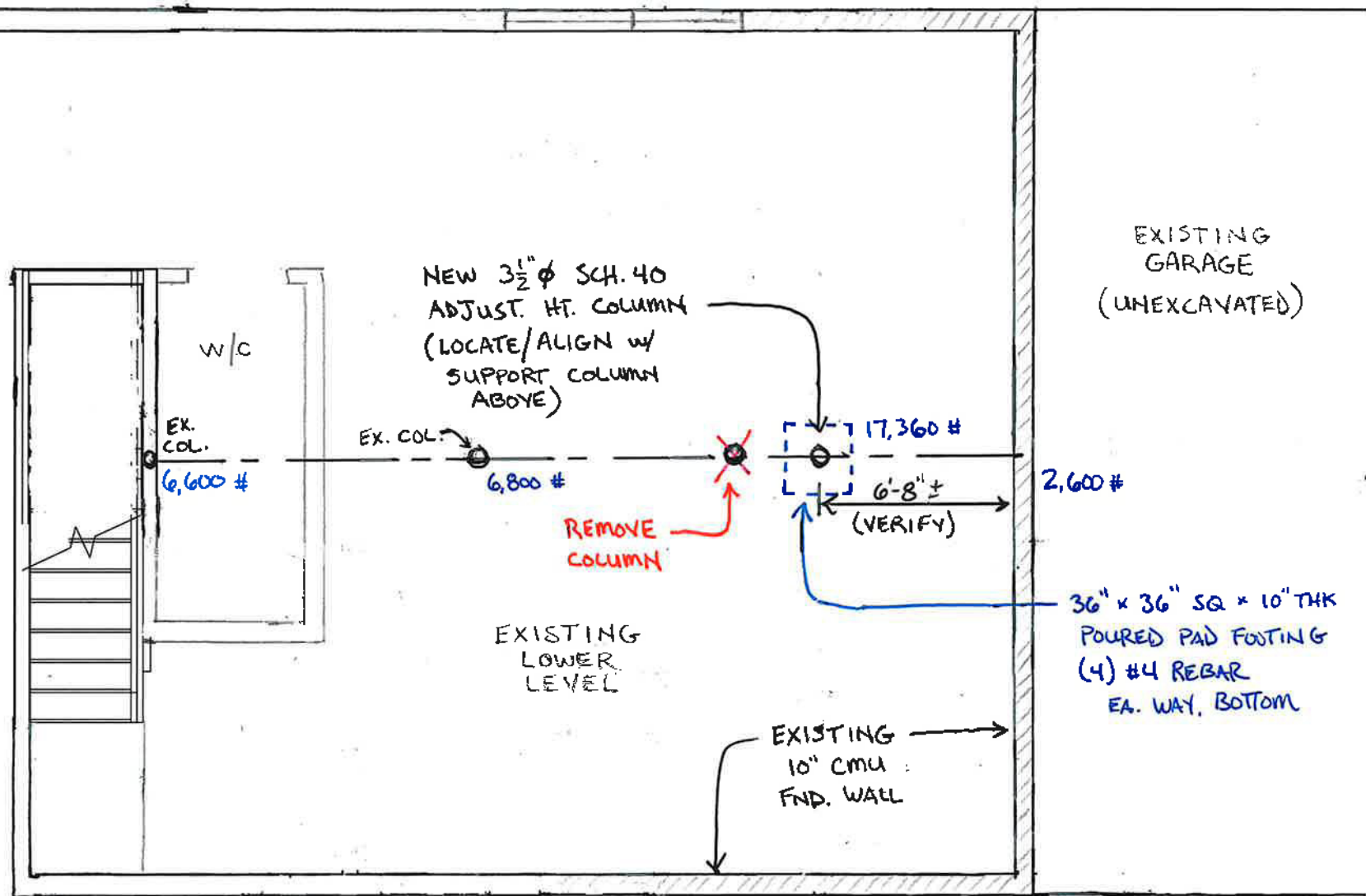
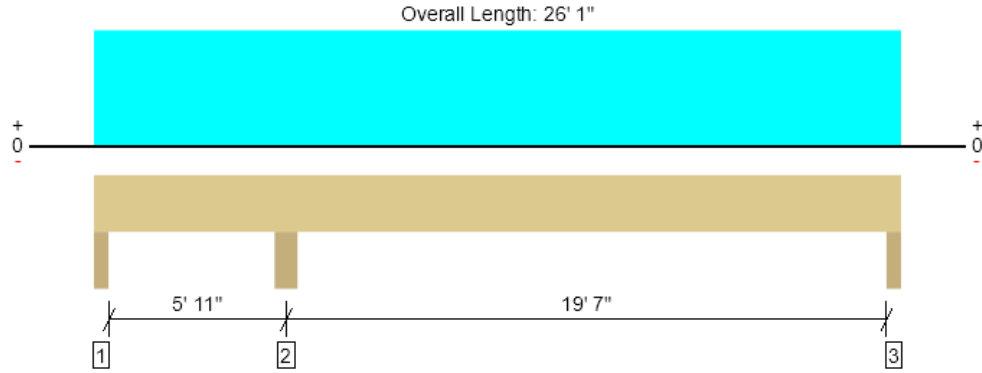


#24-180 Patrick Murphy
Lower Level
Engineer Review Comments



Main Level, Kitchen Beam 1a

3 piece(s) 1 3/4" x 11 7/8" 2.0E Microllam® LVL



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

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	13578 @ 6' 2 1/2"	20934 (5.50")	Passed (65%)	--	1.0 D + 1.0 L (All Spans)
Shear (lbs)	6791 @ 7' 5 1/8"	11845	Passed (57%)	1.00	1.0 D + 1.0 L (All Spans)
Moment (Ft-lbs)	-24551 @ 6' 2 1/2"	26573	Passed (92%)	1.00	1.0 D + 1.0 L (All Spans)
Live Load Defl. (in)	0.653 @ 17' 5/8"	0.657	Passed (L/362)	--	1.0 D + 1.0 L (Alt Spans)
Total Load Defl. (in)	0.868 @ 17' 13/16"	0.985	Passed (L/272)	--	1.0 D + 1.0 L (Alt Spans)

- Deflection criteria: LL (L/360) and TL (L/240).
- A 0.7% decrease in the moment capacity has been added to account for lateral stability.
- An excessive uplift of -3462 lbs detected at support located at 2".

Member Length : 26' 1"
System : Floor
Member Type : Flush Beam
Building Use : Residential
Building Code : IBC 2015
Design Methodology : ASD

Supports	Bearing Length			Loads to Supports (lbs)			Accessories
	Total	Available	Required	Dead	Floor Live	Factored	
1 - Trimmer - SPF	3.50"	3.50"	1.50"	-509	1445/-2952	936/-3462	None
2 - Column - SPF	5.50"	5.50"	3.57"	3429	10149	13578	None
3 - Trimmer - SPF	3.50"	3.50"	1.50"	1311	3905/-26	5216	None

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	1' 4" o/c	
Bottom Edge (Lu)	1' 4" o/c	

Vertical Loads	Location (Side)	Tributary Width	Dead (0.90)	Floor Live (1.00)	Comments
0 - Self Weight (PLF)	0 to 26' 1"	N/A	18.2	--	
1 - Uniform (PSF)	0 to 26' 1" (Front)	6'	12.0	40.0	upper level
2 - Uniform (PSF)	0 to 26' 1" (Back)	6'	12.0	40.0	upper level

- Side loads are assumed to not induce cross-grain tension.

Weyerhaeuser Notes

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

ForteWEB Software Operator	Job Notes
Troy Downs TLD Engineering & Consulting (507) 951-4909 troydowns@yahoo.com	



12/30/2024 2:25:15 PM UTC
ForteWEB v3.8, Engine: V8.4.1.24, Data: V8.1.6.3
File Name: 24-180 Patrick Murphy

3½" O.D., SCHEDULE 40 SERIES

MODEL#	ADJUSTMENT RANGE		UPC STANDARD SERIES	ALLOWABLE STRENGTH LOAD LBS. (ASD)*	DESIGN STRENGTH LOAD LBS. (LRFD)*	WEIGHT UNIT	UNIT CUBE
300-40	6' - 6' 4"	72" - 76"	7-16733-61200-6	29,300	44,000	52 lbs.	1.37
301-40	6' 3" - 6' 7"	75" - 79"	7-16733-61201-3	28,800	43,300	54 lbs.	1.42
302-40	6' 6" - 6' 10"	78" - 82"	7-16733-61202-0	28,400	42,600	56 lbs.	1.48
303-40	6' 9" - 7' 1"	81" - 85"	7-16733-61203-7	27,900	41,900	58 lbs.	1.53
304-40	7' - 7' 4"	84" - 88"	7-16733-61204-4	27,400	41,200	60 lbs.	1.59
305-40	7' 3" - 7' 7"	87" - 91"	7-16733-61205-1	26,900	40,500	62 lbs.	1.64
306-40	7' 6" - 7' 10"	90" - 94"	7-16733-61206-8	26,400	39,700	64 lbs.	1.7
307-40	7' 9" - 8' 1"	93" - 97"	7-16733-61207-5	25,900	39,000	65 lbs.	1.75
308-40	8' - 8' 4"	96" - 100"	7-16733-61208-2	25,400	38,200	67 lbs.	1.81
309-40	8' 3" - 8' 7"	99" - 103"	7-16733-61209-9	24,900	37,400	69 lbs.	1.86
310-40	8' 6" - 8' 10"	102" - 106"	7-16733-61210-5	24,400	36,600	71 lbs.	1.92
311-40	8' 9" - 9' 1"	105" - 109"	7-16733-61211-2	23,800	35,800	73 lbs.	1.97
312-40	9' - 9' 4"	108" - 112"	7-16733-61212-9	23,300	35,000	75 lbs.	2.03
313-40	9' 3" - 9' 7"	111" - 115"	7-16733-61213-6	22,700	34,100	77 lbs.	2.08
314-40	9' 6" - 9' 10"	114" - 118"	7-16733-61214-3	22,200	33,300	79 lbs.	2.14
315-40	9' 9" - 10' 1"	117" - 121"	7-16733-61215-0	21,600	32,500	81 lbs.	2.2
316-40	10' - 10' 4"	120" - 124"	7-16733-61216-7	21,000	31,600	83 lbs.	2.25
317-40	10' 3" - 10' 7"	123" - 127"	7-16733-61217-4	20,500	30,800	85 lbs.	2.31
318-40	10' 6" - 10' 10"	126" - 130"	7-16733-61218-1	19,900	29,900	87 lbs.	2.36
319-40	10' 9" - 11' 1"	129" - 133"	7-16733-61219-8	19,300	29,100	89 lbs.	2.42
320-40	11' - 11' 4"	132" - 136"	7-16733-61220-4	18,800	28,200	90 lbs.	2.47