

Products				
PlotID	Length	Product	Pies	Net Qty
B16	10-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	1	1
B17	14-00-00	11 7/8" NI-20	2	2
B18	19-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	2	2
B19 (LOW)	7-00-00	11 7/8" NI-20	1	1
B20 (LOW)	6-00-00	11 7/8" NI-20	1	2
J1	15-00-00	11 7/8" NI-20	1	7
J2	14-00-00	11 7/8" NI-20	1	7
J3	13-00-00	11 7/8" NI-20	1	10
J4	11-00-00	11 7/8" NI-20	1	1
J5	10-00-00	11 7/8" NI-20	1	15
J6	6-00-00	11 7/8" NI-20	1	10
J7	5-00-00	11 7/8" NI-20	1	1
J8	4-00-00	11 7/8" NI-20	1	1
J9	3-00-00	11 7/8" NI-20	1	3
J10	21-00-00	11 7/8" NI-40x	1	18
J11	21-00-00	11 7/8" NI-40x	2	4
J12	19-00-00	11 7/8" NI-40x	1	39
J13	19-00-00	11 7/8" NI-40x	2	8
J14	18-00-00	11 7/8" NI-40x	1	6
J15	17-00-00	11 7/8" NI-40x	1	15
Ca1	266-00-00	1 1/8" x 11 7/8" Rim Board	1	1
Bk1	192-00-00	11 7/8" NI-20	1	1

Connector Summary			
PlotID	Qty	Manuf	Product
H1	37		LT251188
H2	1		MIT311.88-2

REVISION 1 - JUN. 02, 2022

HATCH LEGEND



FLOOR LOADING  
LIVE LOAD : 40 PSF  
DEAD LOAD : 15 PSF  
DEAD LOAD (TILE) : 20 PSF

GROUND FLOOR FRAMING

UNIT 6001 - THE QUEENSLAND  
ELEVATION A  
W/ SUNKEN MUDROOM

APP - AS PER PLAN  
BBO - BEAM BY OTHERS  
PA - POST ABOVE  
O.T.B - OPEN TO BELOW  
GT - GIRDER TRUSS  
RT - ROOF TRUSS

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

SUBFLOOR: 3/4" NAILED & GLUED\*

Blocking panels are required over all interior supports.  
Squash blocks are required under concentrated loads.

Ceramic Tile Application as per O.B.C. 9.30.6

Provide 1-Joist blocking between cantilevered joists (along bearing) and rimboard closure at ends.

Do not scale - refer to architectural plans for dimensions.

JT/PL: 45147/(116409) 117690  
LI: 343075\*

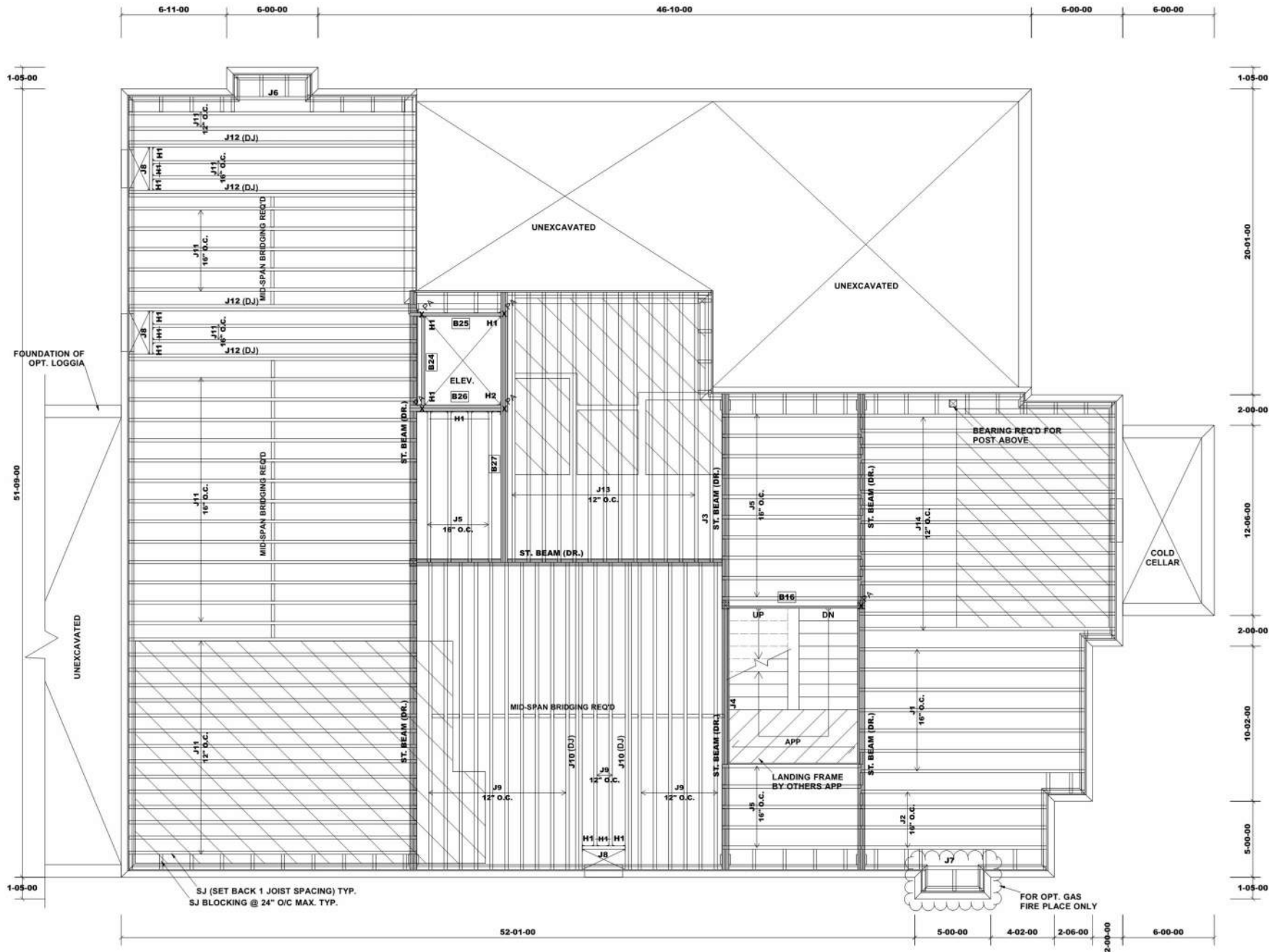
Builder: Gold Park Homes  
Project: Pine Valley Ph2

Location: Vaughan, ON  
Date: Apr. 11, 2022

Designer: TL  
Sheet: 2 of 24

Alpa Roof Trusses Inc.  
Stouffville, Ontario

Salesperson: Derek F.  
Home Lumber Inc.



Products					
ProdID	Length	Product	Pies	Net Qty	
B16	10-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	1	1	
B24	6-00-00	11 7/8" NI-20	1	1	
B25	6-00-00	11 7/8" NI-20	1	1	
B26	6-00-00	11 7/8" NI-20	2	2	
B27	18-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	3	3	
J1	15-00-00	11 7/8" NI-20	1	7	
J2	13-00-00	11 7/8" NI-20	1	4	
J3	12-00-00	11 7/8" NI-20	1	1	
J4	11-00-00	11 7/8" NI-20	1	1	
J5	10-00-00	11 7/8" NI-20	1	19	
J6	5-00-00	11 7/8" NI-20	1	1	
J7	4-00-00	11 7/8" NI-20	1	1	
J8	3-00-00	11 7/8" NI-20	1	3	
J9	21-00-00	11 7/8" NI-40x	1	18	
J10	21-00-00	11 7/8" NI-40x	2	4	
J11	19-00-00	11 7/8" NI-40x	1	39	
J12	19-00-00	11 7/8" NI-40x	2	8	
J13	18-00-00	11 7/8" NI-40x	1	13	
J14	17-00-00	11 7/8" NI-40x	1	15	
Ca1	266-00-00	1 1/8" x 11 7/8" Rim Board	1	1	
Bk1	189-00-00	11 7/8" NI-20	1	1	

Connector Summary			
ProdID	Qty	Manuf	Product
H1	19		LT251188
H2	1		MIT311.88-2

REVISION 1 - JUN. 02, 2022

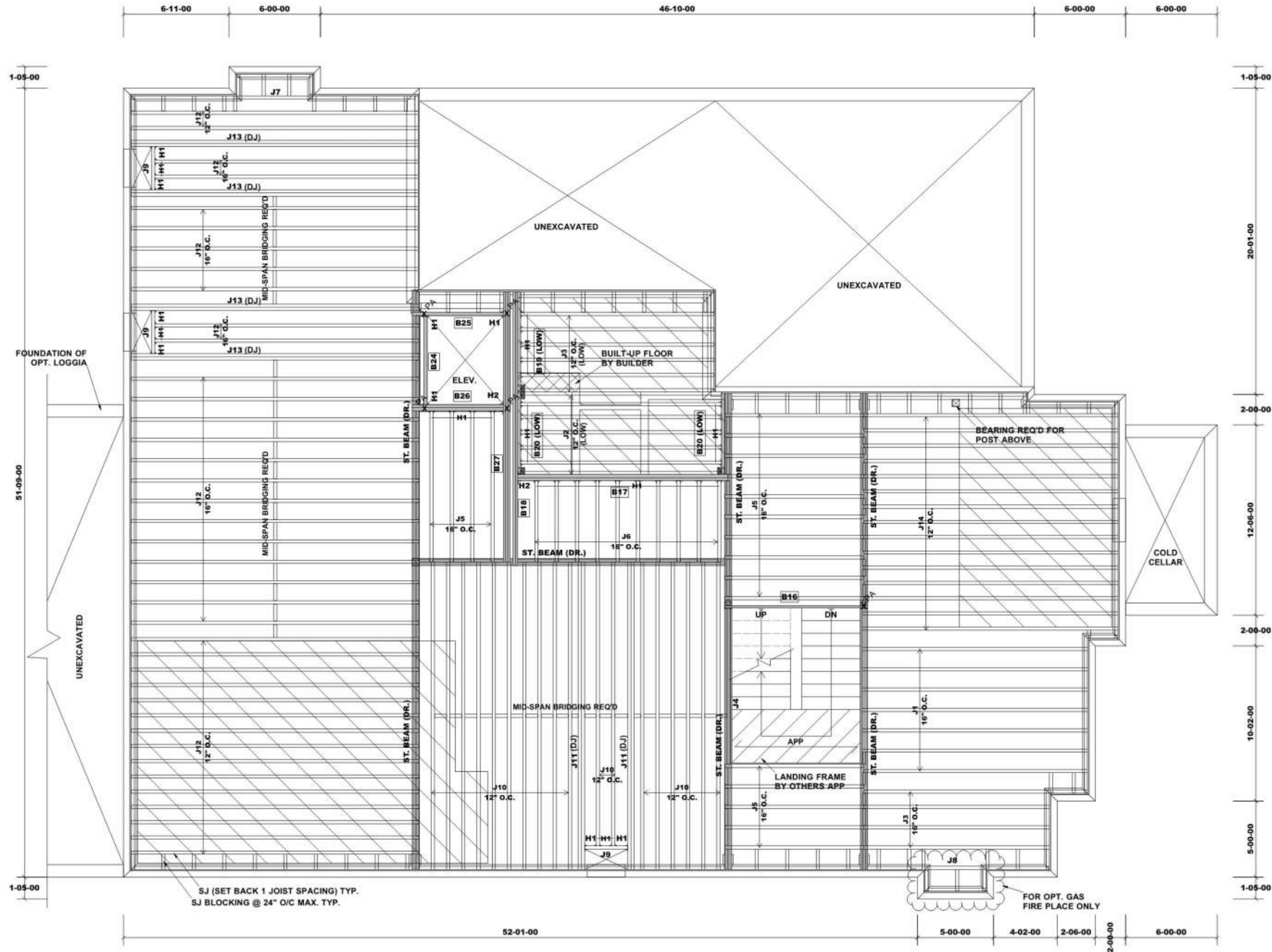
HATCH LEGEND	
	Ceramic Tile
	Conv Framed

FLOOR LOADING  
LIVE LOAD : 40 PSF  
DEAD LOAD : 15 PSF  
DEAD LOAD (TILE) : 20 PSF

GROUND FLOOR FRAMING	
UNIT 6001 - THE QUEENSLAND	
ELEVATION A	
W/ ELEVATOR	

APP - AS PER PLAN  
BBO - BEAM BY OTHERS  
PA - POST ABOVE  
O.T.B - OPEN TO BELOW  
GT - GIRDER TRUSS  
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RIMBOARD  
1-1/8" X 11-7/8" O.S.B  
  
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B20 (LOW)	6-00-00	11 7/8" NI-20	1	2
B24	6-00-00	11 7/8" NI-20	1	1
B25	6-00-00	11 7/8" NI-20	1	1
B26	6-00-00	11 7/8" NI-20	2	2
B27	18-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	3	3
J1	15-00-00	11 7/8" NI-20	1	7
J2	14-00-00	11 7/8" NI-20	1	7
J3	13-00-00	11 7/8" NI-20	1	10
J4	11-00-00	11 7/8" NI-20	1	1
J5	10-00-00	11 7/8" NI-20	1	19
J6	6-00-00	11 7/8" NI-20	1	10
J7	5-00-00	11 7/8" NI-20	1	1
J8	4-00-00	11 7/8" NI-20	1	1
J9	3-00-00	11 7/8" NI-20	1	3
J10	21-00-00	11 7/8" NI-40x	1	18
J11	21-00-00	11 7/8" NI-40x	2	4
J12	19-00-00	11 7/8" NI-40x	1	39
J13	19-00-00	11 7/8" NI-40x	2	8
J14	17-00-00	11 7/8" NI-40x	1	15
Ca1	266-00-00	1 1/8" x 11 7/8" Rim Board	1	1
Bk1	195-00-00	11 7/8" NI-20	1	1

Connector Summary			
PlotID	Qty	Manuf	Product
H1	44		LT251188
H2	2		MIT311.88-2

REVISION 1 - JUN. 02, 2022

HATCH LEGEND



FLOOR LOADING  
LIVE LOAD : 40 PSF  
DEAD LOAD : 15 PSF  
DEAD LOAD (TILE) : 20 PSF

GROUND FLOOR FRAMING

UNIT 6001 - THE QUEENSLAND  
ELEVATION A  
W/ SUNKEN MUDROOM  
W/ ELEVATOR

APP - AS PER PLAN  
BBO - BEAM BY OTHERS  
PA - POST ABOVE  
O.T.B - OPEN TO BELOW  
GT - GIRDER TRUSS  
RT - ROOF TRUSS

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

SUBFLOOR: 3/4" NAILED & GLUED\*

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JT/PL: 45147/(116409) 117690  
LI: 343075\*

Builder: Gold Park Homes  
Project: Pine Valley Ph2

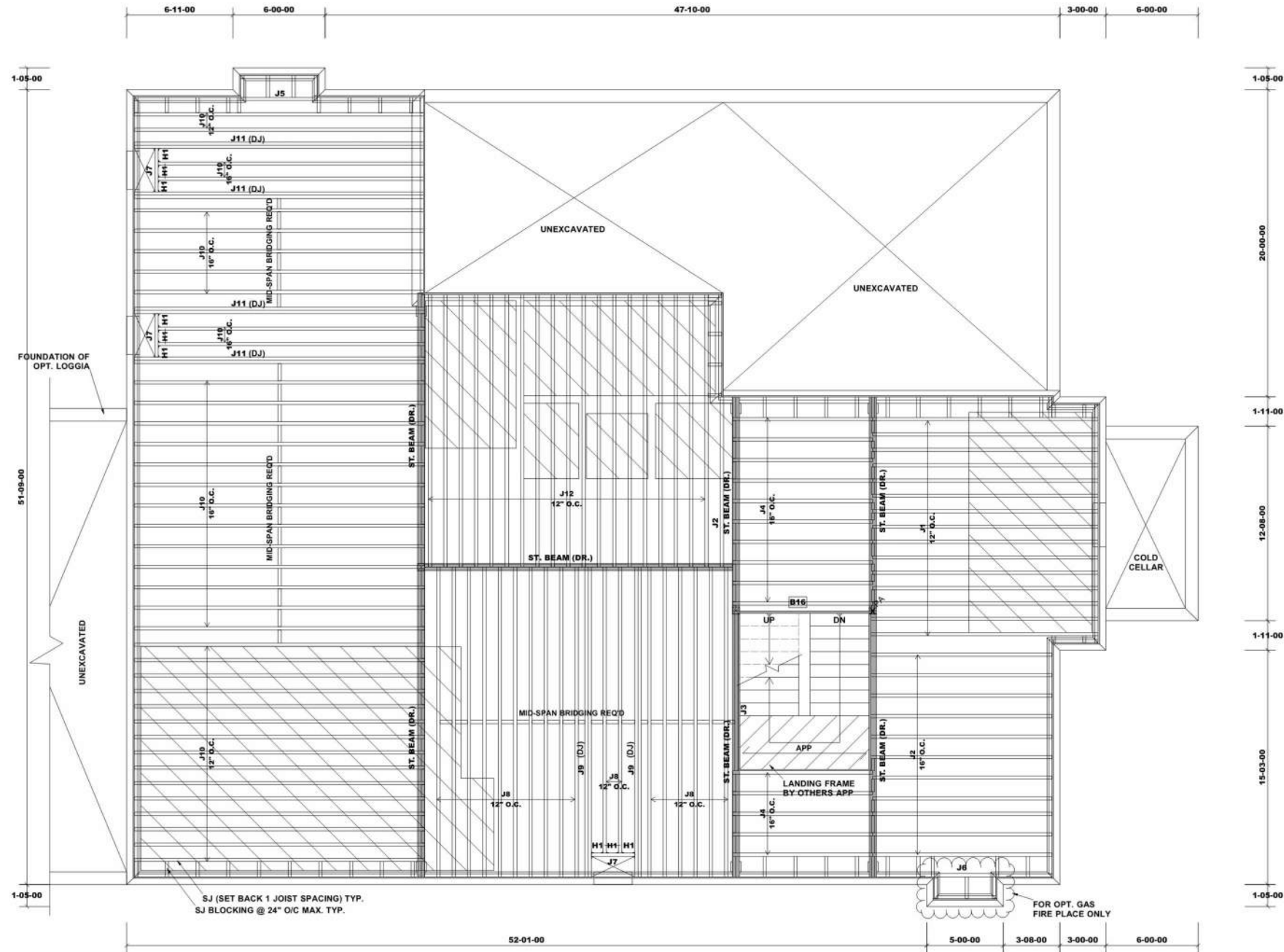
Location: Vaughan, ON  
Date: Apr. 11, 2022

Designer: TL  
Sheet: 4 of 24

Alpa Roof Trusses Inc.  
Stouffville, Ontario

Salesperson: Derek F.  
Home Lumber Inc.





Products					
PlotID	Length	Product	Pies	Net Qty	
B16	10-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	1	1	
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J2	12-00-00	11 7/8" NI-20	1	12	
J3	11-00-00	11 7/8" NI-20	1	1	
J4	10-00-00	11 7/8" NI-20	1	15	
J5	5-00-00	11 7/8" NI-20	1	1	
J6	4-00-00	11 7/8" NI-20	1	1	
J7	3-00-00	11 7/8" NI-20	1	3	
J8	21-00-00	11 7/8" NI-40x	1	18	
J9	21-00-00	11 7/8" NI-40x	2	4	
J10	19-00-00	11 7/8" NI-40x	1	39	
J11	19-00-00	11 7/8" NI-40x	2	8	
J12	18-00-00	11 7/8" NI-40x	1	19	
Ca1	262-00-00	1 1/8" x 11 7/8" Rim Board	1	1	
Bk1	181-00-00	11 7/8" NI-20	1	1	

Connector Summary			
PlotID	Qty	Manuf	Product
H1	12		LT251188

REVISION 1 - JUN. 02, 2022

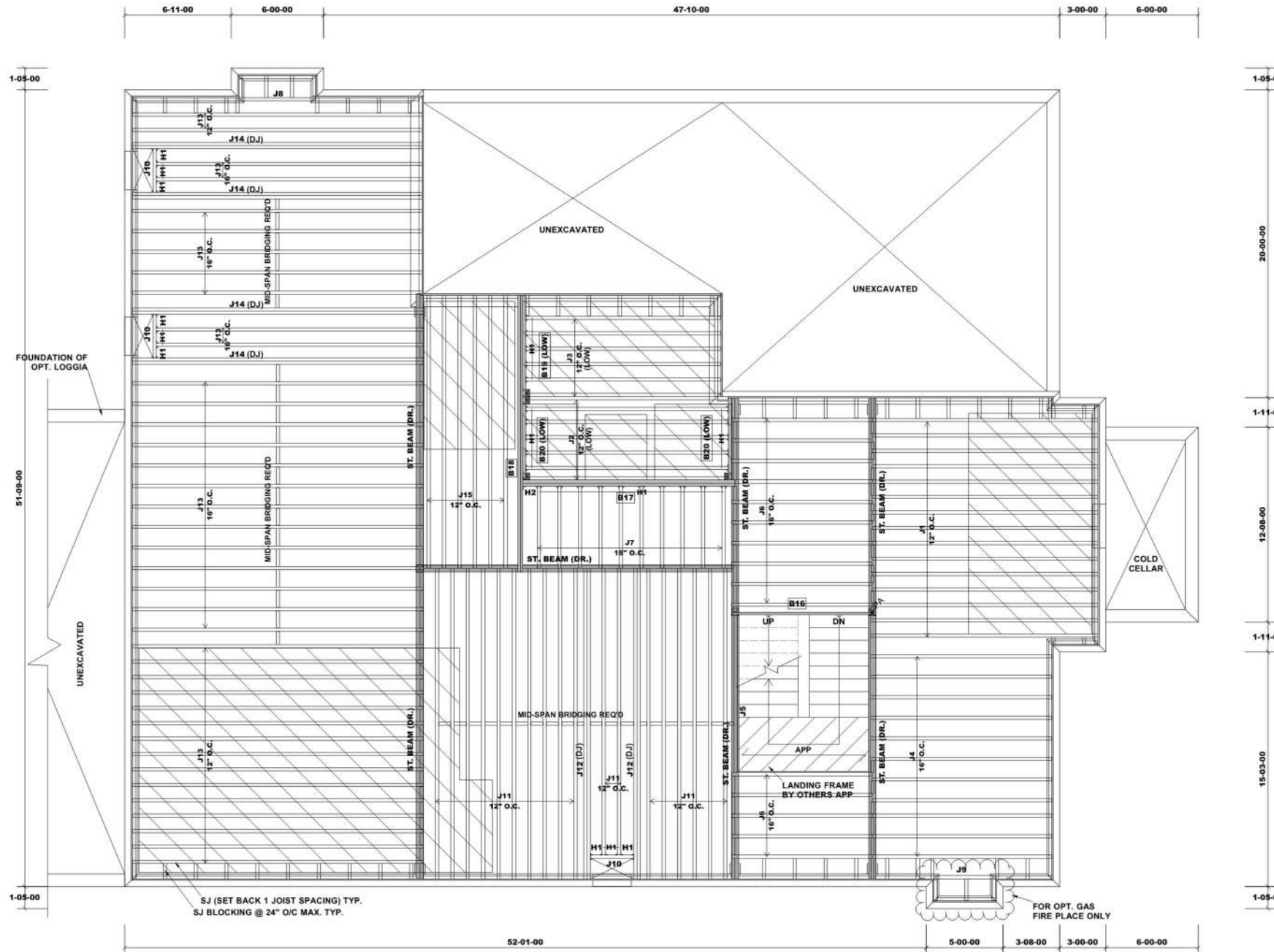
HATCH LEGEND	
	Ceramic Tile
	Conv Framed

FLOOR LOADING  
LIVE LOAD : 40 PSF  
DEAD LOAD : 15 PSF  
DEAD LOAD (TILE) : 20 PSF

GROUND FLOOR FRAMING  
UNIT 6001 - THE QUEENSLAND  
ELEVATION B

APP - AS PER PLAN  
BBO - BEAM BY OTHERS  
PA - POST ABOVE  
O.T.B - OPEN TO BELOW  
GT - GIRDER TRUSS  
RT - ROOF TRUSS  
  
RIMBOARD  
1-1/8" X 11-7/8" O.S.B  
  
SUBFLOOR: 3/4" NAILED & GLUED\*

Blocking panels are required over all interior supports.  
Squash blocks are required under concentrated loads.  
  
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Provide 1-Joist blocking between cantilevered joists (along bearing) and rimboard closure at ends.  
  
Do not scale - refer to architectural plans for dimensions.



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B18	19-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	2	2
B19 (LOW)	7-00-00	11 7/8" NI-20	1	1
B20 (LOW)	6-00-00	11 7/8" NI-20	1	2
J1	15-00-00	11 7/8" NI-20	1	15
J2	14-00-00	11 7/8" NI-20	1	7
J3	13-00-00	11 7/8" NI-20	1	6
J4	12-00-00	11 7/8" NI-20	1	11
J5	11-00-00	11 7/8" NI-20	1	1
J6	10-00-00	11 7/8" NI-20	1	15
J7	6-00-00	11 7/8" NI-20	1	10
J8	5-00-00	11 7/8" NI-20	1	1
J9	4-00-00	11 7/8" NI-20	1	1
J10	3-00-00	11 7/8" NI-20	1	3
J11	21-00-00	11 7/8" NI-40x	1	18
J12	21-00-00	11 7/8" NI-40x	2	4
J13	19-00-00	11 7/8" NI-40x	1	39
J14	19-00-00	11 7/8" NI-40x	2	8
J15	18-00-00	11 7/8" NI-40x	1	6
Ca1	262-00-00	1 1/8" x 11 7/8" Rim Board	1	1
Bk1	188-00-00	11 7/8" NI-20	1	1

Connector Summary			
PlotID	Qty	Manuf	Product
H1	37		LT251188
H2	1		MIT311.88-2

REVISION 1 - JUN. 02, 2022

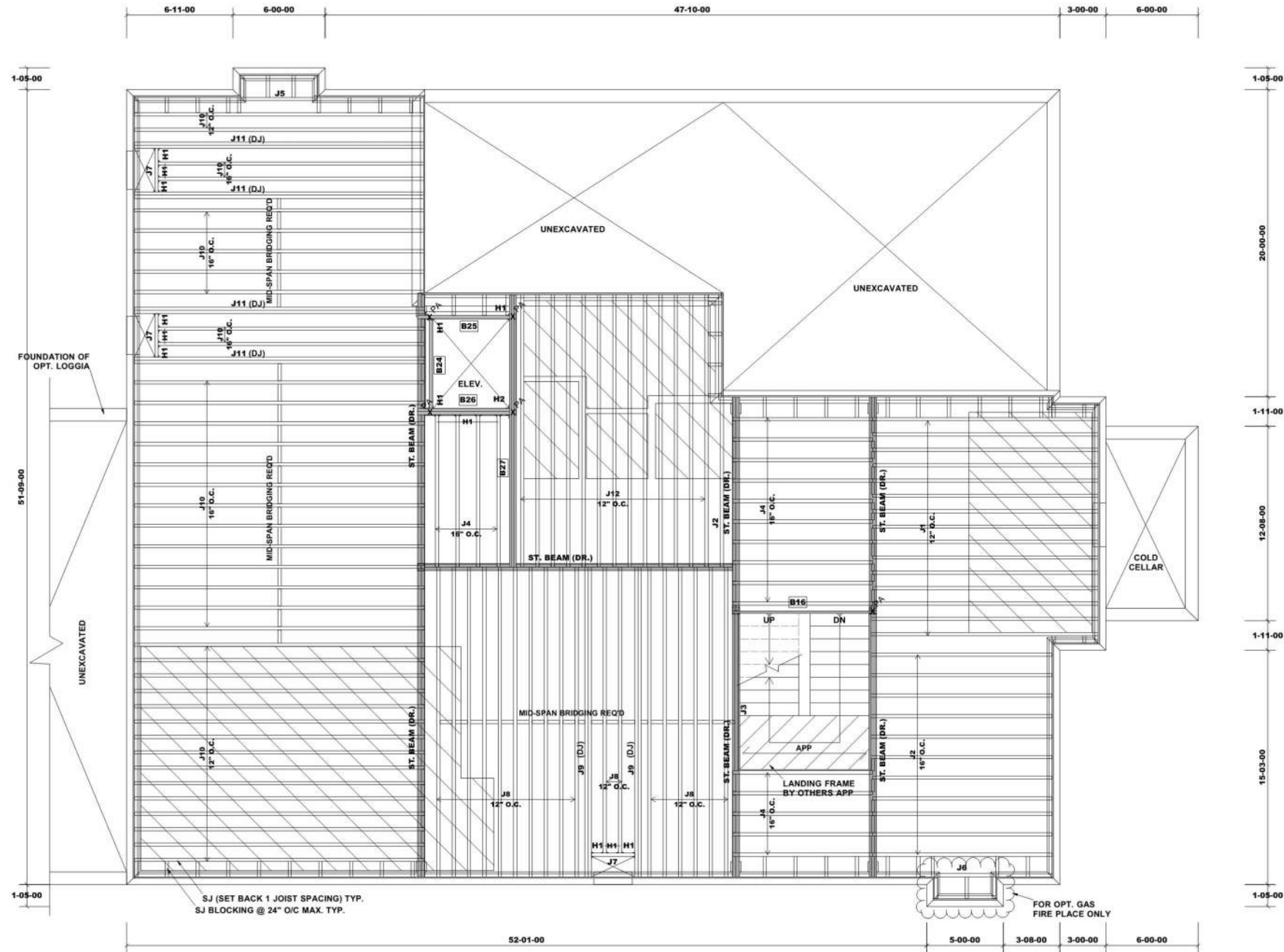
HATCH LEGEND	
	Ceramic Tile
	Conv Framed

**FLOOR LOADING**  
 LIVE LOAD : 40 PSF  
 DEAD LOAD : 15 PSF  
 DEAD LOAD (TILE) : 20 PSF

GROUND FLOOR FRAMING	
UNIT 6001 - THE QUEENSLAND	
ELEVATION B	
W/ SUNKEN MUDROOM	

APP - AS PER PLAN  
 BBO - BEAM BY OTHERS  
 PA - POST ABOVE  
 O.T.B - OPEN TO BELOW  
 GT - GIRDER TRUSS  
 RT - ROOF TRUSS  
 RIMBOARD  
 1-1/8" X 11-7/8" O.S.B  
 SUBFLOOR: 3/4" NAILED & GLUED\*

Blocking panels are required over all interior supports.  
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 Provide 1-Joist blocking between cantilevered joists (along bearing) and rimboard closure at ends.  
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Products					
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B24	6-00-00	11 7/8" NI-20	1	1	
B25	6-00-00	11 7/8" NI-20	1	1	
B26	6-00-00	11 7/8" NI-20	2	2	
B27	18-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	3	3	
J1	15-00-00	11 7/8" NI-20	1	15	
J2	12-00-00	11 7/8" NI-20	1	12	
J3	11-00-00	11 7/8" NI-20	1	1	
J4	10-00-00	11 7/8" NI-20	1	19	
J5	5-00-00	11 7/8" NI-20	1	1	
J6	4-00-00	11 7/8" NI-20	1	1	
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J10	19-00-00	11 7/8" NI-40x	1	39	
J11	19-00-00	11 7/8" NI-40x	2	8	
J12	18-00-00	11 7/8" NI-40x	1	13	
Ca1	262-00-00	1 1/8" x 11 7/8" Rim Board	1	1	
Bk1	185-00-00	11 7/8" NI-20	1	1	

Connector Summary			
ProdID	Qty	Manuf	Product
H1	19		LT251188
H2	1		MIT311.88-2

REVISION 1 - JUN. 02, 2022

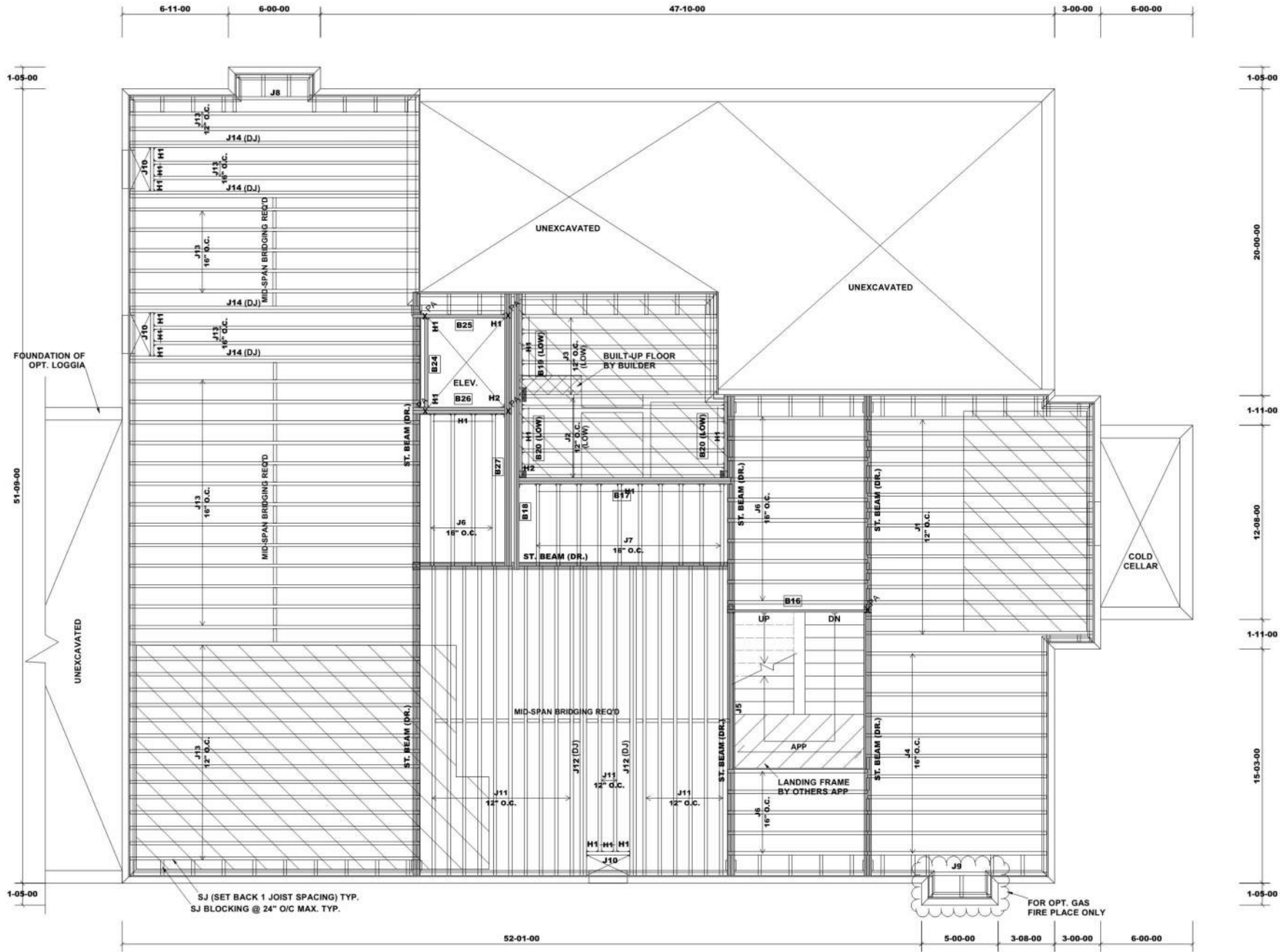
HATCH LEGEND	
	Ceramic Tile
	Conv Framed

FLOOR LOADING  
LIVE LOAD : 40 PSF  
DEAD LOAD : 15 PSF  
DEAD LOAD (TILE) : 20 PSF

GROUND FLOOR FRAMING	
UNIT 6001 - THE QUEENSLAND	
ELEVATION B	
W/ ELEVATOR	

APP - AS PER PLAN  
BBO - BEAM BY OTHERS  
PA - POST ABOVE  
O.T.B - OPEN TO BELOW  
GT - GIRDER TRUSS  
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B20 (LOW)	6-00-00	11 7/8" NI-20	1	2
B24	6-00-00	11 7/8" NI-20	1	1
B25	6-00-00	11 7/8" NI-20	1	1
B26	6-00-00	11 7/8" NI-20	2	2
B27	18-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	3	3
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J4	12-00-00	11 7/8" NI-20	1	11
J5	11-00-00	11 7/8" NI-20	1	1
J6	10-00-00	11 7/8" NI-20	1	19
J7	6-00-00	11 7/8" NI-20	1	10
J8	5-00-00	11 7/8" NI-20	1	1
J9	4-00-00	11 7/8" NI-20	1	1
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J14	19-00-00	11 7/8" NI-40x	2	8
Ca1	262-00-00	1 1/8" x 11 7/8" Rim Board	1	1
Bk1	191-00-00	11 7/8" NI-20	1	1

Connector Summary			
PlotID	Qty	Manuf	Product
H1	44		LT251188
H2	2		MIT311.88-2

REVISION 1 - JUN. 02, 2022

HATCH LEGEND



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GROUND FLOOR FRAMING

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ELEVATION B  
W/ SUNKEN MUDROOM  
W/ ELEVATOR

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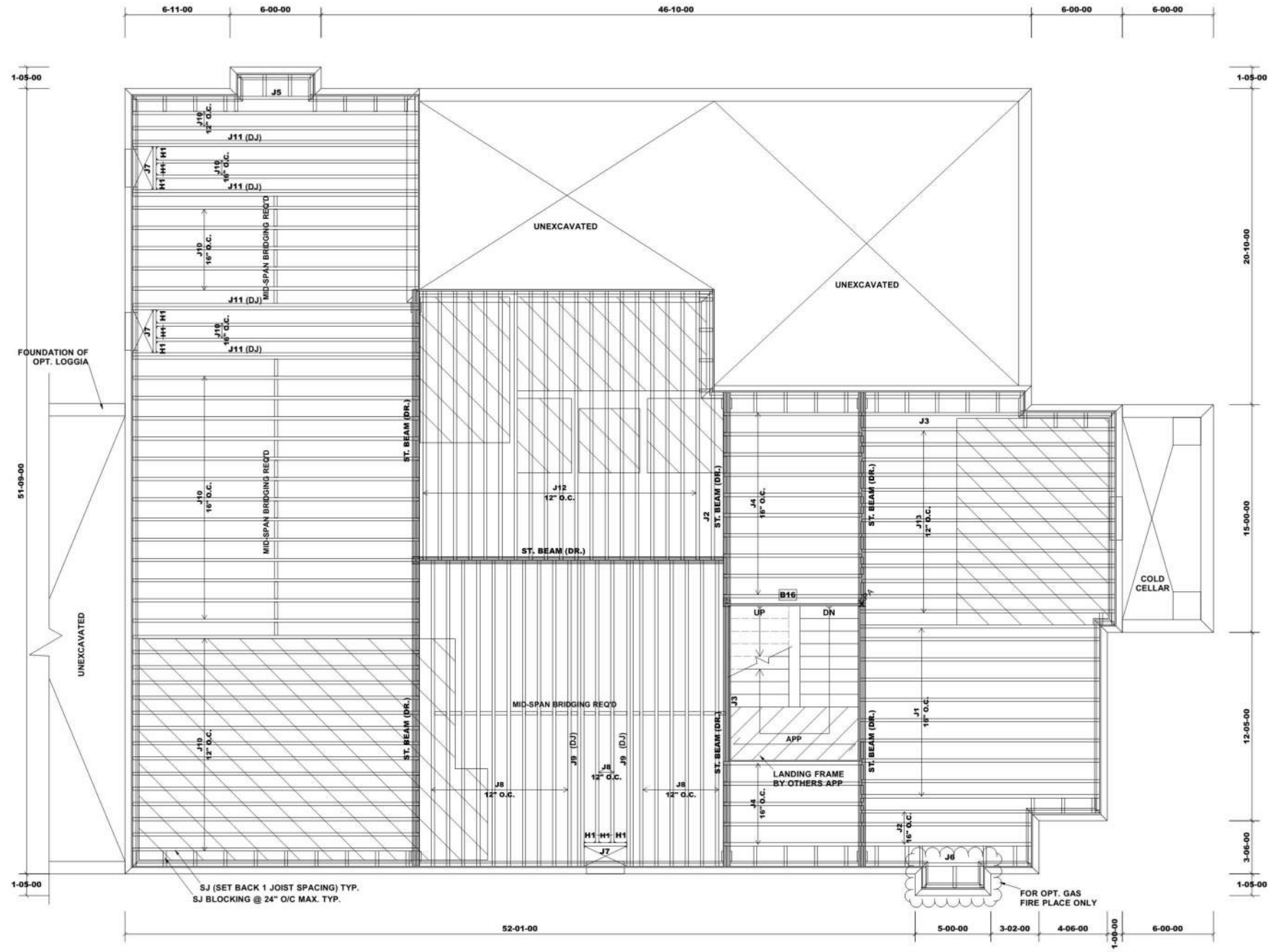
Location: Vaughan, ON  
Date: Apr. 11, 2022

Designer: TL  
Sheet: 8 of 24

Alpa Roof Trusses Inc.  
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J4	10-00-00	11 7/8" NI-20	1	15	
J5	5-00-00	11 7/8" NI-20	1	1	
J6	4-00-00	11 7/8" NI-20	1	1	
J7	3-00-00	11 7/8" NI-20	1	3	
J8	21-00-00	11 7/8" NI-40x	1	18	
J9	21-00-00	11 7/8" NI-40x	2	4	
J10	19-00-00	11 7/8" NI-40x	1	39	
J11	19-00-00	11 7/8" NI-40x	2	8	
J12	18-00-00	11 7/8" NI-40x	1	19	
J13	17-00-00	11 7/8" NI-40x	1	13	
Ca1	265-11-04	1 1/8" x 11 7/8" Rim Board	1	1	
Bk1	187-00-00	11 7/8" NI-20	1	1	

Connector Summary			
PlotID	Qty	Manuf	Product
H1	12		LT251188

REVISION 1 - JUN. 02, 2022

Ceramic Tile

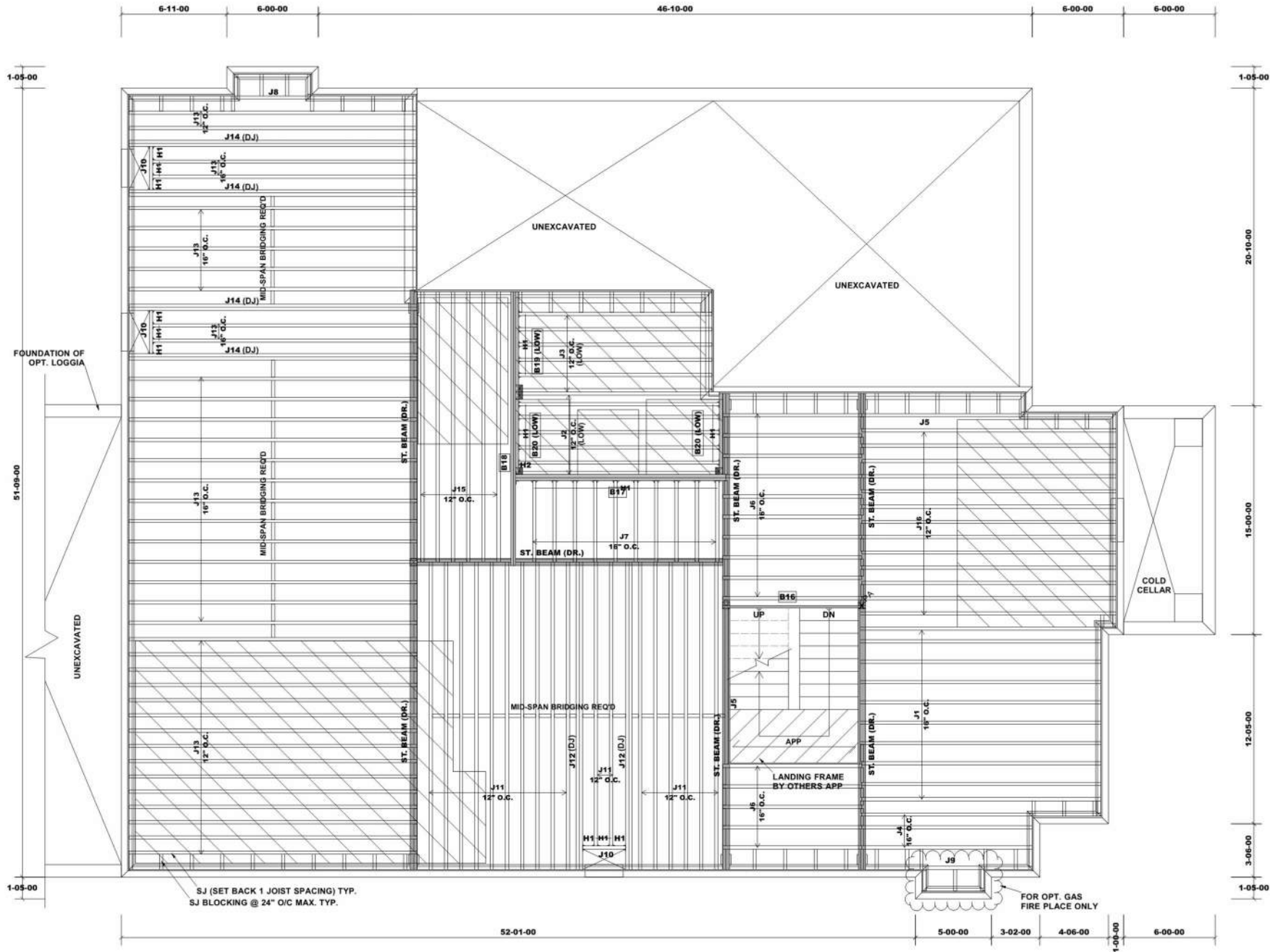
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GROUND FLOOR FRAMING	
UNIT 6001 - THE QUEENSLAND	
ELEVATION C	

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BBO - BEAM BY OTHERS  
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O.T.B - OPEN TO BELOW  
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PlotID	Length	Product	Pies	Net Qty
B16	10-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	1	1
B17	14-00-00	11 7/8" NI-20	2	2
B18	19-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	2	2
B19 (LOW)	7-00-00	11 7/8" NI-20	1	1
B20 (LOW)	6-00-00	11 7/8" NI-20	1	2
J1	16-00-00	11 7/8" NI-20	1	10
J2	14-00-00	11 7/8" NI-20	1	7
J3	13-00-00	11 7/8" NI-20	1	6
J4	12-00-00	11 7/8" NI-20	1	3
J5	11-00-00	11 7/8" NI-20	1	2
J6	10-00-00	11 7/8" NI-20	1	15
J7	6-00-00	11 7/8" NI-20	1	10
J8	5-00-00	11 7/8" NI-20	1	1
J9	4-00-00	11 7/8" NI-20	1	1
J10	3-00-00	11 7/8" NI-20	1	3
J11	21-00-00	11 7/8" NI-40x	1	18
J12	21-00-00	11 7/8" NI-40x	2	4
J13	19-00-00	11 7/8" NI-40x	1	39
J14	19-00-00	11 7/8" NI-40x	2	8
J15	18-00-00	11 7/8" NI-40x	1	6
J16	17-00-00	11 7/8" NI-40x	1	13
Ca1	266-00-00	1 1/8" x 11 7/8" Rim Board	1	1
Bk1	194-00-00	11 7/8" NI-20	1	1

Connector Summary			
PlotID	Qty	Manuf	Product
H1	37		LT251188
H2	1		MIT311.88-2

REVISION 1 - JUN. 02, 2022

#### HATCH LEGEND



**FLOOR LOADING**  
LIVE LOAD : 40 PSF  
DEAD LOAD : 15 PSF  
DEAD LOAD (TILE) : 20 PSF

#### GROUND FLOOR FRAMING

UNIT 6001 - THE QUEENSLAND  
ELEVATION C  
W/ SUNKEN MUDROOM

APP - AS PER PLAN  
BBO - BEAM BY OTHERS  
PA - POST ABOVE  
O.T.B - OPEN TO BELOW  
GT - GIRDER TRUSS  
RT - ROOF TRUSS

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

SUBFLOOR: 3/4" NAILED & GLUED\*

Blocking panels are required over all interior supports.  
Squash blocks are required under concentrated loads.

Ceramic Tile Application as per O.B.C. 9.30.6

Provide 1-Joist blocking between cantilevered joists (along bearing) and rimboard closure at ends.

Do not scale - refer to architectural plans for dimensions.

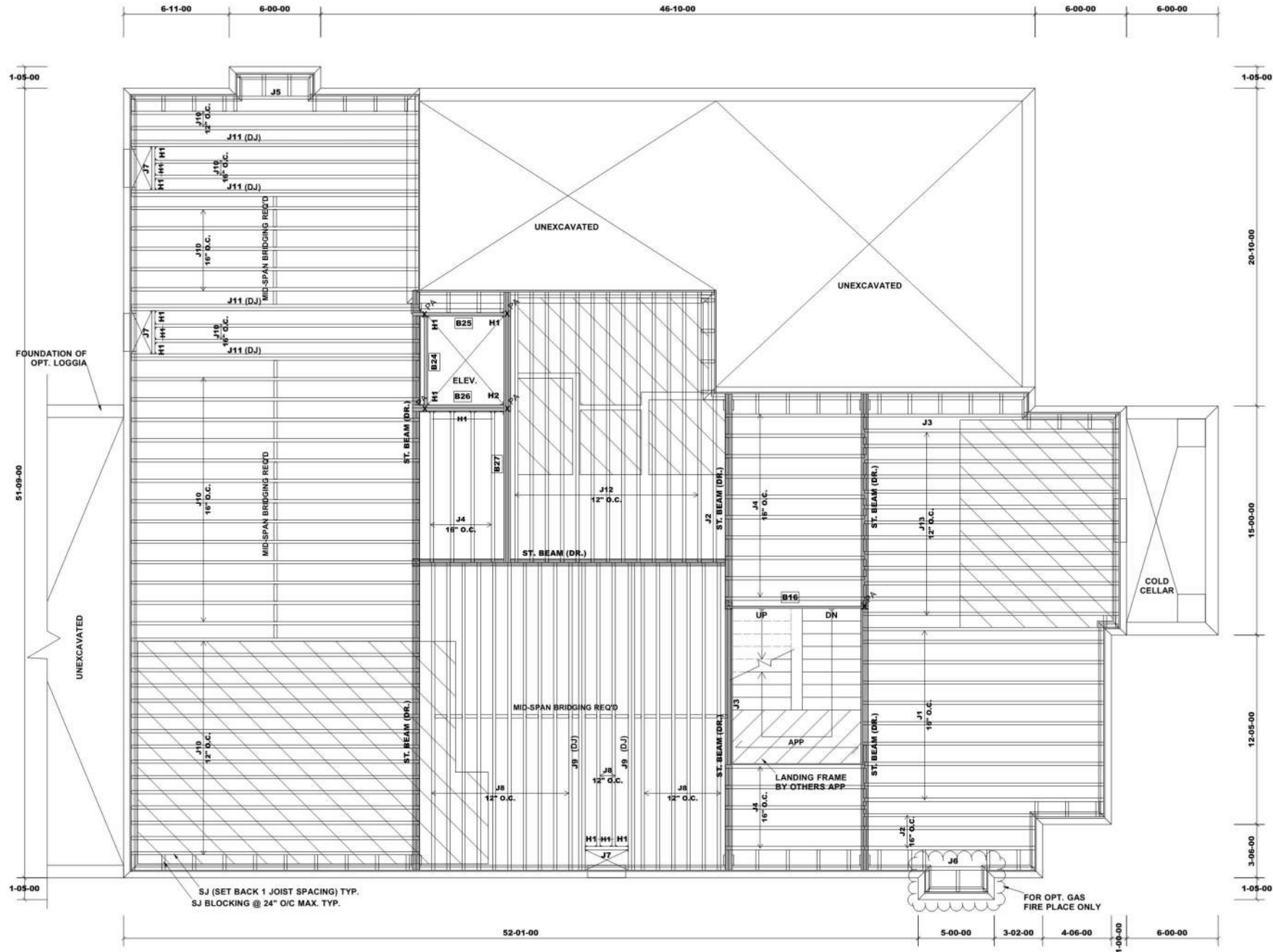
JT/PL: 45147/(116409) 117690  
LI: 343075\*

Builder: Gold Park Homes  
Project: Pine Valley Ph2

Location: Vaughan, ON  
Date: Apr. 11, 2022

Designer: TL  
Sheet: 10 of 24  
Alpa Roof Trusses Inc.  
Stouffville, Ontario

Salesperson: Derek F.  
Home Lumber Inc.



Products					
ProdID	Length	Product	Pies	Net Qty	
B16	10-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	1	1	
B24	6-00-00	11 7/8" NI-20	1	1	
B25	6-00-00	11 7/8" NI-20	1	1	
B26	6-00-00	11 7/8" NI-20	2	2	
B27	18-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	3	3	
J1	16-00-00	11 7/8" NI-20	1	10	
J2	12-00-00	11 7/8" NI-20	1	4	
J3	11-00-00	11 7/8" NI-20	1	2	
J4	10-00-00	11 7/8" NI-20	1	19	
J5	5-00-00	11 7/8" NI-20	1	1	
J6	4-00-00	11 7/8" NI-20	1	1	
J7	3-00-00	11 7/8" NI-20	1	3	
J8	21-00-00	11 7/8" NI-40x	1	18	
J9	21-00-00	11 7/8" NI-40x	2	4	
J10	19-00-00	11 7/8" NI-40x	1	39	
J11	19-00-00	11 7/8" NI-40x	2	8	
J12	18-00-00	11 7/8" NI-40x	1	13	
J13	17-00-00	11 7/8" NI-40x	1	13	
Ca1	266-00-00	1 1/8" x 11 7/8" Rim Board	1	1	
Bk1	191-00-00	11 7/8" NI-20	1	1	

Connector Summary			
ProdID	Qty	Manuf	Product
H1	19		LT251188
H2	1		MIT311.88-2

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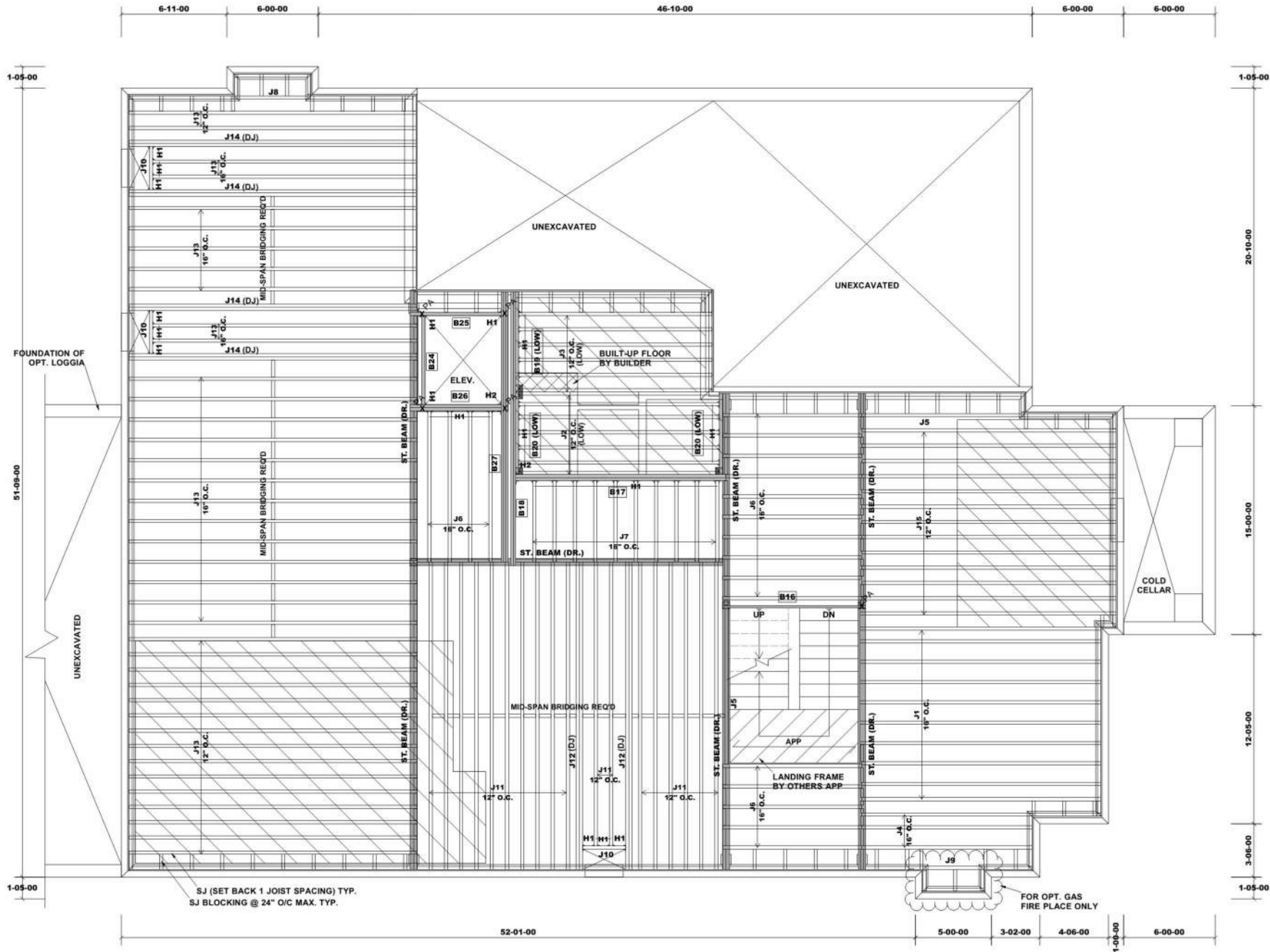
HATCH LEGEND	
	Ceramic Tile
	Conv Framed

FLOOR LOADING  
LIVE LOAD : 40 PSF  
DEAD LOAD : 15 PSF  
DEAD LOAD (TILE) : 20 PSF

GROUND FLOOR FRAMING  
UNIT 6001 - THE QUEENSLAND  
ELEVATION C  
  
W/ ELEVATOR

APP - AS PER PLAN  
BBO - BEAM BY OTHERS  
PA - POST ABOVE  
O.T.B - OPEN TO BELOW  
GT - GIRDER TRUSS  
RT - ROOF TRUSS  
  
RIMBOARD  
1-1/8" X 11-7/8" O.S.B  
  
SUBFLOOR: 3/4" NAILED & GLUED\*

Blocking panels are required over all interior supports.  
Squash blocks are required under concentrated loads.  
  
Ceramic Tile Application as per O.B.C. 9.30.6  
  
Provide I-Joist blocking between cantilevered joists (along bearing) and rimboard closure at ends.  
  
Do not scale - refer to architectural plans for dimensions.



Products					
PlotID	Length	Product	Pies	Net Qty	
B16	10-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	1	1	
B17	14-00-00	11 7/8" NI-20	2	2	
B18	19-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	2	2	
B19 (LOW)	7-00-00	11 7/8" NI-20	1	1	
B20 (LOW)	6-00-00	11 7/8" NI-20	1	2	
B24	6-00-00	11 7/8" NI-20	1	1	
B25	6-00-00	11 7/8" NI-20	1	1	
B26	6-00-00	11 7/8" NI-20	2	2	
B27	18-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	3	3	
J1	16-00-00	11 7/8" NI-20	1	10	
J2	14-00-00	11 7/8" NI-20	1	7	
J3	13-00-00	11 7/8" NI-20	1	6	
J4	12-00-00	11 7/8" NI-20	1	3	
J5	11-00-00	11 7/8" NI-20	1	2	
J6	10-00-00	11 7/8" NI-20	1	19	
J7	6-00-00	11 7/8" NI-20	1	10	
J8	5-00-00	11 7/8" NI-20	1	1	
J9	4-00-00	11 7/8" NI-20	1	1	
J10	3-00-00	11 7/8" NI-20	1	3	
J11	21-00-00	11 7/8" NI-40x	1	18	
J12	21-00-00	11 7/8" NI-40x	2	4	
J13	19-00-00	11 7/8" NI-40x	1	39	
J14	19-00-00	11 7/8" NI-40x	2	8	
J15	17-00-00	11 7/8" NI-40x	1	13	
Ca1	268-00-00	1 1/8" x 11 7/8" Rim Board	1	1	
Bk1	197-00-00	11 7/8" NI-20	1	1	

Connector Summary			
PlotID	Qty	Manuf	Product
H1	44		LT251188
H2	2		MIT311.88-2

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HATCH LEGEND



FLOOR LOADING  
LIVE LOAD : 40 PSF  
DEAD LOAD : 15 PSF  
DEAD LOAD (TILE): 20 PSF

GROUND FLOOR FRAMING

UNIT 6001 - THE QUEENSLAND  
ELEVATION C  
W/ SUNKEN MUDROOM  
W/ ELEVATOR

APP - AS PER PLAN  
BBO - BEAM BY OTHERS  
PA - POST ABOVE  
O.T.B - OPEN TO BELOW  
GT - GIRDER TRUSS  
RT - ROOF TRUSS

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

SUBFLOOR: 3/4" NAILED & GLUED\*

Blocking panels are required over all interior supports.  
Squash blocks are required under concentrated loads.

Ceramic Tile Application as per O.B.C. 9.30.6

Provide 1-Joist blocking between cantilevered joists (along bearing) and rimboard closure at ends.

Do not scale - refer to architectural plans for dimensions.

JT/PL: 45147/(116409) 117690  
LI: 343075\*

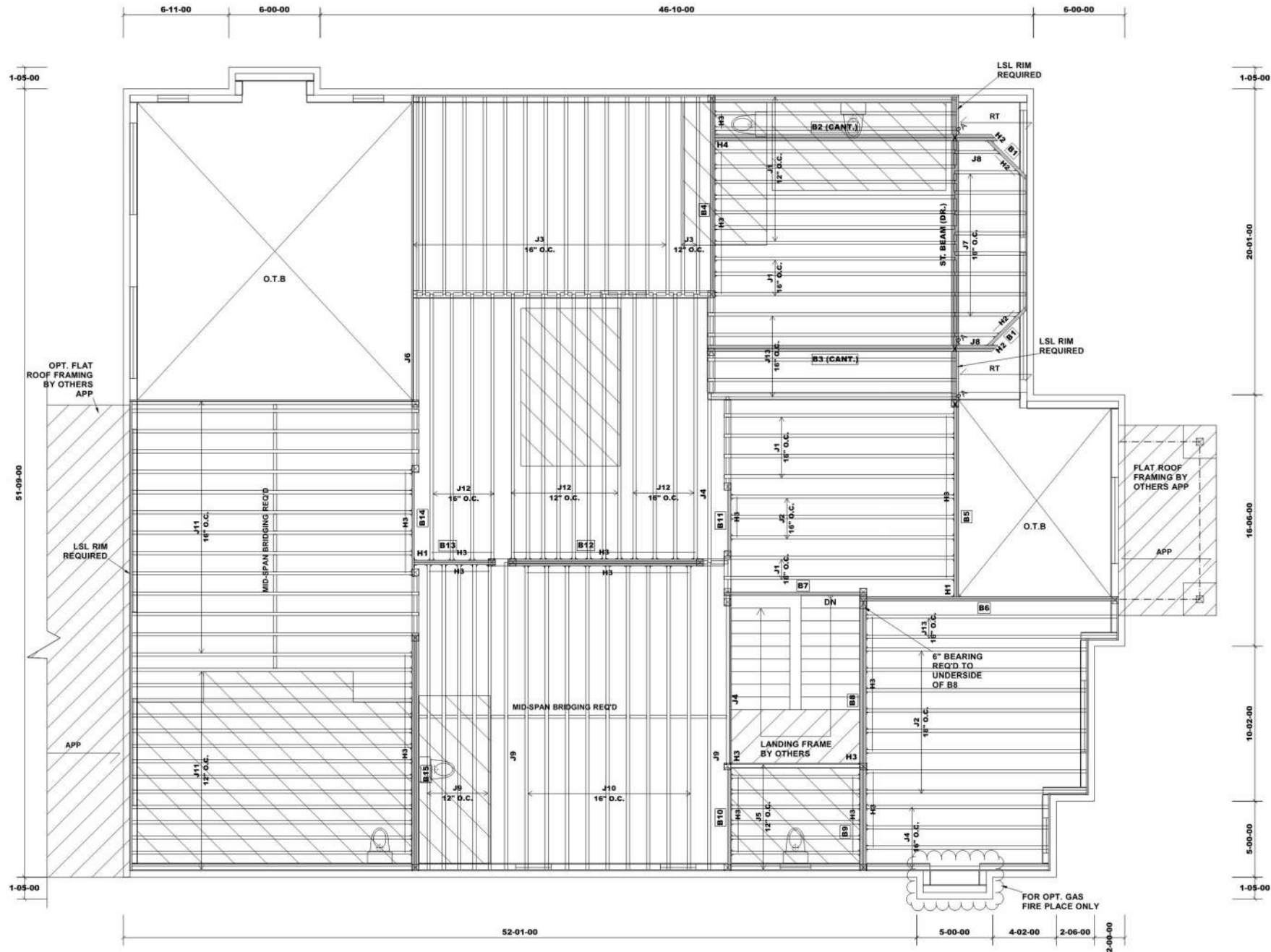
Builder: Gold Park Homes  
Project: Pine Valley Ph2

Location: Vaughan, ON  
Date: Apr. 11, 2022

Designer: TL  
Sheet: 12 of 24  
Alpa Roof Trusses Inc.  
Stouffville, Ontario

Salesperson: Derek F.  
Home Lumber Inc.





Products				
PlotID	Length	Product	Pies	Net Qty
B1	4-00-00	11 7/8" NI-20	1	2
B2 (CANT.)	19-00-00	11 7/8" NI-20	2	2
B3 (CANT.)	20-00-00	11 7/8" NI-20	2	2
B4	14-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	2	2
B5	13-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	2	2
B6	17-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	2	2
B7	10-00-00	11 7/8" NI-20	1	1
B8	11-00-00	11 7/8" NI-20	2	2
B9	7-00-00	11 7/8" NI-20	2	2
B10	7-00-00	11 7/8" NI-20	1	1
B11	5-00-00	11 7/8" NI-20	1	1
B12	13-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	3	3
B13	6-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	2	2
B14	8-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	1	1
B15	16-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	3	3
J1	16-00-00	11 7/8" NI-20	1	19
J2	15-00-00	11 7/8" NI-20	1	11
J3	13-00-00	11 7/8" NI-20	1	16
J4	12-00-00	11 7/8" NI-20	1	6
J5	9-00-00	11 7/8" NI-20	1	8
J6	8-00-00	11 7/8" NI-20	1	1
J7	5-00-00	11 7/8" NI-20	1	8
J8	3-00-00	11 7/8" NI-20	1	2
J9	21-00-00	11 7/8" NI-40x	1	7
J10	20-00-00	11 7/8" NI-40x	1	9
J11	19-00-00	11 7/8" NI-40x	1	28
J12	18-00-00	11 7/8" NI-40x	1	16
J13	17-00-00	11 7/8" NI-40x	1	7
Ca1	186-00-00	1 1/8" x 11 7/8" Rim Board	1	1
Ca2	37-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	1	1
Bk1	74-00-00	11 7/8" NI-20	1	1

Connector Summary			
PlotID	Qty	Manuf	Product
H1	2		HGUS410
H2	6		LSSR2.56Z
H3	101		LT251188
H4	1		MIT311.88-2

REVISION 1 - JUN. 02, 2022

#### HATCH LEGEND

	Ceramic Tile
	Conv Framed

**FLOOR LOADING**  
LIVE LOAD : 40 PSF  
DEAD LOAD : 15 PSF  
DEAD LOAD (TILE) : 20 PSF

#### SECOND FLOOR FRAMING

UNIT 6001 - THE QUEENSLAND  
ELEVATION A

APP - AS PER PLAN  
BBO - BEAM BY OTHERS  
PA - POST ABOVE  
O.T.B. - OPEN TO BELOW  
GT - GIRDER TRUSS  
RT - ROOF TRUSS

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

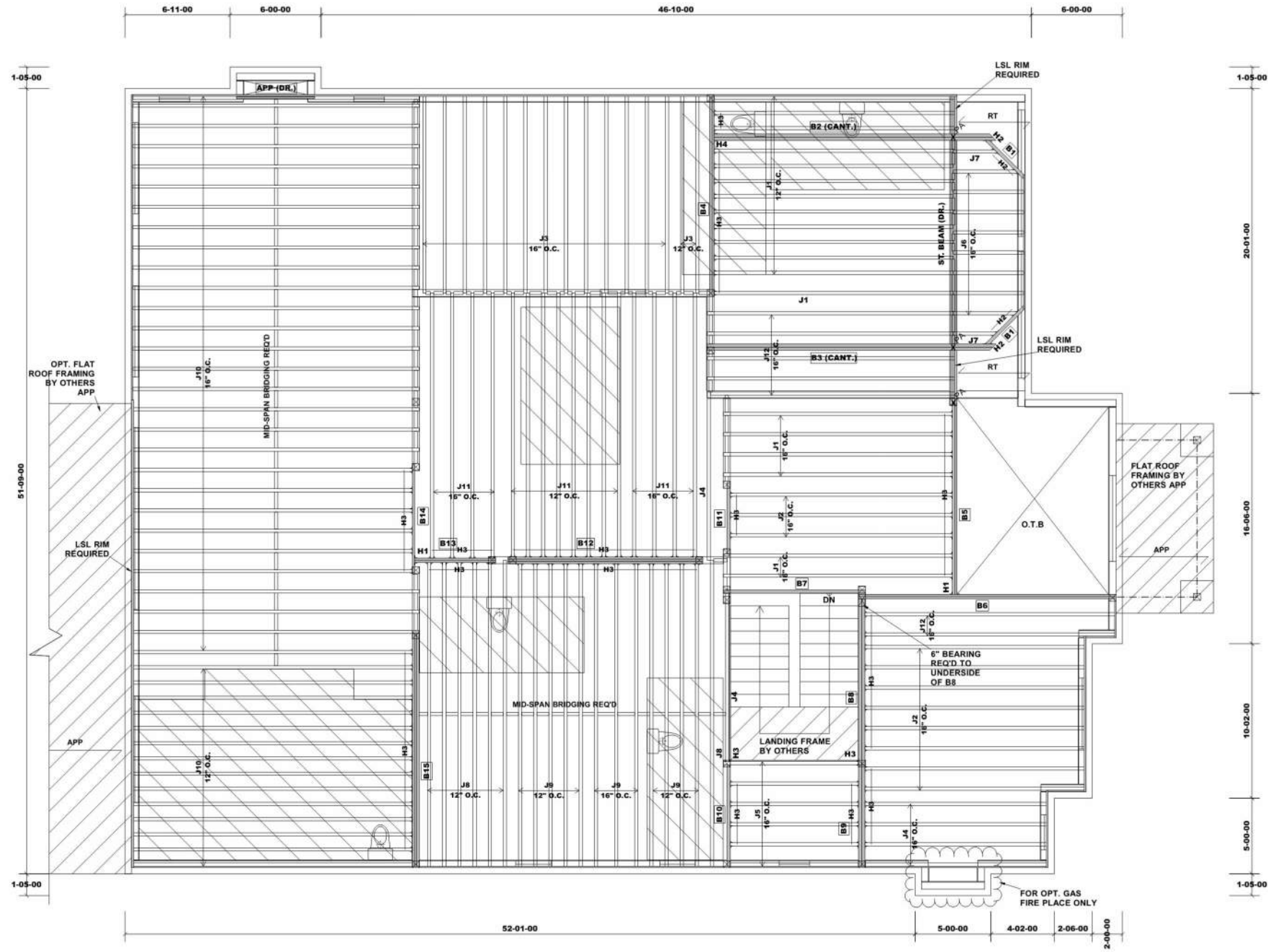
SUBFLOOR: 3/4" NAILED & GLUED\*

Blocking panels are required over all interior supports.  
Squash blocks are required under concentrated loads.

Ceramic Tile Application as per O.B.C. 9.30.6

Provide I-Joist blocking between cantilevered joists (along bearing) and rimboard closure at ends.

Do not scale - refer to architectural plans for dimensions.



Products				
PlotID	Length	Product	Pies	Net Qty
B1	4-00-00	11 7/8" NI-20	1	2
B2 (CANT.)	19-00-00	11 7/8" NI-20	2	2
B3 (CANT.)	20-00-00	11 7/8" NI-20	2	2
B4	14-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	2	2
B5	13-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	2	2
B6	17-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	2	2
B7	10-00-00	11 7/8" NI-20	1	1
B8	11-00-00	11 7/8" NI-20	2	2
B9	7-00-00	11 7/8" NI-20	2	2
B10	7-00-00	11 7/8" NI-20	1	1
B11	5-00-00	11 7/8" NI-20	1	1
B12	13-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	3	3
B13	6-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	2	2
B14	8-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	1	1
B15	16-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	3	3
J1	16-00-00	11 7/8" NI-20	1	19
J2	15-00-00	11 7/8" NI-20	1	11
J3	13-00-00	11 7/8" NI-20	1	15
J4	12-00-00	11 7/8" NI-20	1	6
J5	9-00-00	11 7/8" NI-20	1	6
J6	5-00-00	11 7/8" NI-20	1	8
J7	3-00-00	11 7/8" NI-20	1	2
J8	21-00-00	11 7/8" NI-40x	1	7
J9	20-00-00	11 7/8" NI-40x	1	12
J10	19-00-00	11 7/8" NI-40x	1	43
J11	18-00-00	11 7/8" NI-40x	1	16
J12	17-00-00	11 7/8" NI-40x	1	7
Ca1	186-00-00	1 1/8" x 11 7/8" Rim Board	1	1
Ca2	37-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	1	1
Bk1	107-00-00	11 7/8" NI-20	1	1

Connector Summary			
PlotID	Qty	Manuf	Product
H1	2		HGUS410
H2	6		LSSR2.56Z
H3	100		LT251188
H4	1		MIT311.88-2

REVISION 1 - JUN. 02, 2022

HATCH LEGEND



FLOOR LOADING  
LIVE LOAD : 40 PSF  
DEAD LOAD : 15 PSF  
DEAD LOAD (TILE): 20 PSF

SECOND FLOOR FRAMING

UNIT 6001 - THE QUEENSLAND  
ELEVATION A  
W/ OPT. FLOOR PLAN

APP - AS PER PLAN  
BBO - BEAM BY OTHERS  
PA - POST ABOVE  
O.T.B. - OPEN TO BELOW  
GT - GIRDER TRUSS  
RT - ROOF TRUSS

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

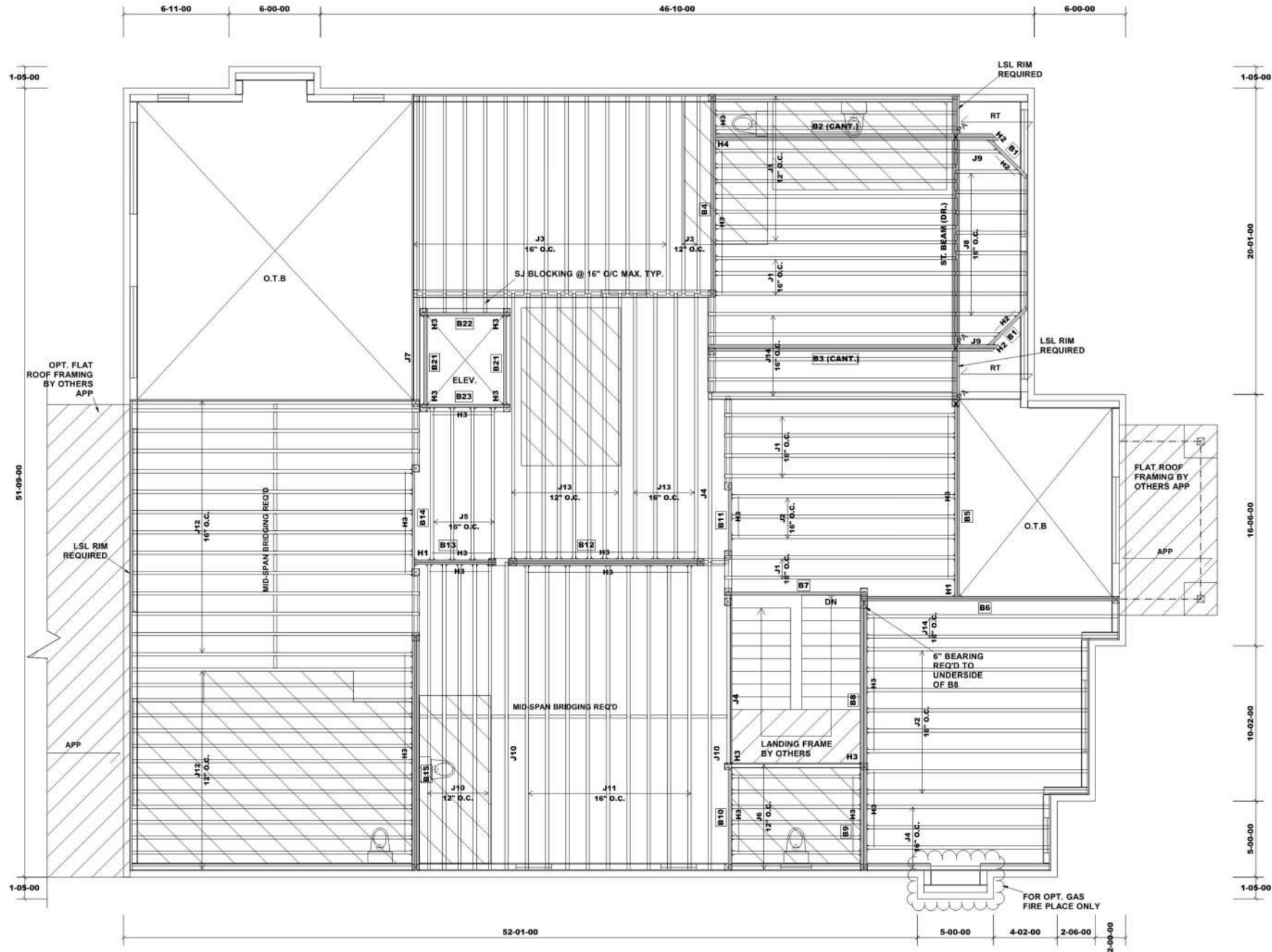
SUBFLOOR: 3/4" NAILED & GLUED\*

Blocking panels are required over all interior supports.  
Squash blocks are required under concentrated loads.

Ceramic Tile Application as per O.B.C. 9.30.6

Provide I-Joist blocking between cantilevered joists (along bearing) and rimboard closure at ends.

Do not scale - refer to architectural plans for dimensions.



Products				
PlotID	Length	Product	Pies	Net Qty
B1	4-00-00	11 7/8" NI-20	1	2
B2 (CANT.)	19-00-00	11 7/8" NI-20	2	2
B3 (CANT.)	20-00-00	11 7/8" NI-20	2	2
B4	14-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	2	2
B5	13-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	2	2
B6	17-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	2	2
B7	10-00-00	11 7/8" NI-20	1	1
B8	11-00-00	11 7/8" NI-20	2	2
B9	7-00-00	11 7/8" NI-20	2	2
B10	7-00-00	11 7/8" NI-20	1	1
B11	5-00-00	11 7/8" NI-20	1	1
B12	13-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	3	3
B13	6-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	2	2
B14	8-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	1	1
B15	16-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	3	3
B21	6-00-00	11 7/8" NI-20	1	2
B22	6-00-00	11 7/8" NI-20	1	1
B23	6-00-00	11 7/8" NI-20	1	1
J1	16-00-00	11 7/8" NI-20	1	19
J2	15-00-00	11 7/8" NI-20	1	11
J3	13-00-00	11 7/8" NI-20	1	16
J4	12-00-00	11 7/8" NI-20	1	6
J5	10-00-00	11 7/8" NI-20	1	4
J6	9-00-00	11 7/8" NI-20	1	8
J7	8-00-00	11 7/8" NI-20	1	1
J8	5-00-00	11 7/8" NI-20	1	8
J9	3-00-00	11 7/8" NI-20	1	2
J10	21-00-00	11 7/8" NI-40x	1	7
J11	20-00-00	11 7/8" NI-40x	1	9
J12	19-00-00	11 7/8" NI-40x	1	28
J13	18-00-00	11 7/8" NI-40x	1	12
J14	17-00-00	11 7/8" NI-40x	1	7
Ca1	186-00-00	1 1/8" x 11 7/8" Rim Board	1	1
Ca2	37-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	1	1
Bk1	81-00-00	11 7/8" NI-20	1	1

Connector Summary			
PlotID	Qty	Manuf	Product
H1	2		HGUS410
H2	6		LSSR2.56Z
H3	109		LT251188
H4	1		MIT311.88-2

REVISION 1 - JUN. 02, 2022

HATCH LEGEND



FLOOR LOADING  
LIVE LOAD : 40 PSF  
DEAD LOAD : 15 PSF  
DEAD LOAD (TILE) : 20 PSF

SECOND FLOOR FRAMING

UNIT 6001 - THE QUEENSLAND  
ELEVATION A

W/ ELEVATOR

APP - AS PER PLAN  
BBO - BEAM BY OTHERS  
PA - POST ABOVE  
O.T.B. - OPEN TO BELOW  
GT - GIRDER TRUSS  
RT - ROOF TRUSS

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

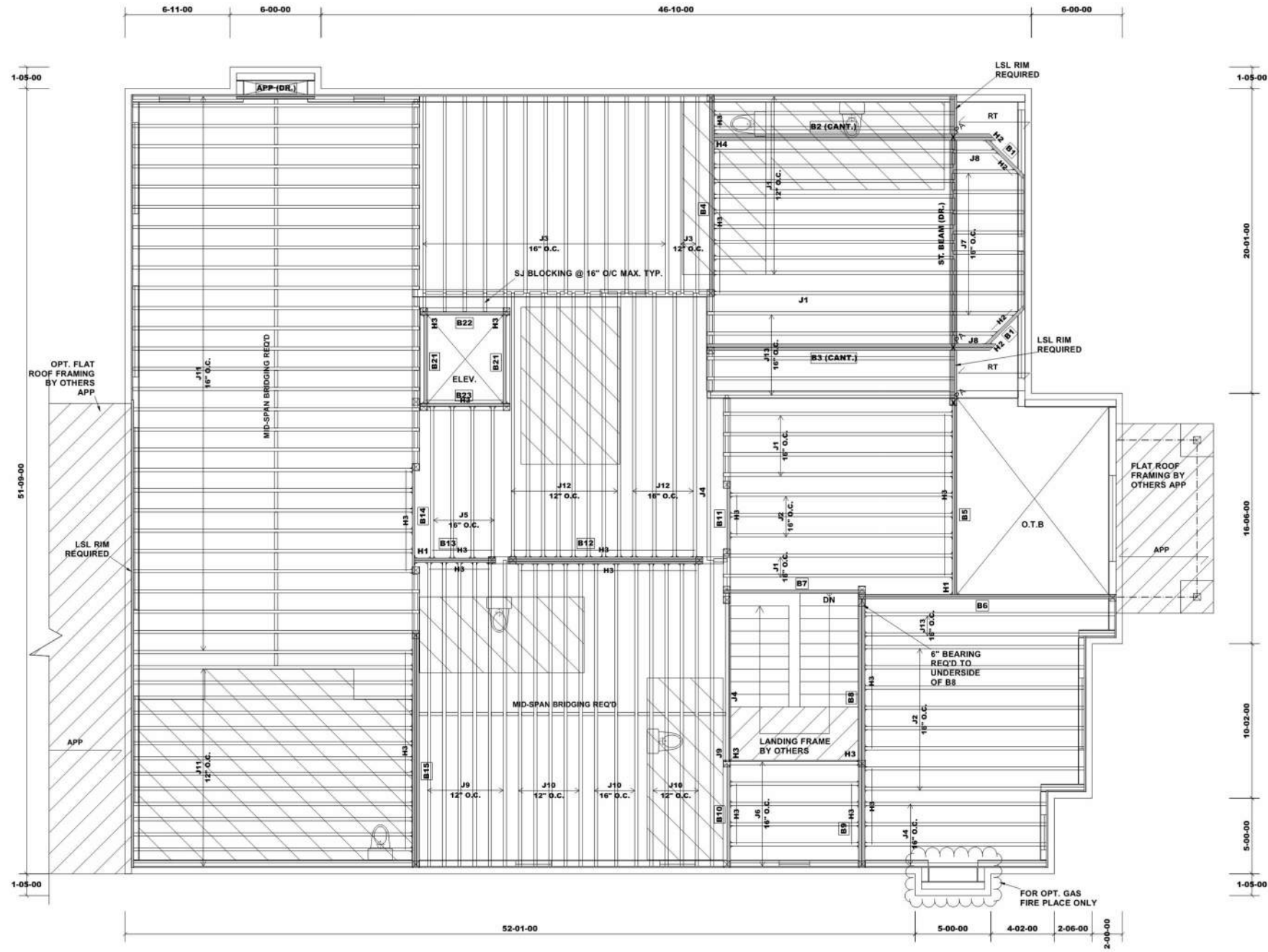
SUBFLOOR: 3/4" NAILED & GLUED\*

Blocking panels are required over all interior supports.  
Squash blocks are required under concentrated loads.

Ceramic Tile Application as per O.B.C. 9.30.6

Provide I-Joist blocking between cantilevered joists (along bearing) and rimboard closure at ends.

Do not scale - refer to architectural plans for dimensions.



Products				
PlotID	Length	Product	Pies	Net Qty
B1	4-00-00	11 7/8" NI-20	1	2
B2 (CANT.)	19-00-00	11 7/8" NI-20	2	2
B3 (CANT.)	20-00-00	11 7/8" NI-20	2	2
B4	14-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	2	2
B5	13-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	2	2
B6	17-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	2	2
B7	10-00-00	11 7/8" NI-20	1	1
B8	11-00-00	11 7/8" NI-20	2	2
B9	7-00-00	11 7/8" NI-20	2	2
B10	7-00-00	11 7/8" NI-20	1	1
B11	5-00-00	11 7/8" NI-20	1	1
B12	13-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	3	3
B13	6-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	2	2
B14	8-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	1	1
B15	16-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	3	3
B21	6-00-00	11 7/8" NI-20	1	2
B22	6-00-00	11 7/8" NI-20	1	1
B23	6-00-00	11 7/8" NI-20	1	1
J1	16-00-00	11 7/8" NI-20	1	19
J2	15-00-00	11 7/8" NI-20	1	11
J3	13-00-00	11 7/8" NI-20	1	15
J4	12-00-00	11 7/8" NI-20	1	6
J5	10-00-00	11 7/8" NI-20	1	4
J6	9-00-00	11 7/8" NI-20	1	6
J7	5-00-00	11 7/8" NI-20	1	8
J8	3-00-00	11 7/8" NI-20	1	2
J9	21-00-00	11 7/8" NI-40x	1	7
J10	20-00-00	11 7/8" NI-40x	1	12
J11	19-00-00	11 7/8" NI-40x	1	43
J12	18-00-00	11 7/8" NI-40x	1	12
J13	17-00-00	11 7/8" NI-40x	1	7
Ca1	186-00-00	1 1/8" x 11 7/8" Rim Board	1	1
Ca2	37-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	1	1
Bk1	114-00-00	11 7/8" NI-20	1	1

Connector Summary			
PlotID	Qty	Manuf	Product
H1	2		HGUS410
H2	6		LSSR2.56Z
H3	108		LT251188
H4	1		MIT311.88-2

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**HATCH LEGEND**

Ceramic Tile

Conv Framed

**FLOOR LOADING**  
 LIVE LOAD : 40 PSF  
 DEAD LOAD : 15 PSF  
 DEAD LOAD (TILE) : 20 PSF

**SECOND FLOOR FRAMING**

UNIT 6001 - THE QUEENSLAND

ELEVATION A

W/ OPT. FLOOR PLAN

W/ ELEVATOR

APP - AS PER PLAN  
 BBO - BEAM BY OTHERS  
 PA - POST ABOVE  
 O.T.B - OPEN TO BELOW  
 GT - GIRDER TRUSS  
 RT - ROOF TRUSS

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

SUBFLOOR: 3/4" NAILED & GLUED\*

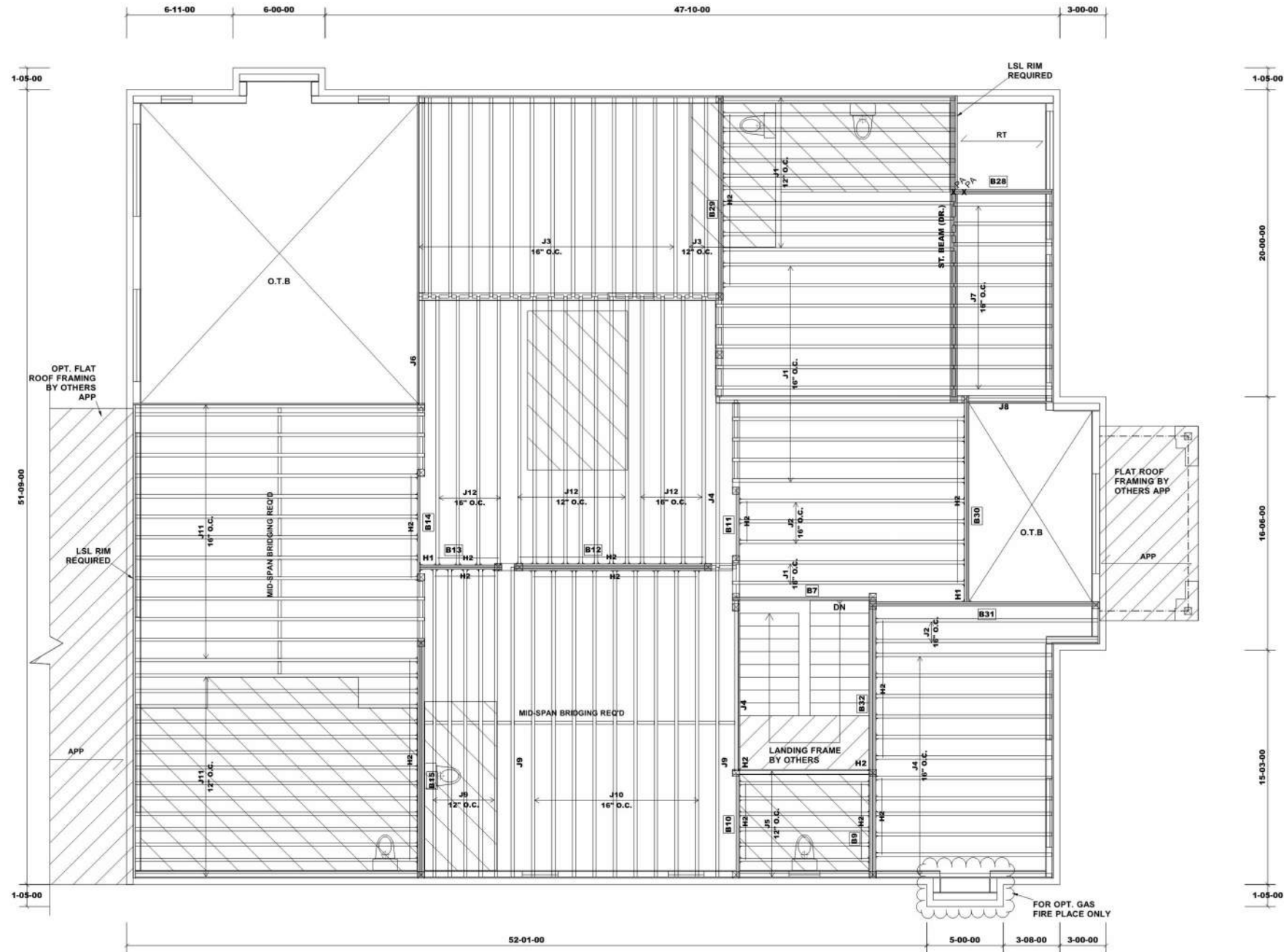
Blocking panels are required over all interior supports.  
 Squash blocks are required under concentrated loads.

Ceramic Tile Application as per O.B.C. 9.30.6

Provide I-Joist blocking between cantilevered joists (along bearing) and rimboard closure at ends.

Do not scale - refer to architectural plans for dimensions.





Products				
PlotID	Length	Product	Pies	Net Qty
B7	10-00-00	11 7/8" NI-20	1	1
B9	7-00-00	11 7/8" NI-20	2	2
B10	7-00-00	11 7/8" NI-20	1	1
B11	5-00-00	11 7/8" NI-20	1	1
B12	13-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	3	3
B13	6-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	2	2
B14	8-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	1	1
B15	16-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	3	3
B28	7-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	2	2
B29	14-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	2	2
B30	14-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	2	2
B31	15-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	2	2
B32	11-00-00	11 7/8" NI-20	2	2
J1	16-00-00	11 7/8" NI-20	1	25
J2	15-00-00	11 7/8" NI-20	1	5
J3	13-00-00	11 7/8" NI-20	1	16
J4	12-00-00	11 7/8" NI-20	1	14
J5	9-00-00	11 7/8" NI-20	1	8
J6	8-00-00	11 7/8" NI-20	1	1
J7	7-00-00	11 7/8" NI-20	1	10
J8	6-00-00	11 7/8" NI-20	1	1
J9	21-00-00	11 7/8" NI-40x	1	7
J10	20-00-00	11 7/8" NI-40x	1	9
J11	19-00-00	11 7/8" NI-40x	1	28
J12	18-00-00	11 7/8" NI-40x	1	16
Ca1	194-00-00	1 1/8" x 11 7/8" Rim Board	1	1
Ca2	37-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	1	1
Bk1	75-00-00	11 7/8" NI-20	1	1

Connector Summary			
PlotID	Qty	Manuf	Product
H1	2		HGUS410
H2	101		LT251188

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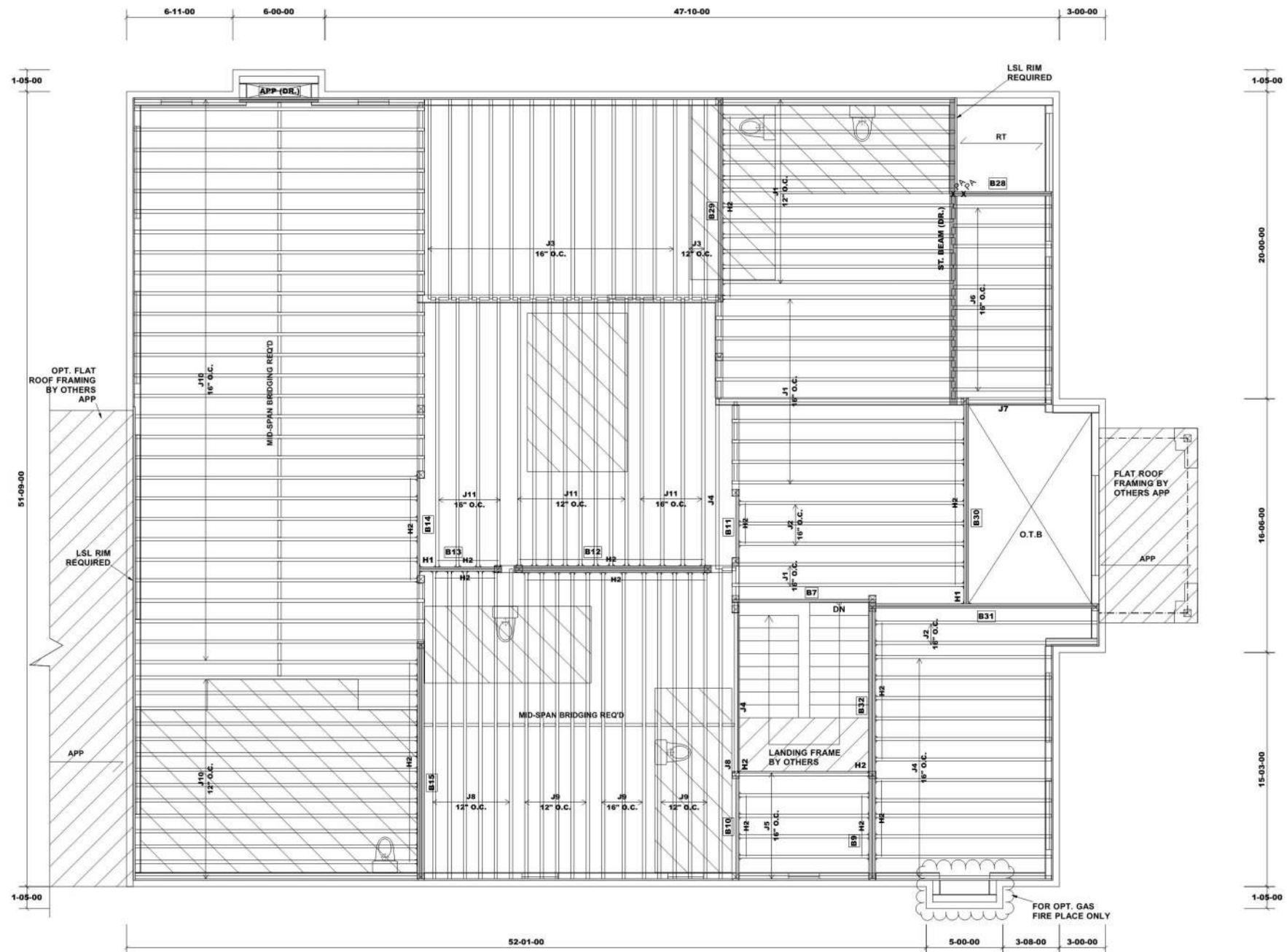
HATCH LEGEND	
	Ceramic Tile
	Conv Framed

FLOOR LOADING  
LIVE LOAD : 40 PSF  
DEAD LOAD : 15 PSF  
DEAD LOAD (TILE) : 20 PSF

SECOND FLOOR FRAMING  
UNIT 6001 - THE QUEENSLAND  
ELEVATION B

APP - AS PER PLAN  
BBO - BEAM BY OTHERS  
PA - POST ABOVE  
O.T.B. - OPEN TO BELOW  
GT - GIRDER TRUSS  
RT - ROOF TRUSS  
  
RIMBOARD  
1-1/8" X 11-7/8" O.S.B  
  
SUBFLOOR: 3/4" NAILED & GLUED\*

Blocking panels are required over all interior supports.  
Squash blocks are required under concentrated loads.  
  
Ceramic Tile Application as per O.B.C. 9.30.6  
  
Provide I-Joist blocking between cantilevered joists (along bearing) and rimboard closure at ends.  
  
Do not scale - refer to architectural plans for dimensions.



Products				
PlotID	Length	Product	Pies	Net Qty
B7	10-00-00	11 7/8" NI-20	1	1
B9	7-00-00	11 7/8" NI-20	2	2
B10	7-00-00	11 7/8" NI-20	1	1
B11	5-00-00	11 7/8" NI-20	1	1
B12	13-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	3	3
B13	6-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	2	2
B14	8-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	1	1
B15	16-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	3	3
B28	7-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	2	2
B29	14-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	2	2
B30	14-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	2	2
B31	15-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	2	2
B32	11-00-00	11 7/8" NI-20	2	2
J1	16-00-00	11 7/8" NI-20	1	25
J2	15-00-00	11 7/8" NI-20	1	5
J3	13-00-00	11 7/8" NI-20	1	15
J4	12-00-00	11 7/8" NI-20	1	14
J5	9-00-00	11 7/8" NI-20	1	6
J6	7-00-00	11 7/8" NI-20	1	10
J7	6-00-00	11 7/8" NI-20	1	1
J8	21-00-00	11 7/8" NI-40x	1	7
J9	20-00-00	11 7/8" NI-40x	1	12
J10	19-00-00	11 7/8" NI-40x	1	43
J11	18-00-00	11 7/8" NI-40x	1	16
Ca1	194-00-00	1 1/8" x 11 7/8" Rim Board	1	1
Ca2	37-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	1	1
Bk1	106-00-00	11 7/8" NI-20	1	1

Connector Summary			
PlotID	Qty	Manuf	Product
H1	2		HGUS410
H2	101		LT251188

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HATCH LEGEND	
	Ceramic Tile
	Conv Framed

**FLOOR LOADING**  
 LIVE LOAD : 40 PSF  
 DEAD LOAD : 15 PSF  
 DEAD LOAD (TILE) : 20 PSF

## SECOND FLOOR FRAMING

UNIT 6001 - THE QUEENSLAND

ELEVATION B

W/ OPT. FLOOR PLAN

APP - AS PER PLAN  
 BBO - BEAM BY OTHERS  
 PA - POST ABOVE  
 O.T.B - OPEN TO BELOW  
 GT - GIRDER TRUSS  
 RT - ROOF TRUSS  
 RIMBOARD  
 1-1/8" X 11-7/8" O.S.B.  
 SUBFLOOR: 3/4" NAILED & GLUED\*

Blocking panels are required over all interior supports.  
 Squash blocks are required under concentrated loads.

Ceramic Tile Application as per O.B.C. 9.30.6

Provide I-Joist blocking between cantilevered joists (along bearing) and rimboard closure at ends.

Do not scale - refer to architectural plans for dimensions.

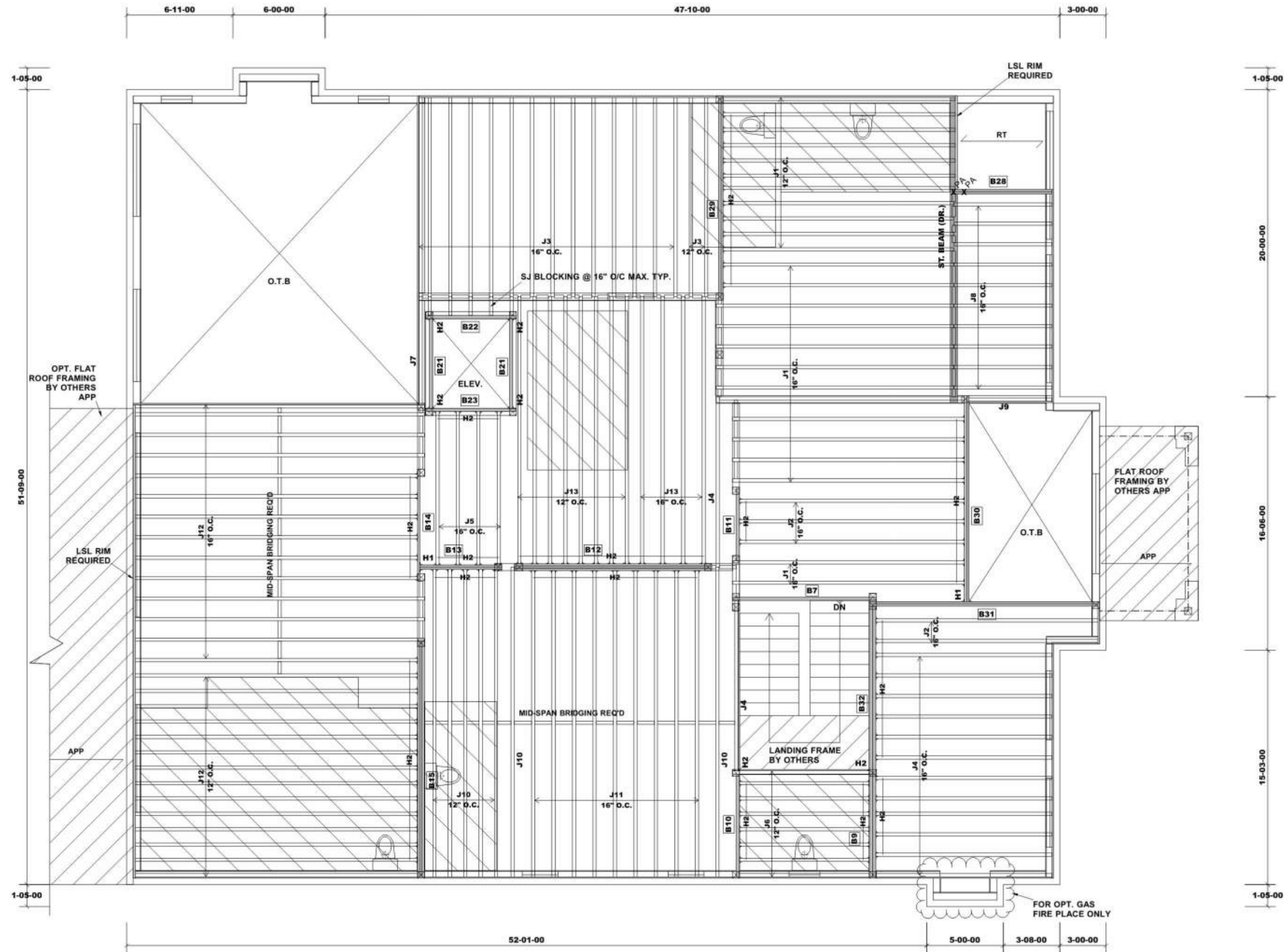
JT/PL: 45147/(116409) 117690  
 LI: 343075\*

Builder: Gold Park Homes  
 Project: Pine Valley Ph2

Location: Vaughan, ON  
 Date: Apr. 11, 2022

Designer: TL  
 Sheet: 18 of 24  
 Alpa Roof Trusses Inc.  
 Stouffville, Ontario

Salesperson: Derek F.  
 Home Lumber Inc.



Products				
PlotID	Length	Product	Pies	Net Qty
B7	10-00-00	11 7/8" NI-20	1	1
B9	7-00-00	11 7/8" NI-20	2	2
B10	7-00-00	11 7/8" NI-20	1	1
B11	5-00-00	11 7/8" NI-20	1	1
B12	13-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	3	3
B13	6-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	2	2
B14	8-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	1	1
B15	16-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	3	3
B21	6-00-00	11 7/8" NI-20	1	2
B22	6-00-00	11 7/8" NI-20	1	1
B23	6-00-00	11 7/8" NI-20	1	1
B28	7-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	2	2
B29	14-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	2	2
B30	14-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	2	2
B31	15-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	2	2
B32	11-00-00	11 7/8" NI-20	2	2
J1	16-00-00	11 7/8" NI-20	1	25
J2	15-00-00	11 7/8" NI-20	1	5
J3	13-00-00	11 7/8" NI-20	1	16
J4	12-00-00	11 7/8" NI-20	1	14
J5	10-00-00	11 7/8" NI-20	1	4
J6	9-00-00	11 7/8" NI-20	1	8
J7	8-00-00	11 7/8" NI-20	1	1
J8	7-00-00	11 7/8" NI-20	1	10
J9	6-00-00	11 7/8" NI-20	1	1
J10	21-00-00	11 7/8" NI-40x	1	7
J11	20-00-00	11 7/8" NI-40x	1	9
J12	19-00-00	11 7/8" NI-40x	1	28
J13	18-00-00	11 7/8" NI-40x	1	12
Ca1	194-00-00	1 1/8" x 11 7/8" Rim Board	1	1
Ca2	37-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	1	1
Bk1	82-00-00	11 7/8" NI-20	1	1

Connector Summary			
PlotID	Qty	Manuf	Product
H1	2		HGUS410
H2	109		LT251188

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HATCH LEGEND	
	Ceramic Tile
	Conv Framed

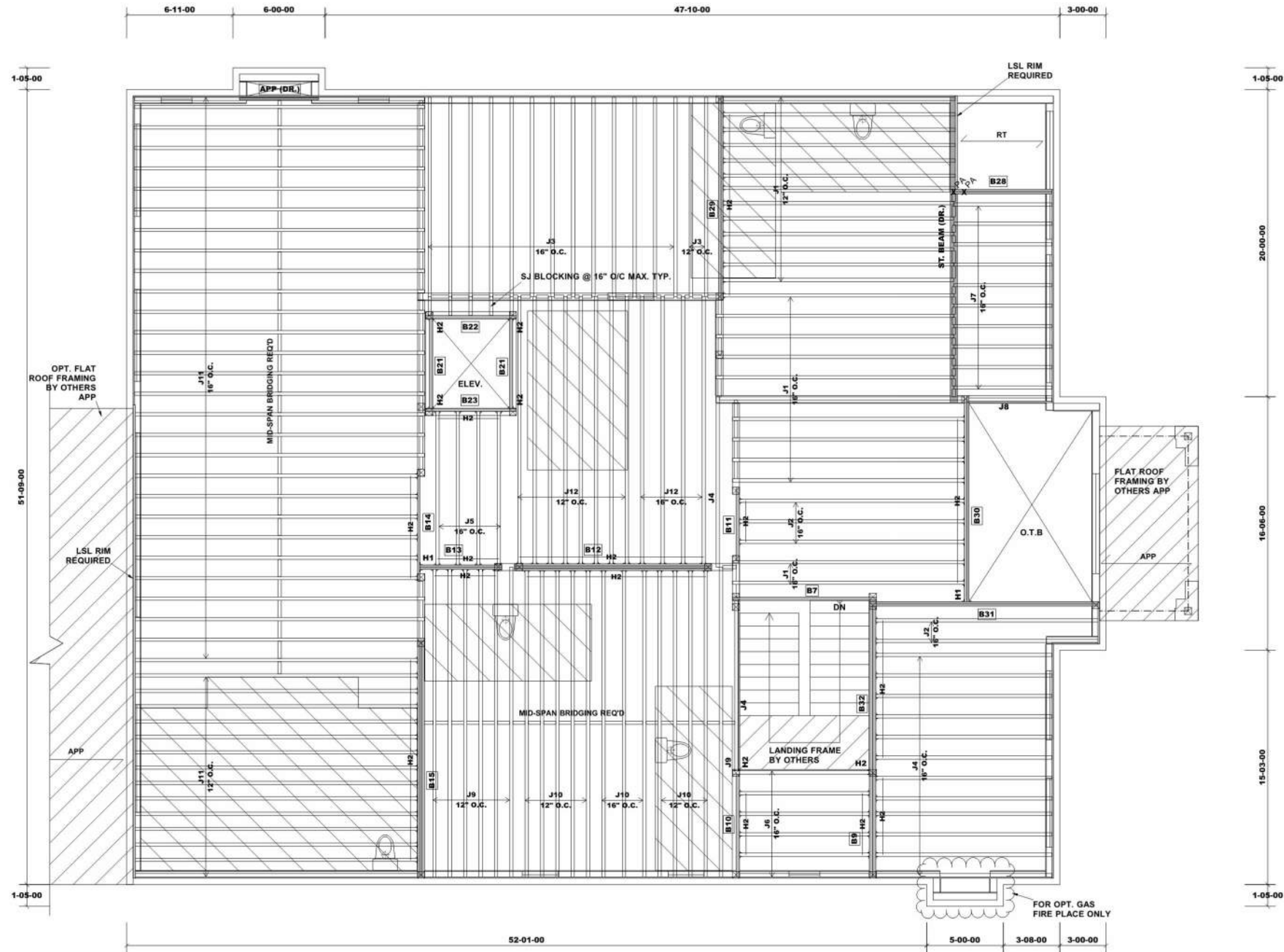
FLOOR LOADING  
LIVE LOAD : 40 PSF  
DEAD LOAD : 15 PSF  
DEAD LOAD (TILE) : 20 PSF

SECOND FLOOR FRAMING  
UNIT 6001 - THE QUEENSLAND  
ELEVATION B

W/ ELEVATOR

APP - AS PER PLAN  
BBO - BEAM BY OTHERS  
PA - POST ABOVE  
O.T.B - OPEN TO BELOW  
GT - GIRDER TRUSS  
RT - ROOF TRUSS  
  
RIMBOARD  
1-1/8" X 11-7/8" O.S.B  
  
SUBFLOOR: 3/4" NAILED & GLUED\*

Blocking panels are required over all interior supports.  
Squash blocks are required under concentrated loads.  
  
Ceramic Tile Application as per O.B.C. 9.30.6  
Provide I-Joist blocking between cantilevered joists (along bearing) and rimboard closure at ends.  
  
Do not scale - refer to architectural plans for dimensions.

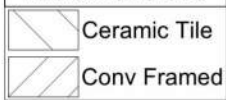


Products				
PlotID	Length	Product	Pies	Net Qty
B7	10-00-00	11 7/8" NI-20	1	1
B9	7-00-00	11 7/8" NI-20	2	2
B10	7-00-00	11 7/8" NI-20	1	1
B11	5-00-00	11 7/8" NI-20	1	1
B12	13-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	3	3
B13	6-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	2	2
B14	8-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	1	1
B15	16-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	3	3
B21	6-00-00	11 7/8" NI-20	1	2
B22	6-00-00	11 7/8" NI-20	1	1
B23	6-00-00	11 7/8" NI-20	1	1
B28	7-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	2	2
B29	14-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	2	2
B30	14-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	2	2
B31	15-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	2	2
B32	11-00-00	11 7/8" NI-20	2	2
J1	16-00-00	11 7/8" NI-20	1	25
J2	15-00-00	11 7/8" NI-20	1	5
J3	13-00-00	11 7/8" NI-20	1	15
J4	12-00-00	11 7/8" NI-20	1	14
J5	10-00-00	11 7/8" NI-20	1	4
J6	9-00-00	11 7/8" NI-20	1	6
J7	7-00-00	11 7/8" NI-20	1	10
J8	6-00-00	11 7/8" NI-20	1	1
J9	21-00-00	11 7/8" NI-40x	1	7
J10	20-00-00	11 7/8" NI-40x	1	12
J11	19-00-00	11 7/8" NI-40x	1	43
J12	18-00-00	11 7/8" NI-40x	1	12
Ca1	194-00-00	1 1/8" x 11 7/8" Rim Board	1	1
Ca2	37-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	1	1
Bk1	113-00-00	11 7/8" NI-20	1	1

Connector Summary			
PlotID	Qty	Manuf	Product
H1	2		HGUS410
H2	109		LT251188

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HATCH LEGEND



FLOOR LOADING  
LIVE LOAD : 40 PSF  
DEAD LOAD : 15 PSF  
DEAD LOAD (TILE) : 20 PSF

SECOND FLOOR FRAMING

UNIT 6001 - THE QUEENSLAND  
ELEVATION B  
W/ OPT. FLOOR PLAN  
W/ ELEVATOR

APP - AS PER PLAN  
BBO - BEAM BY OTHERS  
PA - POST ABOVE  
O.T.B. - OPEN TO BELOW  
GT - GIRDER TRUSS  
RT - ROOF TRUSS

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

SUBFLOOR: 3/4" NAILED & GLUED\*

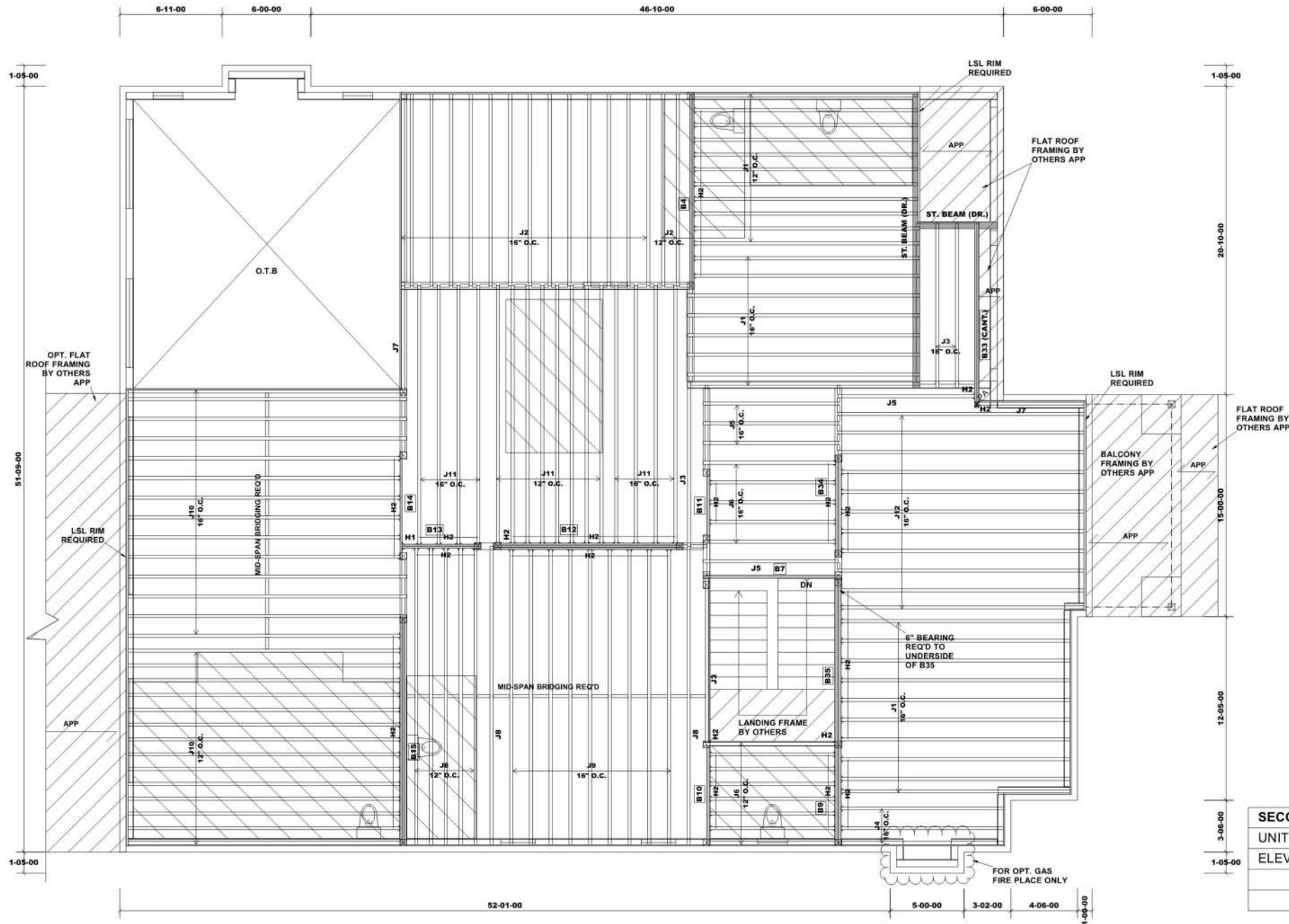
Blocking panels are required over all interior supports.  
Squash blocks are required under concentrated loads.

Ceramic Tile Application as per O.B.C. 9.30.6

Provide I-Joist blocking between cantilevered joists (along bearing) and rimboard closure at ends.

Do not scale - refer to architectural plans for dimensions.





Products				
PlotID	Length	Product	Pies	Net Qty
B4	14-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	2	2
B7	10-00-00	11 7/8" NI-20	1	1
B8	7-00-00	11 7/8" NI-20	2	2
B10	7-00-00	11 7/8" NI-20	1	1
B11	5-00-00	11 7/8" NI-20	1	1
B12	13-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	3	3
B13	6-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	2	2
B14	8-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	1	1
B15	16-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	3	3
B33 (CANT.)	13-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	2	2
B34	7-00-00	11 7/8" NI-20	2	2
B35	12-00-00	11 7/8" NI-20	2	2
J1	16-00-00	11 7/8" NI-20	1	29
J2	13-00-00	11 7/8" NI-20	1	16
J3	12-00-00	11 7/8" NI-20	1	4
J4	11-00-00	11 7/8" NI-20	1	3
J5	10-00-00	11 7/8" NI-20	1	5
J6	9-00-00	11 7/8" NI-20	1	13
J7	8-00-00	11 7/8" NI-20	1	2
J8	21-00-00	11 7/8" NI-40x	1	7
J9	20-00-00	11 7/8" NI-40x	1	9
J10	19-00-00	11 7/8" NI-40x	1	28
J11	18-00-00	11 7/8" NI-40x	1	16
J12	17-00-00	11 7/8" NI-40x	1	11
Ca1	185-00-02	1 1/8" x 11 7/8" Rim Board	1	1
Ca2	54-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	1	1
Bk1	81-00-00	11 7/8" NI-20	1	1

Connector Summary			
PlotID	Qty	Manuf	Product
H1	1		HGUS410
H2	105		LT251188

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HATCH LEGEND



FLOOR LOADING  
LIVE LOAD : 40 PSF  
DEAD LOAD : 15 PSF  
DEAD LOAD (TILE) : 20 PSF

SECOND FLOOR FRAMING

UNIT 6001 - THE QUEENSLAND  
ELEVATION C

APP - AS PER PLAN  
BBO - BEAM BY OTHERS  
PA - POST ABOVE  
O.T.B. - OPEN TO BELOW  
GT - GIRDER TRUSS  
RT - ROOF TRUSS

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

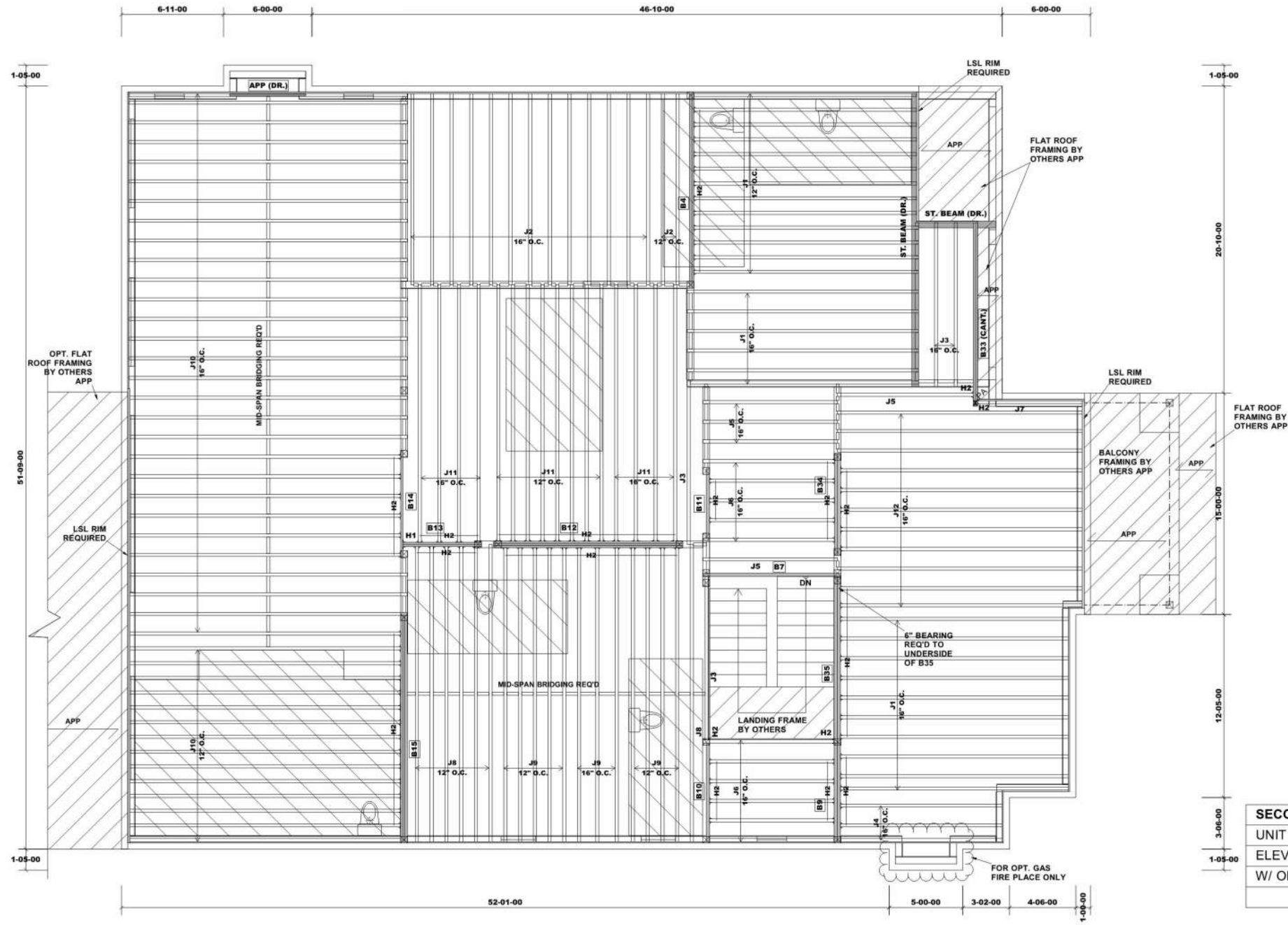
SUBFLOOR: 3/4" NAILED & GLUED\*

Blocking panels are required over all interior supports.  
Squash blocks are required under concentrated loads.

Ceramic Tile Application as per O.B.C. 9.30.6

Provide I-Joist blocking between cantilevered joists (along bearing) and rimboard closure at ends.

Do not scale - refer to architectural plans for dimensions.



Products					
ProdID	Length	Product	Pies	Net Qty	
B4	14-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	2	2	
B7	10-00-00	11 7/8" NI-20	1	1	
B8	7-00-00	11 7/8" NI-20	2	2	
B10	7-00-00	11 7/8" NI-20	1	1	
B11	5-00-00	11 7/8" NI-20	1	1	
B12	13-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	3	3	
B13	6-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	2	2	
B14	8-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	1	1	
B15	16-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	3	3	
B33 (CANT.)	13-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	2	2	
B34	7-00-00	11 7/8" NI-20	2	2	
B35	12-00-00	11 7/8" NI-20	2	2	
J1	16-00-00	11 7/8" NI-20	1	29	
J2	13-00-00	11 7/8" NI-20	1	15	
J3	12-00-00	11 7/8" NI-20	1	4	
J4	11-00-00	11 7/8" NI-20	1	3	
J5	10-00-00	11 7/8" NI-20	1	5	
J6	9-00-00	11 7/8" NI-20	1	11	
J7	8-00-00	11 7/8" NI-20	1	1	
J8	21-00-00	11 7/8" NI-40x	1	7	
J9	20-00-00	11 7/8" NI-40x	1	12	
J10	19-00-00	11 7/8" NI-40x	1	43	
J11	18-00-00	11 7/8" NI-40x	1	16	
J12	17-00-00	11 7/8" NI-40x	1	11	
Ca1	186-00-00	1 1/8" x 11 7/8" Rim Board	1	1	
Ca2	54-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	1	1	
Bk1	113-00-00	11 7/8" NI-20	1	1	

Connector Summary			
ProdID	Qty	Manuf	Product
H1	1		HGUS410
H2	104		LT251188

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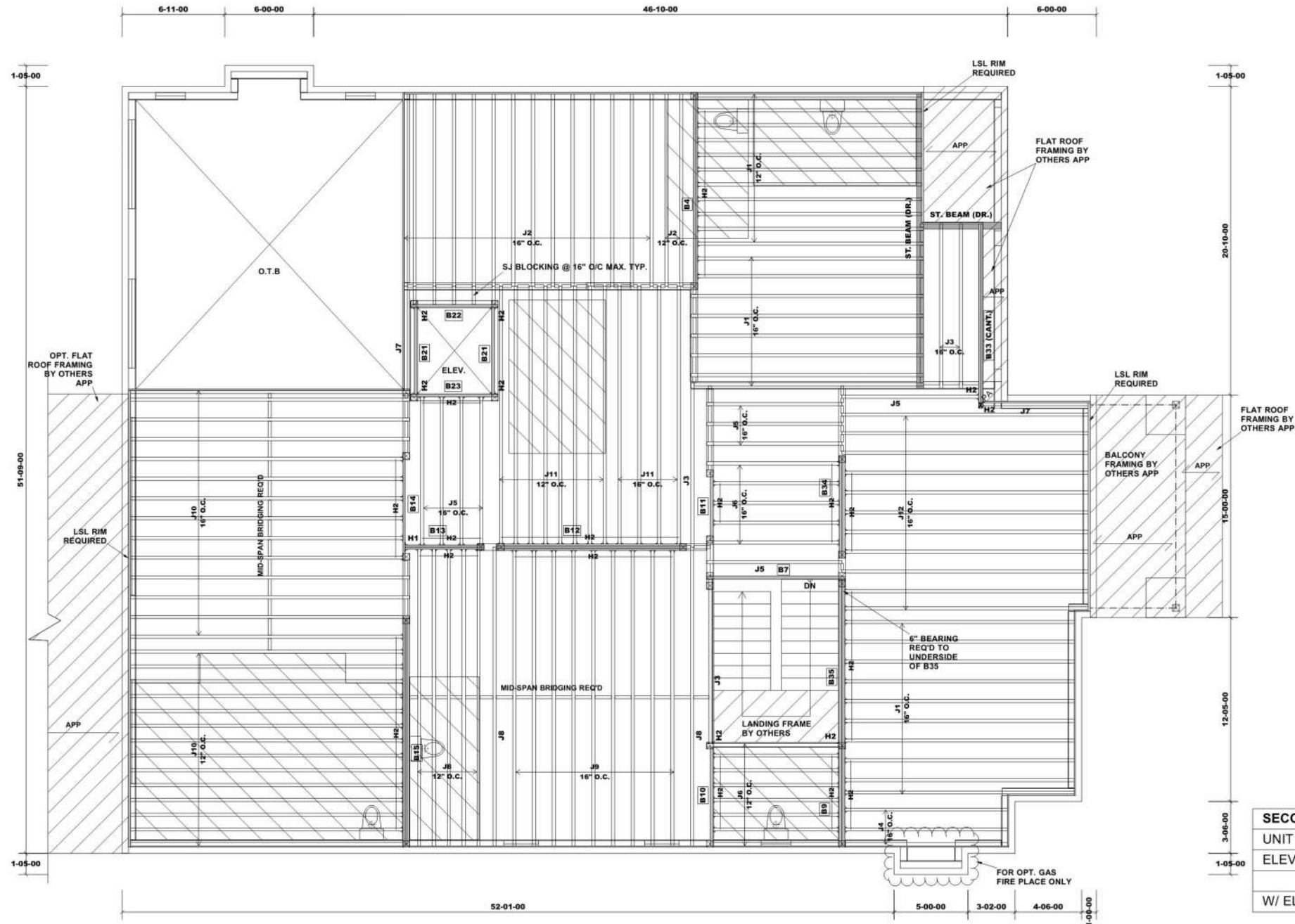
HATCH LEGEND	
	Ceramic Tile
	Conv Framed

**FLOOR LOADING**  
 LIVE LOAD : 40 PSF  
 DEAD LOAD : 15 PSF  
 DEAD LOAD (TILE) : 20 PSF

SECOND FLOOR FRAMING	
UNIT 6001 - THE QUEENSLAND	
ELEVATION C	
W/ OPT. FLOOR PLAN	

APP - AS PER PLAN  
 BBO - BEAM BY OTHERS  
 PA - POST ABOVE  
 O.T.B - OPEN TO BELOW  
 GT - GIRDER TRUSS  
 RT - ROOF TRUSS  
 RIMBOARD  
 1-1/8" X 11-7/8" O.S.B  
 SUBFLOOR: 3/4" NAILED & GLUED\*

Blocking panels are required over all interior supports.  
 Squash blocks are required under concentrated loads.  
 Ceramic Tile Application as per O.B.C. 9.30.6  
 Provide I-Joist blocking between cantilevered joists (along bearing) and rimboard closure at ends.  
 Do not scale - refer to architectural plans for dimensions.



Products				
PlotID	Length	Product	Pies	Net Qty
B4	14-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	2	2
B7	10-00-00	11 7/8" NI-20	1	1
B9	7-00-00	11 7/8" NI-20	2	2
B10	7-00-00	11 7/8" NI-20	1	1
B11	5-00-00	11 7/8" NI-20	1	1
B12	13-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	3	3
B13	6-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	2	2
B14	8-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	1	1
B15	16-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	3	3
B21	6-00-00	11 7/8" NI-20	1	2
B22	6-00-00	11 7/8" NI-20	1	1
B23	6-00-00	11 7/8" NI-20	1	1
B33 (CANT.)	13-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	2	2
B34	7-00-00	11 7/8" NI-20	2	2
B35	12-00-00	11 7/8" NI-20	2	2
J1	16-00-00	11 7/8" NI-20	1	29
J2	13-00-00	11 7/8" NI-20	1	16
J3	12-00-00	11 7/8" NI-20	1	4
J4	11-00-00	11 7/8" NI-20	1	3
J5	10-00-00	11 7/8" NI-20	1	9
J6	9-00-00	11 7/8" NI-20	1	13
J7	8-00-00	11 7/8" NI-20	1	2
J8	21-00-00	11 7/8" NI-40x	1	7
J9	20-00-00	11 7/8" NI-40x	1	9
J10	19-00-00	11 7/8" NI-40x	1	28
J11	18-00-00	11 7/8" NI-40x	1	12
J12	17-00-00	11 7/8" NI-40x	1	11
Ca1	198-00-00	1 1/8" x 11 7/8" Rim Board	1	1
Ca2	54-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	1	1
Bk1	88-00-00	11 7/8" NI-20	1	1

Connector Summary			
PlotID	Qty	Manuf	Product
H1	1		HGUS410
H2	113		LT251188

REVISION 1 - JUN. 02, 2022

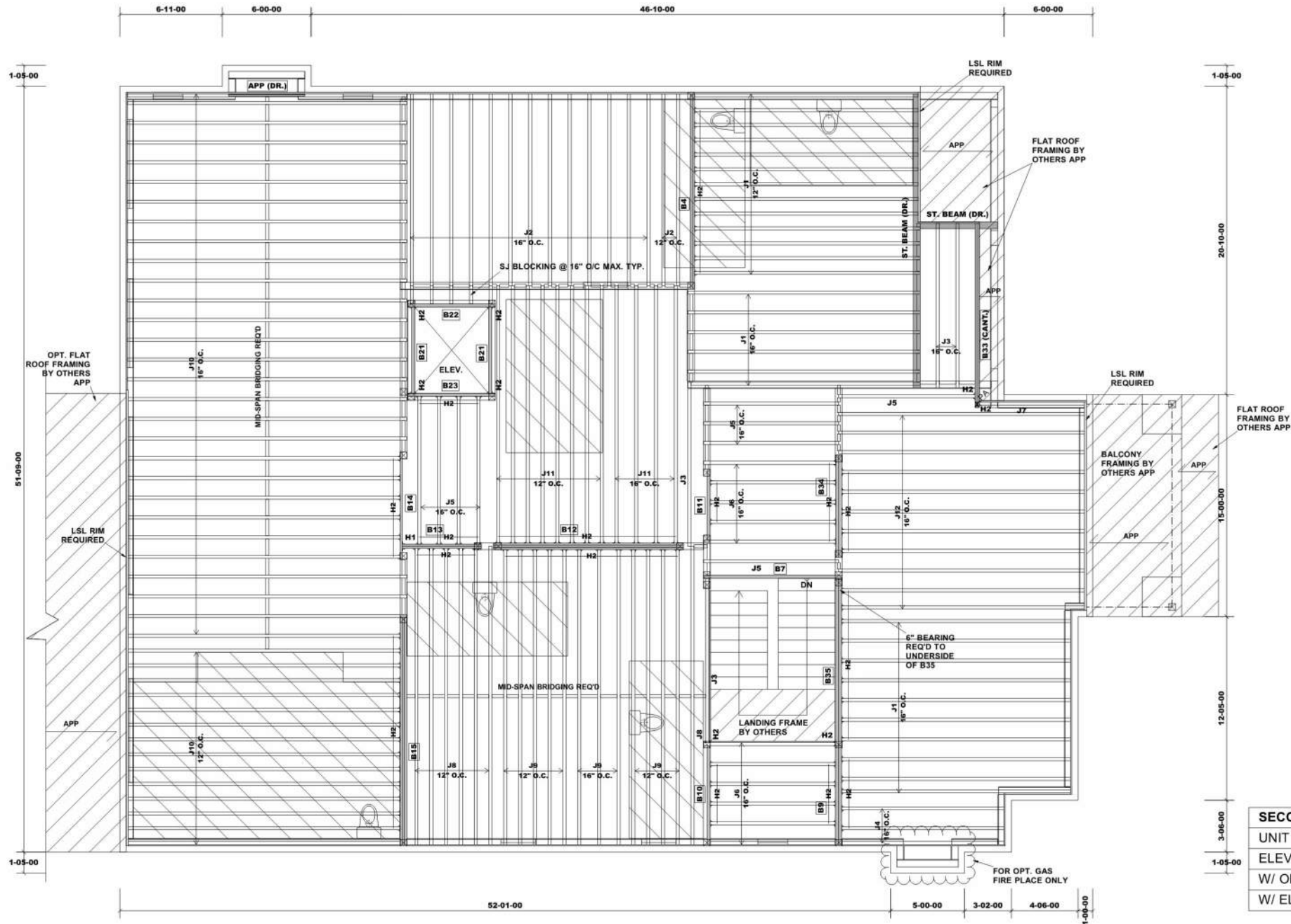
HATCH LEGEND	
	Ceramic Tile
	Conv Framed

**FLOOR LOADING**  
 LIVE LOAD : 40 PSF  
 DEAD LOAD : 15 PSF  
 DEAD LOAD (TILE) : 20 PSF

SECOND FLOOR FRAMING	
UNIT 6001 - THE QUEENSLAND	
ELEVATION C	
W/ ELEVATOR	

APP - AS PER PLAN  
 BBO - BEAM BY OTHERS  
 PA - POST ABOVE  
 O.T.B - OPEN TO BELOW  
 GT - GIRDER TRUSS  
 RT - ROOF TRUSS  
 RIMBOARD  
 1-1/8" X 11-7/8" O.S.B  
 SUBFLOOR: 3/4" NAILED & GLUED\*

Blocking panels are required over all interior supports.  
 Squash blocks are required under concentrated loads.  
 Ceramic Tile Application as per O.B.C. 9.30.6  
 Provide I-Joist blocking between cantilevered joists (along bearing) and rimboard closure at ends.  
 Do not scale - refer to architectural plans for dimensions.

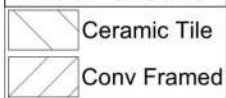


Products				
PlotID	Length	Product	Pies	Net Qty
B4	14-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	2	2
B7	10-00-00	11 7/8" NI-20	1	1
B9	7-00-00	11 7/8" NI-20	2	2
B10	7-00-00	11 7/8" NI-20	1	1
B11	5-00-00	11 7/8" NI-20	1	1
B12	13-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	3	3
B13	6-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	2	2
B14	8-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	1	1
B15	16-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	3	3
B21	6-00-00	11 7/8" NI-20	1	2
B22	6-00-00	11 7/8" NI-20	1	1
B23	6-00-00	11 7/8" NI-20	1	1
B33 (CANT.)	13-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	2	2
B34	7-00-00	11 7/8" NI-20	2	2
B35	12-00-00	11 7/8" NI-20	2	2
J1	16-00-00	11 7/8" NI-20	1	29
J2	13-00-00	11 7/8" NI-20	1	15
J3	12-00-00	11 7/8" NI-20	1	4
J4	11-00-00	11 7/8" NI-20	1	3
J5	10-00-00	11 7/8" NI-20	1	9
J6	9-00-00	11 7/8" NI-20	1	11
J7	8-00-00	11 7/8" NI-20	1	1
J8	21-00-00	11 7/8" NI-40x	1	7
J9	20-00-00	11 7/8" NI-40x	1	12
J10	19-00-00	11 7/8" NI-40x	1	43
J11	18-00-00	11 7/8" NI-40x	1	12
J12	17-00-00	11 7/8" NI-40x	1	11
Ca1	185-00-02	1 1/8" x 11 7/8" Rim Board	1	1
Ca2	54-00-00	1 3/4" x 11 7/8" 1.55E TimberStrand® LSL	1	1
Bk1	120-00-00	11 7/8" NI-20	1	1

Connector Summary			
PlotID	Qty	Manuf	Product
H1	1		HGUS410
H2	112		LT251188

REVISION 1 - JUN. 02, 2022

#### HATCH LEGEND



**FLOOR LOADING**  
LIVE LOAD : 40 PSF  
DEAD LOAD : 15 PSF  
DEAD LOAD (TILE) : 20 PSF

#### SECOND FLOOR FRAMING

UNIT 6001 - THE QUEENSLAND  
ELEVATION C  
W/ OPT. FLOOR PLAN  
W/ ELEVATOR

APP - AS PER PLAN  
BBO - BEAM BY OTHERS  
PA - POST ABOVE  
O.T.B - OPEN TO BELOW  
GT - GIRDER TRUSS  
RT - ROOF TRUSS

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

SUBFLOOR: 3/4" NAILED & GLUED\*

Blocking panels are required over all interior supports.  
Squash blocks are required under concentrated loads.

Ceramic Tile Application as per O.B.C. 9.30.6

Provide I-Joist blocking between cantilevered joists (along bearing) and rimboard closure at ends.

Do not scale - refer to architectural plans for dimensions.





Customer: **Gold Park Homes**  
Job Address: **Pine Valley Ph2**  
City: **Vaughan**  
Job Track: **45147**

Job Name: **343075 Ground A + Second A (1,**  
Level: **Second Floor**  
Label: **B1 - i51328**  
Type: **Beam**

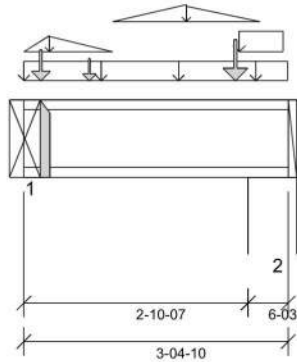
**1 Ply Member**  
**11 7/8" NI-20**

Status:  
**Design Passed**

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update5.15

Report Version: 2021.03.26 04/09/2022 14:00



### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019 Amendment)

Design Methodology: LSD  
Service Condition: Dry  
LL Deflection Limit: L/360,  
TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0'- 2 1/2" Bottom: 1'- 7 1/16"

#### Factored Resistance of Support Material:

- 769 psi Beam @ 0'
- 615 psi Wall @ 2'- 11 7/16"



### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	1'- 4 7/16"	1.25D + 1.5L	0.77	262 lb ft	4299 lb ft	Passed - 6%
Factored Neg. Moment:	2'- 11 7/16"	1.25D + 1.5S	0.81	23 lb ft	4534 lb ft	Passed - 1%
Factored Shear:	2'- 10 3/8"	1.25D + 1.5L + S	0.87	641 lb	1956 lb	Passed - 33%

### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	1-12	1.25D + 1.5S + L	0.89	597 lb		1970 lb	-	Passed - 30%
2	6-03	1.25D + 1.5L + S	0.87	772 lb		1956 lb	8312 lb	Passed - 39%

### CONNECTOR INFORMATION

ID	Part No.	Manufacturer	Nailing Requirements			Other Information or Requirement for Reinforcement Accessories
			Top	Face	Member	
1	LSSR2.56Z	-	-	-	-	Connector manually specified by the user.

\* Connectors: Refer to manufacturer's specifications, fasteners requirements and installation instruction. Where header fasteners are longer than the width of the supporting member, install backer block or clinch header nails.

### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	3'- 4 5/8"	Self Weight	Top	3 lb/ft	-	-	-
Uniform	0'	3'- 4 1/2"	E25(i41655)	Top	101 lb/ft	-	-	-
Uniform	2'- 9 1/16"	3'- 3 13/16"	E25(i41655)	Top	48 lb/ft	-	76 lb/ft	-
Tapered	0'	0'- 3 7/8"	FC2 Floor Decking (Plan View Fill)	Top	-	0 To 32 lb/ft	-	-
Tapered	0'- 3 7/8"	1'- 1 5/8"	FC2 Floor Decking (Plan View Fill)	Top	-	16 To 0 lb/ft	-	-
Tapered	1'- 1 5/8"	2'- 15/16"	FC2 Floor Decking (Plan View Fill)	Top	0 To 14 lb/ft	0 To 38 lb/ft	-	-
Tapered	2'- 15/16"	3'- 1/4"	FC2 Floor Decking (Plan View Fill)	Top	-	19 To 0 lb/ft	-	-
Point	0'- 10 1/16"	0'- 10 1/16"	J8(i51262)	Front	24 lb	65 lb	-	-
Point	2'- 8 1/2"	2'- 8 1/2"	-	Front	105 lb	101 lb	98 lb	-
Point	0'- 2 5/8"	0'- 2 5/8"	-	Top	75 lb	-	111 lb	-

### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 2 1/2"	B2 (CANT.)(i51251)	276 lb	72 lb	121 lb	-
2	2'- 10 7/16"	3'- 4 5/8"	E7(i41631)	340 lb	144 lb	139 lb	-

### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

SE047007





Customer: **Gold Park Homes**  
Job Address: **Pine Valley Ph2**  
City: **Vaughan**  
Job Track: **45147**

Job Name: **343075 Ground A + Second A (1,**  
Level: **Second Floor**  
Label: **B2 (CANT.) - i51251**  
Type: **Beam**

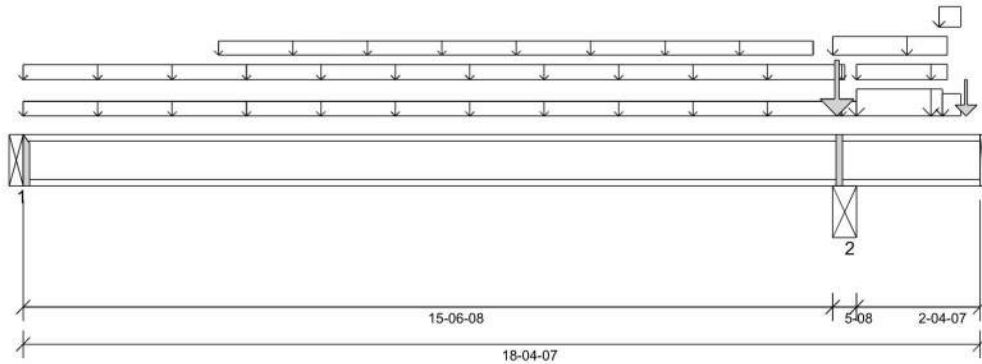
**2 Ply Member**  
**11 7/8" NI-20**

Status:  
**Design Passed**

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version  
8.5.3.233.Update5.15

Report Version: 2021.03.26 04/09/2022 14:05



### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019 Amendment)  
Design Methodology: LSD  
Service Condition: Dry  
LL Deflection Limit: L/360,  
TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0'- 5" Bottom: 15'- 6 1/2"

#### Factored Resistance of Support Material:

- 769 psi Beam @ 0'
- 769 psi Beam @ 15'- 9 1/4"



### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	6'- 6 11/16"	1.25D + 1.5L	0.76	1510 lb ft	8430 lb ft	Passed - 18%
Factored Neg. Moment:	15'- 9 1/4"	1.25D + 1.5L + S	0.81	2519 lb ft	9031 lb ft	Passed - 28%
Factored Shear:	16'- 1/16"	1.25D + 1.5L + S	0.81	1536 lb	3626 lb	Passed - 42%
Live Load (LL) Pos. Defl.:	7'- 10 5/8"	L		0.089"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	7'- 1 5/16"	D + L		0.085"	L/240	Passed - L/999

### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	1-12	1.25D + 1.5L	0.76	470 lb		3940 lb	-	Passed - 12%
2	5-08	1.25D + 1.5S + L	0.97	3606 lb		9836 lb	20513 lb	Passed - 37%

### CONNECTOR INFORMATION

ID	Part No.	Manufacturer	Nailing Requirements			Other Information or Requirement for Reinforcement Accessories
			Top	Face	Member	
1	MIT311.88-2		-	-	-	Connector manually specified by the user.

\* Connectors: Refer to manufacturer's specifications, fasteners requirements and installation instruction. Where header fasteners are longer than the width of the supporting member, install backer block or clinch header nails.

### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	18'- 4 7/16"	Self Weight	Top	6 lb/ft	-	-	-
Uniform	0'	16'	FC2 Floor Decking (Plan View Fill)	Top	5 lb/ft	12 lb/ft	-	-
Uniform	0'	15'- 9 1/4"	FC2 Floor Decking (Plan View Fill)	Top	7 lb/ft	18 lb/ft	-	-
Uniform	3'- 9"	15'- 2"	FC2 Floor Decking (Plan View Fill)	Top	4 lb/ft	-	-	-
Uniform	15'- 6 1/2"	17'- 8 15/16"	E24(i41647)	Top	101 lb/ft	-	-	-
Uniform	16'	17'- 8 15/16"	FC2 Floor Decking (Plan View Fill)	Top	9 lb/ft	23 lb/ft	-	-
Uniform	16'	17'- 7 13/16"	E24(i41647)	Top	109 lb/ft	-	171 lb/ft	-
Uniform	17'- 7"	18'	E25(i41655)	Top	143 lb/ft	-	-	-
Uniform	17'- 7 13/16"	18'	E25(i41655)	Top	68 lb/ft	-	107 lb/ft	-
Point	18'- 1 1/4"	18'- 1 1/4"	B1(i51328)	Front	276 lb	72 lb	121 lb	-
Point	15'- 7 1/2"	15'- 7 1/2"	E24(i41647)	Top	345 lb	-	537 lb	-

### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'	B4(i51405)	88 lb	239/-12 lb	-39 lb	-
2	15'- 6 1/2"	16'	ST. BEAM (DR.)(i41725)	1374 lb	366 lb	1017 lb	-

### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- The deflection at the cantilever for either live and/or total loads is less than 3/8" and therefore has been excluded from the deflection ratio considerations.

SE047008



Customer: **Gold Park Homes**  
Job Address: **Pine Valley Ph2**  
City: **Vaughan**  
Job Track: **45147**

Job Name: **343075 Ground A + Second A (1,**  
Level: **Second Floor**  
Label: **B3 (CANT.) - i51378**  
Type: **Beam**

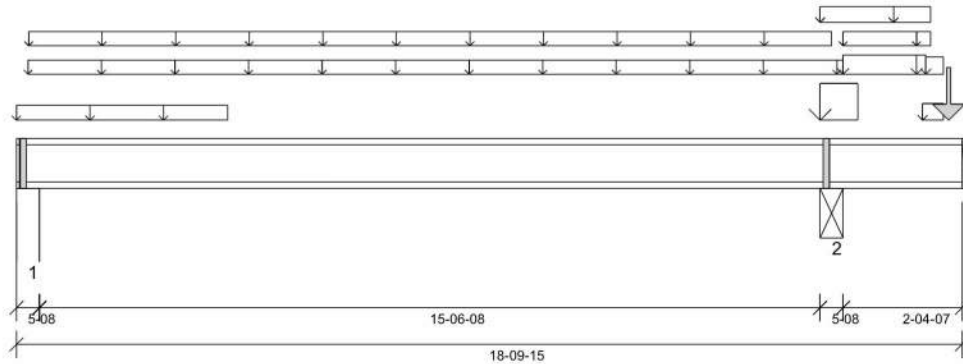
**2 Ply Member**  
**11 7/8" NI-20**

Status:  
**Design Passed**

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version  
8.5.3.233.Update5.15

Report Version: 2021.03.26 04/09/2022 14:05



#### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019 Amendment)  
Design Methodology: LSD  
Service Condition: Dry  
LL Deflection Limit: L/360,  
TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0'- 5" Bottom: 15'- 6 1/2"

#### Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 4 1/2"
- 769 psi Beam @ 16'- 2 3/4"



#### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	6'- 4 3/4"	1.25D + 1.5L	0.75	1833 lb ft	8319 lb ft	Passed - 22%
Factored Neg. Moment:	16'- 2 3/4"	1.25D + 1.5L + S	0.78	2693 lb ft	8678 lb ft	Passed - 31%
Factored Shear:	16'- 5 9/16"	1.25D + 1.5L + S	0.78	1904 lb	3484 lb	Passed - 55%
Live Load (LL) Pos. Defl.:	8'- 3 5/8"	L		0.099"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	7'- 4 5/8"	D + L		0.107"	L/240	Passed - L/999
Total Load (TL) Neg. Defl.:	16'	D + L		0.010"	L/240	Passed - L/999

#### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	5-08	1.25D + 1.5L	0.75	755 lb		3340 lb	12611 lb	Passed - 23%
2	5-08	1.25D + 1.5S + L	0.94	3656 lb		9568 lb	19954 lb	Passed - 38%

#### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	18'- 9 15/16"	Self Weight	Top	6 lb/ft	-	-	-
Uniform	0'	4'- 2 1/2"	User Load	Top	60 lb/ft	-	-	-
Uniform	0'- 2 3/4"	16'- 5 1/2"	FC2 Floor Decking (Plan View Fill)	Top	6 lb/ft	15 lb/ft	-	-
Uniform	0'- 2 15/16"	16'- 2 3/4"	FC2 Floor Decking (Plan View Fill)	Top	7 lb/ft	18 lb/ft	-	-
Uniform	16'	18'- 2 7/16"	E41(i41730)	Top	101 lb/ft	-	-	-
Uniform	16'	16'- 9"	E41(i41730)	Top	460 lb/ft	-	716 lb/ft	-
Uniform	16'- 5 1/2"	18'- 2 7/16"	FC2 Floor Decking (Plan View Fill)	Top	-	22 lb/ft	-	-
Uniform	16'- 5 1/2"	18'- 1 5/16"	E41(i41730)	Top	109 lb/ft	-	171 lb/ft	-
Uniform	18'- 1/2"	18'- 5 1/2"	E27(i41644)	Top	143 lb/ft	-	-	-
Uniform	18'- 1 5/16"	18'- 5 1/2"	E27(i41644)	Top	68 lb/ft	-	107 lb/ft	-
Point	18'- 6 3/4"	18'- 6 3/4"	B1(i51386)	Back	277 lb	72 lb	121 lb	-

#### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 5 1/2"	3(i41638)	291 lb	262/-12 lb	-49 lb	-
2	16'	16'- 5 1/2"	ST. BEAM (DR.)(i41725)	1388 lb	383 lb	1027 lb	-

#### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- The deflection at the cantilever for either live and/or total loads is less than 3/8" and therefore has been excluded from the deflection ratio considerations.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

#### PLY TO PLY CONNECTION

- Member design assumed proper ply to ply connection by others. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.

SE047009





Customer: **Gold Park Homes**  
Job Address: **Pine Valley Ph2**  
City: **Vaughan**  
Job Track: **45147**

Job Name: **343075 Ground A + Second A (1,**  
Level: **Second Floor**  
Label: **B4 - i51405**  
Type: **Beam**

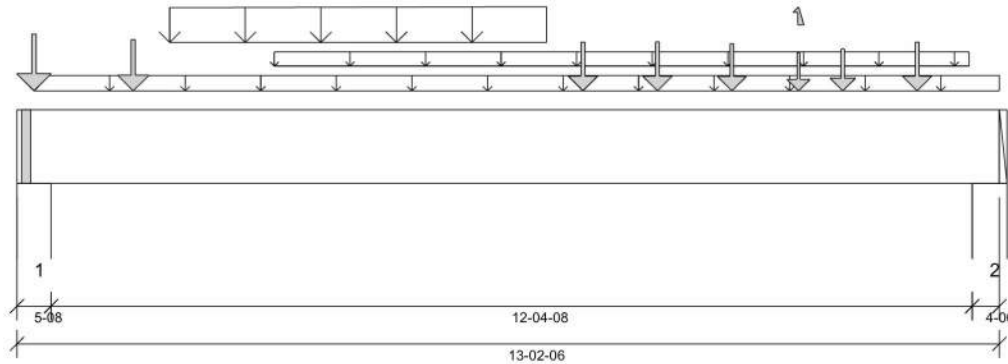
**2 Ply Member**  
**1 3/4" x 11 7/8" 1.55E**  
**TimberStrand® LSL**

Status:  
**Design**  
**Passed**

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version  
8.5.3.233.Update5.15

Report Version: 2021.03.26 04/09/2022 14:05



### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018,  
ABC 2019, OBC 2012 (2019  
Amendment)

Design Methodology: LSD

Service Condition: Dry

LL Deflection Limit: L/360,

TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports  
must be laterally restrained. Top and bottom edges  
of the member must be fully restrained or have the  
following maximum unbraced length:

Top: 0' Bottom: 1'

#### Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 4 1/2"
- 615 psi Wall @ 12'- 11"



### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	6'- 7 1/4"	1.25D + 1.5L	1.00	13961 lb ft	26531 lb ft	Passed - 53%
Factored Shear:	11'- 10 1/8"	1.25D + 1.5L	1.00	4212 lb	14414 lb	Passed - 29%
Live Load (LL) Pos. Defl.:	6'- 7 13/16"	L		0.254"	L/360	Passed - L/584
Total Load (TL) Pos. Defl.:	6'- 7 15/16"	D + L		0.377"	L/240	Passed - L/393

### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	5'-08"	1.25D + 1.5L	1.00	4909 lb		25225 lb	11842 lb	Passed - 41%
2	4'-06"	1.25D + 1.5L	1.00	4291 lb		20065 lb	9420 lb	Passed - 46%

### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	13'- 2 3/8"	Self Weight	Top	13 lb/ft	-	-	-
Uniform	0'- 2 3/4"	13'- 2 3/8"	FC2 Floor Decking (Plan View Fill)	Top	7 lb/ft	19 lb/ft	-	-
Uniform	3'- 5 1/2"	12'- 9 1/2"	FC2 Floor Decking (Plan View Fill)	Top	2 lb/ft	-	-	-
Tapered	2'- 5/8"	7'- 1 3/8"	Smoothed Load	Front	120 To 142 lb/ft	317 lb/ft	-	-
Point	0'- 2 3/4"	0'- 2 3/4"	J1(i51389)	Front	159 lb	424 lb	-	-
Point	1'- 6 3/4"	1'- 6 3/4"	J1(i51333)	Front	139 lb	371 lb	-	-
Point	7'- 7 1/4"	7'- 7 1/4"	J1(i51523)	Front	156 lb	318 lb	-	-
Point	8'- 7 1/4"	8'- 7 1/4"	J1(i51231)	Front	158 lb	318 lb	-	-
Point	9'- 7 1/4"	9'- 7 1/4"	J1(i51511)	Front	150 lb	302 lb	-	-
Point	10'- 6"	10'- 6"	B2 (CANT.) (i51251)	Front	88 lb	239/-12 lb	-39 lb	-
Point	11'- 1 1/8"	11'- 1 1/8"	J1(i51449)	Front	126 lb	254 lb	-	-
Point	12'- 1 1/8"	12'- 1 1/8"	J1(i51300)	Front	156 lb	318 lb	-	-

### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 5 1/2"	2(i41637)	1074 lb	2393/-2 lb	-8 lb	-
2	12'- 10"	13'- 2 3/8"	E19(i41641)	1008 lb	2006/-10 lb	-31 lb	-

### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Lateral stability factor (KL) was based on user preference to use the width of one ply.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

### PLY TO PLY CONNECTION

- Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.

NAIL ONE PLY TO ANOTHER WITH 3-1/2" SPIRAL NAILS @ 10" O/C,  
STAGGERED IN 2 ROWS

SE047010



Customer: **Gold Park Homes**  
Job Address: **Pine Valley Ph2**  
City: **Vaughan**  
Job Track: **45147**

Job Name: **343075 Ground A + Second A (1,**  
Level: **Second Floor**  
Label: **B5 - i51419**  
Type: **Beam**

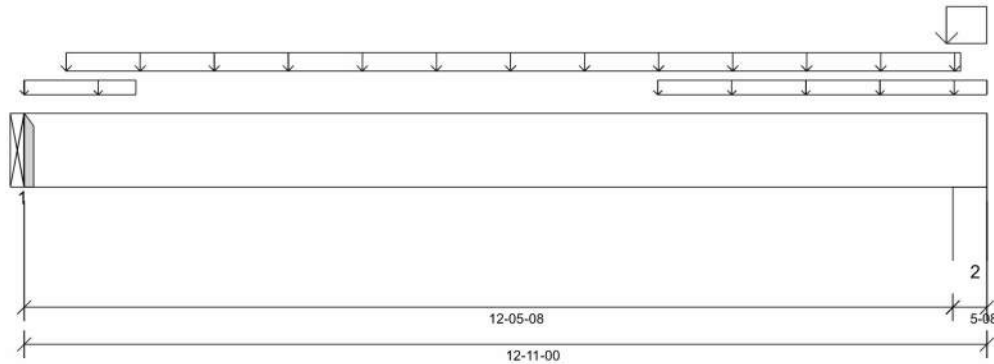
**2 Ply Member**  
**1 3/4" x 11 7/8" 1.55E**  
**TimberStrand® LSL**

Status:  
**Design**  
**Passed**

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version  
8.5.3.233.Update5.15

Report Version: 2021.03.26 04/09/2022 14:06



#### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019 Amendment)  
Design Methodology: LSD  
Service Condition: Dry  
LL Deflection Limit: L/360,  
TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 1'- 1 1/2"

#### Factored Resistance of Support Material:

- 769 psi Beam @ 0'
- 615 psi Wall @ 12'- 6 1/2"



#### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	6'- 6 3/4"	1.25D + 1.5L	1.00	12551 lb ft	26531 lb ft	Passed - 47%
Factored Neg. Moment:	12'- 6 1/2"	1.25D + 1.5S	0.74	229 lb ft	19238 lb ft	Passed - 1%
Factored Shear:	11'- 5 5/8"	1.25D + 1.5L + S	1.00	4078 lb	14414 lb	Passed - 28%
Live Load (LL) Pos. Defl.:	6'- 3 3/8"	L		0.232"	L/360	Passed - L/644
Total Load (TL) Pos. Defl.:	6'- 3 9/16"	D + L		0.339"	L/240	Passed - L/440

#### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	1-08	1.25D + 1.5L	1.00	3684 lb		6880 lb	-	Passed - 54%
2	5-08	1.25D + 1.5L + S	1.00	5567 lb		25225 lb	11842 lb	Passed - 47%

#### CONNECTOR INFORMATION

ID	Part No.	Manufacturer	Nailing Requirements			Other Information or Requirement for Reinforcement Accessories
			Top	Face	Member	
1	HGUS410	-	-	-	-	Connector manually specified by the user.

\* Connectors: Refer to manufacturer's specifications, fasteners requirements and installation instruction. Where header fasteners are longer than the width of the supporting member, install backer block or clinch header nails.

#### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	12'- 11"	Self Weight	Top	13 lb/ft	-	-	-
Uniform	0'	1'- 6"	User Load	Top	60 lb/ft	-	-	-
Uniform	0'- 6 3/4"	12'- 6 3/4"	Smoothed Load	Back	115 lb/ft	306 lb/ft	-	-
Uniform	8'- 6"	12'- 11"	User Load	Top	60 lb/ft	-	-	-
Uniform	12'- 4 1/2"	12'- 11"	E28(i41651)	Top	947 lb/ft	-	1321 lb/ft	-

#### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'	B6(i51506)	851 lb	1745 lb	-11 lb	-
2	12'- 5 1/2"	12'- 11"	14(i41723)	1563 lb	1930 lb	727 lb	-

#### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Lateral stability factor (KL) was based on user preference to use the width of one ply.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

#### PLY TO PLY CONNECTION

- Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.

NAIL ONE PLY TO ANOTHER WITH 3-1/2" SPIRAL NAILS @ 10" O/C,  
STAGGERED IN 2 ROWS

SE047011





Customer: **Gold Park Homes**  
 Job Address: **Pine Valley Ph2**  
 City: **Vaughan**  
 Job Track: **45147**

Job Name: **343075 Ground A + Second A (1,**  
 Level: **Second Floor**  
 Label: **B6 - i51506**  
 Type: **Beam**

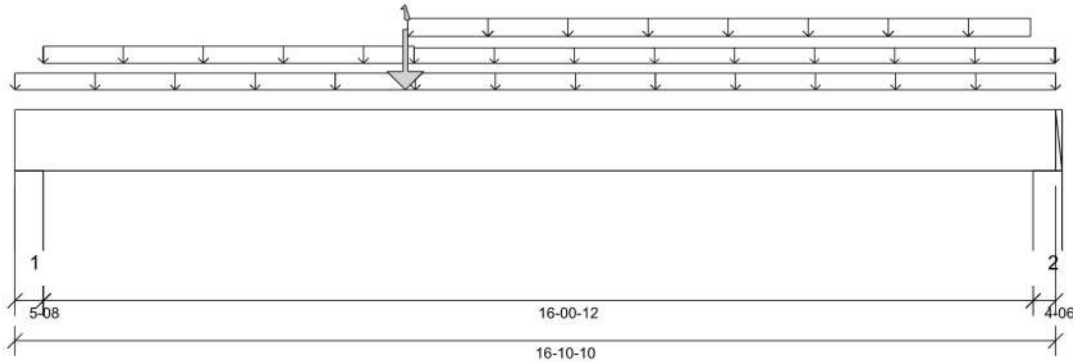
**2 Ply Member**  
**1 3/4" x 11 7/8" 1.55E**  
**TimberStrand® LSL**

Status:  
**Design Passed**

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version  
 8.5.3.233.Update5.15

Report Version: 2021.03.26 04/09/2022 14:06



#### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019 Amendment)  
 Design Methodology: LSD  
 Service Condition: Dry  
 LL Deflection Limit: L/360,  
 TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:  
 Top: 0' Bottom: 10'- 1/2"

#### Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 4 1/2"
- 615 psi Wall @ 16'- 7 1/4"



#### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	6'- 4"	1.25D + 1.5L	1.00	18060 lb ft	26531 lb ft	Passed - 68%
Factored Shear:	1'- 5 3/8"	1.25D + 1.5L	1.00	3253 lb	14414 lb	Passed - 23%
Live Load (LL) Pos. Defl.:	7'- 11 9/16"	L		0.408"	L/360	Passed - L/472
Total Load (TL) Pos. Defl.:	8'- 1 1/16"	D + L		0.714"	L/240	Passed - L/269
Permanent Deflection:	8'- 3 1/8"			-	L/360	Passed - L/648

#### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	5-08	1.25D + 1.5L	1.00	3402 lb		25225 lb	11843 lb	Passed - 29%
2	4-06	1.25D + 1.5L	1.00	2537 lb		20066 lb	9420 lb	Passed - 27%

#### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	16'- 10 5/8"	Self Weight	Top	13 lb/ft	-	-	-
Uniform	-0'	16'- 10 5/8"	FC2 Floor Decking (Plan View Fill)	Top	9 lb/ft	23 lb/ft	-	-
Uniform	0'- 5 1/2"	6'- 5 3/4"	FC2 Floor Decking (Plan View Fill)	Top	10 lb/ft	28 lb/ft	-	-
Uniform	6'- 4 1/2"	16'- 5 3/4"	User Load	Top	60 lb/ft	-	-	-
Uniform	6'- 5 3/4"	16'- 10 5/8"	FC2 Floor Decking (Plan View Fill)	Top	2 lb/ft	6 lb/ft	-	-
Point	6'- 4"	6'- 4"	B5(i51419)	Back	851 lb	1745 lb	-11 lb	-

#### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 5 1/2"	11(i41713)	962 lb	1441 lb	-7 lb	-
2	16'- 6 1/4"	16'- 10 5/8"	E9(i41630)	948 lb	927 lb	-4 lb	-

#### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Lateral stability factor (KL) was based on user preference to use the width of one ply.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

#### PLY TO PLY CONNECTION

- Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.

NAIL ONE PLY TO ANOTHER WITH 3-1/2" SPIRAL NAILS @ 12" O/C,  
 STAGGERED IN 2 ROWS

SE047012





Customer: **Gold Park Homes**  
Job Address: **Pine Valley Ph2**  
City: **Vaughan**  
Job Track: **45147**

Job Name: **343075 Ground A + Second A (1,**  
Level: **Second Floor**  
Label: **B7 - i51464**  
Type: **Beam**

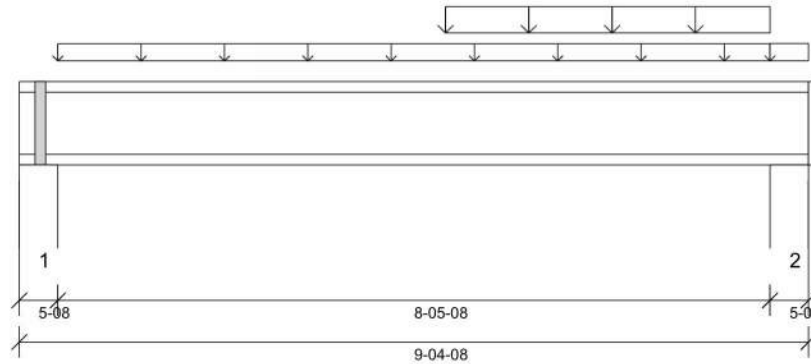
**1 Ply Member**  
**11 7/8" NI-20**

Status:  
**Design  
Passed**

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version  
8.5.3.233.Update5.15

Report Version: 2021.03.26 04/09/2022 14:06



#### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018,  
ABC 2019, OBC 2012 (2019  
Amendment)

Design Methodology: LSD  
Service Condition: Dry  
LL Deflection Limit: L/360,  
TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports  
must be laterally restrained. Top and bottom edges  
of the member must be fully restrained or have the  
following maximum unbraced length:

Top: 0' Bottom: 8'- 5 1/2"

#### Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 4 1/2"
- 615 psi Wall @ 9'



#### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	5'- 9 3/8"	1.25D + 1.5L	1.00	1783 lb ft	5580 lb ft	Passed - 32%
Factored Shear:	8'- 10 15/16"	1.25D + 1.5L	1.00	1080 lb	2240 lb	Passed - 48%
Live Load (LL) Pos. Defl.:	4'- 11 13/16"	L		0.057"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	4'- 11 3/4"	D + L		0.080"	L/240	Passed - L/999

#### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	5'-08	1.25D + 1.5L	1.00	475 lb		2240 lb	8458 lb	Passed - 21%
2	5'-08	1.25D + 1.5L	1.00	1108 lb		2240 lb	8459 lb	Passed - 49%

#### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	9'- 4 1/2"	Self Weight	Top	3 lb/ft	-	-	-
Uniform	0'- 5 1/2"	8'- 11"	FC2 Floor Decking (Plan View Fill)	Top	9 lb/ft	23 lb/ft	-	-
Uniform	5'- 3/4"	8'- 11"	User Load	Top	57 lb/ft	150 lb/ft	-	-
Uniform	8'- 11"	9'- 4 1/2"	FC2 Floor Decking (Plan View Fill)	Top	10 lb/ft	28 lb/ft	-	-

#### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 5 1/2"	12(i41714)	100 lb	230 lb	-	-
2	8'- 11"	9'- 4 1/2"	11(i41713)	224 lb	556 lb	-	-

#### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

SE047013



Customer: **Gold Park Homes**  
Job Address: **Pine Valley Ph2**  
City: **Vaughan**  
Job Track: **45147**

Job Name: **343075 Ground A + Second A (1,**  
Level: **Second Floor**  
Label: **B8 - i51516**  
Type: **Beam**

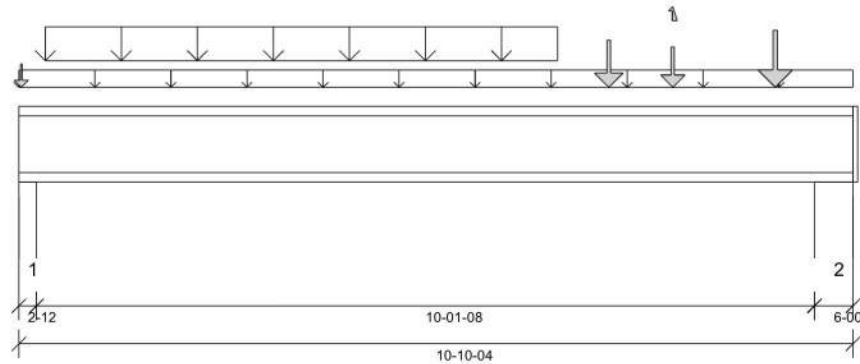
**2 Ply Member**  
**11 7/8" NI-20**

Status:  
**Design Passed**

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version  
8.5.3.233.Update5.15

Report Version: 2021.03.26 04/09/2022 14:07



#### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019 Amendment)

Design Methodology: LSD

Service Condition: Dry

LL Deflection Limit: L/360,

TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 1'- 1 1/2"

#### Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 1 3/4"
- 615 psi Wall @ 10'- 5 1/4"



#### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	5'- 1/8"	1.25D + 1.5L	1.00	8886 lb ft	11160 lb ft	Passed - 80%
Factored Shear:	10'- 4 3/16"	1.25D + 1.5L	1.00	3434 lb	4480 lb	Passed - 77%
Live Load (LL) Pos. Defl.:	5'- 3 3/8"	L		0.179"	L/360	Passed - L/679
Total Load (TL) Pos. Defl.:	5'- 3 3/8"	D + L		0.285"	L/240	Passed - L/426

#### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	2-12	1.25D + 1.5L	1.00	3530 lb		4180 lb	8459 lb	Passed - 84%
2	6-00	1.25D + 1.5L	1.00	3476 lb		4480 lb	18457 lb	Passed - 78%

#### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	10'- 10 1/4"	Self Weight	Top	6 lb/ft	-	-	-
Uniform	0'	10'- 10 1/4"	User Load	Top	60 lb/ft	-	-	-
Uniform	0'- 4 1/8"	7'- 1/8"	Smoothed Load	Front	112 lb/ft	299 lb/ft	-	-
Point	7'- 8 1/8"	7'- 8 1/8"	J2(i51332)	Front	122 lb	325 lb	-	-
Point	8'- 6 1/8"	8'- 6 1/8"	J13(i51327)	Front	97 lb	259/0 lb	-	-
Point	9'- 10 1/8"	9'- 10 1/8"	J13(i51364)	Front	159 lb	424 lb	-	-
Point	0'- 3/8"	0'- 3/8"	J5(i42416)	Back	37 lb	86 lb	-	-

#### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 2 3/4"	10(i41712)	941 lb	1570 lb	-	-
2	10'- 4 1/4"	10'- 10 1/4"	11(i41713)	941 lb	1533 lb	-	-

#### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
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- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

#### PLY TO PLY CONNECTION

- Member design assumed proper ply to ply connection by others. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.

SE047014





Customer: **Gold Park Homes**  
Job Address: **Pine Valley Ph2**  
City: **Vaughan**  
Job Track: **45147**

Job Name: **343075 Ground A + Second A (1,**  
Level: **Second Floor**  
Label: **B9 - i51829**  
Type: **Beam**

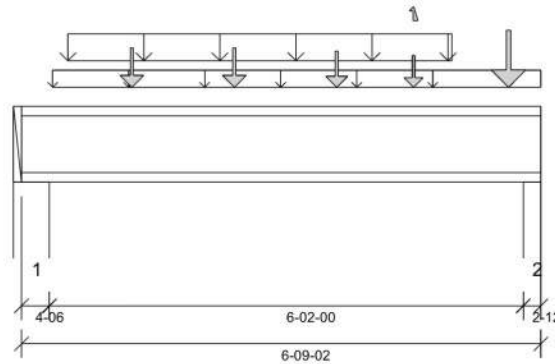
**2 Ply Member**  
**11 7/8" NI-20**

Status:  
**Design Passed**

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update5.15

Report Version: 2021.03.26 04/09/2022 14:07



#### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019 Amendment)

Design Methodology: LSD

Service Condition: Dry

LL Deflection Limit: L/360,

TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 0'- 9 1/2"

#### Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 3 3/8"
- 615 psi Wall @ 6'- 7 3/8"



#### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	3'- 1 1/4"	1.25D + 1.5L	1.00	4555 lb ft	11160 lb ft	Passed - 41%
Factored Shear:	6'- 6 5/16"	1.25D + 1.5L	1.00	3162 lb	4480 lb	Passed - 71%
Live Load (LL) Pos. Defl.:	3'- 5 5/16"	L		0.045"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	3'- 5 5/16"	D + L		0.071"	L/240	Passed - L/999

#### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	4-06	1.25D + 1.5L	1.00	2571 lb		4480 lb	13458 lb	Passed - 57%
2	2-12	1.25D + 1.5L	1.00	3181 lb		4180 lb	8459 lb	Passed - 76%

#### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	6'- 9 1/8"	Self Weight	Top	6 lb/ft	-	-	-
Uniform	0'- 4 7/8"	6'- 9 1/8"	User Load	Top	60 lb/ft	-	-	-
Uniform	0'- 7 1/4"	5'- 7 1/4"	Smoothed Load	Back	88 lb/ft	177 lb/ft	-	-
Point	1'- 5 1/4"	1'- 5 1/4"	J4(i51452)	Front	121 lb	323 lb	-	-
Point	2'- 9 1/4"	2'- 9 1/4"	J4(i51452)	Front	121 lb	323 lb	-	-
Point	4'- 1 1/4"	4'- 1 1/4"	J4(i51351)	Front	106 lb	282 lb	-	-
Point	5'- 1 1/4"	5'- 1 1/4"	J2(i51432)	Front	85 lb	227/0 lb	-	-
Point	6'- 4 1/16"	6'- 4 1/16"	-	Front	219 lb	536 lb	-	-

#### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 4 3/8"	E18(i41621)	686 lb	1128 lb	-	-
2	6'- 6 3/8"	6'- 9 1/8"	10(i41712)	825 lb	1448 lb	-	-

#### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

#### PLY TO PLY CONNECTION

- Member design assumed proper ply to ply connection by others. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.

SE047015



Customer: **Gold Park Homes**  
Job Address: **Pine Valley Ph2**  
City: **Vaughan**  
Job Track: **45147**

Job Name: **343075 Ground A + Second A (1,**  
Level: **Second Floor**  
Label: **B10 - i51801**  
Type: **Beam**

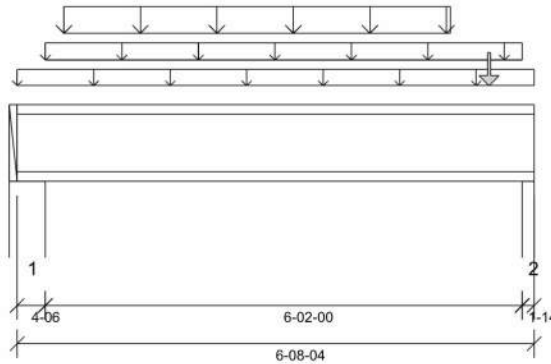
**1 Ply Member**  
**11 7/8" NI-20**

Status:  
**Design  
Passed**

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version  
8.5.3.233.Update5.15

Report Version: 2021.03.26 04/09/2022 14:07



#### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018,  
ABC 2019, OBC 2012 (2019  
Amendment)

Design Methodology: LSD  
Service Condition: Dry  
LL Deflection Limit: L/360,  
TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports  
must be laterally restrained. Top and bottom edges  
of the member must be fully restrained or have the  
following maximum unbraced length:

Top: 0' Bottom: 0'- 9 1/2"

#### Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 3 3/8"
- 615 psi Wall @ 6'- 7 3/8"



#### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	3'- 1 1/4"	1.25D + 1.5L	1.00	2487 lb ft	5580 lb ft	Passed - 45%
Factored Shear:	6'- 6 5/16"	1.25D + 1.5L	1.00	1505 lb	2240 lb	Passed - 67%
Live Load (LL) Pos. Defl.:	3'- 5 3/8"	L		0.044"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	3'- 5 3/8"	D + L		0.079"	L/240	Passed - L/938

#### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	4-06	1.25D + 1.5L	1.00	1471 lb		2240 lb	6729 lb	Passed - 66%
2	1-14	1.25D + 1.5L	1.00	1520 lb		1985 lb	2884 lb	Passed - 77%

#### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	6'- 8 1/4"	Self Weight	Top	3 lb/ft	-	-	-
Uniform	0'	6'- 8 1/4"	FC2 Floor Decking (Plan View Fill)	Top	10 lb/ft	27 lb/ft	-	-
Uniform	0'- 4 3/8"	6'- 6 3/8"	User Load	Top	60 lb/ft	-	-	-
Uniform	0'- 7 1/4"	5'- 7 1/4"	Smoothed Load	Front	86 lb/ft	173 lb/ft	-	-
Point	6'- 1 1/4"	6'- 1 1/4"	J5(i51319)	Front	72 lb	146 lb	-	-

#### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 4 3/8"	E18(i41621)	471 lb	582 lb	-	-
2	6'- 6 3/8"	6'- 8 1/4"	9(i41711)	488 lb	613 lb	-	-

#### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

SE047016





Customer: **Gold Park Homes**  
Job Address: **Pine Valley Ph2**  
City: **Vaughan**  
Job Track: **45147**

Job Name: **343075 Ground A + Second A (1,**  
Level: **Second Floor**  
Label: **B11 - i51448**  
Type: **Beam**

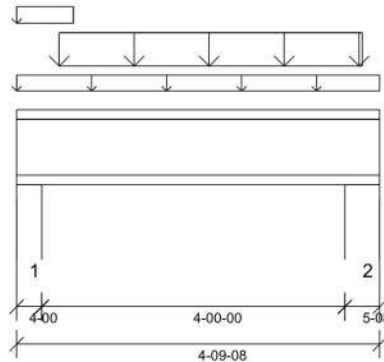
**1 Ply Member**  
**11 7/8" NI-20**

Status:  
**Design Passed**

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update5.15

Report Version: 2021.03.26 04/09/2022 14:08



### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019 Amendment)

Design Methodology: LSD

Service Condition: Dry

LL Deflection Limit: L/360,

TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 1'- 1 1/2"

#### Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 3"
- 615 psi Wall @ 4'- 5"



### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	2'- 6 3/4"	1.25D + 1.5L	1.00	1486 lb ft	5580 lb ft	Passed - 27%
Factored Shear:	4'- 3 15/16"	1.25D + 1.5L	1.00	1411 lb	2240 lb	Passed - 63%
Live Load (LL) Pos. Defl.:	2'- 4 1/8"	L		0.020"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	2'- 4 1/8"	D + L		0.028"	L/240	Passed - L/999

### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	4-00	1.25D + 1.5L	1.00	1230 lb		2240 lb	6151 lb	Passed - 55%
2	5-08	1.25D + 1.5L	1.00	1437 lb		2240 lb	8459 lb	Passed - 64%

### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	4'- 9 1/2"	Self Weight	Top	3 lb/ft	-	-	-
Uniform	0'	4'- 9 1/2"	FC2 Floor Decking (Plan View Fill)	Top	10 lb/ft	26 lb/ft	-	-
Uniform	0'	0'- 9"	User Load	Top	60 lb/ft	-	-	-
Uniform	0'- 6 3/4"	4'- 6 3/4"	Smoothed Load	Front	112 lb/ft	297 lb/ft	-	-

### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 4"	12(i41714)	273 lb	593 lb	-	-
2	4'- 4"	4'- 9 1/2"	13(i41715)	281 lb	724 lb	-	-

### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

SE047017





Customer: **Gold Park Homes**  
 Job Address: **Pine Valley Ph2**  
 City: **Vaughan**  
 Job Track: **45147**

Job Name: **343075 Ground A + Second A (1,**  
 Level: **Second Floor**  
 Label: **B12 - i51816**  
 Type: **Beam**

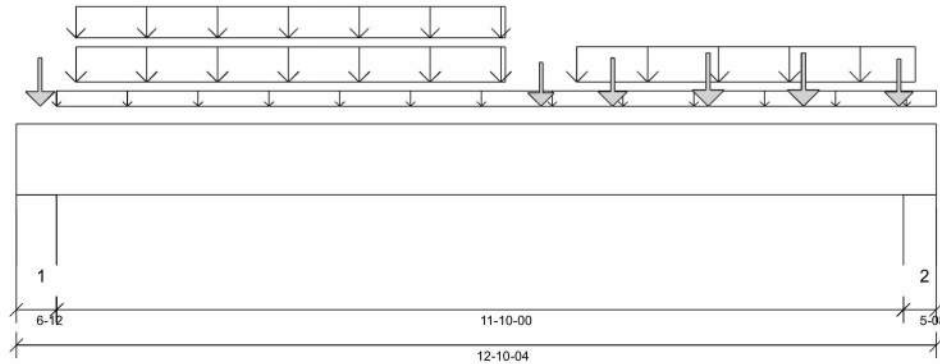
**3 Ply Member**  
**1 3/4" x 11 7/8" 1.55E**  
**TimberStrand® LSL**

Status:  
**Design Passed**

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version  
 8.5.3.233.Update5.15

Report Version: 2021.03.26 04/09/2022 14:08



### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019 Amendment)  
 Design Methodology: LSD  
 Service Condition: Dry  
 LL Deflection Limit: L/360,  
 TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 0'- 9 1/2"

#### Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 5 3/4"
- 615 psi Wall @ 12'- 5 3/4"



### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	6'- 6 3/4"	1.25D + 1.5L	1.00	28900 lb ft	39797 lb ft	Passed - 73%
Factored Shear:	11'- 4 7/8"	1.25D + 1.5L	1.00	9738 lb	21621 lb	Passed - 45%
Live Load (LL) Pos. Defl.:	6'- 5 3/4"	L		0.319"	L/360	Passed - L/444
Total Load (TL) Pos. Defl.:	6'- 5 11/16"	D + L		0.477"	L/240	Passed - L/297
Permanent Deflection:	6'- 5 5/8"			-	L/360	Passed - L/927

### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	6-12	1.25D + 1.5L	1.00	10137 lb		46433 lb	21799 lb	Passed - 47%
2	5-08	1.25D + 1.5L	1.00	9882 lb		37838 lb	17764 lb	Passed - 56%

### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	12'- 10 1/4"	Self Weight	Top	19 lb/ft	-	-	-
Uniform	0'- 6 3/4"	12'- 10 1/4"	User Load	Top	60 lb/ft	-	-	-
Uniform	0'- 10"	6'- 10"	Smoothed Load	Front	167 lb/ft	447 lb/ft	-	-
Uniform	0'- 10"	6'- 10"	Smoothed Load	Back	150 lb/ft	354 lb/ft	-	-
Uniform	7'- 10"	12'- 6 3/4"	Smoothed Load	Front	170 lb/ft	453 lb/ft	-	-
Point	0'- 4"	0'- 4"	J12(i51215)	Back	157 lb	412 lb	-	-
Point	7'- 4"	7'- 4"	J12(i51491)	Back	142 lb	354 lb	-	-
Point	8'- 4"	8'- 4"	J12(i51436)	Back	155 lb	412 lb	-	-
Point	9'- 8"	9'- 8"	J12(i51427)	Back	177 lb	471 lb	-	-
Point	11'	11'	J12(i51427)	Back	177 lb	471 lb	-	-
Point	12'- 4"	12'- 4"	J12(i51375)	Back	150 lb	401 lb	-	-

### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 6 3/4"	7(i41707)	2345 lb	4761 lb	-	-
2	12'- 4 3/4"	12'- 10 1/4"	8(i41708)	2308 lb	4708 lb	-	-

### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Lateral stability factor (KL) was based on user preference to use the width of one ply.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

### PLY TO PLY CONNECTION

- Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.

NAIL ONE PLY TO ANOTHER WITH 3-1/2" SPIRAL NAILS @ 6" O/C,  
 STAGGERED IN 2 ROWS

SE047018



Customer: **Gold Park Homes**  
Job Address: **Pine Valley Ph2**  
City: **Vaughan**  
Job Track: **45147**

Job Name: **343075 Ground A + Second A (1,**  
Level: **Second Floor**  
Label: **B13 - i51853**  
Type: **Beam**

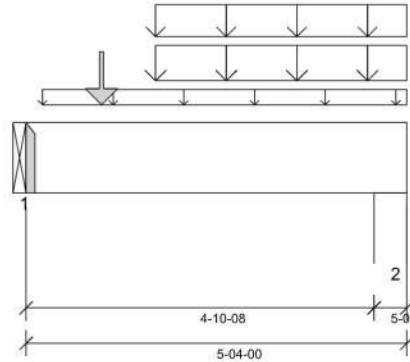
**2 Ply Member**  
**1 3/4" x 11 7/8" 1.55E**  
**TimberStrand® LSL**

Status:  
**Design**  
**Passed**

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version  
8.5.3.233.Update5.15

Report Version: 2021.03.26 04/09/2022 14:08



### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019 Amendment)  
Design Methodology: LSD  
Service Condition: Dry  
LL Deflection Limit: L/360,  
TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 0'- 10 1/4"

#### Factored Resistance of Support Material:

- 769 psi Beam @ 0'
- 615 psi Wall @ 4'- 11 1/2"



### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	2'- 5 3/4"	1.25D + 1.5L	1.00	4739 lb ft	26531 lb ft	Passed - 18%
Factored Neg. Moment:	4'- 11 1/2"	1.25D + 1.5L	1.00	180 lb ft	26531 lb ft	Passed - 1%
Factored Shear:	3'- 10 5/8"	1.25D + 1.5L	1.00	3134 lb	14414 lb	Passed - 22%
Live Load (LL) Pos. Defl.:	2'- 5 11/16"	L		0.013"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	2'- 5 11/16"	D + L		0.020"	L/240	Passed - L/999

### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	1-08	1.25D + 1.5L	1.00	3127 lb		6880 lb	-	Passed - 45%
2	5-08	1.25D + 1.5L	1.00	5021 lb		25225 lb	11843 lb	Passed - 42%

### CONNECTOR INFORMATION

ID	Part No.	Manufacturer	Nailing Requirements			Other Information or Requirement for Reinforcement Accessories
			Top	Face	Member	
1	HGUS410	-	-	-	-	Connector manually specified by the user.

\* Connectors: Refer to manufacturer's specifications, fasteners requirements and installation instruction. Where header fasteners are longer than the width of the supporting member, install backer block or clinch header nails.

### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	5'- 4"	Self Weight	Top	13 lb/ft	-	-	-
Uniform	0'- 2 3/4"	5'- 4"	User Load	Top	60 lb/ft	-	-	-
Uniform	1'- 9 3/4"	5'- 4"	Smoothed Load	Front	188 lb/ft	459 lb/ft	-	-
Uniform	1'- 9 3/4"	5'- 4"	Smoothed Load	Back	150 lb/ft	400 lb/ft	-	-
Point	1'- 11/16"	1'- 11/16"	-	Front	326 lb	831 lb	-	-

### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'	B14(i51738)	743 lb	1452 lb	-	-
2	4'- 10 1/2"	5'- 4"	7(i41707)	1150 lb	2403 lb	-	-

### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Lateral stability factor (KL) was based on user preference to use the width of one ply.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

### PLY TO PLY CONNECTION

- Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.

NAIL ONE PLY TO ANOTHER WITH 3-1/2" SPIRAL NAILS @ 6" O/C,  
STAGGERED IN 2 ROWS

SE047019





Customer: **Gold Park Homes**  
Job Address: **Pine Valley Ph2**  
City: **Vaughan**  
Job Track: **45147**

Job Name: **343075 Ground A + Second A (1,**  
Level: **Second Floor**  
Label: **B14 - i51738**  
Type: **Beam**

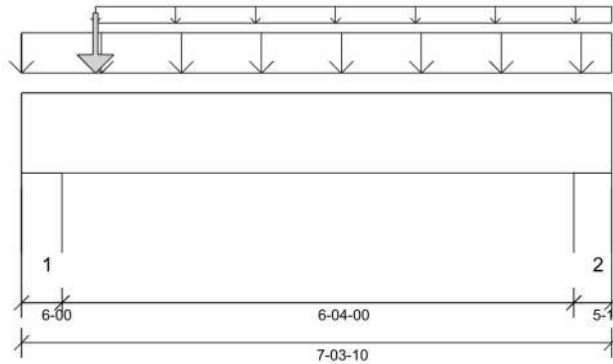
**1 Ply Member**  
**1 3/4" x 11 7/8" 1.55E**  
**TimberStrand® LSL**

Status:  
**Design**  
**Passed**

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version  
8.5.3.233.Update5.15

Report Version: 2021.03.26 04/09/2022 14:09



#### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019 Amendment)

Design Methodology: LSD

Service Condition: Dry

LL Deflection Limit: L/360,

TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 1'- 1 1/2"

#### Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 5"
- 615 psi Wall @ 6'- 11"



#### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	2'- 10 3/8"	1.25D + 1.5L	1.00	4747 lb ft	13266 lb ft	Passed - 36%
Factored Neg. Moment:	0'- 5"	1.25D + 1.5L	1.00	211 lb ft	13266 lb ft	Passed - 2%
Factored Shear:	1'- 5 7/8"	1.25D + 1.5L	1.00	5032 lb	7207 lb	Passed - 70%
Live Load (LL) Pos. Defl.:	3'- 7 1/8"	L		0.050"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	3'- 7 1/16"	D + L		0.070"	L/240	Passed - L/999

#### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	6'-00	1.25D + 1.5L	1.00	6032 lb		13759 lb	6460 lb	Passed - 93%
2	5'-10	1.25D + 1.5L	1.00	3205 lb		12899 lb	6056 lb	Passed - 53%

#### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	7'- 3 5/8"	Self Weight	Top	6 lb/ft	-	-	-
Uniform	0'	7'- 3 5/8"	Smoothed Load	Back	150 lb/ft	401 lb/ft	-	-
Uniform	0'- 11"	7'- 3 5/8"	FC2 Floor Decking (Plan View Fill)	Top	9 lb/ft	24 lb/ft	-	-
Point	0'- 11"	0'- 11"	B13(i51853)	Front	743 lb	1452 lb	-	-

#### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 6"	6(i41704)	1311 lb	2944 lb	-	-
2	6'- 10"	7'- 3 5/8"	5(i41703)	636 lb	1592 lb	-	-

#### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.
- Bearing capacity of member at support 1, 2 was verified for the effect of concentrated load applied near the support. At support 1. Required Load Area: L=3.500", W=1.750". LDF=1.00, Pf=3107 lb, Qr=7262 lb, Result=42.78%.

SE047020



Customer: **Gold Park Homes**  
 Job Address: **Pine Valley Ph2**  
 City: **Vaughan**  
 Job Track: **45147**

Job Name: **343075 Ground A + Second A (1,**  
 Level: **Second Floor**  
 Label: **B15 - i51858**  
 Type: **Beam**

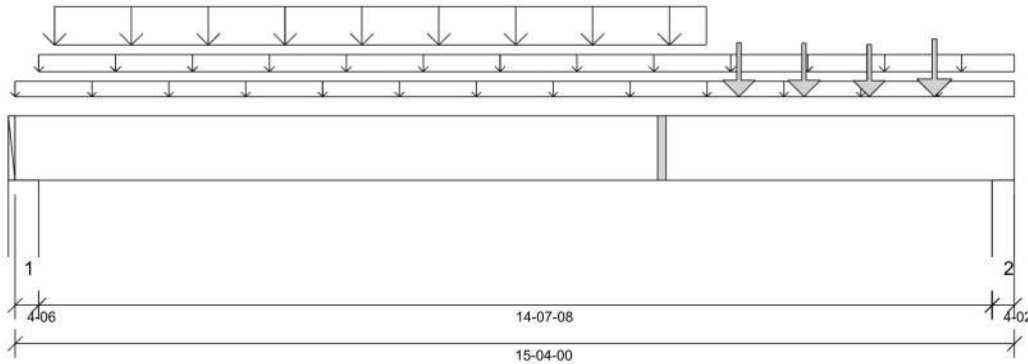
**3 Ply Member**  
**1 3/4" x 11 7/8" 1.55E**  
**TimberStrand® LSL**

Status:  
**Design Passed**

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version  
 8.5.3.233.Update5.15

Report Version: 2021.03.26 04/09/2022 14:09



#### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019 Amendment)  
 Design Methodology: LSD  
 Service Condition: Dry  
 LL Deflection Limit: L/360,  
 TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:  
 Top: 0' Bottom: 1'- 1 1/2"

#### Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 3 3/8"
- 615 psi Wall @ 15'- 7/8"



#### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	7'- 11 15/16"	1.25D + 1.5L	1.00	25118 lb ft	39797 lb ft	Passed - 63%
Factored Shear:	1'- 4 1/4"	1.25D + 1.5L	1.00	6414 lb	21621 lb	Passed - 30%
Live Load (LL) Pos. Defl.:	7'- 8 1/8"	L		0.381"	L/360	Passed - L/460
Total Load (TL) Pos. Defl.:	7'- 8 1/16"	D + L		0.642"	L/240	Passed - L/273
Permanent Deflection:	7'- 7 15/16"			-	L/360	Passed - L/694

#### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	4-06	1.25D + 1.5L	1.00	6573 lb		30098 lb	14130 lb	Passed - 47%
2	4-02	1.25D + 1.5L	1.00	6492 lb		28378 lb	13323 lb	Passed - 49%

#### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	15'- 4"	Self Weight	Top	19 lb/ft	-	-	-
Uniform	0'	15'- 4"	FC2 Floor Decking (Plan View Fill)	Top	7 lb/ft	18 lb/ft	-	-
Uniform	0'- 4 3/8"	15'- 4"	User Load	Top	60 lb/ft	-	-	-
Uniform	0'- 7 1/4"	10'- 7 1/4"	Smoothed Load	Back	184 lb/ft	372 lb/ft	-	-
Point	11'- 1 1/4"	11'- 1 1/4"	J11(i51782)	Back	172 lb	372 lb	-	-
Point	12'- 1 1/4"	12'- 1 1/4"	J11(i51881)	Back	165 lb	372 lb	-	-
Point	13'- 1 1/4"	13'- 1 1/4"	J11(i51767)	Back	149 lb	372 lb	-	-
Point	14'- 1 1/4"	14'- 1 1/4"	J11(i51839)	Back	163 lb	433 lb	-	-

#### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 4 3/8"	E18(i41621)	1934 lb	2773 lb	-	-
2	14'- 11 7/8"	15'- 4"	6(i41704)	1865 lb	2771 lb	-	-

#### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Lateral stability factor (KL) was based on user preference to use the width of one ply.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

#### PLY TO PLY CONNECTION

- Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.

NAIL ONE PLY TO ANOTHER WITH 3-1/2" SPIRAL NAILS @ 6" O/C,  
 STAGGERED IN 2 ROWS

SE047021





Customer: **Gold Park Homes**  
Job Address: **Pine Valley Ph2**  
City: **Vaughan**  
Job Track: **45147**

Job Name: **343075 Ground A + Second A (1,**  
Level: **Ground Floor**  
Label: **B16 - i52309**  
Type: **Beam**

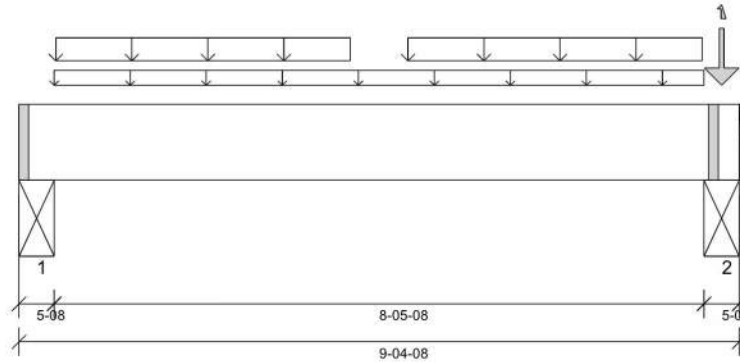
**1 Ply Member**  
**1 3/4" x 11 7/8" 1.55E**  
**TimberStrand® LSL**

Status:  
**Design**  
**Passed**

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version  
8.5.3.233.Update5.15

Report Version: 2021.03.26 04/09/2022 14:10



#### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019 Amendment)  
Design Methodology: LSD  
Service Condition: Dry  
LL Deflection Limit: L/360,  
TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 8'- 5 1/2"

#### Factored Resistance of Support Material:

- 769 psi Beam @ 0'- 4 1/2"
- 769 psi Beam @ 9'



#### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	4'- 1 7/8"	1.25D + 1.5L	1.00	2118 lb ft	13266 lb ft	Passed - 16%
Factored Neg. Moment:	9'	1.25D + 1.5L	1.00	509 lb ft	4119 lb ft	Passed - 12%
Factored Shear:	7'- 11 1/8"	1.25D + 1.5L	1.00	921 lb	7207 lb	Passed - 13%
Live Load (LL) Pos. Defl.:	4'- 7 5/16"	L		0.039"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	4'- 7 3/16"	D + L		0.054"	L/240	Passed - L/999

#### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	5-08	1.25D + 1.5L	1.00	1095 lb		12613 lb	7402 lb	Passed - 15%
2	5-08	1.25D + 1.5L	1.00	4701 lb		12613 lb	7402 lb	Passed - 64%

#### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	9'- 4 1/2"	Self Weight	Top	6 lb/ft	-	-	-
Uniform	0'- 5 1/2"	8'- 11"	FC1 Floor Decking (Plan View Fill)	Top	5 lb/ft	13 lb/ft	-	-
Uniform	0'- 5 3/4"	4'- 3 3/4"	User Load	Top	50 lb/ft	134 lb/ft	-	-
Uniform	5'- 3/4"	8'- 10 3/4"	User Load	Top	50 lb/ft	134 lb/ft	-	-
Point	9'- 1 3/4"	9'- 1 3/4"	11(i41713)	Top	951 lb	1533/0 lb	-	-

#### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 5 1/2"	ST. BEAM (DR.)(i41694)	242 lb	567 lb	-	-
2	8'- 11"	9'- 4 1/2"	ST. BEAM (DR.)(i41696)	1193 lb	2100 lb	-	-

#### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.
- Bearing capacity of member at support 1, 2 was verified for the effect of concentrated load applied near the support. At support 2. Required Load Area: L=1.521", W=1.750". LDF=1.00, Pf=3488 lb, Qr=3488 lb, Result=100.00%.

SE047022





Customer: **Gold Park Homes**  
Job Address: **Pine Valley Ph2**  
City: **Vaughan**  
Job Track: **45147**

Job Name: **343075 Ground A W Sunken M...**  
Level: **Ground Floor**  
Label: **B17 - i60744**  
Type: **Beam**

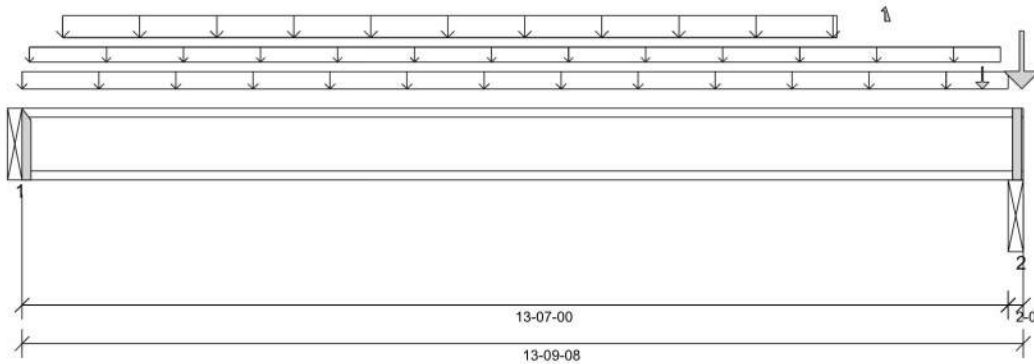
**2 Ply Member**  
**11 7/8" NI-20**

Status:  
**Design Passed**

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update5.15

Report Version: 2021.03.26 04/11/2022 14:45



#### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019 Amendment)

Design Methodology: LSD

Service Condition: Dry

LL Deflection Limit: L/360,

TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 1'- 1 1/2"

#### Factored Resistance of Support Material:

- 769 psi Beam @ 0'
- 769 psi Beam @ 13'- 8"



#### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	6'- 6 3/4"	1.25D + 1.5L	1.00	7099 lb ft	11160 lb ft	Passed - 64%
Factored Neg. Moment:	13'- 8"	1.25D + 1.5L	1.00	116 lb ft	11160 lb ft	Passed - 1%
Factored Shear:	0'- 1/16"	1.25D + 1.5L	1.00	1996 lb	4480 lb	Passed - 45%
Live Load (LL) Pos. Defl.:	6'- 9 1/4"	L		0.193"	L/360	Passed - L/842
Total Load (TL) Pos. Defl.:	6'- 9 7/16"	D + L		0.378"	L/240	Passed - L/431
Permanent Deflection:	6'- 9 5/8"			-	L/360	Passed - L/988

#### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	1-12	1.25D + 1.5L	1.00	1997 lb		3940 lb	-	Passed - 51%
2	2-08	1.25D + 1.5L	1.00	2997 lb		4120 lb	9613 lb	Passed - 73%

#### CONNECTOR INFORMATION

ID	Part No.	Manufacturer	Nailing Requirements			Other Information or Requirement for Reinforcement Accessories
			Top	Face	Member	
1	MIT311.88-2		-	-	-	Connector manually specified by the user.

\* Connectors: Refer to manufacturer's specifications, fasteners requirements and installation instruction. Where header fasteners are longer than the width of the supporting member, install backer block or clinch header nails.

#### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	13'- 9 1/2"	Self Weight	Top	6 lb/ft	-	-	-
Uniform	0'	13'- 7"	User Load	Top	60 lb/ft	-	-	-
Uniform	0'- 1 1/4"	13'- 5 3/4"	FC1 Floor Decking (Plan View Fill)	Top	2 lb/ft	6 lb/ft	-	-
Uniform	0'- 6 3/4"	11'- 2 3/4"	Smoothed Load	Front	42 lb/ft	113 lb/ft	-	-
Point	11'- 10 3/4"	11'- 10 3/4"	J6(i60486)	Front	-10 lb	-	-	-
Point	13'- 2 3/4"	13'- 2 3/4"	J6(i60418)	Front	38 lb	101 lb	-	-
Point	13'- 9 1/4"	13'- 9 1/4"	13(i41715)	Top	238 lb	544 lb	-	-

#### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'	B18(i60749)	720 lb	734 lb	-	-
2	13'- 7"	13'- 9 1/2"	ST. BEAM (DR.)(i41695)	923 lb	1226 lb	-	-

#### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

#### PLY TO PLY CONNECTION

- Member design assumed proper ply to ply connection by others. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.

SE047023



Customer: **Gold Park Homes**  
Job Address: **Pine Valley Ph2**  
City: **Vaughan**  
Job Track: **45147**

Job Name: **343075 Ground A W Sunken M...**  
Level: **Ground Floor**  
Label: **B18 - i60749**  
Type: **Beam**

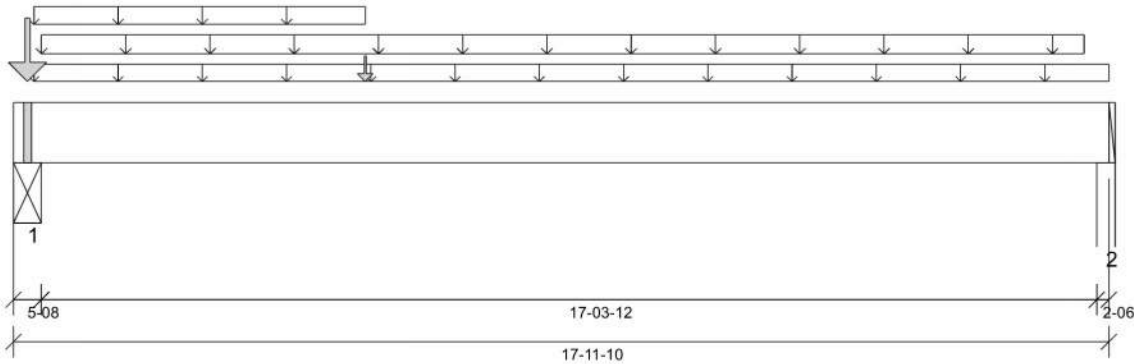
**2 Ply Member**  
**1 3/4" x 11 7/8" 1.55E**  
**TimberStrand® LSL**

Status:  
**Design Passed**

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update5.15

Report Version: 2021.03.26 04/11/2022 14:46



### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019 Amendment)  
Design Methodology: LSD  
Service Condition: Dry  
LL Deflection Limit: L/360,  
TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 11'- 9 1/2"

#### Factored Resistance of Support Material:

- 769 psi Beam @ 0'- 4 1/2"
- 615 psi Wall @ 17'- 10 1/4"



### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	5'- 9 1/4"	1.25D + 1.5L	1.00	11419 lb ft	26531 lb ft	Passed - 43%
Factored Neg. Moment:	0'- 4 1/2"	1.25D + 1.5L	1.00	1497 lb ft	5909 lb ft	Passed - 25%
Factored Shear:	1'- 5 3/8"	1.25D + 1.5L	1.00	2691 lb	14414 lb	Passed - 19%
Live Load (LL) Pos. Defl.:	8'- 7"	L		0.207"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	8'- 8 11/16"	D + L		0.586"	L/240	Passed - L/354
Permanent Deflection:	8'- 9 5/8"			-	L/360	Passed - L/565

### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	5-08	1.25D + 1.5L	1.00	13147 lb		25225 lb	14803 lb	Passed - 89%
2	2-06	1.4D	0.65	1287 lb		7080 lb	3324 lb	Passed - 39%

### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	17'- 11 5/8"	Self Weight	Top	13 lb/ft	-	-	-
Uniform	0'- 4"	17'- 11 5/8"	FC1 Floor Decking (Plan View Fill)	Top	7 lb/ft	19 lb/ft	-	-
Uniform	0'- 4"	5'- 9 1/4"	FC1 Floor Decking (Plan View Fill)	Top	10 lb/ft	28 lb/ft	-	-
Uniform	0'- 5 1/2"	17'- 6 3/4"	User Load	Top	60 lb/ft	-	-	-
Point	5'- 9 1/4"	5'- 9 1/4"	B17(i60744)	Front	720 lb	734 lb	-	-
Point	0'- 2 3/4"	0'- 2 3/4"	7(i41707)	Top	2392 lb	4844 lb	-	-

### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 5 1/2"	ST. BEAM (DR.)(i41698)	3698 lb	5771 lb	-	-
2	17'- 9 1/4"	17'- 11 5/8"	W27(i41610)	891 lb	358 lb	-	-

### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Lateral stability factor (KL) was based on user preference to use the width of one ply.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.
- Bearing capacity of member at support 1, 2 was verified for the effect of concentrated load applied near the support. At support 1. Required Load Area: L=3.038", W=2.750". LDF=1.00, Pf=10256 lb, Q'r=10256 lb, Result=100.00%.

### PLY TO PLY CONNECTION

- Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.

NAIL ONE PLY TO ANOTHER WITH 3-1/2" SPIRAL NAILS @ 12" O/C,  
STAGGERED IN 2 ROWS

SE047024





Customer: **Gold Park Homes**  
Job Address: **Pine Valley Ph2**  
City: **Vaughan**  
Job Track: **45147**

Job Name: **343075 Ground A W Sunken M...**  
Level: **Ground Floor**  
Label: **B19 (LOW) - i55990**  
Type: **Beam**

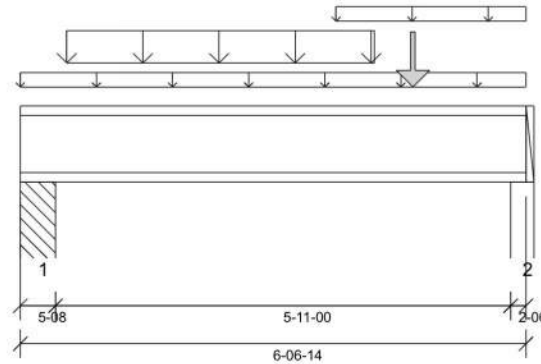
**1 Ply Member**  
**11 7/8" NI-20**

Status:  
**Design Passed**

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update5.15

Report Version: 2021.03.26 04/09/2022 16:09



#### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019 Amendment)

Design Methodology: LSD

Service Condition: Dry

LL Deflection Limit: L/360,

TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 1'- 2"

#### Factored Resistance of Support Material:

- 1334 psi Column @ 0'- 4 1/2"
- 615 psi Wall @ 6'- 5 1/2"



#### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	3'- 1 1/4"	1.25D + 1.5L	1.00	2589 lb ft	5580 lb ft	Passed - 46%
Factored Shear:	0'- 5 9/16"	1.25D + 1.5L	1.00	1558 lb	2240 lb	Passed - 70%
Live Load (LL) Pos. Defl.:	3'- 4 15/16"	L		0.051"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	3'- 4 15/16"	D + L		0.076"	L/240	Passed - L/932

#### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	5-08	1.25D + 1.5L	1.00	1563 lb		2240 lb	18348 lb	Passed - 70%
2	2-06	1.25D + 1.5L	1.00	1374 lb		2045 lb	3653 lb	Passed - 67%

#### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	6'- 6 7/8"	Self Weight	Top	3 lb/ft	-	-	-
Uniform	-0'	6'- 6 7/8"	FC1 Floor Decking (Plan View Fill)	Top	1 lb/ft	3 lb/ft	-	-
Uniform	0'- 7 1/4"	4'- 7 1/4"	Smoothed Load	Front	126 lb/ft	254 lb/ft	-	-
Tapered	4'- 1 1/4"	6'- 6 7/8"	FC1 Floor Decking (Plan View Fill)	Top	-	8 To 4 lb/ft	-	-
Point	5'- 1 1/4"	5'- 1 1/4"	J3(i56058)	Front	157 lb	319 lb	-	-

#### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 5 1/2"	Pt1(i56094)	373 lb	731 lb	-	-
2	6'- 4 1/2"	6'- 6 7/8"	W27(i41610)	327 lb	643 lb	-	-

#### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

SE047025



Customer: **Gold Park Homes**  
Job Address: **Pine Valley Ph2**  
City: **Vaughan**  
Job Track: **45147**

Job Name: **343075 Ground A W Sunken M...**  
Level: **Ground Floor**  
Label: **B20 (LOW) - i56270**  
Type: **Beam**

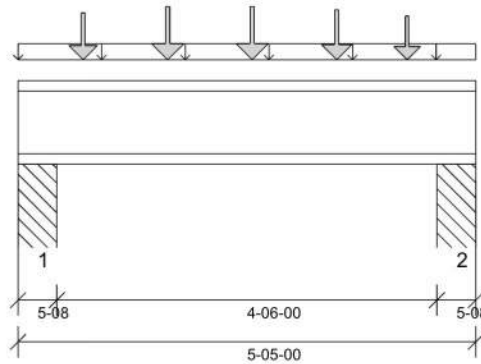
**1 Ply Member**  
**11 7/8" NI-20**

Status:  
**Design Passed**

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update5.15

Report Version: 2021.03.26 04/09/2022 16:10



#### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019 Amendment)

Design Methodology: LSD

Service Condition: Dry

LL Deflection Limit: L/360,

TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 0'- 9 1/2"

#### Factored Resistance of Support Material:

- 1334 psi Column @ 0'- 4 1/2"
- 1334 psi Column @ 5'- 1/2"



#### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	2'- 9 1/4"	1.25D + 1.5L	1.00	1596 lb ft	5580 lb ft	Passed - 29%
Factored Shear:	0'- 5 9/16"	1.25D + 1.5L	1.00	1308 lb	2240 lb	Passed - 58%
Live Load (LL) Pos. Defl.:	2'- 8 9/16"	L		0.023"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	2'- 8 1/2"	D + L		0.034"	L/240	Passed - L/999

#### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	5'-08	1.25D + 1.5L	1.00	1314 lb		2240 lb	18348 lb	Passed - 59%
2	5'-08	1.25D + 1.5L	1.00	1289 lb		2240 lb	18348 lb	Passed - 58%

#### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	5'- 5"	Self Weight	Top	3 lb/ft	-	-	-
Uniform	0'	5'- 5"	FC1 Floor Decking (Plan View Fill)	Top	1 lb/ft	3 lb/ft	-	-
Point	0'- 9 1/4"	0'- 9 1/4"	J2(i56184)	Front	109 lb	223 lb	-	-
Point	1'- 9 1/4"	1'- 9 1/4"	J2(i55985)	Front	131 lb	268 lb	-	-
Point	2'- 9 1/4"	2'- 9 1/4"	J2(i56229)	Front	131 lb	268 lb	-	-
Point	3'- 9 1/4"	3'- 9 1/4"	J2(i56144)	Front	119 lb	245 lb	-	-
Point	4'- 7 1/4"	4'- 7 1/4"	J2(i56070)	Front	92 lb	206 lb	-	-

#### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 5 1/2"	Pt1(i56120)	309 lb	618 lb	-	-
2	4'- 11 1/2"	5'- 5"	Pt1(i56087)	298 lb	611 lb	-	-

#### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

SE047026





Customer: **Gold Park Homes**  
Job Address: **Pine Valley Ph2**  
City: **Vaughan**  
Job Track: **45147**

Job Name: **343075 Ground A + Second A...**  
Level: **Second Floor**  
Label: **B21 - i56366**  
Type: **Beam**

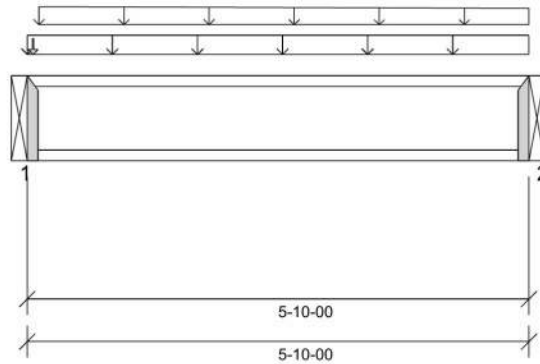
**1 Ply Member**  
**11 7/8" NI-20**

Status:  
**Design Passed**

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update5.15

Report Version: 2021.03.26 04/11/2022 13:41



### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019 Amendment)

Design Methodology: LSD

Service Condition: Dry

LL Deflection Limit: L/360,

TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 5'- 10"

#### Factored Resistance of Support Material:

- 769 psi Beam @ 0'
- 769 psi Beam @ 5'- 10"



### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	2'- 9 7/8"	1.25D + 1.5L	0.71	499 lb ft	3980 lb ft	Passed - 13%
Factored Shear:	0'- 1/16"	1.25D + 1.5L	0.71	359 lb	1598 lb	Passed - 22%
Total Load (TL) Pos. Defl.:	2'- 10 3/4"	D + L		0.015"	L/240	Passed - L/999

### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	1-12	1.25D + 1.5L	0.71	360 lb		1970 lb	-	Passed - 18%
2	1-12	1.25D + 1.5L	0.71	320 lb		1970 lb	-	Passed - 16%

### CONNECTOR INFORMATION

ID	Part No.	Manufacturer	Nailing Requirements			Other Information or Requirement for Reinforcement Accessories
			Top	Face	Member	
1	LT251188		-	-	-	Connector manually specified by the user.
2	LT251188		-	-	-	Connector manually specified by the user.

\* Connectors: Refer to manufacturer's specifications, fasteners requirements and installation instruction. Where header fasteners are longer than the width of the supporting member, install backer block or clinch header nails.

### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	5'- 10"	Self Weight	Top	3 lb/ft	-	-	-
Uniform	0'	5'- 10"	35(i56375)	Top	61 lb/ft	-	-	-
Tapered	0'- 1 5/8"	5'- 10"	FC2 Floor Decking (Plan View Fill)	Top	11 To 3 lb/ft	30 To 8 lb/ft	-	-
Point	0'- 13/16"	0'- 13/16"	FC2 Floor Decking (Plan View Fill)	Top	-	2 lb	-	-

### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'	B23(i56370)	211 lb	68 lb	-	-
2	5'- 10"	5'- 10"	B22(i56350)	202 lb	44 lb	-	-

### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

SE047027



Customer: **Gold Park Homes**  
Job Address: **Pine Valley Ph2**  
City: **Vaughan**  
Job Track: **45147**

Job Name: **343075 Ground A + Second A...**  
Level: **Second Floor**  
Label: **B22 - i56350**  
Type: **Beam**

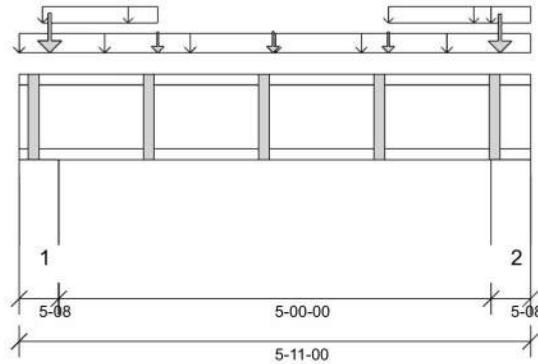
**1 Ply Member**  
**11 7/8" NI-20**

Status:  
**Design Passed**

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update5.15

Report Version: 2021.03.26 04/11/2022 13:41



### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019 Amendment)

Design Methodology: LSD

Service Condition: Dry

LL Deflection Limit: L/360,

TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 1'- 1 1/2"

#### Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 4 1/2"
- 615 psi Wall @ 5'- 6 1/2"



### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	2'- 11 1/4"	1.25D + 1.5L	0.71	456 lb ft	3935 lb ft	Passed - 12%
Factored Shear:	0'- 5 9/16"	1.25D + 1.5L	0.71	323 lb	1580 lb	Passed - 20%
Total Load (TL) Pos. Defl.:	2'- 11 1/2"	D + L		0.012"	L/240	Passed - L/999

### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	5'-08	1.25D + 1.5L	0.71	680 lb		1580 lb	5965 lb	Passed - 43%
2	5'-08	1.25D + 1.5L	0.71	670 lb		1580 lb	5965 lb	Passed - 42%

### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	5'- 11"	Self Weight	Top	3 lb/ft	-	-	-
Uniform	0'	5'- 11"	32(i56373)	Top	61 lb/ft	-	-	-
Uniform	0'- 3 1/4"	1'- 7 1/4"	FC2 Floor Decking (Plan View Fill)	Top	-	4 lb/ft	-	-
Uniform	4'- 3 1/4"	5'- 5 1/2"	FC2 Floor Decking (Plan View Fill)	Top	-	4 lb/ft	-	-
Uniform	5'- 5 1/2"	5'- 11"	FC2 Floor Decking (Plan View Fill)	Top	-	6 lb/ft	-	-
Point	0'- 4 1/4"	0'- 4 1/4"	B23(i56366)	Front	202 lb	44 lb	-	-
Point	5'- 6 3/4"	5'- 6 3/4"	B23(i56372)	Front	199 lb	38 lb	-	-
Point	1'- 7 1/4"	1'- 7 1/4"	Bk1(i56593)	Back	14 lb	38 lb	-	-
Point	2'- 11 1/4"	2'- 11 1/4"	Bk1(i56592)	Back	15 lb	41 lb	-	-
Point	4'- 3 1/4"	4'- 3 1/4"	Bk1(i56589)	Back	14 lb	38 lb	-	-

### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 5 1/2"	31(i56330)	414 lb	109 lb	-	-
2	5'- 5 1/2"	5'- 11"	30(i56333)	411 lb	104 lb	-	-

### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

SE047028





Customer: **Gold Park Homes**  
Job Address: **Pine Valley Ph2**  
City: **Vaughan**  
Job Track: **45147**

Job Name: **343075 Ground A + Second A...**  
Level: **Second Floor**  
Label: **B23 - i56370**  
Type: **Beam**

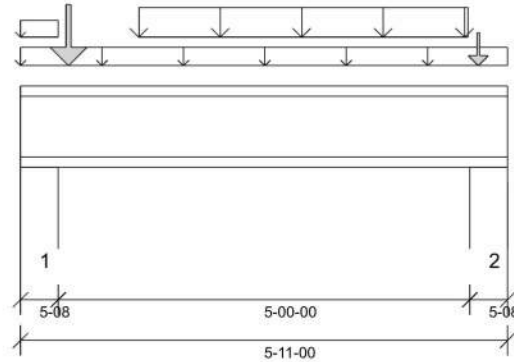
**1 Ply Member**  
**11 7/8" NI-20**

Status:  
**Design Passed**

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update5.15

Report Version: 2021.03.26 04/11/2022 13:41



#### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019 Amendment)

Design Methodology: LSD

Service Condition: Dry

LL Deflection Limit: L/360,

TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 1'- 1 1/2"

#### Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 4 1/2"
- 615 psi Wall @ 5'- 6 1/2"



#### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	3'- 5 1/4"	1.25D + 1.5L	1.00	1633 lb ft	5580 lb ft	Passed - 29%
Factored Shear:	0'- 5 9/16"	1.25D + 1.5L	1.00	1317 lb	2240 lb	Passed - 59%
Live Load (LL) Pos. Defl.:	2'- 11 5/8"	L		0.024"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	2'- 11 5/8"	D + L		0.040"	L/240	Passed - L/999

#### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	5-08	1.25D + 1.5L	1.00	1749 lb		2240 lb	8458 lb	Passed - 78%
2	5-08	1.25D + 1.5L	1.00	1553 lb		2240 lb	8459 lb	Passed - 69%

#### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	5'- 11"	Self Weight	Top	3 lb/ft	-	-	-
Uniform	0'	5'- 11"	34(i56376)	Top	61 lb/ft	-	-	-
Uniform	0'	0'- 5 1/2"	FC2 Floor Decking (Plan View Fill)	Top	-	33 lb/ft	-	-
Uniform	1'- 5 1/4"	5'- 5 1/4"	Smoothed Load	Front	78 lb/ft	207 lb/ft	-	-
Point	0'- 7"	0'- 7"	-	Front	304 lb	315 lb	-	-
Point	5'- 6 3/4"	5'- 6 3/4"	B23(i56372)	Back	199 lb	38 lb	-	-

#### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 5 1/2"	28(i56332)	618 lb	652 lb	-	-
2	5'- 5 1/2"	5'- 11"	29(i56331)	580 lb	551 lb	-	-

#### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

SE047029





Customer: **Gold Park Homes**  
Job Address: **Pine Valley Ph2**  
City: **Vaughan**  
Job Track: **45147**

Job Name: **343075 Ground A + Second A...**  
Level: **Ground Floor**  
Label: **B24 - i57461**  
Type: **Beam**

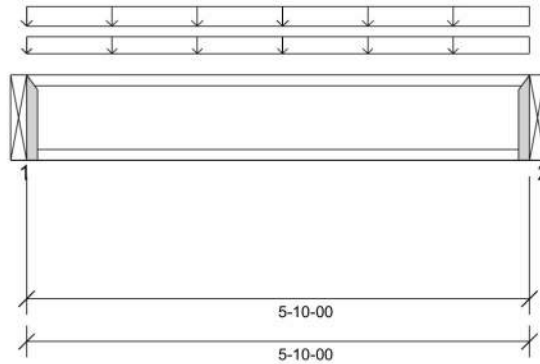
**1 Ply Member**  
**11 7/8" NI-20**

Status:  
**Design Passed**

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update5.15

Report Version: 2021.03.26 04/11/2022 13:42



### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019 Amendment)

Design Methodology: LSD

Service Condition: Dry

LL Deflection Limit: L/360,

TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 5'- 10"

#### Factored Resistance of Support Material:

- 769 psi Beam @ 0'
- 769 psi Beam @ 5'- 10"



### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	2'- 11"	1.25D + 1.5L	0.65	482 lb ft	3627 lb ft	Passed - 13%
Factored Shear:	0'- 1/16"	1.25D + 1.5L	0.65	330 lb	1456 lb	Passed - 23%
Total Load (TL) Pos. Defl.:	2'- 11"	D + L		0.015"	L/240	Passed - L/999

### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	1-12	1.25D + 1.5L	0.65	331 lb		1970 lb	-	Passed - 17%
2	1-12	1.25D + 1.5L	0.65	331 lb		1970 lb	-	Passed - 17%

### CONNECTOR INFORMATION

ID	Part No.	Manufacturer	Nailing Requirements			Other Information or Requirement for Reinforcement Accessories
			Top	Face	Member	
1	LT251188	-	-	-	-	Connector manually specified by the user.
2	LT251188	-	-	-	-	Connector manually specified by the user.

\* Connectors: Refer to manufacturer's specifications, fasteners requirements and installation instruction. Where header fasteners are longer than the width of the supporting member, install backer block or clinch header nails.

### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	5'- 10"	Self Weight	Top	3 lb/ft	-	-	-
Uniform	0'	5'- 10"	23(i56261)	Top	68 lb/ft	-	-	-
Uniform	0'	5'- 10"	FC1 Floor Decking (Plan View Fill)	Top	5 lb/ft	12 lb/ft	-	-

### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'	B26(i57614)	221 lb	37 lb	-	-
2	5'- 10"	5'- 10"	B25(i57580)	221 lb	36 lb	-	-

### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

SE047030



Customer: **Gold Park Homes**  
Job Address: **Pine Valley Ph2**  
City: **Vaughan**  
Job Track: **45147**

Job Name: **343075 Ground A + Second A...**  
Level: **Ground Floor**  
Label: **B25 - i57580**  
Type: **Beam**

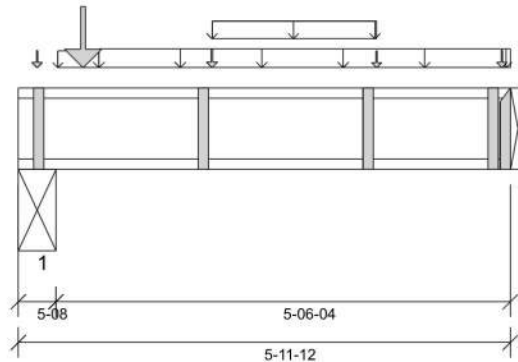
**1 Ply Member**  
**11 7/8" NI-20**

Status:  
**Design Passed**

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update5.15

Report Version: 2021.03.26 04/11/2022 13:42



#### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019 Amendment)

Design Methodology: LSD

Service Condition: Dry

LL Deflection Limit: L/360,

TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 1'- 9 1/2"

#### Factored Resistance of Support Material:

- 769 psi Beam @ 0'- 4 1/2"
- 769 psi Beam @ 5'- 11 3/4"



#### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	2'- 7 1/4"	1.25D + 1.5L	0.76	883 lb ft	4247 lb ft	Passed - 21%
Factored Shear:	0'- 5 9/16"	1.25D + 1.5L	0.76	1397 lb	1705 lb	Passed - 82%
Total Load (TL) Pos. Defl.:	3'- 11/16"	D + L		0.026"	L/240	Passed - L/999

#### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	5-08	1.25D + 1.5L	0.76	1449 lb		1705 lb	8047 lb	Passed - 85%
2	1-12	1.25D + 1.5L	0.76	527 lb		1970 lb	-	Passed - 27%

#### CONNECTOR INFORMATION

ID	Part No.	Manufacturer	Nailing Requirements			Other Information or Requirement for Reinforcement Accessories
			Top	Face	Member	
2	LT251188	-	-	-	-	Connector manually specified by the user.

\* Connectors: Refer to manufacturer's specifications, fasteners requirements and installation instruction. Where header fasteners are longer than the width of the supporting member, install backer block or clinch header nails.

#### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	5'- 11 3/4"	Self Weight	Top	3 lb/ft	-	-	-
Uniform	0'- 5 3/4"	0'- 11 3/4"	FC1 Floor Decking (Plan View Fill)	Top	-	31 lb/ft	-	-
Uniform	0'- 11 3/4"	5'- 11 3/4"	25(i56327)	Top	68 lb/ft	-	-	-
Uniform	2'- 4 1/4"	4'- 4 1/4"	FC1 Floor Decking (Plan View Fill)	Top	12 lb/ft	33 lb/ft	-	-
Point	0'- 9 7/16"	0'- 9 7/16"	-	Front	677 lb	174 lb	-	-
Point	2'- 4 1/4"	2'- 4 1/4"	Bk1(i57597)	Back	17 lb	47 lb	-	-
Point	4'- 4 1/4"	4'- 4 1/4"	Bk1(i57607)	Back	-	26 lb	-	-
Point	5'- 10 1/2"	5'- 10 1/2"	Bk1(i57596)	Back	12 lb	31 lb	-	-
Point	0'- 2 3/4"	0'- 2 3/4"	5(i41703)	Top	23 lb	10 lb	-	-

#### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 5 1/2"	ST. BEAM (DR.)(i41693)	823 lb	256 lb	-	-
2	5'- 11 3/4"	5'- 11 3/4"	B27(i57578)	307 lb	120 lb	-	-

#### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

SE047031





Customer: **Gold Park Homes**  
Job Address: **Pine Valley Ph2**  
City: **Vaughan**  
Job Track: **45147**

Job Name: **343075 Ground A + Second A...**  
Level: **Ground Floor**  
Label: **B26 - i57614**  
Type: **Beam**

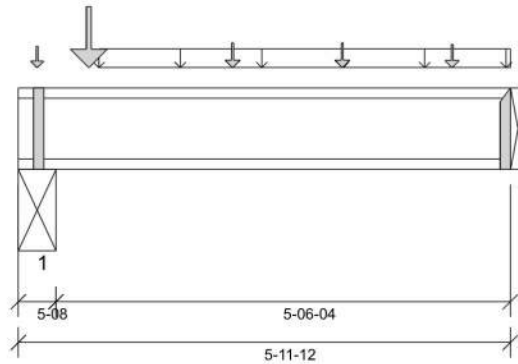
**2 Ply Member**  
**11 7/8" NI-20**

Status:  
**Design Passed**

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update5.15

Report Version: 2021.03.26 04/11/2022 13:43



### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019 Amendment)  
Design Methodology: LSD  
Service Condition: Dry  
LL Deflection Limit: L/360,  
TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 1'- 1 1/2"

#### Factored Resistance of Support Material:

- 769 psi Beam @ 0'- 4 1/2"
- 769 psi Beam @ 5'- 11 3/4"

#### Reinforcement Accessories Required

- Critical Load Web Stiffener @ 0'- 9 3/4"



### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	2'- 7 1/4"	1.25D + 1.5L	1.00	2401 lb ft	11160 lb ft	Passed - 22%
Factored Shear:	0'- 5 9/16"	1.25D + 1.5L	1.00	3191 lb	4480 lb	Passed - 71%
Live Load (LL) Pos. Defl.:	3'- 1 7/16"	L		0.018"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	3'- 1 3/16"	D + L		0.033"	L/240	Passed - L/999

### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	5-08	1.25D + 1.5L	1.00	3549 lb		4480 lb	21148 lb	Passed - 79%
2	1-12	1.25D + 1.5L	1.00	1463 lb		3940 lb	-	Passed - 37%

### CONNECTOR INFORMATION

ID	Part No.	Manufacturer	Nailing Requirements			Other Information or Requirement for Reinforcement Accessories
			Top	Face	Member	
2	MIT311.88-2	-	-	-	-	Connector manually specified by the user.

\* Connectors: Refer to manufacturer's specifications, fasteners requirements and installation instruction. Where header fasteners are longer than the width of the supporting member, install backer block or clinch header nails.

### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	5'- 11 3/4"	Self Weight	Top	6 lb/ft	-	-	-
Uniform	0'- 11 3/4"	5'- 11 3/4"	26(i56328)	Top	68 lb/ft	-	-	-
Point	2'- 7 1/4"	2'- 7 1/4"	J5(i57342)	Front	106 lb	284 lb	-	-
Point	3'- 11 1/4"	3'- 11 1/4"	J5(i57342)	Front	106 lb	284 lb	-	-
Point	5'- 3 1/4"	5'- 3 1/4"	J5(i57584)	Front	90 lb	241 lb	-	-
Point	0'- 2 3/4"	0'- 2 3/4"	5(i41703)	Top	89 lb	161 lb	-	-
Point	0'- 10 1/4"	0'- 10 1/4"	-	Top	958 lb	924 lb	-	-

### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 5 1/2"	ST. BEAM (DR.)(i41693)	1236 lb	1308 lb	-	-
2	5'- 11 3/4"	5'- 11 3/4"	B27(i57578)	490 lb	593 lb	-	-

### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

### PLY TO PLY CONNECTION

- Member design assumed proper ply to ply connection by others. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.

SE047032





Customer: **Gold Park Homes**  
 Job Address: **Pine Valley Ph2**  
 City: **Vaughan**  
 Job Track: **45147**

Job Name: **343075 Ground A + Second A...**  
 Level: **Ground Floor**  
 Label: **B27 - i57578**  
 Type: **Beam**

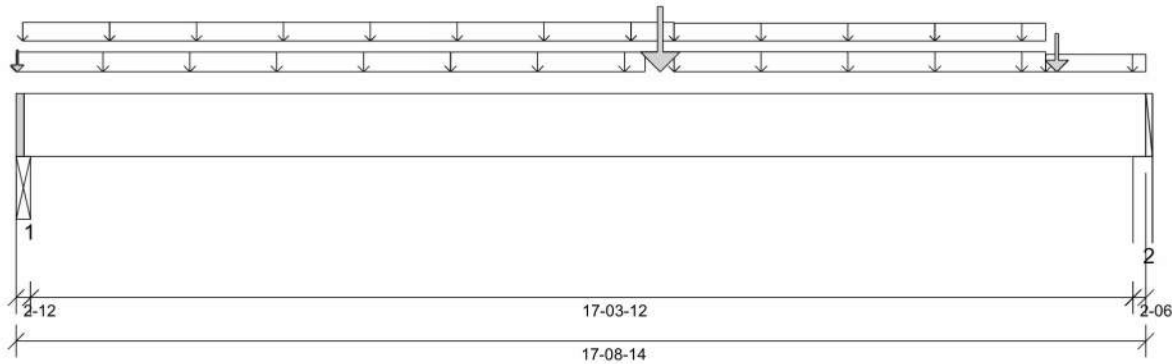
**3 Ply Member**  
**1 3/4" x 11 7/8" 1.55E**  
**TimberStrand® LSL**

Status:  
**Design Passed**

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update5.15

Report Version: 2021.03.26 04/11/2022 13:43



#### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019 Amendment)  
 Design Methodology: LSD  
 Service Condition: Dry  
 LL Deflection Limit: L/360,  
 TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 9'- 8 1/4"

#### Factored Resistance of Support Material:

- 769 psi Beam @ 0'- 1 3/4"
- 615 psi Wall @ 17'- 7 1/2"



#### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	10'- 1 1/4"	1.25D + 1.5L	0.88	19378 lb ft	35059 lb ft	Passed - 55%
Factored Shear:	16'- 6 5/8"	1.25D + 1.5L	0.88	4014 lb	19047 lb	Passed - 21%
Live Load (LL) Pos. Defl.:	9'- 2 5/16"	L		0.248"	L/360	Passed - L/838
Total Load (TL) Pos. Defl.:	9'- 2 1/16"	D + L		0.626"	L/240	Passed - L/331
Permanent Deflection:	9'- 1 7/8"			-	L/360	Passed - L/565

#### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	2-12	1.25D + 1.5L	0.88	3114 lb		16667 lb	9781 lb	Passed - 32%
2	2-06	1.25D + 1.5L	0.88	4091 lb		14394 lb	6758 lb	Passed - 61%

#### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	17'- 8 7/8"	Self Weight	Top	19 lb/ft	-	-	-
Uniform	0'	9'- 10 1/2"	User Load	Top	60 lb/ft	-	-	-
Uniform	0'- 1 1/4"	10'- 4"	FC1 Floor Decking (Plan View Fill)	Top	12 lb/ft	31 lb/ft	-	-
Uniform	10'- 4"	16'- 2"	21(i56260)	Top	68 lb/ft	-	-	-
Uniform	10'- 4"	16'- 2"	FC1 Floor Decking (Plan View Fill)	Top	6 lb/ft	17 lb/ft	-	-
Uniform	16'- 2"	17'- 8 7/8"	FC1 Floor Decking (Plan View Fill)	Top	-	19 lb/ft	-	-
Point	10'- 1 3/8"	10'- 1 3/8"	-	Back	1073 lb	1119 lb	-	-
Point	16'- 4 1/8"	16'- 4 1/8"	-	Back	739 lb	245 lb	-	-
Point	0'- 1/4"	0'- 1/4"	7(i41707)	Top	89 lb	159 lb	-	-

#### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 2 3/4"	ST. BEAM (DR.)(i41698)	1423 lb	926 lb	-	-
2	17'- 6 1/2"	17'- 8 7/8"	W27(i41610)	1980 lb	1041 lb	-	-

#### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Lateral stability factor (KL) was based on user preference to use the width of one ply.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

#### PLY TO PLY CONNECTION

- Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.

NAIL ONE PLY TO ANOTHER WITH 3-1/2" SPIRAL NAILS @ 12" O/C,  
 STAGGERED IN 2 ROWS (TOP LOADED)

SE047033



Customer: **Gold Park Homes**  
 Job Address: **Pine Valley Ph2**  
 City: **Vaughan**  
 Job Track: **45147**

Job Name: **343075 Ground B + Second B (\$**  
 Level: **Second Floor**  
 Label: **B28 - i57585**  
 Type: **Beam**

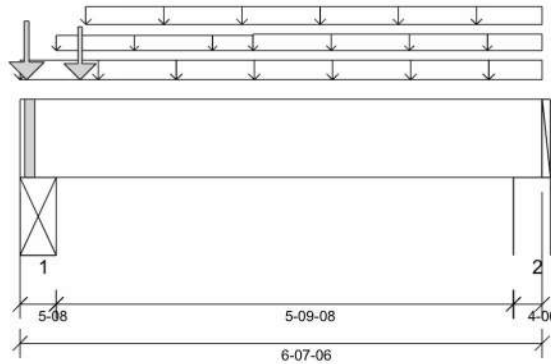
**2 Ply Member**  
**1 3/4" x 11 7/8" 1.55E**  
**TimberStrand® LSL**

Status:  
**Design Passed**

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update5.15

Report Version: 2021.03.26 04/12/2022 14:17



### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019 Amendment)

Design Methodology: LSD

Service Condition: Dry

LL Deflection Limit: L/360,

TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 5'- 9 1/2"

#### Factored Resistance of Support Material:

- 769 psi Beam @ 0'- 4 1/2"
- 769 psi Beam @ 0'- 4 1/2"
- 615 psi Wall @ 6'- 4"



### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	3'- 4 3/4"	1.25D + 1.5L	0.65	944 lb ft	17245 lb ft	Passed - 5%
Factored Neg. Moment:	0'- 4 1/2"	1.25D + 1.5S	1.00	1050 lb ft	12031 lb ft	Passed - 9%
Factored Shear:	1'- 5 3/8"	1.25D + 1.5S + L	1.00	1416 lb	14414 lb	Passed - 10%

### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	5-08	1.25D + 1.5S + L	1.00	7408 lb		25225 lb	14803 lb	Passed - 50%
1	5-08	1.25D + 1.5S + L	1.00	7408 lb		25225 lb	14803 lb	Passed - 50%
2	4-06	1.25D + 1.5L	0.65	715 lb		13043 lb	6123 lb	Passed - 12%

### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	6'- 7 3/8"	Self Weight	Top	13 lb/ft	-	-	-
Uniform	-0'	6'- 7 3/8"	E49(i56158)	Top	101 lb/ft	-	-	-
Uniform	0'- 5 1/2"	2'- 11 7/16"	FC2 Floor Decking (Plan View Fill)	Top	-	6 lb/ft	-	-
Uniform	0'- 10"	6'- 7 3/8"	E49(i56158)	Top	27 lb/ft	-	42 lb/ft	-
Uniform	2'- 11 7/16"	6'- 7 3/8"	FC2 Floor Decking (Plan View Fill)	Top	8 lb/ft	23 lb/ft	-	-
Point	0'- 1"	0'- 1"	-	Top	992 lb	2 lb	1547 lb	-
Point	0'- 9 1/8"	0'- 9 1/8"	E49(i56158)	Top	877 lb	-	1334 lb	-

### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 5 1/2"	ST. BEAM (DR.)(i41725)	2329 lb	35 lb	2982 lb	-
2	6'- 3"	6'- 7 3/8"	E7(i41631)	489 lb	66 lb	142 lb	-

### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Lateral stability factor (KL) was based on user preference to use the width of one ply.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.
- Bearing capacity of member at support 1, 2 was verified for the effect of concentrated load applied near the support. At support 1. Required Load Area: L=1.500", W=3.500". LDF=1.00, Pf=3561 lb, Qr=6880 lb, Result=51.75%.

### PLY TO PLY CONNECTION

- Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.

NAIL ONE PLY TO ANOTHER WITH 3-1/2" SPIRAL NAILS @ 12" O/C,  
 STAGGERED IN 2 ROWS

SE047034





Customer: **Gold Park Homes**  
Job Address: **Pine Valley Ph2**  
City: **Vaughan**  
Job Track: **45147**

Job Name: **343075 Ground B + Second B (\$**  
Level: **Second Floor**  
Label: **B29 - i57606**  
Type: **Beam**

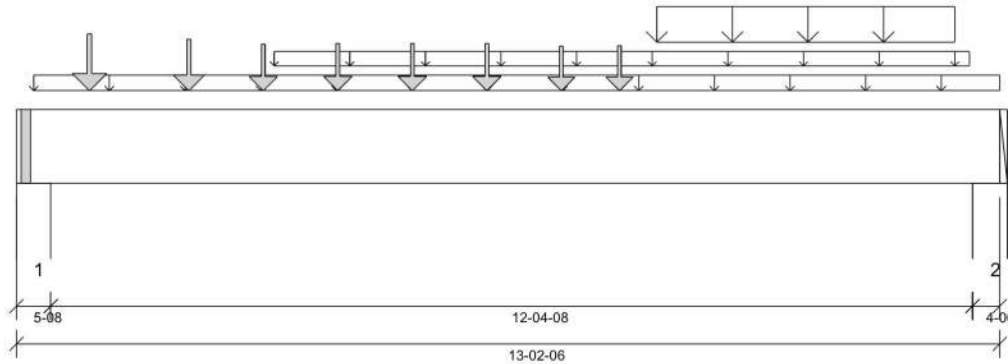
**2 Ply Member**  
**1 3/4" x 11 7/8" 1.55E**  
**TimberStrand® LSL**

Status:  
**Design**  
**Passed**

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version  
8.5.3.233.Update5.15

Report Version: 2021.03.26 04/12/2022 14:17



#### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019 Amendment)  
Design Methodology: LSD  
Service Condition: Dry  
LL Deflection Limit: L/360,  
TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 1'- 1 1/2"

#### Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 4 1/2"
- 615 psi Wall @ 12'- 11"



#### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	6'- 3 3/4"	1.25D + 1.5L	1.00	13446 lb ft	26531 lb ft	Passed - 51%
Factored Shear:	1'- 5 3/8"	1.25D + 1.5L	1.00	4171 lb	14414 lb	Passed - 29%
Live Load (LL) Pos. Defl.:	6'- 7 11/16"	L		0.245"	L/360	Passed - L/606
Total Load (TL) Pos. Defl.:	6'- 7 7/8"	D + L		0.365"	L/240	Passed - L/406

#### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	5'-08"	1.25D + 1.5L	1.00	4240 lb		25225 lb	11842 lb	Passed - 36%
2	4'-06"	1.25D + 1.5L	1.00	4145 lb		20065 lb	9420 lb	Passed - 44%

#### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	13'- 2 3/8"	Self Weight	Top	13 lb/ft	-	-	-
Uniform	0'- 2 3/4"	13'- 2 3/8"	FC2 Floor Decking (Plan View Fill)	Top	7 lb/ft	19 lb/ft	-	-
Uniform	3'- 5 1/2"	12'- 9 1/2"	FC2 Floor Decking (Plan View Fill)	Top	2 lb/ft	-	-	-
Uniform	8'- 7 1/8"	12'- 7 1/8"	Smoothed Load	Front	150 lb/ft	303 lb/ft	-	-
Point	0'- 11 3/4"	0'- 11 3/4"	J1(i57625)	Front	152 lb	404 lb	-	-
Point	2'- 3 3/4"	2'- 3 3/4"	J1(i57586)	Front	133 lb	354 lb	-	-
Point	3'- 3 3/4"	3'- 3 3/4"	J1(i57601)	Front	120 lb	303 lb	-	-
Point	4'- 3 3/4"	4'- 3 3/4"	J1(i57641)	Front	129 lb	303 lb	-	-
Point	5'- 3 3/4"	5'- 3 3/4"	J1(i57617)	Front	130 lb	303 lb	-	-
Point	6'- 3 3/4"	6'- 3 3/4"	J1(i57589)	Front	130 lb	303 lb	-	-
Point	7'- 3 3/4"	7'- 3 3/4"	J1(i57624)	Front	128 lb	270 lb	-	-
Point	8'- 1 1/8"	8'- 1 1/8"	J1(i57695)	Front	134 lb	270 lb	-	-

#### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 5 1/2"	2(i41637)	944 lb	2035 lb	-	-
2	12'- 10"	13'- 2 3/8"	E19(i41641)	998 lb	1937 lb	-	-

#### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Lateral stability factor (KL) was based on user preference to use the width of one ply.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
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- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

#### PLY TO PLY CONNECTION

- Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.

NAIL ONE PLY TO ANOTHER WITH 3-1/2" SPIRAL NAILS @ 10" O/C,  
STAGGERED IN 2 ROWS

SE047035





Customer: **Gold Park Homes**  
Job Address: **Pine Valley Ph2**  
City: **Vaughan**  
Job Track: **45147**

Job Name: **343075 Ground B + Second B (\$**  
Level: **Second Floor**  
Label: **B30 - i58016**  
Type: **Beam**

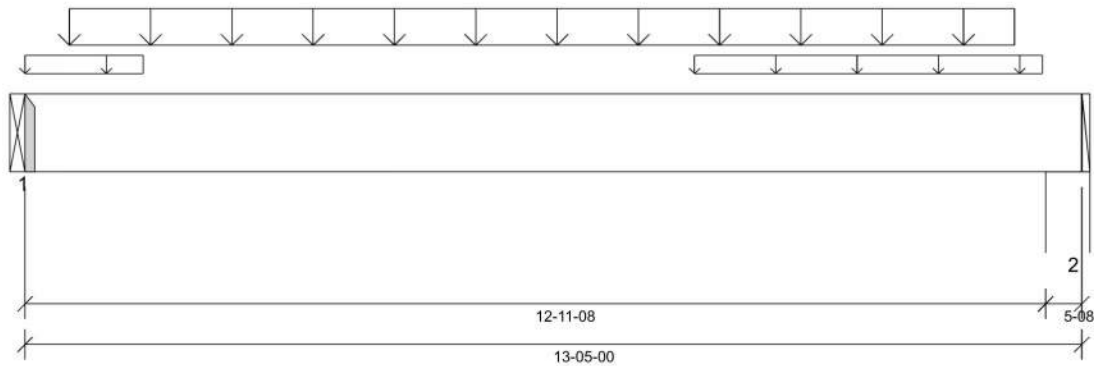
**2 Ply Member**  
**1 3/4" x 11 7/8" 1.55E**  
**TimberStrand® LSL**

Status:  
**Design**  
**Passed**

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version  
8.5.3.233.Update5.15

Report Version: 2021.03.26 04/12/2022 14:17



### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018,  
ABC 2019, OBC 2012 (2019  
Amendment)

Design Methodology: LSD

Service Condition: Dry

LL Deflection Limit: L/360,

TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports  
must be laterally restrained. Top and bottom edges  
of the member must be fully restrained or have the  
following maximum unbraced length:

Top: 0' Bottom: 1'- 1 1/2"

#### Factored Resistance of Support Material:

- 769 psi Beam @ 0'
- 615 psi Wall @ 13'- 1/2"



### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	6'- 6 3/4"	1.25D + 1.5L	1.00	13640 lb ft	26531 lb ft	Passed - 51%
Factored Shear:	11'- 11 5/8"	1.25D + 1.5L	1.00	3944 lb	14414 lb	Passed - 27%
Live Load (LL) Pos. Defl.:	6'- 6 5/16"	L		0.270"	L/360	Passed - L/575
Total Load (TL) Pos. Defl.:	6'- 6 9/16"	D + L		0.399"	L/240	Passed - L/389

### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	1-08	1.25D + 1.5L	1.00	3850 lb		6880 lb	-	Passed - 56%
2	5-08	1.25D + 1.5L	1.00	4052 lb		25225 lb	11842 lb	Passed - 34%

### CONNECTOR INFORMATION

ID	Part No.	Manufacturer	Nailing Requirements			Other Information or Requirement for Reinforcement Accessories
			Top	Face	Member	
1	HGUS410	-	-	-	-	Connector manually specified by the user.

\* Connectors: Refer to manufacturer's specifications, fasteners requirements and installation instruction. Where header fasteners are longer than the width of the supporting member, install backer block or clinch header nails.

### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	13'- 5"	Self Weight	Top	13 lb/ft	-	-	-
Uniform	0'	1'- 6"	User Load	Top	60 lb/ft	-	-	-
Uniform	0'- 6 3/4"	12'- 6 3/4"	Smoothed Load	Back	115 lb/ft	306 lb/ft	-	-
Uniform	8'- 6"	12'- 11"	User Load	Top	60 lb/ft	-	-	-

### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'	B31(i57979)	899 lb	1819 lb	-	-
2	12'- 11 1/2"	13'- 5"	4(i41640)	1009 lb	1860 lb	-	-

### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Lateral stability factor (KL) was based on user preference to use the width of one ply.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

### PLY TO PLY CONNECTION

- Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.

NAIL ONE PLY TO ANOTHER WITH 3-1/2" SPIRAL NAILS @ 10" O/C,  
STAGGERED IN 2 ROWS

SE047036



Customer: **Gold Park Homes**  
 Job Address: **Pine Valley Ph2**  
 City: **Vaughan**  
 Job Track: **45147**

Job Name: **343075 Ground B + Second B (\$,**  
 Level: **Second Floor**  
 Label: **B31 - i57979**  
 Type: **Beam**

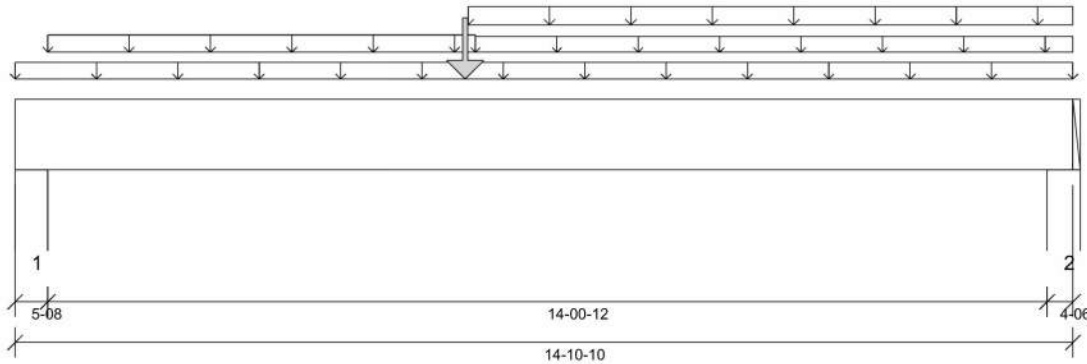
**2 Ply Member**  
**1 3/4" x 11 7/8" 1.55E**  
**TimberStrand® LSL**

Status:  
**Design Passed**

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update5.15

Report Version: 2021.03.26 04/12/2022 14:18



#### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019 Amendment)  
 Design Methodology: LSD  
 Service Condition: Dry  
 LL Deflection Limit: L/360,  
 TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:  
 Top: 0' Bottom: 8'- 1/2"

#### Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 4 1/2"
- 615 psi Wall @ 14'- 7 1/4"



#### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	6'- 4"	1.25D + 1.5L	1.00	16584 lb ft	26531 lb ft	Passed - 63%
Factored Shear:	1'- 5 3/8"	1.25D + 1.5L	1.00	2999 lb	14414 lb	Passed - 21%
Live Load (LL) Pos. Defl.:	7'- 2"	L		0.293"	L/360	Passed - L/576
Total Load (TL) Pos. Defl.:	7'- 2 7/8"	D + L		0.495"	L/240	Passed - L/341
Permanent Deflection:	7'- 4 1/4"			-	L/360	Passed - L/860

#### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	5-08	1.25D + 1.5L	1.00	3143 lb		25225 lb	11842 lb	Passed - 27%
2	4-06	1.25D + 1.5L	1.00	2651 lb		20065 lb	9420 lb	Passed - 28%

#### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	14'- 10 5/8"	Self Weight	Top	13 lb/ft	-	-	-
Uniform	-0'	14'- 10 5/8"	FC2 Floor Decking (Plan View Fill)	Top	8 lb/ft	21 lb/ft	-	-
Uniform	0'- 5 1/2"	6'- 5 3/4"	FC2 Floor Decking (Plan View Fill)	Top	10 lb/ft	28 lb/ft	-	-
Uniform	6'- 4 1/2"	14'- 10 5/8"	User Load	Top	60 lb/ft	-	-	-
Uniform	6'- 5 3/4"	14'- 10 5/8"	FC2 Floor Decking (Plan View Fill)	Top	2 lb/ft	6 lb/ft	-	-
Point	6'- 4"	6'- 4"	B29(i58016)	Back	899 lb	1819 lb	-	-

#### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 5 1/2"	11(i41713)	867 lb	1346 lb	-	-
2	14'- 6 1/4"	14'- 10 5/8"	E45(i56152)	939 lb	1013 lb	-	-

#### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Lateral stability factor (KL) was based on user preference to use the width of one ply.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

#### PLY TO PLY CONNECTION

- Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.

NAIL ONE PLY TO ANOTHER WITH 3-1/2" SPIRAL NAILS @ 12" O/C,  
 STAGGERED IN 2 ROWS

SE047037





Customer: **Gold Park Homes**  
Job Address: **Pine Valley Ph2**  
City: **Vaughan**  
Job Track: **45147**

Job Name: **343075 Ground B + Second B (\$**  
Level: **Second Floor**  
Label: **B32 - i57847**  
Type: **Beam**

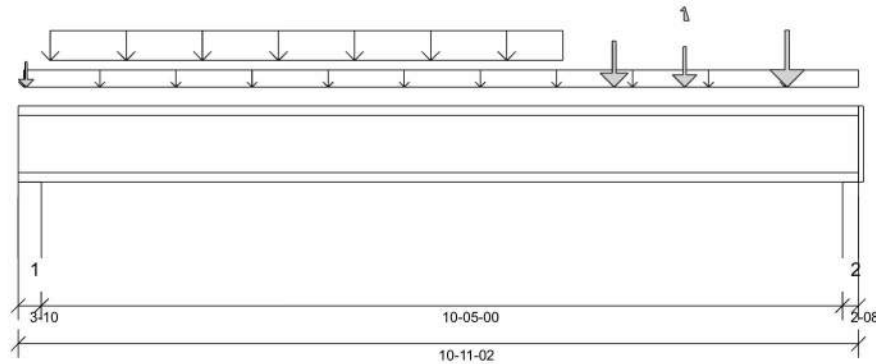
**2 Ply Member**  
**11 7/8" NI-20**

Status:  
**Design Passed**

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update5.15

Report Version: 2021.03.26 04/12/2022 14:18



### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019 Amendment)

Design Methodology: LSD

Service Condition: Dry

LL Deflection Limit: L/360,

TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 1'- 1 1/2"

#### Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 2 5/8"
- 615 psi Wall @ 10'- 9 5/8"



### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	5'- 1"	1.25D + 1.5L	1.00	7735 lb ft	11160 lb ft	Passed - 69%
Factored Shear:	10'- 8 9/16"	1.25D + 1.5L	1.00	2859 lb	4480 lb	Passed - 64%
Live Load (LL) Pos. Defl.:	5'- 6 1/16"	L		0.159"	L/360	Passed - L/786
Total Load (TL) Pos. Defl.:	5'- 6 1/16"	D + L		0.262"	L/240	Passed - L/476

### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	3'-10	1.25D + 1.5L	1.00	3029 lb		4390 lb	11150 lb	Passed - 69%
2	2'-08	1.25D + 1.5L	1.00	2877 lb		4120 lb	7691 lb	Passed - 70%

### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	10'- 11 1/8"	Self Weight	Top	6 lb/ft	-	-	-
Uniform	0'- 7/8"	10'- 11 1/8"	User Load	Top	60 lb/ft	-	-	-
Uniform	0'- 5"	7'- 1"	Smoothed Load	Front	90 lb/ft	239 lb/ft	-	-
Point	7'- 9"	7'- 9"	J4(i57989)	Front	101 lb	270 lb	-	-
Point	8'- 8"	8'- 8"	J2(i57817)	Front	83 lb	222/-1 lb	-	-
Point	10'	10'	J2(i57839)	Front	135 lb	361 lb	-	-
Point	0'- 1 1/4"	0'- 1 1/4"	J5(i57908)	Back	38 lb	90 lb	-	-

### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 3 5/8"	10(i41712)	853 lb	1310 lb	-	-
2	10'- 8 5/8"	10'- 11 1/8"	11(i41713)	818 lb	1235/-1 lb	-	-

### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

### PLY TO PLY CONNECTION

- Member design assumed proper ply to ply connection by others. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.

SE047038





Customer: **Gold Park Homes**  
Job Address: **Pine Valley Ph2**  
City: **Vaughan**  
Job Track: **45147**

Job Name: **343075 Ground C + Second C (9,**  
Level: **Second Floor**  
Label: **B33 (CANT.) - i57892**  
Type: **Beam**

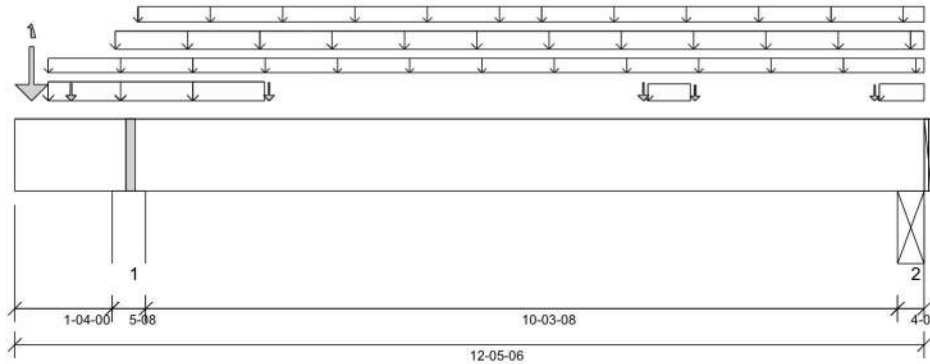
**2 Ply Member**  
**1 3/4" x 11 7/8" 1.55E**  
**TimberStrand® LSL**

Status:  
**Design**  
**Passed**

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version  
8.5.3.233.Update5.15

Report Version: 2021.03.26 04/13/2022 18:22



#### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019 Amendment)  
Design Methodology: LSD  
Service Condition: Dry  
LL Deflection Limit: L/360,  
TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:  
Top: 0' Bottom: 10'- 3 1/2"

#### Factored Resistance of Support Material:

- 615 psi Wall @ 1'- 6 3/4"
- 769 psi Beam @ 12'- 2"



#### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	8'- 1/8"	1.25D + 1.5L	0.65	2865 lb ft	17245 lb ft	Passed - 17%
Factored Neg. Moment:	1'- 6 3/4"	1.25D + 1.5S + L	0.97	5580 lb ft	6770 lb ft	Passed - 82%
Factored Shear:	0'- 4 1/8"	1.25D + 1.5S + L	0.97	4198 lb	13913 lb	Passed - 30%
Live Load (LL) Neg. Defl.:	4'- 6 11/16"	S + 0.5L		0.013"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	7'- 2 7/8"	D + L		0.055"	L/240	Passed - L/999

#### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	5-08	1.25D + 1.5S + L	0.98	7075 lb		24664 lb	11579 lb	Passed - 61%
2	4-06	1.25D + 1.5L	0.65	1380 lb		13042 lb	7654 lb	Passed - 18%

#### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	12'- 5 3/8"	Self Weight	Top	13 lb/ft	-	-	-
Uniform	0'- 5 1/2"	12'- 5 3/8"	User Load	Top	9 lb/ft	-	13 lb/ft	-
Uniform	0'- 5 1/2"	3'- 5"	E53(i56100)	Top	48 lb/ft	-	75 lb/ft	-
Uniform	1'- 4 1/2"	12'- 5 3/8"	E53(i56100)	Top	101 lb/ft	-	-	-
Uniform	1'- 8 1/4"	7'- 2 9/16"	FC2 Floor Decking (Plan View Fill)	Top	11 lb/ft	30 lb/ft	-	-
Uniform	7'- 2 9/16"	12'- 5 3/8"	FC2 Floor Decking (Plan View Fill)	Top	12 lb/ft	32 lb/ft	-	-
Uniform	8'- 8"	9'- 3"	E53(i56100)	Top	-	-	75 lb/ft	-
Uniform	11'- 10"	12'- 5 3/8"	E53(i56100)	Top	-	-	75 lb/ft	-
Point	0'- 2 3/4"	0'- 2 3/4"	-	Front	1129/-14 lb	17/-16 lb	1657 lb	-
Point	0'- 9 1/4"	0'- 9 1/4"	J5(i57678)	Back	75 lb	199 lb	-	-
Point	3'- 5 3/4"	3'- 5 3/4"	E53(i56100)	Top	136 lb	-	197 lb	-
Point	8'- 7 1/4"	8'- 7 1/4"	E53(i56100)	Top	136 lb	-	197 lb	-
Point	9'- 3 3/4"	9'- 3 3/4"	E53(i56100)	Top	67 lb	-	97 lb	-
Point	11'- 9 1/4"	11'- 9 1/4"	E53(i56100)	Top	67 lb	-	97 lb	-

#### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	1'- 4"	1'- 9 1/2"	4(i41640)	2444 lb	395/-18 lb	2467 lb	-
2	12'- 1"	12'- 5 3/8"	ST. BEAM (DR.)(i56149)	869 lb	178/-18 lb	245 lb	-

#### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Lateral stability factor (KL) was based on user preference to use the width of one ply.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- The deflection at the cantilever for either live and/or total loads is less than 3/8" and therefore has been excluded from the deflection ratio considerations.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

#### PLY TO PLY CONNECTION

NAIL ONE PLY TO ANOTHER WITH 3-1/2" SPIRAL NAILS @ 12" O/C, SE047039  
STAGGERED IN 2 ROWS



Customer: **Gold Park Homes**  
Job Address: **Pine Valley Ph2**  
City: **Vaughan**  
Job Track: **45147**

Job Name: **343075 Ground C + Second C (9,**  
Level: **Second Floor**  
Label: **B34 - i57822**  
Type: **Beam**

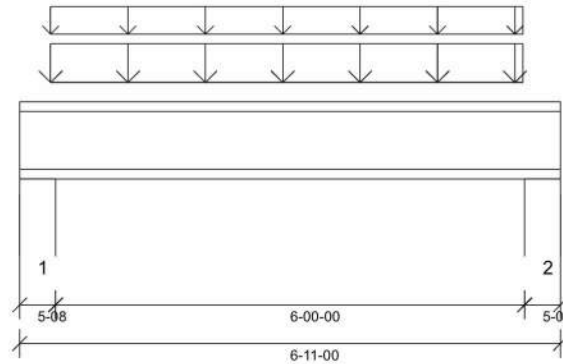
**2 Ply Member**  
**11 7/8" NI-20**

Status:  
**Design  
Passed**

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version  
8.5.3.233.Update5.15

Report Version: 2021.03.26 04/13/2022 18:23



#### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019 Amendment)  
Design Methodology: LSD  
Service Condition: Dry  
LL Deflection Limit: L/360,  
TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 0'- 6"

#### Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 4 1/2"
- 615 psi Wall @ 6'- 6 1/2"



#### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	3'- 1 1/4"	1.25D + 1.5L	1.00	4797 lb ft	11160 lb ft	Passed - 43%
Factored Shear:	6'- 5 7/16"	1.25D + 1.5L	1.00	3227 lb	4480 lb	Passed - 72%
Live Load (LL) Pos. Defl.:	3'- 5 1/2"	L		0.051"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	3'- 5 1/2"	D + L		0.071"	L/240	Passed - L/999

#### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	5'-08"	1.25D + 1.5L	1.00	3521 lb		4480 lb	16918 lb	Passed - 79%
2	5'-08"	1.25D + 1.5L	1.00	3231 lb		4480 lb	16918 lb	Passed - 72%

#### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	6'- 11"	Self Weight	Top	6 lb/ft	-	-	-
Uniform	0'- 4 3/4"	6'- 5 1/4"	Smoothed Load	Front	137 lb/ft	366 lb/ft	-	-
Uniform	0'- 4 3/4"	6'- 5 1/4"	Smoothed Load	Back	74 lb/ft	197 lb/ft	-	-

#### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 5 1/2"	11(i41713)	686 lb	1774 lb	-	-
2	6'- 5 1/2"	6'- 11"	16(i56156)	632 lb	1629 lb	-	-

#### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

#### PLY TO PLY CONNECTION

- Member design assumed proper ply to ply connection by others. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.

SE047040





Customer: **Gold Park Homes**  
Job Address: **Pine Valley Ph2**  
City: **Vaughan**  
Job Track: **45147**

Job Name: **343075 Ground C + Second C (9,**  
Level: **Second Floor**  
Label: **B35 - i57838**  
Type: **Beam**

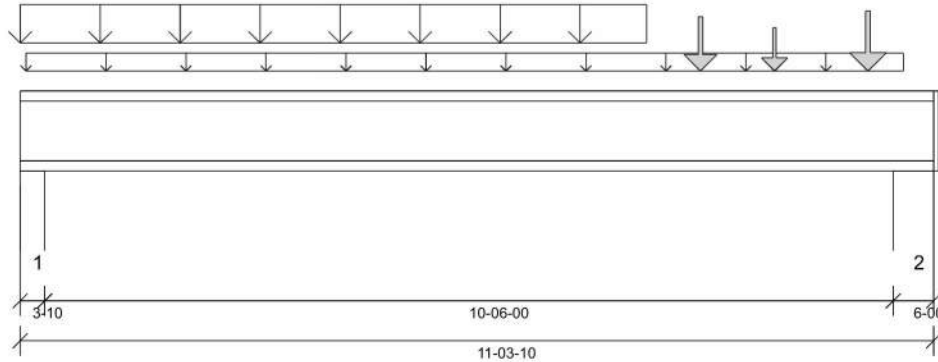
**2 Ply Member**  
**11 7/8" NI-20**

Status:  
**Design Passed**

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version  
8.5.3.233.Update5.15

Report Version: 2021.03.26 04/13/2022 18:23



#### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019 Amendment)

Design Methodology: LSD

Service Condition: Dry

LL Deflection Limit: L/360,

TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 1'- 1 1/2"

#### Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 2 5/8"
- 615 psi Wall @ 10'- 10 5/8"



#### ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	5'- 9"	1.25D + 1.5L	1.00	10092 lb ft	11160 lb ft	Passed - 90%
Factored Shear:	0'- 3 11/16"	1.25D + 1.5L	1.00	4065 lb	4480 lb	Passed - 91%
Live Load (LL) Pos. Defl.:	5'- 6 9/16"	L		0.217"	L/360	Passed - L/581
Total Load (TL) Pos. Defl.:	5'- 6 9/16"	D + L		0.343"	L/240	Passed - L/367

#### SUPPORT AND REACTION INFORMATION

ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	3'-10	1.25D + 1.5L	1.00	4269 lb		4390 lb	11150 lb	Passed - 97%
2	6'-00	1.25D + 1.5L	1.00	3906 lb		4480 lb	18457 lb	Passed - 87%

#### SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	11'- 3 5/8"	Self Weight	Top	6 lb/ft	-	-	-
Uniform	0'	7'- 9"	Smoothed Load	Top	128 lb/ft	342 lb/ft	-	-
Uniform	0'- 7/8"	10'- 11 1/8"	User Load	Top	60 lb/ft	-	-	-
Point	8'- 5"	8'- 5"	J1(i57526)	Front	135 lb	360 lb	-	-
Point	9'- 4"	9'- 4"	J12(i57866)	Front	97 lb	259 lb	-	-
Point	10'- 5 7/8"	10'- 5 7/8"	J12(i57864)	Front	155 lb	412 lb	-	-

#### UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 3 5/8"	10(i41712)	1094 lb	1946 lb	-	-
2	10'- 9 5/8"	11'- 3 5/8"	11(i41713)	1011 lb	1750 lb	-	-

#### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

#### PLY TO PLY CONNECTION

- Member design assumed proper ply to ply connection by others. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.

SE047041



## Maximum Floor Spans – M3.1, L/360

### Design Criteria

Spans:	Simple span
Loads:	Live load = 40 psf and dead load = 20 psf
Deflection limits:	L/360 under live load and L/240 under total load
Sheathing:	23/32 in. nailed-glued oriented strand board (OSB) sheathing



### Maximum Floor Spans

Joist depth	Joist series	Bare On centre spacing				1/2 in. gypsum ceiling On centre spacing			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
9-1/2"	NI-20	15'-9"	14'-10"	14'-4"	13'-5"	16'-2"	15'-4"	14'-6"	13'-5"
	NI-40x	16'-10"	15'-10"	15'-3"	14'-8"	17'-2"	16'-3"	15'-8"	14'-11"
	NI-60	16'-11"	16'-0"	15'-5"	14'-9"	17'-4"	16'-4"	15'-9"	15'-2"
	NI-80	18'-0"	16'-11"	16'-3"	15'-7"	18'-5"	17'-3"	16'-7"	15'-11"
11-7/8"	NI-20	17'-8"	16'-8"	16'-1"	15'-6"	18'-3"	17'-3"	16'-7"	16'-0"
	NI-40x	19'-1"	17'-9"	17'-1"	16'-5"	19'-8"	18'-3"	17'-6"	16'-10"
	NI-60	19'-4"	17'-11"	17'-3"	16'-7"	19'-11"	18'-6"	17'-8"	17'-0"
	NI-80	20'-9"	19'-2"	18'-3"	17'-5"	21'-3"	19'-8"	18'-9"	17'-10"
	NI-90	21'-2"	19'-7"	18'-8"	17'-9"	21'-8"	20'-1"	19'-1"	18'-1"
14"	NI-40x	21'-2"	19'-7"	18'-8"	17'-9"	21'-10"	20'-3"	19'-4"	18'-4"
	NI-60	21'-6"	19'-11"	19'-0"	18'-0"	22'-2"	20'-7"	19'-8"	18'-8"
	NI-80	23'-1"	21'-4"	20'-3"	19'-3"	23'-8"	21'-11"	20'-10"	19'-9"
	NI-90	23'-6"	21'-9"	20'-8"	19'-7"	24'-1"	22'-4"	21'-3"	20'-1"
16"	NI-60	23'-5"	21'-8"	20'-8"	19'-7"	24'-2"	22'-5"	21'-5"	20'-4"
	NI-80	25'-1"	23'-2"	22'-1"	20'-11"	25'-9"	23'-10"	22'-9"	21'-6"
	NI-90	25'-7"	23'-7"	22'-6"	21'-3"	26'-3"	24'-3"	23'-1"	21'-11"

Joist depth	Joist series	Mid-span blocking with 1x4 inch strap On centre spacing				Mid-span blocking and 1/2 in. gypsum ceiling On centre spacing			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
9-1/2"	NI-20	17'-1"	15'-5"	14'-6"	13'-5"	17'-1"	15'-5"	14'-6"	13'-5"
	NI-40x	18'-6"	17'-5"	16'-7"	14'-11"	19'-0"	17'-8"	16'-7"	14'-11"
	NI-60	18'-9"	17'-7"	16'-10"	15'-7"	19'-2"	17'-11"	16'-10"	15'-7"
	NI-80	20'-0"	18'-7"	17'-10"	17'-1"	20'-6"	19'-1"	18'-2"	17'-5"
11-7/8"	NI-20	20'-1"	18'-8"	17'-6"	16'-1"	20'-7"	18'-8"	17'-6"	16'-1"
	NI-40x	21'-8"	20'-2"	19'-0"	17'-0"	22'-3"	20'-9"	19'-0"	17'-0"
	NI-60	21'-11"	20'-5"	19'-6"	18'-6"	22'-6"	21'-0"	20'-1"	18'-8"
	NI-80	23'-5"	21'-9"	20'-9"	19'-8"	23'-11"	22'-3"	21'-3"	20'-2"
	NI-90	23'-11"	22'-2"	21'-1"	20'-0"	24'-4"	22'-8"	21'-8"	20'-6"
14"	NI-40x	24'-3"	22'-7"	20'-11"	18'-8"	24'-11"	22'-11"	20'-11"	18'-8"
	NI-60	24'-8"	22'-11"	21'-10"	20'-8"	25'-3"	23'-7"	22'-7"	21'-4"
	NI-80	26'-3"	24'-5"	23'-3"	22'-0"	26'-10"	25'-0"	23'-10"	22'-7"
	NI-90	26'-9"	24'-10"	23'-8"	22'-5"	27'-4"	25'-5"	24'-3"	22'-11"
16"	NI-60	27'-1"	25'-2"	24'-0"	22'-9"	27'-9"	26'-0"	24'-10"	23'-1"
	NI-80	28'-10"	26'-10"	25'-6"	24'-2"	29'-6"	27'-6"	26'-3"	24'-10"
	NI-90	29'-5"	27'-3"	26'-0"	24'-6"	30'-0"	27'-11"	26'-8"	25'-2"

### Notes:

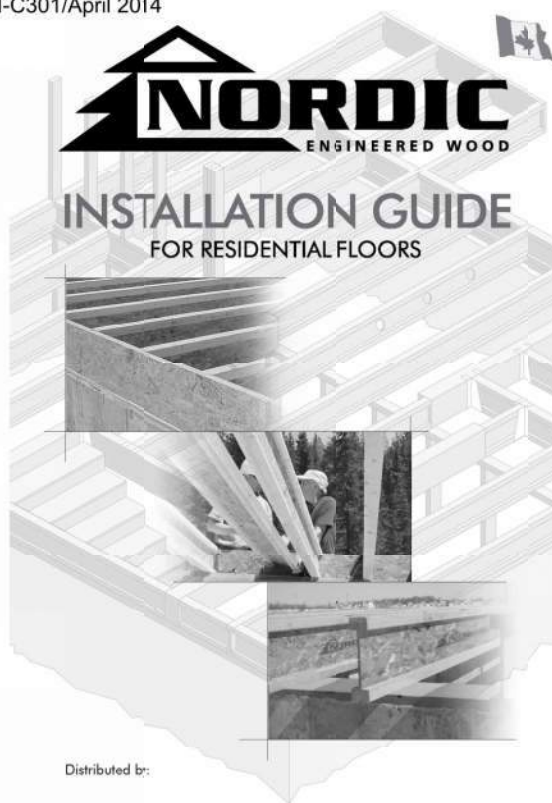
- The tabulated clear spans are based on CSA O86-14 and NBC 2015, and are applicable to residential floor construction meeting the above design criteria.
- For multiple-span applications, the end spans shall be 40% or more of the adjacent span.
- Minimum bearing length shall be 1-3/4 inch for end bearings, and 3-1/2 inches for intermediate bearings.
- Bearing stiffeners are not required when I-joists are used in accordance with this table, except as required for hangers.
- Nordic I-joists are listed in CCMC Evaluation Report 13032-R and APA Product Report PR-L274C.

The construction details for residential designs are prone to changes.

Details released after April 2014 supersedes N-C301

Installation must comply with latest documentation on I-Joist and other Nordic products from the <http://nordic.ca/>

This document does not constitute a record of the structural integrity of the building nor suitability of the design assumptions made. Nordic Structures is responsible only for the structural adequacy of its component based on the design criteria and loadings shown on the calculation sheets.



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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.

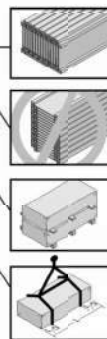
### Avoid Accidents by Following these Important Guidelines:

1. Brace and nail each I-joist as it is installed, using hangers, blocking panels, rim board, and/or cross-bridging 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 flange of the I-joists. Until this sheathing is applied, temporary bracing, often 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 1 foot 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 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 closure panels, rim board, or cross-bridging.
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.

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.

## STORAGE AND HANDLING GUIDELINES

1. Bundle wrap and tie up securely when not stored in a controlled environment.
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 flatwise.
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 CRUTY TO REPAIR A DAMAGED I-JOIST.

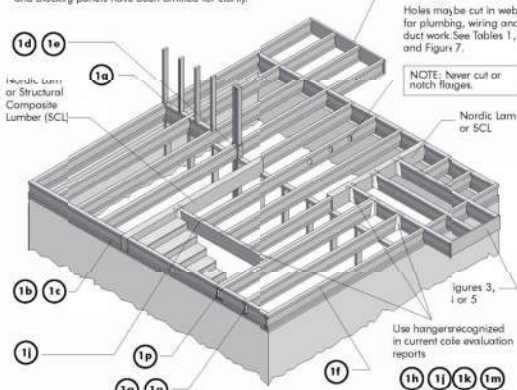


## INSTALLING NORDIC I-JOISTS

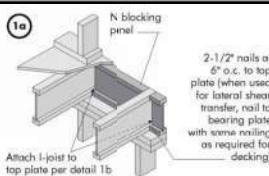
1. Before laying out floor system components, verify that I-joist flange widths match hanger widths. If not contact your supplier.
2. Except for cutting to length, I-joist flanges should **never** be cut, drilled, or notched.
3. Install I-joists so that top and bottom flanges are within 1/2 inch of true vertical alignment.
4. I-joists must be anchored securely to supports before floor sheathing is attached, and supports for multiple-span joists must 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 load 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 squash 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 **must 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 structure, the gypsum wallboard ceiling provides this lateral support. Until the final finished ceiling is applied, temporary bracing or struts 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 minimize squeaks. Blocking is not required under structural finish flooring, such as wood strip flooring or if a separate underlayment layer is installed.
15. Nail spacing: Spacing 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 FLOOR FRAMING AND CONSTRUCTION DETAILS

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

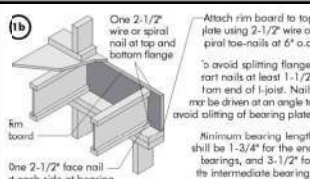


All nails shown in the above details are assumed to be common wire nails unless otherwise noted. 3" (0.122" dia.) common spiral nails may be substituted for 2-1/2" (0.128" dia.) common wire nails. Framing lumber assumed to be Spruce-Pine-Fir No. 2 or better. Individual components not shown to scale for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



Blocking Panel or Rim Joist	Maximum Factored Uniform Vertical Load* (plf)
Ni Joists	3,300

\*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.



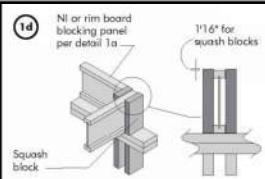
Blocking Panel or Rim Joist	Maximum Factored Uniform Vertical Load* (plf)
1-1/8" Rim Board Plus	8,090

\*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.



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.



Pair of Squash Blocks	Maximum Factored Uniform Vertical Load* (plf)
2x Lumber	5,500
1-1/8" Rim Board Plus	4,300

\*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.



The construction details for residential designs are prone to changes.

Details released after April 2014 supersedes N-C301

Installation must comply with latest documentation on I-Joist and other Nordic products from the <http://nordic.ca/>

This document does not constitute a record of the structural integrity of the building nor suitability of the design assumptions made. Nordic Structures is responsible only for the structural adequacy of its component based on the design criteria and loadings shown on the calculation sheets.

## MAXIMUM FLOOR SPANS

- 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. The ultimate limit states are based on the factored loads of 1.5L + 1.25D. The serviceability limit states include 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.
- 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. Adhesive shall meet the requirements given in CGS-71.26 Standard. 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.
- Minimum bearing length shall be 1-3/4 inches for the end bearings, and 3-1/2 inches for the intermediate 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 uniform loads, an engineering analysis may be required based on the use of the design properties.
- Tables are based on Lint States Design per CAN/CSA C86-09 Standard, and NBC 2010.
- SI units conversion: 1 inch = 25.4 mm  
1 foot = 0.305 m

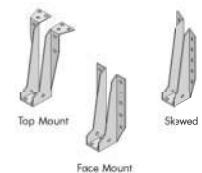
## MAXIMUM FLOOR SPANS FOR NORDIC I-JOISTS SIMPLE AND MULTIPLE SPANS

Joist Depth	Joist Series	Simple spans				Multiple spans			
		On centre spacing				On centre spacing			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
9-1/2"	Ni-20	15-1"	14-2"	13-5"	13-5"	16-3"	15-4"	14-10"	14-7"
	Ni-40	14-1"	13-2"	12-5"	12-5"	15-6"	14-6"	13-10"	13-6"
	Ni-60	16-3"	15-4"	14-10"	14-11"	17-7"	16-7"	16-0"	16-6"
	Ni-70	17-1"	16-1"	15-6"	15-7"	18-7"	17-4"	16-9"	17-2"
11-7/8"	Ni-20	17-3"	16-3"	15-8"	15-9"	18-10"	17-6"	16-11"	17-5"
	Ni-40x	16-11"	15-0"	14-5"	14-6"	17-3"	16-8"	16-8"	16-7"
	Ni-60	18-11"	17-0"	16-5"	16-6"	20-0"	18-6"	17-9"	17-7"
	Ni-70	19-4"	18-0"	17-4"	17-5"	21-6"	19-11"	19-0"	19-8"
14"	Ni-20	19-9"	18-3"	17-6"	17-7"	21-9"	20-2"	19-3"	19-11"
	Ni-40	20-2"	18-7"	17-10"	17-11"	22-3"	20-7"	19-8"	19-9"
	Ni-60	20-4"	18-9"	17-11"	18-0"	22-5"	20-8"	19-10"	20-4"
	Ni-70	20-5"	19-11"	18-1"	18-2"	22-7"	20-11"	20-0"	20-10"
16"	Ni-20	21-7"	20-0"	19-1"	19-2"	23-10"	22-1"	21-1"	21-10"
	Ni-40	21-11"	20-3"	19-4"	19-5"	24-3"	22-5"	21-5"	22-2"
	Ni-60	22-5"	20-8"	19-9"	19-9"	24-9"	22-10"	21-10"	21-10"
	Ni-70	22-7"	21-11"	19-11"	20-0"	25-0"	23-1"	22-0"	22-9"
18"	Ni-20	22-7"	21-11"	20-0"	20-1"	25-0"	23-1"	22-0"	22-9"
	Ni-40	23-6"	21-9"	20-9"	20-10"	26-0"	24-0"	22-11"	23-9"
	Ni-60	23-11"	22-1"	21-1"	21-2"	26-5"	24-5"	23-3"	24-1"
	Ni-70	24-5"	22-6"	21-5"	21-6"	26-11"	24-10"	23-9"	23-9"
20"	Ni-20	24-8"	22-9"	21-9"	21-10"	27-3"	25-2"	24-0"	24-10"
	Ni-40	24-8"	22-9"	21-9"	21-10"	27-3"	25-2"	24-0"	24-10"

CCAC EVALUATION REPORT 13032-R

## 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 maximum spans.
- Web stiffeners are required when the sides of the hangers do not laterally brace the top flange of the I-joist.



## WEB STIFFENER

### RECOMMENDATIONS:

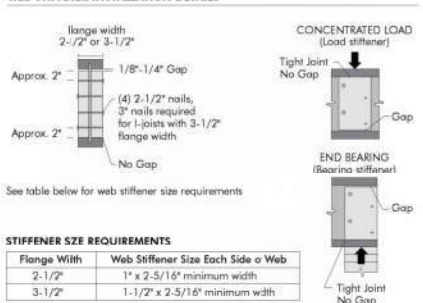
■ A **bearing stiffener** is required in all engineered applications with factored reactions greater than those in the I-joist properties table found in the I-joist Construction Guide (C101). The gap between the stiffener and the flange is at the top.

■ A **bearing stiffener** is required when the I-joist is supported in hanger and the sides of the hanger do not extend up to, and support, the top flange. The gap between the stiffener and the 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.

SI units conversion: 1 inch = 25.4 mm

### FIGURE 2 WEB STIFFENER INSTALLATION DETAILS



### 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

Ni-20	Ni-40x	Ni-60	Ni-70	Ni-80	Ni-90	Ni-90x
5-PF No. 2	1950 MSR	2100F MSR	1950F MSR	2100F MSR	2400F MSR	NPS Lumber
33 pieces per unit	33 pieces per unit	33 pieces per unit	33 pieces per unit	23 pieces per unit	23 pieces per unit	2 pieces per unit

Chantiers Chibougamau Ltd. harvests its own trees, which enables Nordic products to adhere to strict quality control procedures throughout the manufacturing process. Every phase of the operation, from forest to the finished product, reflects our commitment to quality.

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



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

**11** Use single I-joist for load up to 3,300 plf, double I-joists for loads up to 1,600 plf (filler block not required). Attach I-joist to top plate using 2-1/2" nails at 6" o.c.

Provide backer for siding attachment unless nailable sheathing is used.

Wall sheathing, as required.

Rim board may be used in lieu of I-joists. Backer is not required when rim board is used. Tracing per code shall be carried to the foundation.

**12** Load bearing wall above shall align vertically with the bearing below. Other conditions, such as offset bearing walls, are not covered in this detail.

Blocking required over all interior supports under load-bearing walls or when the wall is not continuous over support.

Joist attachment per detail 1b

2-1/2" nails at 6" o.c. top plate

Ni blocking panel per detail 1a

**13** Backer block (use if hanger load exceeds 360 lbs) Before installing backer block to a double I-joist, drive three additional 3" nails through the webs and filler block when the backer block will fit. Clinch. Install backer right to top flange. Use twelve 3" nails, clinched when possible. Maximum factored resistance for hanger for this detail = 1,620 lbs.

Double I-joist header

Top- or face-mount hanger

Filler block per detail 1p

Note: Unless hanger sides laterally support the top flange, bearing stiffeners shall be used.

Backer block required (both sides for face-mount hangers)

For hanger capacity see hanger manufacturer's recommendations. Verify double I-joist capacity to support concentrated loads.

**BACKER BLOCKS** (Blocks must be long enough to permit required nailing without splitting)

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

\* Minimum grade for backer block material shall be S-PF No. 2 or better for solid saw lumber and wood structural panels conforming to CAN/CSA-C337 or CAN/CSA-C337 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".

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

Note: Unless hanger sides laterally support the top flange, bearing stiffeners shall be used.

**15** 2x plate flush with inside face of wall or beam. 1/8" overhang allowed past inside face of wall or beam.

Top-mount hanger installed per manufacturer's recommendations.

Note: Unless hanger sides laterally support the top flange, bearing stiffeners shall be used.

**16** Multiple I-joist reader with full depth filler block shown. Nordic Lam or SCL headers may also be used. Verify double I-joist capacity to support concentrated loads.

Filler block per detail 1p

Install hanger per manufacturer's recommendations.

Backer block attached per detail 1h. Nail with twelve 3" nails, clinched when possible.

Maximum support capacity = 1,620 lbs.

**17** Do not level-cut joist beyond inside face of wall.

Attach I-joist per detail 1b

Note: Blocking required at bearing for lateral resistance to wall frame for clarity.

**18** Lumber 2x4 min., extend block to face of adjacent webs. Two 2-1/2" spiral nails from each web to lumber piece, alternate on opposite side.

Filler blocking panel

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

**19** One 2-1/2" nails at top and bottom flange. Two 2-1/2" nails from each web to lumber piece. 2x4 min. (1/8" gap minimum). Two 2-1/2" nails from each web to lumber piece. I-joist blocking panel. One 2-1/2" nails one side only. 2-1/2" nails at 6" o.c.

Note: In some local codes, blocking is prescriptively required in the first joist space (or first and second joist space) next to the stark joist. Where required, see local code requirements for spacing of the blocking. All nails are common spiral in this detail.

**Notes:**

- Support back of I-joist web during nailing to prevent damage to web/flange connection.
- Leave a 1/8 to 1/4-inch gap between top of filler block and bottom of top I-joist flange.
- Filler block is required between joists for full length of span.
- Nail joists together with two rows of 3" nails at 12 inches o.c. (clinched when possible) on each side of the double I-joist. Total of four nails per foot required. If nails can be clinched, only two nails per foot are required.
- The maximum factored load that may be applied to one side of the double joist using this detail is 860 lbf/ft. Verify double I-joist capacity.



The construction details for residential designs are prone to changes.

Details released after April 2014 supersedes N-C301

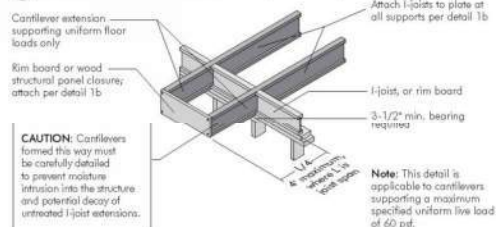
Installation must comply with latest documentation on I-Joist and other Nordic products from the <http://nordic.ca/>

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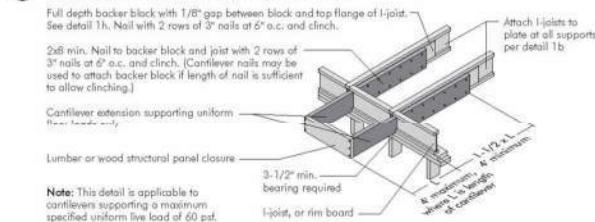


## CANTILEVER DETAILS FOR BALCONIES (NO WALL LOAD)

### 3a I-JOIST CANTILEVER DETAIL FOR BALCONIES (No Wall Load)

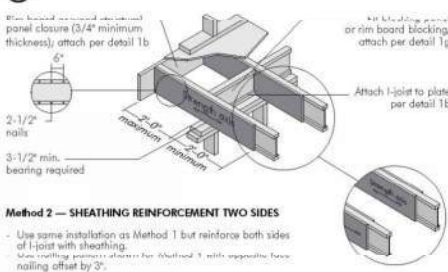


### 3b LUMBER CANTILEVER DETAIL FOR BALCONIES (No Wall Load)



## 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 sheathing perpendicular to 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-joist to plate at all supports per detail 1b. Verify reinforced I-joist capacity.

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

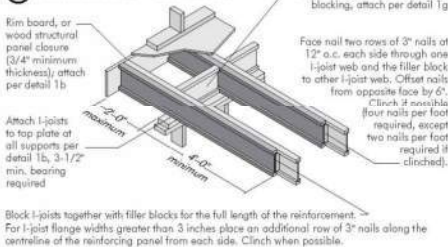
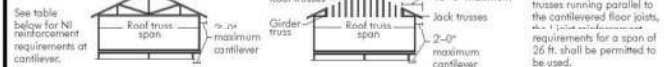


FIGURE 4 (continued)



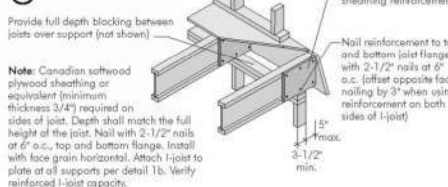
## CANTILEVER REINFORCEMENT METHODS ALLOWED

Joist Depth (in.)	Roof Truss Span (ft)	ROOF LOADING (UNFACTORED)							
		LL = 30 psf, DL = 15 psf				LL = 40 psf, DL = 15 psf			
		Joist Spacing (in.)				Joist Spacing (in.)			
		12	16	19.2	24	12	16	19.2	24
9-1/2	26	N	N	1	2	N	1	2	X
	28	N	N	1	X	N	1	2	X
	30	N	1	1	X	N	1	2	X
	32	N	1	2	X	N	2	X	X
	34	N	1	2	X	N	2	X	X
11-7/8	26	N	1	2	X	N	1	2	X
	28	N	1	N	1	N	1	2	X
	30	1	N	1	2	N	1	2	X
	32	1	N	1	2	N	1	2	X
	34	1	N	1	2	N	1	2	X
14	26	N	N	N	N	N	N	N	1
	28	N	N	N	N	N	N	N	1
	30	N	N	N	N	N	N	N	1
	32	N	N	N	1	N	N	N	1
	34	N	N	N	1	N	N	N	1
16	26	N	N	N	1	N	N	N	1
	28	N	N	N	1	N	N	N	1
	30	N	N	N	1	N	N	N	1
	32	N	N	N	N	N	N	N	1
	34	N	N	N	N	N	N	N	1

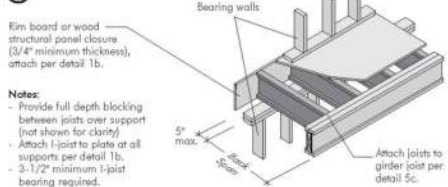
- N = No reinforcement required.
- N = NI reinforced with 3/4" wood structural panel on one side only.
- N = NI reinforced with 3/4" wood structural panel on both sides, or double I-joist.
- X = Try a deeper joist or closer spacing.
- Maximum design load shall be: 15 psf roof dead load, 45 psf floor total load, and 80 psf wall load. Wall load is based on 9'-0" maximum width window or door openings.
- For larger openings, or multiple 9'-0" width openings spaced less than 6'-0" o.c., additional joists beneath the opening's cripple studs may be required.
- Table applies to joists 12" to 24" o.c. that meet the floor 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. Use 12" o.c. requirements for lesser spacing.
- For conventional roof construction using a ridge beam, the Roof Truss Span column above is equivalent to the distance between the supporting wall and the ridge beam. When the roof is framed using a ridge beam, the Roof Truss Span is equivalent to the distance between the supporting walls or if a truss is used.
- Cantilevered joists supporting girder trusses or roof beams may require additional reinforcing.

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

### 5a SHEATHING REINFORCEMENT



### 5b SET-BACK DETAIL



### 5c SET-BACK CONNECTION

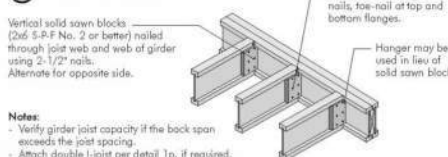
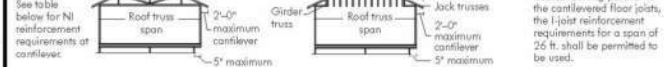


FIGURE 5 (continued)



## BRICK CANTILEVER REINFORCEMENT METHODS ALLOWED

Joist Depth (in.)	Roof Truss Span (ft)	ROOF LOADING (UNFACTORED)							
		LL = 30 psf, DL = 15 psf				LL = 40 psf, DL = 15 psf			
		Joist Spacing (in.)				Joist Spacing (in.)			
		12	16	19.2	24	12	16	19.2	24
9-1/2	26	1	X	X	X	2	X	X	X
	28	1	X	X	X	2	X	X	X
	30	1	X	X	X	2	X	X	X
	32	1	X	X	X	2	X	X	X
	34	2	X	X	X	2	X	X	X
11-7/8	26	X	2	X	X	X	X	X	X
	28	X	2	X	X	X	X	X	X
	30	X	2	X	X	X	X	X	X
	32	X	2	X	X	X	X	X	X
	34	X	2	X	X	X	X	X	X
14	26	N	2	X	X	1	X	X	X
	28	N	2	X	X	1	X	X	X
	30	1	X	X	X	1	X	X	X
	32	1	X	X	X	2	X	X	X
	34	1	X	X	X	2	X	X	X
16	26	1	2	X	X	1	X	X	X
	28	1	2	X	X	1	X	X	X
	30	1	2	X	X	2	X	X	X
	32	1	2	X	X	2	X	X	X
	34	1	2	X	X	2	X	X	X

- N = No reinforcement required.
- N = NI reinforced with 3/4" wood structural panel on one side only.
- N = NI reinforced with 3/4" wood structural panel on both sides, or double I-joist.
- X = Try a deeper joist or closer spacing.
- Maximum design load shall be: 15 psf roof dead load, 45 psf floor total load, and 80 psf wall load. Wall load is based on 9'-0" maximum width window or door openings.
- For larger openings, or multiple 9'-0" width openings spaced less than 6'-0" o.c., additional joists beneath the opening's cripple studs may be required.
- Table applies to joists 12" to 24" o.c. that meet the floor 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. Use 12" o.c. requirements for lesser spacing.
- For conventional roof construction using a ridge beam, the Roof Truss Span column above is equivalent to the distance between the supporting wall and the ridge beam. When the roof is framed using a ridge beam, the Roof Truss Span is equivalent to the distance between the supporting walls or if a truss is used.
- Cantilevered joists supporting girder trusses or roof beams may require additional reinforcing.



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## WEB HOLES

### RULES FOR CUTTING HOLES AND DUCT CHASE OPENINGS:

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

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.)													Span adjustment Factor
		2	3	4	5	6	6-1/4	7	8	8-5/8	9	10	10-3/4	11	
9-1/2"	N120	0-7"	1-0"	1-10"	1-4"	1-6"	1-7"	1-8"	1-9"	1-10"	1-11"	1-12"	1-13"	1-14"	1-15"
	N140	0-7"	1-0"	1-10"	1-4"	1-6"	1-7"	1-8"	1-9"	1-10"	1-11"	1-12"	1-13"	1-14"	1-15"
	N160	0-7"	1-0"	1-10"	1-4"	1-6"	1-7"	1-8"	1-9"	1-10"	1-11"	1-12"	1-13"	1-14"	1-15"
	N180	0-7"	1-0"	1-10"	1-4"	1-6"	1-7"	1-8"	1-9"	1-10"	1-11"	1-12"	1-13"	1-14"	1-15"
	N200	0-7"	1-0"	1-10"	1-4"	1-6"	1-7"	1-8"	1-9"	1-10"	1-11"	1-12"	1-13"	1-14"	1-15"
11-7/8"	N120	0-7"	1-0"	1-10"	1-4"	1-6"	1-7"	1-8"	1-9"	1-10"	1-11"	1-12"	1-13"	1-14"	1-15"
	N140	0-7"	1-0"	1-10"	1-4"	1-6"	1-7"	1-8"	1-9"	1-10"	1-11"	1-12"	1-13"	1-14"	1-15"
	N160	0-7"	1-0"	1-10"	1-4"	1-6"	1-7"	1-8"	1-9"	1-10"	1-11"	1-12"	1-13"	1-14"	1-15"
	N180	0-7"	1-0"	1-10"	1-4"	1-6"	1-7"	1-8"	1-9"	1-10"	1-11"	1-12"	1-13"	1-14"	1-15"
	N200	0-7"	1-0"	1-10"	1-4"	1-6"	1-7"	1-8"	1-9"	1-10"	1-11"	1-12"	1-13"	1-14"	1-15"
14"	N120	0-7"	1-0"	1-10"	1-4"	1-6"	1-7"	1-8"	1-9"	1-10"	1-11"	1-12"	1-13"	1-14"	1-15"
	N140	0-7"	1-0"	1-10"	1-4"	1-6"	1-7"	1-8"	1-9"	1-10"	1-11"	1-12"	1-13"	1-14"	1-15"
	N160	0-7"	1-0"	1-10"	1-4"	1-6"	1-7"	1-8"	1-9"	1-10"	1-11"	1-12"	1-13"	1-14"	1-15"
	N180	0-7"	1-0"	1-10"	1-4"	1-6"	1-7"	1-8"	1-9"	1-10"	1-11"	1-12"	1-13"	1-14"	1-15"
	N200	0-7"	1-0"	1-10"	1-4"	1-6"	1-7"	1-8"	1-9"	1-10"	1-11"	1-12"	1-13"	1-14"	1-15"
16"	N120	0-7"	1-0"	1-10"	1-4"	1-6"	1-7"	1-8"	1-9"	1-10"	1-11"	1-12"	1-13"	1-14"	1-15"
	N140	0-7"	1-0"	1-10"	1-4"	1-6"	1-7"	1-8"	1-9"	1-10"	1-11"	1-12"	1-13"	1-14"	1-15"
	N160	0-7"	1-0"	1-10"	1-4"	1-6"	1-7"	1-8"	1-9"	1-10"	1-11"	1-12"	1-13"	1-14"	1-15"
	N180	0-7"	1-0"	1-10"	1-4"	1-6"	1-7"	1-8"	1-9"	1-10"	1-11"	1-12"	1-13"	1-14"	1-15"
	N200	0-7"	1-0"	1-10"	1-4"	1-6"	1-7"	1-8"	1-9"	1-10"	1-11"	1-12"	1-13"	1-14"	1-15"

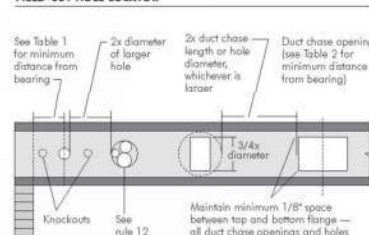
- Above table may be used for I-joint spacing of 24 inches on centre or less.
- Hole location distance is measured from inside face of supports to centre of hole.
- Distances in this chart are based on uniformly loaded joists.

### OPTIONAL:

The above table is based on the I-joints used at their maximum span. If the I-joints are placed less than their full maximum span (see Maximum Floor Spans), the minimum distance from the centreline of the hole to the face of any support (D) as given above may be reduced as follows:

- Where:
- Reduced = Distance from the inside face of any support to centre of hole, reduced for less-than-maximum span applications [9]. The reduced distance shall not be less than 6 inches from the face of the support to edge of the hole.
  - Actual = The actual measured span distance between the inside faces of supports [9].
  - SAF = Span Adjustment Factor given in this table.
  - D = The minimum distance from the inside face of any support to centre of hole from this table.
- If (Actual) is greater than 1, use 1 in the above calculation for (Actual).

FIGURE 7  
FIELD-CUT HOLE LOCATOR



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

Knockouts are precored 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-joint. 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-joint.

TABLE 2  
DUCT CHASE OPENING SIZES AND LOCATIONS — Simple Span Only

Joist Depth	Joist Series	Minimum distance from inside face of any support to centre of opening (ft.-in.)												
		8	10	12	14	16	18	20	22	24	26	28	30	32
9-1/2"	N120	4-1"	4-5"	4-10"	5-0"	5-5"	6-1"	6-6"	7-1"	7-6"	8-1"	8-6"	9-1"	9-6"
	N140	5-0"	5-5"	6-0"	6-5"	7-0"	7-5"	8-0"	8-5"	9-0"	9-5"	10-0"	10-5"	11-0"
	N160	5-5"	6-0"	6-5"	7-0"	7-5"	8-0"	8-5"	9-0"	9-5"	10-0"	10-5"	11-0"	11-5"
	N180	6-0"	6-5"	7-0"	7-5"	8-0"	8-5"	9-0"	9-5"	10-0"	10-5"	11-0"	11-5"	12-0"
	N200	6-5"	7-0"	7-5"	8-0"	8-5"	9-0"	9-5"	10-0"	10-5"	11-0"	11-5"	12-0"	12-5"
11-7/8"	N120	4-1"	4-5"	4-10"	5-0"	5-5"	6-1"	6-6"	7-1"	7-6"	8-1"	8-6"	9-1"	9-6"
	N140	5-0"	5-5"	6-0"	6-5"	7-0"	7-5"	8-0"	8-5"	9-0"	9-5"	10-0"	10-5"	11-0"
	N160	5-5"	6-0"	6-5"	7-0"	7-5"	8-0"	8-5"	9-0"	9-5"	10-0"	10-5"	11-0"	11-5"
	N180	6-0"	6-5"	7-0"	7-5"	8-0"	8-5"	9-0"	9-5"	10-0"	10-5"	11-0"	11-5"	12-0"
	N200	6-5"	7-0"	7-5"	8-0"	8-5"	9-0"	9-5"	10-0"	10-5"	11-0"	11-5"	12-0"	12-5"
14"	N120	4-1"	4-5"	4-10"	5-0"	5-5"	6-1"	6-6"	7-1"	7-6"	8-1"	8-6"	9-1"	9-6"
	N140	5-0"	5-5"	6-0"	6-5"	7-0"	7-5"	8-0"	8-5"	9-0"	9-5"	10-0"	10-5"	11-0"
	N160	5-5"	6-0"	6-5"	7-0"	7-5"	8-0"	8-5"	9-0"	9-5"	10-0"	10-5"	11-0"	11-5"
	N180	6-0"	6-5"	7-0"	7-5"	8-0"	8-5"	9-0"	9-5"	10-0"	10-5"	11-0"	11-5"	12-0"
	N200	6-5"	7-0"	7-5"	8-0"	8-5"	9-0"	9-5"	10-0"	10-5"	11-0"	11-5"	12-0"	12-5"
16"	N120	4-1"	4-5"	4-10"	5-0"	5-5"	6-1"	6-6"	7-1"	7-6"	8-1"	8-6"	9-1"	9-6"
	N140	5-0"	5-5"	6-0"	6-5"	7-0"	7-5"	8-0"	8-5"	9-0"	9-5"	10-0"	10-5"	11-0"
	N160	5-5"	6-0"	6-5"	7-0"	7-5"	8-0"	8-5"	9-0"	9-5"	10-0"	10-5"	11-0"	11-5"
	N180	6-0"	6-5"	7-0"	7-5"	8-0"	8-5"	9-0"	9-5"	10-0"	10-5"	11-0"	11-5"	12-0"
	N200	6-5"	7-0"	7-5"	8-0"	8-5"	9-0"	9-5"	10-0"	10-5"	11-0"	11-5"	12-0"	12-5"

- Above table may be used for I-joint spacing of 24 inches on centre or less.
- Duct chase opening location distance is measured from inside face of support to centre of opening.
- The above table is based on simple-span joist only. For other applications, contact your local distributor.
- 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. For other applications, contact your local distributor.

## INSTALLING THE GLUED FLOOR SYSTEM

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

### FASTENERS FOR SHEATHING AND SUBFLOORING(1)

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

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

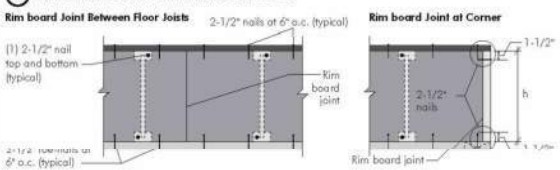
Ref: NRC-CNRC, National Building Code of Canada 2010, Table 9.23.3.5.

### IMPORTANT NOTE:

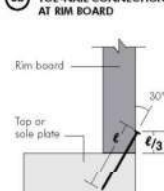
Floor sheathing must be field glued to the I-joint flanges in order to achieve the maximum spans shown in this document. If sheathing is nailed only, I-joint spans must be verified with your local distributor.

## RIM BOARD INSTALLATION DETAILS

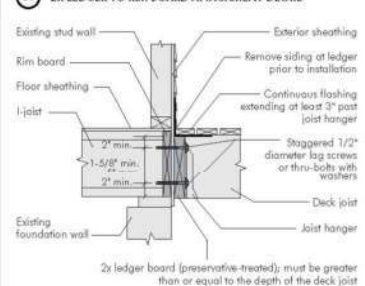
### 80 ATTACHMENT DETAILS WHERE RIM BOARDS ABUT



### 86 TOE-NAIL CONNECTION AT RIM BOARD



### 86 2X LEDGER TO RIM BOARD ATTACHMENT DETAIL



### PRODUCT WARRANTY

Chertex Chivignoux guarantees that, in accordance with our specifications, Nordic products are free from manufacturing defects in material and workmanship.

Furthermore, Chertex Chivignoux 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.







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

### WEB HOLE SPECIFICATIONS

#### RULES FOR CUTTING HOLES AND DUCT CHASE OPENINGS:

1. The distance between the inside edge of the support and the centreline of any hole or duct chase opening shall be in compliance with the requirements of Table 1 or 2, respectively.
2. I-joist top and bottom flanges must NEVER be cut, notched, or otherwise modified.
3. Whenever possible, field-cut holes should be centred on the middle of the web.
4. The maximum size hole or the maximum depth of a duct chase opening that can be cut into an I-joist web shall equal the clear distance between the flanges of the I-joist minus 1/4 inch. A minimum of 1/8 inch should always be maintained between the top/bottom of the hole or opening and the adjacent I-joist flange.

5. The sides of square holes or longest sides of rectangular holes should not exceed 3/4 of the diameter of the maximum round hole permitted at that location.
6. Where more than one hole is necessary, the distance between adjacent hole edges shall exceed twice the diameter of the largest round hole or twice the size of the largest square hole (or twice the length of the longest side of the longest rectangular hole or duct chase opening) and each hole and duct chase opening shall be sized and located in compliance with the requirements of Tables 1 and 2, respectively.
7. A knockout is **not** considered a hole, may be utilized anywhere it occurs, and may be ignored for purposes of calculating minimum distances between holes and/or duct chase openings.
8. Holes measuring 1-1/2 inches or smaller are permitted anywhere in a canistered section of a joist. Holes of greater size may be permitted subject to verification.

9. A 1-1/2 inch hole or smaller can be placed anywhere in the web provided that it meets the requirements of rule number 6 above.
10. All holes and duct chase openings shall be cut in a workman-like manner in accordance with the restrictions listed above and as illustrated in Figure 7.
11. Limit three maximum size holes per span, of which one may be a duct chase opening.
12. A group of round holes at approximately the same location shall be permitted if they meet the requirements for single round hole circumscribed around them.

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.)													
		Round Hole Diameter (in.)													
		2	3	4	5	6	6-1/4	7	8	8-5/8	9	10	10-3/4	11	12
9-1/2"	NI-20	0-7"	1-6"	2-10"	4-3"	5-3"	6-0"	---	---	---	---	---	---	---	---
	NI-40x	0-7"	1-6"	3-0"	4-4"	6-0"	6-4"	---	---	---	---	---	---	---	---
	NI-60	1-3"	2-6"	4-0"	5-4"	7-3"	7-7"	---	---	---	---	---	---	---	---
	NI-70	2-0"	3-4"	4-8"	6-2"	8-1"	8-5"	---	---	---	---	---	---	---	---
11-7/8"	NI-20	0-7"	0-8"	1-0"	2-4"	3-3"	4-0"	5-0"	6-6"	7-9"	---	---	---	---	---
	NI-40x	0-7"	0-8"	1-3"	2-8"	4-3"	4-4"	5-5"	7-0"	8-4"	---	---	---	---	---
	NI-60	0-7"	1-8"	3-0"	4-3"	5-2"	6-0"	7-3"	8-10"	10-0"	---	---	---	---	---
	NI-70	1-3"	2-6"	4-0"	5-4"	6-2"	7-2"	8-4"	10-0"	11-2"	---	---	---	---	---
14"	NI-20	1-6"	2-10"	4-2"	5-6"	7-3"	7-5"	8-6"	10-3"	11-4"	---	---	---	---	---
	NI-40x	0-7"	0-8"	0-9"	2-7"	4-4"	4-9"	6-3"	---	---	---	---	---	---	---
	NI-60	0-7"	0-8"	0-8"	1-0"	2-4"	2-9"	3-9"	5-2"	6-0"	6-6"	8-3"	10-2"	---	---
	NI-70	0-7"	0-8"	1-8"	3-0"	4-3"	4-8"	5-8"	7-2"	8-0"	8-8"	10-4"	11-9"	---	---
16"	NI-20	0-7"	0-8"	0-8"	1-0"	2-4"	2-9"	3-9"	5-2"	6-0"	6-6"	8-3"	10-2"	---	---
	NI-40x	0-7"	0-8"	0-8"	1-0"	2-4"	2-9"	3-9"	5-2"	6-0"	6-6"	8-3"	10-2"	---	---
	NI-60	0-7"	0-8"	0-8"	1-0"	2-4"	2-9"	3-9"	5-2"	6-0"	6-6"	8-3"	10-2"	---	---
	NI-70	0-7"	0-8"	0-8"	1-0"	2-4"	2-9"	3-9"	5-2"	6-0"	6-6"	8-3"	10-2"	---	---

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.

TABLE 2

### DUCT CHASE OPENING SIZES AND LOCATIONS

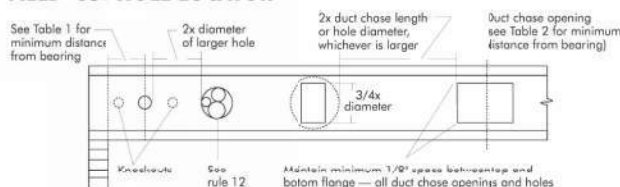
Simple Span Only

Joist Depth	Joist Series	Minimum Distance from Inside Face of Supports to Centre of Opening (ft - in.)													
		Duct Chase Length (in.)													
		8	10	12	14	16	18	20	22	24	26	28	30	32	34
9-1/2"	NI-20	4-1"	4-5"	4-10"	5-4"	5-8"	6-1"	6-6"	7-1"	7-5"	---	---	---	---	---
	NI-40x	5-3"	5-8"	6-0"	6-5"	6-10"	7-3"	7-8"	8-2"	8-6"	---	---	---	---	---
	NI-60	5-4"	5-9"	6-2"	6-7"	7-1"	7-5"	8-0"	8-3"	8-9"	---	---	---	---	---
	NI-70	6-1"	6-6"	6-10"	6-15"	6-19"	7-3"	7-8"	8-2"	8-6"	---	---	---	---	---
11-7/8"	NI-20	5-9"	6-2"	6-6"	7-1"	7-5"	7-9"	8-3"	8-9"	9-4"	---	---	---	---	---
	NI-40x	6-8"	7-2"	7-6"	8-1"	8-6"	9-1"	9-6"	10-1"	10-9"	---	---	---	---	---
	NI-60	7-3"	7-8"	8-0"	8-6"	9-0"	9-3"	9-9"	10-3"	11-0"	---	---	---	---	---
	NI-70	7-1"	7-4"	7-9"	8-3"	8-7"	9-1"	9-6"	10-1"	10-4"	---	---	---	---	---
14"	NI-20	7-2"	7-7"	8-0"	8-5"	8-10"	9-4"	9-8"	10-2"	10-8"	---	---	---	---	---
	NI-40x	8-1"	8-7"	9-0"	9-6"	10-1"	10-7"	11-2"	12-0"	12-8"	---	---	---	---	---
	NI-60	8-9"	9-3"	9-8"	10-3"	10-6"	11-1"	11-6"	12-3"	13-0"	---	---	---	---	---
	NI-70	8-7"	9-1"	9-5"	9-10"	10-4"	10-8"	11-2"	11-7"	12-3"	---	---	---	---	---
16"	NI-20	9-0"	9-3"	9-9"	10-1"	10-7"	11-1"	11-6"	12-1"	12-6"	---	---	---	---	---
	NI-40x	9-4"	9-9"	10-3"	10-7"	11-1"	11-7"	12-1"	12-7"	13-2"	---	---	---	---	---
	NI-60	10-3"	10-8"	11-2"	11-6"	12-1"	12-6"	13-2"	14-1"	14-10"	---	---	---	---	---
	NI-70	10-1"	10-5"	11-0"	11-4"	11-10"	12-3"	12-8"	13-2"	14-0"	---	---	---	---	---

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 tables 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



Knockouts are prescored 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.

### 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 unbraced 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:

1. Brace and nail each I-joist as it is installed, using hangers, blocking panels, rim board, and/or cross-briding 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, when needed, shall be applied to prevent I-joist rotation 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 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 closure panels, rim board, or cross-briding.
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.

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.



### PRODUCT WARRANTY

Chantiers Chibougamau guarantees that, in accordance with our specifications, Nordic products are free from manufacturing defects in material and workmanship.

Furthermore, Chantiers Chibougamau 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.

The construction details for residential designs are prone to changes.

Details released after September 2013 supersedes N-303

Installation must comply with latest documentation on I-Joist and other Nordic products from the <http://nordic.ca/>

This document does not constitute a record of the structural integrity of the building nor suitability of the design assumptions made. Nordic Structures is responsible only for the structural adequacy of its component based on the design criteria and loadings shown on the calculation sheets.





**1a** NI blocking panel

Attach I-joint to top plate per detail 1b

2-1/2" nail at 6" o.c. to top plate (when used for lateral shear transfer, nail to bearing plate with same nailing as required for decking)

Blocking Panel or Rim Joist	Maximum Factored Uniform Vertical Load* (plf)
N Joists	3,300

\*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.

**1b** Rim board

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

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 line-nails at 6" o.c.

To avoid splitting/flange, start nails at least 1-1/2" from end of I-joint. 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.

**1d** NI or rim board blocking panel per detail 1a

Squash block

Pair of Squash Blocks

Pair of Squash Blocks	Maximum Factored Vertical Load per Pair of Squash Blocks (lbs)
2x Lumber	5,500
1-1/8" Kim Board Plus	4,300

3-1/2" wide  
5-1/2" wide

Provide lateral bracing per detail 1a or 1b

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

**1f** Joist attachment per detail 1b

2-1/2" nails at 6" o.c. to top plate

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

Blocking required over all interior supports under load-bearing walls or when floor joists are not continuous over support

NI blocking panel per detail 1a

**1h** Backer block (use if hanger load exceeds 360 lbs). Before installing a backer block to a double I-joint, drive three additional 3" nails through the webs and filler block where the backer block will fit. Clinch. Install backer tight to top flange. Use twelve 3" nails, clinched when possible. Maximum factored resistance for hanger for this detail = 1,620 lbs.

**BACKER BLOCKS** (Blocks must be long enough to permit required nailing without splitting)

Flange Width	Material Thickness Required*	Minimum Depth**
2-1/2"	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 own lumber and wood structural panels conforming to CAN/CSA-O325 or CAN/CSA-O437 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".

Top- or face-mount hanger

Double I-joint header

Filler block - per detail 1p

Backer block required (both sides for face-mount hangers)

For hanger capacity see hanger manufacturer's recommendations. Verify double I-joint capacity to support concentrated loads.

**1i** Nordic Lam or Structural Composite Lumber (SCL)

For nailing schedules for multiple beams, see the manufacturer's recommendations.

Top- or face-mount hanger installed per manufacturer's recommendations

NOTE: Unless hanger sides laterally support the top flange, bearing stiffeners shall be used.

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

NOTE: Unless hanger sides laterally support the top flange, bearing stiffeners shall be used.

Top-mount hanger installed per manufacturer's recommendations

**1m** Multiple I-joint header with full depth filler block shown. Nordic Lam or SCL headers may also be used. Verify double I-joint capacity to support concentrated loads.

Backer block attached per detail 1h. Nail with twelve 3" nails, clinch when possible.

Install hanger per manufacturer's recommendations

Maximum support capacity = 1,620 lbs.

**1n** Do not bevel-cut joist beyond inside face of wall

Attach I-joint per detail 1b

NOTE: Blocking required at bearing for lateral support, not shown for clarity.

**1r** Lumber 2x4 min., extend blocks to face of adjacent web. Two 2-1/2" spiral nails from each web to lumber piece, alternate on opposite side

NI blocking panel

OPTIONAL: Minimum 1x4 incl strap applied to underside of joist at blocking line or 1/2 inch minimum gypsum ceiling attached to underside of joists.

**1p** FILLER BLOCK REQUIREMENTS FOR DOUBLE I-JOIST CONSTRUCTION

Filler block

Offset nails from opposite face by 6"

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

NOTES:

- Support back of I-joint web during nailing to prevent damage to web/flange connection
- Leave a 1/8 to 1/4-inch gap between top of filler block and bottom of top I-joint flange.
- Filler block is required between joists for full length of span.
- Nail joists together with two rows of 3" nails at 12 inches o.c. (clinched when possible) on each side of the double I-joint. Total of four nails per foot required. If nails can be clinched, only two nails per foot are required.
- The maximum factored load that may be applied to one side of the double joist using this detail is 860 lb/ft. Verify double I-joint capacity.

Flange Size	Net Depth	Filler Block Size
2-1/2" x 1-1/2"	1-1/8" to 1-7/8"	2-1/8" x 8"
	4"	2-1/8" x 10"
	6"	2-1/8" x 12"
3-1/2" x 1-1/2"	1-1/2" to 1-7/8"	3" x 6"
	4"	3" x 8"
	6"	3" x 10"
3-1/2" x 2"	1-7/8" to 1-7/8"	3" x 7"
	4"	3" x 9"
	6"	3" x 11"

**1s** One 2-1/2" nail at top and bottom flange

2x4 min. (1/8" gap minimum)

Two 2-1/2" nails from each web to lumber piece

I-joint blocking panel

One 2-1/2" nail one side only

NOTE:

- In some local codes, blocking is prescriptively required in the first joist space (or first and second joist space) next to the starter joist. Where required, see local code requirements for spacing of the blocking.
- All nails are common spiral in this detail.

All nails shown in the above details are assumed to be common wire nails unless otherwise noted. 3" (0.125" dia.) common spiral nails may be substituted for 2-1/2" (0.128" dia.) common wire nails. Framing lumber assumed to be Spruce-Pine-Fir No. 2 or better. Individual components not shown to scale for clarity.

## WEB STIFFENERS

## RECOMMENDATIONS:

- A **bearing stiffener** is required in all engineered applications with factored reactions greater than shown in the I-joint properties table found in the I-Joint Construction Guide (C101). The gap between the stiffener and the flange is at the top.
- A **bearing stiffener** is required when the I-joint 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 area 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.

FIGURE 2

## WEB STIFFENER INSTALLATION DETAILS

Flange width 2-1/2" or 3-1/2"

Approx. 2"

1/8"-1/4" Gap

(4) 2-1/2" nails, 3" nails required for I-joints with 3-1/2" flange width

No Gap

See the adjacent table for web stiffener size requirements.

**CONCENTRATED LOAD** (Load stiffener)

Tight Joint No Gap

Gap

**END BEARING** (Bearing stiffener)

Gap

Tight Joint No Gap

Flange Width	Web Stiffener Size Each Side of Web
2-1/2"	1" x 2-5/8" minimum width
3-1/2"	1-1/2" x 2-1/8" minimum width

## CANTILEVER DETAILS FOR VERTICAL BUILDING OFFSET

## Method 1 — SHEATHING REINFORCEMENT ONE SIDE

Rim board or wood structural panel closure (3/4" minimum thickness); attach per detail 1b

NI blocking panel or rim board blocking, attach per detail 1g

Attach I-joint to plate per detail 1b

2-1/2" nails

3-1/2" min. bearing required

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-joint to plate at all supports per detail 1b. Verify reinforced I-joint capacity.

## Method 2 — SHEATHING REINFORCEMENT TWO SIDES

Use same installation as Method 1 but reinforce both sides of I-joint with sheathing.

Use nailing pattern shown for Method 1 with opposite face nailing offset by 3".

## RIM BOARD INSTALLATION DETAILS

## 8a ATTACHMENT DETAILS WHERE RIM BOARDS ABUT

**Rim Board Joint Between Floor Joists**

(1) 2-1/2" nail top and bottom (typical)

2-1/2" nails at 6" o.c. (typical)

2-1/2" toe-nails at 6" o.c. (typical)

**Rim Board Joint at Corner**

2-1/2" nails

h

1-1/2"

1-1/2"

## 8b TOE-NAIL CONNECTION AT RIMBOARD

Rim board

Top or sole plate

30°

1/3

The construction details for residential designs are prone to changes.

Details released after September 2013 supersedes N-303

Installation must comply with latest documentation on I-Joist and other Nordic products from the <http://nordic.ca/>

This document does not constitute a record of the structural integrity of the building nor suitability of the design assumptions made. Nordic Structures is responsible only for the structural adequacy of its component based on the design criteria and loadings shown on the calculation sheets.