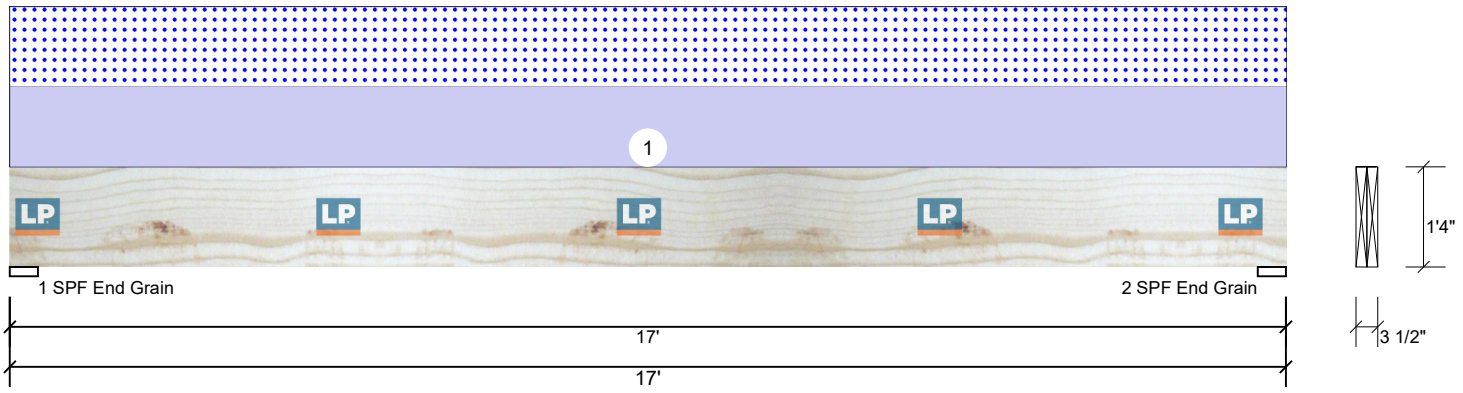
Client:	84 Lumber-Fayetteville #2307	Date:	2/18/2020
Project:	Caviness Land - CL2977 CP	Input by:	Kyle Militzer
Address:		Job Name:	CL2977 CP
		Project #:	CL2977 CP

HD2-A LP-LVL 2900Fb-2.0E 1.750" X 16.000" 2-Ply - PASSED

Level: 2nd Floor



Member Information

Type:	Girder	Application:	Floor
Plies:	2	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IRC 2012
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal		
Temperature:	Temp <= 100°F		
General Load			
Floor Live:	40 PSF		
Dead:	10 PSF		

Reactions PATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	0	3961	3825	0	0
2	0	3961	3825	0	0

Bearings

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	4.500"	66%	3961 / 3825	7786	L	D+S
2 - SPF End Grain	4.500"	66%	3961 / 3825	7786	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	30781 ft-lb	8'6"	39831 ft-lb	0.773 (77%)	D+S	L
Shear	6288 lb	1'7 5/8"	12236 lb	0.514 (51%)	D+S	L
LL Defl inch	0.337 (L/583)	8'6 1/16"	0.547 (L/360)	0.620 (62%)	S	L
TL Defl inch	0.687 (L/287)	8'6 1/16"	0.820 (L/240)	0.840 (84%)	D+S	L

Design Notes

1. Provide lateral support to prevent rotation at end bearings and at interior bearings when required by code for seismic design.
2. Dead Load Deflection: Instant = 0.349", Long Term = 0.524"
3. Girders are designed to be supported on the bottom edge only.
4. Multiple plies must be fastened together as per manufacturer's details.
5. Top loads must be supported equally by all plies.
6. Top must be laterally braced at a maximum of 4'2 1/4" o.c.
7. Bottom braced at bearings.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Part. Uniform	0-0-0 to 17-0-0		Top	450 PLF	0 PLF	450 PLF	0 PLF	0 PLF	
	Self Weight				16 PLF					

Notes

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APA: PR-L280, ICC-ES: ESR-2403, LADBS: RR-25783, Florida: FL15228

US Lumber
2160 Satellite Blvd, Suite 450, GA 30097
888-613-5078

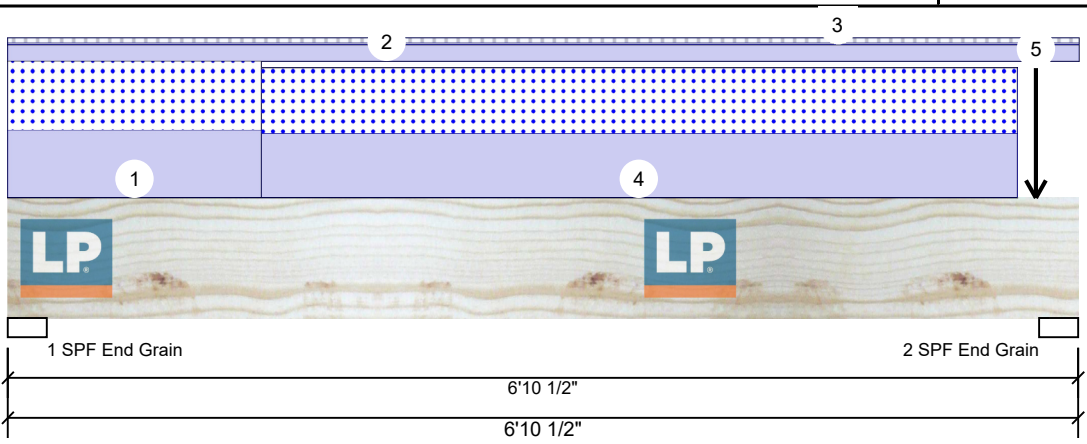
U.S. LUMBER

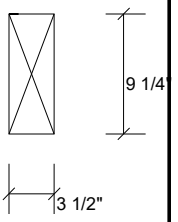
CSD DRAW DESIGN BUILD

Client:	84 Lumber-Fayetteville #2307	Date:	2/18/2020
Project:	Caviness Land - CL2977 CP	Input by:	Kyle Militzer
Address:		Job Name:	CL2977 CP
		Project #:	CL2977 CP

HD3-A LP-LSL 1.55E 3.500" X 9.250" - PASSED

Level: 2nd Floor





Member Information

Type:	Girder	Application:	Floor
Plies:	1	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IRC 2012
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal		
Temperature:	Temp <= 100°F		
General Load			
Floor Live:	40 PSF		
Dead:	10 PSF		

Reactions PATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	100	1742	1342	0	0
2	100	2155	1755	0	0

Bearings

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.000"	34%	1742 / 1342	3084	L	D+S
2 - SPF End Grain	3.000"	43%	2155 / 1755	3909	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	4691 ft-lb	3'5 5/16"	11647 ft-lb	0.403 (40%)	D+S	L
Shear	2296 lb	5'11"	10177 lb	0.226 (23%)	D+S	L
LL Defl inch	0.053 (L/1477)	3'5 1/4"	0.217 (L/360)	0.240 (24%)	S	L
TL Defl inch	0.121 (L/642)	3'5 1/4"	0.325 (L/240)	0.370 (37%)	D+S	L

Design Notes

1 Provide lateral support to prevent rotation at end bearings and at interior bearings when required by code for seismic design.
2 Dead Load Deflection: Instant = 0.069", Long Term = 0.103"
3 Girders are designed to be supported on the bottom edge only.
4 Top braced at bearings.
5 Bottom braced at bearings.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Part. Uniform	0-0-0 to 1-7-9		Top	400 PLF	0 PLF	400 PLF	0 PLF	0 PLF	
2	Part. Uniform	0-0-0 to 6-10-8		Top	96 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
3	Tapered Start	0-0-0		Top	10 PLF	29 PLF	0 PLF	0 PLF	0 PLF	
	End	6-10-8			10 PLF	29 PLF	0 PLF	0 PLF	0 PLF	
4	Part. Uniform	1-7-9 to 6-5-12		Top	380 PLF	0 PLF	380 PLF	0 PLF	0 PLF	
5	Point	6-7-4		Top	602 lb	0 lb	602 lb	0 lb	0 lb	Header Column
	Bearing Length	0-3-8								
	Self Weight				10 PLF					

Notes

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US Lumber
2160 Satellite Blvd, Suite 450, GA 30097
888-613-5078

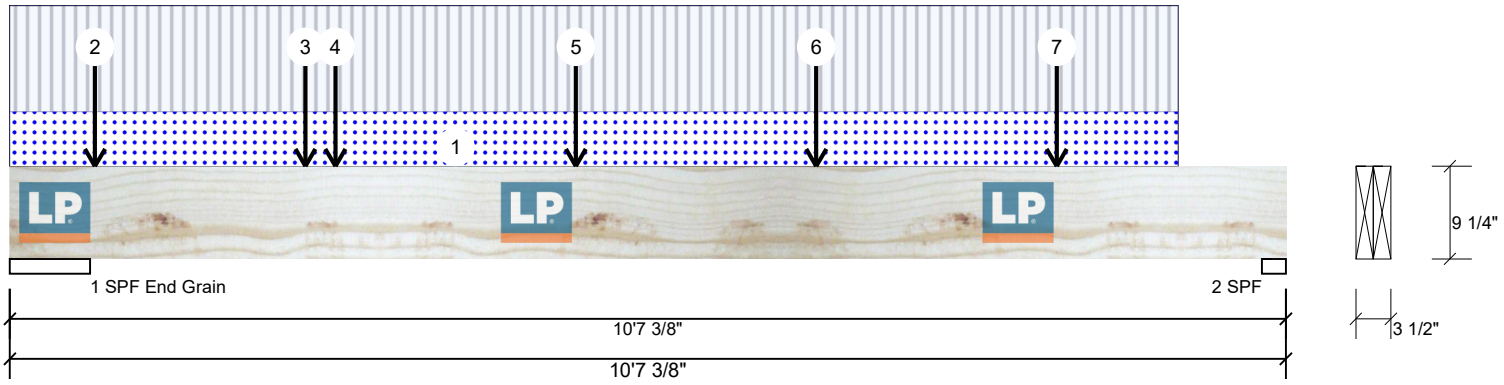
U.S. LUMBER

CSD DRAW DESIGN BUILD

Client:	84 Lumber-Fayetteville #2307	Date:	2/18/2020
Project:	Caviness Land - CL2977 CP	Input by:	Kyle Militzer
Address:		Job Name:	CL2977 CP
		Project #:	CL2977 CP

DB8-A LP-LVL 2900Fb-2.0E 1.750" X 9.250" 2-Ply - PASSED

Level: 2nd Floor



Member Information

Type:	Girder	Application:	Floor
Plies:	2	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IRC 2012
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal		
Temperature:	Temp <= 100°F		
General Load			
Floor Live:	40 PSF		
Dead:	10 PSF		

Reactions PATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	3031 (-138)	611	0 (-72)	0	0
2	2147 (-105)	443	0 (-55)	0	0

Bearings

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	8.000"	17%	611 / 3031	3642	L	D+L
2 - SPF	2.375"	73%	443 / 2147	2591	L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	7469 ft-lb	4'8 1/2"	12416 ft-lb	0.602 (60%)	D+L	L
Shear	2604 lb	1'4 1/2"	6151 lb	0.423 (42%)	D+L	L
LL Defl inch	0.257 (L/460)	5'6 3/8"	0.329 (L/360)	0.780 (78%)	L	L
TL Defl inch	0.310 (L/383)	5'6 3/8"	0.494 (L/240)	0.630 (63%)	D+L	L

Design Notes

1 Provide lateral support to prevent rotation at end bearings and at interior bearings when required by code for seismic design.
2 Dead Load Deflection: Instant = 0.052", Long Term = 0.078"
3 Girders are designed to be supported on the bottom edge only.
4 Multiple plies must be fastened together as per manufacturer's details.
5 Top loads must be supported equally by all plies.
6 Top braced at bearings.
7 Bottom braced at bearings.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Part. Uniform	0-0-0 to 9-8-8		Top	0 PLF	-25 PLF	-13 PLF	0 PLF	0 PLF	
2	Point	0-8-8		Top	181 lb	1004 lb	0 lb	0 lb	0 lb	J2 J7
	Bearing Length	0-3-8								
3	Point	2-5-8		Top	167 lb	527 lb	0 lb	0 lb	0 lb	J7
	Bearing Length	0-3-8								
4	Point	2-8-8		Top	25 lb	512 lb	0 lb	0 lb	0 lb	J2
	Bearing Length	0-3-8								

Continued on page 2...

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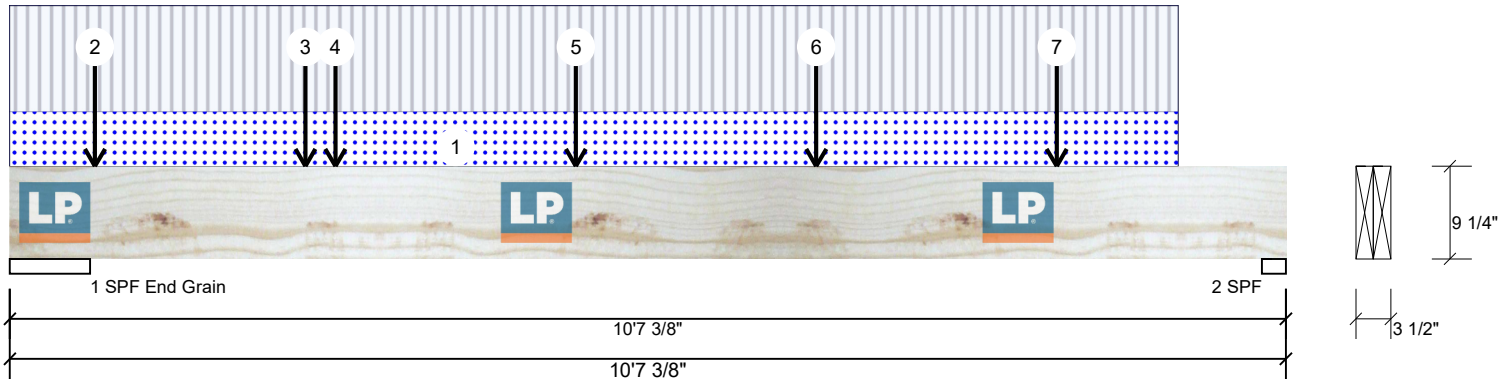
U.S. LUMBER

CSD DRAW DESIGN BUILD

Client:	84 Lumber-Fayetteville #2307	Date:	2/18/2020
Project:	Caviness Land - CL2977 CP	Input by:	Kyle Militzer
Address:		Job Name:	CL2977 CP
		Project #:	CL2977 CP

DB8-A LP-LVL 2900Fb-2.0E 1.750" X 9.250" 2-Ply - PASSED

Level: 2nd Floor



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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
5	Point	4-8-8		Top	202 lb	1071 lb	0 lb	0 lb	0 lb	J7 J2
	Bearing Length	0-3-8								
6	Point	6-8-8		Top	192 lb	1038 lb	0 lb	0 lb	0 lb	J7 J2
	Bearing Length	0-3-8								
7	Point	8-8-8		Top	189 lb	1026 lb	0 lb	0 lb	0 lb	J7 J2
	Bearing Length	0-3-8								
	Self Weight				9 PLF					

Notes

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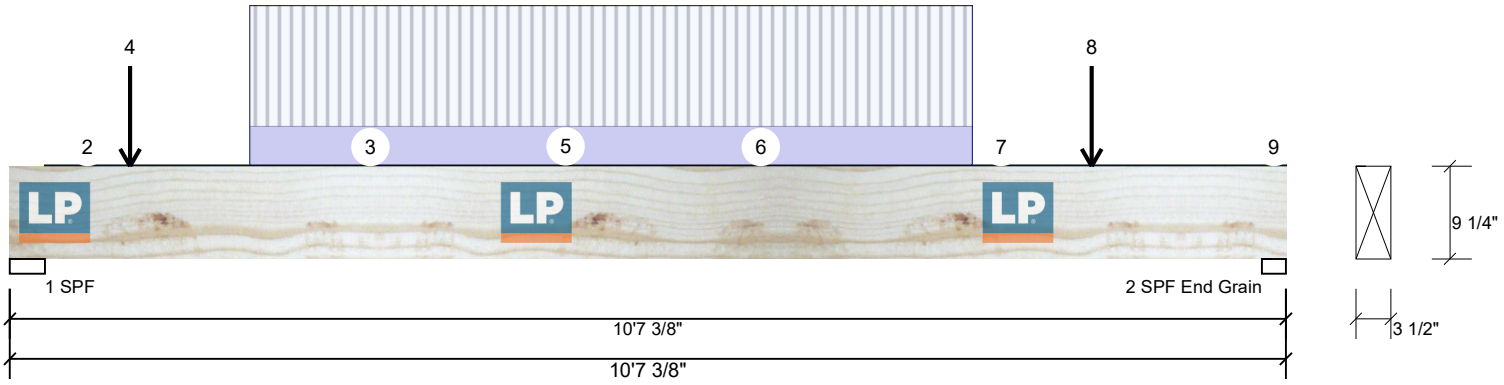
CSD DRAW DESIGN BUILD

Client:	84 Lumber-Fayetteville #2307	Date:	2/18/2020
Project:	Caviness Land - CL2977 CP	Input by:	Kyle Militzer
Address:		Job Name:	CL2977 CP
		Project #:	CL2977 CP

DB1-A LP-LSL 1.55E 3.500" X 9.250" - PASSED

Level: 2nd Floor



Member Information

Type:	Girder	Application:	Floor
Plies:	1	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IRC 2012
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal		
Temperature:	Temp <= 100°F		
General Load			
Floor Live:	40 PSF		
Dead:	10 PSF		

Reactions PATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	1059	408	0	0	0
2	934	365	0	0	0

Bearings

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	28%	408 / 1059	1467	L	D+L
2 - SPF End Grain	2.375"	18%	365 / 934	1299	L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3686 ft-lb	5'4 1/8"	10127 ft-lb	0.364 (36%)	D+L	L
Shear	1456 lb	1'	8849 lb	0.165 (16%)	D+L	L
LL Defl inch	0.153 (L/805)	5'4 1/4"	0.342 (L/360)	0.450 (45%)	L	L
TL Defl inch	0.212 (L/581)	5'4 1/4"	0.512 (L/240)	0.410 (41%)	D+L	L

Design Notes

1 Provide lateral support to prevent rotation at end bearings and at interior bearings when required by code for seismic design.
2 Dead Load Deflection: Instant = 0.059", Long Term = 0.088"
3 Girders are designed to be supported on the bottom edge only.
4 Top braced at bearings.
5 Bottom braced at bearings.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
2	Tapered Start	0-3-8		Top	0 PLF	1 PLF	0 PLF	0 PLF	0 PLF	
	End	1-0-0			0 PLF	1 PLF	0 PLF	0 PLF	0 PLF	
3	Tapered Start	1-0-0		Top	0 PLF	1 PLF	0 PLF	0 PLF	0 PLF	
	End	5-0-0			0 PLF	1 PLF	0 PLF	0 PLF	0 PLF	
4	Point	1-0-0		Top	122 lb	366 lb	0 lb	0 lb	0 lb	J6
	Bearing Length	0-3-8								
5	Part. Uniform	2-0-0 to 8-0-0		Top	69 PLF	206 PLF	0 PLF	0 PLF	0 PLF	
6	Tapered Start	5-0-0		Top	0 PLF	1 PLF	0 PLF	0 PLF	0 PLF	
	End	7-5-15			0 PLF	1 PLF	0 PLF	0 PLF	0 PLF	

Continued on page 2...

Notes

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U.S. LUMBER

CSD DRAW DESIGN BUILD

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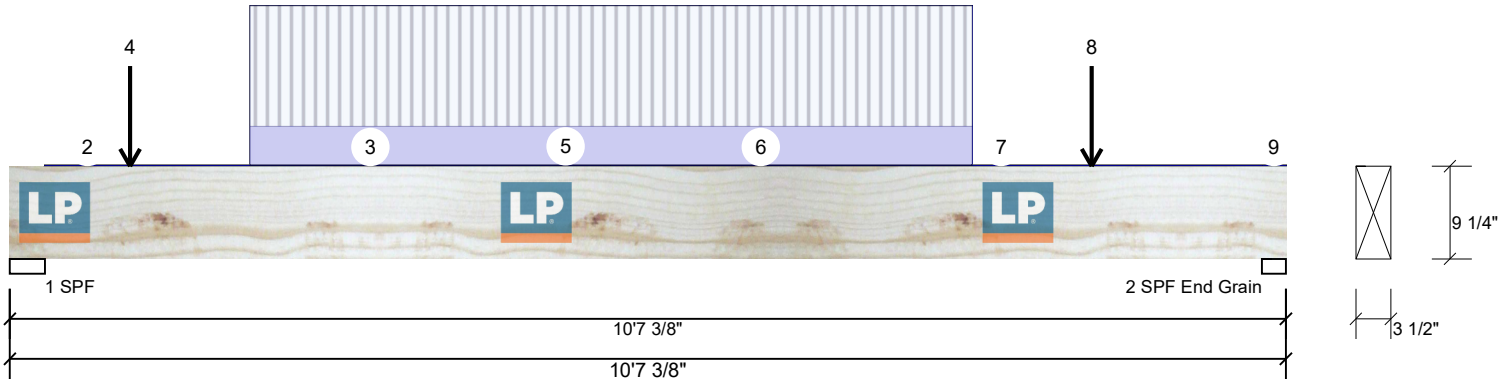
Project:	Caviness Land - CL2977 CP	Input by:	Kyle Militzer
Address:		Job Name:	CL2977 CP
		Project #:	CL2977 CP

DB1-A LP-LSL 1.55E 3.500" X 9.250" - PASSED

Level: 2nd Floor



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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
7	Tapered Start	7-5-15		Top	0 PLF	1 PLF	0 PLF	0 PLF	0 PLF	
	End	10-5-0			0 PLF	1 PLF	0 PLF	0 PLF	0 PLF	
8	Point	9-0-0		Top	127 lb	381 lb	0 lb	0 lb	0 lb	J6
	Bearing Length	0-3-8								
9	Tapered Start	10-5-0		Top	0 PLF	1 PLF	0 PLF	0 PLF	0 PLF	
	End	10-7-6			0 PLF	1 PLF	0 PLF	0 PLF	0 PLF	
	Self Weight				10 PLF					

Notes

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