

Wood Framing Takeoff Sample

Representative sample project: 2,400 SF 2-story residential home (30' x 40' footprint)

Sample deliverable — prepared on a representative project to show format and level of detail. Not a client project. Quantities are computed from the sample project dimensions stated below; unit costs are illustrative (pricing basis: September 2026, national average, not a quote).

TAKEOFF LINE ITEMS 31	PRICED LINE ITEMS 31	DIRECT LABOR HOURS 373	SAMPLE TOTAL (ILLUSTRATIVE) \$64,215	PER SF LIVING \$26.76
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Sample project description

Complete structural rough carpentry and lumber takeoff for a 2,400 SF two-story custom single-family home (30' x 40' footprint). The estimate covers the entire structural wood package: pressure-treated mudsills with anchor bolts, 2x6 exterior wall framing @ 16" o.c., 2x4 interior partitions, built-up headers, engineered I-joist floor system with 3-ply LVL center girder, 3/4" T&G glued and screwed subfloor, pre-engineered roof trusses @ 24" o.c., 7/16" OSB wall and roof sheathing with H-clips, and Simpson Strong-Tie structural hurricane ties, hold-downs, and joist hangers. Includes a full lumber cut list with board feet calculations.

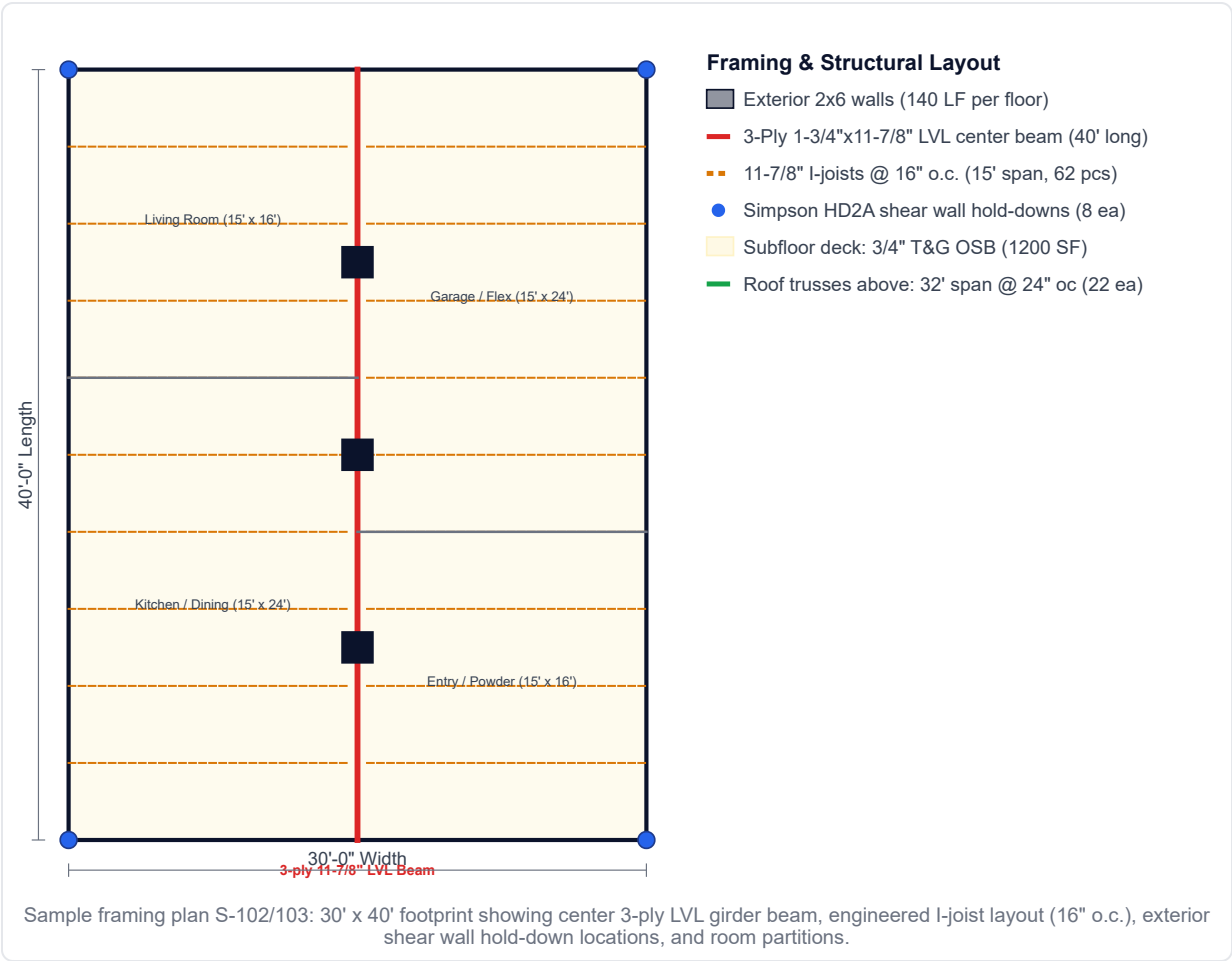
Scope included

- Complete wood rough framing structure (1st & 2nd floor walls, floor, roof)
- Pressure-treated mudsills, sill sealer, and 1/2" foundation anchor bolts
- Engineered 11-7/8" I-joist floor system with 3-ply 1-3/4" LVL girder beam
- 3/4" T&G OSB subfloor glued and screwed to joists
- Pre-engineered roof trusses (32' span, 6:12 pitch) and crane set
- 7/16" OSB wall sheathing, building wrap, and 7/16" OSB roof sheathing with H-clips
- Simpson Strong-Tie hurricane ties, joist hangers, hold-downs, and nails
- Itemized dimensional lumber cut list with board footage (BF) totals

Exclusions / by others

- Concrete foundation, footings, and slab (Div 03)
- Asphalt shingle roofing, underlayment, and flashings (Div 07)
- Exterior siding, soffits, and fascia metal wrap (Div 07)
- Windows, entry doors, and patio doors supply or installation (Div 08)
- Stair stringers, treads, and handrails (Div 06 finish carpentry)
- Interior drywall, insulation, and paint finishes (Div 09)

Takeoff markup (sample plan)



Assumptions & basis

Every quantity in this sample is computed from these inputs. The name column is the named range used by the Excel formulas.

Section	Parameter	Name	Value	Unit	Note / basis
Building	Building width	house_w	30	ft	East-west dimension
Building	Building length	house_l	40	ft	North-south dimension
Building	Single floor footprint area	floor_sf	1,200	SF	1,200 SF per floor $= \text{house_w} \times \text{house_l}$
Building	Total finished living area (2 stories)	gross_sf	2,400	SF	2,400 SF total $= 2 \times \text{floor_sf}$
Building	Exterior foundation / wall perimeter	perim_lf	140	LF	140 LF perimeter $= 2 \times (\text{house_w} + \text{house_l})$
Building	First floor wall framing height	fl1_ht	9	ft	9'-0" wall height
Building	Second floor wall framing height	fl2_ht	8	ft	8'-0" wall height
Building	Second floor joist rim height	rim_ht	1	ft	11-7/8" joist rim band
Walls	First floor interior partition length	int_fl1_lf	120	LF	Foyer, living, kitchen, bath, stairs
Walls	Second floor interior partition length	int_fl2_lf	140	LF	Bedrooms, 2 baths, laundry, hallway
Walls	Exterior wall sheathing gross area	ext_wall_sf	2,520	SF	140 LF x 18' total height $= \text{perim_lf} \times (\text{fl1_ht} + \text{fl2_ht} + \text{rim_ht})$
Floor	Floor joist clear span (half width)	joist_span	15	ft	Center LVL girder divides 30' span $= \text{house_w} / 2$
Floor	I-joist spacing on center	joist_oc	16	in	16" o.c. engineered floor system
Floor	Number of joist lines per floor length	joist_runs	31	EA	31 joist lines along 40' length $= \text{ROUNDUP}(\text{house_l} / (\text{joist_oc} / 12), 0) + 1$
Floor	Second floor subfloor deck area	subfloor_sf	1,200	SF	1,200 SF 3/4" T&G OSB $= \text{floor_sf}$
Roof	Eave and rake overhang width	roof_overhang	1	ft	12" closed soffit overhang
Roof	Total roof length along ridge (incl. rakes)	roof_len	42	ft	42'-0" total length $= \text{house_l} + 2 \times \text{roof_overhang}$
Roof	Roof truss span (incl. eaves)	truss_span	32	ft	32'-0" truss span $= \text{house_w} + 2 \times \text{roof_overhang}$
Roof	Roof truss spacing on center	truss_oc	24	in	24" o.c. engineered trusses
Roof	Common prefabricated roof trusses	truss_count	20	EA	20 common trusses $= \text{ROUNDUP}(\text{roof_len} / (\text{truss_oc} / 12), 0) - 1$
Roof	Gable end roof trusses	gable_count	2	EA	2 gable ends
Roof	Roof pitch multiplier (6:12 pitch)	pitch_mult	1.12	FACTOR	$\text{sqrt}(1 + (6/12)^2) = 1.118$
Roof	Total sloped roof deck surface area	roof_sf	1,502.59	SF	1,502 SF sloped sheathing area $= \text{truss_span} \times \text{pitch_mult} \times \text{roof_len}$
Hardware	Foundation sill anchor spacing	anchor_spacing	4	ft	1/2" anchor bolts @ 4'-0" o.c. max
Hardware	Foundation anchor bolts count	anchors_n	43	EA	43 anchor bolts incl. corner pairs $= \text{ROUNDUP}(\text{perim_lf} / \text{anchor_spacing}, 0) + 8$
Hardware	Hurricane ties (truss to double top plate)	hurr_ties_n	44	EA	Both ends of each truss $= 2 \times (\text{truss_count} + \text{gable_count})$
Hardware	I-joist top flange hangers at center girder	joist_hgr_n	62	EA	Each side of LVL center girder $= 2 \times \text{joist_runs}$
Hardware	Shear wall structural hold-downs	holddown_n	8	EA	Simpson HD2A at 4 exterior corners

Section	Parameter	Name	Value	Unit	Note / basis
Rates	Framing carpenter burdened labor rate	rate_framing	72	\$/hr	Illustrative
Rates	Lead framing carpenter / foreman	rate_lead	84	\$/hr	Illustrative
Rates	Crane rental & operator for truss set	rate_crane	220	\$/hr	Truss setting crane
Markups	Sales tax on material	tax_rate	7.0%	%	Assumption
Markups	Overhead	oh_pct	10.0%	%	Assumption
Markups	Profit	profit_pct	10.0%	%	Assumption

Sample drawing list

Sheets of the representative sample project (described here so the takeoff can be traced; not a real plan set).

Sheet	Title
S-101	Foundation & Anchor Bolt Placement Plan (sample)
S-102	First Floor Framing & Shear Wall Plan (sample)
S-103	Second Floor Joist & Girder Framing Plan (sample)
S-104	Roof Truss Layout & Structural Connector Details (sample)

Itemized dimensional lumber schedules with board footage

Board feet (BF) = Nominal Thickness (in) x Nominal Width (in) / 12 x Length (ft). Precut studs are carried at exact commercial lengths. Engineered joists, LVLs, and trusses are carried by piece/LF in takeoff.

Mark	Member Description	Grade / Spec	Nom. Size	Length (ft)	Qty	Total LF	BF / LF	Total BF
MS-1	Treated mudsill plate (perimeter)	SYP #2 Pressure Treated	2x6	16	9	144	1	144
PL-1	1st floor exterior wall plates (sole + dbl top)	SPF #2	2x6	16	27	432	1	432
ST-1	1st floor exterior studs (precut 104-5/8")	SPF Stud Grade	2x6	8.72	145	1,264.40	1	1,264.40
PL-2	1st floor interior plates (sole + dbl top)	SPF #2	2x4	16	23	368	0.67	245.46
ST-2	1st floor interior studs (precut 104-5/8")	SPF Stud Grade	2x4	8.72	115	1,002.80	0.67	668.87
PL-3	2nd floor exterior wall plates (sole + dbl top)	SPF #2	2x6	16	27	432	1	432
ST-3	2nd floor exterior studs (precut 92-5/8")	SPF Stud Grade	2x6	7.72	140	1,080.80	1	1,080.80
PL-4	2nd floor interior plates (sole + dbl top)	SPF #2	2x4	16	27	432	0.67	288.14
ST-4	2nd floor interior studs (precut 92-5/8")	SPF Stud Grade	2x4	7.72	135	1,042.20	0.67	695.15
HDR-1	Exterior door & window headers (double 2x10)	#2 SPF	2x10	12	14	168	1.67	280.06
FAS-1	Eave and rake subfascia	#2 SPF	2x6	16	10	160	1	160
BRK-1	Temporary and permanent truss lateral bracing	#2 SPF / Econ	2x4	16	25	400	0.67	266.80
Totals					697	6,926.20		5,957.67

Quantity takeoff

Qty is computed from the assumptions; the formula column is the exact expression used (the workbook holds it as a live Excel formula).

#	CSI	Description	Qty	Unit	Waste	Qty w/ waste	Formula / basis
Foundation plates & sills							
1	06 11 00	2x6 Pressure-treated sill plate (foundation mudsill) #2 SYP .40 MCQ treated for ground contact	140	LF	8%	151.20	perim_lf
2	06 11 00	Sill sealer gasket (5-1/2" closed-cell polyethylene) Continuous capillary break under mudsill	140	LF	5%	147	perim_lf
3	06 05 23	1/2" x 10" Foundation anchor bolts w/ 3" sq washer & nut Spaced 4'-0" o.c. and within 12" of plate ends	43	EA	0%	43	anchors_n
First floor wall framing (9'-0" wall)							
4	06 11 00	2x6 Exterior wall sole & double top plates 16' lengths for minimum splices	420	LF	8%	453.60	3 × perim_lf
5	06 11 00	2x6 Exterior wall studs @ 16" o.c. (precut 104-5/8") Includes corners (3-stud) and partition tees	140	EA	5%	147	ROUNDUP(perim_lf × 0.75+35,0)
6	06 11 00	2x4 Interior partition plates (sole + double top)	360	LF	8%	388.80	3 × int_fl1_lf
7	06 11 00	2x4 Interior partition studs @ 16" o.c. (precut 104-5/8")	115	EA	5%	120.75	ROUNDUP(int_fl1_lf × 0.75+25,0)
8	06 11 00	Built-up 2x10 headers with 1/2" spacer (doors & windows) Double 2x10 + 1/2" OSB core	96	LF	8%	103.68	96
Second floor floor system							
9	06 17 33	11-7/8" Wood I-joists @ 16" o.c. (TJI 210 or equiv., 16' stock) 62 pcs 16' joists spanning to central beam	992	LF	5%	1,041.60	2 × joist_runs × 16
10	06 17 33	1-1/8" x 11-7/8" Rim board / rim joist (LSL) Continuous engineered perimeter rim band	140	LF	5%	147	perim_lf
11	06 17 19	3-ply 1-3/4" x 11-7/8" LVL center girder beam 2.0E LVL glued & nailed girder carrying joists	120	LF	5%	126	3 × house_1
12	06 16 23	3/4" Tongue & Groove (T&G) OSB Sturd-I-Floor subflooring 4'x8' APA rated subfloor, glued and screw-shank nailed	1,200	SF	8%	1,296	subfloor_sf
13	06 05 23	Subfloor construction adhesive (28 oz polyurethane tubes) Continuous bead on all joist flanges	8	EA	0%	8	ROUNDUP(subfloor_sf/160,0)
Second floor wall framing (8'-0" wall)							
14	06 11 00	2x6 Exterior wall plates (sole + double top)	420	LF	8%	453.60	3 × perim_lf
15	06 11 00	2x6 Exterior wall studs @ 16" o.c. (precut 92-5/8")	135	EA	5%	141.75	ROUNDUP(perim_lf × 0.75+30,0)
16	06 11 00	2x4 Interior partition plates (sole + double top)	420	LF	8%	453.60	3 × int_fl2_lf
17	06 11 00	2x4 Interior partition studs @ 16" o.c. (precut 92-5/8")	135	EA	5%	141.75	ROUNDUP(int_fl2_lf × 0.75+30,0)
18	06 11 00	Built-up 2x10 headers (2nd floor window openings)	64	LF	8%	69.12	64
Roof framing & trusses							
19	06 17 53	Engineered common roof trusses (32' span, 6:12 pitch, 24" o.c.) Prefabricated metal plate connected wood trusses	20	EA	0%	20	truss_count
20	06 17 53	Engineered gable end roof trusses Vertical stud infill ready for sheathing	2	EA	0%	2	gable_count
21	01 54 23	Mobile crane service for roof truss erection (4 hour minimum) Includes crane, rigging and certified crane operator	4	HR	0%	4	4 (counted / stated)
22	06 11 00	2x6 Subfascia board at eaves and gables	155.08	LF	8%	167.49	2 × roof_len+4 × (house_w/2 × pitch_mult+roof_overhang)
23	06 11 00	2x4 Truss lateral bracing and web bracing per truss engineering Continuous lateral restraint (CLR) rows	400	LF	5%	420	400

#	CSI	Description	Qty	Unit	Waste	Qty w/ waste	Formula / basis
Sheathing & weather barrier							
24	06 16 13	7/16" OSB exterior wall sheathing (APA Rated Sheathing) 4'x9' sheets nailed 6" o.c. edge / 12" field	2,520	SF	8%	2,721.60	ext_wall_sf
25	07 25 00	Spunbonded polyolefin housewrap weather barrier (Tyvek) Taped seams with 3" contractor acrylic tape	2,898	SF	5%	3,042.90	ext_wall_sf × 1.15
26	06 16 13	7/16" OSB roof sheathing (APA Rated) Staggered joints with 1/8" expansion gap	1,502.59	SF	8%	1,622.80	roof_sf
27	06 05 23	7/16" Sheathing H-clips (panel edge clips) 1 clip between every truss space	126	EA	0%	126	ROUNDUP(roof_sf/12,0)
Structural connectors & fasteners							
28	06 05 23	Simpson H2.5A hurricane ties (truss-to-plate connector) Seismic/high-wind uplift restraint	44	EA	0%	44	hurr_ties_n
29	06 05 23	Simpson ITS / IUS top-mount I-joist hangers Heavy duty joist connection to LVL girder	62	EA	0%	62	joist_hgr_n
30	06 05 23	Simpson HD2A hold-down anchors & 5/8" threaded rods Corner shear wall tie to concrete foundation	8	EA	0%	8	holddown_n
31	06 05 23	Collated framing nails package (16d, 10d, 8d ring shank) Complete pneumatic framing fasteners package	1	LS	0%	1	1

Pricing

Illustrative unit costs and labor productivity, September 2026 national average. Not a quote.

#	Description	Qty	Unit	Mat \$/unit	Material \$	Hr/unit	Labor hrs	Rate	Labor \$	Equip \$	Total \$
1	2x6 Pressure-treated sill plate (foundation mudsill)	151.20	LF	\$1.45	\$219.24	0.0350	5.3	\$72.00	\$381.02	\$0.00	\$600.26
2	Sill sealer gasket (5-1/2" closed-cell polyethylene)	147	LF	\$0.28	\$41.16	0.0100	1.5	\$72.00	\$105.84	\$0.00	\$147.00
3	1/2" x 10" Foundation anchor bolts w/ 3" sq washer & nut	43	EA	\$3.85	\$165.55	0.1000	4.3	\$72.00	\$309.60	\$0.00	\$475.15
4	2x6 Exterior wall sole & double top plates	453.60	LF	\$1.15	\$521.64	0.0300	13.6	\$72.00	\$979.78	\$0.00	\$1,501.42
5	2x6 Exterior wall studs @ 16" o.c. (precut 104-5/8")	147	EA	\$8.40	\$1,234.80	0.1200	17.6	\$72.00	\$1,270.08	\$0.00	\$2,504.88
6	2x4 Interior partition plates (sole + double top)	388.80	LF	\$0.75	\$291.60	0.0250	9.7	\$72.00	\$699.84	\$0.00	\$991.44
7	2x4 Interior partition studs @ 16" o.c. (precut 104-5/8")	120.75	EA	\$5.80	\$700.35	0.1000	12.1	\$72.00	\$869.40	\$0.00	\$1,569.75
8	Built-up 2x10 headers with 1/2" spacer (doors & windows)	103.68	LF	\$3.60	\$373.25	0.0800	8.3	\$72.00	\$597.20	\$0.00	\$970.44
9	11-7/8" Wood I-joists @ 16" o.c. (TJI 210 or equiv., 16' stock)	1,041.60	LF	\$3.25	\$3,385.20	0.0450	46.9	\$72.00	\$3,374.78	\$0.00	\$6,759.98
10	1-1/8" x 11-7/8" Rim board / rim joist (LSL)	147	LF	\$4.60	\$676.20	0.0400	5.9	\$72.00	\$423.36	\$0.00	\$1,099.56
11	3-ply 1-3/4" x 11-7/8" LVL center girder beam	126	LF	\$14.50	\$1,827.00	0.1500	18.9	\$72.00	\$1,360.80	\$0.00	\$3,187.80
12	3/4" Tongue & Groove (T&G) OSB Sturd-I-Floor subflooring	1,296	SF	\$1.45	\$1,879.20	0.0220	28.5	\$72.00	\$2,052.86	\$0.00	\$3,932.06
13	Subfloor construction adhesive (28 oz polyurethane tubes)	8	EA	\$11.50	\$92.00	0.0150	0.1	\$72.00	\$8.64	\$0.00	\$100.64
14	2x6 Exterior wall plates (sole + double top)	453.60	LF	\$1.15	\$521.64	0.0300	13.6	\$72.00	\$979.78	\$0.00	\$1,501.42
15	2x6 Exterior wall studs @ 16" o.c. (precut 92-5/8")	141.75	EA	\$7.40	\$1,048.95	0.1100	15.6	\$72.00	\$1,122.66	\$0.00	\$2,171.61
16	2x4 Interior partition plates (sole + double top)	453.60	LF	\$0.75	\$340.20	0.0250	11.3	\$72.00	\$816.48	\$0.00	\$1,156.68
17	2x4 Interior partition studs @ 16" o.c. (precut 92-5/8")	141.75	EA	\$5.10	\$722.92	0.0900	12.8	\$72.00	\$918.54	\$0.00	\$1,641.46
18	Built-up 2x10 headers (2nd floor window openings)	69.12	LF	\$3.60	\$248.83	0.0800	5.5	\$72.00	\$398.13	\$0.00	\$646.96
19	Engineered common roof trusses (32' span, 6:12 pitch, 24" o.c.)	20	EA	\$185.00	\$3,700.00	0.8500	17.0	\$72.00	\$1,224.00	\$0.00	\$4,924.00
20	Engineered gable end roof trusses	2	EA	\$235.00	\$470.00	1.2000	2.4	\$72.00	\$172.80	\$0.00	\$642.80
21	Mobile crane service for roof truss erection (4 hour minimum)	4	HR	\$0.00	\$0.00	0.0000	0.0	\$220.00	\$0.00	\$880.00	\$880.00
22	2x6 Subfascia board at eaves and gables	167.49	LF	\$1.20	\$200.98	0.0350	5.9	\$72.00	\$422.07	\$0.00	\$623.05
23	2x4 Truss lateral bracing and web bracing per truss engineering	420	LF	\$0.75	\$315.00	0.0250	10.5	\$72.00	\$756.00	\$0.00	\$1,071.00
24	7/16" OSB exterior wall sheathing (APA Rated Sheathing)	2,721.60	SF	\$0.68	\$1,850.69	0.0160	43.5	\$72.00	\$3,135.28	\$0.00	\$4,985.97
25	Spunbonded polyolefin housewrap weather barrier (Tyvek)	3,042.90	SF	\$0.22	\$669.44	0.0050	15.2	\$72.00	\$1,095.44	\$0.00	\$1,764.88
26	7/16" OSB roof sheathing (APA Rated)	1,622.80	SF	\$0.72	\$1,168.42	0.0200	32.5	\$72.00	\$2,336.83	\$0.00	\$3,505.25
27	7/16" Sheathing H-clips (panel edge clips)	126	EA	\$0.18	\$22.68	0.0050	0.6	\$72.00	\$45.36	\$0.00	\$68.04
28	Simpson H2.5A hurricane ties (truss-to-plate connector)	44	EA	\$1.45	\$63.80	0.0600	2.6	\$72.00	\$190.08	\$0.00	\$253.88
29	Simpson ITS / IUS top-mount I-joist hangers	62	EA	\$3.80	\$235.60	0.1200	7.4	\$72.00	\$535.68	\$0.00	\$771.28
30	Simpson HD2A hold-down anchors & 5/8" threaded rods	8	EA	\$28.00	\$224.00	0.4500	3.6	\$72.00	\$259.20	\$0.00	\$483.20
31	Collated framing nails package (16d, 10d, 8d ring shank)	1	LS	\$480.00	\$480.00	0.0000	0.0	\$72.00	\$0.00	\$0.00	\$480.00
Direct cost totals					\$23,690.34		372.8		\$26,841.54	\$880.00	\$51,411.88

Summary

Group	Lines	Material	Labor hrs	Labor	Equipment	Total
Foundation plates & sills	3	\$425.95	11.1	\$796.46	\$0.00	\$1,222.41
First floor wall framing (9'-0" wall)	5	\$3,121.64	61.3	\$4,416.29	\$0.00	\$7,537.93

Group	Lines	Material	Labor hrs	Labor	Equipment	Total
Second floor floor system	5	\$7,859.60	100.3	\$7,220.45	\$0.00	\$15,080.05
Second floor wall framing (8'-0" wall)	5	\$2,882.55	58.8	\$4,235.59	\$0.00	\$7,118.13
Roof framing & trusses	5	\$4,685.98	35.8	\$2,574.87	\$880.00	\$8,140.85
Sheathing & weather barrier	4	\$3,711.22	91.8	\$6,612.92	\$0.00	\$10,324.14
Structural connectors & fasteners	4	\$1,003.40	13.7	\$984.96	\$0.00	\$1,988.36
Direct cost subtotal		\$23,690.34	372.8	\$26,841.54	\$880.00	\$51,411.88
Sales tax on material — 7.0% of material (assumption)						\$1,658.32
Overhead — 10.0% of running subtotal (assumption)						\$5,307.02
Profit — 10.0% of running subtotal (assumption)						\$5,837.72
SAMPLE TOTAL (illustrative)						\$64,215
Cost per SF living						\$26.76

Sample deliverable on a representative project; not a client project. Unit costs illustrative (September 2026, national average, not a quote). Companion workbook sheets: Cover & Basis, Lumber Package Cut List, Quantity Takeoff, Pricing, Summary.