FORTE®

JOB SUMMARY REPORT

Requia_spec3.4te

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 06/13/17

01: Level			
Member Name	**Results**	**Current Solution**	**Comments**
16' ohd header	Passed	3 Piece(s) 1 3/4" x 16" 2.0E Microllam® LVL	
Main beam	Passed	3 Piece(s) 1 3/4" x 16" 2.0E Microllam® LVL	
Left front beam	Passed	2 Piece(s) 2 x 10 Hem-Fir No. 1	
right front beam	Passed	3 Piece(s) 1 3/4" x 9 1/4" 2.0E Microllam® LVL	

Forte Software Operator	Job Notes
Chris Burnett Hammond Lumber Company (207) 495-3303 cburnett@hammondlumber.com	

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Forte v5.1, Design Engine: V6.5.1.1
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MEMBER REPORT *Level, 16' ohd header*

3 piece(s) 1 3/4" x 16" 2.0E Microllam® LVL

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Overall Length: 16 6 0

All locations are measured from the outside face of left support (or left cantilever end).All dimensions are horizontal.;Drawing is Conceptual

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	6583 @ 0 1 8	11419 (3.00")	Passed (58%)	--	1.0 D + 0.75 L + 0.75 S (All Spans)
Shear (lbs)	6170 @ 1 7 0	18354	Passed (34%)	1.15	1.0 D + 0.75 L + 0.75 S (All Spans)
Moment (Ft-lbs)	26162 @ 4 6 0	53672	Passed (49%)	1.15	1.0 D + 0.75 L + 0.75 S (All Spans)
Live Load Defl. (in)	0.203 @ 7 8 9	0.542	Passed (L/963)	--	1.0 D + 0.75 L + 0.75 S (All Spans)
Total Load Defl. (in)	0.338 @ 7 8 4	0.813	Passed (L/577)	--	1.0 D + 0.75 L + 0.75 S (All Spans)

System : Wall
Member Type : Header
Building Use : Residential
Building Code : IBC 2009
Design Methodology : ASD

- Deflection criteria: LL (L/360) and TL (L/240).
- Bracing (Lu): All compression edges (top and bottom) must be braced at 15 2 13 o/c unless detailed otherwise. Proper attachment and positioning of lateral bracing is required to achieve member stability.

Supports	Bearing			Loads to Supports (lbs)				Accessories
	Total	Available	Required	Dead	Floor Live	Snow	Total	
1 - Trimmer - SPF	3.00"	3.00"	1.73"	2658	1974	3260	7892	None
2 - Trimmer - SPF	3.00"	3.00"	1.50"	1458	805	2295	4558	None

Loads	Location (Side)	Tributary Width	Dead (0.90)	Floor Live (1.00)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 0 0 to 16 6 0	N/A	24.5			
1 - Uniform (PSF)	0 0 0 to 16 6 0	3 6 0	15.0	-	60.0	Residential - Living Areas
2 - Uniform (PSF)	0 0 0 to 16 6 0	1 6 0	10.0	10.0	-	
3 - Point (lb)	4 6 0	N/A	2598	2532	2090	Linked from: Main beam, Support 2

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The product application, input design loads, dimensions and support information have been provided by Forte Software Operator

SUSTAINABLE FORESTRY INITIATIVE

Forte Software Operator	Job Notes
Chris Burnett Hammond Lumber Company (207) 495-3303 cburnett@hammondlumber.com	

FORTE®

MEMBER REPORT *Level, Main beam*

3 piece(s) 1 3/4" x 16" 2.0E Microllam® LVL

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Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern) [Group]
Member Reaction (lbs)	4594 @ 0 4 0	12272 (5.50")	Passed (37%)	--	1.0 D + 1.0 L (All Spans) [1]
Shear (lbs)	6020 @ 18 2 8	18354	Passed (33%)	1.15	1.0 D + 0.75 L + 0.75 S (All Spans) [1]
Moment (Ft-lbs)	22468 @ 10 5 4	46671	Passed (48%)	1.00	1.0 D + 1.0 L (All Spans) [1]
Live Load Defl. (in)	0.279 @ 10 0 0	0.483	Passed (L/830)	--	1.0 D + 1.0 L (All Spans) [1]
Total Load Defl. (in)	0.458 @ 10 1 8	0.967	Passed (L/507)	--	1.0 D + 1.0 L (All Spans) [1]

System : Floor
Member Type : Flush Beam
Building Use : Residential
Building Code : IBC 2009
Design Methodology : ASD

- Deflection criteria: LL (L/480) and TL (L/240).
- Bracing (Lu): All compression edges (top and bottom) must be braced at 18 1 12 o/c unless detailed otherwise. Proper attachment and positioning of lateral bracing is required to achieve member stability.

Supports	Bearing			Loads to Supports (lbs)				Accessories
	Total	Available	Required	Dead	Floor Live	Snow	Total	
1 - Stud wall - SPF	5.50"	5.50"	2.06"	1624	2969	280	4873	Blocking
2 - Beam - LVL	5.50"	5.50"	1.54"	2598	2532	2090	7220	Blocking

- Blocking Panels are assumed to carry no loads applied directly above them and the full load is applied to the member being designed.

Loads	Location (Side)	Tributary Width	Dead (0.90)	Floor Live (1.00)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 0 0 to 20 0 0	N/A	24.5			
1 - Uniform (PSF)	0 0 0 to 17 0 0 (Back)	7 7 8	12.0	30.0	-	Residential - Sleeping Areas
2 - Uniform (PSF)	0 0 0 to 18 0 0 (Front)	2 3 4	12.0	30.0	-	Residential - Sleeping Areas
3 - Point (lb)	18 0 0 (Front)	N/A	421	108/-24	912	Linked from: Left front beam, Support 3
4 - Point (lb)	17 0 0 (Front)	N/A	1265	278	1458	Linked from: right front beam, Support 1

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MEMBER REPORT *Level, Left front beam*

2 piece(s) 2 x 10 Hem-Fir No. 1

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Overall Length: 14 0 0

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Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	1258 @ 13 9 6	1823 (1.50")	Passed (69%)	--	1.0 D + 1.0 S (Alt Spans)
Shear (lbs)	1312 @ 7 2 12	3191	Passed (41%)	1.15	1.0 D + 1.0 S (All Spans)
Moment (Ft-lbs)	-2261 @ 8 2 12	4397	Passed (51%)	1.15	1.0 D + 1.0 S (All Spans)
Live Load Defl. (in)	0.030 @ 3 11 6	0.197	Passed (L/999+)	--	1.0 D + 1.0 S (Alt Spans)
Total Load Defl. (in)	0.056 @ 3 11 0	0.395	Passed (L/999+)	--	1.0 D + 1.0 S (Alt Spans)

System : Floor
Member Type : Flush Beam
Building Use : Residential
Building Code : IBC 2009
Design Methodology : ASD

- Deflection criteria: LL (L/480) and TL (L/240).
- Bracing (Lu): All compression edges (top and bottom) must be braced at 13 9 6 o/c unless detailed otherwise. Proper attachment and positioning of lateral bracing is required to achieve member stability.
- Applicable calculations are based on NDS.

Supports	Bearing			Loads to Supports (lbs)				Accessories
	Total	Available	Required	Dead	Floor Live	Snow	Total	
1 - Column - SPF	5.50"	5.50"	1.50"	586	148/-8	642	1376/-8	None
2 - Stud wall - SPF	5.50"	5.50"	2.58"	1472	345	1664	3481	None
3 - Hanger on 9 1/4" LVL beam	2.63"	Hanger[1]	1.50"	421	108/-24	912	1441/-24	See note [1]

- At hanger supports, the Total Bearing dimension is equal to the width of the material that is supporting the hanger
- [1] See Connector grid below for additional information and/or requirements.

Connector: Simpson Strong-Tie Connectors

Support	Model	Seat Length	Top Nails	Face Nails	Member Nails	Accessories
3 - Face Mount Hanger	U210-2	2.00"	N/A	14-10d x 1-1/2	6-10d x 1-1/2	

Loads	Location (Side)	Tributary Width	Dead (0.90)	Floor Live (1.00)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 0 0 to 13 9 6	N/A	7.0			
1 - Uniform (PSF)	0 0 0 to 14 0 0 (Front)	1 4 0	12.0	30.0	-	Residential - Sleeping Areas
2 - Uniform (PLF)	0 0 0 to 14 0 0 (Front)	N/A	100.0	-	-	
3 - Uniform (PSF)	0 0 0 to 14 0 0 (Front)	2 0 0	15.0	-	60.0	gable
4 - Uniform (PSF)	0 0 0 to 14 0 0 (Front)	1 0 0	15.0	-	60.0	low roof
5 - Point (lb)	13 0 0 (Front)	N/A	127	-	600	

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MEMBER REPORT *Level, right front beam*

3 piece(s) 1 3/4" x 9 1/4" 2.0E Microllam® LVL

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Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	2640 @ 0 2 10	5906 (1.50")	Passed (45%)	--	1.0 D + 1.0 S (All Spans)
Shear (lbs)	2337 @ 0 11 14	10611	Passed (22%)	1.15	1.0 D + 1.0 S (All Spans)
Moment (Ft-lbs)	8876 @ 6 11 5	19327	Passed (46%)	1.15	1.0 D + 1.0 S (All Spans)
Live Load Defl. (in)	0.234 @ 6 11 5	0.336	Passed (L/689)	--	1.0 D + 1.0 S (All Spans)
Total Load Defl. (in)	0.438 @ 6 11 5	0.672	Passed (L/368)	--	1.0 D + 1.0 S (All Spans)

System : Floor
Member Type : Flush Beam
Building Use : Residential
Building Code : IBC 2009
Design Methodology : ASD

- Deflection criteria: LL (L/480) and TL (L/240).
- Bracing (Lu): All compression edges (top and bottom) must be braced at 13 9 6 o/c unless detailed otherwise. Proper attachment and positioning of lateral bracing is required to achieve member stability.

Supports	Bearing			Loads to Supports (lbs)				Accessories
	Total	Available	Required	Dead	Floor Live	Snow	Total	
1 - Hanger on 9 1/4" SPF beam	2.63"	Hanger[1]	1.50"	1265	278	1458	3001	See note [1]
2 - Stud wall - SPF	5.50"	5.50"	1.50"	1289	282	1482	3053	Blocking

- Blocking Panels are assumed to carry no loads applied directly above them and the full load is applied to the member being designed.
- At hanger supports, the Total Bearing dimension is equal to the width of the material that is supporting the hanger
- [1] See Connector grid below for additional information and/or requirements.

Connector: Simpson Strong-Tie Connectors

Support	Model	Seat Length	Top Nails	Face Nails	Member Nails	Accessories
1 - Face Mount Hanger	HHUS5.50/10	3.00"	N/A	30-16d common	10-16d double shear	

Loads	Location (Side)	Tributary Width	Dead (0.90)	Floor Live (1.00)	Snow (1.15)	Comments
0 - Self Weight (PLF)	0 2 10 to 14 0 0	N/A	14.2			
1 - Uniform (PSF)	0 0 0 to 14 0 0 (Front)	1 4 0	12.0	30.0	-	Residential - Sleeping Areas
2 - Uniform (PLF)	0 0 0 to 14 0 0 (Front)	N/A	100.0	-	-	
3 - Uniform (PSF)	0 0 0 to 14 0 0 (Front)	2 0 0	15.0	-	60.0	gable snow
4 - Uniform (PSF)	0 0 0 to 14 0 0 (Front)	1 6 0	15.0	-	60.0	low roof

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