

Products				
PlotID	Length	Product	Plies	Net Qty
J1	18-00-00	11 7/8" NI-40x	1	23
J1 DJ	18-00-00	11 7/8" NI-40x	2	6
J2	16-00-00	11 7/8" NI-40x	1	25
J2 DJ	16-00-00	11 7/8" NI-40x	2	4
J3	14-00-00	11 7/8" NI-40x	1	2
J4	8-00-00	11 7/8" NI-40x	1	18
J5	4-00-00	11 7/8" NI-40x	1	6
J6	2-00-00	11 7/8" NI-40x	1	4
B1	14-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B4	14-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
B3	12-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B2	10-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1

DWG# TF22071135 TO TF22071138



STRUCTURAL COMPONENTS ONLY
DWG# TF22071153

**THIS IS A FLOOR COMPONENT
PLACEMENT PLAN ONLY.**

The wood beams and joists outlined on this plan are designed as individual building components to be incorporated into the design of the building at the specification of the building designer. Please see the individual beam reports, joist reports, and/or joist span tables for each component identified on this placement plan.

The supporting structure is to be specified by the building designer prior to the installation of joist(s) and/or beam(s). The building designer is responsible for the bracing of the floor system and its integration into the bracing of the overall structure. All components labelled "by others" or "as per plan", and all steel beams, are not within the scope of work of this seal.

The building designer must review and approve this plan to ascertain conformity to the overall structural plan of the building. All dimensions to be verified on site.

DATE: 2022-07-15

1st FLOOR FRAMING



FROM PLAN DATED: 2022/01/12

BUILDER: ROYAL PINE HOMES

SITE: FORESTSIDE ESTATES

MODEL: 4001

ELEVATION:

LOT:

CITY: BRAMPTON

SALESMAN: Rick DiCiano

DESIGNER: PL

REVISION:

REFER TO THE **NORDIC INSTALLATION GUIDE**
FOR PROPER STORAGE AND INSTALLATION.
SQUASH BLOCKS OF 2x4, 2x6, 2x8 SPF #2 REQ'D
UNDER INTERIOR UNIFORM LOAD BEARING WALLS.
MULTIPLE SQUASH BLOCKS REQ'D UNDER
CONCENTRATED LOADS. SEE FIGURE 1.
CANTILEVERED JOISTS INCLUDING **CANT' OVER**
BRICK REQ. I-JOIST BLOCKING ALONG BEARING
AND RIMBOARD CLOSURE AT ENDS. SEE FIGURES
4/5 FOR REINFORCEMENT REQUIREMENTS.
FOR **HOLES** INCLUDING **DUCT CHASE** AND **FIELD**
CUT OPENINGS SEE FIGURE 6 AND TABLES 6.1/6.2.
CERAMIC TILE APPLICATION AS PER OBC 9.30.6.

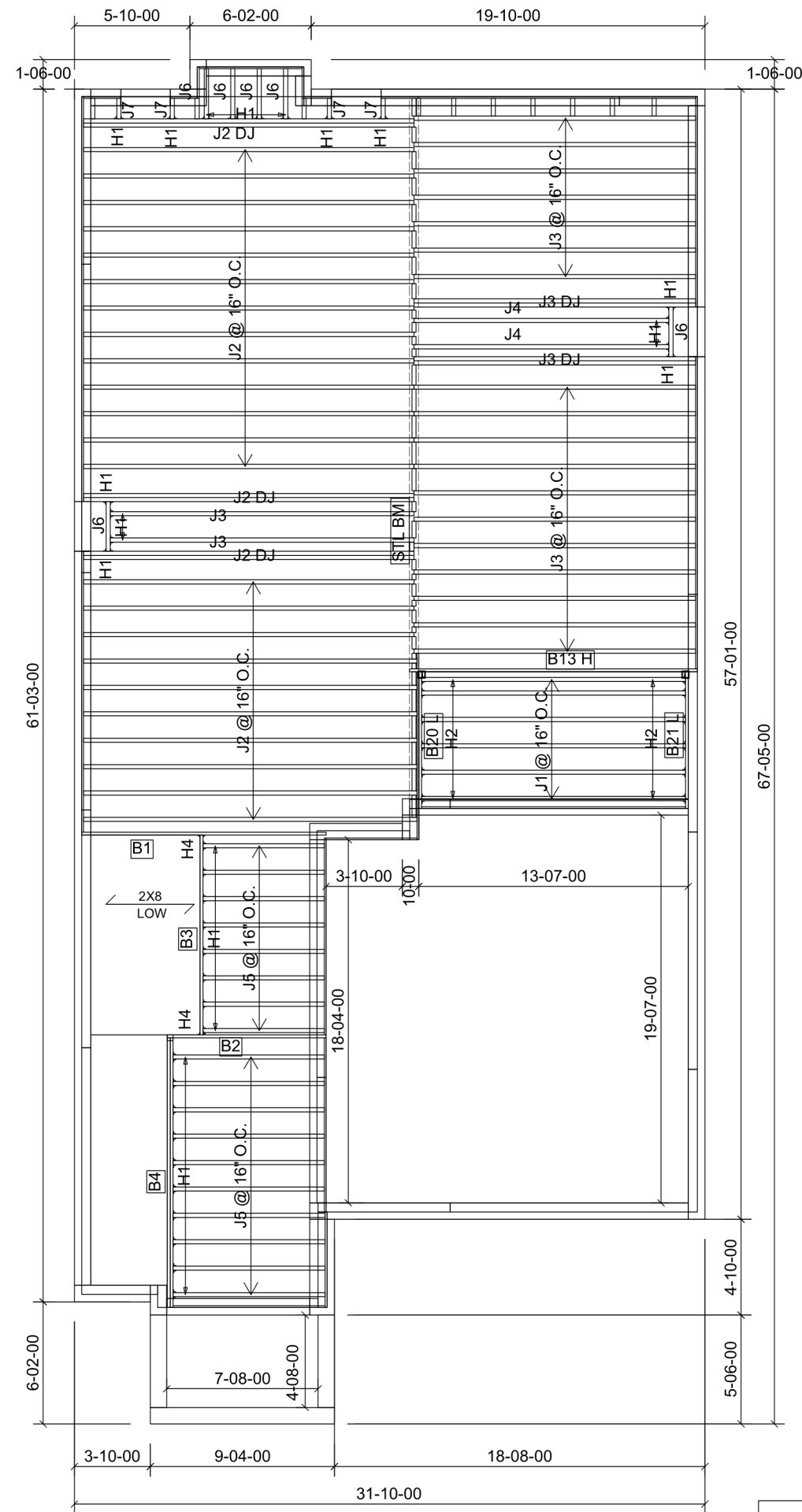
ALL CONNECTORS MUST BE INSTALLED AS PER THE MANUFACTURER'S SPECIFICATIONS USING THE MANUFACTURER SPECIFIED FASTENERS.

ALL BEAM HANGER FASTENERS INSTALLED INTO THE SUPPORTING MEMBER MUST BE A MINIMUM OF 3.5" IN LENGTH UNLESS OTHERWISE SPECIFIED BY THE SUPPORTING MEMBER ENGINEER OF RECORD

LOADING:
LIVE LOAD: 40.0 lb/ft²
DEAD LOAD: 15.0 lb/ft²
TILE LOAD: +5.0 lb/ft²

JOIST LL DEFLECTION LIMIT: $L/480$

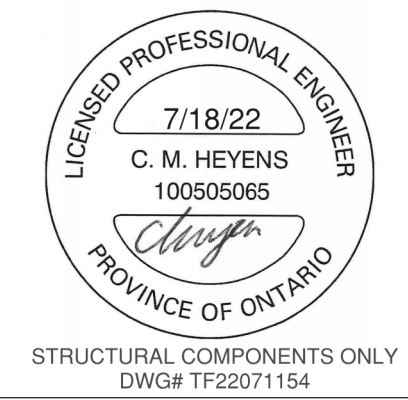
SUBFLOOR: 3/4" GLUED AND NAILED



Products				
PlotID	Length	Product	Plies	Net Qty
J1	14-00-00	9 1/2" NI-40x	1	6
J2	18-00-00	11 7/8" NI-40x	1	23
J2 DJ	18-00-00	11 7/8" NI-40x	2	6
J3	16-00-00	11 7/8" NI-40x	1	20
J3 DJ	16-00-00	11 7/8" NI-40x	2	4
J4	14-00-00	11 7/8" NI-40x	1	2
J5	8-00-00	11 7/8" NI-40x	1	18
J6	4-00-00	11 7/8" NI-40x	1	6
J7	2-00-00	11 7/8" NI-40x	1	4
B20 L	8-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B21 L	8-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B13 H	16-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B1	14-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B4	14-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
B3	12-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B2	10-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1

Connector Summary		
Qty	Manuf	Product
8	H1	IUS2.56/11.88
10	H1	IUS2.56/11.88
12	H1	IUS2.56/11.88
4	H1	IUS2.56/11.88
12	H2	IUS2.56/9.5
2	H4	HUS1.81/10

DWG# TF22071135 TO TF22071138
DWG# TF22071145 TO TF22071147



THIS IS A FLOOR COMPONENT
PLACEMENT PLAN ONLY.

The wood beams and joists outlined on this plan are designed as individual building components to be incorporated into the design of the building at the specification of the building designer. Please see the individual beam reports, joist reports, and/or joist span tables for each component identified on this placement plan.
The supporting structure is to be specified by the building designer prior to the installation of joist(s) and/or beam(s). The building designer is responsible for the bracing of the floor system and its integration into the bracing of the overall structure. All components labelled "by others" or "as per plan", and all steel beams, are not within the scope of work of this seal.
The building designer must review and approve this plan to ascertain conformity to the overall structural plan of the building. All dimensions to be verified on site.

DATE: 2022-07-15

OPT SUNKEN

1st FLOOR FRAMING



FROM PLAN DATED: 2022/01/12

BUILDER: ROYAL PINE HOMES

SITE: FORESTSIDE ESTATES

MODEL: 4001

ELEVATION: A

LOT:

CITY: BRAMPTON

SALESMAN: Rick DiCiano

DESIGNER: PL

REVISION:

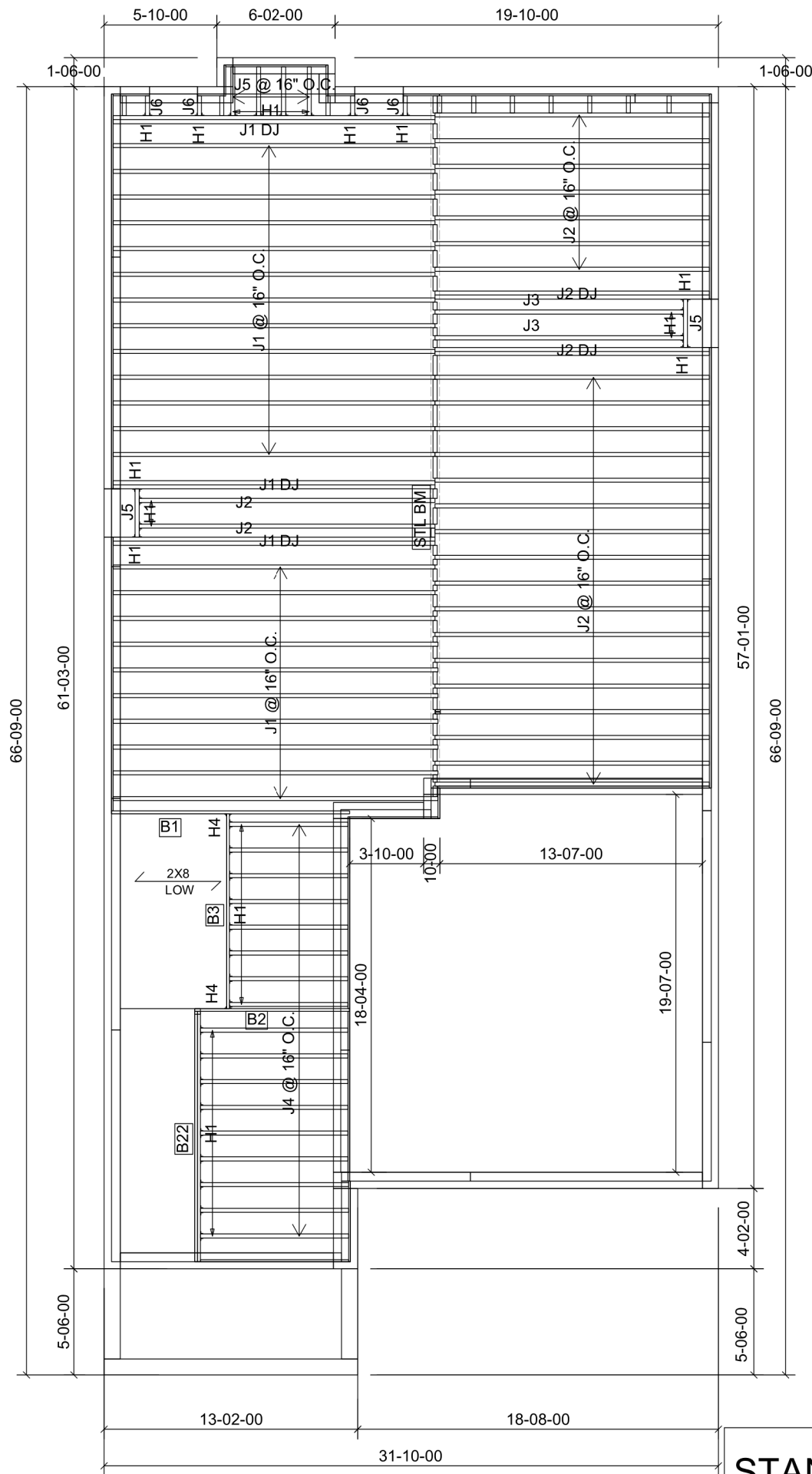
REFER TO THE **NORDIC INSTALLATION** GUIDE FOR PROPER STORAGE AND INSTALLATION.
SQUASH BLOCKS OF 2x4, 2x6, 2x8 SPF #2 REQ'D UNDER INTERIOR UNIFORM LOAD BEARING WALLS. **MULTIPLE SQUASH BLOCKS** REQ'D UNDER CONCENTRATED LOADS. SEE FIGURE 1.
CANTILEVERED JOISTS INCLUDING **CANT' OVER BRICK** REQ. I-JOIST BLOCKING ALONG BEARING AND RIMBOARD CLOSURE AT ENDS. SEE FIGURES 4/5 FOR REINFORCEMENT REQUIREMENTS.
FOR **HOLES** INCLUDING **DUCT CHASE** AND **FIELD CUT OPENINGS** SEE FIGURE 6 AND TABLES 6.1/6.2.
CERAMIC TILE APPLICATION AS PER OBC 9.30.6.

ALL **CONNECTORS** MUST BE INSTALLED AS PER THE **MANUFACTURER'S SPECIFICATIONS** USING THE MANUFACTURER **SPECIFIED FASTENERS**.
ALL **BEAM HANGER FASTENERS** INSTALLED INTO THE **SUPPORTING MEMBER MUST** BE A MINIMUM OF **3.5"** IN LENGTH UNLESS OTHERWISE SPECIFIED BY THE SUPPORTING MEMBER ENGINEER OF RECORD.

LOADING:
LIVE LOAD: 40.0 lb/ft²
DEAD LOAD: 15.0 lb/ft²
TILE LOAD: +5.0 lb/ft²

JOIST LL DEFLECTION LIMIT: L/480

SUBFLOOR: 3/4" GLUED AND NAILED



Products				
PlotID	Length	Product	Plies	Net Qty
J1	18-00-00	11 7/8" NI-40x	1	23
J1 DJ	18-00-00	11 7/8" NI-40x	2	6
J2	16-00-00	11 7/8" NI-40x	1	26
J2 DJ	16-00-00	11 7/8" NI-40x	2	4
J3	14-00-00	11 7/8" NI-40x	1	2
J4	8-00-00	11 7/8" NI-40x	1	17
J5	4-00-00	11 7/8" NI-40x	1	6
J6	2-00-00	11 7/8" NI-40x	1	4
B1	14-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B22	14-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
B3	12-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B2	10-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1

Connector Summary		
Qty	Manuf	Product
8	H1	IUS2.56/11.88
9	H1	IUS2.56/11.88
12	H1	IUS2.56/11.88
4	H1	IUS2.56/11.88
2	H4	HUS1.81/10



THIS IS A FLOOR COMPONENT PLACEMENT PLAN ONLY.

The wood beams and joists outlined on this plan are designed as individual building components to be incorporated into the design of the building at the specification of the building designer. Please see the individual beam reports, joist reports, and/or joist span tables for each component identified on this placement plan.

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The building designer must review and approve this plan to ascertain conformity to the overall structural plan of the building. All dimensions to be verified on site.

DATE: 2022-07-15

1st FLOOR FRAMING



FROM PLAN DATED: 2022/01/12
BUILDER: ROYAL PINE HOMES
SITE: FORESTSIDE ESTATES
MODEL: 4001
ELEVATION: B
LOT:
CITY: BRAMPTON
SALESMAN: Rick DiCiano
DESIGNER: PL
REVISION:

REFER TO THE **NORDIC INSTALLATION** GUIDE FOR PROPER STORAGE AND INSTALLATION.
SQUASH BLOCKS OF 2x4, 2x6, 2x8 SPF #2 REQ'D UNDER INTERIOR UNIFORM LOAD BEARING WALLS.
MULTIPLE SQUASH BLOCKS REQ'D UNDER CONCENTRATED LOADS. SEE FIGURE 1.
CANTILEVERED JOISTS INCLUDING **CANT' OVER BRICK** REQ. I-JOIST BLOCKING ALONG BEARING AND RIMBOARD CLOSURE AT ENDS. SEE FIGURES 4/5 FOR REINFORCEMENT REQUIREMENTS.
FOR **HOLES** INCLUDING **DUCT CHASE** AND **FIELD CUT OPENINGS** SEE FIGURE 6 AND TABLES 6.1/6.2.
CERAMIC TILE APPLICATION AS PER OBC 9.30.6.

ALL **CONNECTORS** MUST BE INSTALLED AS PER THE **MANUFACTURER'S SPECIFICATIONS** USING THE MANUFACTURER **SPECIFIED FASTENERS**.
ALL **BEAM HANGER FASTENERS** INSTALLED INTO THE **SUPPORTING MEMBER MUST** BE A MINIMUM OF **3.5"** IN LENGTH UNLESS OTHERWISE SPECIFIED BY THE SUPPORTING MEMBER ENGINEER OF RECORD.

LOADING:
LIVE LOAD: 40.0 lb/ft²
DEAD LOAD: 15.0 lb/ft²
TILE LOAD: +5.0 lb/ft²

JOIST LL DEFLECTION LIMIT: L/480
SUBFLOOR: 3/4" GLUED AND NAILED



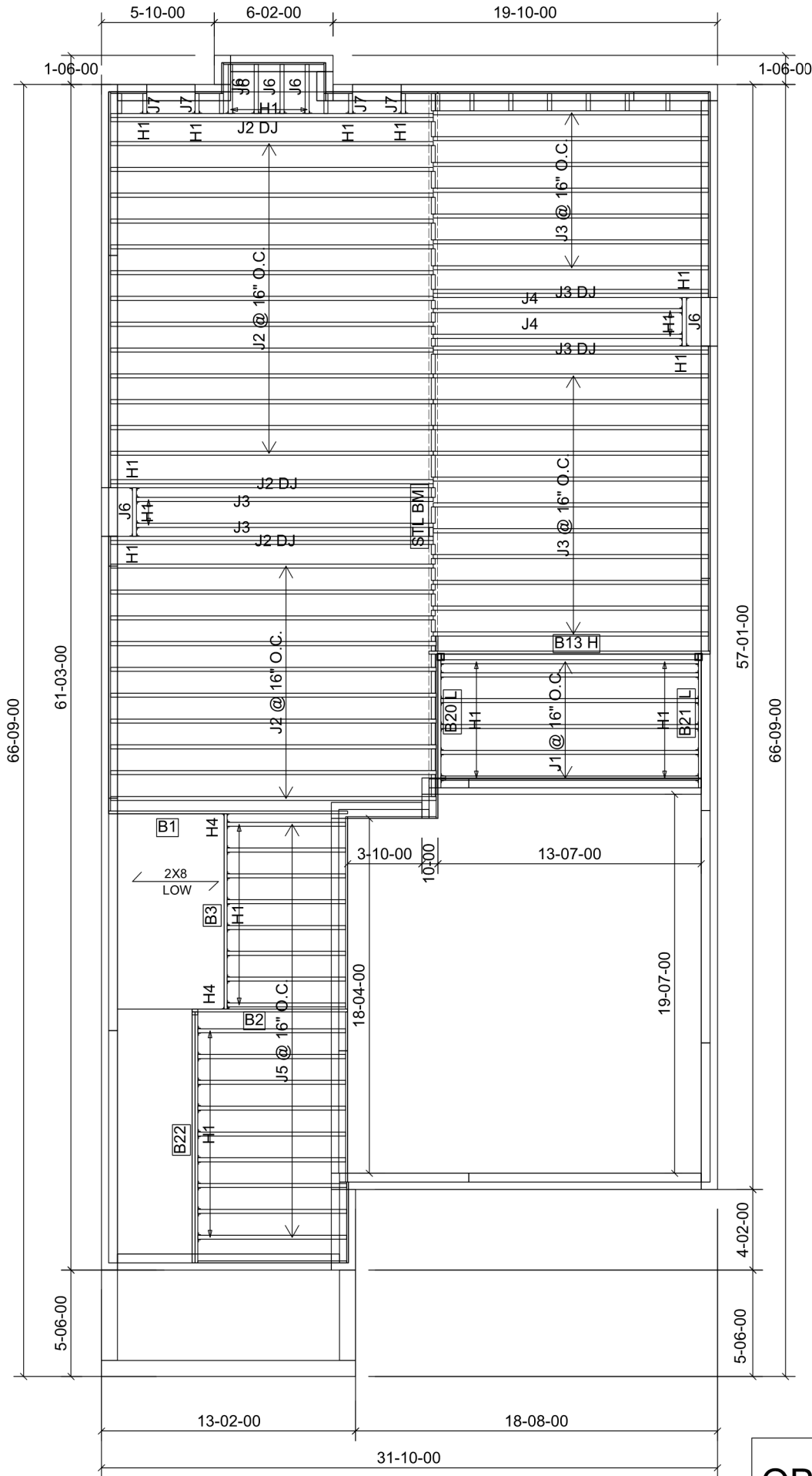
FROM PLAN DATED: 2022/01/12
BUILDER: ROYAL PINE HOMES
SITE: FORESTSIDE ESTATES
MODEL: 4001
ELEVATION: B
LOT:
CITY: BRAMPTON
SALESMAN: Rick DiCiano
DESIGNER: PL
REVISION:

REFER TO THE **NORDIC INSTALLATION** GUIDE FOR PROPER STORAGE AND INSTALLATION.
SQUASH BLOCKS OF 2x4, 2x6, 2x8 SPF #2 REQ'D UNDER INTERIOR UNIFORM LOAD BEARING WALLS.
MULTIPLE SQUASH BLOCKS REQ'D UNDER CONCENTRATED LOADS. SEE FIGURE 1.
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FOR **HOLES** INCLUDING **DUCT CHASE** AND **FIELD CUT OPENINGS** SEE FIGURE 6 AND TABLES 6.1/6.2.
CERAMIC TILE APPLICATION AS PER OBC 9.30.6.

ALL **CONNECTORS** MUST BE INSTALLED AS PER THE **MANUFACTURER'S SPECIFICATIONS** USING THE MANUFACTURER **SPECIFIED FASTENERS**.
ALL **BEAM HANGER FASTENERS** INSTALLED INTO THE **SUPPORTING MEMBER MUST** BE A MINIMUM OF **3.5"** IN LENGTH UNLESS OTHERWISE SPECIFIED BY THE SUPPORTING MEMBER ENGINEER OF RECORD.

LOADING:
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DEAD LOAD: 15.0 lb/ft²
TILE LOAD: +5.0 lb/ft²

JOIST LL DEFLECTION LIMIT: L/480
SUBFLOOR: 3/4" GLUED AND NAILED



Products				
PlotID	Length	Product	Plies	Net Qty
J1	14-00-00	9 1/2" NI-40x	1	6
J2	18-00-00	11 7/8" NI-40x	1	23
J2 DJ	18-00-00	11 7/8" NI-40x	2	6
J3	16-00-00	11 7/8" NI-40x	1	20
J3 DJ	16-00-00	11 7/8" NI-40x	2	4
J4	14-00-00	11 7/8" NI-40x	1	2
J5	8-00-00	11 7/8" NI-40x	1	17
J6	4-00-00	11 7/8" NI-40x	1	6
J7	2-00-00	11 7/8" NI-40x	1	4
B20 L	8-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B21 L	8-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B13 H	16-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B1	14-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B22	14-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
B3	12-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B2	10-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1

Connector Summary		
Qty	Manuf	Product
8	H1	IUS2.56/11.88
9	H1	IUS2.56/11.88
12	H1	IUS2.56/11.88
4	H1	IUS2.56/11.88
12		IUS2.56/11.88
2	H4	HUS1.81/10

DWG# TF22071135 TO TF22071137
DWG# TF22071145 TO TF22071147
DWG# TF22071150



STRUCTURAL COMPONENTS ONLY
DWG# TF22071156

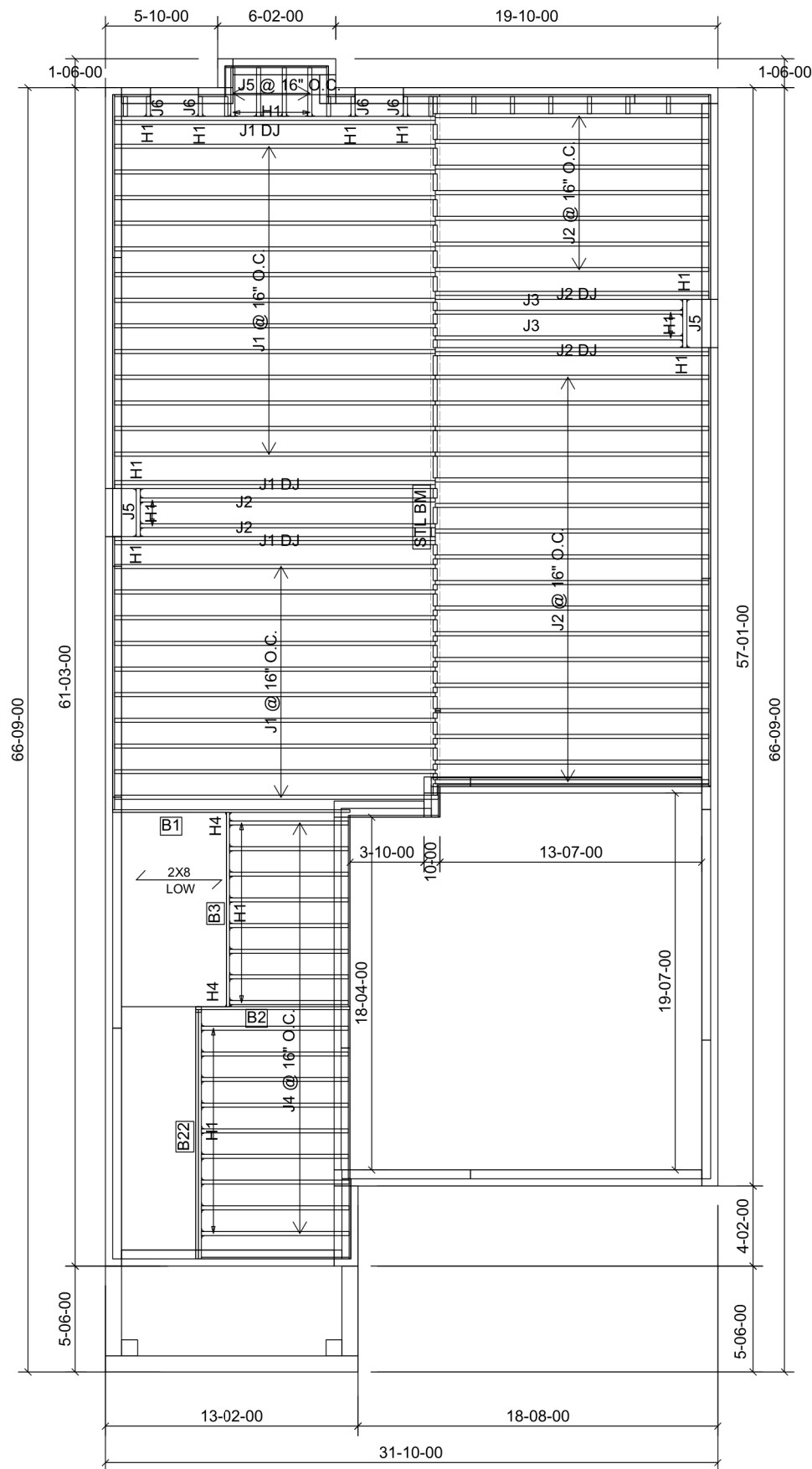
THIS IS A FLOOR COMPONENT
PLACEMENT PLAN ONLY.

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DATE: 2022-07-15

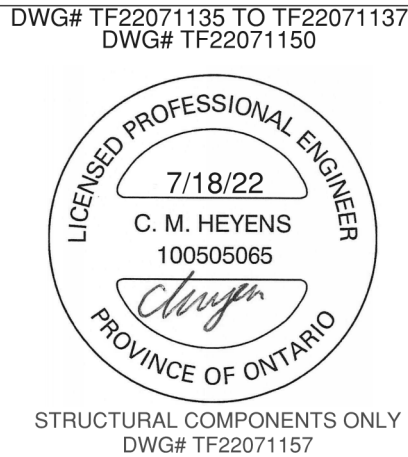
OPT SUNKEN

1st FLOOR FRAMING



Products				
PlotID	Length	Product	Plies	Net Qty
J1	18-00-00	11 7/8" NI-40x	1	23
J1 DJ	18-00-00	11 7/8" NI-40x	2	6
J2	16-00-00	11 7/8" NI-40x	1	26
J2 DJ	16-00-00	11 7/8" NI-40x	2	4
J3	14-00-00	11 7/8" NI-40x	1	2
J4	8-00-00	11 7/8" NI-40x	1	17
J5	4-00-00	11 7/8" NI-40x	1	6
J6	2-00-00	11 7/8" NI-40x	1	4
B1	14-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B22	14-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
B3	12-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B2	10-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1

Connector Summary		
Qty	Manuf	Product
8	H1	IUS2.56/11.88
9	H1	IUS2.56/11.88
12	H1	IUS2.56/11.88
4	H1	IUS2.56/11.88
2	H4	HUS1.81/10



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The building designer must review and approve this plan to ascertain conformity to the overall structural plan of the building. All dimensions to be verified on site.

DATE: 2022-07-15

STANDARD

1st FLOOR FRAMING



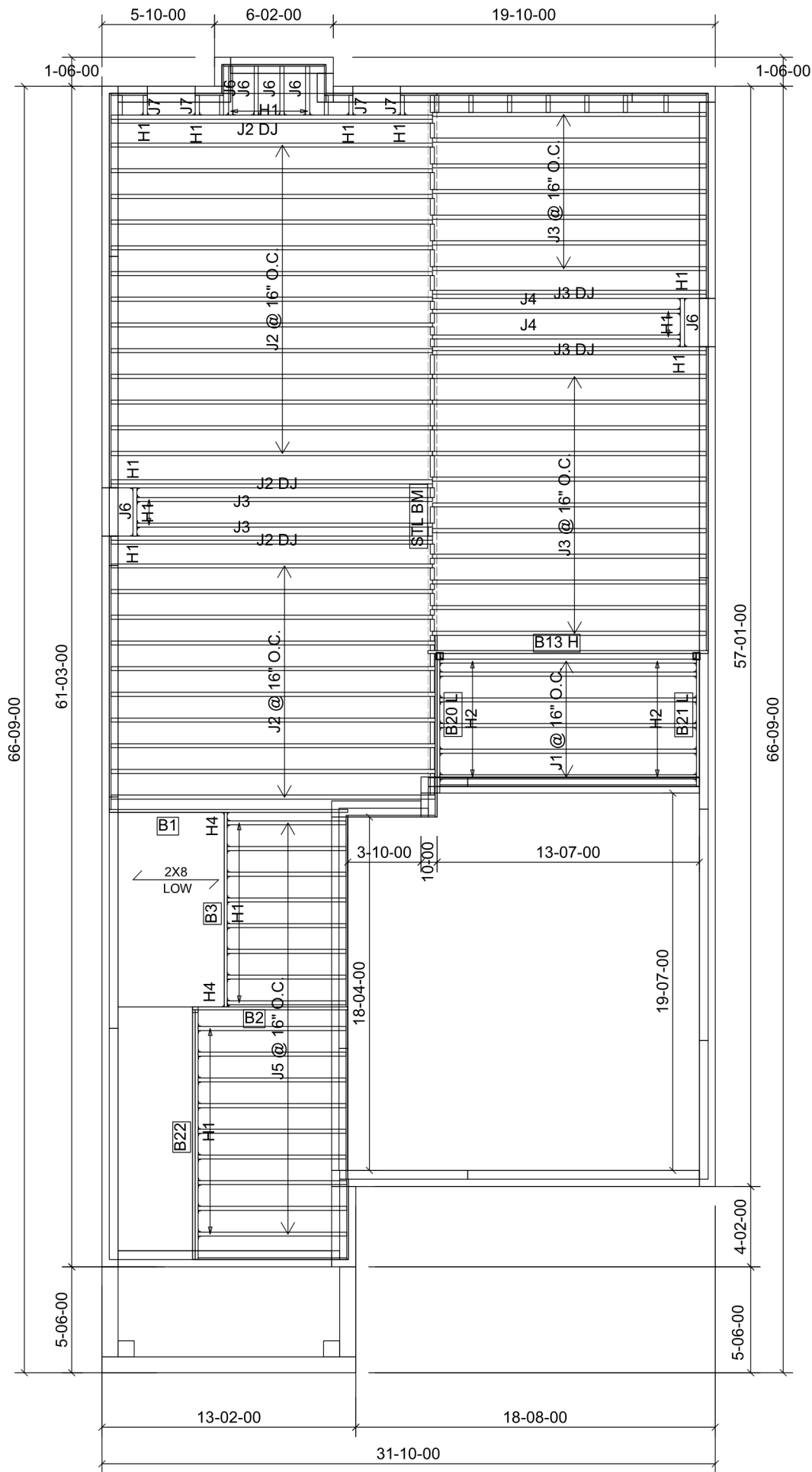
FROM PLAN DATED: 2022/01/12
BUILDER: ROYAL PINE HOMES
SITE: FORESTSIDE ESTATES
MODEL: 4001
ELEVATION: C
LOT:
CITY: BRAMPTON
SALESMAN: Rick DiCiano
DESIGNER: PL
REVISION:

REFER TO THE **NORDIC INSTALLATION** GUIDE FOR PROPER STORAGE AND INSTALLATION.
SQUASH BLOCKS OF 2x4, 2x6, 2x8 SPF #2 REQ'D UNDER INTERIOR UNIFORM LOAD BEARING WALLS.
MULTIPLE SQUASH BLOCKS REQ'D UNDER CONCENTRATED LOADS. SEE FIGURE 1.
CANTILEVERED JOISTS INCLUDING **CANT' OVER BRICK** REQ. I-JOIST BLOCKING ALONG BEARING AND RIMBOARD CLOSURE AT ENDS. SEE FIGURES 4/5 FOR REINFORCEMENT REQUIREMENTS.
FOR **HOLES** INCLUDING **DUCT CHASE** AND **FIELD CUT OPENINGS** SEE FIGURE 6 AND TABLES 6.1/6.2.
CERAMIC TILE APPLICATION AS PER OBC 9.30.6.

ALL **CONNECTORS** MUST BE INSTALLED AS PER THE **MANUFACTURER'S SPECIFICATIONS** USING THE MANUFACTURER **SPECIFIED FASTENERS**.
ALL **BEAM HANGER FASTENERS** INSTALLED INTO THE **SUPPORTING MEMBER MUST** BE A MINIMUM OF **3.5"** IN LENGTH UNLESS OTHERWISE SPECIFIED BY THE SUPPORTING MEMBER ENGINEER OF RECORD.

LOADING:
LIVE LOAD: 40.0 lb/ft²
DEAD LOAD: 15.0 lb/ft²
TILE LOAD: +5.0 lb/ft²

JOIST LL DEFLECTION LIMIT: L/480
SUBFLOOR: 3/4" GLUED AND NAILED



Products				
PlotID	Length	Product	Plies	Net Qty
J1	14-00-00	9 1/2" NI-40x	1	6
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J3	16-00-00	11 7/8" NI-40x	1	20
J3 DJ	16-00-00	11 7/8" NI-40x	2	4
J4	14-00-00	11 7/8" NI-40x	1	2
J5	8-00-00	11 7/8" NI-40x	1	17
J6	4-00-00	11 7/8" NI-40x	1	6
J7	2-00-00	11 7/8" NI-40x	1	4
B20 L	8-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B21 L	8-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B13 H	16-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B1	14-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B22	14-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
B3	12-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B2	10-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1

Connector Summary		
Qty	Manuf	Product
8	H1	IUS2.56/11.88
9	H1	IUS2.56/11.88
12	H1	IUS2.56/11.88
4	H1	IUS2.56/11.88
12	H2	IUS2.56/9.5
2	H4	HUS1.81/10

DWG# TF22071135 TO TF22071137
DWG# TF22071145 TO TF22071147
DWG# TF22071150



STRUCTURAL COMPONENTS ONLY
DWG# TF22071158

THIS IS A FLOOR COMPONENT
PLACEMENT PLAN ONLY.

The wood beams and joists outlined on this plan are designed as individual building components to be incorporated into the design of the building at the specification of the building designer. Please see the individual beam reports, joist reports, and/or joist span tables for each component identified on this placement plan.
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The building designer must review and approve this plan to ascertain conformity to the overall structural plan of the building. All dimensions to be verified on site.

DATE: 2022-07-15

OPT SUNKEN

1st FLOOR FRAMING



FROM PLAN DATED: 2022/01/12

BUILDER: ROYAL PINE HOMES

SITE: FORESTSIDE ESTATES

MODEL: 4001

ELEVATION: C

LOT:

CITY: BRAMPTON

SALESMAN: Rick DiCiano

DESIGNER: PL

REVISION:

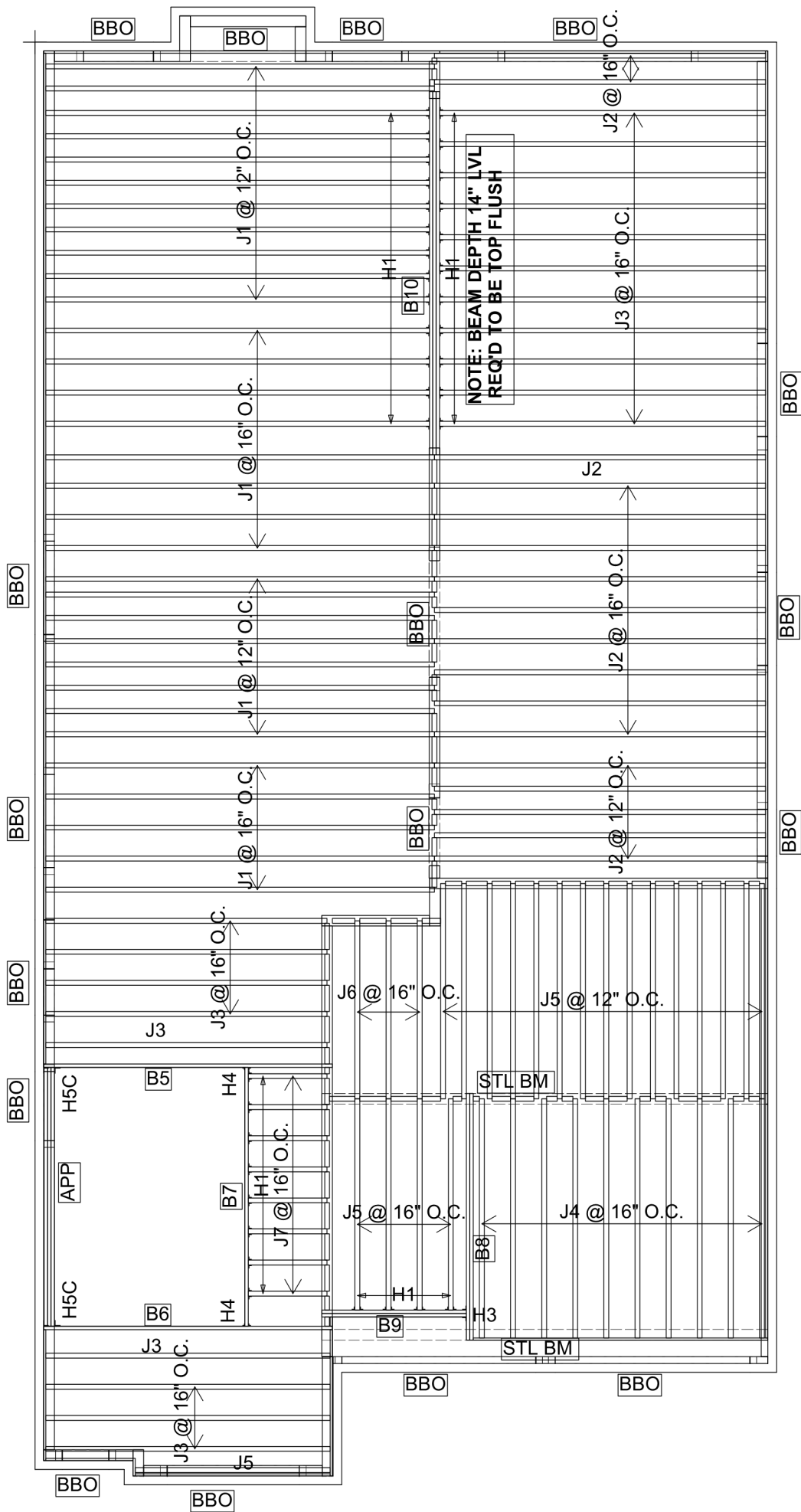
REFER TO THE **NORDIC INSTALLATION** GUIDE FOR PROPER STORAGE AND INSTALLATION.
SQUASH BLOCKS OF 2x4, 2x6, 2x8 SPF #2 REQ'D UNDER INTERIOR UNIFORM LOAD BEARING WALLS. **MULTIPLE SQUASH BLOCKS** REQ'D UNDER CONCENTRATED LOADS. SEE FIGURE 1.
CANTILEVERED JOISTS INCLUDING **CANT' OVER BRICK** REQ. I-JOIST BLOCKING ALONG BEARING AND RIMBOARD CLOSURE AT ENDS. SEE FIGURES 4/5 FOR REINFORCEMENT REQUIREMENTS.
FOR **HOLES** INCLUDING **DUCT CHASE** AND **FIELD CUT OPENINGS** SEE FIGURE 6 AND TABLES 6.1/6.2.
CERAMIC TILE APPLICATION AS PER OBC 9.30.6.

ALL **CONNECTORS** MUST BE INSTALLED AS PER THE **MANUFACTURER'S SPECIFICATIONS** USING THE MANUFACTURER **SPECIFIED FASTENERS**.
ALL **BEAM HANGER FASTENERS** INSTALLED INTO THE **SUPPORTING MEMBER MUST** BE A MINIMUM OF **3.5"** IN LENGTH UNLESS OTHERWISE SPECIFIED BY THE SUPPORTING MEMBER ENGINEER OF RECORD.

LOADING:
LIVE LOAD: 40.0 lb/ft²
DEAD LOAD: 15.0 lb/ft²
TILE LOAD: +5.0 lb/ft²

JOIST LL DEFLECTION LIMIT: L/480

SUBFLOOR: 3/4" GLUED AND NAILED



Products				
PlotID	Length	Product	Plies	Net Qty
J1	18-00-00	11 7/8" NI-40x	1	32
J2	16-00-00	11 7/8" NI-40x	1	17
J3	14-00-00	11 7/8" NI-40x	1	20
J4	12-00-00	11 7/8" NI-40x	1	10
J5	10-00-00	11 7/8" NI-40x	1	20
J6	8-00-00	11 7/8" NI-40x	1	3
J7	4-00-00	11 7/8" NI-40x	1	8
B5	14-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B6	14-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B7	12-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B8	12-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
APP	12-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	3	3
B9	8-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
B10	16-00-00	1 3/4" x 14" (2.0E 3100) WestFraser LVL	3	3

Connector Summary		
Qty	Manuf	Product
8	H1	IUS2.56/11.88
4	H1	IUS2.56/11.88
24	H1	IUS2.56/11.88
1	H3	HGUS410
2	H4	HUS1.81/10
2	H5C	HUC610

DWG# TF22071139 TO TF22071144



STRUCTURAL COMPONENTS ONLY
DWG# TF22071159

THIS IS A FLOOR COMPONENT
PLACEMENT PLAN ONLY.

The wood beams and joists outlined on this plan are designed as individual building components to be incorporated into the design of the building at the specification of the building designer. Please see the individual beam reports, joist reports, and/or joist span tables for each component identified on this placement plan.
The supporting structure is to be specified by the building designer prior to the installation of joist(s) and/or beam(s). The building designer is responsible for the bracing of the floor system and its integration into the bracing of the overall structure. All components labelled "by others" or "as per plan", and all steel beams, are not within the scope of work of this seal.
The building designer must review and approve this plan to ascertain conformity to the overall structural plan of the building. All dimensions to be verified on site.

DATE: 2022-07-15

2nd FLOOR FRAMING



FROM PLAN DATED: 2022/01/12

BUILDER: ROYAL PINE HOMES

SITE: FORESTSIDE ESTATES

MODEL: 4001

ELEVATION:

LOT:

CITY: BRAMPTON

SALESMAN: Rick DiCiano

DESIGNER: PL

REVISION:

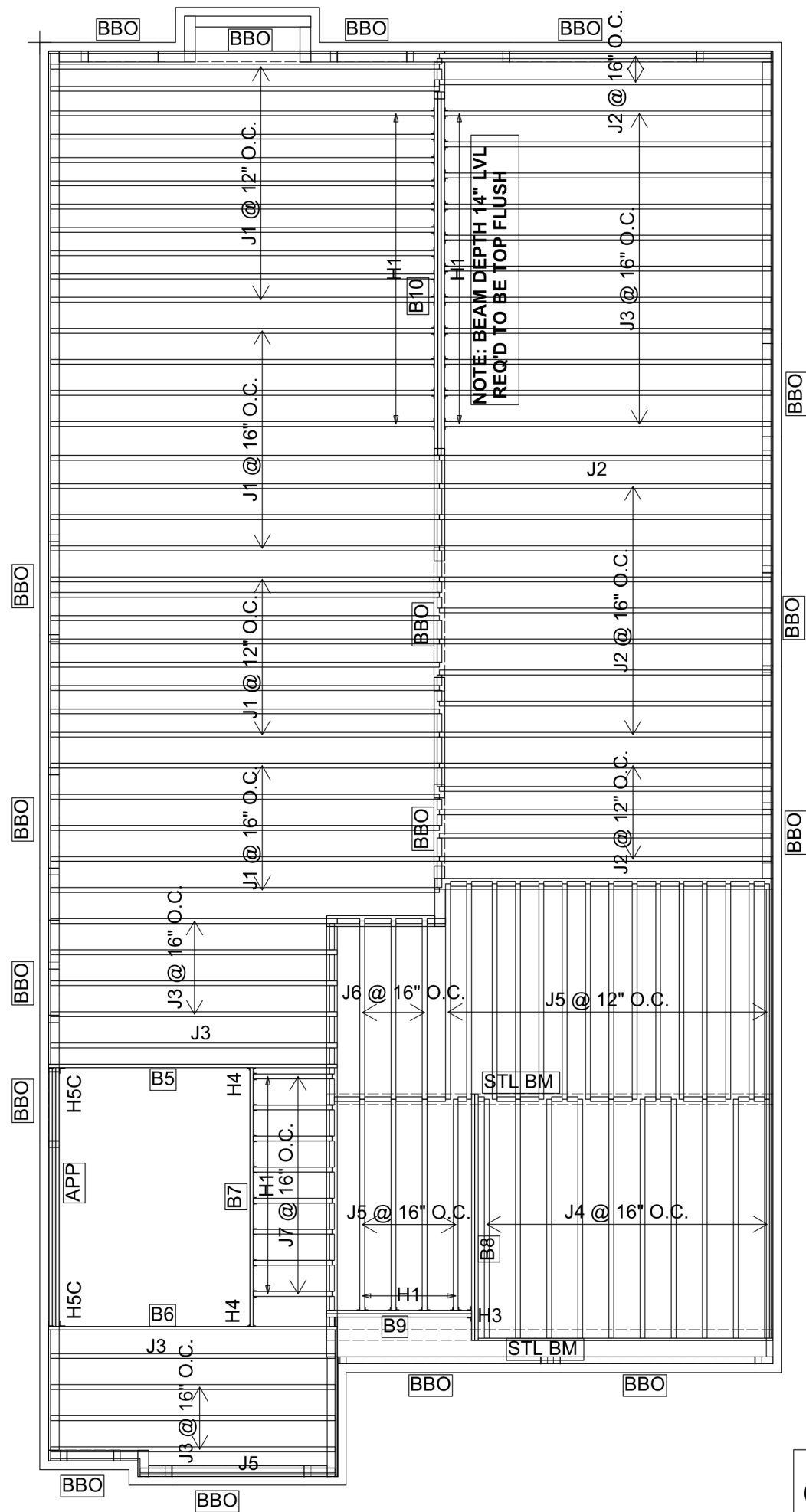
REFER TO THE **NORDIC INSTALLATION** GUIDE FOR PROPER STORAGE AND INSTALLATION.
SQUASH BLOCKS OF 2x4, 2x6, 2x8 SPF #2 REQ'D UNDER INTERIOR UNIFORM LOAD BEARING WALLS.
MULTIPLE SQUASH BLOCKS REQ'D UNDER CONCENTRATED LOADS. SEE FIGURE 1.
CANTILEVERED JOISTS INCLUDING **CANT' OVER BRICK** REQ. I-JOIST BLOCKING ALONG BEARING AND RIMBOARD CLOSURE AT ENDS. SEE FIGURES 4/5 FOR REINFORCEMENT REQUIREMENTS.
FOR **HOLES** INCLUDING **DUCT CHASE** AND **FIELD CUT OPENINGS** SEE FIGURE 6 AND TABLES 6.1/6.2.
CERAMIC TILE APPLICATION AS PER OBC 9.30.6.

ALL **CONNECTORS** MUST BE INSTALLED AS PER THE **MANUFACTURER'S SPECIFICATIONS** USING THE MANUFACTURER **SPECIFIED FASTENERS**.
ALL **BEAM HANGER FASTENERS** INSTALLED INTO THE **SUPPORTING MEMBER MUST** BE A MINIMUM OF **3.5"** IN LENGTH UNLESS OTHERWISE SPECIFIED BY THE SUPPORTING MEMBER ENGINEER OF RECORD.

LOADING:
LIVE LOAD: 40.0 lb/ft²
DEAD LOAD: 15.0 lb/ft²
TILE LOAD: +5.0 lb/ft²

JOIST LL DEFLECTION LIMIT: L/480

SUBFLOOR: 5/8" GLUED AND NAILED



Products				
PlotID	Length	Product	Plies	Net Qty
J1	18-00-00	11 7/8" NI-40x	1	32
J2	16-00-00	11 7/8" NI-40x	1	17
J3	14-00-00	11 7/8" NI-40x	1	20
J4	12-00-00	11 7/8" NI-40x	1	10
J5	10-00-00	11 7/8" NI-40x	1	20
J6	8-00-00	11 7/8" NI-40x	1	3
J7	4-00-00	11 7/8" NI-40x	1	8
B5	14-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B6	14-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B7	12-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B8	12-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
APP	12-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	3	3
B9	8-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
B10	16-00-00	1 3/4" x 14" (2.0E 3100) WestFraser LVL	3	3

Connector Summary		
Qty	Manuf	Product
8	H1	IUS2.56/11.88
4	H1	IUS2.56/11.88
24	H1	IUS2.56/11.88
1	H3	HGUS410
2	H4	HUS1.81/10
2	H5C	HUC610

DWG# TF22071139 TO TF22071144



STRUCTURAL COMPONENTS ONLY
DWG# TF22071160

**THIS IS A FLOOR COMPONENT
PLACEMENT PLAN ONLY.**

The wood beams and joists outlined on this plan are designed as individual building components to be incorporated into the design of the building at the specification of the building designer. Please see the individual beam reports, joist reports, and/or joist span tables for each component identified on this placement plan.
The supporting structure is to be specified by the building designer prior to the installation of joist(s) and/or beam(s). The building designer is responsible for the bracing of the floor system and its integration into the bracing of the overall structure. All components labelled "by others" or "as per plan", and all steel beams, are not within the scope of work of this seal.
The building designer must review and approve this plan to ascertain conformity to the overall structural plan of the building. All dimensions to be verified on site.

DATE: 2022-07-15

OPT 5 BED

2nd FLOOR FRAMING



FROM PLAN DATED: 2022/01/12

BUILDER: ROYAL PINE HOMES

SITE: FORESTSIDE ESTATES

MODEL: 4001

ELEVATION: A

LOT:

CITY: BRAMPTON

SALESMAN: Rick DiCiano

DESIGNER: PL

REVISION:

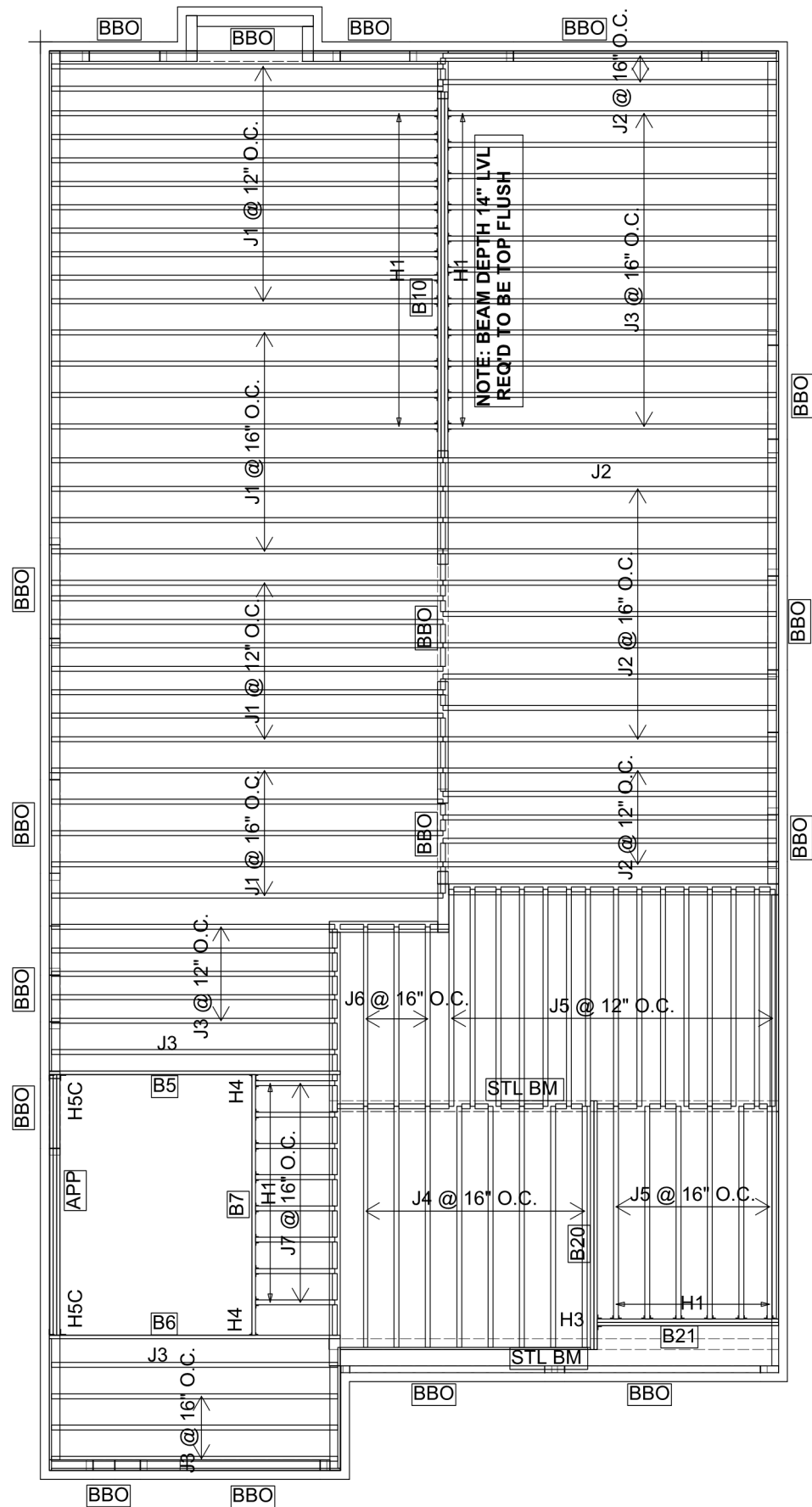
REFER TO THE **NORDIC INSTALLATION** GUIDE FOR PROPER STORAGE AND INSTALLATION.
SQUASH BLOCKS OF 2x4, 2x6, 2x8 SPF #2 REQ'D UNDER INTERIOR UNIFORM LOAD BEARING WALLS.
MULTIPLE SQUASH BLOCKS REQ'D UNDER CONCENTRATED LOADS. SEE FIGURE 1.
CANTILEVERED JOISTS INCLUDING **CANT' OVER BRICK** REQ. I-JOIST BLOCKING ALONG BEARING AND RIMBOARD CLOSURE AT ENDS. SEE FIGURES 4/5 FOR REINFORCEMENT REQUIREMENTS.
FOR **HOLES** INCLUDING **DUCT CHASE** AND **FIELD CUT OPENINGS** SEE FIGURE 6 AND TABLES 6.1/6.2.
CERAMIC TILE APPLICATION AS PER OBC 9.30.6.

ALL **CONNECTORS** MUST BE INSTALLED AS PER THE **MANUFACTURER'S SPECIFICATIONS** USING THE MANUFACTURER **SPECIFIED FASTENERS**.
ALL **BEAM HANGER FASTENERS** INSTALLED INTO THE **SUPPORTING MEMBER MUST** BE A MINIMUM OF **3.5"** IN LENGTH UNLESS OTHERWISE SPECIFIED BY THE SUPPORTING MEMBER ENGINEER OF RECORD.

LOADING:
LIVE LOAD: 40.0 lb/ft²
DEAD LOAD: 15.0 lb/ft²
TILE LOAD: +5.0 lb/ft²

JOIST LL DEFLECTION LIMIT: L/480

SUBFLOOR: 5/8" GLUED AND NAILED



Products				
PlotID	Length	Product	Plies	Net Qty
J1	18-00-00	11 7/8" NI-40x	1	32
J2	16-00-00	11 7/8" NI-40x	1	17
J3	14-00-00	11 7/8" NI-40x	1	21
J4	12-00-00	11 7/8" NI-40x	1	8
J5	10-00-00	11 7/8" NI-40x	1	21
J6	8-00-00	11 7/8" NI-40x	1	3
J7	4-00-00	11 7/8" NI-40x	1	8
B5	14-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B6	14-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B7	12-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B20	12-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
APP	12-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	3	3
B21	8-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
B10	16-00-00	1 3/4" x 14" (2.0E 3100) WestFraser LVL	3	3

Connector Summary		
Qty	Manuf	Product
8	H1	IUS2.56/11.88
6	H1	IUS2.56/11.88
24	H1	IUS2.56/11.88
1	H3	HGUS410
2	H4	HUS1.81/10
2	H5C	HUC610

DWG# TF22071139 TO TF22071141
DWG# TF22071144
DWG# TF22071148 TO TF22071149



STRUCTURAL COMPONENTS ONLY
DWG# TF22071161

THIS IS A FLOOR COMPONENT
PLACEMENT PLAN ONLY.

The wood beams and joists outlined on this plan are designed as individual building components to be incorporated into the design of the building at the specification of the building designer. Please see the individual beam reports, joist reports, and/or joist span tables for each component identified on this placement plan.
The supporting structure is to be specified by the building designer prior to the installation of joist(s) and/or beam(s). The building designer is responsible for the bracing of the floor system and its integration into the bracing of the overall structure. All components labelled "by others" or "as per plan", and all steel beams, are not within the scope of work of this seal.
The building designer must review and approve this plan to ascertain conformity to the overall structural plan of the building. All dimensions to be verified on site.

DATE: 2022-07-15

2nd FLOOR FRAMING



FROM PLAN DATED: 2022/01/12

BUILDER: ROYAL PINE HOMES

SITE: FORESTSIDE ESTATES

MODEL: 4001

ELEVATION: B

LOT:

CITY: BRAMPTON

SALESMAN: Rick DiCiano

DESIGNER: PL

REVISION:

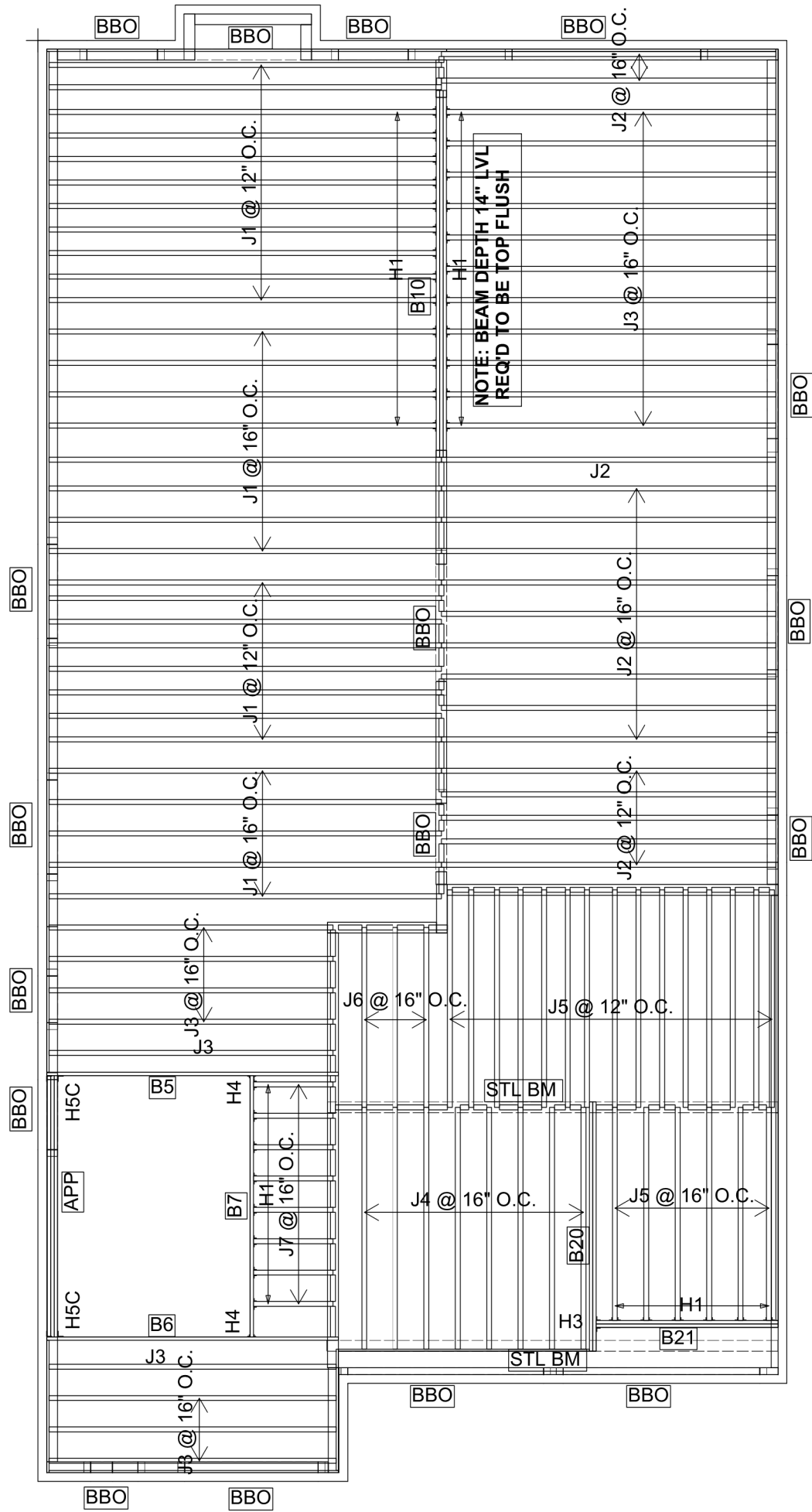
REFER TO THE **NORDIC INSTALLATION** GUIDE FOR PROPER STORAGE AND INSTALLATION.
SQUASH BLOCKS OF 2x4, 2x6, 2x8 SPF #2 REQ'D UNDER INTERIOR UNIFORM LOAD BEARING WALLS.
MULTIPLE SQUASH BLOCKS REQ'D UNDER CONCENTRATED LOADS. SEE FIGURE 1.
CANTILEVERED JOISTS INCLUDING **CANT' OVER BRICK** REQ. I-JOIST BLOCKING ALONG BEARING AND RIMBOARD CLOSURE AT ENDS. SEE FIGURES 4/5 FOR REINFORCEMENT REQUIREMENTS.
FOR **HOLES** INCLUDING **DUCT CHASE** AND **FIELD CUT OPENINGS** SEE FIGURE 6 AND TABLES 6.1/6.2.
CERAMIC TILE APPLICATION AS PER OBC 9.30.6.

ALL **CONNECTORS** MUST BE INSTALLED AS PER THE **MANUFACTURER'S SPECIFICATIONS** USING THE MANUFACTURER **SPECIFIED FASTENERS**.
ALL **BEAM HANGER FASTENERS** INSTALLED INTO THE **SUPPORTING MEMBER MUST** BE A MINIMUM OF **3.5"** IN LENGTH UNLESS OTHERWISE SPECIFIED BY THE SUPPORTING MEMBER ENGINEER OF RECORD.

LOADING:
LIVE LOAD: 40.0 lb/ft²
DEAD LOAD: 15.0 lb/ft²
TILE LOAD: +5.0 lb/ft²

JOIST LL DEFLECTION LIMIT: L/480

SUBFLOOR: 5/8" GLUED AND NAILED



Products				
PlotID	Length	Product	Plies	Net Qty
J1	18-00-00	11 7/8" NI-40x	1	32
J2	16-00-00	11 7/8" NI-40x	1	17
J3	14-00-00	11 7/8" NI-40x	1	20
J4	12-00-00	11 7/8" NI-40x	1	8
J5	10-00-00	11 7/8" NI-40x	1	21
J6	8-00-00	11 7/8" NI-40x	1	3
J7	4-00-00	11 7/8" NI-40x	1	8
B5	14-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B6	14-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B7	12-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B20	12-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
APP	12-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	3	3
B21	8-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
B10	16-00-00	1 3/4" x 14" (2.0E 3100) WestFraser LVL	3	3

Connector Summary		
Qty	Manuf	Product
8	H1	IUS2.56/11.88
6	H1	IUS2.56/11.88
24	H1	IUS2.56/11.88
1	H3	HGUS410
2	H4	HUS1.81/10
2	H5C	HUC610

DWG# TF22071139 TO TF22071141
DWG# TF22071144
DWG# TF22071148 TO TF22071149



STRUCTURAL COMPONENTS ONLY
DWG# TF22071162

THIS IS A FLOOR COMPONENT
PLACEMENT PLAN ONLY.

The wood beams and joists outlined on this plan are designed as individual building components to be incorporated into the design of the building at the specification of the building designer. Please see the individual beam reports, joist reports, and/or joist span tables for each component identified on this placement plan.
The supporting structure is to be specified by the building designer prior to the installation of joist(s) and/or beam(s). The building designer is responsible for the bracing of the floor system and its integration into the bracing of the overall structure. All components labelled "by others" or "as per plan", and all steel beams, are not within the scope of work of this seal.
The building designer must review and approve this plan to ascertain conformity to the overall structural plan of the building. All dimensions to be verified on site.

DATE: 2022-07-15

OPT 5 BEDROOM

2nd FLOOR FRAMING



FROM PLAN DATED: 2022/01/12

BUILDER: ROYAL PINE HOMES

SITE: FORESTSIDE ESTATES

MODEL: 4001

ELEVATION: B

LOT:

CITY: BRAMPTON

SALESMAN: Rick DiCiano

DESIGNER: PL

REVISION:

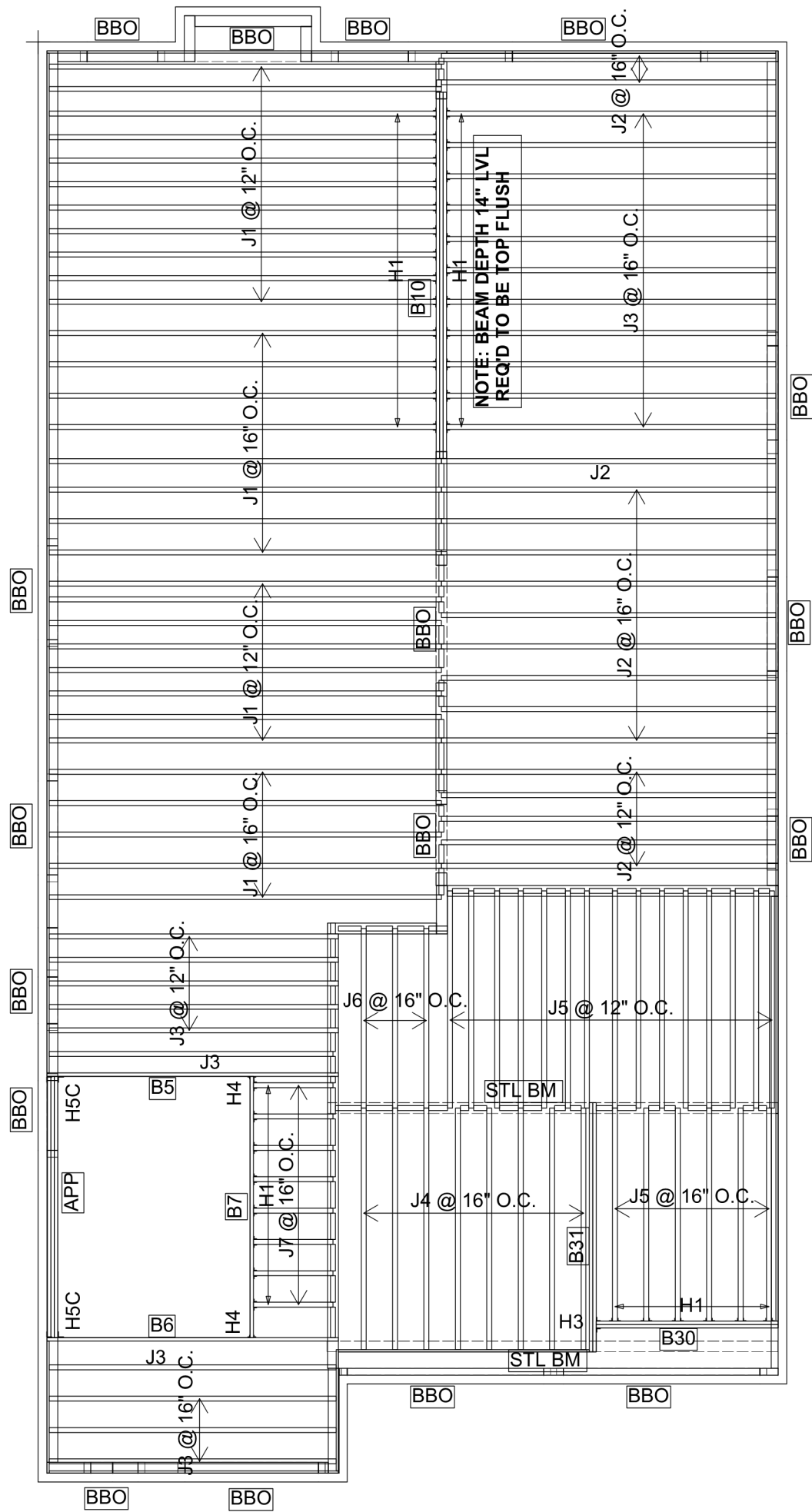
REFER TO THE **NORDIC INSTALLATION** GUIDE FOR PROPER STORAGE AND INSTALLATION.
SQUASH BLOCKS OF 2x4, 2x6, 2x8 SPF #2 REQ'D UNDER INTERIOR UNIFORM LOAD BEARING WALLS. **MULTIPLE SQUASH BLOCKS** REQ'D UNDER CONCENTRATED LOADS. SEE FIGURE 1.
CANTILEVERED JOISTS INCLUDING **CANT' OVER BRICK** REQ. I-JOIST BLOCKING ALONG BEARING AND RIMBOARD CLOSURE AT ENDS. SEE FIGURES 4/5 FOR REINFORCEMENT REQUIREMENTS.
FOR **HOLES** INCLUDING **DUCT CHASE** AND **FIELD CUT OPENINGS** SEE FIGURE 6 AND TABLES 6.1/6.2.
CERAMIC TILE APPLICATION AS PER OBC 9.30.6.

ALL **CONNECTORS** MUST BE INSTALLED AS PER THE **MANUFACTURER'S SPECIFICATIONS** USING THE MANUFACTURER **SPECIFIED FASTENERS**.
ALL **BEAM HANGER FASTENERS** INSTALLED INTO THE **SUPPORTING MEMBER** MUST BE A MINIMUM OF **3.5"** IN LENGTH UNLESS OTHERWISE SPECIFIED BY THE SUPPORTING MEMBER ENGINEER OF RECORD.

LOADING:
LIVE LOAD: 40.0 lb/ft²
DEAD LOAD: 15.0 lb/ft²
TILE LOAD: +5.0 lb/ft²

JOIST LL DEFLECTION LIMIT: L/480

SUBFLOOR: 5/8" GLUED AND NAILED



Products				
PlotID	Length	Product	Plies	Net Qty
J1	18-00-00	11 7/8" NI-40x	1	32
J2	16-00-00	11 7/8" NI-40x	1	17
J3	14-00-00	11 7/8" NI-40x	1	21
J4	12-00-00	11 7/8" NI-40x	1	8
J5	10-00-00	11 7/8" NI-40x	1	21
J6	8-00-00	11 7/8" NI-40x	1	3
J7	4-00-00	11 7/8" NI-40x	1	8
B5	14-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B6	14-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B7	12-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B31	12-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
APP	12-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	3	3
B30	8-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
B10	16-00-00	1 3/4" x 14" (2.0E 3100) WestFraser LVL	3	3

Connector Summary		
Qty	Manuf	Product
8	H1	IUS2.56/11.88
6	H1	IUS2.56/11.88
24	H1	IUS2.56/11.88
1	H3	HGUS410
2	H4	HUS1.81/10
2	H5C	HUC610

DWG# TF22071139 TO TF22071141
DWG# TF22071144
DWG# TF22071151 TO TF22071152



STRUCTURAL COMPONENTS ONLY
DWG# TF22071163

THIS IS A FLOOR COMPONENT
PLACEMENT PLAN ONLY.

The wood beams and joists outlined on this plan are designed as individual building components to be incorporated into the design of the building at the specification of the building designer. Please see the individual beam reports, joist reports, and/or joist span tables for each component identified on this placement plan.
The supporting structure is to be specified by the building designer prior to the installation of joist(s) and/or beam(s). The building designer is responsible for the bracing of the floor system and its integration into the bracing of the overall structure. All components labelled "by others" or "as per plan", and all steel beams, are not within the scope of work of this seal.
The building designer must review and approve this plan to ascertain conformity to the overall structural plan of the building. All dimensions to be verified on site.

DATE: 2022-07-15

2nd FLOOR FRAMING



FROM PLAN DATED: 2022/01/12

BUILDER: ROYAL PINE HOMES

SITE: FORESTSIDE ESTATES

MODEL: 4001

ELEVATION: C

LOT:

CITY: BRAMPTON

SALESMAN: Rick DiCiano

DESIGNER: PL

REVISION:

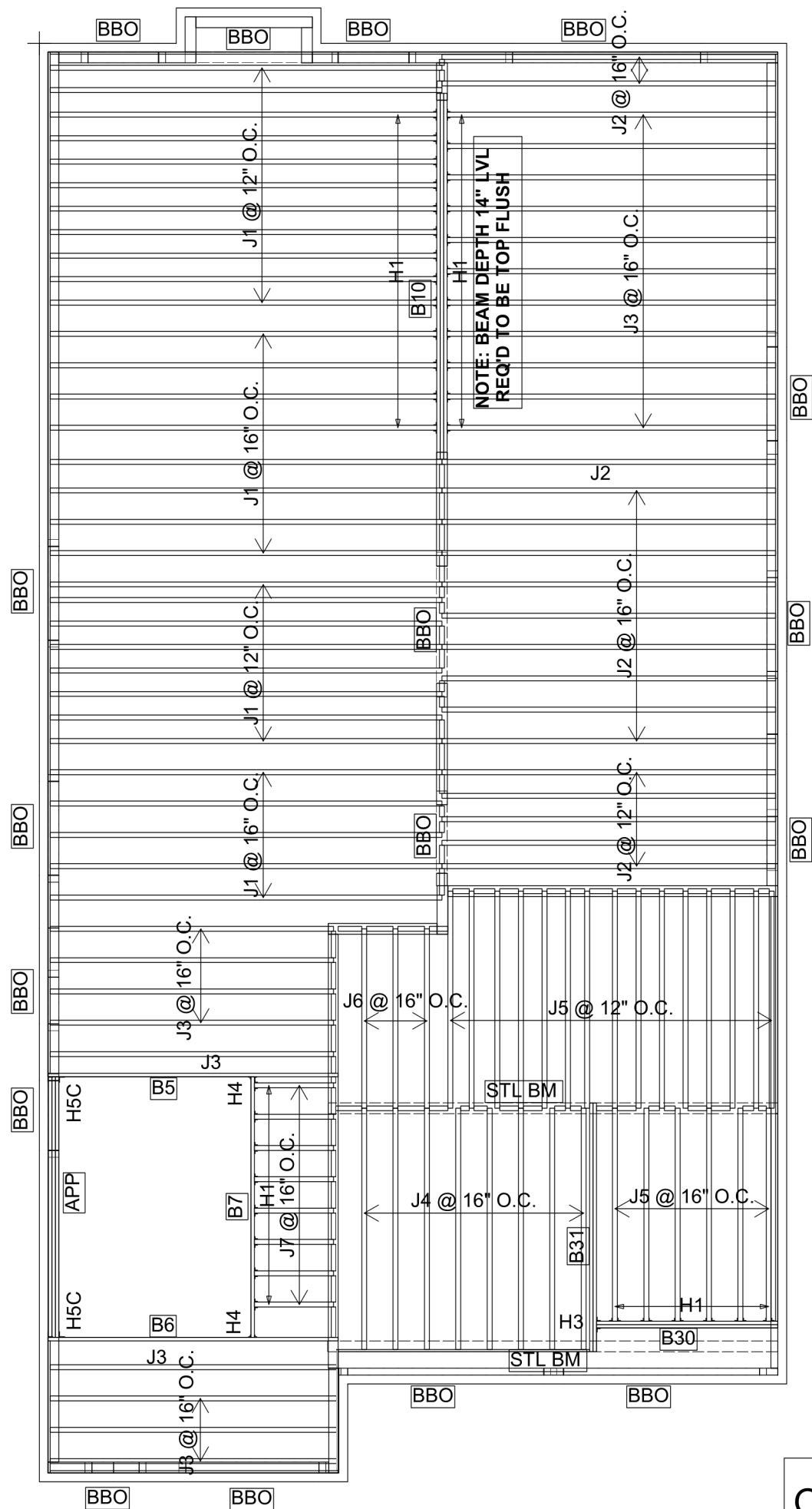
REFER TO THE **NORDIC INSTALLATION** GUIDE FOR PROPER STORAGE AND INSTALLATION.
SQUASH BLOCKS OF 2x4, 2x6, 2x8 SPF #2 REQ'D UNDER INTERIOR UNIFORM LOAD BEARING WALLS.
MULTIPLE SQUASH BLOCKS REQ'D UNDER CONCENTRATED LOADS. SEE FIGURE 1.
CANTILEVERED JOISTS INCLUDING **CANT' OVER BRICK** REQ. I-JOIST BLOCKING ALONG BEARING AND RIMBOARD CLOSURE AT ENDS. SEE FIGURES 4/5 FOR REINFORCEMENT REQUIREMENTS.
FOR **HOLES** INCLUDING **DUCT CHASE** AND **FIELD CUT OPENINGS** SEE FIGURE 6 AND TABLES 6.1/6.2.
CERAMIC TILE APPLICATION AS PER OBC 9.30.6.

ALL **CONNECTORS** MUST BE INSTALLED AS PER THE **MANUFACTURER'S SPECIFICATIONS** USING THE MANUFACTURER **SPECIFIED FASTENERS**.
ALL **BEAM HANGER FASTENERS** INSTALLED INTO THE **SUPPORTING MEMBER MUST** BE A MINIMUM OF **3.5"** IN LENGTH UNLESS OTHERWISE SPECIFIED BY THE SUPPORTING MEMBER ENGINEER OF RECORD.

LOADING:
LIVE LOAD: 40.0 lb/ft²
DEAD LOAD: 15.0 lb/ft²
TILE LOAD: +5.0 lb/ft²

JOIST LL DEFLECTION LIMIT: L/480

SUBFLOOR: 5/8" GLUED AND NAILED



Products				
PlotID	Length	Product	Plies	Net Qty
J1	18-00-00	11 7/8" NI-40x	1	32
J2	16-00-00	11 7/8" NI-40x	1	17
J3	14-00-00	11 7/8" NI-40x	1	20
J4	12-00-00	11 7/8" NI-40x	1	8
J5	10-00-00	11 7/8" NI-40x	1	21
J6	8-00-00	11 7/8" NI-40x	1	3
J7	4-00-00	11 7/8" NI-40x	1	8
B5	14-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B6	14-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B7	12-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B31	12-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
APP	12-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	3	3
B30	8-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
B10	16-00-00	1 3/4" x 14" (2.0E 3100) WestFraser LVL	3	3

Connector Summary		
Qty	Manuf	Product
8	H1	IUS2.56/11.88
6	H1	IUS2.56/11.88
24	H1	IUS2.56/11.88
1	H3	HGUS410
2	H4	HUS1.81/10
2	H5C	HUC610

DWG# TF22071139 TO TF22071141
DWG# TF22071144
DWG# TF22071151 TO TF22071152



STRUCTURAL COMPONENTS ONLY
DWG# TF22071164

THIS IS A FLOOR COMPONENT
PLACEMENT PLAN ONLY.

The wood beams and joists outlined on this plan are designed as individual building components to be incorporated into the design of the building at the specification of the building designer. Please see the individual beam reports, joist reports, and/or joist span tables for each component identified on this placement plan.
The supporting structure is to be specified by the building designer prior to the installation of joist(s) and/or beam(s). The building designer is responsible for the bracing of the floor system and its integration into the bracing of the overall structure. All components labelled "by others" or "as per plan", and all steel beams, are not within the scope of work of this seal.
The building designer must review and approve this plan to ascertain conformity to the overall structural plan of the building. All dimensions to be verified on site.

DATE: 2022-07-15

OPT 5 BEDROOM

2nd FLOOR FRAMING



FROM PLAN DATED: 2022/01/12

BUILDER: ROYAL PINE HOMES

SITE: FORESTSIDE ESTATES

MODEL: 4001

ELEVATION: C

LOT:

CITY: BRAMPTON

SALESMAN: Rick DiCiano

DESIGNER: PL

REVISION:

REFER TO THE **NORDIC INSTALLATION** GUIDE FOR PROPER STORAGE AND INSTALLATION.
SQUASH BLOCKS OF 2x4, 2x6, 2x8 SPF #2 REQ'D UNDER INTERIOR UNIFORM LOAD BEARING WALLS.
MULTIPLE SQUASH BLOCKS REQ'D UNDER CONCENTRATED LOADS. SEE FIGURE 1.
CANTILEVERED JOISTS INCLUDING **CANT' OVER BRICK** REQ. I-JOIST BLOCKING ALONG BEARING AND RIMBOARD CLOSURE AT ENDS. SEE FIGURES 4/5 FOR REINFORCEMENT REQUIREMENTS.
FOR **HOLES** INCLUDING **DUCT CHASE** AND **FIELD CUT OPENINGS** SEE FIGURE 6 AND TABLES 6.1/6.2.
CERAMIC TILE APPLICATION AS PER OBC 9.30.6.

ALL **CONNECTORS** MUST BE INSTALLED AS PER THE **MANUFACTURER'S SPECIFICATIONS** USING THE MANUFACTURER **SPECIFIED FASTENERS**.
ALL **BEAM HANGER FASTENERS** INSTALLED INTO THE **SUPPORTING MEMBER MUST** BE A MINIMUM OF **3.5"** IN LENGTH UNLESS OTHERWISE SPECIFIED BY THE SUPPORTING MEMBER ENGINEER OF RECORD.

LOADING:
LIVE LOAD: 40.0 lb/ft²
DEAD LOAD: 15.0 lb/ft²
TILE LOAD: +5.0 lb/ft²

JOIST LL DEFLECTION LIMIT: L/480

SUBFLOOR: 5/8" GLUED AND NAILED



BUILDER: **ROYAL PINE HOMES**
SITE: **FORESTSIDE ESTATES**
MODEL: **4001**
CITY: **BRAMPTON**

Job Name: **4001- ELEV A STD**
Level: **1ST FLOOR**
Label: **B1 - i7582**
Type: **Beam**

1 Ply Member
1 3/4" x 11 7/8" (2.0E 3100)
WestFraser LVL

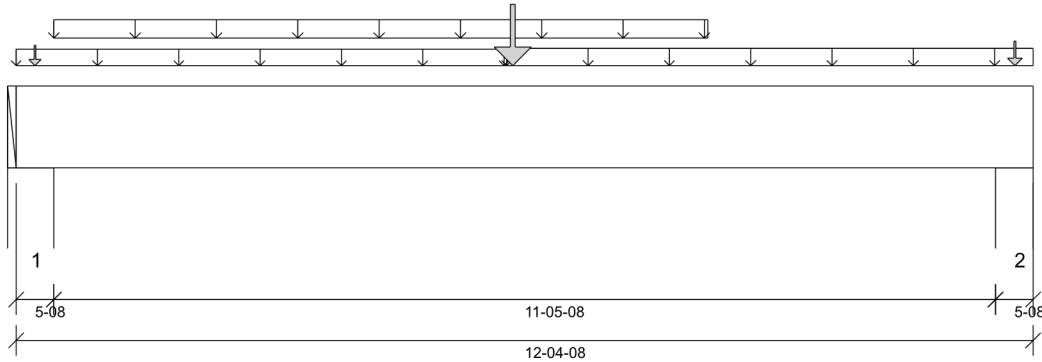
Status:
Design Passed

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

07/15/2022 11:26



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: 6'- 3 1/8"

Factored Resistance of Support Material:

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

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	6'- 1/2"	1.25D + 1.5L	0.94	7498 lb ft	16678 lb ft	Passed - 45%
Factored Neg. Moment:	12'	1.25D + 1.5L + S	0.95	65 lb ft	7171 lb ft	Passed - 1%
Factored Shear:	1'- 5 3/8"	1.25D + 1.5L	0.94	1531 lb	6519 lb	Passed - 23%
Live Load (LL) Pos. Defl.:	6'- 1 15/16"	L		0.105"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	6'- 1 5/8"	D + L		0.239"	L/240	Passed - L/575

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	0.81	1621 lb		8139 lb	4815 lb	Passed - 34%
2	5-08	1.25D + 1.5L	0.94	1912 lb		9447 lb	5588 lb	Passed - 34%

SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	12'- 4 1/2"	Self Weight	Top	6 lb/ft	-	-	-
Uniform	-0'	5'- 11 5/8"	FC1 Floor Decking (Plan View Fill)	Top	8 lb/ft	16 lb/ft	-	-
Uniform	0'- 5 1/2"	8'- 5"	User Load	Top	60 lb/ft	-	-	-
Uniform	5'- 11 5/8"	12'- 4 1/2"	FC1 Floor Decking (Plan View Fill)	Top	13 lb/ft	27 lb/ft	-	-
Point	6'- 1/2"	6'- 1/2"	B3(i7597)	Front	664 lb	735 lb	-	-
Point	0'- 2 3/4"	0'- 2 3/4"	E50(i1096)	Top	73 lb	24 lb	57 lb	-
Point	12'- 1 13/16"	12'- 1 13/16"	3(i997)	Top	118 lb	163 lb	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 5 1/2"	W30(i34)	825 lb	521 lb	59 lb	-
2	11'- 11"	12'- 4 1/2"	W34(i53)	713 lb	666 lb	-2 lb	-

DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped 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.



STRUCTURAL COMPONENT ONLY
DWG # TF22071135



BUILDER: **ROYAL PINE HOMES**
SITE: **FORESTSIDE ESTATES**
MODEL: **4001**
CITY: **BRAMPTON**

Job Name: **4001- ELEV A STD**
Level: **1ST FLOOR**
Label: **B2 - i7602**
Type: **Beam**

1 Ply Member
1 3/4" x 11 7/8" (2.0E 3100)
WestFraser LVL

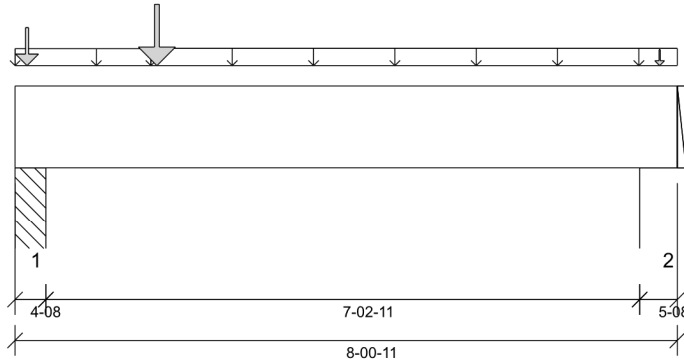
Status:
Design Passed

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

07/15/2022 11:26



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 5/8"

Factored Resistance of Support Material:

- 615 psi Column @ 0'- 3 1/2"
- 615 psi Wall @ 7'- 8 3/16"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	1'- 8 11/16"	1.25D + 1.5L	1.00	3533 lb ft	17672 lb ft	Passed - 20%
Factored Neg. Moment:	0'- 3 1/2"	1.25D + 1.5L	1.00	219 lb ft	7738 lb ft	Passed - 3%
Factored Shear:	1'- 4 3/8"	1.25D + 1.5L	1.00	2596 lb	6908 lb	Passed - 38%
Live Load (LL) Pos. Defl.:	3'- 6 7/8"	L		0.025"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	3'- 6 15/16"	D + L		0.041"	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'-08	1.25D + 1.5L	1.00	4158 lb		8190 lb	4843 lb	Passed - 86%
2	5'-08	1.25D + 1.5L	1.00	856 lb		10010 lb	5921 lb	Passed - 14%

SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	8'- 11/16"	Self Weight	Top	6 lb/ft	-	-	-
Uniform	0'	1'- 7 13/16"	FC1 Floor Decking (Plan View Fill)	Top	11 lb/ft	22 lb/ft	-	-
Uniform	1'- 7 13/16"	8'- 11/16"	FC1 Floor Decking (Plan View Fill)	Top	13 lb/ft	27 lb/ft	-	-
Point	1'- 8 11/16"	1'- 8 11/16"	B3(i7597)	Back	813 lb	1309 lb	-	-
Point	0'- 1 3/4"	0'- 1 3/4"	User Load	Top	350 lb	700 lb	-	-
Point	7'- 10 1/8"	7'- 10 1/8"	4(i995)	Top	19 lb	15 lb	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 4 1/2"	PBO1(i67)	1100 lb	1895 lb	-	-
2	7'- 7 3/16"	8'- 11/16"	W35(i50)	233 lb	337 lb	-	-

DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped 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.



STRUCTURAL COMPONENT ONLY
DWG # TF22071136



BUILDER: ROYAL PINE HOMES
SITE: FORESTSIDE ESTATES
MODEL: 4001
CITY: BRAMPTON

Job Name: 4001- ELEV A STD
Level: 1ST FLOOR
Label: B3 - i7597
Type: Beam

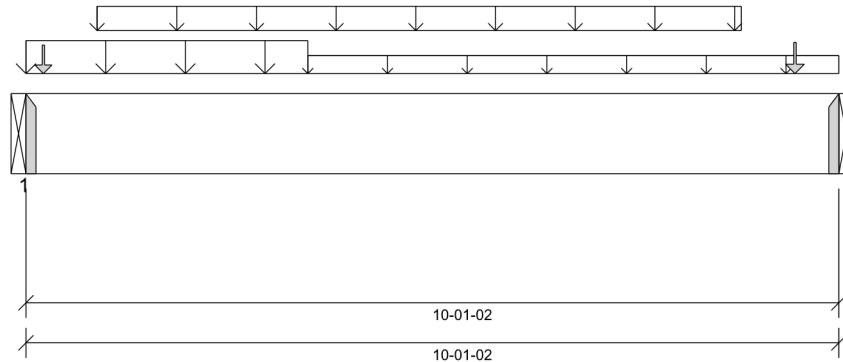
1 Ply Member
1 3/4" x 11 7/8" (2.0E 3100)
WestFraser LVL

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 07/15/2022 11:26



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 Beam @ 0'
- 615 psi Beam @ 10'- 1 1/8"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	4'- 2 5/8"	1.25D + 1.5L	1.00	5815 lb ft	17672 lb ft	Passed - 33%
Factored Shear:	0'- 11 7/8"	1.25D + 1.5L	1.00	2251 lb	6908 lb	Passed - 33%
Live Load (LL) Pos. Defl.:	4'- 10 1/8"	L		0.091"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	4'- 10 7/8"	D + L		0.162"	L/240	Passed - L/749

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	1-10	1.25D + 1.5L	1.00	2976 lb		2976 lb	-	Passed - 100%
2	1-08	1.25D + 1.5L	1.00	1937 lb		2730 lb	-	Passed - 71%

CONNECTOR INFORMATION

ID	Part No.	Manufacturer	Nailing Requirements			Other Information or Requirement for Reinforcement Accessories		
			Top	Face	Member			
1	HUS1.81/10		-	-	-	Connector manually specified by the user.		
2	HUS1.81/10		-	-	-	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'	10'- 1 1/8"	Self Weight	Top	6 lb/ft	-	-	-
Uniform	0'	3'- 6"	User Load	Top	120 lb/ft	240 lb/ft	-	-
Uniform	0'- 10 5/8"	8'- 10 5/8"	Smoothed Load	Front	62 lb/ft	123 lb/ft	-	-
Uniform	3'- 6"	10'- 1 1/8"	User Load	Top	60 lb/ft	-	-	-
Point	0'- 2 5/8"	0'- 2 5/8"	J4(i7589)	Front	50 lb	100 lb	-	-
Point	9'- 6 5/8"	9'- 6 5/8"	J4(i7593)	Front	60 lb	120 lb	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'	B2(i7602)	813 lb	1309 lb	-	-
2	10'- 1 1/8"	10'- 1 1/8"	B1(i7582)	664 lb	735 lb	-	-

DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped 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.



STRUCTURAL COMPONENT ONLY
DWG # TF22071137



BUILDER: ROYAL PINE HOMES
SITE: FORESTSIDE ESTATES
MODEL: 4001
CITY: BRAMPTON

Job Name: 4001- ELEV A STD
Level: 1ST FLOOR
Label: B4 - i7592
Type: Beam

2 Ply Member
1 3/4" x 11 7/8" (2.0E 3100)
WestFraser LVL

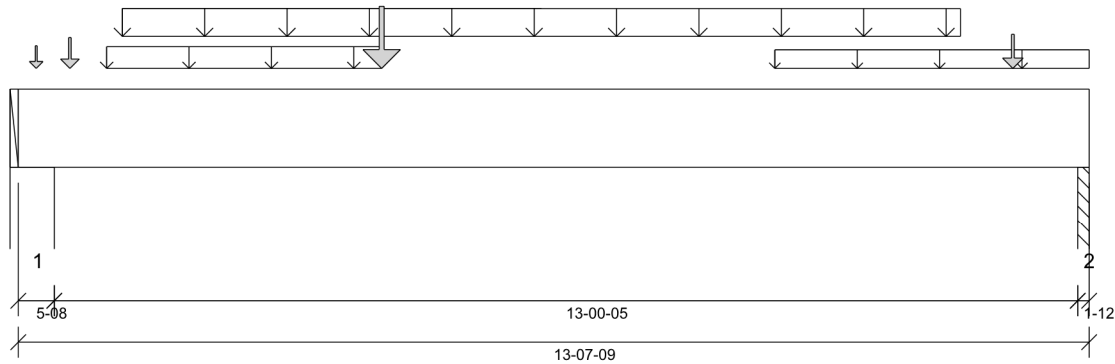
Status:
Design
Passed

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

07/15/2022 11:26



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 Column @ 13'- 6 13/16"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	5'- 11 7/8"	1.25D + 1.5L	1.00	11125 lb ft	35345 lb ft	Passed - 31%
Factored Shear:	1'- 5 3/8"	1.25D + 1.5L + S	1.00	3503 lb	13815 lb	Passed - 25%
Live Load (LL) Pos. Defl.:	6'- 9 1/4"	L		0.162"	L/360	Passed - L/965
Total Load (TL) Pos. Defl.:	6'- 9 3/4"	D + L		0.260"	L/240	Passed - L/601

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 + S	1.00	3718 lb		20020 lb	11843 lb	Passed - 31%
2	1-12	1.25D + 1.5L	1.00	2901 lb		6370 lb	3767 lb	Passed - 77%

SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	13'- 7 9/16"	Self Weight	Top	12 lb/ft	-	-	-
Uniform	1'- 1 1/2"	4'- 7 1/2"	User Load	Top	40 lb/ft	80 lb/ft	-	-
Uniform	9'- 7 9/16"	13'- 7 9/16"	User Load	Top	60 lb/ft	-	-	-
Tapered	1'- 3 7/8"	11'- 11 7/8"	Smoothed Load	Front	80 To 79 lb/ft	160 To 159 lb/ft	-	-
Point	0'- 7 7/8"	0'- 7 7/8"	J4(i7297)	Front	80 lb	159 lb	-	-
Point	12'- 7 7/8"	12'- 7 7/8"	J4(i7587)	Front	96 lb	192 lb	-	-
Point	0'- 2 3/4"	0'- 2 3/4"	E41(i1032)	Top	73 lb	18 lb	21 lb	-
Point	4'- 7 1/2"	4'- 7 1/2"	User Load	Top	240 lb	480 lb	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 5 1/2"	W31(i35)	999 lb	1631 lb	22 lb	-
2	13'- 5 13/16"	13'- 7 9/16"	PBO1(i67)	882 lb	1200 lb	-1 lb	-

DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Lateral stability factor (KL) was based on user preference to use the width of all plies. (Consult with manufacturer for guideline pertaining to this design option.)
- 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.

PLY TO PLY CONNECTION:

4 ROWS OF 3.25" PNEUMATIC GUN
NAILS (0.120"x3.25") @ 12" O/C

PLY TO PLY CONNECTION ASSUMES ANY
SUPPORTED BEAM HANGERS ARE FASTENED
TO THIS BEAM WITH MIN. 3.5" FASTENERS.



STRUCTURAL COMPONENT ONLY
DWG # TF22071138



BUILDER: ROYAL PINE HOMES
SITE: FORESTSIDE ESTATES
MODEL: 4001
CITY: BRAMPTON

Job Name: 4001- ELEV A STD
Level: 2ND FLOOR
Label: B5 - i7481
Type: Beam

1 Ply Member
1 3/4" x 11 7/8" (2.0E 3100)
WestFraser LVL

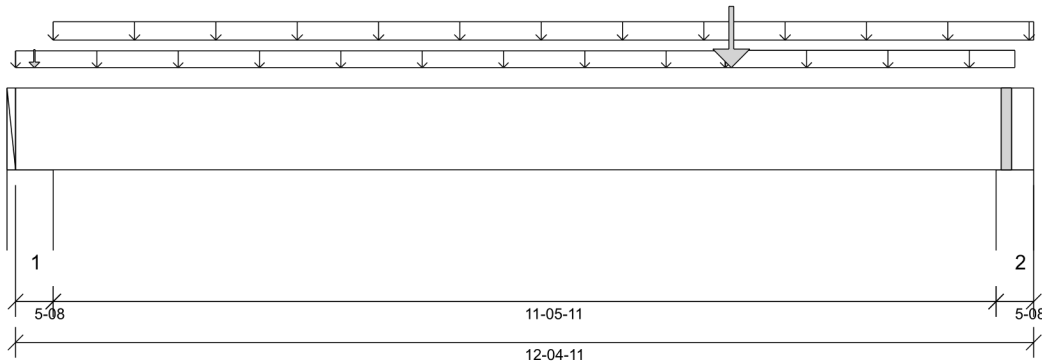
Status:
Design
Passed

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

07/15/2022 11:26



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'- 2 1/8"

Factored Resistance of Support Material:

- 615 psi Beam @ 0'- 4 1/2"
- 615 psi Wall @ 12'- 3/16"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	8'- 8 1/2"	1.25D + 1.5L	0.97	7527 lb ft	17221 lb ft	Passed - 44%
Factored Shear:	10'- 11 5/16"	1.25D + 1.5L	0.97	2360 lb	6731 lb	Passed - 35%
Live Load (LL) Pos. Defl.:	6'- 8 13/16"	L		0.122"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	6'- 7 5/16"	D + L		0.242"	L/240	Passed - L/567

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	0.84	1352 lb		8419 lb	4979 lb	Passed - 27%
2	5-08	1.25D + 1.5L	0.97	2548 lb		9754 lb	5770 lb	Passed - 44%

SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	12'- 4 11/16"	Self Weight	Top	6 lb/ft	-	-	-
Uniform	-0'	8'- 7 5/8"	FC2 Floor Decking (Plan View Fill)	Top	10 lb/ft	19 lb/ft	-	-
Uniform	0'- 5 1/2"	12'- 4 11/16"	User Load	Top	60 lb/ft	-	-	-
Uniform	8'- 7 5/8"	12'- 1 15/16"	FC2 Floor Decking (Plan View Fill)	Top	13 lb/ft	27 lb/ft	-	-
Point	8'- 8 1/2"	8'- 8 1/2"	B7(i7519)	Front	597 lb	1129 lb	-	-
Point	0'- 2 3/4"	0'- 2 3/4"	E96(i7573)	Top	46 lb	-	57 lb	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 5 1/2"	-	664 lb	451 lb	59 lb	-
++>	0'- 9/16"	0'- 9/16"	E37(i1028)	137 lb	93 lb	12 lb	-
++>	0'- 2 3/16"	0'- 2 3/16"	BBO(i1049)	527 lb	358 lb	47 lb	-
2	11'- 11 3/16"	12'- 4 11/16"	4(i995)	897 lb	938 lb	-2 lb	-

DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped 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.



STRUCTURAL COMPONENT ONLY
DWG # TF22071139



BUILDER: ROYAL PINE HOMES
SITE: FORESTSIDE ESTATES
MODEL: 4001
CITY: BRAMPTON

Job Name: 4001- ELEV A STD
Level: 2ND FLOOR
Label: B6 - i7288
Type: Beam

1 Ply Member
1 3/4" x 11 7/8" (2.0E 3100)
WestFraser LVL

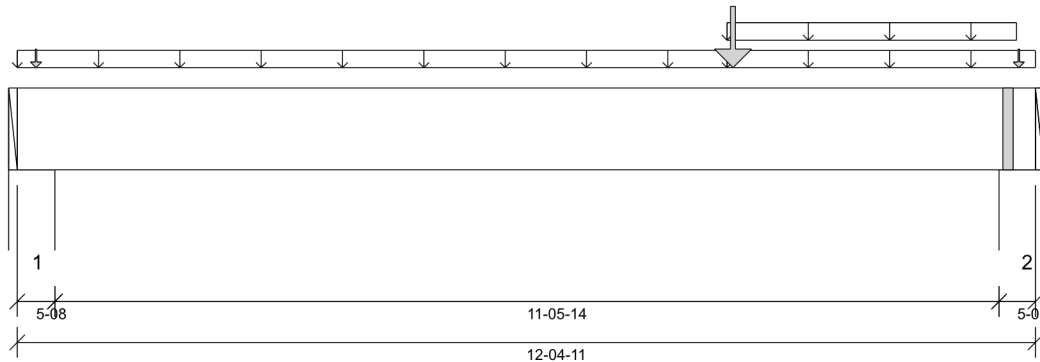
Status:
Design
Passed

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

07/15/2022 11:26



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'- 2 1/8"

Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 4 1/2"
- 615 psi Wall @ 12'- 3/8"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	8'- 8 1/2"	1.25D + 1.5L	1.00	3683 lb ft	17672 lb ft	Passed - 21%
Factored Shear:	10'- 11 1/2"	1.25D + 1.5L + S	1.00	1183 lb	6908 lb	Passed - 17%
Live Load (LL) Pos. Defl.:	6'- 7 3/4"	L		0.073"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	6'- 7 9/16"	D + L		0.117"	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 + S	1.00	782 lb		10009 lb	5921 lb	Passed - 13%
2	5-05	1.25D + 1.5L + S	1.00	1403 lb		9672 lb	5721 lb	Passed - 25%

SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	12'- 4 11/16"	Self Weight	Top	6 lb/ft	-	-	-
Uniform	-0'	8'- 7 5/8"	FC2 Floor Decking (Plan View Fill)	Top	13 lb/ft	25 lb/ft	-	-
Uniform	8'- 7 5/8"	12'- 4 11/16"	FC2 Floor Decking (Plan View Fill)	Top	12 lb/ft	24 lb/ft	-	-
Uniform	8'- 7 5/8"	12'- 1 15/16"	FC2 Floor Decking (Plan View Fill)	Top	15 lb/ft	29 lb/ft	-	-
Point	8'- 8 1/2"	8'- 8 1/2"	B7(i7519)	Back	281 lb	496 lb	-	-
Point	0'- 2 3/4"	0'- 2 3/4"	E61(i2408)	Top	28 lb	-	26 lb	-
Point	12'- 2 1/4"	12'- 2 1/4"	E56(i2413)	Top	28 lb	-	26 lb	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 5 1/2"	E13(i828)	233 lb	316 lb	27 lb	-
2	11'- 11 3/8"	12'- 4 11/16"	4(i995)	383 lb	592 lb	25 lb	-

DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped 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.



STRUCTURAL COMPONENT ONLY
DWG # TF22071140



BUILDER: **ROYAL PINE HOMES**
SITE: **FORESTSIDE ESTATES**
MODEL: **4001**
CITY: **BRAMPTON**

Job Name: **4001- ELEV A STD**
Level: **2ND FLOOR**
Label: **B7 - i7519**
Type: **Beam**

1 Ply Member
1 3/4" x 11 7/8" (2.0E 3100)
WestFraser LVL

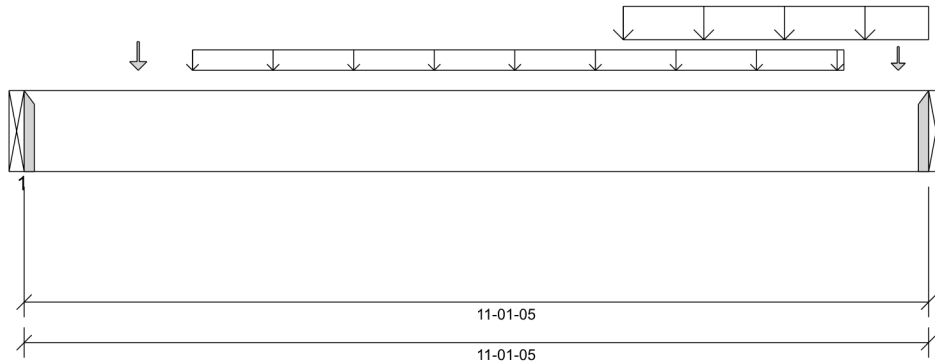
Status:
Design Passed

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

07/15/2022 11:26



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'- 3 9/16"

Factored Resistance of Support Material:

- 615 psi Beam @ 0'
- 615 psi Beam @ 11'- 1 5/16"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	7'- 5 1/16"	1.25D + 1.5L	1.00	4515 lb ft	17672 lb ft	Passed - 26%
Factored Shear:	10'- 1 7/16"	1.25D + 1.5L	1.00	1795 lb	6908 lb	Passed - 26%
Live Load (LL) Pos. Defl.:	5'- 10 3/8"	L		0.095"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	5'- 10 1/4"	D + L		0.146"	L/240	Passed - L/911

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	1095 lb		2730 lb	-	Passed - 40%
2	1-08	1.25D + 1.5L	1.00	2441 lb		2730 lb	-	Passed - 89%

CONNECTOR INFORMATION

ID	Part No.	Manufacturer	Nailing Requirements			Other Information or Requirement for Reinforcement Accessories		
			Top	Face	Member			
1	HUS1.81/10		-	-	-	Connector manually specified by the user.		
2	HUS1.81/10		-	-	-	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'	11'- 1 5/16"	Self Weight	Top	6 lb/ft	-	-	-
Uniform	2'- 13/16"	10'- 13/16"	Smoothed Load	Front	35 lb/ft	71 lb/ft	-	-
Uniform	7'- 4 5/16"	11'- 1 5/16"	User Load	Top	120 lb/ft	240 lb/ft	-	-
Point	1'- 4 13/16"	1'- 4 13/16"	J7(i7274)	Front	49 lb	99 lb	-	-
Point	10'- 8 13/16"	10'- 8 13/16"	J7(i7354)	Front	31 lb	63 lb	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'	B6(i7288)	281 lb	496 lb	-	-
2	11'- 1 5/16"	11'- 1 5/16"	B5(i7481)	597 lb	1129 lb	-	-

DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped 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.



STRUCTURAL COMPONENT ONLY
DWG # TF22071141



BUILDER: **ROYAL PINE HOMES**
SITE: **FORESTSIDE ESTATES**
MODEL: **4001**
CITY: **BRAMPTON**

Job Name: **4001- ELEV A STD**
Level: **2ND FLOOR**
Label: **B8 - i7585**
Type: **Beam**

2 Ply Member
1 3/4" x 11 7/8" (2.0E 3100)
WestFraser LVL

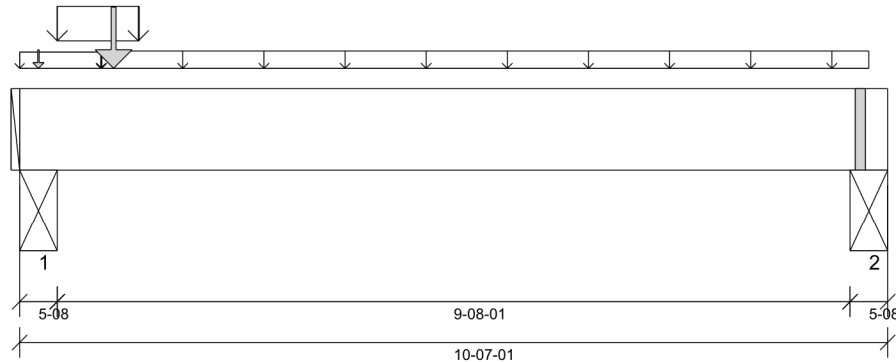
Status:
Design Passed

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

07/15/2022 11:26



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'- 10 1/16"

Factored Resistance of Support Material:

- 615 psi Beam @ 0'- 4 1/2"
- 615 psi Beam @ 10'- 2 9/16"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	1'- 3 3/4"	1.25D + 1.5S + L	1.00	2968 lb ft	35345 lb ft	Passed - 8%
Factored Shear:	1'- 5 3/8"	1.25D + 1.5L	0.83	2290 lb	11507 lb	Passed - 20%
Live Load (LL) Pos. Defl.:	4'- 8 3/8"	S + 0.5L		0.016"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	4'- 9 1/16"	D + S + 0.5L		0.032"	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	1.00	4349 lb		20020 lb	11839 lb	Passed - 37%
2	5-08	1.25D + 1.5L + S	0.97	644 lb		19431 lb	11491 lb	Passed - 6%

SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	10'- 7 1/16"	Self Weight	Top	12 lb/ft	-	-	-
Uniform	-0'	1'	FC2 Floor Decking (Plan View Fill)	Top	7 lb/ft	13 lb/ft	-	-
Uniform	0'- 5 1/2"	1'- 5 1/2"	E54(i2410)	Top	195 lb/ft	-	182 lb/ft	-
Uniform	1'	10'- 4 5/16"	FC2 Floor Decking (Plan View Fill)	Top	13 lb/ft	27 lb/ft	-	-
Point	1'- 1 3/4"	1'- 1 3/4"	B9(i7586)	Back	1149 lb	507 lb	1094 lb	-
Point	0'- 2 3/4"	0'- 2 3/4"	E75(i4438)	Top	82 lb	10 lb	104 lb	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 5 1/2"	STL BM (i1003)	1473 lb	615 lb	1304 lb	-
2	10'- 1 9/16"	10'- 7 1/16"	STL BM (i1004)	210 lb	165 lb	76 lb	-

DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Lateral stability factor (KL) was based on user preference to use the width of all plies. (Consult with manufacturer for guideline pertaining to this design option.)
- 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=3.500". LDF=1.00, Pf=3584 lb, Qr=10920 lb, Result=32.82%.

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.



STRUCTURAL COMPONENT ONLY
DWG # TF22071142



BUILDER: ROYAL PINE HOMES
SITE: FORESTSIDE ESTATES
MODEL: 4001
CITY: BRAMPTON

Job Name: 4001- ELEV A STD
Level: 2ND FLOOR
Label: B9 - i7586
Type: Beam

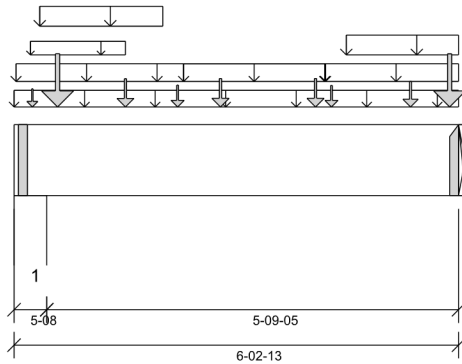
2 Ply Member
1 3/4" x 11 7/8" (2.0E 3100)
WestFraser LVL

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 07/15/2022 11:26



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 Beam @ 6'- 2 13/16"

PLY TO PLY CONNECTION:
4 ROWS OF 3.25" PNEUMATIC GUN
NAILS (0.120"x3.25") @ 8" O/C

PLY TO PLY CONNECTION ASSUMES ANY
SUPPORTED BEAM HANGERS ARE FASTENED
TO THIS BEAM WITH MIN. 3.5" FASTENERS.



STRUCTURAL COMPONENT ONLY
DWG # TF22071143 PG 1/2

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	2'- 10 3/4"	1.25D + 1.5L + S	0.97	3503 lb ft	34451 lb ft	Passed - 10%
Factored Shear:	1'- 5 3/8"	1.25D + 1.5L	0.80	1419 lb	11110 lb	Passed - 13%
Total Load (TL) Pos. Defl.:	3'- 3 9/16"	D + L + 0.5S		0.016"	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	1.00	3781 lb		20020 lb	11842 lb	Passed - 32%
2	1-08	1.25D + 1.5S + L	1.00	3625 lb		5460 lb	-	Passed - 66%

CONNECTOR INFORMATION

ID	Part No.	Manufacturer	Nailing Requirements			Other Information or Requirement for Reinforcement Accessories
			Top	Face	Member	
2	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'	6'- 2 13/16"	Self Weight	Top	12 lb/ft	-	-	-
Uniform	0'	6'- 2 13/16"	User Load	Front	28 lb/ft	-	48 lb/ft	-
Uniform	0'- 5/16"	2'- 4 9/16"	E77(i4440)	Top	100 lb/ft	-	-	-
Uniform	0'- 2 3/4"	1'- 6 3/4"	FC2 Floor Decking (Plan View Fill)	Top	3 lb/ft	6 lb/ft	-	-
Uniform	0'- 4 5/16"	2'- 1 1/16"	E77(i4440)	Top	48 lb/ft	-	101 lb/ft	-
Uniform	2'- 4 9/16"	4'- 4 7/16"	E76(i4439)	Top	100 lb/ft	-	-	-
Uniform	4'- 4 7/16"	6'- 2 13/16"	E55(i2418)	Top	100 lb/ft	-	-	-
Uniform	4'- 7 15/16"	6'- 2 13/16"	E55(i2418)	Top	48 lb/ft	-	101 lb/ft	-
Point	1'- 6 3/4"	1'- 6 3/4"	J5(i7286)	Back	125 lb	249 lb	-	-
Point	2'- 10 3/4"	2'- 10 3/4"	J5(i7515)	Back	127 lb	253 lb	-	-
Point	4'- 2 3/4"	4'- 2 3/4"	J5(i7515)	Back	127 lb	253 lb	-	-
Point	5'- 6 3/4"	5'- 6 3/4"	J5(i7355)	Back	102 lb	204 lb	-	-
Point	0'- 3 1/16"	0'- 3 1/16"	E77(i4440)	Top	42 lb	-	82 lb	-
Point	0'- 7 5/16"	0'- 7 5/16"	E77(i4440)	Top	332 lb	-	667 lb	-
Point	2'- 3 9/16"	2'- 3 9/16"	E77(i4440)	Top	82 lb	-	133 lb	-
Point	4'- 5 7/16"	4'- 5 7/16"	E55(i2418)	Top	80 lb	-	127 lb	-
Point	6'- 1 5/16"	6'- 1 5/16"	E55(i2418)	Top	332 lb	-	666 lb	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 5 1/2"	4(i995)	1234 lb	460 lb	1213 lb	-
2	6'- 2 13/16"	6'- 2 13/16"	B8(i7585)	1149 lb	507 lb	1094 lb	-

DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Lateral stability factor (KL) was based on user preference to use the width of all plies. (Consult with manufacturer for guideline pertaining to this design option.)
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.



BUILDER:	ROYAL PINE HOMES	Job Name:	4001- ELEV A STD	2 Ply Member	Status:
SITE:	FORESTSIDE ESTATES	Level:	2ND FLOOR	1 3/4" x 11 7/8" (2.0E 3100)	Design
MODEL:	4001	Label:	B9 - i7586	WestFraser LVL	Passed
CITY:	BRAMPTON	Type:	Beam		

DESIGN NOTES

- 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.





BUILDER: **ROYAL PINE HOMES**
SITE: **FORESTSIDE ESTATES**
MODEL: **4001**
CITY: **BRAMPTON**

Job Name: **4001- ELEV A STD**
Level: **2ND FLOOR**
Label: **B10 - i7327**
Type: **Beam**

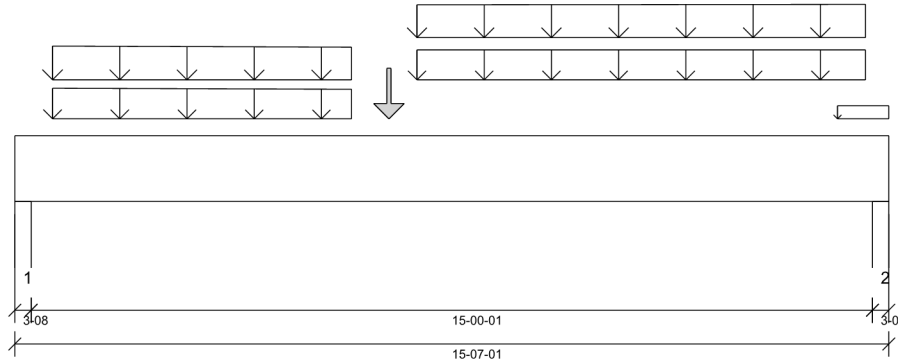
3 Ply Member
1 3/4" x 14" (2.0E 3100)
WestFraser LVL

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 07/15/2022 11:26



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 13/16"

Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 2 1/2"
- 615 psi Wall @ 15'- 4 9/16"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	7'- 11 1/2"	1.25D + 1.5L	1.00	38486 lb ft	72216 lb ft	Passed - 53%
Factored Shear:	14'- 1 9/16"	1.25D + 1.5L	1.00	9927 lb	24431 lb	Passed - 41%
Live Load (LL) Pos. Defl.:	7'- 9 9/16"	L		0.315"	L/360	Passed - L/570
Total Load (TL) Pos. Defl.:	7'- 9 9/16"	D + L		0.483"	L/240	Passed - L/372

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	3-08	1.25D + 1.5L	1.00	9590 lb		19110 lb	11304 lb	Passed - 85%
2	3-08	1.25D + 1.5L	1.00	9978 lb		19110 lb	11304 lb	Passed - 88%

SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	15'- 7 1/16"	Self Weight	Top	21 lb/ft	-	-	-
Uniform	7'- 2 1/16"	15'- 2 1/16"	Smoothed Load	Front	141 lb/ft	283 lb/ft	-	-
Uniform	14'- 8 1/16"	15'- 7 1/16"	FC2 Floor Decking (Plan View Fill)	Top	3 lb/ft	7 lb/ft	-	-
Tapered	0'- 8 1/16"	6'- 1/16"	Smoothed Load	Back	173 To 164 lb/ft	346 To 327 lb/ft	-	-
Tapered	0'- 8 1/16"	6'- 1/16"	Smoothed Load	Front	146 To 139 lb/ft	294 To 278 lb/ft	-	-
Tapered	7'- 2 1/16"	15'- 2 1/16"	Smoothed Load	Back	164 To 169 lb/ft	330 To 337 lb/ft	-	-
Point	6'- 8 1/16"	6'- 8 1/16"	J3(i7562)	Front	188 lb	377 lb	-	-
Point	6'- 8 1/16"	6'- 8 1/16"	J1(i7394)	Back	194 lb	388 lb	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 3 1/2"	7(i1001)	2368 lb	4419 lb	-	-
2	15'- 3 9/16"	15'- 7 1/16"	8(i1002)	2460 lb	4603 lb	-	-

DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Lateral stability factor (KL) was based on user preference to use the width of all plies. (Consult with manufacturer for guideline pertaining to this design option.)
- 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.

PLY TO PLY CONNECTION:

4 ROWS OF 3.25" PNEUMATIC GUN NAILS (0.120"x3.25") @ 8" O/C

NAIL FROM BOTH FACES (STAGGER 1/2 SPACE)

PLY TO PLY CONNECTION ASSUMES ANY SUPPORTED BEAM HANGERS ARE FASTENED TO THIS BEAM WITH MIN. 3.5" FASTENERS.



STRUCTURAL COMPONENT ONLY
DWG # TF22071144



BUILDER: ROYAL PINE HOMES
SITE: FORESTSIDE ESTATES
MODEL: 4001
CITY: BRAMPTON

Job Name: 4001- ELEV A OPT SUNKEN
Level: 1ST FLOOR
Label: B13 H - i8401
Type: Beam

1 Ply Member
1 3/4" x 11 7/8" (2.0E 3100)
WestFraser LVL

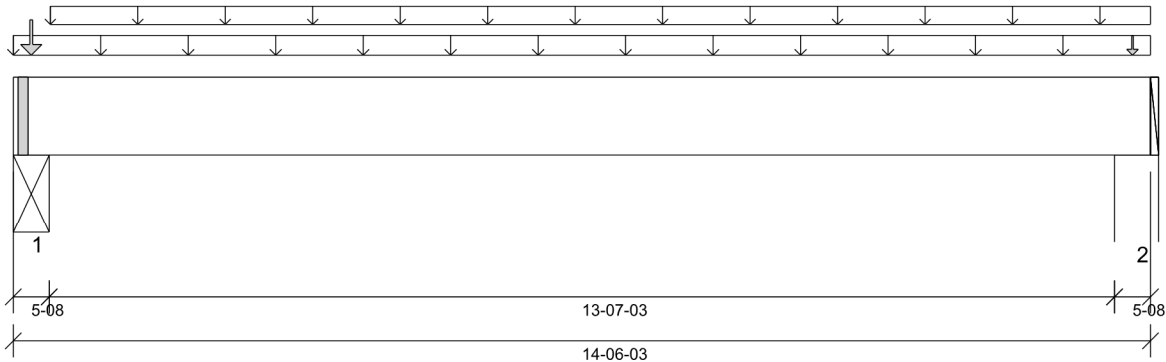
Status:
Design
Passed

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

07/15/2022 11:21



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: 13'- 7"

Factored Resistance of Support Material:

- 615 psi Beam @ 0'- 4 1/2"
- 615 psi Wall @ 14'- 1 11/16"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	7'- 3 5/16"	1.25D + 1.5L	0.77	2966 lb ft	13545 lb ft	Passed - 22%
Factored Neg. Moment:	0'- 4 1/2"	1.25D + 1.5L	0.77	45 lb ft	3305 lb ft	Passed - 1%
Factored Shear:	1'- 5 3/8"	1.25D + 1.5L	0.77	737 lb	5294 lb	Passed - 14%
Live Load (LL) Pos. Defl.:	7'- 3 5/16"	L		0.035"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	7'- 3 1/8"	D + L		0.163"	L/240	Passed - L/998

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	0.77	1168 lb		7672 lb	4537 lb	Passed - 26%
2	5-08	1.4D	0.65	815 lb		6507 lb	3849 lb	Passed - 21%

SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	14'- 6 3/16"	Self Weight	Top	6 lb/ft	-	-	-
Uniform	0'	14'- 6 3/16"	User Load	Top	60 lb/ft	-	-	-
Uniform	0'- 5 11/16"	14'- 6 3/16"	FC1 Floor Decking (Plan View Fill)	Top	10 lb/ft	21 lb/ft	-	-
Point	0'- 2 3/4"	0'- 2 3/4"	5(i999)	Top	72 lb	119 lb	-	-
Point	14'- 3 7/16"	14'- 3 7/16"	E21(i1012)	Top	29 lb	-	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 5 1/2"	STL BM (i54)	623 lb	264 lb	-	-
2	14'- 11/16"	14'- 6 3/16"	W41(i60)	580 lb	146 lb	-	-

DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped 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.



STRUCTURAL COMPONENT ONLY
DWG # TF22071145



BUILDER: ROYAL PINE HOMES
SITE: FORESTSIDE ESTATES
MODEL: 4001
CITY: BRAMPTON

Job Name: 4001- ELEV A OPT SUNKEN
Level: 1ST FLOOR
Label: B20 L - i8693
Type: Beam

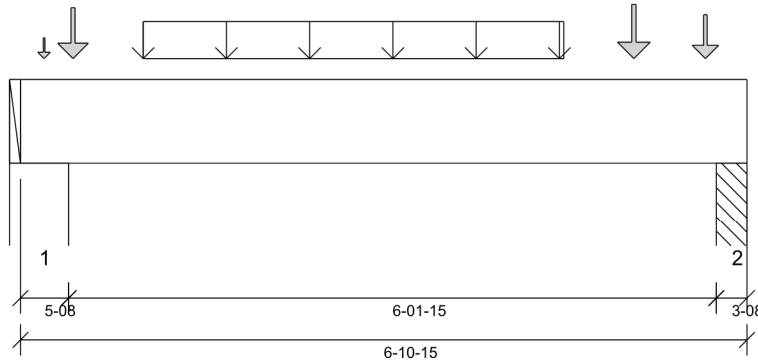
1 Ply Member
1 3/4" x 9 1/2" (2.0E 3100)
WestFraser LVL

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 07/15/2022 11:21



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 Column @ 6'- 8 7/16"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	3'- 2"	1.25D + 1.5L	1.00	2891 lb ft	11650 lb ft	Passed - 25%
Factored Shear:	5'- 9 15/16"	1.25D + 1.5L	1.00	1954 lb	5526 lb	Passed - 35%
Live Load (LL) Pos. Defl.:	3'- 6 7/16"	L		0.039"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	3'- 6 7/16"	D + L		0.059"	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	1999 lb		10010 lb	5921 lb	Passed - 34%
2	3'-08"	1.25D + 1.5L	1.00	1961 lb		6370 lb	3767 lb	Passed - 52%

SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	6'- 10 15/16"	Self Weight	Top	5 lb/ft	-	-	-
Uniform	1'- 2"	5'- 2"	Smoothed Load	Front	136 lb/ft	272 lb/ft	-	-
Point	0'- 6"	0'- 6"	J1(i8459)	Front	125 lb	249 lb	-	-
Point	5'- 10"	5'- 10"	J1(i8442)	Front	137 lb	273 lb	-	-
Point	6'- 6 3/16"	6'- 6 3/16"	J1(i8443)	Front	100 lb	200 lb	-	-
Point	0'- 2 11/16"	0'- 2 11/16"	28(i7939)	Top	28 lb	27 lb	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 5 1/2"	W32(i51)	494 lb	922 lb	-	-
2	6'- 7 7/16"	6'- 10 15/16"	PBO2(i7857)	472 lb	913 lb	-	-

DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped 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.



STRUCTURAL COMPONENT ONLY
DWG # TF22071146



BUILDER: ROYAL PINE HOMES
SITE: FORESTSIDE ESTATES
MODEL: 4001
CITY: BRAMPTON

Job Name: 4001- ELEV A OPT SUNKEN
Level: 1ST FLOOR
Label: B21 L - i8095
Type: Beam

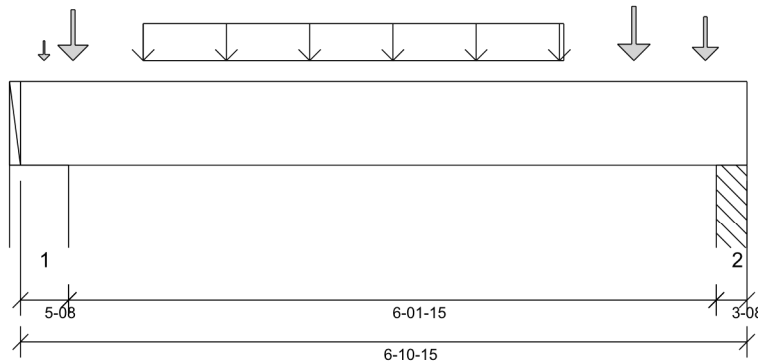
1 Ply Member
1 3/4" x 9 1/2" (2.0E 3100)
WestFraser LVL

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 07/15/2022 11:21



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 Column @ 6'- 8 7/16"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	3'- 2"	1.25D + 1.5L	1.00	2892 lb ft	11650 lb ft	Passed - 25%
Factored Shear:	5'- 9 15/16"	1.25D + 1.5L	1.00	1954 lb	5526 lb	Passed - 35%
Live Load (LL) Pos. Defl.:	3'- 6 7/16"	L		0.039"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	3'- 6 7/16"	D + L		0.059"	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	1984 lb		10010 lb	5921 lb	Passed - 34%
2	3'-08"	1.25D + 1.5L	1.00	1961 lb		6370 lb	3767 lb	Passed - 52%

SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	6'- 10 15/16"	Self Weight	Top	5 lb/ft	-	-	-
Uniform	1'- 2"	5'- 2"	Smoothed Load	Back	136 lb/ft	272 lb/ft	-	-
Point	0'- 6"	0'- 6"	J1(i8459)	Back	125 lb	249 lb	-	-
Point	5'- 10"	5'- 10"	J1(i8442)	Back	137 lb	273 lb	-	-
Point	6'- 6 3/16"	6'- 6 3/16"	J1(i8443)	Back	100 lb	200 lb	-	-
Point	0'- 2 11/16"	0'- 2 11/16"	28(i7939)	Top	25 lb	20 lb	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 5 1/2"	W32(i51)	490 lb	914 lb	-	-
2	6'- 7 7/16"	6'- 10 15/16"	PBO3(i7858)	472 lb	914 lb	-	-

DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped 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.



STRUCTURAL COMPONENT ONLY
DWG # TF22071147



BUILDER: **ROYAL PINE HOMES**
SITE: **FORESTSIDE ESTATES**
MODEL: **4001**
CITY: **BRAMPTON**

Job Name: **4001- ELEV B STD**
Level: **2ND FLOOR**
Label: **B20 - i10069**
Type: **Beam**

2 Ply Member
1 3/4" x 11 7/8" (2.0E 3100)
WestFraser LVL

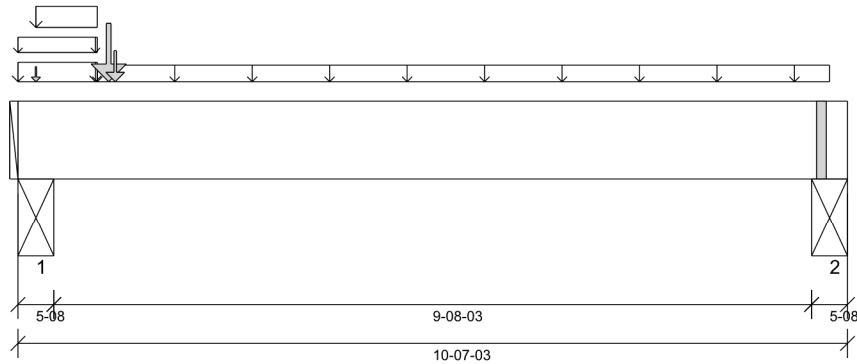
Status:
Design Passed

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

07/15/2022 11:43



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: 8'- 10"

Factored Resistance of Support Material:

- 615 psi Beam @ 0'- 4 1/2"
- 615 psi Beam @ 10'- 2 11/16"

PLY TO PLY CONNECTION:

4 ROWS OF 3.25" PNEUMATIC GUN
NAILS (0.120"x3.25") @ 12" O/C

PLY TO PLY CONNECTION ASSUMES ANY
SUPPORTED BEAM HANGERS ARE FASTENED
TO THIS BEAM WITH MIN. 3.5" FASTENERS.



STRUCTURAL COMPONENT ONLY
DWG # TF22071148

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	1'- 2 15/16"	1.25D + 1.5S + L	0.97	2980 lb ft	34322 lb ft	Passed - 9%
Factored Shear:	1'- 5 3/8"	1.25D + 1.5L	0.87	2579 lb	12028 lb	Passed - 21%
Live Load (LL) Pos. Defl.:	4'- 10 1/8"	L + 0.5S		0.016"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	4'- 9 7/8"	D + L + 0.5S		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 + 1.5S + L	0.97	3964 lb		19441 lb	11496 lb	Passed - 34%
2	5'-08	1.25D + 1.5L + S	0.96	658 lb		19318 lb	11424 lb	Passed - 6%

SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	10'- 7 3/16"	Self Weight	Top	12 lb/ft	-	-	-
Uniform	0'	1'- 3/16"	E98(i8105)	Top	100 lb/ft	-	-	-
Uniform	0'	1'- 3/16"	FC2 Floor Decking (Plan View Fill)	Top	5 lb/ft	11 lb/ft	-	-
Uniform	0'- 2 3/4"	1'- 3/16"	E98(i8105)	Top	30 lb/ft	33 lb/ft	72 lb/ft	-
Uniform	1'- 3/16"	10'- 4 7/16"	FC2 Floor Decking (Plan View Fill)	Top	13 lb/ft	27 lb/ft	-	-
Point	1'- 1 15/16"	1'- 1 15/16"	B21(i10068)	Front	998 lb	638 lb	464 lb	-
Point	0'- 2 3/4"	0'- 2 3/4"	E98(i8105)	Top	8 lb	-	18 lb	-
Point	1'- 2 15/16"	1'- 2 15/16"	E114(i8121)	Top	305 lb	8 lb	476 lb	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 5 1/2"	STL BM (i1003)	1476 lb	757 lb	952 lb	-
2	10'- 1 11/16"	10'- 7 3/16"	STL BM (i1004)	215 lb	176 lb	62 lb	-

DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Lateral stability factor (KL) was based on user preference to use the width of all plies. (Consult with manufacturer for guideline pertaining to this design option.)
- 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=3.500". LDF=0.97, Pf=2765 lb, Qr=10920 lb, Result=25.32%.

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.



BUILDER: ROYAL PINE HOMES
SITE: FORESTSIDE ESTATES
MODEL: 4001
CITY: BRAMPTON

Job Name: 4001- ELEV B STD
Level: 2ND FLOOR
Label: B21 - i10068
Type: Beam

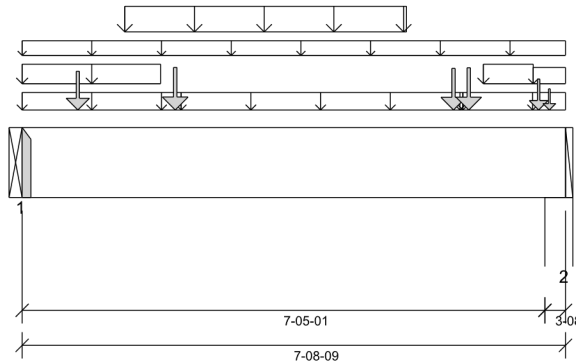
2 Ply Member
1 3/4" x 11 7/8" (2.0E 3100)
WestFraser LVL

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 07/15/2022 11:43



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:

- 615 psi Beam @ 0'
- 615 psi Wall @ 7'- 6 1/16"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	3'- 5 1/2"	1.25D + 1.5L + S	0.97	5004 lb ft	34343 lb ft	Passed - 15%
Factored Shear:	6'- 5 3/16"	1.25D + 1.5L + S	0.97	2634 lb	13424 lb	Passed - 20%
Live Load (LL) Pos. Defl.:	3'- 8 3/4"	L + 0.5S		0.018"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	3'- 8 3/4"	D + L + 0.5S		0.038"	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 + S	0.97	2699 lb		5305 lb	-	Passed - 51%
2	3-08	1.25D + 1.5L + S	0.97	3003 lb		12379 lb	7323 lb	Passed - 41%

CONNECTOR INFORMATION

ID	Part No.	Manufacturer	Top	Face	Member	Other Information or Requirement for Reinforcement Accessories
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'	7'- 8 9/16"	Self Weight	Top	12 lb/ft	-	-	-
Uniform	0'	7'- 8 9/16"	User Load	Front	14 lb/ft	-	24 lb/ft	-
Uniform	-0'	2'- 3 1/16"	E114(i8121)	Top	100 lb/ft	-	-	-
Uniform	-0'	1'- 11 9/16"	E114(i8121)	Top	47 lb/ft	-	100 lb/ft	-
Uniform	1'- 5 1/2"	5'- 5 1/2"	Smoothed Load	Back	95 lb/ft	190 lb/ft	-	-
Uniform	2'- 3 1/16"	6'- 3 1/16"	E115(i8122)	Top	100 lb/ft	-	-	-
Uniform	6'- 3 1/8"	7'- 8 9/16"	E97(i8106)	Top	100 lb/ft	-	-	-
Uniform	6'- 6 9/16"	7'- 3 1/16"	E97(i8106)	Top	47 lb/ft	-	100 lb/ft	-
Uniform	7'- 3 1/16"	7'- 8 9/16"	E97(i8106)	Top	24 lb/ft	-	50 lb/ft	-
Point	0'- 9 1/2"	0'- 9 1/2"	J5(i9960)	Back	108 lb	216 lb	-	-
Point	6'- 1 1/2"	6'- 1 1/2"	J5(i9956)	Back	121 lb	241 lb	-	-
Point	7'- 4"	7'- 4"	J5(i9935)	Back	75 lb	151 lb	-	-
Point	2'- 2 1/16"	2'- 2 1/16"	E114(i8121)	Top	143 lb	-	231 lb	-
Point	6'- 4 1/16"	6'- 4 1/16"	E97(i8106)	Top	141 lb	-	228 lb	-
Point	7'- 5 13/16"	7'- 5 13/16"	E73(i4436)	Top	49 lb	10 lb	44 lb	-

UNFACTORED REACTIONS


ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'	B20(i10069)	998 lb	638 lb	464 lb	-
2	7'- 5 1/16"	7'- 8 9/16"	E44(i1037)	1128 lb	739 lb	514 lb	-

DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Lateral stability factor (KL) was based on user preference to use the width of all plies. (Consult with manufacturer for guideline pertaining to this design option.)
- 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.



STRUCTURAL COMPONENT ONLY
DWG # TF22071149 PG 1/2

	BUILDER: ROYAL PINE HOMES SITE: FORESTSIDE ESTATES MODEL: 4001 CITY: BRAMPTON	Job Name: 4001- ELEV B STD Level: 2ND FLOOR Label: B21 - i10068 Type: Beam	2 Ply Member 1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	Status: Design Passed
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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. 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.





BUILDER: **ROYAL PINE HOMES**
SITE: **FORESTSIDE ESTATES**
MODEL: **4001**
CITY: **BRAMPTON**

Job Name: **4001- ELEV B STD**
Level: **1ST FLOOR**
Label: **B22 - i10062**
Type: **Beam**

2 Ply Member
1 3/4" x 11 7/8" (2.0E 3100)
WestFraser LVL

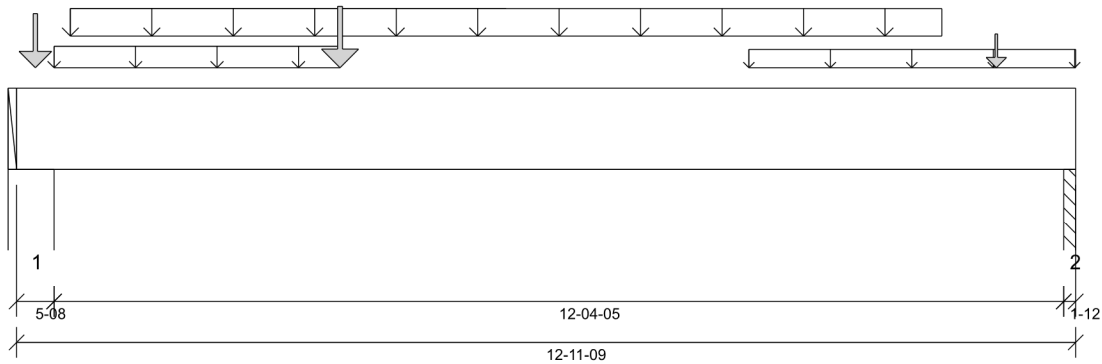
Status:
Design Passed

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

07/15/2022 11:43



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:

- 615 psi Wall @ 0'- 4 1/2"
- 615 psi Column @ 12'- 10 13/16"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	5'- 3 7/8"	1.25D + 1.5L	1.00	9726 lb ft	35345 lb ft	Passed - 28%
Factored Shear:	1'- 5 3/8"	1.25D + 1.5L + S	1.00	3225 lb	13815 lb	Passed - 23%
Live Load (LL) Pos. Defl.:	6'- 5 5/16"	L		0.129"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	6'- 5 13/16"	D + L		0.207"	L/240	Passed - L/715

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 + S	1.00	4150 lb		20020 lb	11842 lb	Passed - 35%
2	1'-12"	1.25D + 1.5L	1.00	2716 lb		6370 lb	3767 lb	Passed - 72%

SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	12'- 11 9/16"	Self Weight	Top	12 lb/ft	-	-	-
Uniform	0'- 5 1/2"	3'- 11 1/2"	User Load	Top	40 lb/ft	80 lb/ft	-	-
Uniform	8'- 11 9/16"	12'- 11 9/16"	User Load	Top	60 lb/ft	-	-	-
Tapered	0'- 7 7/8"	11'- 3 7/8"	Smoothed Load	Front	80 lb/ft	160 To 159 lb/ft	-	-
Point	11'- 11 7/8"	11'- 11 7/8"	J4(i10074)	Front	96 lb	192 lb	-	-
Point	0'- 2 3/4"	0'- 2 3/4"	E117(i8218)	Top	315 lb	100 lb	192 lb	-
Point	3'- 11 1/2"	3'- 11 1/2"	User Load	Top	240 lb	480 lb	-	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 5 1/2"	W31(i35)	1204 lb	1633 lb	198 lb	-
2	12'- 9 13/16"	12'- 11 9/16"	PBO1(i67)	830 lb	1120 lb	-6 lb	-

DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Lateral stability factor (KL) was based on user preference to use the width of all plies. (Consult with manufacturer for guideline pertaining to this design option.)
- 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.

PLY TO PLY CONNECTION:

**4 ROWS OF 3.25" PNEUMATIC GUN
NAILS (0.120"x3.25") @ 12" O/C**

PLY TO PLY CONNECTION ASSUMES ANY
SUPPORTED BEAM HANGERS ARE FASTENED
TO THIS BEAM WITH MIN. 3.5" FASTENERS.



STRUCTURAL COMPONENT ONLY
DWG # TF22071150



BUILDER: **ROYAL PINE HOMES**
SITE: **FORESTSIDE ESTATES**
MODEL: **4001**
CITY: **BRAMPTON**

Job Name: **4001- ELEV C STD**
Level: **2ND FLOOR**
Label: **B31 - i10411**
Type: **Beam**

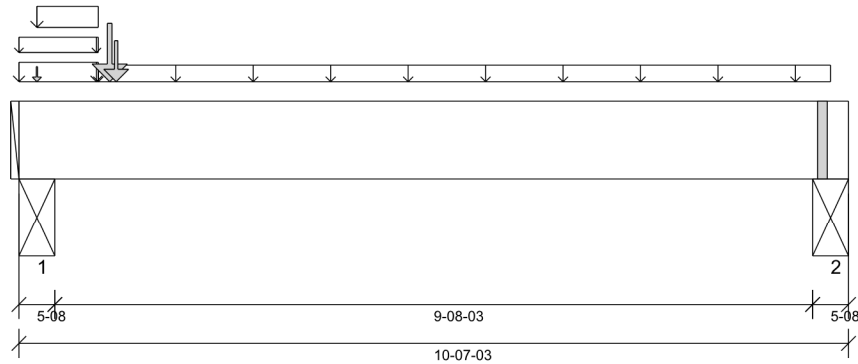
2 Ply Member
1 3/4" x 11 7/8" (2.0E 3100)
WestFraser LVL

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 07/15/2022 13:28



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'- 10"

Factored Resistance of Support Material:

- 615 psi Beam @ 0'- 4 1/2"
- 615 psi Beam @ 10'- 2 11/16"

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	1'- 2 15/16"	1.25D + 1.5S + L	1.00	3581 lb ft	35204 lb ft	Passed - 10%
Factored Shear:	1'- 5 3/8"	1.25D + 1.5L	0.85	2764 lb	11776 lb	Passed - 23%
Live Load (LL) Pos. Defl.:	4'- 8 1/4"	S + 0.5L		0.018"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	4'- 8 13/16"	D + S + 0.5L		0.037"	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	1.00	4661 lb		19940 lb	11791 lb	Passed - 40%
2	5'-08"	1.25D + 1.5L + S	0.97	710 lb		19419 lb	11483 lb	Passed - 6%

SPECIFIED LOADS

Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	10'- 7 3/16"	Self Weight	Top	12 lb/ft	-	-	-
Uniform	0'	1'- 3/16"	E98(i8105)	Top	100 lb/ft	-	-	-
Uniform	0'	1'- 3/16"	FC2 Floor Decking (Plan View Fill)	Top	5 lb/ft	11 lb/ft	-	-
Uniform	0'- 2 3/4"	1'- 3/16"	E98(i8105)	Top	30 lb/ft	33 lb/ft	72 lb/ft	-
Uniform	1'- 3/16"	10'- 4 7/16"	FC2 Floor Decking (Plan View Fill)	Top	13 lb/ft	27 lb/ft	-	-
Point	1'- 1 15/16"	1'- 1 15/16"	B30(i10410)	Front	1017 lb	654 lb	469 lb	-
Point	0'- 2 3/4"	0'- 2 3/4"	E98(i8105)	Top	8 lb	-	18 lb	-
Point	1'- 2 15/16"	1'- 2 15/16"	E114(i8121)	Top	466 lb	8 lb	820 lb	-

UNFACTORED REACTIONS

ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 5 1/2"	STL BM (i1003)	1645 lb	772 lb	1279 lb	-
2	10'- 1 11/16"	10'- 7 3/16"	STL BM (i1004)	227 lb	177 lb	85 lb	-

DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Lateral stability factor (KL) was based on user preference to use the width of all plies. (Consult with manufacturer for guideline pertaining to this design option.)
- 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=3.500". LDF=1.00, Pf=2805 lb, Qr=10920 lb, Result=25.69%.

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.

PLY TO PLY CONNECTION:

4 ROWS OF 3.25" PNEUMATIC GUN NAILS (0.120"x3.25") @ 12" O/C

PLY TO PLY CONNECTION ASSUMES ANY SUPPORTED BEAM HANGERS ARE FASTENED TO THIS BEAM WITH MIN. 3.5" FASTENERS.



STRUCTURAL COMPONENT ONLY
DWG # TF22071151



BUILDER: ROYAL PINE HOMES
SITE: FORESTSIDE ESTATES
MODEL: 4001
CITY: BRAMPTON

Job Name: 4001- ELEV C STD
Level: 2ND FLOOR
Label: B30 - i10410
Type: Beam

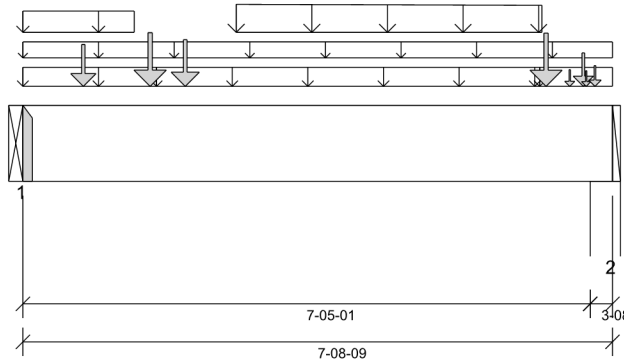
2 Ply Member
1 3/4" x 11 7/8" (2.0E 3100)
WestFraser LVL

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 07/15/2022 13:28



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 Beam @ 0'
- 615 psi Wall @ 7'- 6 1/16"

PLY TO PLY CONNECTION:
4 ROWS OF 3.25" PNEUMATIC GUN
NAILS (0.120"x3.25") @ 8" O/C

PLY TO PLY CONNECTION ASSUMES ANY
SUPPORTED BEAM HANGERS ARE FASTENED
TO THIS BEAM WITH MIN. 3.5" FASTENERS.

ANALYSIS RESULTS

Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	3'- 5 1/2"	1.25D + 1.5L + S	0.97	4814 lb ft	34230 lb ft	Passed - 14%
Factored Shear:	6'- 5 3/16"	1.25D + 1.5L + S	0.97	2523 lb	13379 lb	Passed - 19%
Live Load (LL) Pos. Defl.:	3'- 8 5/8"	L + 0.5S		0.017"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	3'- 8 5/8"	D + L + 0.5S		0.037"	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 + S	0.97	2715 lb		5288 lb	-	Passed - 51%
2	3-08	1.25D + 1.5L + S	0.97	2971 lb		12338 lb	7298 lb	Passed - 41%

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'	7'- 8 9/16"	Self Weight	Top	12 lb/ft	-	-	-
Uniform	0'	7'- 8 9/16"	User Load	Front	14 lb/ft	-	24 lb/ft	-
Uniform	-0'	1'- 9"	E114(i18121)	Top	100 lb/ft	-	-	-
Uniform	-0'	1'- 5 1/2"	E114(i18121)	Top	48 lb/ft	-	101 lb/ft	-
Uniform	1'- 9"	6'- 9 1/8"	E115(i18122)	Top	100 lb/ft	-	-	-
Uniform	6'- 9 1/8"	7'- 8 9/16"	E97(i18106)	Top	100 lb/ft	-	-	-
Tapered	2'- 9 1/2"	6'- 9 1/2"	Smoothed Load	Back	97 To 90 lb/ft	194 To 180 lb/ft	-	-
Point	0'- 9 1/2"	0'- 9 1/2"	J5(i10269)	Back	108 lb	216 lb	-	-
Point	2'- 1 1/2"	2'- 1 1/2"	J5(i10187)	Back	127 lb	253 lb	-	-
Point	7'- 4"	7'- 4"	J5(i10241)	Back	75 lb	151 lb	-	-
Point	1'- 8"	1'- 8"	E114(i18121)	Top	177 lb	-	284 lb	-
Point	6'- 10 1/8"	6'- 10 1/8"	E97(i18106)	Top	176 lb	-	281 lb	-
Point	7'- 1 7/8"	7'- 1 7/8"	E97(i18106)	Top	10 lb	-	20 lb	-
Point	7'- 4 7/16"	7'- 4 7/16"	E97(i18106)	Top	6 lb	-	12 lb	-
Point	7'- 5 13/16"	7'- 5 13/16"	E73(i4436)	Top	43 lb	-	34 lb	-

UNFACTORED REACTIONS


ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'	B31(i10411)	1017 lb	654 lb	469 lb	-
2	7'- 5 1/16"	7'- 8 9/16"	E44(i1037)	1121 lb	713 lb	495 lb	-

DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Lateral stability factor (KL) was based on user preference to use the width of all plies. (Consult with manufacturer for guideline pertaining to this design option.)
- 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.



STRUCTURAL COMPONENT ONLY
DWG # TF22071152 PG 1/2

	BUILDER: ROYAL PINE HOMES SITE: FORESTSIDE ESTATES MODEL: 4001 CITY: BRAMPTON	Job Name: 4001- ELEV C STD Level: 2ND FLOOR Label: B30 - i10410 Type: Beam	2 Ply Member 1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	Status: Design Passed
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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. 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.



Maximum Floor Spans – S2.1

Design Criteria

Spans:	Simple span
Loads:	Live load = 40 psf and dead load = 15 psf
Deflection limits:	L/480 under live load and L/240 under total load
Sheathing:	5/8 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'-1"	14'-3"	13'-10"	-	15'-7"	14'-9"	14'-3"	-
	NI-40x	16'-2"	15'-3"	14'-8"	-	16'-7"	15'-8"	15'-1"	-
	NI-60	16'-4"	15'-4"	14'-10"	-	16'-9"	15'-9"	15'-3"	-
	NI-80	17'-3"	16'-3"	15'-8"	-	17'-8"	16'-7"	16'-0"	-
11-7/8"	NI-20	17'-0"	16'-0"	15'-6"	-	17'-6"	16'-7"	16'-0"	-
	NI-40x	18'-2"	17'-1"	16'-6"	-	18'-9"	17'-6"	16'-11"	-
	NI-60	18'-5"	17'-3"	16'-8"	-	19'-0"	17'-8"	17'-1"	-
	NI-80	19'-9"	18'-3"	17'-7"	-	20'-4"	18'-10"	18'-0"	-
	NI-90	20'-2"	18'-8"	17'-10"	-	20'-9"	19'-2"	18'-4"	-
14"	NI-40x	20'-1"	18'-8"	17'-10"	-	20'-10"	19'-4"	18'-6"	-
	NI-60	20'-6"	18'-11"	18'-2"	-	21'-2"	19'-8"	18'-9"	-
	NI-80	21'-11"	20'-3"	19'-4"	-	22'-7"	20'-11"	20'-0"	-
	NI-90	22'-5"	20'-8"	19'-9"	-	23'-0"	21'-4"	20'-4"	-
16"	NI-60	22'-4"	20'-8"	19'-9"	-	23'-1"	21'-5"	20'-6"	-
	NI-80	23'-11"	22'-1"	21'-1"	-	24'-8"	22'-10"	21'-9"	-
	NI-90	24'-5"	22'-6"	21'-6"	-	25'-1"	23'-2"	22'-2"	-

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	16'-8"	15'-3"	14'-5"	-	16'-8"	15'-3"	14'-5"	-
	NI-40x	17'-11"	17'-0"	16'-1"	-	18'-5"	17'-1"	16'-1"	-
	NI-60	18'-2"	17'-1"	16'-4"	-	18'-8"	17'-4"	16'-4"	-
	NI-80	19'-5"	18'-0"	17'-5"	-	19'-10"	18'-5"	17'-8"	-
11-7/8"	NI-20	19'-7"	18'-2"	17'-3"	-	19'-11"	18'-3"	17'-3"	-
	NI-40x	21'-1"	19'-7"	18'-8"	-	21'-8"	20'-2"	19'-2"	-
	NI-60	21'-4"	19'-9"	18'-11"	-	21'-11"	20'-5"	19'-6"	-
	NI-80	22'-9"	21'-1"	20'-2"	-	23'-3"	21'-8"	20'-8"	-
	NI-90	23'-3"	21'-6"	20'-6"	-	23'-9"	22'-0"	21'-0"	-
14"	NI-40x	23'-8"	21'-11"	20'-11"	-	24'-4"	22'-8"	21'-8"	-
	NI-60	24'-0"	22'-3"	21'-3"	-	24'-8"	22'-11"	21'-11"	-
	NI-80	25'-7"	23'-9"	22'-7"	-	26'-2"	24'-4"	23'-3"	-
	NI-90	26'-1"	24'-2"	23'-0"	-	26'-8"	24'-9"	23'-7"	-
16"	NI-60	26'-5"	24'-6"	23'-5"	-	27'-2"	25'-3"	24'-2"	-
	NI-80	28'-2"	26'-1"	24'-10"	-	28'-10"	26'-9"	25'-6"	-
	NI-90	28'-8"	26'-6"	25'-3"	-	29'-3"	27'-2"	25'-11"	-

Notes:

1. 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.
2. For multiple-span applications, the end spans shall be 40% or more of the adjacent span.
3. Minimum bearing length shall be 1-3/4 inch for end bearings, and 3-1/2 inches for intermediate bearings.
4. Bearing stiffeners are not required when I-joists are used in accordance with this table, except as required for hangers.
5. Nordic I-joists are listed in CCMC Evaluation Report 13032-R and APA Product Report PR-L274C.

Maximum Floor Spans – S4.1

Design Criteria

Spans:	Simple span
Loads:	Live load = 40 psf and dead load = 15 psf
Deflection limits:	L/480 under live load and L/240 under total load
Sheathing:	3/4 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'-11"	15'-0"	14'-6"	13'-5"	16'-5"	15'-5"	14'-6"	13'-5"
	NI-40x	17'-0"	16'-0"	15'-5"	14'-10"	17'-5"	16'-5"	15'-10"	15'-2"
	NI-60	17'-2"	16'-2"	15'-7"	14'-11"	17'-7"	16'-7"	16'-0"	15'-4"
	NI-80	18'-3"	17'-1"	16'-5"	15'-9"	18'-8"	17'-5"	16'-9"	16'-1"
11-7/8"	NI-20	17'-11"	16'-11"	16'-3"	15'-8"	18'-7"	17'-5"	16'-10"	16'-2"
	NI-40x	19'-4"	17'-11"	17'-3"	16'-7"	19'-11"	18'-6"	17'-9"	17'-0"
	NI-60	19'-7"	18'-2"	17'-6"	16'-9"	20'-2"	18'-9"	17'-11"	17'-2"
	NI-80	21'-1"	19'-6"	18'-6"	17'-7"	21'-7"	20'-0"	19'-0"	18'-0"
	NI-90	21'-6"	19'-10"	18'-11"	17'-11"	22'-0"	20'-4"	19'-5"	18'-4"
14"	NI-40x	21'-5"	19'-11"	18'-11"	18'-0"	22'-1"	20'-7"	19'-7"	18'-7"
	NI-60	21'-10"	20'-2"	19'-3"	18'-3"	22'-6"	20'-10"	19'-11"	18'-10"
	NI-80	23'-5"	21'-7"	20'-7"	19'-5"	24'-0"	22'-3"	21'-2"	20'-0"
	NI-90	23'-10"	22'-1"	21'-0"	19'-10"	24'-5"	22'-7"	21'-6"	20'-4"
16"	NI-60	23'-9"	22'-0"	21'-0"	19'-10"	24'-6"	22'-9"	21'-8"	20'-7"
	NI-80	25'-6"	23'-7"	22'-5"	21'-2"	26'-2"	24'-3"	23'-1"	21'-10"
	NI-90	26'-0"	24'-0"	22'-10"	21'-6"	26'-7"	24'-8"	23'-5"	22'-2"

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	16'-10"	15'-5"	14'-6"	13'-5"	16'-10"	15'-5"	14'-6"	13'-5"
	NI-40x	18'-8"	17'-2"	16'-3"	15'-2"	18'-10"	17'-2"	16'-3"	15'-2"
	NI-60	18'-11"	17'-6"	16'-6"	15'-5"	19'-2"	17'-6"	16'-6"	15'-5"
	NI-80	20'-3"	18'-10"	17'-11"	16'-10"	20'-8"	19'-3"	18'-2"	16'-10"
11-7/8"	NI-20	20'-1"	18'-5"	17'-5"	16'-2"	20'-1"	18'-5"	17'-5"	16'-2"
	NI-40x	21'-10"	20'-4"	19'-4"	17'-8"	22'-5"	20'-6"	19'-4"	17'-8"
	NI-60	22'-1"	20'-7"	19'-8"	18'-4"	22'-8"	20'-10"	19'-8"	18'-4"
	NI-80	23'-8"	22'-0"	20'-11"	19'-10"	24'-1"	22'-6"	21'-6"	20'-0"
	NI-90	24'-1"	22'-5"	21'-4"	20'-2"	24'-7"	22'-11"	21'-10"	20'-7"
14"	NI-40x	24'-5"	22'-9"	21'-9"	19'-5"	25'-1"	23'-2"	21'-9"	19'-5"
	NI-60	24'-10"	23'-2"	22'-1"	20'-10"	25'-6"	23'-8"	22'-4"	20'-10"
	NI-80	26'-6"	24'-8"	23'-6"	22'-2"	27'-1"	25'-3"	24'-1"	22'-9"
	NI-90	27'-0"	25'-1"	23'-11"	22'-7"	27'-6"	25'-8"	24'-6"	23'-2"
16"	NI-60	27'-3"	25'-5"	24'-3"	22'-11"	28'-0"	26'-2"	24'-9"	23'-1"
	NI-80	29'-1"	27'-1"	25'-9"	24'-4"	29'-8"	27'-9"	26'-5"	25'-0"
	NI-90	29'-7"	27'-6"	26'-2"	24'-9"	30'-2"	28'-2"	26'-10"	25'-5"

Notes:

1. 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.
2. For multiple-span applications, the end spans shall be 40% or more of the adjacent span.
3. Minimum bearing length shall be 1-3/4 inch for end bearings, and 3-1/2 inches for intermediate bearings.
4. Bearing stiffeners are not required when I-joists are used in accordance with this table, except as required for hangers.
5. Nordic I-joists are listed in CCMC Evaluation Report 13032-R and APA Product Report PR-L274C.

Maximum Floor Spans – S6.1

Design Criteria

Spans:	Simple span
Loads:	Live load = 40 psf and dead load = 15 psf
Deflection limits:	L/480 under live load and L/240 under total load
Sheathing:	5/8 in. nailed-glued Canadian softwood plywood

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	14'-11"	14'-1"	13'-7"	-	15'-4"	14'-6"	14'-1"	-
	NI-40x	15'-11"	15'-0"	14'-6"	-	16'-4"	15'-5"	14'-11"	-
	NI-60	16'-1"	15'-2"	14'-8"	-	16'-6"	15'-7"	15'-1"	-
	NI-80	17'-1"	16'-1"	15'-6"	-	17'-5"	16'-5"	15'-10"	-
11-7/8"	NI-20	16'-9"	15'-10"	15'-4"	-	17'-4"	16'-4"	15'-10"	-
	NI-40x	17'-10"	16'-10"	16'-3"	-	18'-6"	17'-4"	16'-9"	-
	NI-60	18'-1"	17'-0"	16'-5"	-	18'-9"	17'-6"	16'-11"	-
	NI-80	19'-6"	18'-0"	17'-4"	-	20'-1"	18'-7"	17'-9"	-
	NI-90	19'-11"	18'-4"	17'-8"	-	20'-5"	18'-11"	18'-1"	-
14"	NI-40x	19'-10"	18'-4"	17'-8"	-	20'-6"	19'-1"	18'-3"	-
	NI-60	20'-2"	18'-8"	17'-11"	-	20'-10"	19'-4"	18'-6"	-
	NI-80	21'-8"	20'-0"	19'-1"	-	22'-4"	20'-8"	19'-9"	-
	NI-90	22'-1"	20'-5"	19'-6"	-	22'-9"	21'-0"	20'-1"	-
16"	NI-60	22'-0"	20'-4"	19'-6"	-	22'-9"	21'-1"	20'-2"	-
	NI-80	23'-7"	21'-10"	20'-10"	-	24'-4"	22'-6"	21'-6"	-
	NI-90	24'-1"	22'-2"	21'-2"	-	24'-9"	22'-11"	21'-10"	-

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	16'-6"	15'-1"	14'-3"	-	16'-6"	15'-1"	14'-3"	-
	NI-40x	17'-9"	16'-10"	15'-11"	-	18'-2"	16'-11"	15'-11"	-
	NI-60	17'-11"	16'-11"	16'-2"	-	18'-5"	17'-2"	16'-2"	-
	NI-80	19'-3"	17'-10"	17'-3"	-	19'-8"	18'-3"	17'-7"	-
11-7/8"	NI-20	19'-4"	18'-0"	17'-1"	-	19'-9"	18'-1"	17'-1"	-
	NI-40x	20'-10"	19'-4"	18'-6"	-	21'-5"	19'-11"	19'-0"	-
	NI-60	21'-1"	19'-7"	18'-8"	-	21'-8"	20'-2"	19'-3"	-
	NI-80	22'-6"	20'-10"	19'-11"	-	23'-1"	21'-5"	20'-5"	-
	NI-90	23'-0"	21'-3"	20'-4"	-	23'-6"	21'-10"	20'-10"	-
14"	NI-40x	23'-5"	21'-8"	20'-9"	-	24'-0"	22'-5"	21'-5"	-
	NI-60	23'-9"	22'-0"	21'-0"	-	24'-5"	22'-8"	21'-8"	-
	NI-80	25'-4"	23'-6"	22'-5"	-	25'-11"	24'-1"	23'-0"	-
	NI-90	25'-10"	23'-11"	22'-9"	-	26'-5"	24'-6"	23'-4"	-
16"	NI-60	26'-2"	24'-3"	23'-2"	-	26'-11"	25'-0"	23'-11"	-
	NI-80	27'-11"	25'-10"	24'-7"	-	28'-7"	26'-6"	25'-3"	-
	NI-90	28'-5"	26'-3"	25'-0"	-	29'-0"	26'-11"	25'-8"	-

Notes:

1. 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.
2. For multiple-span applications, the end spans shall be 40% or more of the adjacent span.
3. Minimum bearing length shall be 1-3/4 inch for end bearings, and 3-1/2 inches for intermediate bearings.
4. Bearing stiffeners are not required when I-joists are used in accordance with this table, except as required for hangers.
5. Nordic I-joists are listed in CCMC Evaluation Report 13032-R and APA Product Report PR-L274C.

Maximum Floor Spans – S7.1

Design Criteria

Spans:	Simple span
Loads:	Live load = 40 psf and dead load = 15 psf
Deflection limits:	L/480 under live load and L/240 under total load
Sheathing:	3/4 in. nailed-glued Canadian softwood plywood

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'-10"	15'-0"	14'-5"	13'-5"	16'-4"	15'-5"	14'-6"	13'-5"
	NI-40x	16'-11"	15'-11"	15'-4"	14'-9"	17'-4"	16'-4"	15'-9"	15'-1"
	NI-60	17'-1"	16'-1"	15'-6"	14'-10"	17'-6"	16'-6"	15'-11"	15'-3"
	NI-80	18'-1"	17'-0"	16'-4"	15'-8"	18'-7"	17'-4"	16'-8"	16'-0"
11-7/8"	NI-20	17'-10"	16'-10"	16'-2"	15'-7"	18'-5"	17'-4"	16'-9"	16'-1"
	NI-40x	19'-3"	17'-10"	17'-2"	16'-6"	19'-10"	18'-5"	17'-8"	16'-11"
	NI-60	19'-6"	18'-1"	17'-4"	16'-8"	20'-1"	18'-8"	17'-10"	17'-1"
	NI-80	20'-11"	19'-4"	18'-5"	17'-7"	21'-5"	19'-10"	18'-11"	17'-11"
	NI-90	21'-4"	19'-9"	18'-9"	17'-10"	21'-10"	20'-3"	19'-3"	18'-3"
14"	NI-40x	21'-4"	19'-9"	18'-10"	17'-11"	22'-0"	20'-5"	19'-6"	18'-6"
	NI-60	21'-8"	20'-1"	19'-2"	18'-2"	22'-4"	20'-9"	19'-9"	18'-9"
	NI-80	23'-3"	21'-6"	20'-5"	19'-4"	23'-10"	22'-1"	21'-0"	19'-11"
	NI-90	23'-9"	21'-11"	20'-10"	19'-8"	24'-3"	22'-6"	21'-5"	20'-3"
16"	NI-60	23'-7"	21'-10"	20'-10"	19'-9"	24'-4"	22'-7"	21'-7"	20'-5"
	NI-80	25'-4"	23'-5"	22'-3"	21'-1"	26'-0"	24'-1"	22'-11"	21'-8"
	NI-90	25'-10"	23'-10"	22'-8"	21'-5"	26'-5"	24'-6"	23'-4"	22'-0"

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	16'-10"	15'-5"	14'-6"	13'-5"	16'-10"	15'-5"	14'-6"	13'-5"
	NI-40x	18'-7"	17'-2"	16'-3"	15'-2"	18'-10"	17'-2"	16'-3"	15'-2"
	NI-60	18'-10"	17'-6"	16'-6"	15'-5"	19'-1"	17'-6"	16'-6"	15'-5"
	NI-80	20'-2"	18'-9"	17'-11"	16'-10"	20'-7"	19'-2"	18'-2"	16'-10"
11-7/8"	NI-20	20'-1"	18'-5"	17'-5"	16'-2"	20'-1"	18'-5"	17'-5"	16'-2"
	NI-40x	21'-9"	20'-3"	19'-4"	17'-8"	22'-4"	20'-5"	19'-4"	17'-8"
	NI-60	22'-0"	20'-6"	19'-7"	18'-4"	22'-7"	20'-10"	19'-8"	18'-4"
	NI-80	23'-6"	21'-10"	20'-10"	19'-9"	24'-0"	22'-5"	21'-4"	20'-0"
	NI-90	24'-0"	22'-4"	21'-3"	20'-1"	24'-6"	22'-10"	21'-9"	20'-7"
14"	NI-40x	24'-4"	22'-8"	21'-8"	19'-5"	25'-0"	23'-2"	21'-9"	19'-5"
	NI-60	24'-9"	23'-0"	22'-0"	20'-9"	25'-5"	23'-8"	22'-4"	20'-10"
	NI-80	26'-5"	24'-6"	23'-4"	22'-1"	27'-0"	25'-2"	24'-0"	22'-8"
	NI-90	26'-11"	25'-0"	23'-10"	22'-6"	27'-5"	25'-7"	24'-5"	23'-1"
16"	NI-60	27'-2"	25'-4"	24'-2"	22'-10"	27'-11"	26'-1"	24'-9"	23'-1"
	NI-80	29'-0"	26'-11"	25'-8"	24'-3"	29'-7"	27'-7"	26'-4"	24'-11"
	NI-90	29'-6"	27'-5"	26'-1"	24'-8"	30'-1"	28'-1"	26'-9"	25'-4"

Notes:

1. 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.
2. For multiple-span applications, the end spans shall be 40% or more of the adjacent span.
3. Minimum bearing length shall be 1-3/4 inch for end bearings, and 3-1/2 inches for intermediate bearings.
4. Bearing stiffeners are not required when I-joists are used in accordance with this table, except as required for hangers.
5. Nordic I-joists are listed in CCMC Evaluation Report 13032-R and APA Product Report PR-L274C.

Maximum Floor Spans – M2.1

Design Criteria

Spans:	Simple span
Loads:	Live load = 40 psf and dead load = 20 psf
Deflection limits:	L/480 under live load and L/240 under total load
Sheathing:	5/8 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'-1"	14'-3"	13'-10"	-	15'-7"	14'-9"	14'-3"	-
	NI-40x	16'-2"	15'-3"	14'-8"	-	16'-7"	15'-8"	15'-1"	-
	NI-60	16'-4"	15'-4"	14'-10"	-	16'-9"	15'-9"	15'-3"	-
	NI-80	17'-3"	16'-3"	15'-8"	-	17'-8"	16'-7"	16'-0"	-
11-7/8"	NI-20	17'-0"	16'-0"	15'-6"	-	17'-6"	16'-7"	16'-0"	-
	NI-40x	18'-2"	17'-1"	16'-6"	-	18'-9"	17'-6"	16'-11"	-
	NI-60	18'-5"	17'-3"	16'-8"	-	19'-0"	17'-8"	17'-1"	-
	NI-80	19'-9"	18'-3"	17'-7"	-	20'-4"	18'-10"	18'-0"	-
	NI-90	20'-2"	18'-8"	17'-10"	-	20'-9"	19'-2"	18'-4"	-
14"	NI-40x	20'-1"	18'-8"	17'-10"	-	20'-10"	19'-4"	18'-6"	-
	NI-60	20'-6"	18'-11"	18'-2"	-	21'-2"	19'-8"	18'-9"	-
	NI-80	21'-11"	20'-3"	19'-4"	-	22'-7"	20'-11"	20'-0"	-
	NI-90	22'-5"	20'-8"	19'-9"	-	23'-0"	21'-4"	20'-4"	-
16"	NI-60	22'-4"	20'-8"	19'-9"	-	23'-1"	21'-5"	20'-6"	-
	NI-80	23'-11"	22'-1"	21'-1"	-	24'-8"	22'-10"	21'-9"	-
	NI-90	24'-5"	22'-6"	21'-6"	-	25'-1"	23'-2"	22'-2"	-

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	16'-8"	15'-3"	14'-5"	-	16'-8"	15'-3"	14'-5"	-
	NI-40x	17'-11"	17'-0"	16'-1"	-	18'-5"	17'-1"	16'-1"	-
	NI-60	18'-2"	17'-1"	16'-4"	-	18'-8"	17'-4"	16'-4"	-
	NI-80	19'-5"	18'-0"	17'-5"	-	19'-10"	18'-5"	17'-8"	-
11-7/8"	NI-20	19'-7"	18'-2"	17'-3"	-	19'-11"	18'-3"	17'-3"	-
	NI-40x	21'-1"	19'-7"	18'-8"	-	21'-8"	20'-2"	19'-0"	-
	NI-60	21'-4"	19'-9"	18'-11"	-	21'-11"	20'-5"	19'-6"	-
	NI-80	22'-9"	21'-1"	20'-2"	-	23'-3"	21'-8"	20'-8"	-
	NI-90	23'-3"	21'-6"	20'-6"	-	23'-9"	22'-0"	21'-0"	-
14"	NI-40x	23'-8"	21'-11"	20'-11"	-	24'-4"	22'-8"	20'-11"	-
	NI-60	24'-0"	22'-3"	21'-3"	-	24'-8"	22'-11"	21'-11"	-
	NI-80	25'-7"	23'-9"	22'-7"	-	26'-2"	24'-4"	23'-3"	-
	NI-90	26'-1"	24'-2"	23'-0"	-	26'-8"	24'-9"	23'-7"	-
16"	NI-60	26'-5"	24'-6"	23'-5"	-	27'-2"	25'-3"	24'-2"	-
	NI-80	28'-2"	26'-1"	24'-10"	-	28'-10"	26'-9"	25'-6"	-
	NI-90	28'-8"	26'-6"	25'-3"	-	29'-3"	27'-2"	25'-11"	-

Notes:

1. 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.
2. For multiple-span applications, the end spans shall be 40% or more of the adjacent span.
3. Minimum bearing length shall be 1-3/4 inch for end bearings, and 3-1/2 inches for intermediate bearings.
4. Bearing stiffeners are not required when I-joists are used in accordance with this table, except as required for hangers.
5. Nordic I-joists are listed in CCMC Evaluation Report 13032-R and APA Product Report PR-L274C.

Maximum Floor Spans – M4.1

Design Criteria

Spans:	Simple span
Loads:	Live load = 40 psf and dead load = 20 psf
Deflection limits:	L/480 under live load and L/240 under total load
Sheathing:	3/4 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'-11"	15'-0"	14'-6"	13'-5"	16'-5"	15'-5"	14'-6"	13'-5"
	NI-40x	17'-0"	16'-0"	15'-5"	14'-10"	17'-5"	16'-5"	15'-10"	14'-11"
	NI-60	17'-2"	16'-2"	15'-7"	14'-11"	17'-7"	16'-7"	16'-0"	15'-4"
	NI-80	18'-3"	17'-1"	16'-5"	15'-9"	18'-8"	17'-5"	16'-9"	16'-1"
11-7/8"	NI-20	17'-11"	16'-11"	16'-3"	15'-8"	18'-7"	17'-5"	16'-10"	16'-1"
	NI-40x	19'-4"	17'-11"	17'-3"	16'-7"	19'-11"	18'-6"	17'-9"	17'-0"
	NI-60	19'-7"	18'-2"	17'-6"	16'-9"	20'-2"	18'-9"	17'-11"	17'-2"
	NI-80	21'-1"	19'-6"	18'-6"	17'-7"	21'-7"	20'-0"	19'-0"	18'-0"
	NI-90	21'-6"	19'-10"	18'-11"	17'-11"	22'-0"	20'-4"	19'-5"	18'-4"
14"	NI-40x	21'-5"	19'-11"	18'-11"	18'-0"	22'-1"	20'-7"	19'-7"	18'-7"
	NI-60	21'-10"	20'-2"	19'-3"	18'-3"	22'-6"	20'-10"	19'-11"	18'-10"
	NI-80	23'-5"	21'-7"	20'-7"	19'-5"	24'-0"	22'-3"	21'-2"	20'-0"
	NI-90	23'-10"	22'-1"	21'-0"	19'-10"	24'-5"	22'-7"	21'-6"	20'-4"
16"	NI-60	23'-9"	22'-0"	21'-0"	19'-10"	24'-6"	22'-9"	21'-8"	20'-7"
	NI-80	25'-6"	23'-7"	22'-5"	21'-2"	26'-2"	24'-3"	23'-1"	21'-10"
	NI-90	26'-0"	24'-0"	22'-10"	21'-6"	26'-7"	24'-8"	23'-5"	22'-2"

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	16'-10"	15'-5"	14'-6"	13'-5"	16'-10"	15'-5"	14'-6"	13'-5"
	NI-40x	18'-8"	17'-2"	16'-3"	14'-11"	18'-10"	17'-2"	16'-3"	14'-11"
	NI-60	18'-11"	17'-6"	16'-6"	15'-5"	19'-2"	17'-6"	16'-6"	15'-5"
	NI-80	20'-3"	18'-10"	17'-11"	16'-10"	20'-8"	19'-3"	18'-2"	16'-10"
11-7/8"	NI-20	20'-1"	18'-5"	17'-5"	16'-1"	20'-1"	18'-5"	17'-5"	16'-1"
	NI-40x	21'-10"	20'-4"	19'-0"	17'-0"	22'-5"	20'-6"	19'-0"	17'-0"
	NI-60	22'-1"	20'-7"	19'-8"	18'-4"	22'-8"	20'-10"	19'-8"	18'-4"
	NI-80	23'-8"	22'-0"	20'-11"	19'-10"	24'-1"	22'-6"	21'-6"	20'-0"
	NI-90	24'-1"	22'-5"	21'-4"	20'-2"	24'-7"	22'-11"	21'-10"	20'-7"
14"	NI-40x	24'-5"	22'-9"	20'-11"	18'-8"	25'-1"	22'-11"	20'-11"	18'-8"
	NI-60	24'-10"	23'-2"	22'-1"	20'-10"	25'-6"	23'-8"	22'-4"	20'-10"
	NI-80	26'-6"	24'-8"	23'-6"	22'-2"	27'-1"	25'-3"	24'-1"	22'-9"
	NI-90	27'-0"	25'-1"	23'-11"	22'-7"	27'-6"	25'-8"	24'-6"	23'-2"
16"	NI-60	27'-3"	25'-5"	24'-3"	22'-11"	28'-0"	26'-2"	24'-9"	23'-1"
	NI-80	29'-1"	27'-1"	25'-9"	24'-4"	29'-8"	27'-9"	26'-5"	25'-0"
	NI-90	29'-7"	27'-6"	26'-2"	24'-9"	30'-2"	28'-2"	26'-10"	25'-5"

Notes:

1. 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.
2. For multiple-span applications, the end spans shall be 40% or more of the adjacent span.
3. Minimum bearing length shall be 1-3/4 inch for end bearings, and 3-1/2 inches for intermediate bearings.
4. Bearing stiffeners are not required when I-joists are used in accordance with this table, except as required for hangers.
5. Nordic I-joists are listed in CCMC Evaluation Report 13032-R and APA Product Report PR-L274C.

Maximum Floor Spans – M6.1

Design Criteria

Spans:	Simple span
Loads:	Live load = 40 psf and dead load = 20 psf
Deflection limits:	L/480 under live load and L/240 under total load
Sheathing:	5/8 in. nailed-glued Canadian softwood plywood

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	14'-11"	14'-1"	13'-7"	-	15'-4"	14'-6"	14'-1"	-
	NI-40x	15'-11"	15'-0"	14'-6"	-	16'-4"	15'-5"	14'-11"	-
	NI-60	16'-1"	15'-2"	14'-8"	-	16'-6"	15'-7"	15'-1"	-
	NI-80	17'-1"	16'-1"	15'-6"	-	17'-5"	16'-5"	15'-10"	-
11-7/8"	NI-20	16'-9"	15'-10"	15'-4"	-	17'-4"	16'-4"	15'-10"	-
	NI-40x	17'-10"	16'-10"	16'-3"	-	18'-6"	17'-4"	16'-9"	-
	NI-60	18'-1"	17'-0"	16'-5"	-	18'-9"	17'-6"	16'-11"	-
	NI-80	19'-6"	18'-0"	17'-4"	-	20'-1"	18'-7"	17'-9"	-
	NI-90	19'-11"	18'-4"	17'-8"	-	20'-5"	18'-11"	18'-1"	-
14"	NI-40x	19'-10"	18'-4"	17'-8"	-	20'-6"	19'-1"	18'-3"	-
	NI-60	20'-2"	18'-8"	17'-11"	-	20'-10"	19'-4"	18'-6"	-
	NI-80	21'-8"	20'-0"	19'-1"	-	22'-4"	20'-8"	19'-9"	-
	NI-90	22'-1"	20'-5"	19'-6"	-	22'-9"	21'-0"	20'-1"	-
16"	NI-60	22'-0"	20'-4"	19'-6"	-	22'-9"	21'-1"	20'-2"	-
	NI-80	23'-7"	21'-10"	20'-10"	-	24'-4"	22'-6"	21'-6"	-
	NI-90	24'-1"	22'-2"	21'-2"	-	24'-9"	22'-11"	21'-10"	-

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	16'-6"	15'-1"	14'-3"	-	16'-6"	15'-1"	14'-3"	-
	NI-40x	17'-9"	16'-10"	15'-11"	-	18'-2"	16'-11"	15'-11"	-
	NI-60	17'-11"	16'-11"	16'-2"	-	18'-5"	17'-2"	16'-2"	-
	NI-80	19'-3"	17'-10"	17'-3"	-	19'-8"	18'-3"	17'-7"	-
11-7/8"	NI-20	19'-4"	18'-0"	17'-1"	-	19'-9"	18'-1"	17'-1"	-
	NI-40x	20'-10"	19'-4"	18'-6"	-	21'-5"	19'-11"	19'-0"	-
	NI-60	21'-1"	19'-7"	18'-8"	-	21'-8"	20'-2"	19'-3"	-
	NI-80	22'-6"	20'-10"	19'-11"	-	23'-1"	21'-5"	20'-5"	-
	NI-90	23'-0"	21'-3"	20'-4"	-	23'-6"	21'-10"	20'-10"	-
14"	NI-40x	23'-5"	21'-8"	20'-9"	-	24'-0"	22'-5"	20'-11"	-
	NI-60	23'-9"	22'-0"	21'-0"	-	24'-5"	22'-8"	21'-8"	-
	NI-80	25'-4"	23'-6"	22'-5"	-	25'-11"	24'-1"	23'-0"	-
	NI-90	25'-10"	23'-11"	22'-9"	-	26'-5"	24'-6"	23'-4"	-
16"	NI-60	26'-2"	24'-3"	23'-2"	-	26'-11"	25'-0"	23'-11"	-
	NI-80	27'-11"	25'-10"	24'-7"	-	28'-7"	26'-6"	25'-3"	-
	NI-90	28'-5"	26'-3"	25'-0"	-	29'-0"	26'-11"	25'-8"	-

Notes:

1. 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.
2. For multiple-span applications, the end spans shall be 40% or more of the adjacent span.
3. Minimum bearing length shall be 1-3/4 inch for end bearings, and 3-1/2 inches for intermediate bearings.
4. Bearing stiffeners are not required when I-joists are used in accordance with this table, except as required for hangers.
5. Nordic I-joists are listed in CCMC Evaluation Report 13032-R and APA Product Report PR-L274C.

Maximum Floor Spans – M7.1

Design Criteria

Spans:	Simple span
Loads:	Live load = 40 psf and dead load = 20 psf
Deflection limits:	L/480 under live load and L/240 under total load
Sheathing:	3/4 in. nailed-glued Canadian softwood plywood

Maximum Floor Spans

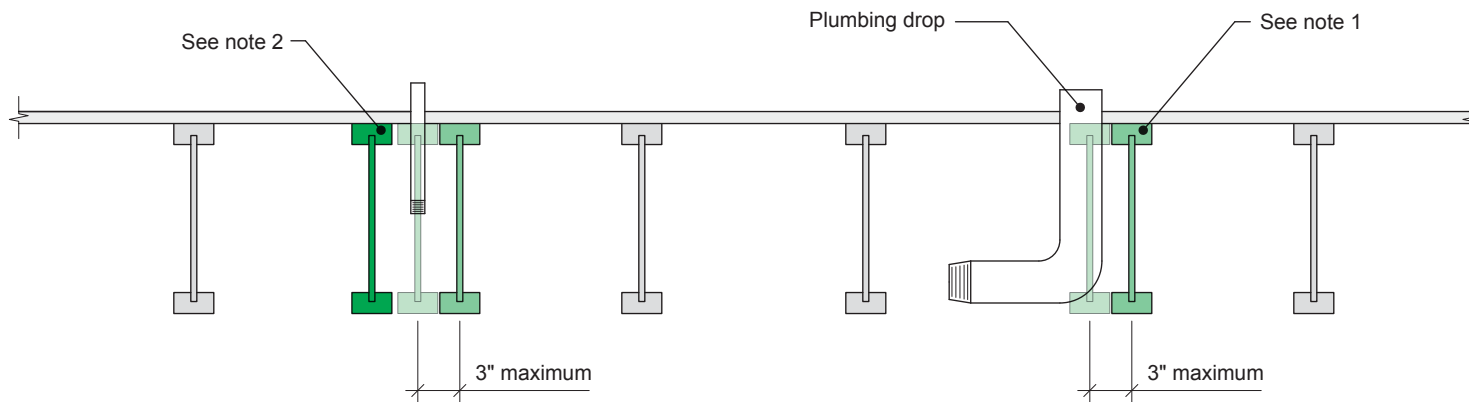
Joist depth	Joist series	Bare On centre spacing				1/2 in. gypsum ceiling On centre spacing			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
9-1/2"	NI-20	15'-10"	15'-0"	14'-5"	13'-5"	16'-4"	15'-5"	14'-6"	13'-5"
	NI-40x	16'-11"	15'-11"	15'-4"	14'-9"	17'-4"	16'-4"	15'-9"	14'-11"
	NI-60	17'-1"	16'-1"	15'-6"	14'-10"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

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	16'-10"	15'-5"	14'-6"	13'-5"	16'-10"	15'-5"	14'-6"	13'-5"
	NI-40x	18'-7"	17'-2"	16'-3"	14'-11"	18'-10"	17'-2"	16'-3"	14'-11"
	NI-60	18'-10"	17'-6"	16'-6"	15'-5"	19'-1"	17'-6"	16'-6"	15'-5"
	NI-80	20'-2"	18'-9"	17'-11"	16'-10"	20'-7"	19'-2"	18'-2"	16'-10"
11-7/8"	NI-20	20'-1"	18'-5"	17'-5"	16'-1"	20'-1"	18'-5"	17'-5"	16'-1"
	NI-40x	21'-9"	20'-3"	19'-0"	17'-0"	22'-4"	20'-5"	19'-0"	17'-0"
	NI-60	22'-0"	20'-6"	19'-7"	18'-4"	22'-7"	20'-10"	19'-8"	18'-4"
	NI-80	23'-6"	21'-10"	20'-10"	19'-9"	24'-0"	22'-5"	21'-4"	20'-0"
	NI-90	24'-0"	22'-4"	21'-3"	20'-1"	24'-6"	22'-10"	21'-9"	20'-7"
14"	NI-40x	24'-4"	22'-8"	20'-11"	18'-8"	25'-0"	22'-11"	20'-11"	18'-8"
	NI-60	24'-9"	23'-0"	22'-0"	20'-9"	25'-5"	23'-8"	22'-4"	20'-10"
	NI-80	26'-5"	24'-6"	23'-4"	22'-1"	27'-0"	25'-2"	24'-0"	22'-8"
	NI-90	26'-11"	25'-0"	23'-10"	22'-6"	27'-5"	25'-7"	24'-5"	23'-1"
16"	NI-60	27'-2"	25'-4"	24'-2"	22'-10"	27'-11"	26'-1"	24'-9"	23'-1"
	NI-80	29'-0"	26'-11"	25'-8"	24'-3"	29'-7"	27'-7"	26'-4"	24'-11"
	NI-90	29'-6"	27'-5"	26'-1"	24'-8"	30'-1"	28'-1"	26'-9"	25'-4"

Notes:

1. 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.
2. For multiple-span applications, the end spans shall be 40% or more of the adjacent span.
3. Minimum bearing length shall be 1-3/4 inch for end bearings, and 3-1/2 inches for intermediate bearings.
4. Bearing stiffeners are not required when I-joists are used in accordance with this table, except as required for hangers.
5. Nordic I-joists are listed in CCMC Evaluation Report 13032-R and APA Product Report PR-L274C.

7c

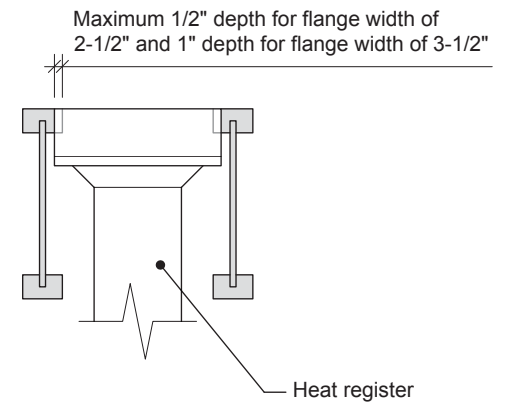
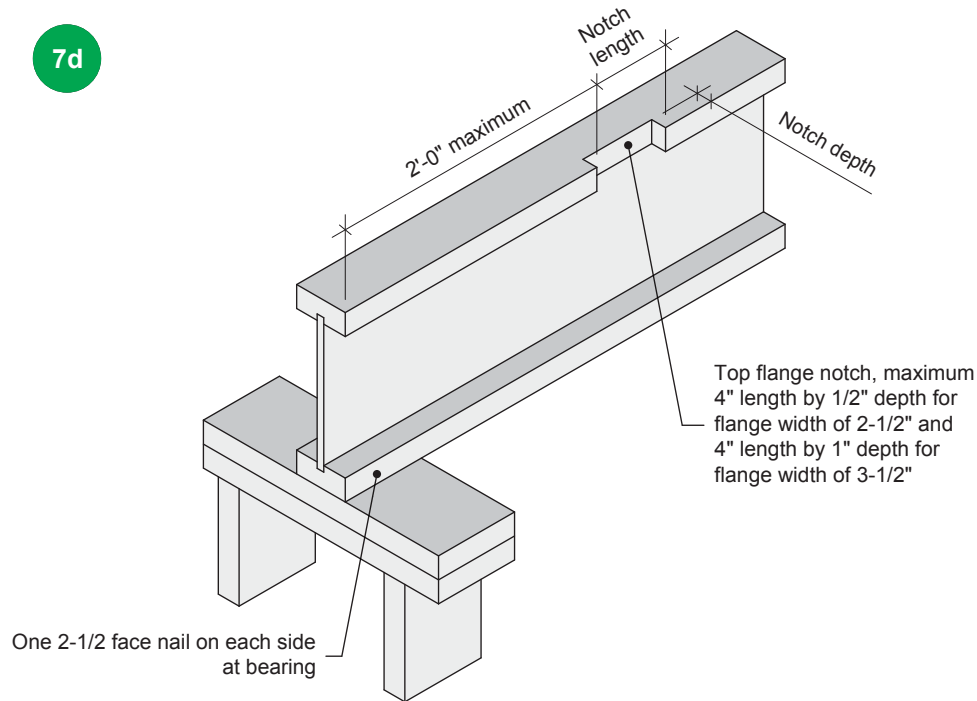


Notes:

1. To prevent interference with plumbing, a joist may be shifted up to 3 inches if the edge of the floor panel is supported and the span rating is not exceeded.
2. In all other cases, an additional joist is required.

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

7d



Notes:

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

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