

Graphical Illustration - Not To Scale

**Design Results:**

	<u>Design</u>	<u>Control</u>	<u>Result</u>	<u>LDF</u>	<u>Load Combination</u>
	<u>Design</u>	<u>Control</u>	<u>Result</u>	<u>LDF</u>	<u>Load Combination</u>
Max. Reaction	1705.04 lb @ 0-00	3937.50 lb	Passed - 43%	1.15	D + Lr
Max. Reaction	2494.83 lb @ 4-05-00	3937.50 lb	Passed - 63%	1.15	D + Lr
Critical Moment (Pos)	2713.54 lb ft @ 1-11-11	35795.16 lb ft	Passed - 8%	1.15	D + Lr
Critical Moment (Neg)	0.00 lb ft	0.00 lb ft			
Critical Shear	1382.02 lb @ 1-04-00	12236.00 lb	Passed - 11%	1.15	D + Lr
Live Load Deflection	0-00 @ 2-02-05	L/480	Passed - L/999	-	Lr
Total Load Deflection	0-00 @ 2-02-06	L/360	Passed - L/999	-	D + Lr

**Design Notes:**

- \* Beam Stability Factor used in the calculation for Allowable Max Pos Moment (CL) = 1.00
- \* Member design assumed proper ply to ply connection. Verify connection between plies with manufacturer.
- \*

**Loading:**

Type	Start	End	Maximum Load Magnitudes			
			Dead	Floor Live	Roof Live	Snow
Self Weight	0-00	4-05-00	16.00 lb/ft	-	-	-
Uniform	-0-00	4-05-00	12.70 lb/ft	25.30 lb/ft	-	-
Uniform	0-01	4-04-15	80.10 lb/ft	-	-	-
Uniform	1-02-04	2-06-04	537.00 lb/ft	-	681.00 lb/ft	-
Uniform	3-02-04	4-04-15	502.50 lb/ft	-	493.50 lb/ft	-
Point	1-10-04	1-10-04	226.00 lb	-	304.00/-1.00 lb	-
Point	3-10-04	3-10-04	179.00 lb	-	166.00/-2.80 lb	-

**Support Information:**

Support	Start	End	Maximum Analysis Reactions			
			Dead	Floor Live	Roof Live	Snow
1	0-00	0-00	896.00 lb	56.00 lb	809.00/-1.00 lb	-
2	4-05-00	4-05-00	1321.00 lb	56.00 lb	1174.00/-3.00 lb	-

**Errors, Warnings & Notes:**

- \* The dead loads used in the design of this member were applied to the structure as projected dead loads.
- \* The member graphic, dimensions, and locations shown on this report are based on the centerline of the member.
- \* Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.

**Loading (psf):**

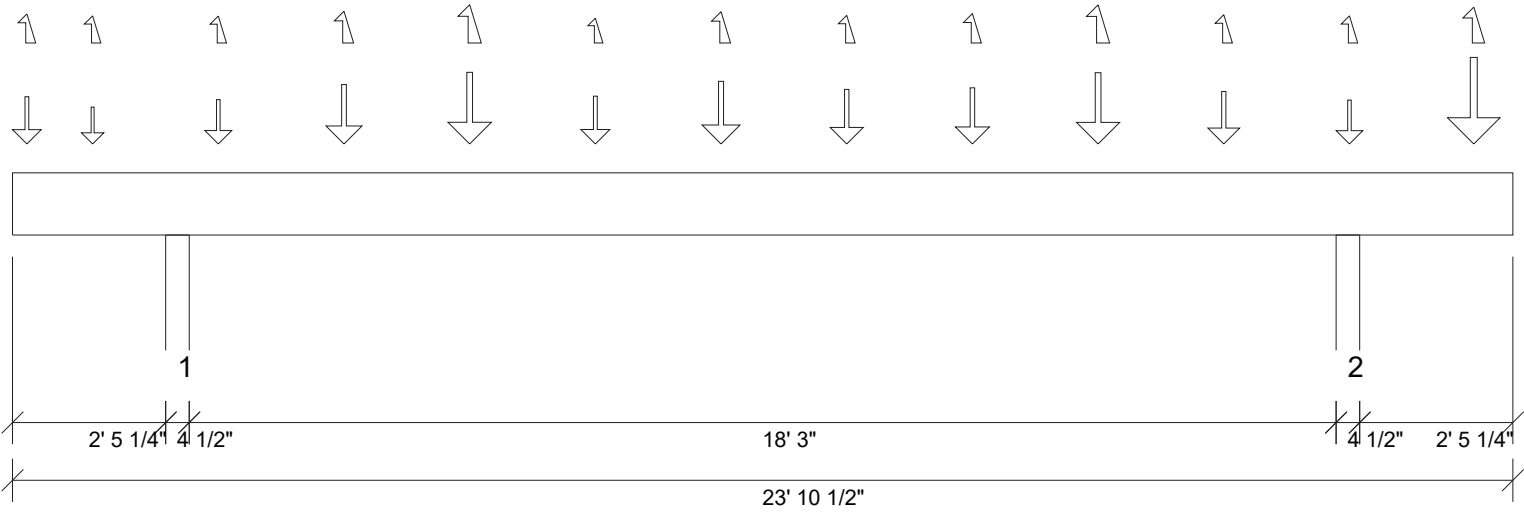
Roof Live Load - 30  
Roof Dead Load - 10  
Floor Live Load - 40  
Floor Dead Load - 20

**Quick Design Summary:**

Building Code - IRC2015  
Design Methodology - ASD  
Critical Moment (Neg)  
Critical Shear Passed - 11%  
Unbraced Length (Top/Bottom) - 0-00/0-00

**Quick Deflection Summary:**

Live Load Deflection 0-00 @ 2-02-05 L/480  
Total Load Deflection 0-00 @ 2-02-06 L/360



Graphical Illustration - Not To Scale

**Design Results:**

	<u>Design</u>	<u>Control</u>	<u>Result</u>	<u>LDF</u>	<u>Load Combination</u>
Max. Reaction	1917.19 lb @ 2-07-08	12796.88 lb	Passed - 15%	1.15	D + Lr
Max. Reaction	2346.08 lb @ 21-03-00	12796.99 lb	Passed - 18%	1.15	D + Lr
Critical Moment (Pos)	7143.20 lb ft @ 11-03-05	14958.91 lb ft	Passed - 48%	1.15	D + 0.75(L + Lr)
Critical Moment (Neg)	0.00 lb ft	0.00 lb ft			
Critical Moment (Neg)	0.00 lb ft	0.00 lb ft			
Critical Shear	1501.21 lb @ 20-00-14	9081.41 lb	Passed - 17%	1.15	D + 0.75(L + Lr)
Live Load Deflection	0-04 @ 11-11-07	L/480	Passed - L/823	-	0.75(L + Lr + 0.6W)
Total Load Deflection	0-08 @ 11-10-15	L/360	Passed - L/454	-	D + 0.75(L + Lr + 0.6W)

**Design Notes:**

- \* Beam Stability Factor used in the calculation for Allowable Max Pos Moment (CL) = 0.56
- \* The deflection at the cantilever for either live and/or total loads is less than 3/8" and therefore has been excluded from the deflection ratio considerations.
- \* Member design assumed proper ply to ply connection. Verify connection between plies with manufacturer.

**Loading:**

Type	Start	End	Maximum Load Magnitudes			
			Dead	Floor Live	Roof Live	Snow
Self Weight	0-00	23-10-08	12.00 lb/ft	-	-	-
Point	23-03-01	23-03-01	272.00 lb	8.00 lb	372.00/-21.00 lb	-
Point	2-12	2-12	78.00 lb	12.00 lb	168.00/-6.00 lb	-
Point	1-03-05	1-03-05	51.00 lb	-10.00 lb	86.00/-32.00 lb	-
Point	3-03-05	3-03-05	106.00 lb	11.00/-3.00 lb	115.00 lb	-
Point	5-03-05	5-03-05	148.00 lb	69.00 lb	169.00/-44.00 lb	-
Point	7-03-05	7-03-05	176.00 lb	85.00 lb	243.00/-86.00 lb	-
Point	9-03-05	9-03-05	137.00 lb	83.00 lb	52.00/-9.00 lb	-
Point	11-03-05	11-03-05	174.00 lb	82.00 lb	166.00/-13.00 lb	-
Point	13-03-05	13-03-05	155.00 lb	82.00 lb	105.00/-7.00 lb	-
Point	15-03-05	15-03-05	152.00 lb	84.00 lb	115.00/-32.00 lb	-
Point	17-03-05	17-03-05	172.00 lb	84.00 lb	247.00/-91.00 lb	-
Point	19-03-05	19-03-05	130.00 lb	52.00 lb	134.00/-15.00 lb	-
Point	21-03-05	21-03-05	104.00 lb	-8.00 lb	119.00 lb	-

**Support Information:**

**Loading (psf):**

Roof Live Load - 30  
Roof Dead Load - 10  
Floor Live Load - 40  
Floor Dead Load - 20

**Quick Design Summary:**

Building Code - IRC2015  
Design Methodology - ASD  
Critical Moment (Neg)  
Critical Shear Passed - 17%  
Unbraced Length (Top/Bottom) - 23-00-08/23-00-08

**Quick Deflection Summary:**

Live Load Deflection 0-04 @ 11-11-07 L/480  
Total Load Deflection 0-08 @ 11-10-15 L/360



UFP Mid-Atlantic, LLC  
5631 S. NC 62,  
Burlington, NC

**Job: 24061831F2**

**Label: GDH2**

Member Type: Beam | Level: 2nd Floor

**Member: 2 - 1 3/4" x 11 7/8" 2.0E Microllam® LVL**

**Status: Design Passed**

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Support	Start	End	Maximum Analysis Reactions			
			Dead	Floor Live	Roof Live	Snow
1	2-05-04	2-09-12	967.00 lb	330.00/-14.00 lb	993.00/-190.00 lb	-
2	21-00-12	21-05-04	1177.00 lb	325.00/-8.00 lb	1168.00/-171.00 lb	-

**Errors, Warnings & Notes:**

- \* The dead loads used in the design of this member were applied to the structure as projected dead loads.
- \* The member graphic, dimensions, and locations shown on this report are based on the centerline of the member.
- \* Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.

**Loading (psf):**

Roof Live Load - 30  
Roof Dead Load - 10  
Floor Live Load - 40  
Floor Dead Load - 20

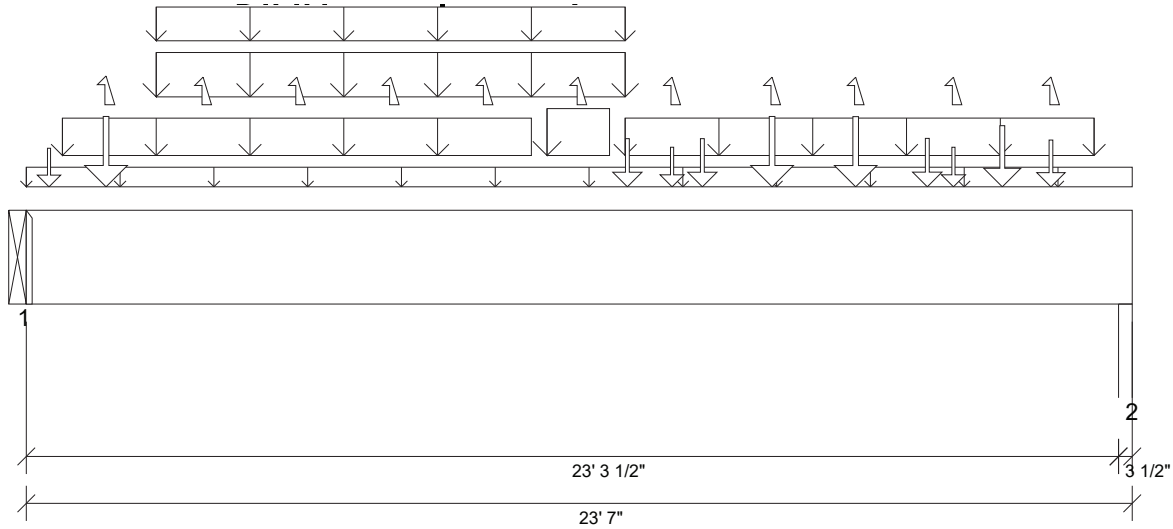
**Quick Design Summary:**

Building Code - IRC2015  
Design Methodology - ASD  
Critical Moment (Neg)  
Critical Shear Passed - 17%  
Unbraced Length (Top/Bottom) - 0-00/0-00

**Quick Deflection Summary:**

Live Load Deflection 0-04 @ 11-11-07 L/480  
Total Load Deflection 0-08 @ 11-10-15 L/360

- I ransfer reactions may differ from design results as allowed per building codes and standard load distribution practices.



Graphical Illustration - Not To Scale

**Design Results:**

	<u>Design</u>	<u>Control</u>	<u>Result</u>	<u>LDF</u>	<u>Load Combination</u>
	<u>Design</u>	<u>Control</u>	<u>Result</u>	<u>LDF</u>	<u>Load Combination</u>
	<u>Design</u>	<u>Control</u>	<u>Result</u>	<u>LDF</u>	<u>Load Combination</u>
Max. Reaction	12896.39 lb @ 0-00	12896.39 lb	Passed - 100%	1.15	D + 0.75(L + Lr)
Max. Reaction	12533.30 lb @ 23-04-08	18375.20 lb	Passed - 68%	1.15	D + 0.75(L + Lr)
Critical Moment (Pos)	76913.08 lb ft @ 11-09-04	152371.29 lb ft	Passed - 50%	1.15	D + 0.75(L + Lr)
Critical Moment (Neg)	0.00 lb ft	0.00 lb ft			
Critical Shear	12199.43 lb @ 2-00-00	36708.00 lb	Passed - 33%	1.15	D + 0.75(L + Lr)
Live Load Deflection	0-05 @ 11-08-04	L/480	Passed - L/914	-	0.75(L + Lr + 0.6W)
Total Load Deflection	0-09 @ 11-08-05	L/360	Passed - L/513	-	D + 0.75(L + Lr + 0.6W)

**Design Notes:**

- \* Beam Stability Factor used in the calculation for Allowable Max Pos Moment (CL) = 0.86
- \* Member design assumed proper ply to ply connection. Verify connection between plies with manufacturer.

**Loading:**

Type	Start	End	Maximum Load Magnitudes			
			Dead	Floor Live	Roof Live	Snow
Self Weight	0-00	23-07-00	49.00 lb/ft	-	-	-
Uniform	0-00	23-07-00	41.20 lb/ft	-	-	-
Uniform	9-04	10-09-04	129.00 lb/ft	-	229.00 lb/ft	-
Uniform	2-09-04	12-09-04	207.00 lb/ft	331.80 lb/ft	-	-
Uniform	2-09-04	12-09-04	134.00 lb/ft	-	162.50 lb/ft	-
Uniform	11-01-04	12-05-04	192.00 lb/ft	-	338.20 lb/ft	-
Uniform	12-09-04	22-09-04	130.00 lb/ft	-	229.00 lb/ft	-
Point	5-13	5-13	251.00 lb	365.00 lb	-	-
Point	12-09-13	12-09-13	345.00 lb	553.00 lb	-	-
Point	14-05-00	14-05-00	345.00 lb	553.00 lb	-	-
Point	19-02-09	19-02-09	347.00 lb	559.00 lb	-	-
Point	20-09-12	20-09-12	549.00 lb	627.00 lb	103.00 lb	-
Point	3-09-04	3-09-04	-	-	-2.00 lb	-
Point	5-09-04	5-09-04	-	-	-2.00 lb	-
Point	7-09-04	7-09-04	-	-	-2.00 lb	-
Point	9-09-04	9-09-04	-	-	-2.00 lb	-
Point	11-09-04	11-09-04	-	-	-2.00 lb	-
Point	13-09-04	13-09-04	267.00 lb	-	321.00/-2.00 lb	-

**Loading (psf):**

Roof Live Load - 30  
Roof Dead Load - 10  
Floor Live Load - 40  
Floor Dead Load - 20

**Quick Design Summary:**

Building Code - IRC2015  
Design Methodology - ASD  
Critical Moment (Neg)  
Critical Shear Passed - 33%  
Unbraced Length (Top/Bottom) - 0-00/0-00

**Quick Deflection Summary:**

Live Load Deflection 0-05 @ 11-08-04 L/480  
Total Load Deflection 0-09 @ 11-08-05 L/360



UFP Mid-Atlantic, LLC  
5631 S. NC 62,  
Burlington, NC

**Job: 24061831F2**

**Label: BM10**

Member Type: Beam | Level: 2nd Floor

**Member: 4 - 1 3/4" x 24" 2.0E Microllam® LVL**

**Status: Design Passed**

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Point	19-09-04	19-09-04	267.00 lb	-	321.00/-2.00 lb	-
Point	1-08-07	1-08-07	599.00 lb	474.00 lb	403.00/-2.00 lb	-
Point	15-10-13	15-10-13	613.00 lb	553.00 lb	325.00/-2.00 lb	-
Point	17-08-04	17-08-04	612.00 lb	553.00 lb	321.00/-2.00 lb	-
Point	21-10-03	21-10-03	276.00 lb	162.00 lb	356.00/-2.00 lb	-

**Support Information:**

Support	Start	End	Maximum Analysis Reactions			
			Dead	Floor Live	Roof Live	Snow
1	0-00	0-00	6533.00 lb	4029.00 lb	4422.00/-11.00 lb	-
2	23-03-08	23-07-00	6446.00 lb	3688.00 lb	4461.00/-11.00 lb	-

**Errors, Warnings & Notes:**

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**Loading (psf):**

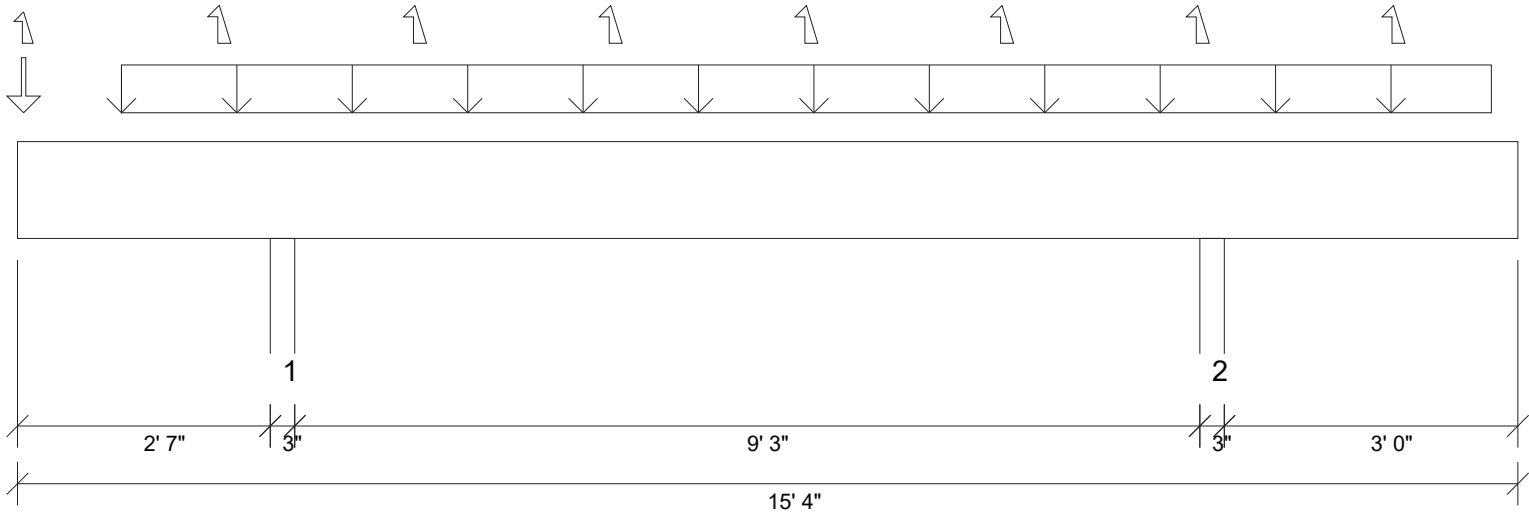
Roof Live Load - 30  
Roof Dead Load - 10  
Floor Live Load - 40  
Floor Dead Load - 20

**Quick Design Summary:**

Building Code - IRC2015  
Design Methodology - ASD  
Critical Moment (Neg)  
Critical Shear Passed - 33%  
Unbraced Length (Top/Bottom) - 0-00/0-00

**Quick Deflection Summary:**

Live Load Deflection 0-05 @ 11-08-04 L/480  
Total Load Deflection 0-09 @ 11-08-05 L/360



Graphical Illustration - Not To Scale

**Design Results:**

	<u>Design</u>	<u>Control</u>	<u>Result</u>	<u>LDF</u>	<u>Load Combination</u>
Max. Reaction	2414.75 lb @ 2-08-08	8859.36 lb	Passed - 27%	1.15	D + Lr
Max. Reaction	2705.69 lb @ 12-02-08	8859.31 lb	Passed - 31%	1.15	D + Lr
Critical Moment (Pos)	3357.86 lb ft @ 8-00-12	20391.53 lb ft	Passed - 16%	1.15	D + Lr
Critical Moment (Neg)	0.00 lb ft	0.00 lb ft			
Critical Shear	1539.79 lb @ 3-09-14	9081.41 lb	Passed - 17%	1.15	D + Lr
Live Load Deflection	0-01 @ 7-05-07	L/480	Passed - L/999	-	Lr
Total Load Deflection	0-01 @ 7-05-04	L/360	Passed - L/999	-	D + Lr

**Design Notes:**

- \* Beam Stability Factor used in the calculation for Allowable Max Pos Moment (CL) = 0.99
- \* The deflection at the cantilever for either live and/or total loads is less than 3/8" and therefore has been excluded from the deflection ratio considerations.
- \* Member design assumed proper ply to ply connection. Verify connection between plies with manufacturer.

**Loading:**

Type	Start	End	Maximum Load Magnitudes			
			Dead	Floor Live	Roof Live	Snow
Self Weight	0-00	15-04-00	12.00 lb/ft	-	-	-
Uniform	1-00-12	15-00-12	143.00 lb/ft	-	188.00 lb/ft	-
Point	0-12	0-12	88.00 lb	-	146.00 lb	-
Point	2-00-12	2-00-12	-	-	-	-
Point	4-00-12	4-00-12	-	-	-	-
Point	6-00-12	6-00-12	-	-	-	-
Point	8-00-12	8-00-12	-	-	-	-
Point	10-00-12	10-00-12	-	-	-	-
Point	12-00-12	12-00-12	-	-	-	-
Point	14-00-12	14-00-12	-	-	-	-

**Support Information:**

Support	Start	End	Maximum Analysis Reactions			
			Dead	Floor Live	Roof Live	Snow
1	2-07-00	2-10-00	1070.00 lb	-	1409.00 lb	-
2	12-01-00	12-04-00	1201.00 lb	-	1515.00 lb	-

**Loading (psf):**

Roof Live Load - 30  
Roof Dead Load - 10  
Floor Live Load - 40  
Floor Dead Load - 20

**Quick Design Summary:**

Building Code - IRC2015  
Design Methodology - ASD  
Critical Moment (Neg)  
Critical Shear Passed - 17%  
Unbraced Length (Top/Bottom) - 0-00/0-00

**Quick Deflection Summary:**

Live Load Deflection 0-01 @ 7-05-07 L/480  
Total Load Deflection 0-01 @ 7-05-04 L/360



UFP Mid-Atlantic, LLC  
5631 S. NC 62,  
Burlington, NC

**Job: 24061831F2**

**Label: GDH3**

Member Type: Beam | Level: 2nd Floor

**Member: 2 - 1 3/4" x 11 7/8" 2.0E Microllam® LVL**

**Status: Design Passed**

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**Errors, Warnings & Notes:**

- \* The dead loads used in the design of this member were applied to the structure as projected dead loads.
- \* The member graphic, dimensions, and locations shown on this report are based on the centerline of the member.
- \* Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.

**Loading (psf):**

Roof Live Load - 30  
Roof Dead Load - 10  
Floor Live Load - 40  
Floor Dead Load - 20

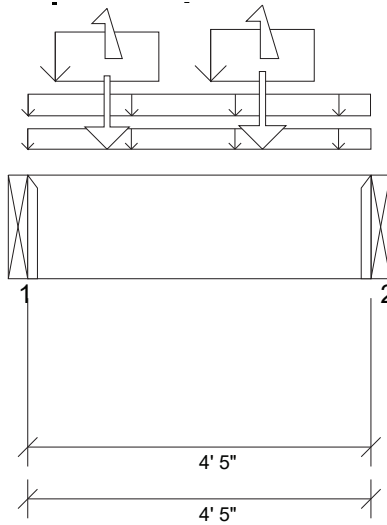
**Quick Design Summary:**

Building Code - IRC2015  
Design Methodology - ASD  
Critical Moment (Neg)  
Critical Shear Passed - 17%  
Unbraced Length (Top/Bottom) - 0-00/0-00

**Quick Deflection Summary:**

Live Load Deflection 0-01 @ 7-05-07 L/480  
Total Load Deflection 0-01 @ 7-05-04 L/360

- I ransfer reactions may differ from design results as allowed per building codes and standard load distribution practices.



Graphical Illustration - Not To Scale

**Design Results:**

	<u>Design</u>	<u>Control</u>	<u>Result</u>	<u>LDF</u>	<u>Load Combination</u>
Max. Reaction	2319.61 lb @ 0-00	3937.50 lb	Passed - 59%	1.15	D + Lr
Max. Reaction	2059.57 lb @ 4-05-00	3937.50 lb	Passed - 52%	1.15	D + Lr
Critical Moment (Pos)	2680.39 lb ft @ 2-06-02	35795.16 lb ft	Passed - 7%	1.15	D + Lr
Critical Moment (Neg)	0.00 lb ft	0.00 lb ft			
Critical Shear	1244.24 lb @ 3-01-00	12236.00 lb	Passed - 10%	1.15	D + Lr
Live Load Deflection	0-00 @ 2-02-11	L/480	Passed - L/999	-	Lr
Total Load Deflection	0-00 @ 2-02-10	L/360	Passed - L/999	-	D + Lr

**Design Notes:**

- \* Beam Stability Factor used in the calculation for Allowable Max Pos Moment (CL) = 1.00
- \* Member design assumed proper ply to ply connection. Verify connection between plies with manufacturer.

**Loading:**

Type	Start	End	Maximum Load Magnitudes			
			Dead	Floor Live	Roof Live	Snow
Self Weight	0-00	4-05-00	16.00 lb/ft	-	-	-
Uniform	0-00	4-05-00	12.70 lb/ft	25.30 lb/ft	-	-
Uniform	0-01	4-04-15	80.10 lb/ft	-	-	-
Uniform	4-04	1-08-04	488.20 lb/ft	-	534.00 lb/ft	-
Uniform	2-04-04	3-08-04	510.00 lb/ft	-	600.00 lb/ft	-
Point	1-00-04	1-00-04	250.00 lb	-	258.00/-1.00 lb	-
Point	3-00-04	3-00-04	260.00 lb	-	288.00/-1.00 lb	-

**Support Information:**

Support	Start	End	Maximum Analysis Reactions			
			Dead	Floor Live	Roof Live	Snow
1	0-00	0-00	1230.00 lb	56.00 lb	1090.00/-1.00 lb	-
2	4-05-00	4-05-00	1091.00 lb	56.00 lb	968.00/-1.00 lb	-

**Errors, Warnings & Notes:**

- \* The dead loads used in the design of this member were applied to the structure as projected dead loads.
- \* The member graphic, dimensions, and locations shown on this report are based on the centerline of the member.

**Loading (psf):**

Roof Live Load - 30  
Roof Dead Load - 10  
Floor Live Load - 40  
Floor Dead Load - 20

**Quick Design Summary:**

Building Code - IRC2015  
Design Methodology - ASD  
Critical Moment (Neg)  
Critical Shear Passed - 10%  
Unbraced Length (Top/Bottom) - 0-00/0-00

**Quick Deflection Summary:**

Live Load Deflection 0-00 @ 2-02-11 L/480  
Total Load Deflection 0-00 @ 2-02-10 L/360





UFP Mid-Atlantic, LLC  
5631 S. NC 62,  
Burlington, NC

**Job: 24061831F2**

**Label: BM12**

Member Type: Beam | Level: 2nd Floor

**Member: 2 - 1 3/4" x 16" 2.0E Microllam® LVL**

**Status: Design Passed**

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\* Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.

**Loading (psf):**

Roof Live Load - 30  
Roof Dead Load - 10  
Floor Live Load - 40  
Floor Dead Load - 20

**Quick Design Summary:**

Building Code - IRC2015  
Design Methodology - ASD  
Critical Moment (Neg)  
Critical Shear Passed - 10%  
Unbraced Length (Top/Bottom) - 0-00/0-00

**Quick Deflection Summary:**

Live Load Deflection 0-00 @ 2-02-11 L/480  
Total Load Deflection 0-00 @ 2-02-10 L/360

- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.



UFP Mid-Atlantic, LLC  
5631 S. NC 62,  
Burlington, NC

Job: 24061831F2

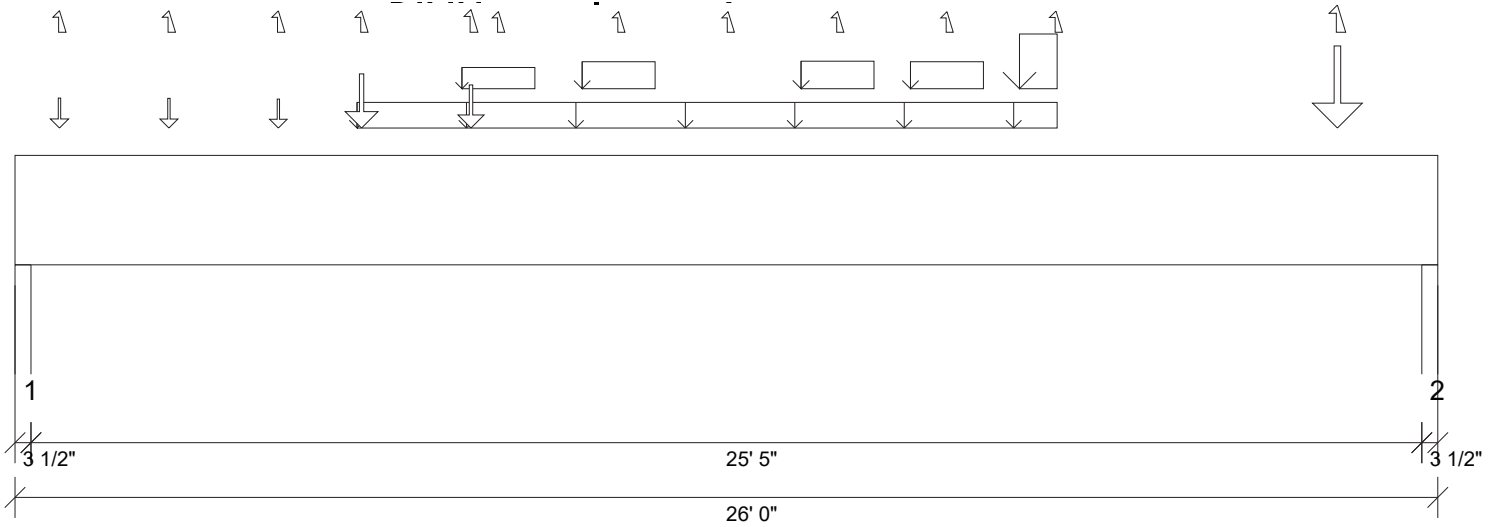
Label: BM9

Member Type: Beam | Level: 2nd Floor

Member: 4 - 1 3/4" x 24" 2.0E Microllam® LVL

Status: Design Passed

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Graphical Illustration - Not To Scale

**Design Results:**

	<u>Design</u>	<u>Control</u>	<u>Result</u>	<u>LDF</u>	<u>Load Combination</u>
Max. Reaction	16491.77 lb @ 2-08	18374.96 lb	Passed - 90%	1.15	D + 0.75(L + Lr)
Max. Reaction	17781.22 lb @ 25-09-08	18374.96 lb	Passed - 97%	1.15	D + 0.75(L + Lr)
Critical Moment (Neg)	0.00 lb ft	0.00 lb ft			
Critical Moment (Pos)	0.00 lb ft	0.00 lb ft			
Critical Moment (Pos)	85338.33 lb ft @ 8-04-00	152371.29 lb ft	Passed - 56%	1.15	D + 0.75(L + Lr)
Critical Shear	14415.29 lb @ 23-08-08	31920.00 lb	Passed - 45%	1.00	D + L
Live Load Deflection	0-05 @ 12-03-05	L/480	Passed - L/936	-	0.75(L + Lr + 0.6W)
Total Load Deflection	0-10 @ 12-04-00	L/360	Passed - L/467	-	D + 0.75(L + Lr + 0.6W)

**Design Notes:**

- \* Beam Stability Factor used in the calculation for Allowable Max Pos Moment (CL) = 0.86
- \* Member design assumed proper ply to ply connection. Verify connection between plies with manufacturer.

**Loading:**

Type	Start	End	Maximum Load Magnitudes			
			Dead	Floor Live	Roof Live	Snow
Self Weight	0-00	26-00-00	49.00 lb/ft	-	-	-
Uniform	6-03-00	19-00-08	81.50 lb/ft	-	-	-
Uniform	8-02-00	9-06-00	-	-	-	-
Uniform	10-04-06	11-08-06	-	-	86.20 lb/ft	-
Uniform	14-04-06	15-08-06	-	-	93.80 lb/ft	-
Uniform	16-04-06	17-08-06	-	-	89.20 lb/ft	-
Uniform	18-04-04	19-00-08	-	-	456.70 lb/ft	-
Point	9-12	9-12	951.00 lb	623.00 lb	779.00/-136.00 lb	-
Point	2-09-12	2-09-12	934.00 lb	623.00 lb	727.00/-136.00 lb	-
Point	4-09-12	4-09-12	878.00 lb	587.00 lb	637.00/-127.00 lb	-
Point	6-04-00	6-04-00	3614.00 lb	4346.00 lb	600.00/-116.00 lb	-
Point	24-02-00	24-02-00	6533.00 lb	4029.00 lb	4422.00/-11.00 lb	-
Point	8-04-00	8-04-00	2481.00 lb	-	2994.00 lb	-
Point	8-10-00	8-10-00	-	-	-	-
Point	11-00-06	11-00-06	-	-	-	-
Point	13-00-06	13-00-06	-	-	-	-
Point	15-00-06	15-00-06	-	-	-	-
Point	17-00-06	17-00-06	-	-	-20.00 lb	-

**Loading (psf):**

Roof Live Load - 30  
Roof Dead Load - 10  
Floor Live Load - 40  
Floor Dead Load - 20

**Quick Design Summary:**

Building Code - IRC2015  
Design Methodology - ASD  
Critical Moment (Pos) Passed - 56%  
Critical Shear Passed - 45%  
Unbraced Length (Top/Bottom) - 0-00/0-00

**Quick Deflection Summary:**

Live Load Deflection 0-05 @ 12-03-05 L/480  
Total Load Deflection 0-10 @ 12-04-00 L/360

- I transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.



UFP Mid-Atlantic, LLC  
5631 S. NC 62,  
Burlington, NC

**Job: 24061831F2**

**Label: BM9**

Member Type: Beam | Level: 2nd Floor

**Member: 4 - 1 3/4" x 24" 2.0E Microllam® LVL**

**Status: Design Passed**

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Point 19-00-04 19-00-04 - - - -

**Support Information:**

Support	Start	End	Dead	Maximum Analysis Reactions		
				Floor Live	Roof Live	Snow
1	0-00	3-08	8801.00 lb	5225.00 lb	5102.00/-455.00 lb	-
2	25-08-08	26-00-00	9507.00 lb	4983.00 lb	5977.00/-93.00 lb	-

**Errors, Warnings & Notes:**

- \* The dead loads used in the design of this member were applied to the structure as projected dead loads.
- \* The member graphic, dimensions, and locations shown on this report are based on the centerline of the member.
- \* Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.

**Loading (psf):**

Roof Live Load - 30  
Roof Dead Load - 10  
Floor Live Load - 40  
Floor Dead Load - 20

**Quick Design Summary:**

Building Code - IRC2015  
Design Methodology - ASD  
Critical Moment (Pos) Passed - 56%  
Critical Shear Passed - 45%  
Unbraced Length (Top/Bottom) - 0-00/0-00

**Quick Deflection Summary:**

Live Load Deflection 0-05 @ 12-03-05 L/480  
Total Load Deflection 0-10 @ 12-04-00 L/360

- I ransfer reactions may differ from design results as allowed per building codes and standard load distribution practices.



UFP Mid-Atlantic, LLC  
5631 S. NC 62,  
Burlington, NC

Job: 24061831F2

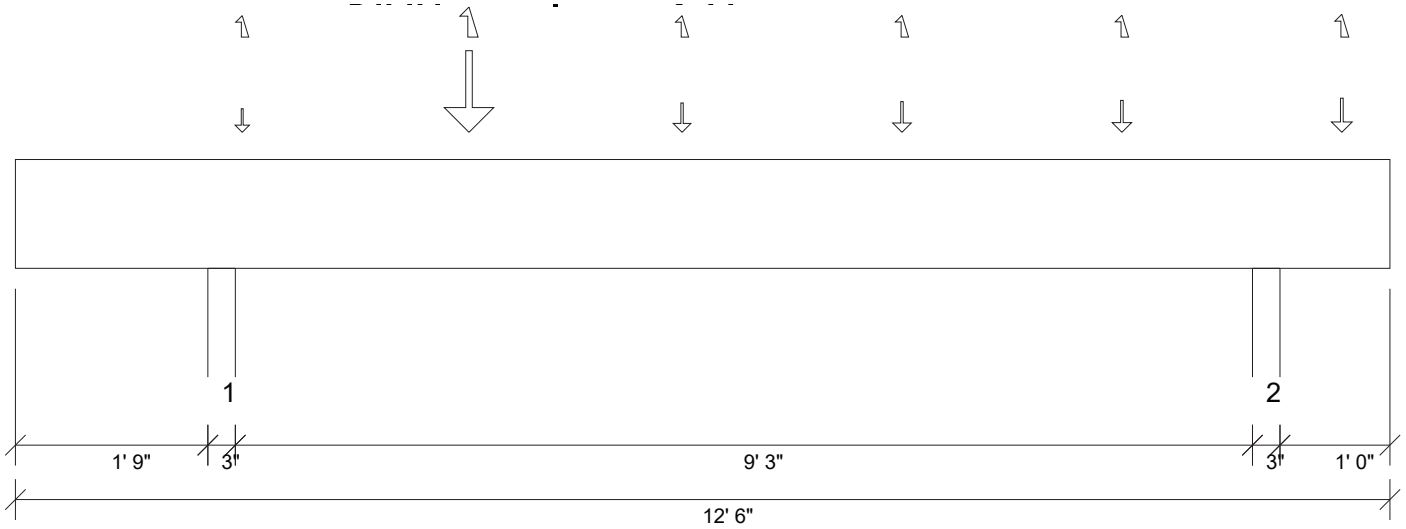
Label: GDH1

Member Type: Beam | Level: 2nd Floor

Member: 2 - 1 3/4" x 11 7/8" 2.0E Microllam® LVL

Status: Design Passed

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Graphical Illustration - Not To Scale

### Design Results:

	<u>Design</u>	<u>Control</u>	<u>Result</u>	<u>LDF</u>	<u>Load Combination</u>
Max. Reaction	4817.27 lb @ 1-10-08	8859.37 lb	Passed - 54%	1.15	D + Lr
Max. Reaction	4029.18 lb @ 11-04-08	8859.38 lb	Passed - 45%	1.15	D + Lr
Critical Moment (Pos)	10232.54 lb ft @ 4-01-08	20382.20 lb ft	Passed - 50%	1.15	D + Lr
Critical Moment (Neg)	0.00 lb ft	0.00 lb ft			
Critical Shear	4552.44 lb @ 2-11-14	9081.41 lb	Passed - 50%	1.15	D + Lr
Live Load Deflection	0-02 @ 6-03-00	L/480	Passed - L/979	-	Lr
Total Load Deflection	0-03 @ 6-03-12	L/360	Passed - L/607	-	D + Lr

### Design Notes:

- \* Beam Stability Factor used in the calculation for Allowable Max Pos Moment (CL) = 0.99
- \* The deflection at the cantilever for either live and/or total loads is less than 3/8" and therefore has been excluded from the deflection ratio considerations.
- \* Member design assumed proper ply to ply connection. Verify connection between plies with manufacturer.

### Loading:

Type	Start	End	Maximum Load Magnitudes			
			Dead	Floor Live	Roof Live	Snow
Self Weight	0-00	12-06-00	12.00 lb/ft	-	-	-
Point	2-00-12	2-00-12	80.00 lb	-	164.00 lb	-
Point	4-01-08	4-01-08	1758.00 lb	-	3123.00/-62.00 lb	-
Point	6-00-12	6-00-12	468.00 lb	-	248.00 lb	-
Point	8-00-12	8-00-12	494.00 lb	-	324.00 lb	-
Point	10-00-12	10-00-12	518.00 lb	-	396.00 lb	-
Point	12-00-12	12-00-12	560.00 lb	-	524.00 lb	-

### Support Information:

Support	Start	End	Maximum Analysis Reactions			
			Dead	Floor Live	Roof Live	Snow
1	1-09-00	2-00-00	1968.00 lb	-	2854.00/-47.00 lb	-
2	11-03-00	11-06-00	2061.00 lb	-	1963.00/-15.00 lb	-

### Errors, Warnings & Notes:

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

### Loading (psf):

Roof Live Load - 30  
Roof Dead Load - 10  
Floor Live Load - 40  
Floor Dead Load - 20

### Quick Design Summary:

Building Code - IRC2015  
Design Methodology - ASD  
Critical Moment (Neg)  
Critical Shear Passed - 50%  
Unbraced Length (Top/Bottom) - 0-00/0-00

### Quick Deflection Summary:

Live Load Deflection 0-02 @ 6-03-00 L/480  
Total Load Deflection 0-03 @ 6-03-12 L/360

- I transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.



UFP Mid-Atlantic, LLC  
5631 S. NC 62,  
Burlington, NC

**Job: 24061831F2**

**Label: GDH1**

Member Type: Beam | Level: 2nd Floor

**Member: 2 - 1 3/4" x 11 7/8" 2.0E Microllam® LVL**

**Status: Design Passed**

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- \* The member graphic, dimensions, and locations shown on this report are based on the centerline of the member.
- \* Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.

**Loading (psf):**

Roof Live Load - 30  
Roof Dead Load - 10  
Floor Live Load - 40  
Floor Dead Load - 20

**Quick Design Summary:**

Building Code - IRC2015  
Design Methodology - ASD  
Critical Moment (Neg)  
Critical Shear                      Passed - 50%  
Unbraced Length (Top/Bottom) - 0-00/0-00

**Quick Deflection Summary:**

Live Load Deflection      0-02 @ 6-03-00    L/480  
Total Load Deflection      0-03 @ 6-03-12    L/360

- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.