

Notes

Design meets Code minimum (L/240) Total load deflection criteria.  
Design meets Code minimum (L/360) Live load deflection criteria.  
Design meets User specified (1") Maximum Total 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 2010 and CSA O86.  
Design based on Dry Service Condition.  
Importance Factor : Normal Part code : Part 4  
Nail one ply to another with 3 1/2" spiral nails @ 12" o.c, staggered in 2 rows



S-152533



Boise Cascade

Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP

Floor Beam\B26



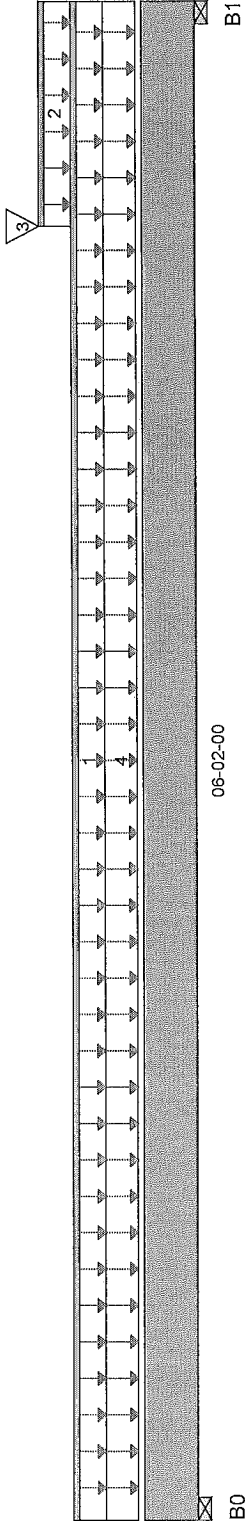
BC CALC® Design Report

Dry | 1 span | No cantilevers | 0/12 slope (deg)

November 16, 2017 09:57:15

Build 6080  
Job Name: 45147 (5004)  
Address: Pine Valley  
City, Province, Postal Code: Vaughan, ON  
Customer: Gold Park  
Code reports: CCMC 12472-R

File Name: 290673.bcc  
Description: Second Floor Framing  
Specifier:  
Designer: NL  
Company: Alpa Roof Trusses  
Misc:



Total Horizontal Product Length = 06-02-00

Reaction Summary (Down / Uplift) ( lbs )

| Bearing    | Live    | Dead    | Snow | Wind |
|------------|---------|---------|------|------|
| B0, 3-1/2" | 503 / 0 | 434 / 0 |      |      |
| B1, 3-1/2" | 577 / 0 | 608 / 0 |      |      |

Load Summary

| Tag Description | Load Type          | Ref. | Start    | End      | Live | Dead | Snow | Wind | Trib.    |
|-----------------|--------------------|------|----------|----------|------|------|------|------|----------|
| 1               | Unf. Lin. (lb/ft)  | L    | 00-00-00 | 06-02-00 | 1.00 | 0.65 |      | 1.00 | 1.15     |
| 2               | Unf. Lin. (lb/ft)  | L    | 05-03-00 | 06-02-00 | 27   | 14   |      |      | n/a      |
| 3               | Conc. Pt. (lbs)    | L    | 05-03-00 | 05-03-00 | 68   | 215  |      |      | n/a      |
| 4               | Unf. Area (lb/ft²) | L    | 00-00-00 | 06-02-00 | 40   | 15   |      |      | 04-00-00 |

Controls Summary

|                  | Factored Demand | Factored Resistance | Demand / Resistance | Load Case | Location |
|------------------|-----------------|---------------------|---------------------|-----------|----------|
| Pos. Moment      | 1,787 ft-lbs    | 35,392 ft-lbs       | 5%                  | 1         | 03-02-06 |
| End Shear        | 953 lbs         | 14,464 lbs          | 6.6%                | 1         | 04-10-10 |
| Total Load Defl. | L/999 (0.008")  | n/a                 | n/a                 | 4         | 03-01-11 |
| Live Load Defl.  | L/999 (0.004")  | n/a                 | n/a                 | 5         | 03-01-00 |
| Max Defl.        | 0.008"          | n/a                 | n/a                 | 4         | 03-01-11 |
| Span / Depth     | 5.8             | n/a                 | n/a                 |           | 00-00-00 |
| Squash Blocks    | Valid           |                     |                     |           |          |

Bearing Supports

|               | Dim. (L x W)    | Demand    | Demand/ Resistance Support | Demand/ Resistance Member | Material        |
|---------------|-----------------|-----------|----------------------------|---------------------------|-----------------|
| B0 Wall/Plate | 3-1/2" x 3-1/2" | 1,296 lbs | 17.2%                      | 8.7%                      | Spruce Pine Fir |
| B1 Wall/Plate | 3-1/2" x 3-1/2" | 1,626 lbs | 21.6%                      | 10.9%                     | Spruce Pine Fir |

Notes

Design meets Code minimum (L/240) Total load deflection criteria.  
Design meets Code minimum (L/360) Live load deflection criteria.  
Design meets User specified (1") Maximum Total 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 2010 and CSA O86.

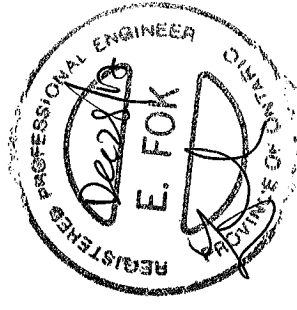
Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 4

Nail one ply to another with

3 1/2" spiral nails @ (2)

o.c. staggered in 2 rows



S152534



Boise Cascade

# Triple 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP

Floor Beam\B27



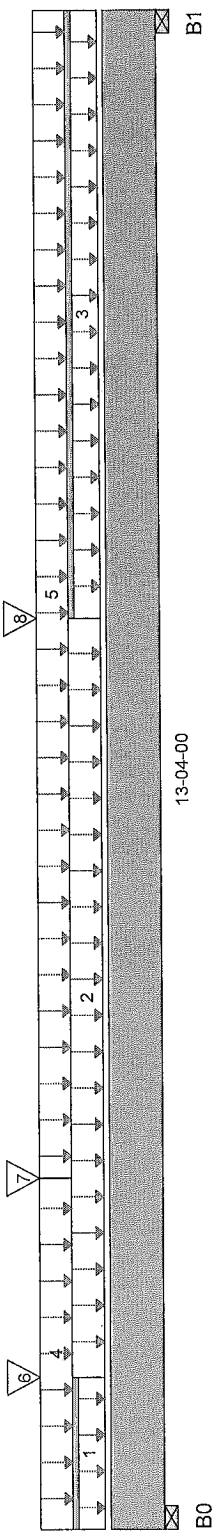
BC CALC® Design Report

Dry | 1 span | No cantilevers | 0/12 slope (deg)

November 16, 2017 09:58:00

Build 6080  
Job Name: 45147 (5004)  
Address: Pine Valley  
City, Province, Postal Code: Vaughan, ON  
Customer: Gold Park  
Code reports: CCMC 12472-R

File Name: 290673.bcc  
Description: Second Floor Framing  
Specifier:  
Designer: NL  
Company: Alpa Roof Trusses  
Misc:



Total Horizontal Product Length = 13-04-00

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

| Bearing    | Live      | Dead      | Snow | Wind |
|------------|-----------|-----------|------|------|
| B0, 3-1/2" | 4,726 / 0 | 2,890 / 0 |      |      |
| B1, 3-1/2" | 3,739 / 0 | 2,434 / 0 |      |      |

## Load Summary

| Tag Description | Load Type           | Ref. | Start    | End      | Live  | Dead  | Snow | Wind | Trib.    |
|-----------------|---------------------|------|----------|----------|-------|-------|------|------|----------|
| 1               | Unf. Lin. (lb/ft)   | L    | 00-00-00 | 01-04-00 | 27    | 14    |      |      | n/a      |
| 2               | Unf. Area (lb/ft^2) | L    | 01-04-00 | 08-00-00 | 40    | 15    |      |      | 03-02-00 |
| 3               | Unf. Lin. (lb/ft)   | L    | 08-00-00 | 13-04-00 | 40    | 60    |      |      | n/a      |
| 4               | Unf. Area (lb/ft^2) | L    | 00-00-00 | 03-01-00 | 40    | 15    |      |      | 03-00-00 |
| 5               | Unf. Area (lb/ft^2) | L    | 03-01-00 | 13-04-00 | 40    | 20    |      |      | 10-05-00 |
| 6               | Conc. Pt. (lbs)     | L    | 01-04-00 | 01-04-00 | 603   | 262   |      |      | n/a      |
| 7               | Conc. Pt. (lbs)     | L    | 03-01-00 | 03-01-00 | 1,838 | 1,458 |      |      | n/a      |
| 8               | Conc. Pt. (lbs)     | L    | 08-00-00 | 08-00-00 | 503   | 434   |      |      | n/a      |

## Controls Summary

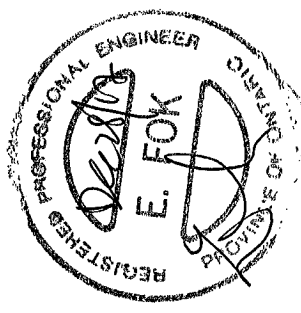
| Pos.             | Factored Demand | Factored Resistance | Demand / Resistance | Load Case | Location |
|------------------|-----------------|---------------------|---------------------|-----------|----------|
| Moment           | 32,131 ft-lbs   | 55,212 ft-lbs       | 58.2%               | 1         | 06-01-14 |
| End Shear        | 10,295 lbs      | 21,696 lbs          | 47.5%               | 1         | 01-03-06 |
| Total Load Defl. | L/328 (0.471")  | 0.644"              | 73.1%               | 4         | 06-05-09 |
| Live Load Defl.  | L/534 (0.289")  | 0.429"              | 67.4%               | 5         | 06-05-09 |
| Max Defl.        | 0.471"          | 1"                  | 47.1%               | 4         | 06-05-09 |
| Span / Depth     | 13              | n/a                 | n/a                 |           | 00-00-00 |
| Squash Blocks    | Valid           |                     |                     |           |          |

## Bearing Supports

|               | Dim. (L x W)    | Demand     | Demand / Resistance Support | Demand / Resistance Member | Material        |
|---------------|-----------------|------------|-----------------------------|----------------------------|-----------------|
| B0 Wall/Plate | 3-1/2" x 5-1/4" | 10,701 lbs | 94.7%                       | 47.7%                      | Spruce Pine Fir |
| B1 Wall/Plate | 3-1/2" x 5-1/4" | 8,652 lbs  | 76.5%                       | 38.6%                      | Spruce Pine Fir |

## Notes

Nail one ply to another with  
3 1/2" spiral nails @ 6"  
o.c., staggered in 2 rows



S.152535



November 16, 2017 09:11:22

File Name: 290673.bcc

45147 (5004)

## Pine Valley

:Vaughan, ON

Gold Park

CCMC 12472-R

Description: Second Floor Framing  
 Specifier:  
 Designer: NL  
 Company: Alpa Roof Trusses  
 Misc:



Total Horizontal Product Length = 08-00-00

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

| Bearing    | Live      | Dead      | Snow | Wind |
|------------|-----------|-----------|------|------|
| B0, 3-1/2" | 2,800 / 0 | 1,688 / 0 |      |      |
| B1, 3-1/2" | 2,800 / 0 | 1,688 / 0 |      |      |

## Load Summary

| Tag | Description | Load Type           | Ref. | Start    | End      | 1.00 | 0.65 | 1.00 | 1.15     |
|-----|-------------|---------------------|------|----------|----------|------|------|------|----------|
| 1   |             | Unf. Area (lb/ft^2) | L    | 00-00-00 | 08-00-00 | 40   | 20   |      | 17-06-00 |
| 2   |             | Unf. Lin. (lb/ft)   | L    | 00-00-00 | 08-00-00 |      | 60   |      | n/a      |

## Controls Summary

|                  |                |               |       |   |          |
|------------------|----------------|---------------|-------|---|----------|
| Pos. Moment      | 11,216 ft-lbs  | 35,392 ft-lbs | 31.7% | 1 | 04-00-00 |
| End Shear        | 4,289 lbs      | 14,464 lbs    | 29.7% | 1 | 01-03-06 |
| Total Load Defl. | L/999 (0.084") | n/a           | n/a   | 4 | 04-00-00 |
| Live Load Defl.  | L/999 (0.052") | n/a           | n/a   | 5 | 04-00-00 |
| Max Defl.        | 0.084"         | n/a           | n/a   | 4 | 04-00-00 |
| Span / Depth     | 7.6            | n/a           | n/a   |   | 00-00-00 |
| Squash Blocks    | Valid          |               |       |   |          |

## Bearing Supports

| Panel | Panel Size | Panel Weight    | Panel Thickness | Panel Material | Panel Color | Panel Finish | Panel Grade | Panel Type | Panel Use | Panel Location | Panel Condition | Panel Age | Panel Value | Panel Notes |
|-------|------------|-----------------|-----------------|----------------|-------------|--------------|-------------|------------|-----------|----------------|-----------------|-----------|-------------|-------------|
| B0    | Wall/Plate | 3-1/2" x 3-1/2" | 6,310 lbs       | 42.2%          | 83.7%       | 42.2%        | 83.7%       | 42.2%      | 83.7%     | 42.2%          | 83.7%           | 42.2%     | 83.7%       | 42.2%       |
| B1    | Wall/Plate | 3-1/2" x 3-1/2" | 6,310 lbs       | 42.2%          | 83.7%       | 42.2%        | 83.7%       | 42.2%      | 83.7%     | 42.2%          | 83.7%           | 42.2%     | 83.7%       | 42.2%       |
| B2    | Wall/Plate | 3-1/2" x 3-1/2" | 6,310 lbs       | 42.2%          | 83.7%       | 42.2%        | 83.7%       | 42.2%      | 83.7%     | 42.2%          | 83.7%           | 42.2%     | 83.7%       | 42.2%       |
| B3    | Wall/Plate | 3-1/2" x 3-1/2" | 6,310 lbs       | 42.2%          | 83.7%       | 42.2%        | 83.7%       | 42.2%      | 83.7%     | 42.2%          | 83.7%           | 42.2%     | 83.7%       | 42.2%       |
| B4    | Wall/Plate | 3-1/2" x 3-1/2" | 6,310 lbs       | 42.2%          | 83.7%       | 42.2%        | 83.7%       | 42.2%      | 83.7%     | 42.2%          | 83.7%           | 42.2%     | 83.7%       | 42.2%       |
| B5    | Wall/Plate | 3-1/2" x 3-1/2" | 6,310 lbs       | 42.2%          | 83.7%       | 42.2%        | 83.7%       | 42.2%      | 83.7%     | 42.2%          | 83.7%           | 42.2%     | 83.7%       | 42.2%       |
| B6    | Wall/Plate | 3-1/2" x 3-1/2" | 6,310 lbs       | 42.2%          | 83.7%       | 42.2%        | 83.7%       | 42.2%      | 83.7%     | 42.2%          | 83.7%           | 42.2%     | 83.7%       | 42.2%       |
| B7    | Wall/Plate | 3-1/2" x 3-1/2" | 6,310 lbs       | 42.2%          | 83.7%       | 42.2%        | 83.7%       | 42.2%      | 83.7%     | 42.2%          | 83.7%           | 42.2%     | 83.7%       | 42.2%       |
| B8    | Wall/Plate | 3-1/2" x 3-1/2" | 6,310 lbs       | 42.2%          | 83.7%       | 42.2%        | 83.7%       | 42.2%      | 83.7%     | 42.2%          | 83.7%           | 42.2%     | 83.7%       | 42.2%       |
| B9    | Wall/Plate | 3-1/2" x 3-1/2" | 6,310 lbs       | 42.2%          | 83.7%       | 42.2%        | 83.7%       | 42.2%      | 83.7%     | 42.2%          | 83.7%           | 42.2%     | 83.7%       | 42.2%       |
| B10   | Wall/Plate | 3-1/2" x 3-1/2" | 6,310 lbs       | 42.2%          | 83.7%       | 42.2%        | 83.7%       | 42.2%      | 83.7%     | 42.2%          | 83.7%           | 42.2%     | 83.7%       | 42.2%       |
| B11   | Wall/Plate | 3-1/2" x 3-1/2" | 6,310 lbs       | 42.2%          | 83.7%       | 42.2%        | 83.7%       | 42.2%      | 83.7%     | 42.2%          | 83.7%           | 42.2%     | 83.7%       | 42.2%       |
| B12   | Wall/Plate | 3-1/2" x 3-1/2" | 6,310 lbs       | 42.2%          | 83.7%       | 42.2%        | 83.7%       | 42.2%      | 83.7%     | 42.2%          | 83.7%           | 42.2%     | 83.7%       | 42.2%       |
| B13   | Wall/Plate | 3-1/2" x 3-1/2" | 6,310 lbs       | 42.2%          | 83.7%       | 42.2%        | 83.7%       | 42.2%      | 83.7%     | 42.2%          | 83.7%           | 42.2%     | 83.7%       | 42.2%       |
| B14   | Wall/Plate | 3-1/2" x 3-1/2" | 6,310 lbs       | 42.2%          | 83.7%       | 42.2%        | 83.7%       | 42.2%      | 83.7%     | 42.2%          | 83.7%           | 42.2%     | 83.7%       | 42.2%       |
| B15   | Wall/Plate | 3-1/2" x 3-1/2" | 6,310 lbs       | 42.2%          | 83.7%       | 42.2%        | 83.7%       | 42.2%      | 83.7%     | 42.2%          | 83.7%           | 42.2%     | 83.7%       | 42.2%       |
| B16   | Wall/Plate | 3-1/2" x 3-1/2" | 6,310 lbs       | 42.2%          | 83.7%       | 42.2%        | 83.7%       | 42.2%      | 83.7%     | 42.2%          | 83.7%           | 42.2%     | 83.7%       | 42.2%       |
| B17   | Wall/Plate | 3-1/2" x 3-1/2" | 6,310 lbs       | 42.2%          | 83.7%       | 42.2%        | 83.7%       | 42.2%      | 83.7%     | 42.2%          | 83.7%           | 42.2%     | 83.7%       | 42.2%       |
| B18   | Wall/Plate | 3-1/2" x 3-1/2" | 6,310 lbs       | 42.2%          | 83.7%       | 42.2%        | 83.7%       | 42.2%      | 83.7%     | 42.2%          | 83.7%           | 42.2%     | 83.7%       | 42.2%       |
| B19   | Wall/Plate | 3-1/2" x 3-1/2" | 6,310 lbs       | 42.2%          | 83.7%       | 42.2%        | 83.7%       | 42.2%      | 83.7%     | 42.2%          | 83.7%           | 42.2%     | 83.7%       | 42.2%       |
| B20   | Wall/Plate | 3-1/2" x 3-1/2" | 6,310 lbs       | 42.2%          | 83.7%       | 42.2%        | 83.7%       | 42.2%      | 83.7%     | 42.2%          | 83.7%           | 42.2%     | 83.7%       | 42.2%       |
| B21   | Wall/Plate | 3-1/2" x 3-1/2" | 6,310 lbs       | 42.2%          | 83.7%       | 42.2%        | 83.7%       | 42.2%      | 83.7%     | 42.2%          | 83.7%           | 42.2%     | 83.7%       | 42.2%       |
| B22   | Wall/Plate | 3-1/2" x 3-1/2" | 6,310 lbs       | 42.2%          | 83.7%       | 42.2%        | 83.7%       | 42.2%      | 83.7%     | 42.2%          | 83.7%           | 42.2%     | 83.7%       | 42.2%       |
| B23   | Wall/Plate | 3-1/2" x 3-1/2" | 6,310 lbs       | 42.2%          | 83.7%       | 42.2%        | 83.7%       | 42.2%      | 83.7%     | 42.2%          | 83.7%           | 42.2%     | 83.7%       | 42.2%       |
|       |            |                 |                 |                |             |              |             |            |           |                |                 |           |             |             |

## Notes

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

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

Design meets User specified (1") Maximum Total load deflection criteria.

Calculations assume member is fully braced.

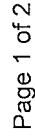
Resistance Factor  $\phi$  has been applied to all presented results per CSA O86.

BC CALCO® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.

Design based on Dry Service Condition.

Importance Factor : Normal      Part code : Part 4

o.c, staggered in 2 rows



152536



Boise Cascade

Triple 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP

Floor Beam\B29



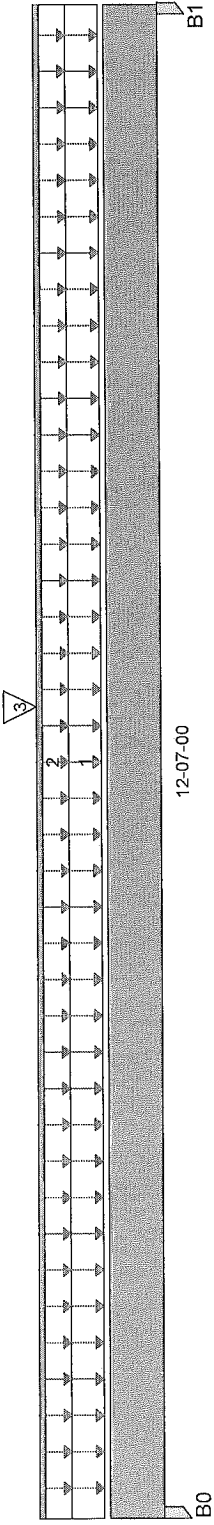
BC CALC® Design Report

Dry | 1 span | No cantilevers | 0/12 slope (deg)

November 16, 2017 09:11:31

Build 6080  
Job Name: 45147 (5004)  
Address: Pine Valley  
City, Province, Postal Code: Vaughan, ON  
Customer: Gold Park  
Code reports: CCMC 12472-R

File Name: 290673.bcc  
Description: Second Floor Framing  
Specifier:  
Designer: NL  
Company: Alpa Roof Trusses  
Misc:



Total Horizontal Product Length = 12-07-00

Reaction Summary (Down / Uplift) (lbs)

| Bearing    | Live      | Dead      | Snow | Wind |
|------------|-----------|-----------|------|------|
| B0, 3-1/2" | 3,698 / 0 | 2,475 / 0 |      |      |
| B1, 3"     | 3,884 / 0 | 2,586 / 0 |      |      |

Load Summary

| Tag Description | Load Type          | Ref. | Start    | End      | Live  | Dead  | Snow | Wind | Trib.    |
|-----------------|--------------------|------|----------|----------|-------|-------|------|------|----------|
| 1               | Unf. Area (lb/ft²) | L    | 00-00-00 | 12-07-00 | 40    | 20    |      |      | 09-06-00 |
| 2               | Unf. Lin. (lb/ft)  | L    | 00-00-00 | 12-07-00 |       | 60    |      |      | n/a      |
| 3               | Conc. Pt. (lbs)    | L    | 06-09-00 | 06-09-00 | 2,800 | 1,688 |      |      | n/a      |

Controls Summary

|                  | Factored Demand | Factored Resistance | Demand / Resistance | Load Case | Location |
|------------------|-----------------|---------------------|---------------------|-----------|----------|
| Pos. Moment      | 35,752 ft-lbs   | 55,212 ft-lbs       | 64.8%               | 1         | 06-09-00 |
| End Shear        | 7,936 lbs       | 21,696 lbs          | 36.6%               | 1         | 11-04-02 |
| Total Load Defl. | L/352 (0.415")  | 0.608"              | 68.3%               | 4         | 06-04-14 |
| Live Load Defl.  | L/582 (0.251")  | 0.406"              | 61.9%               | 5         | 06-04-14 |
| Max Defl.        | 0.415"          | 1"                  | 41.5%               | 4         | 06-04-14 |
| Span / Depth     | 12.3            | n/a                 | n/a                 |           | 00-00-00 |
| Squash Blocks    | Valid           |                     |                     |           |          |

Bearing Supports

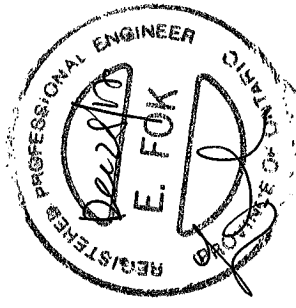
|         | Dim. (L x W)    | Demand    | Demand/ Resistance Support | Demand/ Resistance Member | Material        |
|---------|-----------------|-----------|----------------------------|---------------------------|-----------------|
| B0 Post | 3-1/2" x 3-1/2" | 8,641 lbs | 40.7%                      | 57.8%                     | Spruce Pine Fir |
| B1 Post | 3" x 3-1/2"     | 9,058 lbs | 49.7%                      | 70.7%                     | Spruce Pine Fir |

Cautions

Member is not fully supported at post B0. A connector is required at this bearing.  
Member is not fully supported at post B1. A connector is required at this bearing.

Notes

Design meets Code minimum (L/240) Total load deflection criteria.  
Design meets Code minimum (L/360) Live load deflection criteria.  
Design meets User specified (1") Maximum Total 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 2010 and CSA O86.  
Design based on Dry Service Condition.  
Importance Factor : Normal Part code : Part 4  
Nail one ply to another with 3 1/2" spiral nails @ 6" o.c. staggered in 2 rows



S.152537



Boise Cascade

Single 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP

Floor Beam\B30



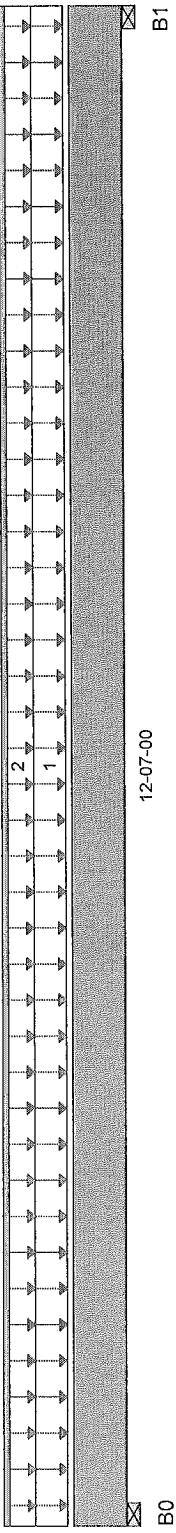
BC CALCO® Design Report

Dry | 1 span | No cantilevers | 0/12 slope (deg)

November 16, 2017 10:08:08

Build 6080  
Job Name: 45147 (5004)  
Address: Pine Valley  
City, Province, Postal Code: Vaughan, ON  
Customer: Gold Park  
Code reports: CCMC 12472-R

File Name: 290673.bcc  
Description: First Floor Framing  
Specifier:  
Designer: NL  
Company: Alpa Roof Trusses  
Misc:



Total Horizontal Product Length = 12-07-00

Reaction Summary (Down / Uplift) (lbs )

| Bearing    | Live      | Dead      | Snow | Wind |
|------------|-----------|-----------|------|------|
| B0, 3-1/2" | 1,258 / 0 | 1,045 / 0 |      |      |
| B1, 3-1/2" | 1,258 / 0 | 1,045 / 0 |      |      |

Load Summary

| Tag Description | Load Type          | Ref. | Start    | End      | Live | Dead | Snow | Wind | Trib.    |
|-----------------|--------------------|------|----------|----------|------|------|------|------|----------|
| 1               | Unf. Area (lb/ft²) | L    | 00-00-00 | 12-07-00 | 40   | 20   |      |      | 05-00-00 |
| 2               | Unf. Lin. (lb/ft)  | L    | 00-00-00 | 12-07-00 | 60   | 60   |      |      | n/a      |

Controls Summary

|                  | Factored Demand | Factored Resistance | Demand / Resistance | Load Case | Location |
|------------------|-----------------|---------------------|---------------------|-----------|----------|
| Pos. Moment      | 9,327 ft-lbs    | 17,696 ft-lbs       | 52.7%               | 1         | 06-03-08 |
| End Shear        | 2,543 lbs       | 7,232 lbs           | 35.2%               | 1         | 01-03-06 |
| Total Load Defl. | L/399 (0.364")  | 0.606"              | 60.1%               | 4         | 06-03-08 |
| Live Load Defl.  | L/731 (0.199")  | 0.404"              | 49.3%               | 5         | 06-03-08 |
| Max Defl.        | 0.364"          | 1"                  | 36.4%               | 4         | 06-03-08 |
| Span / Depth     | 12.3            | n/a                 | n/a                 |           | 00-00-00 |
| Squash Blocks    | Valid           |                     |                     |           |          |

Disclosure

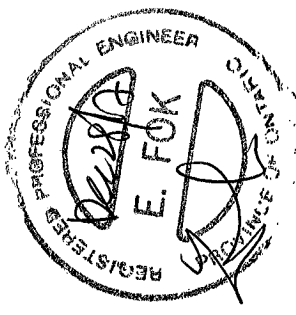
Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of Boise Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call 1-800-964-6999 before installation.

Bearing Supports

|               | Dim. (L x W)    | Demand    | Demand / Resistance Support | Resistance Member | Material        |
|---------------|-----------------|-----------|-----------------------------|-------------------|-----------------|
| B0 Wall/Plate | 3-1/2" x 1-3/4" | 3,193 lbs | 84.7%                       | 42.7%             | Spruce Pine Fir |
| B1 Wall/Plate | 3-1/2" x 1-3/4" | 3,193 lbs | 84.7%                       | 42.7%             | Spruce Pine Fir |

Notes

Design meets Code minimum (L/240) Total load deflection criteria.  
Design meets Code minimum (L/360) Live load deflection criteria.  
Design meets User specified (1") Maximum Total 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 2010 and CSA O86.  
Design based on Dry Service Condition.  
Importance Factor : Normal Part code : Part 4



S152538



Boise Cascade

# Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP

Floor Beam\B31

Dry | 1 span | No cantilevers | 0/12 slope (deg)

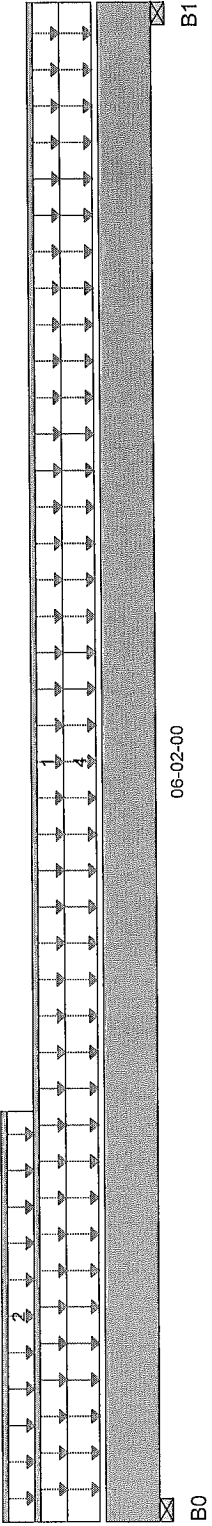
November 16, 2017 10:08:13

## BC CALC® Design Report



Build 6080  
Job Name: 45147 (5004)  
Address: Pine Valley  
City, Province, Postal Code: Vaughan, ON  
Customer: Gold Park  
Code reports: CCMC 12472-R

File Name: 290673.bcc  
Description: First Floor Framing  
Specifier:  
Designer: NL  
Company: Alpa Roof Trusses  
Misc:



06-02-00

B1

Total Horizontal Product Length = 06-02-00

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

| Bearing    | Live    | Dead    | Snow | Wind |
|------------|---------|---------|------|------|
| B0, 3-1/2" | 533 / 0 | 517 / 0 |      |      |
| B1, 3-1/2" | 498 / 0 | 420 / 0 |      |      |

## Load Summary

| Tag Description | Load Type          | Ref. | Start    | End      | Live | Dead | Snow | Wind      | Trib.    |
|-----------------|--------------------|------|----------|----------|------|------|------|-----------|----------|
| 1               | Unf. Lin. (lb/ft)  | L    | 00-00-00 | 06-02-00 | 1.00 | 0.65 |      | 1.00 1.15 | n/a      |
| 2               | Unf. Lin. (lb/ft)  | L    | 00-00-00 | 01-08-00 | 27   | 74   |      |           | n/a      |
| 4               | Unf. Area (lb/ft²) | L    | 00-00-00 | 06-02-00 | 40   | 15   |      |           | 04-00-00 |

## Controls Summary

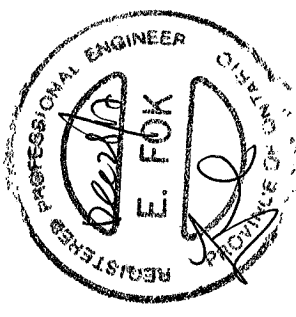
|                  | Factored Demand | Factored Resistance | Demand / Resistance | Load Case | Location |
|------------------|-----------------|---------------------|---------------------|-----------|----------|
| Pos. Moment      | 1,719 ft-lbs    | 35,392 ft-lbs       | 4.9%                | 1         | 02-11-11 |
| End Shear        | 757 lbs         | 14,464 lbs          | 5.2%                | 1         | 01-03-06 |
| Total Load Defl. | L/999 (0.008")  | n/a                 | n/a                 | 4         | 03-00-14 |
| Live Load Defl.  | L/999 (0.004")  | n/a                 | n/a                 | 5         | 03-00-14 |
| Max Defl.        | 0.008"          | n/a                 | n/a                 | 4         | 03-00-14 |
| Span / Depth     | 5.8             | n/a                 | n/a                 |           | 00-00-00 |
| Squash Blocks    | Valid           |                     |                     |           |          |

## Bearing Supports

|               | Dim. (L x W)    | Demand    | Demand/ Resistance Support | Demand/ Resistance Member | Material        |
|---------------|-----------------|-----------|----------------------------|---------------------------|-----------------|
| B0 Wall/Plate | 3-1/2" x 3-1/2" | 1,446 lbs | 19.2%                      | 9.7%                      | Spruce Pine Fir |
| B1 Wall/Plate | 3-1/2" x 3-1/2" | 1,273 lbs | 16.9%                      | 8.5%                      | Spruce Pine Fir |

## Notes

Design meets Code minimum (L/240) Total load deflection criteria.  
Design meets Code minimum (L/360) Live load deflection criteria.  
Design meets User specified (1") Maximum Total 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 2010 and CSA O86.  
Design based on Dry Service Condition.  
Importance Factor : Normal Part code : Part 4  
Nail one ply to another with  
3 1/2" spiral nails @ 12"  
o.c. staggered in 2 rows





## BC CALC® Design Report

Dry | 1 span | No cantilevers | 0/12 slope (deg)

December 15, 2017 14:28:05

Build 6080

Job Name:

Address:

City, Province, Postal Code: Vaughan, ON

Customer: Gold Park

Code reports: CCMC 12472-R

File Name: 290673.bcc

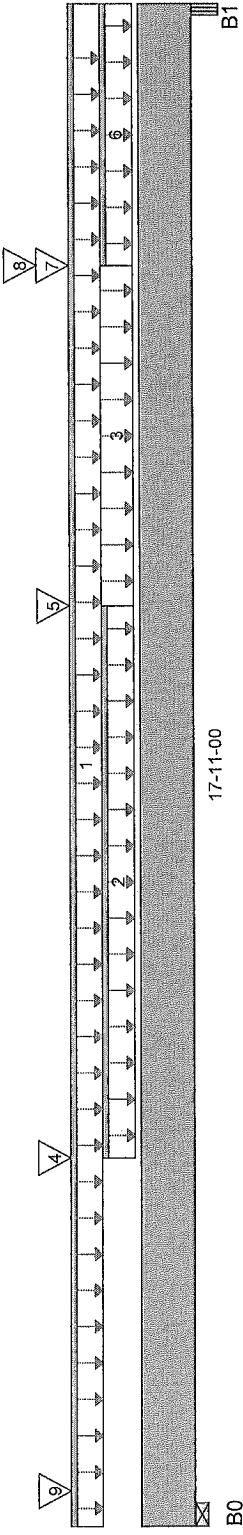
Description: First Floor Framing

Specifier:

Designer: NL

Company: Alpa Roof Trusses

Misc:



Total Horizontal Product Length = 17-11-00

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

| Bearing    | Live      | Dead      | Snow | Wind |
|------------|-----------|-----------|------|------|
| B0, 3-1/2" | 1,744 / 0 | 1,317 / 0 |      |      |
| B1, 3-1/2" | 5,029 / 0 | 3,312 / 0 |      |      |

## Load Summary

| Tag Description | Load Type           | Ref. | Start    | End      | Live  | Dead  | Snow | Wind | Trib.    |
|-----------------|---------------------|------|----------|----------|-------|-------|------|------|----------|
| 1               | Unf. Lin. (lb/ft)   | L    | 00-00-00 | 17-11-00 | 27    | 14    |      |      | n/a      |
| 2               | Unf. Lin. (lb/ft)   | L    | 04-04-00 | 10-10-00 | 27    | 14    |      |      | n/a      |
| 3               | Unf. Area (lb/ft^2) | L    | 10-10-00 | 14-10-00 | 40    | 15    |      |      | 01-00-00 |
| 4               | Conc. Pt. (lbs)     | L    | 04-04-00 | 04-04-00 | 140   | 59    |      |      | n/a      |
| 5               | Conc. Pt. (lbs)     | L    | 10-10-00 | 10-10-00 | 140   | 59    |      |      | n/a      |
| 6               | Unf. Lin. (lb/ft)   | L    | 14-10-00 | 17-11-00 | 27    | 14    |      |      | n/a      |
| 7               | Conc. Pt. (lbs)     | L    | 14-10-00 | 14-10-00 | 533   | 517   |      |      | n/a      |
| 8               | Conc. Pt. (lbs)     | L    | 14-10-00 | 14-10-00 | 4,726 | 2,890 |      |      | n/a      |
| 9               | Conc. Pt. (lbs)     | L    | 00-05-00 | 00-05-00 | 331   | 335   |      |      | n/a      |

## Controls Summary

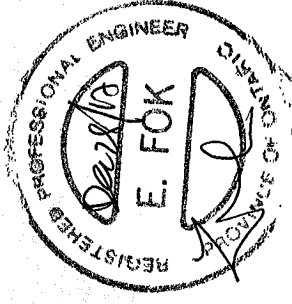
|                  | Factored Demand | Factored Resistance | Demand / Resistance | Load Case | Location |
|------------------|-----------------|---------------------|---------------------|-----------|----------|
| Pos. Moment      | 32,702 ft-lbs   | 55,212 ft-lbs       | 59.2%               | 1         | 14-10-00 |
| End Shear        | 11,505 lbs      | 21,696 lbs          | 53%                 | 1         | 16-07-10 |
| Total Load Defl. | L/287 (0.73")   | 0.873"              | 83.6%               | 4         | 09-09-13 |
| Live Load Defl.  | L/478 (0.438")  | 0.582"              | 75.3%               | 5         | 09-09-13 |
| Max Defl.        | 0.73"           | 1"                  | 73%                 | 4         | 09-09-13 |
| Span / Depth     | 17.6            | n/a                 | n/a                 |           | 00-00-00 |
| Squash Blocks    | Valid           |                     |                     |           |          |

## Bearing Supports

|               | Dim. (L x W)    | Demand     | Demand/Resistance Support | Demand/Resistance Member | Material        |
|---------------|-----------------|------------|---------------------------|--------------------------|-----------------|
| B0 Wall/Plate | 3-1/2" x 5-1/4" | 4,262 lbs  | 37.7%                     | 19%                      | Spruce Pine Fir |
| B1 Beam       | 3-1/2" x 5-1/4" | 11,683 lbs | 1.6%                      | 52.1%                    | Steel           |

## Notes

Nail one ply to another with  
3 1/2" spiral nails @ 12"  
o.c, staggered in 2 rows





Boise Cascade

# Quadruple 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP Floor Beam\B33



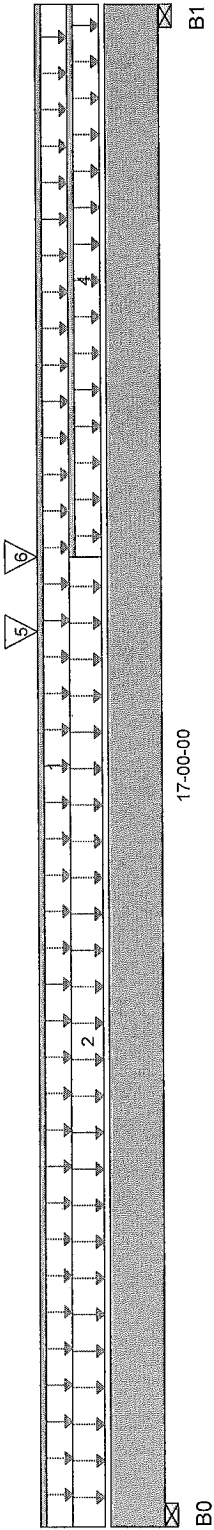
BC CALCO® Design Report

Dry | 1 span | No cantilevers | 0/12 slope (deg)

December 15, 2017 14:29:39

Build 6080  
Job Name: 45147 (5004)  
Address: Pine Valley  
City, Province, Postal Code: Vaughan, ON  
Customer: Gold Park  
Code reports: CCMC 12472-R

File Name: 290673.bcc  
Description: First Floor Framing  
Specifier:  
Designer: NL  
Company: Alpa Roof Trusses  
Misc:



Total Horizontal Product Length = 17-00-00

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

| Bearing    | Live      | Dead      | Snow | Wind |
|------------|-----------|-----------|------|------|
| B0, 3-1/2" | 3,800 / 0 | 1,909 / 0 |      |      |
| B1, 3-1/2" | 3,029 / 0 | 1,812 / 0 |      |      |

## Load Summary

| Tag Description | Load Type          | Ref. | Start    | End      | Live  | Dead  | Snow | Wind | Trib.    |
|-----------------|--------------------|------|----------|----------|-------|-------|------|------|----------|
| 1               | Unf. Lin. (lb/ft)  | L    | 00-00-00 | 17-00-00 | 27    | 14    |      |      | n/a      |
| 2               | Unf. Area (lb/ft²) | L    | 00-00-00 | 10-10-00 | 40    | 15    |      |      | 09-00-00 |
| 4               | Unf. Lin. (lb/ft)  | L    | 10-10-00 | 17-00-00 | 20    | 8     |      |      | n/a      |
| 5               | Conc. Pt. (lbs)    | L    | 10-00-00 | 10-00-00 | 603   | 245   |      |      | n/a      |
| 6               | Conc. Pt. (lbs)    | L    | 10-10-00 | 10-10-00 | 1,744 | 1,317 |      |      | n/a      |

## Controls Summary

|                  | Factored Demand | Factored Resistance | Demand / Resistance | Load Case | Location |
|------------------|-----------------|---------------------|---------------------|-----------|----------|
| Pos. Moment      | 39,186 ft-lbs   | 73,615 ft-lbs       | 53.2%               | 1         | 10-00-00 |
| End Shear        | 7,065 lbs       | 28,927 lbs          | 24.4%               | 1         | 01-03-06 |
| Total Load Defl. | L/299 (0.664")  | 0.827"              | 80.3%               | 4         | 08-07-10 |
| Live Load Defl.  | L/463 (0.429")  | 0.551"              | 77.7%               | 5         | 08-07-10 |
| Max Defl.        | 0.664"          | 1"                  | 66.4%               | 4         | 08-07-10 |
| Span / Depth     | 16.7            | n/a                 | n/a                 |           | 00-00-00 |
| Squash Blocks    | Valid           |                     |                     |           |          |

## Bearing Supports

|               | Dim. (L x W) | Demand    | Demand/Resistance Support | Demand/Resistance Member | Material        |
|---------------|--------------|-----------|---------------------------|--------------------------|-----------------|
| B0 Wall/Plate | 3-1/2" x 7"  | 8,086 lbs | 53.6%                     | 27.1%                    | Spruce Pine Fir |
| B1 Wall/Plate | 3-1/2" x 7"  | 6,809 lbs | 45.2%                     | 22.8%                    | Spruce Pine Fir |

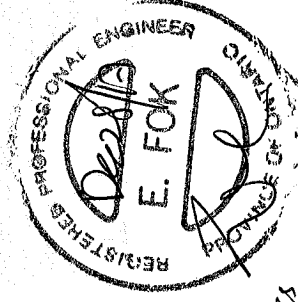
## Notes

Design meets Code minimum (L/240) Total load deflection criteria.  
Design meets Code minimum (L/360) Live load deflection criteria.  
Design meets User specified (1") Maximum Total 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 2010 and CSA O86.  
Design based on Dry Service Condition.  
Importance Factor : Normal Part code : Part 4

Nail one ply to another with

3 1/2" spiral nails @ 6"

o.c. staggered in 2 rows  
Nails 1/2" x 8 bolts  
NOTES & WASTES @ 6" o.c.  
STABILIZED W 2 ROWS



5152541



Boise Cascade

# Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP

Floor Beam\B34



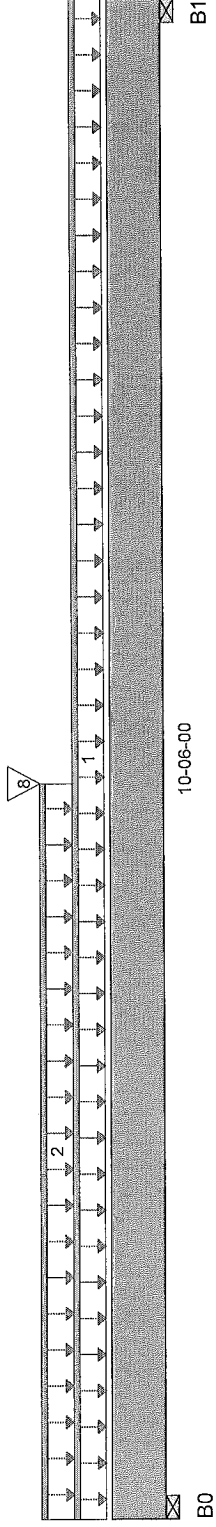
BC CALC® Design Report

Dry | 1 span | No cantilevers | 0/12 slope (deg)

November 16, 2017 10:17:09

Build 6080  
Job Name: 45147 (5004)  
Address: Pine Valley  
City, Province, Postal Code: Vaughan, ON  
Customer: Gold Park  
Code reports: CCMC 12472-R

File Name: 290673.bcc  
Description: First Floor Framing  
Specifier:  
Designer: NL  
Company: Alpa Roof Trusses  
Misc:



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

| Bearing    | Live    | Dead    | Snow | Wind |
|------------|---------|---------|------|------|
| B0, 3-1/2" | 507 / 0 | 731 / 0 |      |      |
| B1, 3-1/2" | 417 / 0 | 678 / 0 |      |      |

## Load Summary

| Tag Description | Load Type         | Ref. | Start    | End      | Live | Dead | Snow | Wind | Trib. |
|-----------------|-------------------|------|----------|----------|------|------|------|------|-------|
| 1               | Unf. Lin. (lb/ft) | L    | 00-00-00 | 10-06-00 | 27   | 74   |      |      | n/a   |
| 2               | Unf. Lin. (lb/ft) | L    | 00-00-00 | 05-01-00 | 27   | 14   |      |      | n/a   |
| 8               | Conc. Pt. (lbs)   | L    | 05-01-00 | 05-01-00 | 503  | 434  |      |      | n/a   |

## Controls Summary

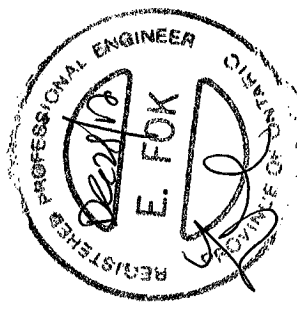
|                  | Factored Demand | Factored Resistance | Demand / Resistance | Load Case | Location |
|------------------|-----------------|---------------------|---------------------|-----------|----------|
| Pos. Moment      | 5,469 ft-lbs    | 35,392 ft-lbs       | 15.5%               | 1         | 05-01-00 |
| End Shear        | 1,410 lbs       | 14,464 lbs          | 9.7%                | 1         | 01-03-06 |
| Total Load Defl. | L/999 (0.066")  | n/a                 | n/a                 | 4         | 05-02-09 |
| Live Load Defl.  | L/999 (0.028")  | n/a                 | n/a                 | 5         | 05-02-09 |
| Max Defl.        | 0.066"          | n/a                 | n/a                 | 4         | 05-02-09 |
| Span / Depth     | 10.1            | n/a                 | n/a                 |           | 00-00-00 |
| Squash Blocks    | Valid           |                     |                     |           |          |

## Bearing Supports

|               | Dim. (L x W)    | Demand    | Demand/ Resistance Support | Demand/ Resistance Member | Material        |
|---------------|-----------------|-----------|----------------------------|---------------------------|-----------------|
| B0 Wall/Plate | 3-1/2" x 3-1/2" | 1,674 lbs | 22.2%                      | 11.2%                     | Spruce Pine Fir |
| B1 Wall/Plate | 3-1/2" x 3-1/2" | 1,472 lbs | 19.5%                      | 9.9%                      | Spruce Pine Fir |

## Notes

Design meets Code minimum (L/240) Total load deflection criteria.  
Design meets Code minimum (L/360) Live load deflection criteria.  
Design meets User specified (1") Maximum Total 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 2010 and CSA O86.  
Design based on Dry Service Condition.  
Importance Factor : Normal Part code : Part 4 Nail one ply to another with 3 1/2" spiral nails @ 12" o.c. staggered in 2 rows



S-152542



Boise Cascade

Single 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP

Floor Beam\B35



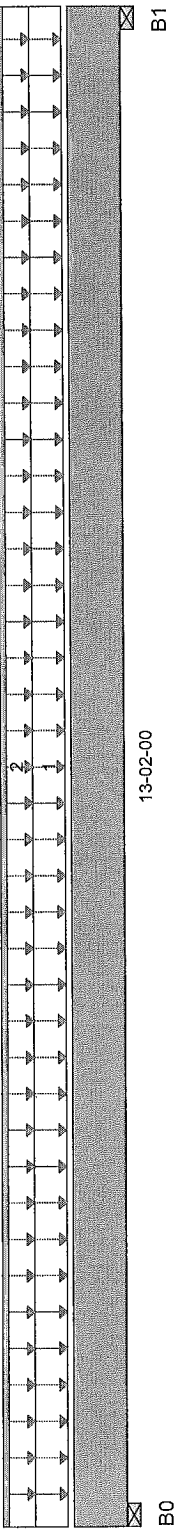
BC CALCO® Design Report

Dry | 1 span | No cantilevers | 0/12 slope (deg)

November 16, 2017 11:41:39

Build 6080  
Job Name: 45147 (5004)  
Address: Pine Valley  
City, Province, Postal Code: Vaughan, ON  
Customer: Gold Park  
Code reports: CCMC 12472-R

File Name: 290673.bcc  
Description: First Floor Framing  
Specifier:  
Designer: NL  
Company: Alpa Roof Trusses  
Misc:



Total Horizontal Product Length = 13-02-00

Reaction Summary (Down / Uplift) (lbs )

| Bearing    | Live    | Dead    | Snow | Wind |
|------------|---------|---------|------|------|
| B0, 3-1/2" | 658 / 0 | 681 / 0 |      |      |
| B1, 3-1/2" | 658 / 0 | 681 / 0 |      |      |

Load Summary

| Tag Description | Load Type          | Ref. | Start    | End      | Live | Dead | Snow | Wind      | Trib.    |
|-----------------|--------------------|------|----------|----------|------|------|------|-----------|----------|
| 1               | Unf. Area (lb/ft²) | L    | 00-00-00 | 13-02-00 | 40   | 15   |      | 1.00 1.15 | 02-06-00 |
| 2               | Unf. Lin. (lb/ft)  | L    | 00-00-00 | 13-02-00 | 40   | 60   |      |           | n/a      |

Controls Summary

|                  | Factored Demand | Factored Resistance | Demand / Resistance | Load Case | Location |
|------------------|-----------------|---------------------|---------------------|-----------|----------|
| Pos. Moment      | 5,640 ft-lbs    | 17,696 ft-lbs       | 31.9%               | 1         | 06-07-00 |
| End Shear        | 1,481 lbs       | 7,232 lbs           | 20.5%               | 1         | 01-03-06 |
| Total Load Defl. | L/624 (0.245")  | 0.635"              | 38.5%               | 4         | 06-07-00 |
| Live Load Defl.  | L/999 (0.12")   | n/a                 | n/a                 | 5         | 06-07-00 |
| Max Defl.        | 0.245"          | 1"                  | 24.5%               | 4         | 06-07-00 |
| Span / Depth     | 12.8            | n/a                 | n/a                 |           | 00-00-00 |
| Squash Blocks    | Valid           |                     |                     |           |          |

Disclosure

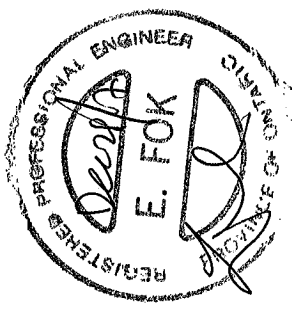
Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of Boise Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call 1-800-964-6999 before installation.

Bearing Supports

|               | Dim. (L x W)    | Demand    | Demand/Resistance Support | Resistance Member | Material        |
|---------------|-----------------|-----------|---------------------------|-------------------|-----------------|
| B0 Wall/Plate | 3-1/2" x 1-3/4" | 1,839 lbs | 48.8%                     | 24.6%             | Spruce Pine Fir |
| B1 Wall/Plate | 3-1/2" x 1-3/4" | 1,839 lbs | 48.8%                     | 24.6%             | Spruce Pine Fir |

Notes

Design meets Code minimum (L/240) Total load deflection criteria.  
Design meets Code minimum (L/360) Live load deflection criteria.  
Design meets User specified (1") Maximum Total 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 2010 and CSA O86.  
Design based on Dry Service Condition.  
Importance Factor : Normal Part code : Part 4



S.152543



Boise Cascade

# Single 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP

Floor Beam\B36



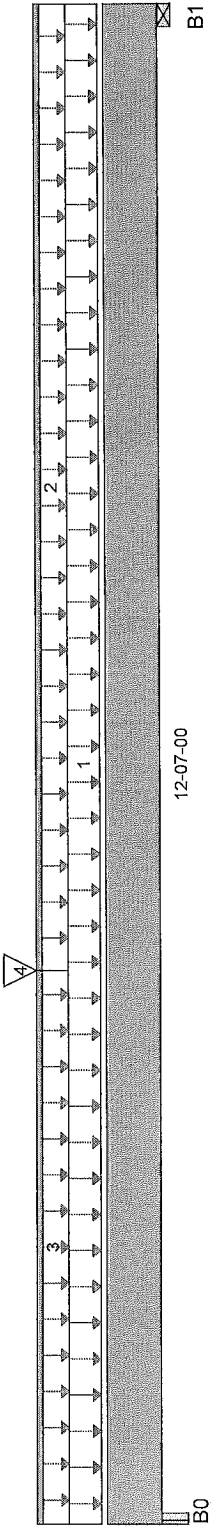
BC CALC® Design Report

Dry | 1 span | No cantilevers | 0/12 slope (deg)

November 16, 2017 11:43:32

Build 6080  
Job Name: 45147 (5004)  
Address: Pine Valley  
City, Province, Postal Code: Vaughan, ON  
Customer: Gold Park  
Code reports: CCMC 12472-R

File Name: 290673.bcc  
Description: First Floor Framing  
Specifier:  
Designer: NL  
Company: Alpa Roof Trusses  
Misc:



Total Horizontal Product Length = 12-07-00

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

| Bearing    | Live      | Dead      | Snow | Wind |
|------------|-----------|-----------|------|------|
| B0, 3-1/2" | 1,552 / 0 | 1,191 / 0 |      |      |
| B1, 3-1/2" | 1,285 / 0 | 1,138 / 0 |      |      |

## Load Summary

| Tag Description | Load Type                       | Ref. | Start    | End      | Live | Dead | Snow | Wind | Trib.    |
|-----------------|---------------------------------|------|----------|----------|------|------|------|------|----------|
| 1               | Unf. Area (lb/ft <sup>2</sup> ) | L    | 00-00-00 | 12-07-00 | 40   | 20   |      |      | 04-01-00 |
| 2               | Unf. Lin. (lb/ft)               | L    | 04-07-00 | 12-07-00 |      | 60   |      |      | n/a      |
| 3               | Unf. Lin. (lb/ft)               | L    | 00-00-00 | 04-07-00 | 27   | 14   |      |      | n/a      |
| 4               | Conc. Pt. (lbs)                 | L    | 04-07-00 | 04-07-00 | 658  | 681  |      |      | n/a      |

## Controls Summary

|                  | Factored Demand | Factored Resistance | Demand / Resistance | Load Case | Location |
|------------------|-----------------|---------------------|---------------------|-----------|----------|
| Pos. Moment      | 12,303 ft-lbs   | 17,696 ft-lbs       | 69.5%               | 1         | 04-09-09 |
| End Shear        | 3,288 lbs       | 7,232 lbs           | 45.5%               | 1         | 01-03-06 |
| Total Load Defl. | L/315 (0.462")  | 0.606"              | 76.1%               | 4         | 06-01-14 |
| Live Load Defl.  | L/588 (0.248")  | 0.404"              | 61.3%               | 5         | 06-01-14 |
| Max Defl.        | 0.462"          | 1"                  | 46.2%               | 4         | 06-01-14 |
| Span / Depth     | 12.3            | n/a                 | n/a                 |           | 00-00-00 |
| Squash Blocks    | Valid           |                     |                     |           |          |

## Disclosure

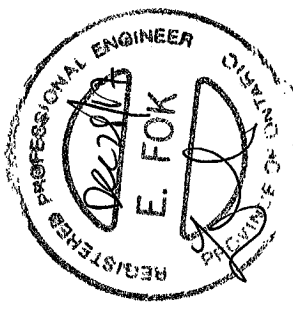
Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of Boise Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call 1-800-964-6999 before installation.

## Bearing Supports

|               | Dim. (L x W)    | Demand    | Resistance Support | Resistance Member | Material        |
|---------------|-----------------|-----------|--------------------|-------------------|-----------------|
| B0 Beam       | 3-1/2" x 1-3/4" | 3,817 lbs | 1.6%               | 51.1%             | Steel           |
| B1 Wall/Plate | 3-1/2" x 1-3/4" | 3,350 lbs | 88.9%              | 44.8%             | Spruce Pine Fir |

## Notes

Design meets Code minimum (L/240) Total load deflection criteria.  
Design meets Code minimum (L/360) Live load deflection criteria.  
Design meets User specified (1") Maximum Total 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 2010 and CSA O86.  
Design based on Dry Service Condition.  
Importance Factor : Normal Part code : Part 4



5152544



Boise Cascade

# Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP

Floor Beam\B37

November 16, 2017 11:44:34



BC CALC® Design Report

Dry | 1 span | No cantilevers | 0/12 slope (deg)

Build 6080

Job Name:

Address:

City, Province, Postal Code: Vaughan, ON

Customer: Gold Park

Code reports:

45147 (5004)

Pine Valley

City, Province, Postal Code: Vaughan, ON

Customer: Gold Park

CCMC 12472-R

File Name: 290673.bcc

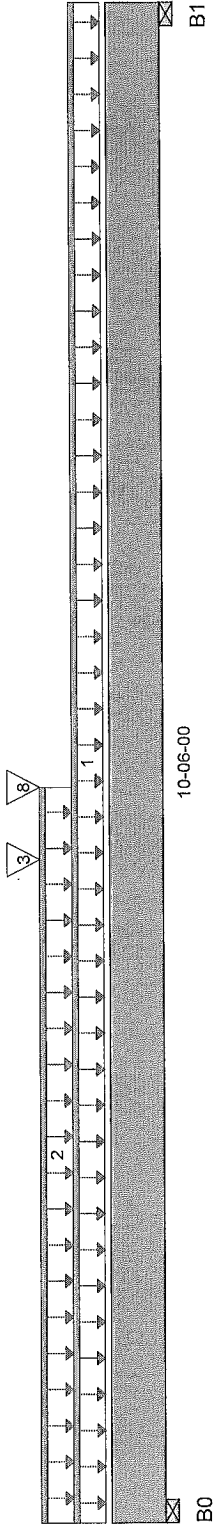
Description: First Floor Framing

Specifier:

Designer: NL

Company: Alpa Roof Trusses

Misc:



Total Horizontal Product Length = 10-06-00

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

| Bearing    | Live    | Dead      | Snow | Wind |
|------------|---------|-----------|------|------|
| B0, 3-1/2" | 880 / 0 | 1,116 / 0 |      |      |
| B1, 3-1/2" | 702 / 0 | 973 / 0   |      |      |

## Load Summary

| Tag Description | Load Type         | Ref. | Start    | End      | Live | Dead | Snow | Wind | Trib. |
|-----------------|-------------------|------|----------|----------|------|------|------|------|-------|
| 1               | Unf. Lin. (lb/ft) | L    | 00-00-00 | 10-06-00 | 27   | 74   |      |      | n/a   |
| 2               | Unf. Lin. (lb/ft) | L    | 00-00-00 | 05-01-00 | 27   | 14   |      |      | n/a   |
| 3               | Conc. Pt. (lbs)   | L    | 04-07-00 | 04-07-00 | 658  | 681  |      |      | n/a   |
| 8               | Conc. Pt. (lbs)   | L    | 05-01-00 | 05-01-00 | 503  | 434  |      |      | n/a   |

## Controls Summary

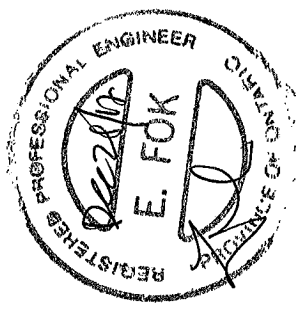
|                  | Factored Demand | Factored Resistance | Demand / Resistance | Load Case | Location |
|------------------|-----------------|---------------------|---------------------|-----------|----------|
| Pos. Moment      | 9,663 ft-lbs    | 35,392 ft-lbs       | 27.3%               | 1         | 04-07-00 |
| End Shear        | 2,451 lbs       | 14,464 lbs          | 16.9%               | 1         | 01-03-06 |
| Total Load Defl. | L/999 (0.115")  | n/a                 | n/a                 | 4         | 05-01-00 |
| Live Load Defl.  | L/999 (0.052")  | n/a                 | n/a                 | 5         | 05-01-00 |
| Max Defl.        | 0.115"          | n/a                 | n/a                 | 4         | 05-01-00 |
| Span / Depth     | 10.1            | n/a                 | n/a                 |           | 00-00-00 |
| Squash Blocks    | Valid           |                     |                     |           |          |

## Bearing Supports

|               | Dim. (L x W)    | Demand    | Demand/Resistance Support | Demand/Resistance Member | Material        |
|---------------|-----------------|-----------|---------------------------|--------------------------|-----------------|
| B0 Wall/Plate | 3-1/2" x 3-1/2" | 2,715 lbs | 36%                       | 18.2%                    | Spruce Pine Fir |
| B1 Wall/Plate | 3-1/2" x 3-1/2" | 2,269 lbs | 30.1%                     | 15.2%                    | Spruce Pine Fir |

## Notes

Design meets Code minimum (L/240) Total load deflection criteria.  
 Design meets Code minimum (L/360) Live load deflection criteria.  
 Design meets User specified (1") Maximum Total 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 2010 and CSA O86.  
 Design based on Dry Service Condition.  
 Importance Factor : Normal Part code : Part 4  
 Nail one ply to another with 3 1/2" spiral nails @ 12" o.c. staggered in 2 rows





Boise Cascade

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

Floor Beam\B38



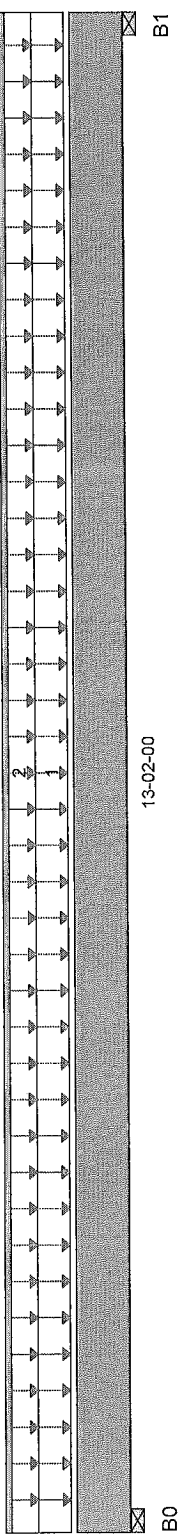
BC CALCo® Design Report

Dry | 1 span | No cantilevers | 0/12 slope (deg)

November 16, 2017 11:45:17

Build 6080  
Job Name: 45147 (5004)  
Address: Pine Valley  
City, Province, Postal Code: Vaughan, ON  
Customer: Gold Park  
Code reports: CCMC 12472-R

File Name: 290673.bcc  
Description: First Floor Framing  
Specifier:  
Designer: NL  
Company: Alpa Roof Trusses  
Misc:



13-02-00

B0 B1 Total Horizontal Product Length = 13-02-00

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

| Bearing    | Live      | Dead    | Snow | Wind |
|------------|-----------|---------|------|------|
| B0, 3-1/2" | 1,053 / 0 | 985 / 0 |      |      |
| B1, 3-1/2" | 1,053 / 0 | 985 / 0 |      |      |

## Load Summary

| Tag | Description | Load Type                       | Ref. | Start    | End      | Live | Dead | Snow | Wind | Trib. |
|-----|-------------|---------------------------------|------|----------|----------|------|------|------|------|-------|
| 1   |             | Unf. Area (lb/ft <sup>2</sup> ) | L    | 00-00-00 | 13-02-00 | 40   | 20   |      |      |       |
| 2   |             | Unf. Lin. (lb/ft)               | L    | 00-00-00 | 13-02-00 | 60   | 60   |      |      |       |

## Controls Summary

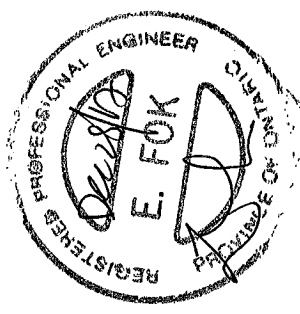
|                  |                |               |       |   |          |
|------------------|----------------|---------------|-------|---|----------|
| Pos. Moment      | 8,621 ft-lbs   | 23,220 ft-lbs | 37.1% | 1 | 06-07-00 |
| End Shear        | 2,349 lbs      | 11,571 lbs    | 20.3% | 1 | 01-01-00 |
| Total Load Defl. | L/420 (0.363") | 0.635"        | 57.2% | 4 | 06-07-00 |
| Live Load Defl.  | L/812 (0.188") | 0.424"        | 44.3% | 5 | 06-07-00 |
| Max Defl.        | 0.363"         | 1"            | 36.3% | 4 | 06-07-00 |
| Span / Depth     | 16.1           | n/a           | n/a   |   | 00-00-00 |
| Squash Blocks    | Valid          |               |       |   |          |

## Bearing Supports

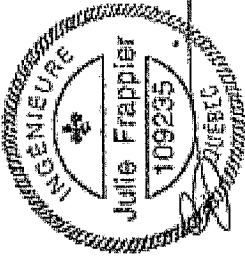
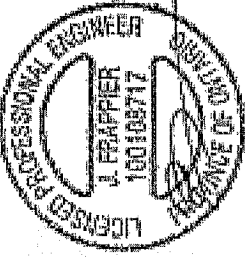
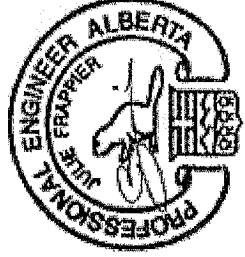
|    |            |                 |           |       |       |                 |
|----|------------|-----------------|-----------|-------|-------|-----------------|
| B0 | Wall/Plate | 3-1/2" x 3-1/2" | 2,811 lbs | 37.3% | 18.8% | Spruce Pine Fir |
| B1 | Wall/Plate | 3-1/2" x 3-1/2" | 2,811 lbs | 37.3% | 18.8% | Spruce Pine Fir |

## Notes

Design meets Code minimum (L/240) Total load deflection criteria.  
Design meets Code minimum (L/360) Live load deflection criteria.  
Design meets User specified (1") Maximum Total 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 2010 and CSA O86.  
Design based on Dry Service Condition.  
Importance Factor : Normal Part code : Part 4 3 1/2" spiral nails @ 12" o.c. staggered in 2 rows



S.152546



## Maximum Floor Spans

Live Load = 40 psf, Dead Load = 15 psf  
Simple Spans, L/360 Deflection Limit  
3/4" OSB G&N Sheathing

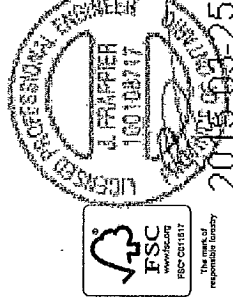
| Depth   | Series | Bare              |         |                   | 1/2" Gypsum Ceiling                       |         |                   |
|---------|--------|-------------------|---------|-------------------|-------------------------------------------|---------|-------------------|
|         |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

- 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/360 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.



www.nordicewp.com

Refer to the Installation Guide for Residential Floors for additional information.  
:CMC EVALUATION REPORT 13032-R



## WEB HOLE SPECIFICATIONS

- The distance between the inside edge of the support and the centerline of any hole or duct chase opening shall be in compliance with the requirements of Table 1 or 2, respectively.
- H-joist top and bottom flanges must NEVER be cut, notched, or otherwise modified. Whenever possible, field-cut holes should be centered on the middle of the web.
- The maximum size hole or the maximum depth of a duct chase opening that can be cut into an H-joist web shall equal the clear distance between the flanges of the H-joist 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 H-joist flange.

TABLE 1  
LOCATION OF CIRCULAR HOLES IN JOIST WEBS

Simple or Multiple Span for Dead Loads up to 15 psf and Live Loads up to 40 psf

| Joist Depth | Joist Series | Minimum Distance from Inside Face of Any Support to Centre of Hole (ft - in.) |      |       |      |      |       |      |       |       |     |         |
|-------------|--------------|-------------------------------------------------------------------------------|------|-------|------|------|-------|------|-------|-------|-----|---------|
|             |              | 2                                                                             | 3    | 4     | 5    | 6    | 6-1/4 | 7    | 8     | 8-5/8 | 9   | 10      |
| 9-1/2"      | Ni-20        | 0-7"                                                                          | 1-6" | 2-10" | 4-3" | 5-8" | 6-0"  | ---  | ---   | ---   | --- | 12-3/4" |
|             | Ni-40x       | 0-7"                                                                          | 1-6" | 2-10" | 4-3" | 5-8" | 6-0"  | ---  | ---   | ---   | --- | ---     |
|             | Ni-60        | 1-3"                                                                          | 2-6" | 4-0"  | 5-4" | 7-0" | 7-5"  | ---  | ---   | ---   | --- | ---     |
|             | Ni-80        | 2-0"                                                                          | 3-4" | 4-9"  | 6-3" | 8-0" | 8-4"  | ---  | ---   | ---   | --- | ---     |
| 11-7/8"     | Ni-20        | 0-7"                                                                          | 0-8" | 1-0"  | 2-4" | 3-8" | 4-0"  | 5-0" | 6-6"  | 7-9"  | --- | ---     |
|             | Ni-40x       | 0-7"                                                                          | 0-8" | 1-0"  | 2-4" | 3-8" | 4-0"  | 5-0" | 6-6"  | 7-9"  | --- | ---     |
|             | Ni-60        | 0-7"                                                                          | 0-8" | 1-0"  | 2-4" | 3-8" | 4-0"  | 5-0" | 6-6"  | 7-9"  | --- | ---     |
|             | Ni-80        | 1-3"                                                                          | 1-8" | 3-0"  | 4-3" | 5-9" | 6-0"  | 7-3" | 8-10" | 10-0" | --- | ---     |
| 14"         | Ni-20        | 0-7"                                                                          | 0-8" | 1-0"  | 2-4" | 3-8" | 4-0"  | 5-0" | 6-6"  | 7-9"  | --- | ---     |
|             | Ni-40x       | 0-7"                                                                          | 0-8" | 1-0"  | 2-4" | 3-8" | 4-0"  | 5-0" | 6-6"  | 7-9"  | --- | ---     |
|             | Ni-60        | 0-7"                                                                          | 0-8" | 1-0"  | 2-4" | 3-8" | 4-0"  | 5-0" | 6-6"  | 7-9"  | --- | ---     |
|             | Ni-80        | 1-3"                                                                          | 1-8" | 3-0"  | 4-3" | 5-9" | 6-0"  | 7-3" | 8-10" | 10-0" | --- | ---     |
| 16"         | Ni-20        | 0-7"                                                                          | 0-8" | 1-0"  | 2-4" | 3-8" | 4-0"  | 5-0" | 6-6"  | 7-9"  | --- | ---     |
|             | Ni-40x       | 0-7"                                                                          | 0-8" | 1-0"  | 2-4" | 3-8" | 4-0"  | 5-0" | 6-6"  | 7-9"  | --- | ---     |
|             | Ni-60        | 0-7"                                                                          | 0-8" | 1-0"  | 2-4" | 3-8" | 4-0"  | 5-0" | 6-6"  | 7-9"  | --- | ---     |
|             | Ni-80        | 1-3"                                                                          | 1-8" | 3-0"  | 4-3" | 5-9" | 6-0"  | 7-3" | 8-10" | 10-0" | --- | ---     |

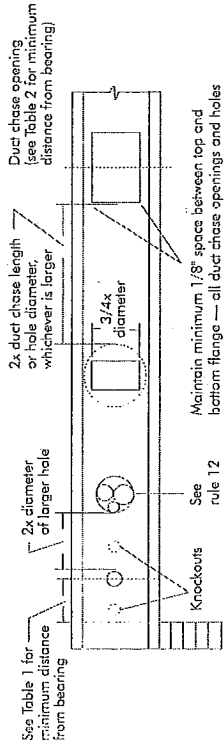
1. Above table may be used for I-joist spacing of 24 inches on centre or less.

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.

4. The above table is based on the I-joists being used at their maximum spans. The minimum distance as given above may be reduced for shorter spans; contact your local distributor.

## FIGURE 7 FIELD-CUT HOLE LOCATOR



## SAFETY AND CONSTRUCTION PRECAUTIONS



Do not walk on I-joists until fully fastened and braced, or serious injuries can result.



Never stack building materials over unsheathed I-joists. Once sheathed, do not over-stress I-joists with concentrated loads from building materials.

WARNING: I-joists are not stable until completely installed, and will not carry any load until fully braced and sheathed.

### AVOID ACCIDENTS BY FOLLOWING THESE IMPORTANT GUIDELINES:

- Brace and nail each I-joist as it is installed, using hangers, blocking, rim board, and/or cross-bracing at joist ends. When I-joists are applied continuously over interior supports and a load-bearing wall is planned at that location, blocking will be required at the interior support.
- When the building is completed, the floor sheathing will provide lateral support for the top flanges of the I-joists. Until this sheathing is applied, temporary bracing, or called struts, or temporary sheathing must be applied to prevent I-joist rollover or buckling.
- Temporary bracing or struts must be 1x4 inch minimum, at least 8 feet long and spaced no more than 8 feet on centre, and must be secured with a minimum of two 2-1/2" nails fastened to the top surface of each I-joist. Nail the bracing to a load resistant at the end of each bay. Lap ends of bracing over at least two I-joists.
- Or, sheathing (temporary or permanent) can be nailed to the top flange of the first 4 feet of I-joists at the end of the bay.
- For cantilevered I-joists, brace top and bottom flanges, and brace ends with closure panels, rim board, or cross-bracing.
- Install and fully nail permanent sheathing to each I-joist before placing loads on the floor system. Then, stack building materials over beams or walls only.
- Never install a damaged I-joist.

Improper storage or installation, failure to follow applicable building codes, failure to follow span ratings for Nordic I-joists, failure to follow allowable hole sizes and locations, or failure to use web stiffeners when required can result in serious accidents. Follow these installation guidelines carefully.

TABLE 2  
DUCT CHASE OPENING SIZES AND LOCATIONS  
Simple Span Only

| Joist Depth | Joist Series | Minimum distance from inside face of supports to centre of opening (ft - in.) |       |       |        |        |       |       |       |       |       |       |
|-------------|--------------|-------------------------------------------------------------------------------|-------|-------|--------|--------|-------|-------|-------|-------|-------|-------|
|             |              | 8                                                                             | 10    | 12    | 14     | 16     | 18    | 20    | 22    | 24    | 24    | 24    |
| 9-1/2"      | Ni-20        | 4-1"                                                                          | 4-5"  | 4-10" | 5-4"   | 5-8"   | 6-1"  | 6-6"  | 7-1"  | 7-5"  | 7-5"  | 7-5"  |
|             | Ni-40x       | 5-3"                                                                          | 5-8"  | 6-0"  | 6-5"   | 6-10"  | 7-3"  | 7-8"  | 8-2"  | 8-6"  | 8-6"  | 8-6"  |
|             | Ni-60        | 5-4"                                                                          | 5-9"  | 6-2"  | 6-7"   | 7-1"   | 7-5"  | 8-0"  | 8-3"  | 8-7"  | 8-7"  | 8-7"  |
|             | Ni-80        | 5-1"                                                                          | 5-5"  | 5-10" | 6-3"   | 6-7"   | 7-1"  | 7-6"  | 8-1"  | 8-4"  | 8-4"  | 8-4"  |
| 11-7/8"     | Ni-20        | 5-0"                                                                          | 5-5"  | 6-6"  | 7-1"   | 7-5"   | 7-9"  | 8-3"  | 8-9"  | 9-4"  | 9-4"  | 9-4"  |
|             | Ni-40x       | 6-8"                                                                          | 7-2"  | 7-6"  | 8-1"   | 8-5"   | 9-1"  | 9-6"  | 10-1" | 10-9" | 10-9" | 10-9" |
|             | Ni-60        | 7-3"                                                                          | 7-8"  | 8-0"  | 8-6"   | 9-0"   | 9-3"  | 9-9"  | 10-3" | 11-0" | 11-0" | 11-0" |
|             | Ni-80        | 7-1"                                                                          | 7-6"  | 7-9"  | 8-4"   | 8-7"   | 9-1"  | 9-6"  | 10-1" | 10-4" | 10-4" | 10-4" |
| 14"         | Ni-20        | 7-6"                                                                          | 7-7"  | 8-0"  | 8-5"   | 8-10"  | 9-3"  | 9-8"  | 10-2" | 10-8" | 10-8" | 10-8" |
|             | Ni-40x       | 8-1"                                                                          | 8-1"  | 8-5"  | 9-0"   | 9-4"   | 9-8"  | 10-2" | 10-7" | 11-1" | 11-1" | 11-1" |
|             | Ni-60        | 8-7"                                                                          | 8-7"  | 9-0"  | 9-5"   | 9-9"   | 10-3" | 10-7" | 11-1" | 11-5" | 11-5" | 11-5" |
|             | Ni-80        | 9-2"                                                                          | 9-2"  | 9-5"  | 10-0"  | 10-4"  | 10-7" | 11-1" | 11-5" | 12-0" | 12-0" | 12-0" |
| 16"         | Ni-20        | 10-3"                                                                         | 10-8" | 11-2" | 11-6"  | 12-1"  | 12-5" | 13-0" | 13-4" | 14-1" | 14-1" | 14-1" |
|             | Ni-40x       | 10-1"                                                                         | 10-5" | 11-0" | 11-4"  | 11-10" | 12-3" | 12-8" | 13-3" | 14-0" | 14-0" | 14-0" |
|             | Ni-60        | 10-4"                                                                         | 10-9" | 11-3" | 11-9"  | 12-1"  | 12-7" | 13-1" | 13-8" | 14-4" | 14-4" | 14-4" |
|             | Ni-80        | 10-9"                                                                         | 11-2" | 11-5" | 11-10" | 12-4"  | 12-6" | 13-0" | 13-6" | 14-2" | 14-2" | 14-2" |

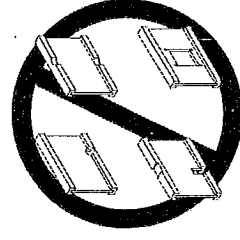
1. Above table may be used for I-joist spacing of 24 inches on centre or less.

2. Duct chase 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 15 psf, and a live load deflection limit of L/480.

5. The above table is based on the I-joists being used at their maximum spans. The minimum distance as given above may be reduced for shorter spans; contact your local distributor.



Knockouts are pre-cored holes provided for the contractor's convenience to install electrical or small plumbing lines. They are 1-1/2 inches in diameter, and are spaced 15 inches on centre along the length of the I-joist. Where possible, it is preferable to use knockouts instead of field-cut holes.

Never drill, cut or notch the flange, or over-cut the web.

Holes in webs should be cut with a sharp saw.

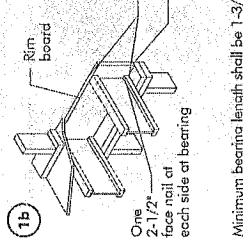
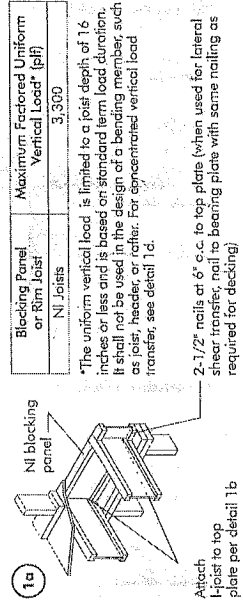
For rectangular holes, avoid over-cutting the corners, as this can cause unnecessary stress concentrations. Slightly rounding the corners is recommended. Starting the rectangular hole by drilling a 1-inch diameter hole in each of the four corners and then making the cuts between the holes is another good method to minimize damage to the I-joist.



## PRODUCT WARRANTY

Changers Chibingman guarantee their products are free from manufacturing defects in material and workmanship.

Furthermore, Changers Chibingman warrants that our products, when utilized in accordance with our handling and installation instructions, will meet or exceed our specifications for the lifetime of the structure.



| Blocking Panel or Rim Joist | Maximum Factored Uniform Vertical Load* (plf) |
|-----------------------------|-----------------------------------------------|
| 1-1/8" Rim Board Plus       | 8,090                                         |

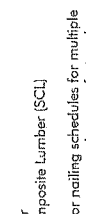
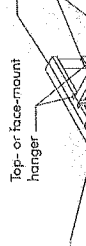
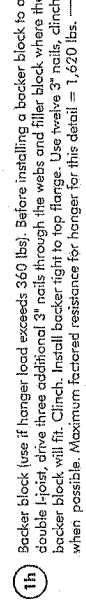
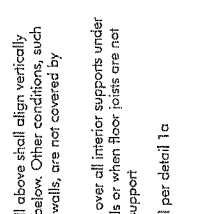
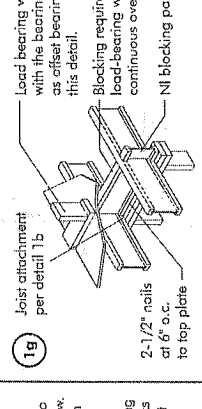
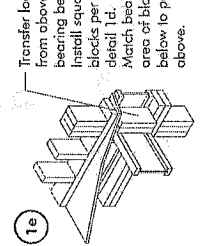
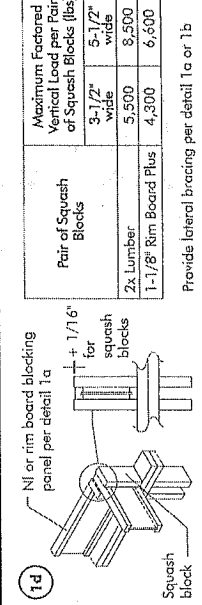
\*The uniform vertical load is limited to a rim board depth of 16 inches or less and is based on standard term load duration. It shall not be used in the design of a bending member, such as joist, header, or rafter. For concentrated vertical load transfer, see detail 1d.

One 2-1/2" wire or spiral nail at top and bottom flange

Attach rim board to top plate using 2-1/2" wire or spiral bee-nails at 6" o.c.

To avoid splitting flange, start nails at least 1-1/2" from end of I-joist. Nails may be driven at an angle to avoid splitting of bearing plate.

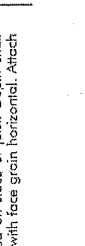
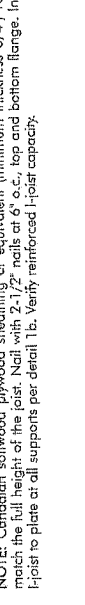
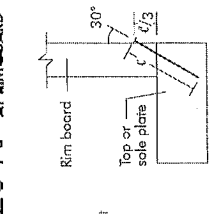
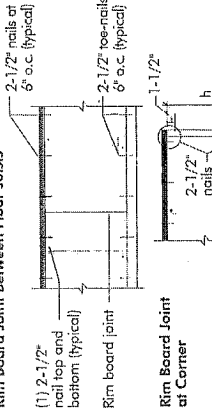
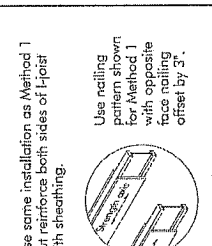
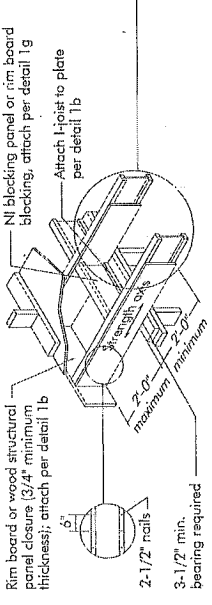
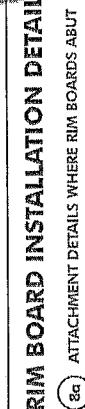
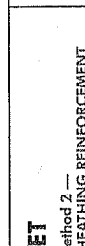
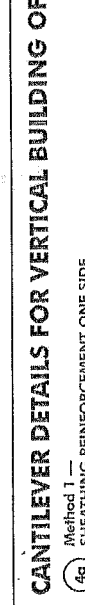
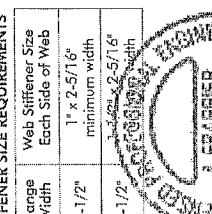
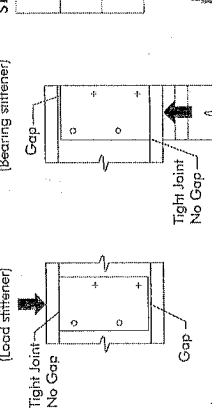
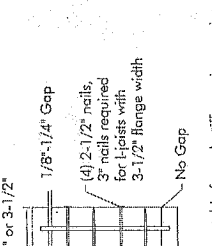
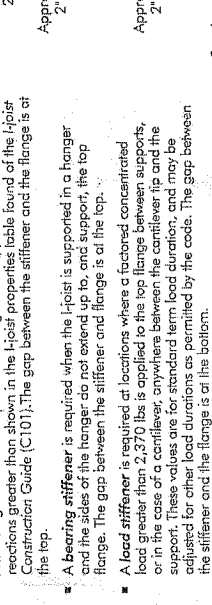
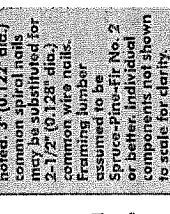
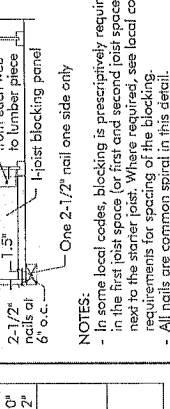
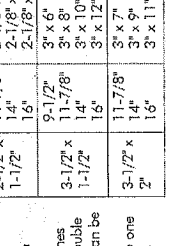
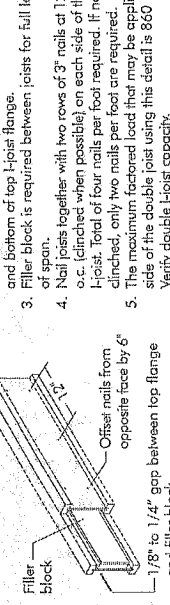
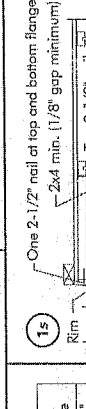
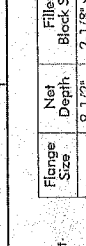
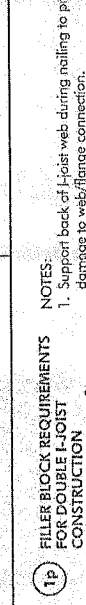
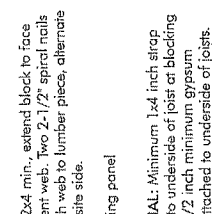
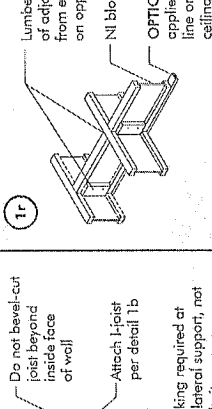
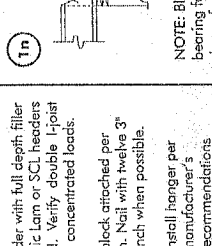
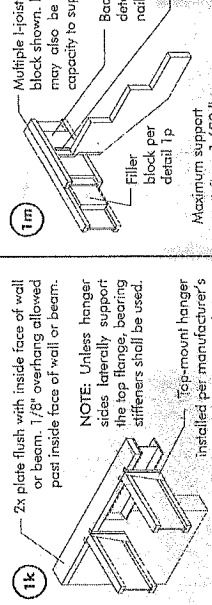
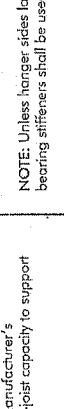
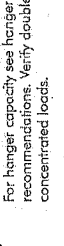
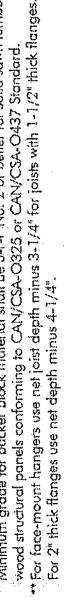
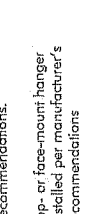
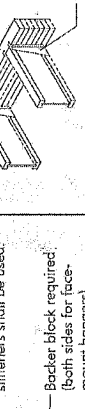
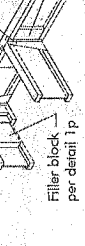
Minimum bearing length shall be 1-3/4" for the end bearings, and 3-1/2" for the intermediate bearings when applicable.



| Flange Width | Material Thickness Required* | Minimum Depth** |
|--------------|------------------------------|-----------------|
| 3-1/2"       | 1"                           | 5-1/2"          |
| 3-1/2"       | 1-1/2"                       | 7-1/4"          |

\* Minimum grade for backer block material shall be S-P-F No. 2 or better for solid sawn lumber and wood structural panels conforming to CAN/CSA-Q325 or CAN/CSA-Q337 Standard.

\*\* For face-mount hangers use net joist depth minus 3-1/4" for joists with 1-1/2" thick flanges. For 2" thick flanges use net depth minus 4-1/4".



## WEB STIFFENERS

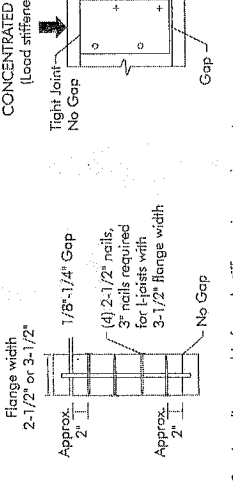
### RECOMMENDATIONS:

- A bearing stiffener is required in all engineered applications with factored reactions greater than shown in the I-joist properties table found in the I-joist Construction Guide (C101). The gap between the stiffener and the flange is at the top.
- A bearing stiffener is required when the I-joist is supported in a hanger and the sides of the hanger do not extend up to, and support, the top flange. The gap between the stiffener and flange is at the top.
- A load stiffener is required at locations where a factored concentrated load greater than 2,370 lbs is applied to the top flange between supports, or in the case of a cantilever, anywhere between the cantilever tip and the support. These values are for standard term load duration, and may be adjusted for other load durations as permitted by the code. The gap between the stiffener and the flange is at the bottom.

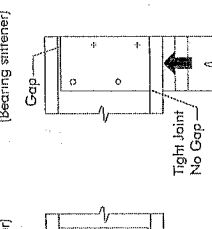
## WEB STIFFENER INSTALLATION DETAILS

FIGURE 2

### CONCENTRATED LOAD (Load stiffener)



### END BEARING (Bearing stiffener)

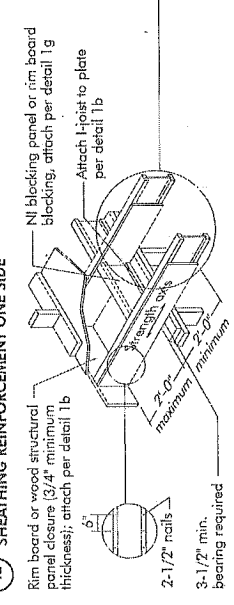


### STIFFENER SIZE REQUIREMENTS

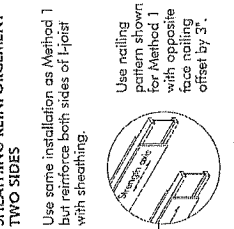
| Flange Width | Web Stiffener Size Each Side of Web |
|--------------|-------------------------------------|
| 2-1/2"       | 1" x 2-5/16" minimum width          |
| 3-1/2"       | 1-1/2" x 2-5/16" minimum width      |

## CANTILEVER DETAILS FOR VERTICAL BUILDING OFFSET

### Method 1 — SHEATHING REINFORCEMENT ONE SIDE

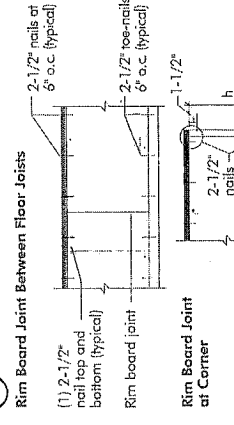


### Method 2 — SHEATHING REINFORCEMENT TWO SIDES

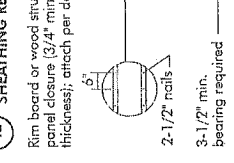


## RIM BOARD INSTALLATION DETAILS

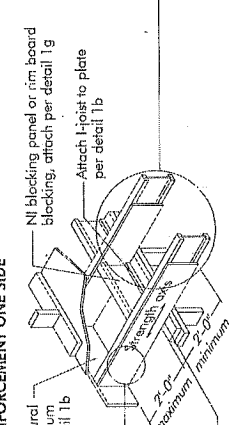
### ATTACHMENT DETAILS WHERE RIM BOARDS ABOUT RIM BOARD JOINT BETWEEN FLOOR JOISTS



### Method 1 — SHEATHING REINFORCEMENT ONE SIDE



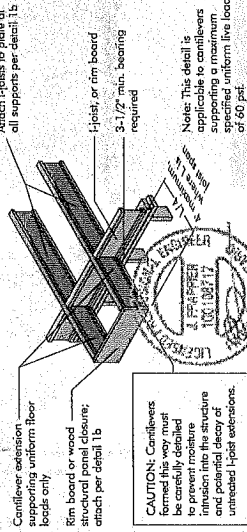
### Method 2 — SHEATHING REINFORCEMENT TWO SIDES



NOTE: Canadian softwood plywood sheathing or equivalent (minimum thickness 3/4") required on sides of joist. Depth shall match the full height of the joist. Nail with 2-1/2 inch nails at 6 inch o.c., top and bottom flange. Install with face grain horizontal. Attach I-joist to plate at all supports per detail 1b. Verify reinforced I-joist capacity.

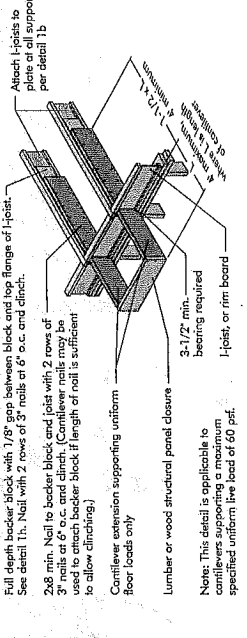
## CANTILEVER DETAILS FOR BALCONIES (NO WALL LOAD)

### 3a) I-JOIST CANTILEVER DETAIL FOR BALCONIES (NO WALL LOAD)



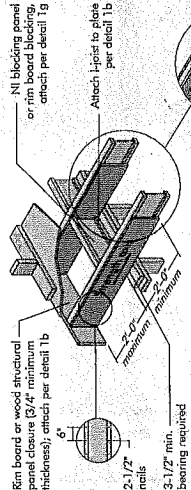
**CAUTION:** Cantilevers formed this way must be designed to prevent moisture intrusion into the structure and potential decay of untreated I-joist extensions.

### 3b) LUMBER CANTILEVER DETAIL FOR BALCONIES (NO WALL LOAD)



## CANTILEVER DETAILS FOR VERTICAL BUILDING OFFSET (CONCENTRATED WALL LOAD)

### 4a) Method 1 — SHEATHING REINFORCEMENT ONE SIDE

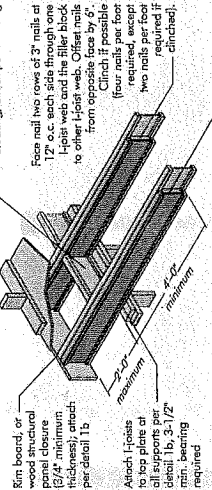


### Method 2 — SHEATHING REINFORCEMENT TWO SIDES

- Use same installation as Method 1, but reinforce both sides of I-joist with sheathing.
- Use nailing pattern shown for Method 1 with opposite face nailing offset by 3".

**Note:** Canadian softwood plywood sheathing or equivalent (minimum thickness 3/4") required on sides of joist. Depth shall match the full height of the joist. Nail with 2-1/2" nails at 6" o.c. top and bottom flange. Install with face grain horizontal. Attach I-joists to plate at all supports per detail 1b. Verify reinforced I-joist capacity.

### 4b) Alternate Method 2 — DOUBLE I-JOIST



Block I-joists together with filler blocks for the full length of the reinforcement. Block I-joist flange widths greater than 3 inches place an additional row of 3" nails along the cantiline of the reinforcing panel from each side. Clinch when possible.

FIGURE 4 (continued)

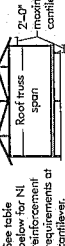
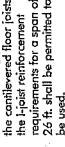


FIGURE 4



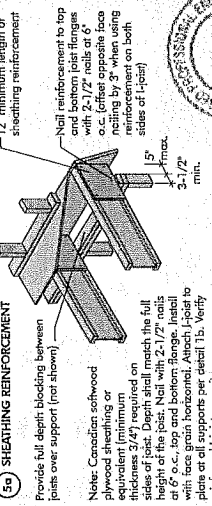
## CANTILEVER REINFORCEMENT METHODS ALLOWED

| JOIST DEPTH (in) | ROOF LOADS (UNFACTORED) |    |      |    |    |                         |    |      |    |    |
|------------------|-------------------------|----|------|----|----|-------------------------|----|------|----|----|
|                  | LL = 30 psf DL = 15 psf |    |      |    |    | LL = 40 psf DL = 15 psf |    |      |    |    |
|                  | 12                      | 16 | 19.2 | 24 | 32 | 12                      | 16 | 19.2 | 24 | 32 |
| 9-1/2"           | N                       | N  | N    | N  | N  | N                       | N  | N    | N  | N  |
| 11-7/8"          | N                       | N  | N    | N  | N  | N                       | N  | N    | N  | N  |
| 14"              | N                       | N  | N    | N  | N  | N                       | N  | N    | N  | N  |
| 16"              | N                       | N  | N    | N  | N  | N                       | N  | N    | N  | N  |

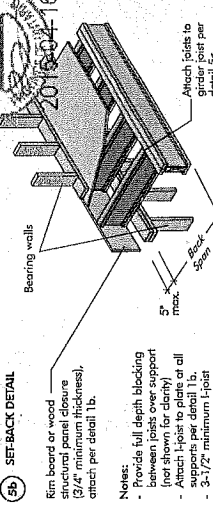
- N = No reinforcement required.
  - N1 = NI reinforced with 3/4" wood structural panel on one side only.
  - N2 = NI reinforced with 3/4" wood structural panel on both sides, or double I-joist.
  - X = Try a deeper joist or closer spacing.
2. Maximum design load shall be 15 psf for 9-1/2" joist, 20 psf for 11-7/8" joist, 25 psf for 14" joist, and 30 psf for 16" joist. Wall load is based on 2-0" maximum width window or door opening.

## BRICK CANTILEVER DETAILS FOR VERTICAL BUILDING OFFSET (CONCENTRATED WALL LOAD)

### 5a) SHEATHING REINFORCEMENT



### 5b) SET-BACK DETAIL



### 5c) SET-BACK CONNECTION

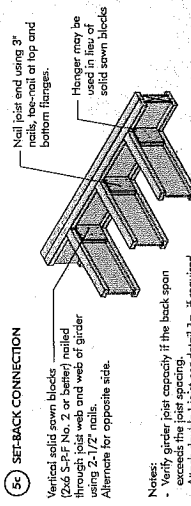


FIGURE 5 (continued)

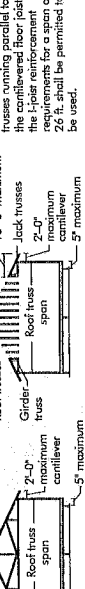
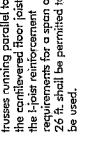


FIGURE 5



## BRICK CANTILEVER REINFORCEMENT METHODS ALLOWED

| JOIST DEPTH (in) | ROOF LOADS (UNFACTORED) |    |      |    |    |                         |    |      |    |    |
|------------------|-------------------------|----|------|----|----|-------------------------|----|------|----|----|
|                  | LL = 30 psf DL = 15 psf |    |      |    |    | LL = 40 psf DL = 15 psf |    |      |    |    |
|                  | 12                      | 16 | 19.2 | 24 | 32 | 12                      | 16 | 19.2 | 24 | 32 |
| 9-1/2"           | N                       | N  | N    | N  | N  | N                       | N  | N    | N  | N  |
| 11-7/8"          | N                       | N  | N    | N  | N  | N                       | N  | N    | N  | N  |
| 14"              | N                       | N  | N    | N  | N  | N                       | N  | N    | N  | N  |
| 16"              | N                       | N  | N    | N  | N  | N                       | N  | N    | N  | N  |

- N = No reinforcement required.
  - N1 = NI reinforced with 3/4" wood structural panel on one side only.
  - N2 = NI reinforced with 3/4" wood structural panel on both sides, or double I-joist.
  - X = Try a deeper joist or closer spacing.
2. Maximum design load shall be 15 psf for 9-1/2" joist, 20 psf for 11-7/8" joist, 25 psf for 14" joist, and 30 psf for 16" joist. Wall load is based on 2-0" maximum width window or door opening.

FIGURE 5 (continued)

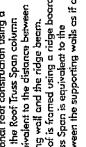
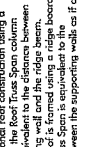
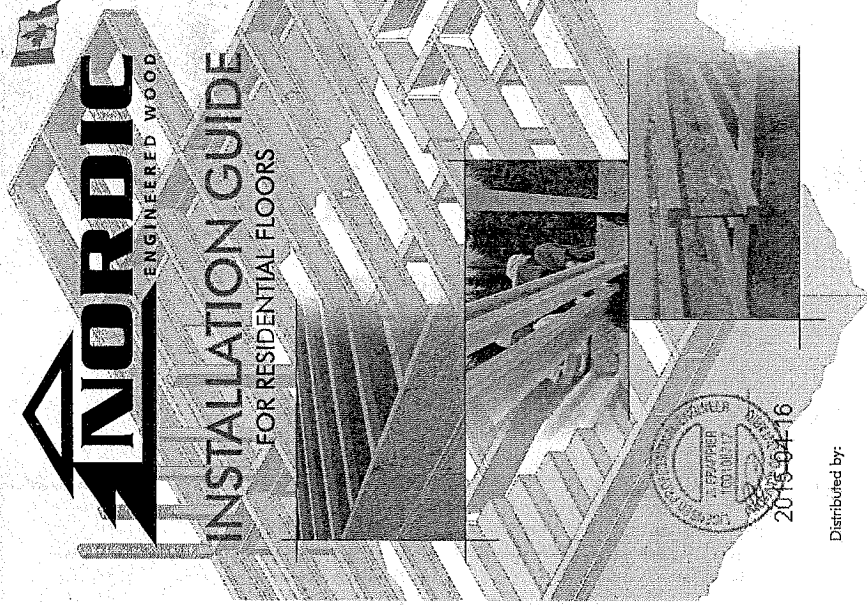


FIGURE 5







# INSTALLATION GUIDE FOR RESIDENTIAL FLOORS

2015-04-16  
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100104717

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## SAFETY AND CONSTRUCTION PRECAUTIONS



**WARNING**  
I-joists are not stable until completely installed, and will not carry any load until fully braced and sheathed.

### Avoid Accidents by Following these Important Guidelines:

1. Brace and nail each I-joist as it is installed, using hangers, blocking panels, rim board, and/or cross-bracing at joist ends. When I-joists are applied continuous over interior supports and a load-bearing wall is planned at that location, blocking will be required at the interior support.
2. When the building is completed, the floor sheathing will provide lateral support for the top flanges of the I-joists. Until this sheathing is applied, temporary bracing or sheathing must be used to prevent lateral movement or buckling.
- Temporary bracing or sheathing must be 1-1/2 inch minimum, at least 8 feet long and extend beyond the ends of the I-joists by a minimum of 6 feet. Bracing must be secured with a minimum of two 2-1/2" nails fastened to the top surface of each I-joist. Nail the bracing to a lateral restraint at the end of each bay. Lap ends of adjoining bracing over at least two I-joists.
- Or, sheathing (temporary or permanent) can be nailed to the top flange of the first 4 feet of I-joists at the end of the bay.
3. For cantilevered I-joists, brace top and bottom flanges, and brace ends with cleave panels, rim board, or cross-bracing.
4. Install and fully nail permanent sheathing to each I-joist before placing loads on the floor system. Then, stack building materials over beams or walls only.
5. Never install a damaged I-joist.

Do not walk on I-joists until fully fastened and braced, or serious injuries can result.



Never stack building materials on unbraced I-joists. Once sheathed, do not over-stress I-joist with concentrated loads from building materials.

Improper storage or installation, failure to follow applicable building codes, failure to follow span ratings for Nordic I-joists, failure to follow allowable hole size and locations, or failure to use web stiffeners when required can result in serious accidents. Follow these installation guidelines carefully.

## STORAGE AND HANDLING GUIDELINES

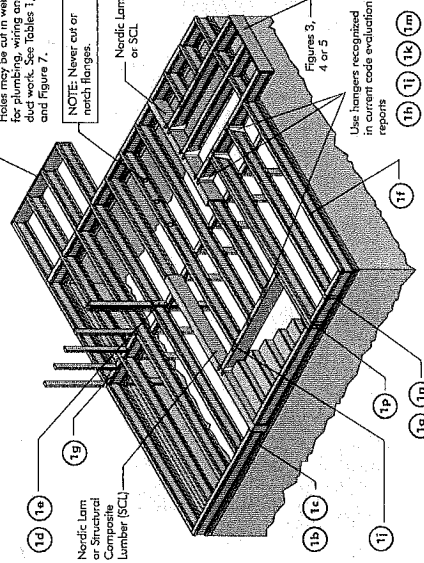
1. Bundle wrap can be slippery when wet. Avoid walking on wrapped bundles.
2. Store, stack, and handle I-joists vertically and level only.
3. Always stack and handle I-joists in the upright position only.
4. Do not store I-joists in direct contact with the ground and/or flammable.
5. Protect I-joists from weather, and use spacers to separate bundles.
6. Bundled units should be kept intact until time of installation.
7. When handling I-joists with a crane on the job site, take a few simple precautions to prevent damage to the I-joists and injury to your work crew.
  - Pick I-joists in bundles as shipped by the supplier.
  - Orient the bundles so that the webs of the I-joists are vertical.
  - Pick the bundles at the 5th points, using a spreader bar if necessary.
8. Do not handle I-joists in a horizontal orientation.
9. NEVER USE OR TRY TO REPAIR A DAMAGED I-JOIST.

## INSTALLING NORDIC I-JOISTS

1. Before laying our floor system components, verify that I-joist flange widths match hanger widths. If not, contact your supplier.
2. Except for cutting to length, I-joist flanges should never be cut, drilled, or notched.
3. Install I-joists so that top and bottom flanges are within 1/2 inch of true vertical alignment.
4. I-joists must be anchored securely to supports before floor sheathing is attached, and supports to be level.
5. Minimum bearing lengths: 1-3/4 inches for end bearings and 3-1/2 inches for intermediate bearings.
6. When using hangers, seat I-joists firmly in hanger bottoms to minimize settlement.
7. Leave a 1/16-inch gap between the I-joist end and a header.
8. Concentrated loads greater than those that can normally be expected in residential construction should only be applied to the top surface of the top flange. Normal concentrated loads include track lighting fixtures, audio equipment and security cameras. Never suspend unusual or heavy loads from the I-joist's bottom flange. Whenever possible, suspend all concentrated loads from the top of the I-joist. Or, attach the load to blocking that has been securely fastened to the I-joist webs.
9. Never install I-joists where they will be permanently exposed to weather, or where they will remain in direct contact with concrete or masonry.
10. Restrain ends of floor joists to prevent rollover. Use rim board, rim joists or I-joist blocking panels.
11. For I-joists installed over and beneath bearing walls, use full depth blocking panels, rim board, or squish blocks (cripple members) to transfer gravity loads through the floor system to the wall or foundation below.
12. Due to shrinkage, common framing lumber set on edge may never be used as blocking or rim boards. I-joist blocking panels or other engineered wood products – such as rim board – must be cut to fit between the I-joists, and an I-joist-compatible depth selected.
13. Provide permanent lateral support of the bottom flange of all I-joists at interior supports of multiple-span joists. Similarly, support the bottom flange of all cantilevered I-joists at the end support next to the cantilever extension. In the completed floor system, blocking and sheathing provides this lateral support. Until the final finished ceiling is applied, temporary bracing or studs must be used.
14. If square-edge panels are used, edges must be supported between I-joists with 2x4 blocking. Glue panels to blocking to prevent lateral movement. If not required under structural finish flooring, such as wood strip flooring, or if a separate underlayment layer is installed.
15. Nail spacing: Space nails installed to the flange's top face in accordance with the applicable building code requirements or approved building plans.

## FIGURE 1 TYPICAL NORDIC I-JOIST FRAMING AND CONSTRUCTION DETAILS

Some framing requirements such as section bracing and blocking panels have been omitted for clarity.



All nails shown in the above details are assumed to be common wire nails unless otherwise noted. 3" (0.122 inch) common spiral nails may be substituted for 2-1/2" (0.128 inch) common wire nails. Framing lumber assumed to be Species-Heart No. 2 or better. Individual components not shown to scale for clarity.

1a

Attach I-joist to top plate per detail 1a

One 2-1/2" face nail at each side at bearing

1b

One 2-1/2" wire or spiral nail at top and bottom flange

To avoid splitting flange, start nails at least 1-1/2" from end of I-joist. Nails may be driven at an angle to avoid splitting of bearing plate. Minimum bearing length shall be 1-3/4" for the end bearings, and 3-1/2" for the intermediate bearings when applicable.

1c

Attach rim joist to floor joist with one nail at top and bottom. Nail must provide 1 inch minimum penetration into floor joist. Toe-nailing may be used.

1d

Attach rim joist to blocking panel per detail 1a

Attach I-joist per detail 1b

Minimum 1-3/4" bearing required

| Blocking Panel or Rim Joist | Maximum Fastened Uniform Vertical Load* (psf) |
|-----------------------------|-----------------------------------------------|
| NJ Joists                   | 3,300                                         |
| 1-1/8" Rim Board Plus       | 8,090                                         |

\*The uniform vertical load is limited to a joist depth of 16 inches or less and is based on standard term load duration. It shall not be used in the design of a bending member, such as joist, header, or rafter. For concentrated vertical load transfer, see detail 1d.

| Pair of Squash Blocks (for 3-1/2" webs) | 5-1/2" webs |
|-----------------------------------------|-------------|
| 2x Lumber                               | 5,500       |
| 1-1/8" Rim Board Plus                   | 4,300       |

Provide lateral bracing per detail 1a, 1b, or 1c

## MAXIMUM FLOOR SPANS

1. Maximum clear spans applicable to simple-span or multiple-span residential floor construction with a design live load of 40 psf and dead load of 15 psf per applicable code. See Table 1.1.50 for details. The serviceability limit state includes the consideration for floor vibration and a live load deflection limit of  $L/480$ . For multiple-span applications, the end spans shall be 40% or more of the adjacent span.

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, or 3/4 inch for joist spacing of 24 inches. See Table 1.1.50 for details. No concrete topping or bridging element was assumed. Increased spans may be achieved with the use of gypsum and/or a row of blocking at mid-span.

3. Minimum bearing length shall be 1-3/4 inches for the end bearings, and 3-1/2 inches for the intermediate bearings. Bearings and 3-1/2 inches for the intermediate bearings. Bearings and 3-1/2 inches for the intermediate bearings.

4. Bearing stiffeners are not required when 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 uniform loads, an engineering analysis may be required based on the use of the design properties.

6. Tables are based on Lateral Stiffness Design per CAN/CSA O86-09 Standard and NBC 2010.

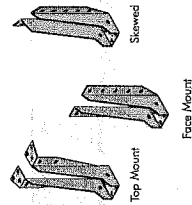
7. SI units conversion: 1 inch = 25.4 mm  
1 foot = 0.305 m

## MAXIMUM FLOOR SPANS FOR NORDIC I-JOISTS

| Joist Depth | Simple Span   |        |        |        | Overlaid Spacing |        |        |        |
|-------------|---------------|--------|--------|--------|------------------|--------|--------|--------|
|             | Joist Spacing | 2x12   | 2x10   | 2x8    | Joist Spacing    | 2x12   | 2x10   | 2x8    |
| 9-1/2"      | N-20          | 16'-1" | 15'-2" | 14'-2" | 12'-0"           | 14'-0" | 13'-0" | 12'-0" |
|             | N-30          | 16'-1" | 15'-2" | 14'-2" | 12'-0"           | 14'-0" | 13'-0" | 12'-0" |
|             | N-40          | 16'-1" | 15'-2" | 14'-2" | 12'-0"           | 14'-0" | 13'-0" | 12'-0" |
|             | N-50          | 16'-1" | 15'-2" | 14'-2" | 12'-0"           | 14'-0" | 13'-0" | 12'-0" |
|             | N-60          | 16'-1" | 15'-2" | 14'-2" | 12'-0"           | 14'-0" | 13'-0" | 12'-0" |
| 11-7/8"     | N-20          | 16'-1" | 15'-2" | 14'-2" | 12'-0"           | 14'-0" | 13'-0" | 12'-0" |
|             | N-30          | 16'-1" | 15'-2" | 14'-2" | 12'-0"           | 14'-0" | 13'-0" | 12'-0" |
|             | N-40          | 16'-1" | 15'-2" | 14'-2" | 12'-0"           | 14'-0" | 13'-0" | 12'-0" |
|             | N-50          | 16'-1" | 15'-2" | 14'-2" | 12'-0"           | 14'-0" | 13'-0" | 12'-0" |
|             | N-60          | 16'-1" | 15'-2" | 14'-2" | 12'-0"           | 14'-0" | 13'-0" | 12'-0" |
| 14"         | N-20          | 16'-1" | 15'-2" | 14'-2" | 12'-0"           | 14'-0" | 13'-0" | 12'-0" |
|             | N-30          | 16'-1" | 15'-2" | 14'-2" | 12'-0"           | 14'-0" | 13'-0" | 12'-0" |
|             | N-40          | 16'-1" | 15'-2" | 14'-2" | 12'-0"           | 14'-0" | 13'-0" | 12'-0" |
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|             | N-60          | 16'-1" | 15'-2" | 14'-2" | 12'-0"           | 14'-0" | 13'-0" | 12'-0" |

## I-JOIST HANGERS

- Hangers shown illustrate the three most commonly used metal hangers to support I-joists.
- All nailing must meet the hanger manufacturer's recommendations.
- Hangers should be selected based on the joist depth, flange width and load capacity based on the minimum spans.
- Web stiffeners are required when the sides of the hangers do not laterally brace the top flange of the I-joist.



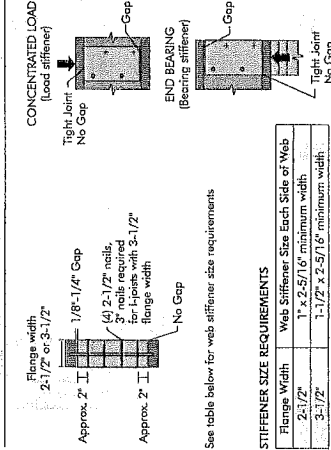
## WEB STIFFENERS

### RECOMMENDATIONS:

- A bearing stiffener is required in all engineered applications with tensile reactions greater than shown in the I-joist properties table found in the Construction Guide (C101). The gap between the stiffener and the flange is at the top.
- A bearing stiffener is required when the I-joist is supported in a hanger and the sides of the hanger do not extend up to, and support, the top flange. The gap between the stiffener and flange is at the top.
- A load stiffener is required at locations where a factored concentrated load greater than 2,370 lbs is applied to the top flange between supports, or in the case of a cantilever, anywhere between the cantilever tip and the support. These values are to be adjusted for other load durations as permitted by the code. The gap between the stiffener and the flange is at the bottom.

SI units conversion: 1 inch = 25.4 mm

FIGURE 2  
WEB STIFFENER INSTALLATION DETAILS



See table below for web stiffener size requirements

### STIFFENER SIZE REQUIREMENTS

| Flange Width | Web Stiffener Size Each Side of Web |
|--------------|-------------------------------------|
| 2-1/2"       | 1" x 2-5/16" minimum width          |
| 3-1/2"       | 1-1/2" x 2-5/16" minimum width      |

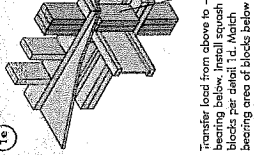
## NORDIC I-JOIST SERIES

| Joist Depth | 2x12   | 2x10   | 2x8    | 2x6    | 2x4    |
|-------------|--------|--------|--------|--------|--------|
| N-20        | 16'-1" | 15'-2" | 14'-2" | 13'-2" | 12'-2" |
| N-30        | 16'-1" | 15'-2" | 14'-2" | 13'-2" | 12'-2" |
| N-40        | 16'-1" | 15'-2" | 14'-2" | 13'-2" | 12'-2" |
| N-50        | 16'-1" | 15'-2" | 14'-2" | 13'-2" | 12'-2" |
| N-60        | 16'-1" | 15'-2" | 14'-2" | 13'-2" | 12'-2" |

Chonlars Chongamany Ltd. harvests its own trees, which enables Nordic products to adhere to strict quality control procedures through the entire manufacturing process. Every phase of the operation, from logging to the finished product, reflects our commitment to quality.

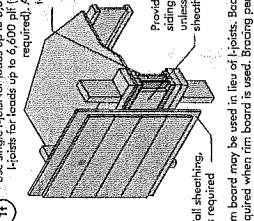
Nordic Engineered Wood I-joists use only finger-jointed solid wood. Finger-jointed lumber in their flanges, ensuring consistent quality, superior strength, and longer span carrying capacity.

### 1e



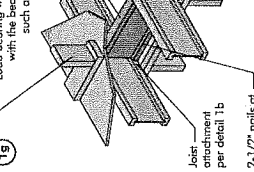
Transfer load from above to bearing below. Install squash blocks per detail 1d. Match bearing area of blocks below to post above.

### 1f



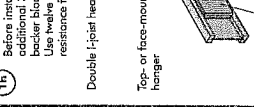
Use single I-joist for loads up to 3,300 plf. Double I-joists for loads up to 6,600 plf. Attach I-joist to top plate using 2-1/2 inch nails at 6 o.c.

### 1g



Load bearing wall above shall align vertically with the bearing below. Other conditions, such as over bearing walls, are not covered by this detail.

### 1h



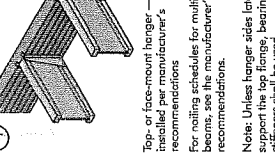
Backer block (use if hanger load exceeds 360 lbs). Before installing a backer block to a double I-joist, drive three additional 3 inch nails through the webs and filler block where the backer block will fit. Check, install backer block to top flange. Backer block must be installed in the minimum required resistance for hanger for this detail = 1,620 lbs.

### 1i



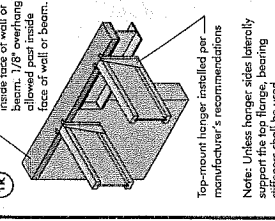
Double I-joist header. Top- or face-mount hanger. Filler block per detail 1p. Backer block required (both sides for face-mount hangers).

### 1j



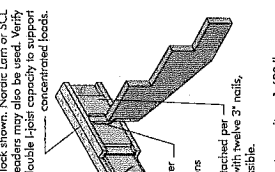
Top- or face-mount hanger installed per manufacturer's recommendations. For nailing schedule for multiple beams, see the manufacturer's recommendations.

### 1k



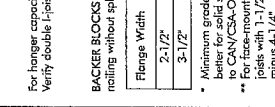
2x plate flush with inside face of wall or beam. 1/8 inch overhang allowed past inside face of wall or beam.

### 1l



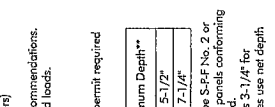
Multiple I-joist header with full depth filler block shown. Nordic Laminated SCL headers may also be used. Verify double I-joist capacity to support concentrated loads.

### 1m



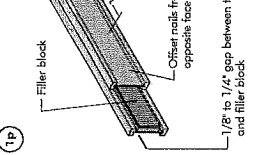
Filler block per detail 1p. Install hanger per manufacturer's recommendations. Backer block attached per detail 1h. Nail with twelve 3 inch nails.

### 1n



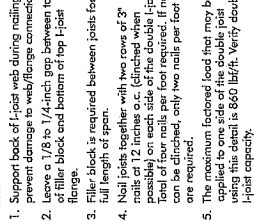
Do not level-cut joist beyond inside face of wall. Attach I-joist per detail 1a.

### 1p



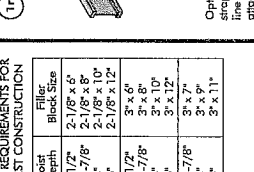
1/8" to 1/4" gap between top flange and filler block.

### 1q



Lumber 2x4 min. extend block to face of wall. Two 2-1/2 inch nails from each web to lumber piece. 2x4 min. 1/8 inch gap minimum. Two 2-1/2 inch nails from each web to lumber piece. L-joist blocking panel. One 2-1/2 inch nail one side only. 2-1/2 inch nails at 6 o.c.

### 1r



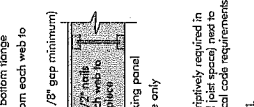
Optional: Minimum 1x4 inch stop applied to underside of joist at blocking line or 1/2 inch minimum gypsum ceiling attached to underside of joist.

### 1s



Backer blocks (Blocks must be long enough to permit required nailing without splitting).

### 1t



Backer block (use if hanger load exceeds 360 lbs). Before installing a backer block to a double I-joist, drive three additional 3 inch nails through the webs and filler block where the backer block will fit. Check, install backer block to top flange. Backer block must be installed in the minimum required resistance for hanger for this detail = 1,620 lbs.

### 1u



1/8" to 1/4" gap between top flange and filler block.