

Client: Project: Address: Weaver Homes

Date: 6/11/2025

Input by: Curtis Quick Job Name: The Lauren H Beams Page 1 of 14

Wind

Total Ld. Case

8382 L

7538 L

4290 / 4092

3868 / 3670

0

0

Const

Ld. Comb.

D+S

D+S

0

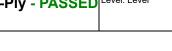
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Project #:

Kerto-S LVL GDH (Side Load)

1.750" X 18.000"

3-Ply - PASSED Level: Level



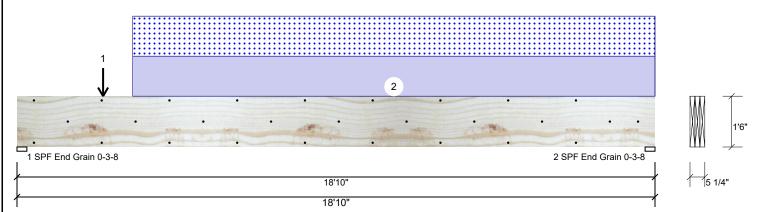
1 - SPF 3.500"

End Grain 2 - SPF 3.500"

End Grain Vert

Vert

54%



Member Information Reactions UNPATTERNED Ib (Uplift) Application: Direction Live Type: Brg Dead Snow Plies: 3 Design Method: ASD 0 4290 4092 Vertical 1 Moisture Condition: Dry **Building Code:** IBC 2012 2 Vertical 0 3868 3670 Deflection LL: 360 Load Sharing: Yes Deflection TL: 240 Deck: Not Checked Importance: Normal - II Temperature: Temp <= 100°F **Bearings** Bearing Length Dir. Cap. React D/L lb

| | _ | | | _ |
|----|-----|------|------|------|
| Δı | nal | vcic | Resu | ıltc |

| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|--------------|---------------|----------|---------------|-----------------|-------|------|
| Moment | 35311 ft-lb | 9' 3/8" | 77108 ft-lb | 0.458 (46%) | D+S | L |
| Unbraced | 35311 ft-lb | 9' 3/8" | 35414 ft-lb | 0.997 (100%) | D+S | L |
| Shear | 8375 lb | 1'9 1/2" | 23184 lb | 0.361 (36%) | D+S | L |
| LL Defl inch | 0.229 (L/964) | 9'3 3/8" | 0.613 (L/360) | 0.373 (37%) | S | L |
| TL Defl inch | 0.470 (L/470) | 9'3 3/8" | 0.920 (L/240) | 0.510 (51%) | D+S | L |

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Fasten all plies using 3 rows of SDW22500 at 24" o.c. Maximum end distance not to exceed
- 3 Refer to last page of calculations for fasteners required for specified loads.
- 4 Simpson fasteners applied from a single side of the member use tip values where published.
- 5 Girders are designed to be supported on the bottom edge only.
- 6 Top loads must be supported equally by all plies.
- 7 Top must be laterally braced at a maximum of 5'7 1/4" o.c.
- 8 Bottom must be laterally braced at end bearings.
- 9 Lateral slenderness ratio based on single ply width.

| ID | Load Type | Location | Trib Width | Side | Dead 0.9 | Live 1 | Snow 1.15 | Wind 1.6 | Const. 1.25 | Comments |
|----|----------------|------------------|------------|------|----------|--------|-----------|----------|-------------|----------|
| 1 | Point | 2-6-8 | | Тор | 1996 lb | 0 lb | 1996 lb | 0 lb | 0 lb | B4 |
| | Bearing Length | 0-3-8 | | | | | | | | |
| 2 | Part. Uniform | 3-5-0 to 18-10-0 | | Тор | 374 PLF | 0 PLF | 374 PLF | 0 PLF | 0 PLF | В3 |
| | Self Weight | | | | 21 PLF | | | | | |

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

- Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive
- Handling & Installation
- LVL beams must not be cut or drilled Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code
- Damaged Beams must not be used
- Design assumes top edge is laterally restrained
 Provide lateral support at bearing points to avoid
 lateral displacement and rotation
- 6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 6/28/2026

| Wandlacturer into |
|----------------------------------------------------------------------------------------------------------------|
| Metsä Wood 301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851 (800) 622-5850 www.metsawood.com/us |
| |

Client: Weaver Homes Date: 6/11/2025 Page 2 of 14 Project: Input by: Curtis Quick isDesign Address: Job Name: The Lauren H Beams Project #: 1.750" X 18.000" 3-Ply - PASSED Level: Level Kerto-S LVL **GDH (Side Load)** 1 SPF End Grain 0-3-8 2 SPF End Grain 0-3-8 18'10" 18'10" Multi-Ply Analysis Fasten all plies using 3 rows of SDW22500 at 24" o.c.. Maximum end distance not to exceed 12". Capacity 0.0 % 0.0 PLF Yield Limit per Foot 382.5 PLF Yield Limit per Fastener 255.0 lb. См Yield Mode Lookup Edge Distance 1 1/2" Min. End Distance 6" Load Combination **Duration Factor** 1.00

Notes

NOtes
Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

Handling & Installation

Handling & Installation

1. UVI beams must not be cut or drilled

2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals

3. Damaged Beams must not be used

4. Design assumes top edge is laterally restrained

5. Provide lateral support at bearing points to avoid lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

This design is valid until 6/28/2026



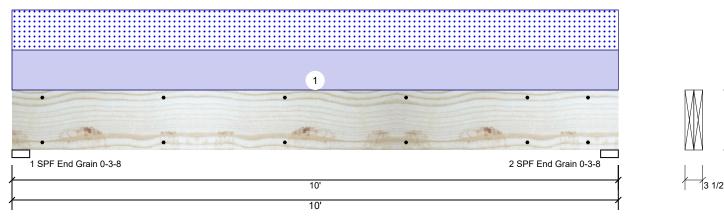
Project: Address: Date: 6/11/2025 Input by: Curtis Quick

Job Name: The Lauren H Beams

Project #:

1.750" X 11.875" 2-Ply - PASSED **Kerto-S LVL** GDH-1

Level: Level



11 7/8'

Ld. Comb.

Page 3 of 14

Member Information

Type: Plies: 2 Moisture Condition: Dry Deflection LL: 360 Deflection TL: 240 Importance: Normal - II

Application: Floor Design Method: ASD **Building Code:** IBC 2012 Load Sharing: No Deck: Not Checked

| Reactions UNPATTERNED Ib (Uplift) | | | | | | | | | | | | |
|-----------------------------------|-----------|------|------|------|------|-------|--|--|--|--|--|--|
| Brg | Direction | Live | Dead | Snow | Wind | Const | | | | | | |
| 1 | Vertical | 0 | 1196 | 1150 | 0 | 0 | | | | | | |
| 2 | Vertical | 0 | 1196 | 1150 | 0 | 0 | | | | | | |
| | | | | | | | | | | | | |

Analysis Results

Temperature:

| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|--------------|----------------|----------|---------------|-------------|-------|------|
| Moment | 5340 ft-lb | 5' | 22897 ft-lb | 0.233 (23%) | D+S | L |
| Unbraced | 5340 ft-lb | 5' | 9721 ft-lb | 0.549 (55%) | D+S | L |
| Shear | 1754 lb | 8'8 5/8" | 10197 lb | 0.172 (17%) | D+S | L |
| LL Defl inch | 0.051 (L/2238) | 5' | 0.318 (L/360) | 0.161 (16%) | S | L |
| TL Defl inch | 0.104 (L/1097) | 5' | 0.477 (L/240) | 0.219 (22%) | D+S | L |

Bearings

Bearing Length

Dir.

2346 L D+S 1 - SPF 3.500" Vert 1196 / 1150 End Grain 1196 / 1150 2346 L D+S 2 - SPF 3.500" Vert 23% End Grain

Cap. React D/L lb

Total Ld. Case

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Fasten all plies using 2 rows of SDW22338 at 24" o.c. Maximum end distance not to exceed 12".
- 3 Refer to last page of calculations for fasteners required for specified loads.
- 4 Simpson fasteners applied from a single side of the member use tip values where published.
- 5 Girders are designed to be supported on the bottom edge only.
- 6 Top loads must be supported equally by all plies.

Temp <= 100°F

- 7 Top must be laterally braced at end bearings.
- 8 Bottom must be laterally braced at end bearings.
- 9 Lateral slenderness ratio based on single ply width.

| ID | Load Type | Location | Trib Width | Side | Dead 0.9 | Live 1 | Snow 1.15 | Wind 1.6 | Const. 1.25 | Comments |
|----|-------------|----------|------------|------|----------|--------|-----------|----------|-------------|----------|
| 1 | Uniform | | | Тор | 230 PLF | 0 PLF | 230 PLF | 0 PLF | 0 PLF | G1 |
| | Self Weight | | | | 9 PLF | | | | | |

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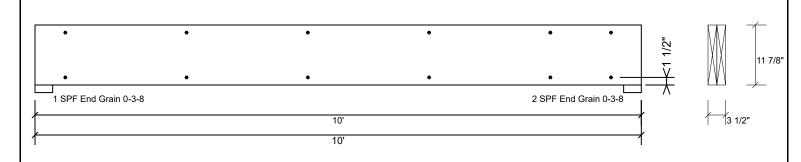
- Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive
- Handling & Installation
- LVL beams must not be cut or drilled Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code
- approvals

 Damaged Beams must not be used
- Design assumes top edge is laterally restrained
 Provide lateral support at bearing points to avoid
 lateral displacement and rotation
- 6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 6/28/2026

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|----|--------|-----|
| a | pplica | tio |

Client: Weaver Homes Date: 6/11/2025 Page 4 of 14 Project: Input by: Curtis Quick isDesign Address: Job Name: The Lauren H Beams Project #: 1.750" X 11.875" Level: Level **Kerto-S LVL** 2-Ply - PASSED GDH-1



Multi-Ply Analysis

Fasten all plies using 2 rows of SDW22338 at 24" o.c.. Maximum end distance not to exceed 12".

Capacity 0.0 % 0.0 PLF 255.0 PLF Yield Limit per Foot Yield Limit per Fastener 255.0 lb. См Yield Mode Lookup Edge Distance 1 1/2" Min. End Distance 6" Load Combination **Duration Factor** 1.00

Notes

NOtes
Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

Handling & Installation

- Handling & Installation

 1. UVI beams must not be cut or drilled

 2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals

 3. Damaged Beams must not be used

 4. Design assumes top edge is laterally restrained

 5. Provide lateral support at bearing points to avoid lateral displacement and rotation
- For flat roofs provide proper drainage to prevent ponding

This design is valid until 6/28/2026



Project: Address: Date: 6/11/2025 Input by:

Curtis Quick Job Name: The Lauren H Beams

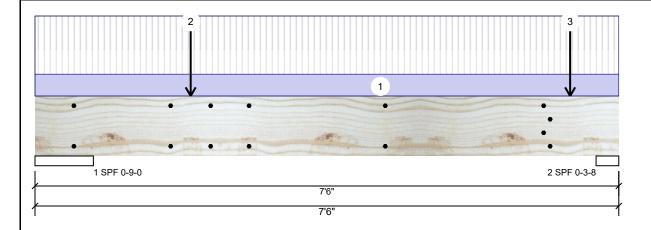
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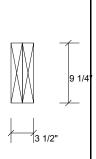
Kerto-S LVL BM1

1.750" X 9.250"

2-Ply - PASSED

Level: Level





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Member Information

Type: Plies: Moisture Condition: Dry Deflection LL: 360 Deflection TL: 240 Importance: Normal - II Temperature: Temp <= 100°F

Application: Floor Design Method: ASD **Building Code:** IBC 2012 Load Sharing: No

Deck: Not Checked

Reactions UNPATTERNED Ib (Uplift)

| Brg | Direction | Live | Dead | Snow | Wind | Const |
|-----|-----------|------|------|------|------|-------|
| 1 | Vertical | 159 | 868 | 780 | 0 | 0 |
| 2 | Vertical | 141 | 1110 | 1032 | 0 | 0 |

Bearings

| Bearing | Length | Dir. | Cap. F | React D/L lb | Total | Ld. Case | Ld. Comb. |
|---------|--------|------|--------|--------------|-------|----------|-----------|
| 1 - SPF | 9.000" | Vert | 12% | 868 / 780 | 1648 | L | D+S |
| 2 - SPF | 3.500" | Vert | 41% | 1110 / 1032 | 2142 | L | D+S |

Analysis Results

| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|--------------|----------------|----------|---------------|-------------|-------|------|
| Moment | 2124 ft-lb | 2' | 14423 ft-lb | 0.147 (15%) | D+S | L |
| Unbraced | 2124 ft-lb | 2' | 10012 ft-lb | 0.212 (21%) | D+S | L |
| Shear | 2124 lb | 6'5 1/4" | 7943 lb | 0.267 (27%) | D+S | L |
| LL Defl inch | 0.018 (L/4389) | 3'7 1/4" | 0.219 (L/360) | 0.082 (8%) | S | L |
| TL Defl inch | 0.038 (L/2056) | 3'7 5/8" | 0.329 (L/240) | 0.117 (12%) | D+S | L |

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Fasten all plies using 2 rows of SDW22338 at 24" o.c. Maximum end distance not to exceed
- 3 Refer to last page of calculations for fasteners required for specified loads.
- 4 Concentrated load fastener specification is in addition to hanger fasteners if a hanger is present.
- 5 Simpson fasteners applied from a single side of the member use tip values where published.
- 6 Girders are designed to be supported on the bottom edge only.
- 7 Top loads must be supported equally by all plies.
- 8 Top must be laterally braced at end bearings.
- 9 Bottom must be laterally braced at end bearings.
- 10 Lateral slenderness ratio based on single ply width.

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 LVL not to be treated with fire retardant or corrosive
- Handling & Installation
 - LVL beams must not be cut or drilled Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code
 - approvals

 Damaged Beams must not be used
 - Design assumes top edge is laterally restrained
 Provide lateral support at bearing points to avoid
 lateral displacement and rotation
- For flat roofs provide proper drainage to prevent ponding

This design is valid until 6/28/2026



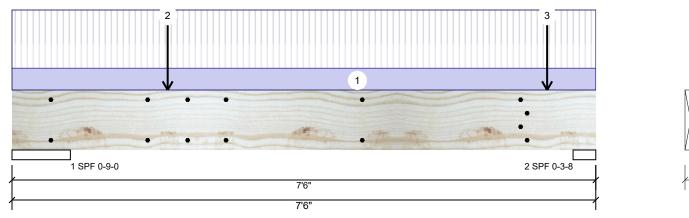
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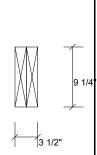
Job Name: The Lauren H Beams

Project #:

Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED BM₁

Level: Level





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| ID | Load Type | Location | Trib Width | Side | Dead 0.9 | Live 1 | Snow 1.15 | Wind 1.6 | Const. 1.25 | Comments |
|----|-------------|----------|------------|----------|----------|--------|-----------|----------|-------------|----------|
| 1 | Uniform | | | Тор | 15 PLF | 40 PLF | 0 PLF | 0 PLF | 0 PLF | Floor |
| 2 | Point | 2-0-0 | | Far Face | 906 lb | 0 lb | 906 lb | 0 lb | 0 lb | A6 |
| 3 | Point | 6-10-8 | | Far Face | 906 lb | 0 lb | 906 lb | 0 lb | 0 lb | A6 |
| | Self Weight | | | | 7 PLF | | | | | |

Notes

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Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

Handling & Installation

Handling & Installation

1. IVI. beams must not be cut or drilled

2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals

3. Damaged Beams must not be used

4. Design assumes top edge is laterally restrained

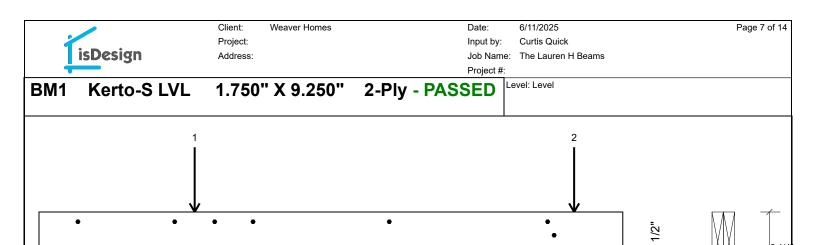
5. Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 6/28/2026

Metsä Wood 301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851 (800) 622-5850 www.metsawood.com/us

Manufacturer Info



Multi-Ply Analysis

. 1 SPF 0-9-0

Fasten all plies using 2 rows of SDW22338 at 24" o.c.. except for regions covered by concentrated load fastening. Maximum end distance not to exceed 12".

7'6" 7'6"

| on a distance not to exceed | ·- · |
|-----------------------------|-----------|
| Capacity | 0.0 % |
| Load | 0.0 PLF |
| Yield Limit per Foot | 255.0 PLF |
| Yield Limit per Fastener | 255.0 lb. |
| См | 1 |
| Yield Mode | Lookup |
| Edge Distance | 1 1/2" |
| Min. End Distance | 6" |
| Load Combination | |
| Duration Factor | 1.00 |

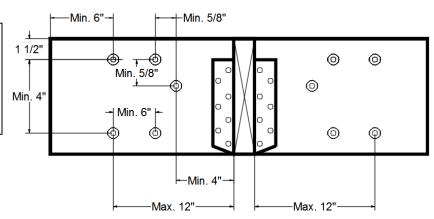
Concentrated Load

Fasten at concentrated side load at 2-0-0 with a minimum of (4) – SDW22338 in the pattern shown. All fasteners shall be installed with the head on the

side of the applied load.

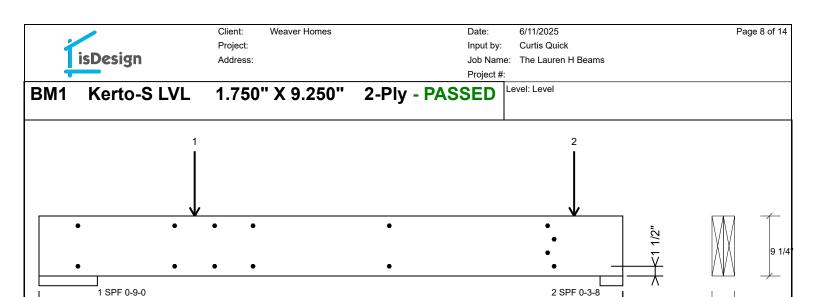
| side of the applied load. | |
|---------------------------|------------|
| Capacity | 77.2 % |
| Load | 906.0lb. |
| Total Yield Limit | 1173.0 lb. |
| Cg | 1.0000 |
| См | 1 |
| Yield Limit per Fastener | 293.3 lb. |
| Yield Mode | Lookup |
| Load Combination | D+S |
| Duration Factor | 1.15 |

Min/Max fastener distances for Concentrated Side Loads



2 SPF 0-3-8

Notes Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component sublibility of the intended application, and to verify the dimensions and loads. Lumber 1. Dy service conditions, unless noted otherwise 2. LVL not to be treated with fire retardant or corrosive 1. Dry service conditions unless noted otherwise 2. LVL not to be treated with fire retardant or corrosive

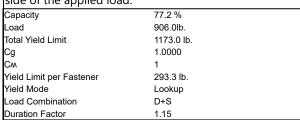


7'6' 7'6'

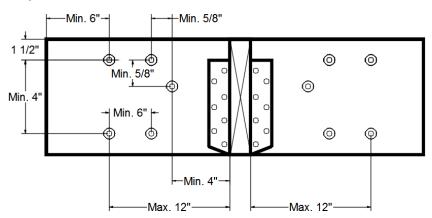
Multi-Ply Analysis

Concentrated Load

Fasten at concentrated side load at 6-10-8 with a minimum of (4) – SDW22338 in the pattern shown. All fasteners shall be installed with the head on the side of the applied load.



Min/Max fastener distances for Concentrated Side Loads



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Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

Handling & Installation

- LVL beams must not be cut or drilled
 Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals

 2 Damaged Beams must not be used
- Design assumes top edge is laterally restrained
 Provide lateral support at bearing points to avoid
 lateral displacement and rotation
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This design is valid until 6/28/2026

Manufacturer Info



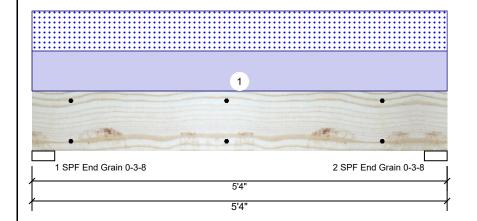
Project: Address: Date: 6/11/2025 Input by: Curtis Quick

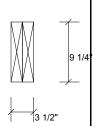
Job Name: The Lauren H Beams

Project #:

1.750" X 9.250" 2-Ply - PASSED **Kerto-S LVL** BM₂

Level: Level





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Member Information

Type: Plies: 2 Moisture Condition: Dry Deflection LL: 360 Deflection TL: 240 Importance: Normal - II Temp <= 100°F Temperature:

Application: Floor Design Method: ASD **Building Code:** IBC 2012 Load Sharing: No

Deck: Not Checked

Reactions UNPATTERNED Ib (Uplift)

| Brg | Direction | Live | Dead | Snow | Wind | Const |
|-----|-----------|------|------|------|------|-------|
| 1 | Vertical | 0 | 1942 | 1923 | 0 | 0 |
| 2 | Vertical | 0 | 1942 | 1923 | 0 | 0 |

Analysis Results

| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|--------------|----------------|----------|---------------|-------------|-------|------|
| Moment | 4305 ft-lb | 2'8" | 14423 ft-lb | 0.298 (30%) | D+S | L |
| Unbraced | 4305 ft-lb | 2'8" | 11811 ft-lb | 0.365 (36%) | D+S | L |
| Shear | 2330 lb | 4'3 1/4" | 7943 lb | 0.293 (29%) | D+S | L |
| LL Defl inch | 0.027 (L/2130) | 2'8" | 0.162 (L/360) | 0.169 (17%) | S | L |
| TL Defl inch | 0.055 (L/1060) | 2'8" | 0.244 (L/240) | 0.226 (23%) | D+S | L |

Bearings

| Bearing Le | ngth Dir. | Сар. | React D/L lb | Total | Ld. Case | Ld. Comb. |
|-----------------------------|-----------|------|--------------|-------|----------|-----------|
| 1 - SPF 3.5 End Grain | 00" Vert | 38% | 1942 / 1923 | 3865 | L | D+S |
| 2 - SPF 3.5 End Grain | 00" Vert | 38% | 1942 / 1923 | 3865 | L | D+S |

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Fasten all plies using 2 rows of SDW22338 at 24" o.c. Maximum end distance not to exceed 12".
- 3 Refer to last page of calculations for fasteners required for specified loads.
- 4 Simpson fasteners applied from a single side of the member use tip values where published.
- 5 Girders are designed to be supported on the bottom edge only.
- 6 Top loads must be supported equally by all plies.
- 7 Top must be laterally braced at end bearings.

Self Weight

- 8 Bottom must be laterally braced at end bearings.
- 9 Lateral slenderness ratio based on single ply width.

| ID | Load Type | Location | Trib Width | Side | Dead 0.9 | Live 1 | Snow 1.15 | Wind 1.6 | Const. 1.25 | Comments |
|----|-----------|----------|------------|------|----------|--------|-----------|----------|-------------|----------|
| 1 | Uniform | | | Тор | 721 PLF | 0 PLF | 721 PLF | 0 PLF | 0 PLF | A3 |

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- For flat roofs provide proper drainage to prevent ponding

7 PLF

- - Design assumes top edge is laterally restrained
 Provide lateral support at bearing points to avoid
 lateral displacement and rotation
 - This design is valid until 6/28/2026

isDesign

Client: Weaver Homes

Project: Address:

Date: 6/11/2025 Input by:

Curtis Quick Job Name: The Lauren H Beams

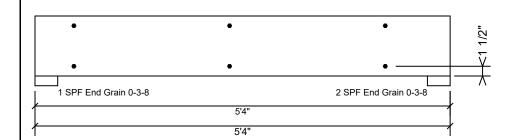
Project #:

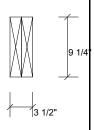
Kerto-S LVL BM2

1.750" X 9.250"

2-Ply - PASSED

Level: Level





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Multi-Ply Analysis

Fasten all plies using 2 rows of SDW22338 at 24" o.c.. Maximum end distance not to exceed 12".

| rasterrain plies asing 2 rows | 01 3D W22330 at 21 0.c Wit |
|-------------------------------|----------------------------|
| Capacity | 0.0 % |
| Load | 0.0 PLF |
| Yield Limit per Foot | 255.0 PLF |
| Yield Limit per Fastener | 255.0 lb. |
| См | 1 |
| Yield Mode | Lookup |
| Edge Distance | 1 1/2" |
| Min. End Distance | 6" |
| Load Combination | |
| Duration Factor | 1.00 |

Notes

NOtes
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 LVL not to be treated with fire retardant or corrosive

Handling & Installation

- Handling & Installation

 1. UVI beams must not be cut or drilled

 2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals

 3. Damaged Beams must not be used

 4. Design assumes top edge is laterally restrained

 5. Provide lateral support at bearing points to avoid lateral displacement and rotation
- 6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 6/28/2026

Metsä Wood 301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851 (800) 622-5850 www.metsawood.com/us

Manufacturer Info



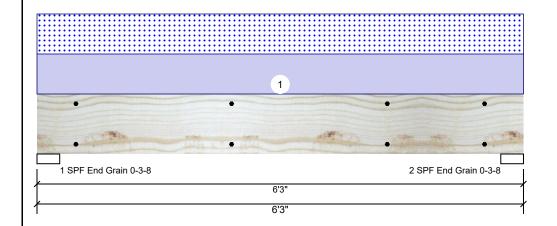
Project: Address: Date: 6/11/2025 Input by:

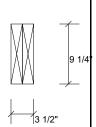
Curtis Quick Job Name: The Lauren H Beams

Project #:

1.750" X 9.250" 2-Ply - PASSED **Kerto-S LVL** BM₃

Level: Level





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Member Information

Type: Plies: Moisture Condition: Dry Deflection LL: 360 Deflection TL: 240 Importance: Normal - II Temperature: Temp <= 100°F

Application: Design Method: ASD **Building Code:** IBC 2012 Load Sharing: No **Header Supports** No Glass: Deck: Not Checked

Reactions UNPATTERNED Ib (Uplift)

| Brg | Direction | Live | Dead | Snow | Wind | Const |
|-----|-----------|------|------|------|------|-------|
| 1 | Vertical | 0 | 2391 | 2369 | 0 | 0 |
| 2 | Vertical | 0 | 2391 | 2369 | 0 | 0 |
| | | | | | | |

Analysis Results

| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|--------------|----------------|----------|---------------|-------------|-------|------|
| Moment | 6387 ft-lb | 3'1 1/2" | 14423 ft-lb | 0.443 (44%) | D+S | L |
| Unbraced | 6387 ft-lb | 3'1 1/2" | 10779 ft-lb | 0.593 (59%) | D+S | L |
| Shear | 3147 lb | 1' 3/4" | 7943 lb | 0.396 (40%) | D+S | L |
| LL Defl inch | 0.053 (L/1314) | 3'1 1/2" | 0.193 (L/360) | 0.274 (27%) | S | L |
| TL Defl inch | 0.106 (L/654) | 3'1 1/2" | 0.290 (L/240) | 0.367 (37%) | D+S | L |

Bearings

| Bearing | Length | Dir. | Сар. | React D/L lb | Total | Ld. Case | Ld. Comb. |
|-------------------------|--------|------|------|--------------|-------|----------|-----------|
| 1 - SPF End Grain | 3.500" | Vert | 46% | 2391 / 2369 | 4760 | L | D+S |
| 2 - SPF End Grain | 3.500" | Vert | 46% | 2391 / 2369 | 4760 | L | D+S |

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Fasten all plies using 2 rows of SDW22338 at 24" o.c. Maximum end distance not to exceed 12".
- 3 Refer to last page of calculations for fasteners required for specified loads.
- 4 Simpson fasteners applied from a single side of the member use tip values where published.
- 5 Girders are designed to be supported on the bottom edge only.
- 6 Top loads must be supported equally by all plies.
- 7 Top must be laterally braced at end bearings.

Self Weight

- 8 Bottom must be laterally braced at end bearings.
- 9 Lateral slenderness ratio based on single ply width.

ID Load Type Location Trib Width Side Dead 0.9 Live 1 Snow 1.15 Wind 1.6 Const. 1.25 Comments 1 Uniform Top 758 PLF 0 PLF 758 PLF 0 PLF 0 PLF

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

- Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive
- Handling & Installation
- LVL beams must not be cut or drilled Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals

 Damaged Beams must not be used
- 6. For flat roofs provide proper drainage to prevent ponding

7 PLF

- Design assumes top edge is laterally restrained
 Provide lateral support at bearing points to avoid
 lateral displacement and rotation
- This design is valid until 6/28/2026

isDesign

Client: Weaver Homes

Project: Address:

Date: 6/11/2025 Input by:

Curtis Quick Job Name: The Lauren H Beams

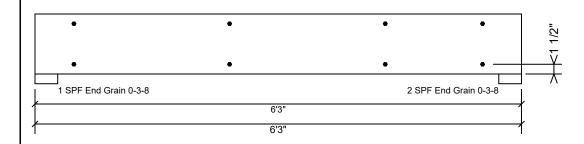
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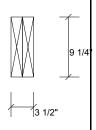
Kerto-S LVL BM₃

1.750" X 9.250"

2-Ply - PASSED

Level: Level





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Multi-Ply Analysis

Fasten all plies using 2 rows of SDW22338 at 24" o.c.. Maximum end distance not to exceed 12".

| rasterran pries asing 2 rove | 3 01 3D 11 LL 330 at L 1 | 0.0 1110 |
|------------------------------|--------------------------|----------|
| Capacity | 0.0 % | |
| Load | 0.0 PLF | |
| Yield Limit per Foot | 255.0 PLF | |
| Yield Limit per Fastener | 255.0 lb. | |
| См | 1 | |
| Yield Mode | Lookup | |
| Edge Distance | 1 1/2" | |
| Min. End Distance | 6" | |
| Load Combination | | |
| Duration Factor | 1.00 | |

Notes

NOtes
Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

- Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

Handling & Installation

- Handling & Installation

 1. UVI beams must not be cut or drilled

 2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals

 3. Damaged Beams must not be used

 4. Design assumes top edge is laterally restrained

 5. Provide lateral support at bearing points to avoid lateral displacement and rotation
- 6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 6/28/2026

(800) 622-5850 www.metsawood.com/us

Manufacturer Info

Metsä Wood 301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851



Client: Project: Address: Weaver Homes

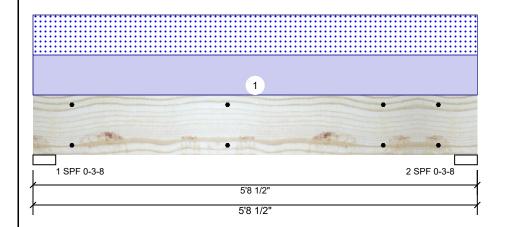
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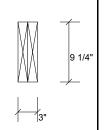
Input by: Curtis Quick Job Name: The Lauren H Beams

Project #:

2.000" X 10.000" 2-Ply - PASSED S-P-F #2

Level: Level





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Member Information

Type: Plies: Moisture Condition: Dry Deflection LL: 360 Deflection TL: 240 Importance: Normal - II

Temp <= 100°F Temperature:

Application: Design Method: ASD **Building Code:** IBC 2012 Load Sharing: No Deck: Not Checked

Reactions UNPATTERNED Ib (Uplift)

| Brg | Direction | Live | Dead | Snow | Wind | Const |
|-----|-----------|------|------|------|------|-------|
| 1 | Vertical | 0 | 756 | 756 | 0 | 0 |
| 2 | Vertical | 0 | 756 | 756 | 0 | 0 |
| | | | | | | |

Bearings

| Bearing | Length | Dir. | Cap. Re | act D/L lb | Total | Ld. Case | Ld. Comb. |
|---------|--------|------|---------|------------|-------|----------|-----------|
| 1 - SPF | 3.500" | Vert | 34% | 756 / 756 | 1513 | L | D+S |
| 2 - SPF | 3 500" | Vert | 34% | 756 / 756 | 1513 | 1 | D+S |

Analysis Results

| Analysis | Actual | Location | Allowed | Capacity | Comb. | Case |
|--------------|----------------|-----------|---------------|-------------|-------|------|
| Moment | 1826 ft-lb | 2'10 1/4" | 3946 ft-lb | 0.463 (46%) | D+S | L |
| Unbraced | 1826 ft-lb | 2'10 1/4" | 3629 ft-lb | 0.503 (50%) | D+S | L |
| Shear | 1358 lb | 1' 3/4" | 2872 lb | 0.473 (47%) | D+S | L |
| LL Defl inch | 0.016 (L/3853) | 2'10 1/4" | 0.175 (L/360) | 0.093 (9%) | S | L |
| TL Defl inch | 0.033 (L/1926) | 2'10 1/4" | 0.262 (L/240) | 0.125 (12%) | D+S | L |

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Fasten all plies using 2 rows of SDW22300 at 24" o.c. Maximum end distance not to exceed 12".
- 3 Refer to last page of calculations for fasteners required for specified loads.
- 4 Simpson fasteners applied from a single side of the member use tip values where published.
- 5 Girders are designed to be supported on the bottom edge only.
- 6 Top must be laterally braced at end bearings.
- 7 Bottom must be laterally braced at end bearings.
- 8 Lateral slenderness ratio based on single ply width.

| ID | Load Type | Location | Trib Width | Side | Dead 0.9 | Live 1 | Snow 1.15 | Wind 1.6 | Const. 1.25 | Comments |
|----|-----------|----------|------------|----------|----------|--------|-----------|----------|-------------|----------|
| 1 | Uniform | | | For Foco | 265 DI E | 0 DI E | 265 DI E | ∩ DI E | 0 DI E | Λ.4 |

This design is valid until 6/28/2026

