

UNIT-IN-PLACE COSTS

INSTRUCTIONS for Converting Square Foot Costs into Whole Dollar Costs for an Entire Residence.

Step A: Select the proper class for the residence.

Step B: Select and list Unit-in-Place components for all construction areas of the residence. Tip: Work through the Unit-in-Place section page by page, first selecting a component, then marking down the corresponding class cost. For an example of how this step is done, see the following pages. If you are not sure of the exact specifications of the residence, refer to the Specification pages located in front of the Square Foot cost tables.

Step C: Convert Unit-in-Place costs into whole dollar costs. Pay special attention to the unit of measure when converting costs. For additional conversion help, see below or refer to the example on the following pages.

Step D: Total all whole dollar costs.

Step E: Divide the result of Step D by the ground area of your residence in square feet.

CONVERSION INSTRUCTIONS

In order to convert the various Unit-in-Place costs into whole dollar costs, use the following formulas:

UNIT-IN-PLACE SECTION	BASE UNIT OF MEASURE	CONVERSION FORMULA		
Exterior wall	Sq. Ft. of Wall Area	Unit-in-Place Cost	x Sq. Ft. of Wall Area	= Whole Dollar Cost
Windows	Sq. Ft. of Window Area	Unit-in-Place Cost	x Sq. Ft. of Window Area	= Whole Dollar Cost
Roof	Sq. Ft. of Ground Area	Unit-in-Place Cost	x Sq. Ft. of Ground Area	= Whole Dollar Cost
Interior partitions and finish	Sq. Ft. of Partition Area	Unit-in-Place Cost	x Sq. Ft. of Partition Area	= Whole Dollar Cost
Floor finish	Sq. Ft. of Floor Area	Unit-in-Place Cost	x Sq. Ft. of Floor Area	= Whole Dollar Cost
Ceiling	Sq. Ft. of Ceiling Area	Unit-in-Place Cost	x Sq. Ft. of Ceiling Area	= Whole Dollar Cost
Excavation	Sq. Ft. of Ground Area	Unit-in-Place Cost	x Sq. Ft. of Ground Area	= Whole Dollar Cost
Basement walls, foundations and footings	Sq. Ft. of Wall Area	Unit-in-Place Cost	x Sq. Ft. of Wall Area	= Whole Dollar Cost
Basement floor	Sq. Ft. of Floor Area	Unit-in-Place Cost	x Sq. Ft. of Floor Area	= Whole Dollar Cost
Floor construction	Sq. Ft. of Floor Area	Unit-in-Place Cost	x Sq. Ft. of Floor Area	= Whole Dollar Cost
Heat and air conditioning	Sq. Ft. of Living Area	Unit-in-Place Cost	x Sq. Ft. of Living Area	= Whole Dollar Cost
Electric lighting system	Sq. Ft. of Living Area	Unit-in-Place Cost	x Sq. Ft. of Living Area	= Whole Dollar Cost

As a final note, when determining costs for exterior walls and interior partitions, originally assume no window or door openings to arrive at a total area for each unit. For example, an interior partition (wall) 8 feet high and 10 linear feet long with a door opening would be measured as 80 square feet of interior partition.

UNIT-IN-PLACE EXAMPLE

CONVERTING UNIT-IN-PLACE COSTS INTO SQUARE FOOT COSTS FOR AN ENTIRE RESIDENCE.

Instructions for Steps (A) through (E) are located on the previous page.

Assume we have chosen a Class C, one-story residence with the following measurements:

STEP A	Dimensions: 40' X 25' Square Feet of Ground: 1000 Square Feet of Living Area: 1000 Square Feet of Window: 125 Square Feet of Basement Wall: 1040 Square Feet of Exterior Wall: 1040	Square Feet of Partition: 896 Square Feet of Basement Floor: 1000 Linear Feet of Footing: 130 Interior Doors: 20 Linear Feet of Interior Trim: 164 Linear Feet of Closet Shelving: 24
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STEP B		STEP C	Unit-in-Place Cost	Unit	Whole Dollar Cost	Subtotals
	Exterior Walls					
	Wood frame with:					
	Face brick veneer		\$ 12.68	x 1040 s.f. wall =	\$13,187.20	
	Building paper		.26	x 1040 s.f. wall =	270.40	
	1/2" insulation board		1.34	x 1040 s.f. wall =	1,393.60	
	2" x 6" studs, 16" o.c.		2.60	x 1040 s.f. wall =	2,704.00	
	6" batt insulation		1.02	x 1040 s.f. wall =	1,060.80	
	1/2" drywall		1.59	x 1040 s.f. wall =	1,653.60	
	Interior surface: painted, two coats		.70	x 1040 s.f. wall =	728.00	
	Two exterior doors (wood raised panel)		540.00	x 2 (cost each) =	1,080.00	
	Aluminum storm and screen door		305.00	x 1 (cost each) =	<u>305.00</u>	\$22,382.60
	Wood double hung windows		19.22	x 125 s.f. wind. =	\$2,402.50	
	Aluminum storms and screens		8.26	x 125 s.f. wind. =	<u>1,032.50</u>	\$3,435.00
	Roof					
	4/12 pitch					
	235# asphalt shingles		1.89	x 1000 s.f. ground =	\$1,890.00	
	Felt		.27	x 1000 s.f. ground =	270.00	
	1/2" plywood		1.45	x 1000 s.f. ground =	1,450.00	
	2" x 6" rafters, 16" o.c.		2.25	x 1000 s.f. ground =	2,250.00	
	1' overhang and soffit		1.38	x 1000 s.f. ground =	1,380.00	
	Gutters and downspouts		.88	x 1000 s.f. ground =	<u>880.00</u>	\$8,120.00
	Interior Partitions and Finish					
	8' walls					
	1/2" drywall, two sides		3.17	x 896 s.f. partition =	2,840.32	
	Painted, two coats, two sides		1.46	x 896 s.f. partition =	1,308.16	
	2" x 4" studs, 16" o.c.		1.84	x 896 s.f. partition =	1,648.64	
	Softwood trim		2.27	x 164 l.f. trim =	372.28	
	Flush hollow core doors		320.00	x 20 (cost each) =	6,400.00	
	Closet shelving		2.81	x 24 l.f. shelving =	<u>67.44</u>	\$12,636.84
	Floor Finish					
	65% carpet with pad		3.41	x 1000 s.f. floor x 65% =	\$2,216.50	
	35% vinyl inlay		3.94	x 1000 s.f. floor x 35% =	1,379.00	
	35% 5/8" underlayment		1.76	x 1000 s.f. floor x 35% =	<u>616.00</u>	\$4,211.50

STEP B		STEP C	Unit-in-Place Cost	Unit	Whole Dollar Cost	Subtotals
	Ceiling					
	1/2" drywall		2.21	x 1000 s.f. ceiling =	\$2,210.00	
	Painted, two coats		1.30	x 1000 s.f. ceiling =	1,300.00	
	12" insulation		1.98	x 1000 s.f. ceiling =	1,980.00	
	2" x 8" Joists, 16" o.c.		2.05	x 1000 s.f. ceiling =	<u>2,050.00</u>	\$7,540.00
	Excavation					
	8' Basement		1.56	x 1000 s.f. ground =	<u>\$1,560.00</u>	\$1,560.00
	Basement Walls					
	8" concrete block		9.19	x 1040 s.f. wall =	\$9,557.60	
	8" x 24" footings		18.62	x 130 l.f. footing =	2,420.60	
	Drain tile, two sides		13.31	x 130 l.f. footing =	1,730.30	
	Perimeter Insulation		1.53	x 1040 s.f. wall =	\$1,591.20	
	Waterproofing		1.25	x 1040 s.f. wall =	<u>1,197.50</u>	\$16,599.70
	Basement Floor					
	4" gravel base		.66	x 1000 s.f. floor =	\$ 660.00	
	4" concrete floor		3.50	x 1000 s.f. floor =	3,500.00	
	Vapor barrier		.24	x 1000 s.f. floor =	<u>240.00</u>	\$4,400.00
	Floor Construction					
	Felt underlay		.43	x 1000 s.f. floor =	\$ 430.00	
	3/4" plywood		1.82	x 1000 s.f. floor =	1,820.00	
	2" x 10" joists, 16" o.c.		2.61	x 1000 s.f. floor =	2,610.00	
	Bridging		.30	x 1000 s.f. floor =	300.00	
	8" steel I-beam		.73	x 1000 s.f. floor =	730.00	
	3" diameter steel posts		.28	x 1000 s.f. floor =	<u>280.00</u>	\$6,170.00
	Heating and Cooling					
	Gas-fired forced-air, with return ducts		4.03	x 1000 s.f. living =	\$4,030.00	
	Block chimney, 16" x 22' Ht.		168.00	x 22 Ht. of chimney =	<u>3,696.00</u>	\$7,726.00
	Electric					
	200-ampere, 110/220-volt, Romex		6.91	x 1000 s.f. living =	\$6,910.00	
	Unfinished Area, Non metallic		2.02	x 1000 s.f. unfin. area =	<u>\$2,020.00</u>	\$8,930.00
	Plumbing					
	White fixtures:					
	One sink, countertop		695.00	x 1 (cost each) =	\$695.00	
	One toilet		1,115.00	x 1 (cost each) =	1,115.00	
	One bathtub with shower		1,520.00	x 1 (cost each) =	1,520.00	
	Ceramic tile, tub alcove		560.00	x 1 (cost each) =	560.00	
	One two-compartment kitchen sink		965.00	x 1 (cost each) =	965.00	
	One two-compartment laundry tub		730.00	x 1 (cost each) =	730.00	
	One 40-gallon gas water heater		945.00	x 1 (cost each) =	<u>945.00</u>	\$6,530.00
	Built-In Units					
	Wood veneer kitchen cabinets					
	16' base with laminated plastic top		180.00	x 16 l.f. cabinet =	\$2,880.00	
	10' wall mounted, 30" high		121.00	x 10 l.f. cabinet =	1,210.00	
	6' wall mounted, 18" high		103.00	x 6 l.f. cabinet =	618.00	
	Vanity cabinet		390.00	x 1 (cost each) =	390.00	
	Open-riser basement stairs		810.00	x 1 (cost each) =	<u>810.00</u>	\$5,908.00
				Summary	STEP D	\$116,149.64

Total Whole Dollar Cost of Unit-in-Place Components: \$116,149.64

Square Feet of Ground Area: 1,000

Whole Dollar Cost/Square Feet of Ground Area: \$116.15

**STEP
E**

UNIT-IN-PLACE COSTS	D	CD	C	BC	B	A
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EXTERIOR WALLS

Costs/Sq. Ft. of Wall Area

MASONRY WALLS

Block, concrete, 6"	7.49	7.83	8.20	9.12	9.71	10.48
8"	8.24	8.57	8.93	9.83	10.41	11.17
10"	9.29	9.74	10.24	11.44	12.22	13.22
12"	10.25	10.82	11.44	12.94	13.90	15.14
Block, reinforced, 6"	8.13	8.62	9.15	10.44	11.26	12.31
8"	8.79	9.38	10.04	11.63	12.64	13.92
10"	10.04	10.75	11.53	13.45	14.66	16.20
12"	11.19	12.01	12.92	15.13	16.53	18.31
Brick, common, 8"	18.98	20.23	21.60	24.94	27.06	29.75
12"	24.97	26.60	28.38	32.72	35.48	39.00
Brick, 6", SCR modular	13.15	13.95	14.84	16.99	18.36	20.10
8"	14.95	15.80	16.72	18.97	20.40	22.24
Concrete, reinforced, 5" – 6"	13.89	15.18	16.62	20.17	22.44	25.30
8"	15.64	16.98	18.48	22.15	24.49	27.44
12"	18.35	19.88	21.58	25.76	28.42	31.77

Additives for block and concrete walls

Synth. plaster on rigid insul. (EIFS)	6.18	6.81	7.52	9.29	10.42	11.85
Stay-in-place forming	.50	.65	.84	1.44	1.91	2.55

SIDINGS

Aluminum	2.25	2.64	3.09	4.30	5.13	6.19
Asphalt	1.59	1.73	1.87	2.23	2.46	2.75
Cement fiber, embossed	3.79	4.02	4.27	4.88	5.27	5.77
Siding or shingles, horizontal	2.62	2.80	3.00	3.48	3.79	4.18
Vinyl	3.25	3.45	3.67	4.21	4.55	4.98
Synth. plaster on rigid insul. (EIFS)	6.11	6.74	7.44	9.19	10.31	11.72
Wood						
Board and batten	2.42	2.84	3.34	4.68	5.59	6.78
Clapboard	3.30	3.68	4.11	5.19	5.89	6.78
Hardboard sheet, embossed	2.03	2.20	2.38	2.84	3.12	3.48
Siding or shingles, horizontal	2.25	2.44	2.64	3.14	3.45	3.85
Masonite, 1/8" tempered	1.92	2.05	2.20	2.56	2.79	3.08
Masonite, 1/4" tempered	2.07	2.22	2.39	2.81	3.08	3.42
Plywood, 3/8" textured	2.42	2.54	2.68	3.01	3.21	3.48
1/2" plain	1.93	2.03	2.15	2.42	2.60	2.82
5/8" textured	2.42	2.54	2.68	3.01	3.21	3.48
5/8" plain	1.93	2.03	2.15	2.42	2.60	2.82
Rustic or log siding, veneer	4.79	5.73	6.86	9.97	12.13	14.97
Half rounds with full corners	13.00	13.72	14.50	16.41	17.63	19.19
Full logs, 6" – 7" in diameter	12.22	13.19	14.26	16.89	18.57	20.68
8"	14.47	15.60	16.86	19.92	21.87	24.34
10"	17.35	18.71	20.20	23.87	26.19	29.13
Hand hewn or oversized logs	21.23	23.39	25.81	31.83	35.69	40.56
Shingle, cedar	2.81	3.02	3.26	3.84	4.21	4.67
Shake	3.20	3.40	3.63	4.18	4.53	4.98

VENEERS

Face brick veneer	10.57	11.57	12.68	15.43	17.19	19.41
Select common brick veneer	9.28	10.18	11.18	13.67	15.26	17.27
Select reused brick veneer	10.15	11.09	12.15	14.77	16.44	18.54

Stone veneers

Ashlar, granite	31.28	33.91	36.83	43.99	48.55	54.30
Split	27.04	29.05	31.27	36.69	40.13	44.48
Native stone	18.08	19.78	21.69	26.40	29.42	33.22
Permastone	8.81	9.67	10.62	12.99	14.50	16.41
Split rock	9.52	10.41	11.41	13.89	15.47	17.47

UNIT-IN-PLACE COSTS	D	CD	C	BC	B	A
Costs/Sq. Ft. of Wall Area						
MISCELLANEOUS						
Glass panel	17.93	20.40	23.25	30.58	35.42	41.58
Local stone, rough cut, solid, 12"	42.78	47.01	51.77	63.56	71.12	80.65
Granite	44.60	50.35	56.94	73.76	84.78	98.75
Limestone	48.70	53.33	58.53	71.37	79.59	89.95
Add for each 6" variation in thickness	5.46	5.85	6.27	7.30	7.96	8.79
Rammed earth, soil cement, 24"	18.21	19.32	20.53	23.50	25.38	27.79
Add for each 6" variation in thickness	1.09	1.19	1.29	1.54	1.70	1.91
Sand. panels, cement fiber or Shotcrete	11.31	12.45	13.72	16.89	18.92	21.48
Stucco on baled straw	13.02	14.26	15.65	19.10	21.31	24.09
FRAMING (Frame including sills, plates and wood) studs						
2" x 4", 12" o.c.	2.42	2.47	2.53	2.69	2.80	2.95
16" o.c.	1.71	1.80	1.91	2.16	2.32	2.53
24" o.c.	1.27	1.32	1.38	1.52	1.62	1.74
2" x 6", 16" o.c.	2.47	2.54	2.60	2.78	2.90	3.06
24" o.c.	1.71	1.80	1.91	2.16	2.32	2.53
2" x 8", 12" o.c.	4.35	4.50	4.66	5.07	5.34	5.70
16" o.c.	3.30	3.42	3.54	3.85	4.06	4.33
24" o.c.	2.09	2.16	2.24	2.44	2.58	2.75
Steel studs						
Light (to 25 gauge)						
4" – 16" o.c.	1.95	2.01	2.09	2.27	2.39	2.55
4" – 24" o.c.	1.60	1.66	1.72	1.88	1.99	2.12
6" – 16" o.c.	2.17	2.25	2.35	2.58	2.73	2.93
6" – 24" o.c.	1.95	1.99	2.03	2.16	2.24	2.36
Medium (to 20 gauge)						
4" – 16" o.c.	2.51	2.59	2.66	2.86	3.00	3.18
4" – 24" o.c.	2.00	2.09	2.18	2.40	2.55	2.74
6" – 16" o.c.	2.92	3.00	3.09	3.31	3.47	3.68
6" – 24" o.c.	2.51	2.58	2.65	2.83	2.95	3.12
Wood pole framing	.73	.87	----	----	----	----
INSULATION						
Insulation, 2-1/2"	.56	.59	.64	.74	.81	.89
3-1/2"	.65	.68	.72	.81	.87	.95
6"	.91	.96	1.02	1.15	1.24	1.35
FINISHES						
Paint on exterior, two coats	.80	.84	.89	1.01	1.08	1.18
Three coats	1.10	1.16	1.22	1.38	1.48	1.61
On masonry, two coats	.62	.68	.74	.90	1.00	1.13
Three coats	.86	.94	1.03	1.25	1.39	1.57
Stain on exterior, two coats	.73	.79	.85	1.00	1.09	1.21
Stucco, two coats on masonry	2.81	3.05	3.31	3.95	4.35	4.87
Three coats on metal lath	4.18	4.39	4.61	5.16	5.51	5.96
Sheathing						
Building paper	.22	.24	.26	.31	.34	.38
Insulation board, 1/2"	1.26	1.30	1.34	1.44	1.52	1.61
25/32"	1.47	1.52	1.57	1.69	1.77	1.88
Plywood, 3/8"	1.54	1.57	1.60	1.68	1.74	1.83
1/2"	1.61	1.64	1.68	1.76	1.83	1.92
5/8"	1.84	1.87	1.91	2.01	2.08	2.19

UNIT-IN-PLACE COSTS	D	CD	C	BC	B	A
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Costs/Sq. Ft. of Wall Area

OSB (oriented strand board), 3/8"	1.43	1.46	1.50	1.60	1.67	1.77
1/2"	1.50	1.54	1.58	1.69	1.76	1.86
5/8"	1.71	1.75	1.80	1.92	2.01	2.12
Wood board, 1" x 6"	1.82	1.92	2.02	2.28	2.44	2.65
Interior finish of exterior walls						
Ceramic tile	8.52	10.15	12.12	17.50	21.23	26.11
Drywall, one side 3/8"	1.28	1.33	1.38	1.50	1.58	1.69
1/2"	1.49	1.54	1.59	1.72	1.80	1.92
5/8"	1.54	1.61	1.67	1.85	1.96	2.10
Furring, wood strips on masonry	.99	1.08	1.19	1.47	1.64	1.86
Painting						
One coat	.35	.38	.43	.54	.61	.70
Two coats	.56	.62	.70	.90	1.03	1.19
Three coats	.80	.89	1.00	1.28	1.45	1.68
Plaster, two coats on gypsum	3.25	3.39	3.53	3.90	4.13	4.44
Three coats on gypsum	3.96	4.06	4.16	4.44	4.63	4.89
Two coats on masonry	2.81	2.93	3.06	3.38	3.58	3.85
Wall paper	1.26	1.43	1.62	2.13	2.46	2.88
Custom	2.92	3.33	3.82	5.07	5.90	6.96

EXTERIOR DOORS

Costs Each

Entrance doors, cost each

Aluminum storm and screen	225	260	305	420	495	595
Metal, hollow core	315	355	405	535	620	725
Insulated	385	435	495	645	745	870
Deluxe	365	420	480	635	735	865
Wood						
Flat panel	375	425	490	655	765	905
Raised panel	390	460	540	755	905	1,095
Dutch	490	560	640	850	985	1,160
French	515	595	685	920	1,080	1,285
Carved, stock	670	750	840	1,070	1,220	1,410
Custom, carved	4,735	5,530	6,470	8,970	10,665	12,855
Hardwood, solid core, flat panel	1,405	1,570	1,755	2,225	2,535	2,920
Raised panel	1,715	2,330	3,180	6,000	8,315	11,685
Sliding glass door, 6' opening	695	755	825	995	1,105	1,240
Sliding insul. glass door, 6' opening	1,020	1,125	1,250	1,550	1,745	1,990
Wood storm and screen	285	320	360	455	515	590
Garage Doors, cost/sq. ft. of garage door area						
Single						
Overhead						
Metal	10.42	11.46	12.63	15.53	17.40	19.75
Plastic	11.35	12.04	12.78	14.61	15.77	17.25
Wood	8.96	9.63	10.38	12.22	13.38	14.85
Redwood or select cedar	13.95	15.14	16.47	19.74	21.82	24.45
Sectional						
Metal	11.59	12.84	14.26	17.79	20.07	22.95
Plastic	12.53	13.40	14.36	16.71	18.20	20.09
Wood	10.04	10.88	11.81	14.11	15.58	17.42
Redwood or select cedar	16.31	18.09	20.11	25.17	28.44	32.56
Add for insulation	1.62	1.80	1.99	2.49	2.81	3.21

UNIT-IN-PLACE COSTS	D	CD	C	BC	B	A
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Garage doors, cost/sq. ft. of a garage door area

Double						
Overhead						
Metal	7.13	8.15	9.35	12.43	14.47	17.08
Plastic	7.58	8.44	9.41	11.86	13.45	15.45
Wood	5.85	6.74	7.78	10.49	12.30	14.62
Redwood or select cedar	11.17	12.33	13.64	16.90	19.00	21.65
Sectional						
Metal	8.35	9.49	10.81	14.20	16.43	19.27
Plastic	8.78	9.72	10.77	13.41	15.11	17.25
Wood	6.87	7.86	9.00	11.97	13.94	16.45
Redwood or select cedar	14.37	15.88	17.59	21.85	24.59	28.05
Add for insulation	1.40	1.55	1.72	2.15	2.43	2.78

WINDOWS

Costs/Sq. Ft. of Window Area

Metal windows						
Double-hung	14.91	16.04	17.29	20.34	22.28	24.73
Casement	15.57	17.11	18.84	23.13	25.88	29.35
Slide-by	10.35	11.51	12.81	16.09	18.20	20.87
Picture, fixed	13.01	14.14	15.40	18.49	20.46	22.95
For double glazed, add 50%						
Vinyl-sash, windows						
Double-hung	17.90	19.25	20.75	24.41	26.73	29.68
Casement	18.68	20.53	22.61	27.76	31.06	35.23
Slide-by	12.42	13.81	15.37	19.30	21.84	25.05
Picture, fixed	15.61	16.97	18.48	22.19	24.56	27.54
For double glazed, add 50%						
Wood windows						
Double-hung, barn sash type	8.81	9.79	10.91	13.70	15.51	17.79
Double-hung	16.62	17.86	19.22	22.56	24.68	27.36
Casement	20.29	22.01	23.93	28.64	31.64	35.42
Slide-by	13.74	14.79	15.96	18.81	20.62	22.91
Picture, fixed	12.53	13.62	14.83	17.81	19.71	22.11
For double glazed, add 50%						
Aluminum storms and screens						
Double-hung or slide-by	7.18	7.69	8.26	9.65	10.53	11.65
Casement	7.66	8.19	8.77	10.19	11.10	12.25
Wood storms and screens						
Double-hung or slide-by	8.08	8.57	9.12	10.45	11.30	12.38
Casement	8.44	8.97	9.56	10.99	11.90	13.06
Bay Windows (cost/sq. ft. of wall area displaced)						
Wood, single-pane, awning	38.74	40.66	42.75	47.88	51.17	55.41
Casement	36.80	38.62	40.62	45.48	48.61	52.64
Double-hung	34.96	36.69	38.59	43.21	46.18	50.01
Insulated glass, wood, awning	58.10	62.57	67.51	79.59	87.27	96.97
Casement	55.20	59.44	64.14	75.61	82.90	92.12
Double-hung	52.44	56.47	60.93	71.83	78.76	87.52
Metal, awning	58.31	62.84	67.86	80.13	87.93	97.79
Casement	55.39	59.70	64.47	76.12	83.54	92.90
Double-hung	52.62	56.71	61.24	72.32	79.36	88.26
Vinyl, awning	64.98	69.51	74.50	86.68	94.41	104.22
Casement	57.99	62.39	67.27	79.18	86.76	96.33
Double-hung	55.09	59.28	63.91	75.23	82.42	91.51

UNIT-IN-PLACE COSTS	D	CD	C	BC	B	A
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ROOF (4" rise in 12" run)

Costs/Sq. Ft. of Ground Area

Roofing

Asphalt singles, 210#	1.38	1.49	1.61	1.91	2.10	2.34
235#	1.66	1.77	1.89	2.18	2.36	2.60
290#	1.75	2.03	2.36	3.22	3.80	4.54
Built-up 2-ply and gravel	1.51	1.64	1.78	2.13	2.35	2.63
Built-up 3-ply and gravel	1.73	1.89	2.07	2.50	2.78	3.13
Cement fiber (Asbestos) shingles	3.16	3.61	4.12	5.46	6.35	7.47
Cement tile	4.21	4.68	5.20	6.53	7.38	8.46
Clay Spanish tile	4.97	5.98	7.20	10.58	12.96	16.08
Copper, flat or standing seam	10.15	11.28	12.56	15.76	17.83	20.45
Batten seam	11.02	12.24	13.62	17.07	19.30	22.11
Roll asphalt roofing	.78	.89	1.02	1.36	1.59	1.88
Slate 3/16" and 1/4"	6.15	6.87	7.69	9.76	11.11	12.81
Slate 3/8"	7.37	8.14	8.99	11.13	12.50	14.23
Terne, flat or standing seam	9.45	10.49	11.67	14.64	16.55	18.96
Batten seam	10.20	11.33	12.60	15.79	17.85	20.45
Wood shingle	2.77	3.07	3.42	4.28	4.84	5.54
Shake	3.00	3.34	3.72	4.68	5.30	6.08
Add for fire-resistant finish	.46	.52	.59	.76	.87	1.01
Felt, 15#	.23	.25	.27	.32	.35	.38

Sheathing

Plywood, 5/16"	1.09	1.13	1.17	1.29	1.36	1.46
3/8"	1.18	1.23	1.29	1.44	1.53	1.65
1/2"	1.32	1.38	1.45	1.62	1.73	1.87
5/8"	1.55	1.63	1.73	1.96	2.10	2.29
OSB (oriented strand board), 3/8"	1.10	1.14	1.18	1.28	1.35	1.45
1/2"	1.23	1.28	1.33	1.46	1.55	1.66
5/8"	1.46	1.53	1.61	1.80	1.93	2.08
Boards, 1" x 6" solid	1.92	2.07	2.23	2.63	2.89	3.21
Boards, 1" x 6" spaced	1.23	1.36	1.50	1.85	2.08	2.37

Rafters

2" x 4", trussed frame	2.34	2.47	2.60	2.94	3.15	3.43
2" x 4", 12" o.c.	2.14	2.24	2.35	2.60	2.77	2.99
16" o.c.	1.73	1.81	1.89	2.10	2.23	2.41
24" o.c.	1.29	1.35	1.41	1.56	1.66	1.79
2" x 6", 12" o.c.	2.55	2.66	2.79	3.09	3.29	3.55
16" o.c.	2.06	2.15	2.25	2.50	2.66	2.87
24" o.c.	1.55	1.62	1.70	1.88	2.00	2.16
2" x 8", 12" o.c.	2.96	3.10	3.24	3.60	3.83	4.12
16" o.c.	2.41	2.52	2.63	2.92	3.11	3.35
24" o.c.	1.79	1.87	1.95	2.17	2.31	2.49
2" x 10", 12" o.c.	3.74	3.91	4.09	4.54	4.83	5.21
16" o.c.	3.05	3.18	3.33	3.70	3.93	4.24
24" o.c.	2.28	2.38	2.49	2.76	2.94	3.17

DORMERS (Per linear foot, measured across face of dormer)

Unfinished area dormer are for attics areas, finished areas are for finished upper floors.

Unfinished areas, gable roof	82.25	92.75	104.50	132.75	149.50	168.50
Hip roof	86.50	97.50	109.75	139.50	157.25	177.25
Shed roof	71.25	80.50	91.25	116.50	131.75	149.00
Finished areas, gable roof	152.50	174.00	198.75	258.75	295.25	337.00
Hip roof	160.25	182.75	208.75	272.00	310.75	354.75
Shed roof	128.75	148.00	170.25	225.25	259.00	298.00

UNIT-IN-PLACE COSTS	D	CD	C	BC	B	A
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Costs/Sq. Ft. of Ground Area

Skylights (per square foot of framed area)

Flat, plain glass or plastic	39.25	41.35	43.65	49.20	52.75	57.25
Wire glass	42.25	44.80	47.55	54.25	58.75	64.25
Pitched, without vent, plain glass or plastic	42.80	45.55	48.55	56.00	60.50	66.50
Wire glass	45.55	49.55	54.00	65.00	72.00	80.75
Pitched, with vent, plain glass or plastic	43.90	48.25	53.25	65.50	73.25	83.25
Wire glass	48.00	53.00	58.50	72.50	81.50	92.75
Plastic domes, fixed, small (under 3 sq. ft.)	54.50	59.75	65.75	80.75	90.25	102.25
Large (over 3 sq. ft.)	40.35	44.20	48.55	59.25	66.25	74.75
Roof windows or vented domes,						
Small (under 3 sq. ft.)	98.25	106.50	116.00	139.00	153.75	172.25
Large (over 3 sq. ft.)	68.75	75.00	82.00	99.50	110.75	124.75
Add for blinds, small (under 3 sq. ft.)	8.10	8.75	9.40	11.05	12.10	13.45
Large (over 3 sq. ft.)	4.65	5.10	5.65	6.95	7.80	8.85
Add for screens, small (under 3 sq. ft.)	13.60	14.15	14.75	16.25	17.20	18.50
Large (over 3 sq. ft.)	10.90	11.35	11.80	13.00	13.80	14.80
Electric controls, each	475.00	490.00	510.00	560.00	590.00	630.00
Each 1'-0" overhang and soffit	1.19	1.28	1.38	1.62	1.77	1.96
Gutters and downspouts	.74	.81	.88	1.06	1.18	1.32

Roof Pitch Adjustment

All roof costs above include an adjustment for a 4" rise in a 12" run. Use these multipliers to adjust for deviations.

Rise in Run	Multiplier
4" in 12"	1.00
5" in 12"	1.03
6" in 12"	1.07
8" in 12"	1.14
10" in 12"	1.24
12" in 12"	1.35
14" in 12"	1.47
16" in 12"	1.56

INTERIOR PARTITIONS AND FINISH

Costs/Sq. Ft. of Partition Area

Ceramic tile	8.52	10.15	12.12	17.50	21.23	26.11
Drywall, 5/8", one side	1.54	1.61	1.67	1.85	1.96	2.10
Two sides	3.08	3.21	3.35	3.69	3.91	4.20
1/2", one side	1.49	1.54	1.59	1.72	1.80	1.92
Two sides	2.98	3.07	3.17	3.43	3.61	3.84
3/8", one side	1.28	1.33	1.38	1.50	1.58	1.69
Two sides	2.56	2.65	2.75	3.00	3.16	3.38
Paint, one coat, one side	.35	.38	.43	.54	.61	.70
One coat, two sides	.69	.77	.86	1.07	1.22	1.39
Two coats, one side	.59	.65	.73	.91	1.04	1.19
Two coats, two sides	1.17	1.31	1.46	1.83	2.07	2.38
Three coats, one side	.83	.92	1.03	1.29	1.46	1.68
Three coats, two sides	1.66	1.84	2.05	2.58	2.93	3.36
Plaster, two coats, one side	2.81	3.05	3.32	3.98	4.40	4.92
Two sides	5.62	6.10	6.64	7.95	8.79	9.85

UNIT-IN-PLACE COSTS	D	CD	C	BC	B	A
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Costs/Sq. Ft. of Partition Area

Plaster, three coats, one side	4.08	4.21	4.35	4.72	4.96	5.28
Two sides	8.16	8.42	8.71	9.43	9.91	10.56
Stained wood finish, two coats, one side	.93	1.00	1.07	1.24	1.36	1.50
Three coats, one side	1.17	1.27	1.37	1.62	1.78	1.99
Stud framing						
2" x 4" wood, 16" o.c.	1.66	1.74	1.84	2.06	2.21	2.40
24" o.c.	1.21	1.26	1.31	1.45	1.53	1.65
4" steel, 16" o.c.	1.86	1.92	1.99	2.17	2.28	2.43
24" o.c.	1.53	1.58	1.64	1.80	1.90	2.03
Wall paper	1.26	1.43	1.62	2.13	2.46	2.88
Interior doors, cost each						
Flush doors	280	300	320	370	405	445
Panel doors	375	400	430	505	555	615
Closet shelving, cost per linear foot	2.29	2.53	2.81	3.49	3.94	4.50
Paneling, lauan	2.43	2.65	2.88	3.42	3.72	4.05
Birch	3.32	3.48	3.65	4.02	4.22	4.42
Oak	3.29	3.59	3.90	4.63	5.04	5.49
Walnut	4.06	4.42	4.81	5.70	6.21	6.76
Trim, hardwood, cost per linear foot	2.42	3.03	3.80	6.05	7.72	9.97
Softwood	1.78	2.01	2.27	2.93	3.36	3.91

FLOOR FINISH

Costs/Sq. Ft. of Floor Area

Asphalt tile	1.98	2.20	2.45	3.08	3.49	4.01
Bamboo, laminated plank	8.79	10.04	11.50	15.27	17.78	20.97
Carpet	1.86	2.52	3.41	6.35	8.75	12.21
Custom	8.52	11.17	14.68	25.66	34.27	46.37
Ceramic tile	8.98	10.59	12.50	17.64	21.17	25.74
Custom	21.62	24.69	28.24	37.42	43.50	51.24
Felt underlay	.29	.32	.35	.44	.50	.58
Hardwood, 1/2"	8.04	9.13	10.38	13.61	15.74	18.44
25/32"	7.98	9.21	10.63	14.37	16.87	20.08
Linoleum	3.18	3.61	4.11	5.39	6.23	7.30
Marble	22.49	27.41	33.48	50.56	62.75	78.92
Parquet block	10.80	12.63	14.80	20.57	24.50	29.56
Rubber tile	3.35	4.12	5.07	7.77	9.72	12.33
Standing and seal for wood floor	1.82	1.99	2.17	2.58	2.82	3.08
Slate	14.05	15.77	17.73	22.70	25.94	30.04
Softwood	6.31	7.03	7.86	9.94	11.29	12.99
Terrazzo	9.55	11.02	12.74	17.25	20.28	24.15
Underlayment, 1/2" plywood	1.34	1.40	1.46	1.61	1.71	1.84
5/8" plywood	1.61	1.68	1.76	1.95	2.07	2.23
Vinyl composition tile	1.70	1.94	2.21	2.90	3.36	3.94
Vinyl inlay	2.54	3.16	3.94	6.21	7.88	10.13
Vinyl tile	2.75	3.40	4.22	6.58	8.29	10.59

UNIT-IN-PLACE COSTS	D	CD	C	BC	B	A
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CEILING

Costs/Sq. Ft. of Ceiling Area

Joists, 2" x 6", 12" o.c.	2.06	2.14	2.22	2.43	2.56	2.74
16" o.c.	1.60	1.66	1.72	1.88	1.99	2.13
24" o.c.	1.11	1.15	1.20	1.31	1.38	1.48
2" x 8", 12" o.c.	2.41	2.50	2.59	2.84	3.00	3.21
16" o.c.	1.90	1.97	2.05	2.24	2.36	2.53
24" o.c.	1.44	1.49	1.55	1.70	1.79	1.92
2" x 10", 12" o.c.	3.05	3.16	3.28	3.59	3.79	4.06
16" o.c.	2.39	2.48	2.57	2.81	2.97	3.18
24" o.c.	1.66	1.72	1.78	1.95	2.06	2.20
2" x 12", 12" o.c.	3.57	3.71	3.85	4.21	4.45	4.76
16" o.c.	2.79	2.90	3.01	3.29	3.48	3.72
24" o.c.	1.96	2.03	2.11	2.31	2.43	2.60
Plaster, two coats	2.89	3.20	3.54	4.41	4.96	5.67
Three coats	3.86	4.24	4.66	5.72	6.40	7.26
Acoustic tile	1.94	2.27	2.66	3.69	4.39	5.29
Drywall, 3/8"	1.78	1.94	2.11	2.52	2.79	3.13
1/2"	1.87	2.03	2.21	2.65	2.94	3.29
Furring						
Metal	1.39	1.61	1.86	2.52	2.96	3.52
Wood	.80	.92	1.07	1.47	1.73	2.07
Hardwood	4.47	5.12	5.87	7.82	9.11	10.76
Coffered/vaulted panel with molding	7.87	9.99	12.72	20.88	27.01	35.41
Paint, one coat flat	.55	.66	.80	1.18	1.45	1.80
Two coats flat	.96	1.12	1.30	1.78	2.11	2.52
Wood, boards or T&G, softwood	2.62	3.02	3.48	4.67	5.47	6.50
Insulation, 4"	.71	.75	.79	.89	.95	1.03
6"	1.00	1.05	1.11	1.25	1.34	1.46
8"	1.27	1.33	1.41	1.59	1.71	1.85
10"	1.53	1.61	1.70	1.92	2.06	2.24
12"	1.78	1.87	1.98	2.23	2.40	2.61

EXCAVATION

Costs/Sq. Ft. of Ground Area

Basement, excavation, 10'-0" deep	1.64	1.79	1.95	2.36	2.61	2.94
9'-0"	1.48	1.61	1.76	2.12	2.35	2.65
8'-0"	1.31	1.43	1.56	1.89	2.09	2.35
7'-4"	1.20	1.31	1.42	1.72	1.91	2.15
7'-0"	1.15	1.25	1.37	1.65	1.83	2.06
Crawl space excavation, 4'-0" deep	.66	.72	.78	.94	1.05	1.18
2'-0"	.33	.36	.39	.47	.52	.59
Pier pits	.41	.45	.49	.59	.65	.73
Trench excavation, 4'-0" deep	1.63	1.70	1.77	1.95	2.07	2.22
2'-0"	.96	1.01	1.05	1.17	1.25	1.35

UNIT-IN-PLACE COSTS	D	CD	C	BC	B	A
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BASEMENT WALLS/FOUNDATIONS AND FOOTINGS

Costs/Sq. Ft. of Wall Area

Basement walls						
Block, concrete, 8" thick	8.82	9.00	9.19	9.72	10.09	10.61
10"	9.82	10.10	10.40	11.19	11.72	12.44
12"	10.71	11.09	11.51	12.55	13.23	14.14
Poured concrete, 6" thick	12.92	13.18	13.48	14.27	14.82	15.61
8"	14.05	14.37	14.73	15.65	16.30	17.20
10"	14.60	15.04	15.54	16.78	17.61	18.73
12"	15.78	16.19	16.64	17.80	18.59	19.67
Add for stay-in-place forming	.52	.65	.81	1.27	1.61	2.06
Treated wood, 2" x 4" studs	5.67	5.87	6.08	6.62	6.97	7.45
2" x 6"	6.64	6.82	7.01	7.52	7.86	8.32
Footings, cost per linear foot						
8" x 16"	14.89	15.54	16.24	17.96	19.08	20.53
8" x 18"	15.68	16.35	17.09	18.91	20.08	21.62
8" x 20"	16.20	16.87	17.60	19.40	20.57	22.11
8" x 24"	17.24	17.90	18.62	20.39	21.55	23.09
10" x 20"	18.03	18.72	19.48	21.35	22.58	24.19
10" x 24"	19.86	20.57	21.36	23.30	24.58	26.28
12" x 24"	22.27	23.04	23.88	25.98	27.37	29.21
Drain tile, cost per linear foot, one side	6.76	7.02	7.30	8.00	8.46	9.06
two sides	11.82	12.53	13.31	15.20	16.40	17.94
Perimeter insulation, cost/sq. ft.	1.09	1.29	1.53	2.17	2.61	3.18
Piers, block, cost per linear foot	13.91	14.64	15.43	17.37	18.60	20.19
Sill plate, cost per linear foot	2.16	2.46	2.80	3.69	4.28	5.02
Waterproofing, cost per sq. ft. of wall	.69	.93	1.25	2.30	3.15	4.37

BASEMENT FLOOR

Costs/Sq. Ft. of Floor Area

Concrete floor, 2" thick, raked finish	2.29	2.34	2.39	2.54	2.64	2.78
3"	2.72	2.79	2.86	3.05	3.18	3.36
3" thick, trowel finish	2.86	2.94	3.03	3.25	3.40	3.61
4"	3.35	3.42	3.50	3.71	3.86	4.06
5"	3.94	4.01	4.10	4.33	4.50	4.73
6"	4.49	4.57	4.66	4.91	5.09	5.35
Gravel base, 4"	.62	.64	.66	.71	.75	.80
6"	.89	.92	.96	1.05	1.11	1.19
Terrazzo on 3" concrete	12.41	13.71	15.17	18.82	21.17	24.13
Vapor barrier	.21	.22	.24	.27	.29	.32
Wire mesh reinforcing	.40	.45	.51	.65	.75	.86

FLOOR CONSTRUCTION

Costs/Sq. Ft. of Floor Area

Subfloor						
Common board, 1" x 6"	1.67	1.77	1.87	2.13	2.29	2.50
Plywood, 3/8"	1.13	1.18	1.23	1.37	1.46	1.57
1/2"	1.34	1.39	1.45	1.60	1.70	1.82
3/4"	1.66	1.74	1.82	2.02	2.15	2.32
Felt underlay	.37	.39	.43	.50	.55	.61

UNIT-IN-PLACE COSTS	D	CD	C	BC	B	A
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Costs/Sq. Ft. of Wall Area

Wood joists, 2" x 6", 12" o.c.	1.84	1.92	2.01	2.23	2.37	2.55
16" o.c.	1.67	1.75	1.83	2.03	2.16	2.32
24" o.c.	1.11	1.16	1.22	1.35	1.44	1.55
2" x 8", 12" o.c.	2.15	2.25	2.36	2.63	2.81	3.03
16" o.c.	1.95	2.05	2.15	2.39	2.55	2.76
24" o.c.	1.30	1.36	1.43	1.59	1.70	1.83
2" x 10", 12" o.c.	2.53	2.69	2.87	3.30	3.58	3.93
16" o.c.	2.30	2.45	2.61	3.00	3.26	3.57
24" o.c.	1.53	1.63	1.74	2.00	2.17	2.38
2" x 12", 12" o.c.	3.03	3.23	3.44	3.95	4.27	4.68
16" o.c.	2.76	2.93	3.12	3.59	3.88	4.26
24" o.c.	1.84	1.95	2.08	2.39	2.59	2.84
Bridging	.28	.29	.30	.33	.35	.38
Steel I-beam, 6"	.63	.65	.67	.72	.75	.79
8"	.70	.71	.73	.78	.82	.87
10"	.86	.88	.90	.97	1.01	1.07
Wood beams	.43	.43	.44	.46	.48	.50
Steel posts, 3" diameter	.26	.27	.28	.31	.32	.34
4" diameter	.32	.32	.33	.35	.37	.39
Wood posts	.21	.21	.22	.24	.25	.26
Slab on grade, concrete, 4" thick	3.49	3.61	3.74	4.06	4.27	4.56
5"	3.92	4.05	4.18	4.53	4.75	5.06
6"	4.36	4.49	4.63	4.99	5.23	5.56
Gravel base, 4"	.62	.64	.66	.71	.75	.80
6"	.89	.92	.96	1.05	1.11	1.19
Sleepers, 1" x 2"	.71	.84	.98	1.37	1.64	1.98
Insulation additive for crawl space	.52	.64	.78	1.18	1.46	1.84
Vapor barrier, polyethylene	.19	.21	.22	.26	.29	.32

HEATING AND AIR CONDITIONING

Costs/Sq. Ft. of Living Area

Heating systems						
Forced warm air, with return ducts	3.31	3.65	4.03	4.97	5.58	6.34
Without return ducts	2.60	2.92	3.29	4.24	4.85	5.63
Forced hot water/steam	5.73	6.29	6.92	8.47	9.47	10.72
Electric wall heaters, baseboard type	2.96	3.24	3.56	4.34	4.83	5.46
Electric ceiling, radiant	2.69	2.91	3.15	3.73	4.10	4.57
Electric wall heaters	1.43	1.54	1.65	1.94	2.12	2.35
Radiant (in-floor) heating	5.78	6.43	7.16	8.99	10.18	11.67
Space heaters	1.34	1.52	1.73	2.26	2.60	3.04
Wall or floor furnace, no ducts	1.62	1.72	1.84	2.13	2.31	2.54
Heating and cooling combined systems						
Forced air, same ducts	7.86	8.48	9.31	11.24	12.48	14.11
Heat pump	6.15	6.77	7.59	9.51	10.72	12.31
Wood burner integrated with furnace, add	1,450	1,675	1,900	2,550	2,975	3,525
Exterior furnace	5,100	6,075	7,275	10,600	12,800	15,750
Cooling only with separate ducts	5.45	5.88	6.37	7.66	8.56	9.83
Solar for space and hot water system (costs per sq. ft. of collector area)						
Fluid system	98.00	106.50	116.50	140.50	156.00	175.50
Other collectors	49.00	53.00	57.50	68.50	75.50	84.50
Air system	94.50	102.50	111.50	133.00	146.50	164.00

UNIT-IN-PLACE COSTS	D	CD	C	BC	B	A
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Costs/Sq. Ft. of Wall Area

Storage wall, concrete, cost/sq. ft. area	15.26	15.90	16.60	18.32	19.43	20.89
Block	9.73	10.22	10.75	12.06	12.90	13.98
Floor, pavers	8.51	9.66	10.99	14.39	16.63	19.48
Quarry tile	9.80	11.36	13.18	18.00	21.23	25.38
Tanks, storage, LP gas, 125 gallons	875	900	925	975	1,025	1,075
250 gallons	1,175	1,200	1,225	1,300	1,350	1,425
500 gallons	1,700	1,725	1,775	1,875	1,950	2,050
1,000 gallons	3,000	3,075	3,125	3,325	3,450	3,625
Fuel oil, 275 gallons	875	925	975	1,075	1,125	1,225

Costs are for gas-fired systems. For oil-fired, add 7% plus storage tank.

Note: The assessor should analyze whether the added cost of oil heat contributes to the value.

ELECTRIC LIGHTING SYSTEMS

Costs/Sq. Ft. of Living Area

60-amp. system, Romex	3.98	4.35	4.76	5.77	6.41	7.23
BX	4.68	5.11	5.59	6.78	7.54	8.50
Conduit	5.50	6.01	6.58	7.97	8.87	9.99
100-amp. system	4.80	5.24	5.73	6.95	7.73	8.71
BX	5.65	6.17	6.75	8.18	9.10	10.26
Conduit	6.66	7.27	7.96	9.65	10.73	12.09
150-amp. system	5.29	5.78	6.32	7.66	8.52	9.60
BX	6.23	6.81	7.45	9.03	10.04	11.32
Conduit	7.35	8.03	8.79	10.66	11.85	13.35
200-amp. system	5.78	6.31	6.91	8.38	9.31	10.50
BX	6.82	7.44	8.15	9.88	10.98	12.38
Conduit	8.05	8.79	9.62	11.67	12.97	14.62
Unfinished Area:						
Nonmetallic	1.64	1.82	2.02	2.52	2.84	3.25
BX	1.97	2.18	2.41	3.00	3.38	3.86
Conduit	2.90	3.19	3.51	4.31	4.83	5.48

Garage lighting, \$220 to \$715 per garage.

PLUMBING

Costs Each

Bathtub, no shower, white	765	965	1,225	2,000	2,575	3,350
Colored	915	1,135	1,405	2,175	2,750	3,525
Fiberglass	720	895	1,120	1,775	2,250	2,900
With shower, white	980	1,215	1,520	2,395	3,035	3,895
Colored	1,130	1,385	1,695	2,575	3,210	4,050
Fiberglass	1,420	1,650	1,900	2,600	3,075	3,700
Sink, countertop, white	475	570	695	1,030	1,270	1,580
Colored	540	640	765	1,105	1,340	1,645
Wall hung, white	565	675	800	1,150	1,390	1,705
Colored	690	800	925	1,260	1,480	1,770
Shower stall, ceramic tile	1,225	1,385	1,565	2,025	2,325	2,710
Fiberglass	765	870	995	1,325	1,525	1,800
Toilet, white	785	935	1,115	1,605	1,945	2,400
Colored	920	1,085	1,275	1,790	2,145	2,600
Electric, incinerator type	2,395	2,540	2,695	3,075	3,320	3,625
Composting	2,590	2,810	3,060	3,665	4,050	4,525
Ceramic tile, tub alcove	465	510	560	675	755	850
Wainscoting, per room	1,400	1,530	1,675	2,030	2,260	2,545
Marble, tub alcove	2,545	3,065	3,690	5,430	6,650	8,255
Wainscoting, per room	8,530	9,930	11,580	15,950	18,900	22,700

UNIT-IN-PLACE COSTS	D	CD	C	BC	B	A
Costs Each						
Kitchen sink, one compartment, white	590	650	720	885	990	1,130
Colored	650	710	780	945	1,055	1,190
Steel	680	745	815	995	1,110	1,255
Two compartments, white	720	835	965	1,310	1,545	1,850
Colored	755	875	1,015	1,385	1,625	1,950
Steel	655	785	940	1,375	1,650	2,050
Laundry tub, one compartment	435	500	575	765	895	1,060
Two compartments	545	630	730	995	1,175	1,405
Water heater, gas, 30-gallon	780	830	885	1,020	1,110	1,220
40-gallon	820	880	945	1,105	1,205	1,335
50-gallon	880	955	1,035	1,230	1,355	1,510
Electric, 30-gallon	700	745	795	920	995	1,095
40-gallon	740	795	850	995	1,085	1,200
52-gallon	865	935	1,010	1,205	1,325	1,480
80-gallon	1,295	1,375	1,465	1,675	1,825	2,000
Solar with 100-gallon tank	4,800	5,325	5,925	7,400	8,350	9,550
Floor drain	385	445	515	700	825	985
Rough-in	405	445	495	610	690	785
Sump pump	490	545	605	765	865	995

WATER AND WASTE DISPOSAL

Costs Each						
Municipal connections, including trench, pipe, tap and fees (40-foot setback)	1,750	1,975	2,225	2,850	3,275	3,800
Well system, 50 feet deep	1,860	1,925	2,000	2,175	2,300	2,450
100 feet	4,100	4,200	4,325	4,650	4,875	5,175
150 feet	6,050	6,225	6,400	6,875	7,200	7,625
200 feet	7,450	7,725	8,000	8,725	9,200	9,825
Septic system, 1000-sq. ft. bed						
1000-gallon tank	3,120	3,330	3,560	4,125	4,475	4,925
1500-gallon tank	4,950	5,225	5,525	6,250	6,725	7,300
2000-gallon tank	6,275	6,675	7,075	8,100	8,725	9,550
Septic system, mound type, 1000-sq. ft. bed						
1000-gallon tank	3,425	3,700	3,975	4,675	5,100	5,675
1500-gallon tank	5,450	5,800	6,175	7,075	7,675	8,400
2000-gallon tank	6,900	7,400	7,900	9,175	9,950	10,975
Grinder pump system, add	5,600	6,450	7,450	10,050	11,800	14,050

BUILT-IN UNITS

Costs as Shown						
Kitchen cabinet, cost per linear foot						
Base, with laminated plastic counter top						
Softwood	100	122	149	225	280	350
Hardwood	185	210	235	310	355	415
Hardwood veneer	125	150	180	260	315	390
Laminated plastic veneer	110	133	160	235	290	360
Ceramic tile counter top, add	30	32	35	42	46	52
Linoleum counter top, deduct	8	10	11	15	17	20
Marble or granite counter top, add	106	119	132	167	190	219
Solid plastic counter top, add	80	77	75	71	69	69

UNIT-IN-PLACE COSTS	D	CD	C	BC	B	A
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Costs as Shown

Wall mounted, 18"						
Softwood	61	68	75	92	103	117
Hardwood	124	131	138	155	170	185
Hardwood veneer	93	98	103	116	124	135
Laminated plastic veneer	77	82	90	104	113	126
Wall mounted, 30"						
Softwood	73	80	88	109	122	139
Hardwood	146	155	160	185	195	215
Hardwood veneer	109	115	121	137	145	160
Laminated plastic veneer	86	93	100	119	131	145
China cabinet, 80" high, corner type	760	830	910	1,105	1,225	1,380
Medicine cabinet, cost each	190	230	280	420	520	650
Vanity cabinet, cost each	240	305	390	650	850	1,125
Fireplace, cost each						
Inside chimney, one-story	3,075	3,500	3,975	5,150	5,875	6,675
Two-story	3,875	4,375	4,950	6,325	7,150	8,100
Add for second fireplace, same stack	2,625	2,925	3,250	4,025	4,500	5,000
Two-sided fireplace	4,450	5,050	5,700	7,300	8,275	9,350
Outside chimney, one-story	3,700	4,250	4,850	6,350	7,275	8,300
Two-story	4,625	5,250	5,975	7,700	8,775	9,975
Add for second fireplace, same stack	2,625	2,925	3,250	4,025	4,500	5,000
Prefabricated fireplace	1,370	1,630	1,930	2,730	3,250	3,870
Pellet or corn cob stoves	2,575	2,875	3,200	3,975	4,425	4,925
Heat-circulating device	385	445	515	690	795	920
Direct vented (no chimney) gas fireplace	1,555	1,875	2,250	3,275	3,925	4,725
Chimney, inside, furnace, cost per lin. ft.						
Common brick with liner, 16" x 16"	144.50	163.00	184.00	237.50	272.50	317.00
16" x 20"	163.00	183.50	207.00	267.00	306.00	355.50
Concrete block with liner, 16" x 16"	117.50	131.50	147.00	186.00	211.50	244.00
16" x 20"	135.50	151.00	168.00	211.00	239.00	274.50
Metal, single-wall	32.00	35.45	39.30	48.95	55.15	62.95
Double-wall	37.05	41.20	45.95	57.75	65.35	75.00
Triple-wall	50.00	55.35	61.40	76.50	86.20	98.50
Custom fireplace, cost each						
Inside chimney, one-story	9,575	10,425	11,350	13,475	14,675	16,000
Two-story	11,350	12,275	13,300	15,600	16,875	18,275
Add for second fireplace, same stack	4,775	5,225	5,675	6,750	7,350	8,000
Two-sided fireplace	12,450	13,550	14,775	17,525	19,075	20,800
Outside chimney, one-story	12,300	13,500	14,825	17,825	19,550	21,450
Two-story	14,700	16,100	17,650	21,150	23,175	25,375
Add for second fireplace, same stack	4,775	5,225	5,675	6,750	7,350	8,000
Direct vented (no chimney) gas fireplaces	3,950	4,475	5,050	6,475	7,325	8,275
Stairs, second floor, with balustrade	1,270	1,540	1,880	2,820	3,490	4,375
Partial balustrade	1,080	1,325	1,625	2,490	3,110	3,940
Custom stairs, curved or floating	16,300	20,950	27,050	45,600	59,750	79,500
Attic	1,110	1,200	1,300	1,545	1,705	1,900
Attic, disappearing, manual	550	685	850	1,330	1,680	2,155
Motorized	10,350	10,825	11,325	12,550	13,350	14,400
Basement, open riser	620	710	810	1,050	1,200	1,370
Closed riser	1,065	1,220	1,405	1,850	2,130	2,445
Range, drop-in, each						
With standard oven	700	810	945	1,270	1,470	1,705
With self-cleaning oven	910	1,080	1,285	1,815	2,155	2,560
Custom	3,825	4,300	4,825	6,075	6,825	7,650
Cooktop, countertop, four burners	370	465	580	905	1,135	1,415
With self-venting grille (Jenn Air)	615	755	930	1,405	1,730	2,125

UNIT-IN-PLACE COSTS	D	CD	C	BC	B	A
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Costs as Shown

Oven, built-in	660	815	1,000	1,515	1,865	2,295
Double	1,225	1,495	1,820	2,700	3,290	4,010
Microwave	165	230	315	605	840	1,165
Microwave combination	1,750	1,960	2,190	2,745	3,070	3,435
Custom double-wall	2,200	2,850	3,750	6,400	8,375	10,950
Refrigerator/freezer, built-in	575	760	1,005	1,760	2,330	3,085
Deluxe	3,025	3,625	4,325	6,125	7,300	8,700
Icemaker	625	715	815	1,070	1,225	1,400
Dishwasher, built-in	385	470	580	875	1,075	1,320
Deluxe	1,380	1,545	1,735	2,175	2,440	2,735
Garbage disposal	135	160	195	270	325	385
Deluxe, heavy duty	410	460	510	640	715	800
Heater, bathroom, without fan	125	145	160	210	235	270
With fan	180	205	235	300	340	390
Hood, range, unvented	170	205	245	355	425	515
Vented	305	360	425	595	700	825
Custom, stainless steel or copper	2,190	2,785	3,545	5,740	7,310	9,300
Hot tub, with whirlpool, built-in	4,345	4,885	5,505	7,080	8,110	9,410
Intercom system, master station	450	510	580	755	860	980
Satellite	95	105	120	140	155	170
Jacuzzi tub	4,345	5,170	6,160	8,855	10,725	13,165
Sauna with heater and controls	3,175	3,960	4,945	7,705	9,620	12,010
Skylight, costs per square foot	65	70	80	100	115	130
Smoke detector, each	125	140	155	190	215	240
Trash compactor	545	600	660	800	880	970
Vacuum, central system	1,750	1,845	1,945	2,165	2,285	2,405
Vent fan, bathroom	125	150	185	265	320	390
Kitchen	125	150	185	265	320	390
Attic	500	555	620	770	860	955
Whole house	1,030	1,110	1,195	1,390	1,495	1,615
Water softener, automatic, 25,000-grain	1,690	1,730	1,765	1,845	1,885	1,925
50,000-grain	1,835	1,875	1,920	2,010	2,055	2,100
75,000-grain	1,900	1,950	2,005	2,110	2,165	2,220
100,000-grain	1,970	2,025	2,085	2,210	2,275	2,340
Manual, 25,000-grain	1,050	1,100	1,150	1,275	1,350	1,475
50,000-grain	1,250	1,300	1,350	1,475	1,550	1,675
75,000-grain	1,325	1,400	1,450	1,625	1,750	1,900
125,000-grain	1,550	1,600	1,700	1,875	2,000	2,150
Wet bar	650	700	775	925	1,025	1,125
Deluxe	1,300	1,550	1,850	2,725	3,325	4,125
Wood-burning stove, freestanding	1,325	1,600	1,900	2,750	3,350	4,100
Fireplace insert	1,375	1,650	2,000	2,900	3,525	4,350

UNIT-IN-PLACE COSTS	D	CD	C	BC	B	A
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Costs as Shown

SECURITY ALARM SYSTEMS

Audio/video entry systems	2,970	3,505	4,150	5,885	7,080	8,625
Home automation systems	2,885	3,260	3,690	4,785	5,500	6,410
Residential security systems, wireless	915	1,195	1,565	2,730	3,635	4,915
Hard-wired	2,540	3,015	3,590	5,150	6,230	7,635
Sensors						
Point-area detectors (per opening)						
Alarm glass (wired)	105	120	135	175	200	235
Screen (burglarproof, wired)	105	135	170	270	345	450
Photoelectric, beam interrupt	455	525	605	815	950	1,130
Field of view changes	15	20	25	55	80	115
Stress detectors, floor						
Pressure mat	105	135	170	270	345	450
Trip or pull switches (wire trap)						
Mercury	115	125	145	185	210	245
Self-contained (battery)	55	60	70	90	100	115
Vibration detectors						
Mercury	60	70	85	120	140	170
Volume detectors						
Motion detectors, infrared						
Microwave	70	100	135	255	355	500
Ultrasonic	120	150	185	300	385	500
Self-contained (battery)	120	145	180	280	355	450
Sound detectors, sensing units						
Remote monitoring	120	150	185	300	385	500
Remote monitoring	975	1,290	1,715	3,060	4,130	5,650
Annunciators						
Alarms, local, residential						
Bells	105	120	135	175	200	235
Buzzers	15	15	15	20	25	25
Horns	50	65	85	145	190	250
Sirens	50	65	85	145	190	250
Lights						
Lights	105	120	135	175	200	235
Control units (transmission/display)						
Control panel						
Control panel	390	430	475	580	645	730
Remote annunciator						
Remote annunciator	215	255	310	450	550	680
Add for: electrical switch locks						
Add for: electrical switch locks	155	195	250	405	520	680
Remote transmitters, each						
Remote transmitters, each	55	60	65	70	80	85
Stand-by power, battery						
Stand-by power, battery	25	35	50	105	155	230

LAND IMPROVEMENTS	D	CD	C	BC	B	A
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DRIVEWAYS AND WALKS

Costs/Sq. Ft.

Asphalt paving	2.01	2.15	2.31	2.69	2.93	3.24
Sealer, two coats	2.21	2.39	2.58	3.06	3.36	3.74
Concrete, plain, 3-1/2" thick	4.30	4.59	4.90	5.65	6.13	6.74
4"	4.51	4.83	5.19	6.07	6.62	7.32
Reinforced, 4"	4.92	5.47	6.09	7.64	8.64	9.91
5"	5.33	5.95	6.66	8.45	9.60	11.07
Crushed rock	1.57	1.63	1.69	1.85	1.95	2.09

TERRACE OR PATIO

Costs/Sq. Ft.

Brick	11.33	12.32	13.42	16.13	17.85	20.03
Concrete patio blocks	9.75	10.63	11.62	14.05	15.61	17.56
Flagstone	12.75	14.11	15.64	19.46	21.92	25.03

WOOD DECKS

Costs/Sq. Ft.

(includes decking, railings, girder, joists, posts and footings)

Pressure-treated wood, 12 sq. ft.	37.55	38.30	39.10	41.35	42.95	45.20
25 sq. ft.	32.65	33.30	34.00	35.95	37.35	39.30
50 sq. ft.	24.10	24.60	25.20	26.70	27.80	29.30
100 sq. ft.	17.45	17.90	18.35	19.50	20.35	21.50
200 sq. ft.	14.20	14.50	14.85	15.85	16.50	17.40
500 sq. ft.	10.35	10.60	10.85	11.50	12.00	12.65
Regular (pine or similar), 12 sq. ft.	30.00	30.60	31.30	33.10	34.35	36.15
25 sq. ft.	26.10	26.60	27.20	28.75	29.90	31.45
50 sq. ft.	19.25	19.70	20.15	21.35	22.20	23.40
100 sq. ft.	13.95	14.30	14.65	15.60	16.25	17.20
200 sq. ft.	11.35	11.60	11.90	12.65	13.20	13.90
500 sq. ft.	8.25	8.45	8.65	9.20	9.60	10.15
Redwood or cedar, 12 sq. ft.	44.05	44.95	46.00	48.75	50.65	53.40
25 sq. ft.	35.20	35.95	36.80	39.00	40.55	42.70
50 sq. ft.	26.75	27.35	28.05	29.90	31.15	32.90
100 sq. ft.	20.70	21.20	21.75	23.15	24.15	25.50
200 sq. ft.	17.15	17.55	18.05	19.25	20.05	21.20
500 sq. ft.	12.90	13.25	13.60	14.55	15.15	16.05
Vinyl, 12 sq. ft.	46.25	47.90	49.80	54.40	57.40	61.40
25 sq. ft.	40.50	41.35	42.30	44.85	46.60	49.10
50 sq. ft.	30.75	31.45	32.30	34.35	35.80	37.85
100 sq. ft.	23.80	24.35	25.00	26.65	27.75	29.35
200 sq. ft.	19.70	20.20	20.75	22.10	23.05	24.40
500 sq. ft.	14.85	15.25	15.65	16.70	17.45	18.45
Wood polymer composite, 12 sq. ft.	39.05	39.80	40.70	43.00	44.70	47.00
25 sq. ft.	33.95	34.60	35.35	37.40	38.85	40.90
50 sq. ft.	25.05	25.60	26.20	27.80	28.90	30.45
100 sq. ft.	18.15	18.60	19.05	20.30	21.15	22.35
200 sq. ft.	14.75	15.10	15.45	16.45	17.15	18.10
500 sq. ft.	10.75	11.00	11.30	12.00	12.50	13.15

LAND IMPROVEMENTS	D	CD	C	BC	B	A
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RETAINING WALLS

**Costs/Sq. Ft. of Wall Area
(includes footings)**

Block, reinforced, 6"	9.75	10.92	12.26	15.65	17.85	20.64
8"	10.81	12.17	13.73	17.69	20.28	23.56
Block w/ pilaster, reinforced, 8"	11.35	12.78	14.42	18.58	21.29	24.74
Brick, 8" thick	18.12	20.17	22.48	28.30	32.06	36.81
12" thick	23.22	25.99	29.14	37.09	42.25	48.78
Precast, 8" nonretaining	7.05	7.72	8.46	10.31	11.49	12.97
Retaining	11.54	12.56	13.69	16.48	18.26	20.51

LANDSCAPING

Costs as Shown

Soil preparation, per sq. ft.						
Fine grading	.17	.19	.22	.30	.35	.42
Mulching	.25	.31	.37	.56	.68	.85
Top dressing or bedding	2.52	2.69	2.87	3.31	3.59	3.95
Lawns, per sq. ft., seeding	.31	.35	.39	.50	.58	.67
Sodded	.57	.68	.82	1.18	1.44	1.77
Ground cover, per sq. ft.						
Gravel/wood chip	1.84	2.01	2.20	2.65	2.95	3.31
Spreading plants	.59	.72	.88	1.34	1.66	2.09
Edging redwood, per lin. ft.	2.51	2.80	3.12	3.94	4.47	5.14
Shrubs and hedges, each, small	15.00	16.65	18.50	23.20	26.20	30.00
Medium	35.75	40.40	45.75	59.40	68.35	79.70
Large	111.30	124.25	139.05	176.30	200.45	230.95
Trees, each						
Small, 15-gallon, 20" box	100	125	160	250	315	405
Medium, 24" to 36" box	435	510	605	855	1,025	1,245
Large, 42" box and larger	1,100	1,315	1,575	2,275	2,765	3,405

FENCES

Cost/Lin. Ft.

Vinyl fencing						
Spaced slat panels						
6'	23.11	25.82	28.92	36.72	41.79	48.20
4' – 5'	22.01	24.37	27.03	33.68	37.97	43.38
Basketweave, 5'	32.00	34.81	37.93	45.62	50.52	56.70
Solid board panels						
6'	24.88	27.62	30.73	38.52	43.55	49.90
4' – 5'	22.90	25.40	28.23	35.31	39.88	45.64
Add for lattice top	4.87	5.25	5.66	6.68	7.33	8.14
Picket, 36" – 48" high	15.51	17.12	18.94	23.47	26.38	30.05
Lattice, framed 24" – 50" high	8.52	9.56	10.75	13.76	15.72	18.20
Two rails, 36" – 48" high	10.77	11.53	12.37	14.41	15.71	17.35
Three rails, 60" high	13.74	14.48	15.28	17.25	18.51	20.13
Four rails, 60" high	14.36	15.33	16.38	18.96	20.60	22.68
Lattice, arbor, per sq. ft.	4.63	5.26	5.98	7.83	9.05	10.60
Trellis (no frame)	1.11	1.22	1.35	1.66	1.86	2.11

LAND IMPROVEMENTS	D	CD	C	BC	B	A
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Costs/Lin. Ft.

Wood fencing						
Solid board, horizontal or vertical, 6'	20.24	21.76	23.44	27.55	30.16	33.45
5'	18.47	19.78	21.22	24.72	26.95	29.77
Split redwood/grape stake, 6'	19.93	21.57	23.40	27.87	30.71	34.30
5'	18.79	20.15	21.66	25.33	27.66	30.62
Basketweave, 6'	23.78	25.36	27.10	31.32	34.01	37.42
5'	23.11	24.50	26.03	29.76	32.13	35.15
Wood picket, 12" to 24"	10.88	11.84	12.92	15.57	17.26	19.39
30" – 40"	14.36	15.39	16.52	19.28	21.03	23.25
Split, two-rail, 24" to 36" high	10.01	10.66	11.38	13.13	14.24	15.65
Three-rail, 36" to 48" high	11.03	11.79	12.62	14.65	15.94	17.58
Four-rail, 42" to 54" high	13.48	14.45	15.53	18.16	19.83	21.94
Wooden gates, per sq. ft.	10.82	11.65	12.56	14.78	16.19	17.97
Paint, per sq. ft., per coat	.41	.43	.46	.53	.58	.64

CHAIN LINK FENCES

Costs/Sq. Ft.

Mesh, 2", #9 wire	2.73	2.78	2.82	2.96	3.06	3.20
#11 wire	2.35	2.39	2.43	2.55	2.64	2.77
Add for rails	2.26	2.29	2.34	2.45	2.54	2.66
Add for three-strand barbed wire	2.93	3.00	3.07	3.27	3.40	3.59
Gates, 3' wide	265	285	305	360	395	435
5' wide	345	395	445	580	670	780
10' wide	575	635	710	885	995	1,140
15' wide	720	805	900	1,135	1,285	1,480

METAL FENCES AND GRILLS

Costs/Sq. Ft.

Hand-forged wrought iron	7.32	8.84	10.69	15.83	19.46	24.23
Modular, steel or aluminum	11.01	12.84	14.99	20.71	24.57	29.55

LAWN SPRINKLERS

Costs/Sq. Ft.

Conventional	.65	.72	.80	1.01	1.14	1.30
Rainbird or Rain Jet systems	.42	.45	.48	.55	.59	.65
For automatic control, add per station	159.00	166.50	175.00	195.25	208.25	225.25

SWIMMING POOLS

**Costs/Sq. Ft. Surface Area
(including filter, diving board, steps and ladder)**

Gunite pool						
Surface area: 200 sq. ft.	91.95	97.15	102.85	116.70	125.55	136.90
400 sq. ft.	60.60	64.25	68.25	78.00	84.20	92.15
600 sq. ft.	48.10	51.40	55.05	63.95	69.55	76.70
800 sq. ft.	40.05	42.65	45.50	52.40	56.80	62.40
Poured concrete pool, in ground						
Surface area: 200 sq. ft.	105.70	114.00	123.20	145.65	159.95	177.95
400 sq. ft.	69.65	75.40	81.75	97.35	107.25	119.75
600 sq. ft.	55.35	60.35	65.95	79.80	88.60	99.75
800 sq. ft.	50.05	53.65	57.60	67.25	73.40	81.15

LAND IMPROVEMENTS	D	CD	C	BC	B	A
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**Costs/Sq. Ft. Surface Area
(including filter, steps and ladder)**

Fiberglass pool, in ground						
Surface area: 200 sq. ft.	78.15	82.55	87.40	99.20	106.75	116.35
400 sq. ft.	51.50	54.60	58.00	66.30	71.55	78.30
600 sq. ft.	40.90	43.70	46.80	54.35	59.15	65.20
800 sq. ft.	34.05	36.25	38.65	44.55	48.30	53.05
Plastic-lined pool, in ground						
Surface area: 200 sq. ft.	75.85	78.35	81.15	88.05	92.60	98.75
400 sq. ft.	49.80	51.15	52.65	56.45	59.05	62.55
600 sq. ft.	39.70	40.60	41.65	44.35	46.20	48.80
800 sq. ft.	32.80	33.50	34.25	36.30	37.75	39.75
Pool accessories						
Deduct for lack of filter	685	760	845	1,055	1,190	1,365
Add for diving board	635	715	805	1,030	1,175	1,365
Add for heater	1,410	1,700	2,050	3,000	3,675	4,550
Chlorinator	125	200	310	775	1,230	1,985
Hydrosweep	710	920	1,195	2,045	2,695	3,610
Attached whirlpool bath (portable type, including hot tubs)	6,950	7,725	8,625	10,900	12,350	14,200
Separate whirlpool bath, (4–10 persons)	9,425	11,225	13,350	19,200	23,250	28,525

GAZEBOS

**Typical cost each
(8' to 20' wood units including minimal foundation but excluding floors)**

Standard	3,500	4,625	6,125	10,925	14,725	20,100
Deluxe	16,250	19,250	23,000	32,750	39,500	48,500

BOAT DOCKS

**Costs/Sq. Ft.
(including fenders and railings)**

Decking, light posts, 2"	28.88	30.49	32.26	36.55	39.29	42.81
Light piling, 3"	33.05	35.54	38.30	45.03	49.31	54.72

SHEDS

**Costs/Sq. Ft.
(excluding permanent foundation or slab and electrical. Includes entry doors with some windows in better qualities). Exterior wall height is 8'. For loft/barn (gambrel), add 10 to 15%.**

Wood frame, 40 sq. ft.						
100 sq. ft.	23.16	25.99	29.22	37.41	42.74	49.49
200 sq. ft.	17.02	19.09	21.47	27.48	31.40	36.36
300 sq. ft.	14.55	16.33	18.36	23.50	26.85	31.10
400 sq. ft.	13.94	15.65	17.59	22.52	25.73	29.79
Metal prefabricated, 40, sq. ft.						
100 sq. ft.	13.32	15.76	18.68	26.60	32.05	39.14
200 sq. ft.	9.78	11.58	13.73	19.54	23.55	28.75
300 sq. ft.	8.37	9.90	11.74	16.71	20.14	24.59
400 sq. ft.	8.02	9.49	11.25	16.01	19.29	23.56
400 sq. ft.	7.66	9.06	10.75	15.30	18.44	22.52

GREEN ADDITIONS

CONCRETE

Concrete can contribute Green credits by being a regional material or by being recycled. Concrete within the building envelope needs to come from within 500 miles and contain post consumer recycled material. The specific credit is dependent on the amount of the recycled content.

Costs Each

Insulated concrete, Form-in-place, Expanded polystyrene, Straight, 9-1/4"x 48"x 16", 4" core	\$33.50
Corner, 9-1/4"x 60"x 16", 4" core	40.00
Angle, 9-1/4"x 52"x 16", 4" core	38.75
Insulated concrete, Form-in-place, Expanded polystyrene, Straight, 11-1/4"x 48"x 16", 6" core	33.75
Corner, 11-1/4"x 56"x 16", 6" core	39.25
Angle, 11-1/4"x 44"x 16", 6" core	36.00
Tee, 11-1/4"x 44"x 16", 6" core	38.00
Insulated concrete, Form-in-place, Expanded polystyrene, Straight, 13-1/4"x 48"x 16", 8" core	35.00
Corner, 13-1/4"x 60"x 16", 8" core	41.75
Angle, 13-1/4"x 60"x 16", 8" core	40.25
Tee, 13-1/4"x 44"x 16", 8" core	39.50

Costs/Sq. Ft.

Insulated concrete, Form-in-place, Reinforced, Expanded polystyrene form, 3,000 psi, 4" thick core	\$ 13.25
3,000 psi, 6" thick core	14.85
4,000 psi, 8" thick core	16.40
Concrete countertop, Cast-in place, Recycled materials, 1-1/2" thick	20.40
2" thick	27.25
Concrete countertop, Pre-cast, Various recycled materials, 1-1/2" thick	160.00
Glass Chips, Various recycled materials, 1-1/4" thick	190.00
Paper Fiber, Various recycled materials, 1-1/8" thick	225.00
Concrete slab on grade, Cast-in-place, With welded wire fabric, Recycled content, 3,000 psi, 4" thick	4.42
5" thick	5.26
6" thick	5.69
Concrete slab, Elevated, Cast-in-place, Recycled content, Reinforced, 3,000 psi, 4" thick	15.45
5" thick	16.50
6" thick	17.25
Concrete slab, Elevated, Cast-in-place, Recycled content, Reinforced, 4,500 psi, 4" thick	17.35
5" thick	18.40
6" thick	19.70
7" thick	20.55
8" thick	21.70
10" thick	23.60
12" thick	25.50

Costs/Sq. Ft.

Foundation wall, Cast-in-place, With damp proofing, Recycled content, 3,000 psi, Reinforced, 6" thick	19.35
8" thick	20.60
10" thick	22.15
12" thick	23.40

Costs/Sq. Ft.

Concrete wall, Cast-in-place, Recycled content, 3,000 psi, Reinforced, 6" thick	\$19.40
8" thick	20.35
10" thick	22.05
12" thick	23.30

Costs/V.L.F.

Concrete column, Cast-in-place, Recycled content, 4,500 psi, Reinforced, 6" x 6"	\$45.50
8" x 8"	58.00
10" x 10"	71.00
12" x 12"	79.00
Concrete column, Cast-in-place, Recycled content, 4,500 psi, Reinforced, 6" dia.	40.75
8" dia.	42.75
10" dia.	47.00
12" dia.	48.50

Costs/Sq. Ft.

Wall, Adobe brick, 8" thick	\$24.05
12" thick	32.00
Concrete masonry block - 4"x8"x16"	8.40
Reinforced Lightweight	8.84
Concrete masonry block - 6"x8"x16"	9.34
Reinforced Lightweight	11.00
Concrete masonry block - 8"x8"x16"	10.85
Reinforced Lightweight	11.75
Concrete masonry block - 12"x8"x16"	15.60
Reinforced Lightweight	17.25
Concrete masonry block - 24"x8"x16"	31.25
Reinforced lightweight	34.25
Glass block, With reinforcement, 6"x 6"x 4" wide	75.00
8"x 8"x 4" wide	45.00
12"x 12"x 4" wide	40.25
Glass block, Reflective, With reinforcement, 6"x 6"x 4" wide	49.25
8"x 8"x 4" wide	33.75
12"x 12"x 4" wide	40.25

GREEN ADDITIONS

WOOD, PLASTIC & COMPOSITES

WOOD: Wood components can contribute Green credits by meeting the Construction Waste Management, Material Reuse, Regional Materials and Certified Wood requirements. Material needs to be diverted from disposal in landfills through recycle and/or salvage and the material needs to have been salvaged, refurbished or reused within 500 miles. fifty percent of the wood-based materials and products must be certified in accordance with the Forest Stewardship councils Principles and Criteria.

PLASTIC: Plastic components can contribute Green credits by meeting the Regional Materials and Recycled Content requirements. Plastic needs to contain post consumer recycled material and come from within 500 miles.

COMPOSITES: Composite components can contribute Green credits by meeting the Construction Waste Management, Regional Materials and Recycled Content requirements. Composite material needs to be diverted from disposal in landfills through recycle and/or salvage and must contain post consumer recycled material within 500 miles.

The specific credit for Wood, Plastic and Composites is dependent on the amount of the recycled content.

Costs/Sq. Ft.

Wall panel, Structural insulated panel (SIP), OSB both sides,	
4' x 8' x 4-1/2" thick	\$6.37
4' x 8' x 6-1/2" thick	7.10
4' x 8' x 8-1/4" thick	7.93
4' x 8' x 10-1/8" thick	8.93
Roof panel, Structural insulated panel (SIP), OSB both sides,	
4' x 8' x 4-1/2" thick	6.44
4' x 8' x 6-1/2" thick	7.20
4' x 8' x 8-1/4" thick	8.06
4' x 8' x 10-1/8" thick	9.16

Costs/Lin. Ft.

Engineered I-Joist, Recycled content, Southern pine,	
1-1/2"x 9-1/2"	\$2.47
1-1/2" x 11-7/8"	2.72
1-1/2" x 14"	2.92
1-3/4" x 9-1/2"	2.56
1-3/4" x 11-7/8"	2.86
1-3/4" x 14"	3.20
1-3/4" x 16"	3.36
2-5/16" x 11-7/8"	3.48
2-5/16" x 14"	3.69
2-5/16" x 16"	3.97

Costs/Sq. Ft.

Floor framing, SFI certified, Engineered laminated veneer lumber,	
1-3/4"x 7-1/4" joist, 16" o.c.	\$ 5.58
1-3/4"x 7-1/4" joist, 24" o.c.	4.32
1-3/4"x 9-1/2" joist, 16" o.c.	6.20
1-3/4"x 9-1/2" joist, 24" o.c.	4.78
1-3/4"x 11-7/8" joist, 16" o.c.	7.13
1-3/4"x 11-7/8" joist, 24" o.c.	5.69
3-1/2"x 9-1/2" joist, 16" o.c.	11.25
3-1/2"x 9-1/2" joist, 24" o.c.	8.55
3-1/2"x 11-7/8" joist, 16" o.c.	13.95
3-1/2"x 11-7/8" joist, 24" o.c.	10.55
5-1/4"x 9-1/2" joist, 16" o.c.	17.65
5-1/4"x 9-1/2" joist, 24" o.c.	13.30
5-1/4"x 11-7/8" joist, 16" o.c.	20.60
5-1/4"x 11-7/8" joist, 24" o.c.	15.55

Costs/Sq. Ft.

Roof framing, SFI certified, Engineered laminated veneer lumber,	
1-3/4"x 7-1/4" rafter, 16" o.c.	\$ 5.66
1-3/4"x 7-1/4" rafter, 24" o.c.	4.38
1-3/4"x 9-1/2" rafter, 16" o.c.	6.30
1-3/4"x 9-1/2" rafter, 24" o.c.	4.84
1-3/4"x 11-7/8" rafter, 16" o.c.	7.54
1-3/4"x 11-7/8" rafter, 24" o.c.	5.77
3-1/2"x 9-1/2" joist, 16" o.c.	11.35
3-1/2"x 9-1/2" joist, 24" o.c.	8.61
3-1/2"x 11-7/8" joist, 16" o.c.	14.05
3-1/2"x 11-7/8" joist, 24" o.c.	10.60
5-1/4"x 9-1/2" joist, 16" o.c.	17.75
5-1/4"x 9-1/2" joist, 24" o.c.	13.40
5-1/4"x 11-7/8" joist, 16" o.c.	20.70
5-1/4"x 11-7/8" joist, 24" o.c.	15.60

GREEN ADDITIONS

THERMAL & MOISTURE PROTECTION INSULATION

Thermal protection affects the thermal and acoustical comfort of building occupants. It also has significant impact on the amount of energy used to cool and heat the building. By controlling moisture at the building envelope the longevity, and therefore the sustainability, of the building will be increased. Proper moisture protection at the building envelope, is also an important step in controlling and preventing the growth of mold, which affects the indoor air quality of buildings. Materials must contain recycled content and future recyclability; have low embodied energy which reduces the initial energy investment of the product, not contain CFCs, HCFCs or other ozone depleting substances; nor contain formaldehyde; no VOCs and no off-gassing for promoting indoor air quality.

Costs/Sq. Ft.

Radiant barrier, 97% reflectivity, Double-sided, Aluminum foil, Poly mesh reinforced,	
48" wide	\$.31
16" to 24" wide . . . . .	.36
Laser perforated, 97% reflectivity,	
48" wide . . . . .	.34
16" to 24" wide . . . . .	.40
Heavy weight, 98% reflectivity, Double-sided, Aluminum,	
48" wide . . . . .	.35
16" to 24" wide . . . . .	.43
Double bubble sided, 98% reflectivity,	
48" wide . . . . .	.59
16" to 24" wide . . . . .	.65
Reflective roof coating, Rubberized, Water-based,	
White . . . . .	.69
Asphalt/aluminum, Silver . . . . .	.61
Polyester fabric, With primer and seal, Acrylic,	
Clear	1.24
Ice/water shield flashing at roof edge	1.30

GREEN ROOF SYSTEM

Costs Each

Plant tray, Modular, Plastic, Polystyrene,	
8" x 8" x 2-1/2"	\$ 5.48
8" x 12" x 2-1/2"	5.90
22" x 11" x 2-1/2"	13.05
13" x 15" x 3-1/2"	14.70
Recycled content, Coconut coir fiber,	
11" x 21"	16.45

Costs/Sq. Ft.

Plant tray, Barrier, Root barrier, Bio degradable fabric, Trifluralin,	
24' x 100'	5.85
Plant tray, Screen, Weed barrier, Moisture retention fabric, Micro-perforated film,	
6' x 250'	5.79

Costs/Sq. Ft.

Plant Growing Media, Hoisted up to 5 story,	
Clay, 2" thick	\$1.19
Clay, 4" thick	2.37
Clay, 6" thick	3.40
Clay, 8" thick	4.53
Recycled content, 2" thick	1.61
Recycled content, 4" thick	3.24
Recycled content, 6" thick	4.80
Recycled content, 8" thick	6.39
Sand and Gravel, 2" thick . . . . .	.86
Sand and Gravel, 4" thick	1.70
Sand and Gravel, 6" thick	2.36
Sand and Gravel, 8" thick	3.14

Costs/Lin. Ft.

Plant tray, Edge restraint, Treated lumber, Wood,	
4" x 4"	\$5.17
4" x 6"	6.36

Costs/Sq. Ft.

Roof paver, Walkway pads, Recycled rubber tire,	
19-1/2" x 19-1/2"	\$10.80
Walkway squares, Recycled rubber,	
16" x 16" x 1" thick	11.95
Insulation, Batt, Foil-faced, Non-rigid, Walls, or Floor,	
3-1/2" Thick, R11 . . . . .	.89
Insulation, Blanket, Unfaced, Non-rigid, Walls or ceiling,	
3-1/2", R11 . . . . .	.92
Insulation, Blown-in, Wall, Cellulose,	
3.5" thick, R-13	2.20
Insulation, Blown-in, Wall, Fiberglass,	
3.5" thick, R-9	2.18
Insulation, Blown-in, Ceiling, Cellulose,	
6" thick, R-22	1.04
Insulation, Blown-in, Ceiling, Fiberglass,	
6" thick, R-13 . . . . .	.90
Insulation, Roof, Straw, Wire tied, 2-wire, Rice,	
4.0 Lbs./Cu. Ft., 15" thick . . . . .	.55
Insulation, Wall, Straw, Wire tied, 2-wire, Rice,	
4.0 Lbs./Cu. Ft., 15" thick . . . . .	.45

GREEN ADDITIONS

DOOR & WINDOW OPENINGS

Openings can contribute Green credits by meeting the Minimum Energy Performance, Daylight & Views, Material Reuse and Regional Material requirements. Openings are considered part of the building envelope system design and can contribute to the Minimum Energy Performance. The Daylight requirement specifies a minimum glazing factor for a specific percentage of all regularly occupied areas. The Views requirement specifies direct line of sight for a specific percentage of all regularly occupied areas. To meet the Material Reuse requirements the material needs to have been salvaged, refurbished or reused. The Regional Material credit requires all materials to be extracted, processed and manufactured within 500 mile of the building site. Opening components must also be NFRC certified and contribute to the reduction in energy to be considered Green.

Costs Each

Skylight, Solar tube kit, With 4' flexible tube, Acrylic dome,	
10" diameter	\$430.00
14" diameter	485.00
21" diameter	625.00
Skylight, Solar tube kit, With 4' rigid tube and fresnel diffuser,	
Acrylic dome,	
10" diameter	470.00
14" diameter	600.00
Skylight, Solar tube kit, With 6' rigid tube and fresnel ceiling	
diffuser,	
Acrylic dome, 21" diameter.	790.00

Costs/Lin. Ft.

Weatherstripping, Door, Vinyl gasket.	\$3.73
Weatherstripping, Window, Rubber,	
3/4" wide, 7/16" thick	3.34

Costs/Sq. Ft.

Translucent wall panel, With aluminium frame, Triple wall,	
48" wide x 5/8" thick polycarbonate panels, Clear,	
8' high.	\$27.00
48" wide x 5/8" thick polycarbonate panels, White,	
8' high.	27.50
6-wall, 48" wide x 1" thick polycarbonate panels,	
Clear, 8' high.	31.00
6-wall, 48" wide x 1" thick polycarbonate panels,	
White, 8' high	31.75
Skyroof, Atrium, Curb mounted, Single pitch, With aluminium	
frame, 5/8" clear triple wall polycarbonate,	
8'-0" wide	37.50
5/8" white triple wall polycarbonate, 8'-0" wide	38.00
1" clear 6-wall polycarbonate, 8'-0" wide	41.50
1" white 6-wall polycarbonate, 8'-0" wide	42.25
Skyroof, Atrium, Curb mounted, Double pitch, With	
aluminium frame, 5/8" clear triple wall polycarbonate,	
16'-0" wide	38.75
5/8" white triple wall polycarbonate, 8'-0" wide .	39.50
1" clear 6-wall polycarbonate, 8'-0" wide.	43.50
1" white 6-wall polycarbonate, 8'-0" wide	44.75

FINISHES

Finishes can contribute Green credits by meeting the Low-Emitting Materials for Carpet, Adhesives & Solvents, Paints & Coatings and Regional Material requirements. The Low-Emitting Materials requirement limits the amount of VOC's that can be out gassed for specific product and the use of urea-formaldehyde resins. The Regional Material credit requires all materials to be extracted, processed and manufactured within 500 mile of the building site. Opening components must also be NFRC certified and contribute to the reduction in energy to be considered Green.

Costs/Sq. Ft.

Sealer, Concrete floor, Semi-transparent, Acrylic, Colored,	
Semi-gloss finish, 2 coats, Spray	\$1.10
Paint, Floor, Interior, Concrete, Low VOC, 1 coat finish,	
Sprayed . . . . .	.37
Paint, Floor, Interior, Metal, Low VOC, Primer and finish	
coat, Sprayed . . . . .	.77
Paint, Wall, Interior, Low VOC latex paint, Average,	
Brush/Roller/Spray, 2 Finish coats, Flatwall . .	.56
2 finish coats, Semi-gloss enamel . . . . .	.60
Paint, Ceiling, Interior, Low VOC latex paint, Average,	
Brush/Roller/Spray, 2 Finish coats, Flatwall . .	.57
2 finish coats, Semi-gloss enamel . . . . .	.60
Paint, Wall, Interior, Zero VOC latex paint, Average, Brush/	
Roller/Spray, Primer and Finish coat, Flatwall .	.61
Primer and Finish coat, Semi-gloss enamel . . .	.65
Paint, Ceiling, Interior, Zero VOC latex paint, Average,	
Brush /Roller/Spray, Primer and Finish coat,	
Flatwall . . . . .	.66
Primer and Finish coat, Semi-gloss enamel . . .	.71
Wood finish, Low VOC, Polyurethane, Clear,	
1 coat, Brushed . . . . .	.88
Wood finish, Low VOC, Lacquer, Clear,	
3 coat, Brushed	2.14
Metal stud framing, Recycled Content, Non-load bearing,	
Galvanized, 25 Ga,	
1-5/8" wide, 16" o.c.	1.83
1-5/8" wide, 24" o.c.	1.37
2-1/2" wide, 16" o.c.	2.05
2-1/2" wide, 24" o.c.	1.55
4" wide, 16" o.c.	2.31
4" wide, 24" o.c.	1.75
6" wide, 16" o.c.	2.32
6" wide, 24" o.c.	1.76
Sealer, Concrete floor, Semi-transparent, Acrylic, Colored,	
Semi-gloss finish, 2 coats, Spray	1.07
Paint, Floor, Interior, Concrete, Low VOC,	
1 coat finish, Sprayed. . . . .	.37
Paint, Floor, Interior, Metal, Low VOC, Primer and	
finish coat, Sprayed . . . . .	.77
Paint, Wall, Interior, Zero VOC latex paint, Average,	
Brush/Roller/Spray, Primer and Finish coat,	
Flatwall . . . . .	.61
Primer and Finish coat, Semi-gloss enamel . . .	.65
Paint, Ceiling, Interior, Zero VOC latex paint, Average,	
Brush/Roller/Spray, Primer and Finish coat,	
Flatwall . . . . .	.66
Primer and Finish coat, Semi-gloss enamel . . .	.71

GREEN ADDITIONS

SPECIALTIES

This area is very broad and encompasses many items. Material or building components typically addressed in this section would be specialty items such as Green Power generation equipment, rain water harvesting, signage, bathroom hand dryers and site features to control heat island effects.

Costs Each

Pellet stove, Freestanding, With glass door and 3" direct vent, 40,000 Btu, Heavy steel, 24"x 21"x 20" H . . .	\$3,550.00
45,000 Btu, Heavy steel, 22"x 27"x 29" H . . .	3,900.00
With ceramic glass door, 50,000 Btu, Heavy steel, 26"x 31"x 33-1/4" H	4,600.00
Fireplace insert, Wood burning, With cast iron glass door, blower and 6" dia. flue liner, 69,600 BTU, Steel, Black finish	2,290.00
With steel glass bay door and blower, 70,000 BTU, Steel, Black finish	4,175.00
Exit sign, Door mounted, Photoluminescent, Rigid plastic, 4" x 6" x 1/8" thick	32.50
Exit egress sign, With directional graphic, Photoluminescent, Rigid plastic, 8" x 4-1/2" x 5/8" thick	48.25
Egress stair signage, Wall mounted, Projecting, Double sided, With graphic, Aluminum, Photoluminescent, 6" x 5" x 3-1/2" projection	48.25
Exit sign, Photoluminescent, 15" x 8-1/2" x 1" thick	97.00
With directional arrows, 15" x 8-1/2" x 1" thick	105.00
8" lettering, Plastic, 17" x 10" x 1/2" thick	165.00
With directional arrows, Metal frame, 15-1/4" x 8-1/4" x 1" thick	175.00
8" lettering, Plastic, 17" x 10" x 1/2" thick	240.00
100 ft visibility, With directional arrows, 16" x 8-5/8" x 1/2" thick	265.00
Ceiling mounted, Double sided, With directional arrows, Metal frame, Photoluminescent, 15-1/4" x 8-1/4" x 1" thick	320.00

GLAZING/WINDOW SHADING

Costs Each

Awning, Fixed, Aluminum, Baked enamel finish, 2' projection, 3' wide	470.00
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Costs/Sq. Ft.

Awning, Retractable, Manual, Standard vinyl, 8' projection, Up to 10' wide	32.50
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Costs Each

Awning, Fixed, Aluminum, Baked enamel finish, 3' projection, 6' wide	605.00
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Costs/Sq. Ft.

Custom acrylic fabric, 8' projection, Up to 10' wide	34.50
Awning, Retractable, Motorized, Standard vinyl, 8' projection, Up to 10' wide	40.25
Custom acrylic fabric, 8' projection, Up to 10' wide	42.25

SPECIAL CONSTRUCTION

Costs Each

Solar hydronic panel, Residential, Roof mounted, With 50 gal tank, photovoltaic pump and piping, Flat lexan/anodized aluminum frame panel, 20" x 144"	\$ 2,750.00
Solar hydronic panel, Flat roof tilt mounted, With 52 gal steel tank, single heat exchanger, pump and piping, Flat glass/anodized aluminum frame panel, 88" x 96"	4,575.00
Solar panel array. Photovoltaic, Grid-tied system, Flush mounted rack, Sloped roof, 2 kWh capacity	8,000.00
Solar panel array. Photovoltaic, Grid-tied system, Flush mounted rack, Sloped roof, 4 kWh capacity	15,000.00
Solar water heater, System including, Collectors / Tank / Controller / Pump / Valves / Piping / Insulation / etc., 120 gallon	9,550.00
Solar water heater, System including, Collectors / Tank / Controller / Pump / Valves / Piping / Insulation / etc., 80 gallon	8,050.00
Solar panel array. Photovoltaic, Grid-tied system, Flush mounted rack, Sloped roof, 6 kWh capacity	20,100.00
Solar panel array. Photovoltaic, Grid-tied system, Flush mounted rack, Sloped roof, 8 kWh capacity	25,600.00
Solar panel array. Photovoltaic, Grid-tied system, Low tilt (30deg) mounted rack, Flat roof, 10 kWh capacity	38,200.00
Solar panel array. Photovoltaic, Grid-tied system, Low tilt (30deg) mounted rack, Flat roof, 15 kWh capacity	55,000.00
Solar panel array. Photovoltaic, Grid-tied system, Low tilt (30deg) mounted rack, Flat roof, 50 kWh capacity	158,000.00
Solar panel array. Photovoltaic, Grid-tied system, Low tilt (30deg) mounted rack, Flat roof, 75 kWh capacity	232,000.00
Roofing, Solar photovoltaic, Tile, Slate, Grid-tied system, 2kWh capacity	21,900.00
Roofing, Solar photovoltaic, Shingles, Grid-tied system, 2kWh capacity	13,700.00
Roofing, Solar photovoltaic, Shingles, Grid-tied system, 4kWh capacity	26,200.00
Wind turbine generator, Off-grid, With 33' guyed pole, 9' rotor blade, 24/36/48 VDC, 1.0 Kwatt	20,700.00
Grid-tied, With inverter and 45' tower, 12' rotor blade, 120/240V, 1.8 Kwatt	29,300.00
Electric backup power storage, With inverter and steel enclosure, 8-200aH 6V batteries, 120VAC, 9.6 kWh	8,600.00
Electric backup power storage, Add-on with steel enclosure, 8-200aH 6V batteries, 240VAC, 9.6 kWh	3,550.00
Wind turbine generator, Grid-tied, With inverter and 60' tower, 12' rotor blade, 120/240V, 2.4 Kwatt	61,750.00
Electric backup power storage, With inverter and steel enclosure, 4-200aH 6V batteries, 120VAC, 4.8 kWh	7,400.00
12-200aH 6V batteries, 120VAC, 14.4 kWh	8,950.00
12-200aH 6V batteries, 240VAC, 14.4 kWh	5,450.00

GREEN ADDITIONS

PLUMBING & FIXTURES

Plumbing has a very broad impact on Green credits primarily covering the efficient management, use and reuse of water and energy use. Typically items covered may include Water Efficient Landscaping, Innovative Waste Water Technologies, Water Use Reduction, Minimum Energy Performance, Recycled Content, On-site Renewable Energy and Fundamental Refrigerant Management.

Costs Each

Reverse Osmosis/Deionization water purification system,	
3 stage, 24 gpd.	\$ 215.00
3 stage, 36 gpd.	220.00
3 stage, 50 gpd.	225.00
3 stage, 75 gpd.	230.00
3 stage, 100 gpd.	305.00
4 stage, 75 gpd.	385.00
5 stage, 50 gpd.	500.00
5 stage, 75 gpd.	520.00
6 stage, 50 gpd.	545.00
6 stage, 75 gpd.	550.00
Greywater system, For water closet, With pump and filter,	
5-1/2 gallon tank, 12VDC	540.00
Greywater tank, Residential, Up to 3 persons,	
39 gallons, 22-1/2" dia. x 46"H.	3,825.00
Up to 6 persons, 66 gallon tank,	
22-1/2" dia. x 60"H	4,225.00
Up to 9 persons, 92 gallon tank,	
30-1/2" dia. x 53"H	4,750.00
Up to 12 persons, 119 gallon tank,	
30-1/2" dia. x 60"H	5,100.00
Atmospheric water system, Generator,	
110v 50Hz, 3.17 gallon capacity.	1,850.00
3.6 gallon capacity	2,180.00
Faucet aerator, Kitchen, 2 spray setting, With pause valve,	
Chrome finish, 1.5 GPM	21.50
Showerhead, Shutoff valve, Brass, Chrome finish	24.50

Costs/Lin. Ft.

Insulation, Pipe, Fiberglass, P/c with ssl,	
1/2"o.d. x 1/2"wall	\$5.54
3/4"o.d. x 1/2"wall	6.06
1"o.d. x 1/2"wall	6.31
1-1/4"o.d. x 1/2"wall	6.61
1-1/2"o.d. x 1/2"wall	6.94
2"o.d. x 1/2"wall	7.39
2-1/2"o.d. x 1/2"wall	8.02
1/2"o.d. x 1"wall	5.86
3/4"o.d. x 1"wall	6.51
1"o.d. x 1"wall	6.88
1-1/4"o.d. x 1"wall	7.74
1-1/2"o.d. x 1"wall	8.39
2"o.d. x 1"wall	9.05
2-1/2"o.d. x 1"wall	9.64
1/2"o.d. x 1-1/2"wall	7.56
3/4"o.d. x 1-1/2"wall	8.30
1"o.d. x 1-1/2"wall	8.65
1-1/4"o.d. x 1-1/2"wall	9.10
1-1/2"o.d. x 1-1/2"wall	9.57

Costs/Lin. Ft.

Insulation, Pipe, Fiberglass, P/c with ssl,	
2"o.d. x 1-1/2"wall	\$10.10
2-1/2"o.d. x 1-1/2"wall	10.60
1/2"o.d. x 2"wall	9.22
3/4"o.d. x 2"wall	10.00
1"o.d. x 2"wall	10.45
1-1/4"o.d. x 2"wall	10.90
1-1/2"o.d. x 2"wall	11.60
2"o.d. x 2"wall	12.35
2-1/2"o.d. x 2"wall	13.10
Insulation, Pipe, Rubber, Closed cell foam,	
3/8"o.d. x 3/8"wall	5.32
1/2"o.d. x 3/8"wall	5.62
5/8"o.d. x 3/8"wall	5.84
3/4"o.d. x 3/8"wall	5.97
7/8"o.d. x 3/8"wall	6.18
1-1/8"o.d. x 3/8"wall	6.48
1-3/8"o.d. x 3/8"wall	6.74
1-5/8"o.d. x 3/8"wall	7.15
2-1/8"o.d. x 3/8"wall	7.81
3/8"o.d. x 1/2"wall	5.92
1/2"o.d. x 1/2"wall	6.18
5/8"o.d. x 1/2"wall	6.37
3/4"o.d. x 1/2"wall	6.48
7/8"o.d. x 1/2"wall	6.65
1-1/8"o.d. x 1/2"wall	6.99
1-3/8"o.d. x 1/2"wall	7.32
1-5/8"o.d. x 1/2"wall	7.78
2-1/8"o.d. x 1/2"wall	8.76
2-3/8"o.d. x 1/2"wall	9.59
2-5/8"o.d. x 1/2"wall	10.15
3-1/8"o.d. x 1/2"wall	11.15
3-1/2"o.d. x 1/2"wall	11.70
4-1/8"o.d. x 1/2"wall	13.95
4-1/2"o.d. x 1/2"wall	14.70
5/8"o.d. x 3/4"wall	7.07
7/8"o.d. x 3/4"wall	7.64
1-1/8"o.d. x 3/4"wall	8.54
1-3/8"o.d. x 3/4"wall	9.13
1-5/8"o.d. x 3/4"wall	10.45
2-1/8"o.d. x 3/4"wall	11.85
5/8"o.d. x 1"wall	9.08
7/8"o.d. x 1"wall	10.55
1-1/8"o.d. x 1"wall	11.70
1-3/8"o.d. x 1"wall	12.80
1-5/8"o.d. x 1"wall	13.85
2-1/8"o.d. x 1"wall	15.90
Pipe fitting cover, Insulated, Pvc, Ips, 90 degree elbow, #2,	
3/8"o.d. x 1/2"wall	8.21
1/2"o.d. x 1/2"wall	8.45
3"o.d. x 1/2"wall	12.35
3-1/2"o.d. x 1/2"wall	13.10
4"o.d. x 1/2"wall	14.20

GREEN ADDITIONS

PLUMBING & FIXTURES (CONT.)

Costs Each

Pipe fitting cover, Insulated, Pvc, Ips, 45 degree elbow, #2,	
3/8"o.d. x 1/2"wall	\$ 8.21
1/2"o.d. x 1/2"wall	8.45
3"o.d. x 1/2"wall	12.35
3-1/2"o.d. x 1/2"wall	13.10
4"o.d. x 1/2"wall	14.20

Pipe fitting cover, Insulated, Pvc, Ips, 45 or 90 degree elbow, #4,	
3/4"o.d. x 1/2"wall	8.68
1"o.d. x 1/2"wall	8.88
1-1/4"o.d. x 1/2"wall	9.22
1-1/2"o.d. x 1/2"wall	9.53
2"o.d. x 1/2"wall	10.35
2-1/2"o.d. x 1/2"wall	11.30
5"o.d. x 1/2"wall	18.90
6"o.d. x 1/2"wall	22.35
7"o.d. x 1/2"wall	25.00
8"o.d. x 1/2"wall	30.75
9"o.d. x 1/2"wall	35.00
10"o.d. x 1/2"wall	38.25
11"o.d. x 1/2"wall	46.75

Pipe fitting cover, Insulated, Pvc, Ips, Tee, #2,	
3/8"o.d. x 1/2"wall	12.25
1/2"o.d. x 1/2"wall	12.40
3/4"o.d. x 1/2"wall	12.95
1"o.d. x 1/2"wall	13.25
1-1/4"o.d. x 1/2"wall	14.05
1-1/2"o.d. x 1/2"wall	14.35
2"o.d. x 1/2"wall	15.45
2-1/2"o.d. x 1/2"wall	16.80
3"o.d. x 1/2"wall	18.05
3-1/2"o.d. x 1/2"wall	19.30
4"o.d. x 1/2"wall	21.65
5"o.d. x 1/2"wall	27.00
6"o.d. x 1/2"wall	40.00
7"o.d. x 1/2"wall	43.50
8"o.d. x 1/2"wall	55.00
9"o.d. x 1/2"wall	59.00
10"o.d. x 1/2"wall	64.00
11"o.d. x 1/2"wall	71.00

Pipe fitting cover, Insulated, Pvc, Ips, Mechanical groove, 90 degree elbow,	
2"o.d.	20.80
2-1/2"o.d.	21.75
3"o.d.	25.50
4"o.d.	30.50
5"o.d.	35.25
6"o.d.	43.00
8"o.d.	53.00
10"o.d.	71.00
12"o.d.	105.00

Costs Each

Pipe fitting cover, Insulated, Pvc, Ips, Mechanical groove, 45 degree elbow, #9,	
2"o.d.	\$ 20.15
2-1/2"o.d.	20.60
3"o.d.	24.85
4"o.d.	29.75
5"o.d.	34.25
6"o.d.	41.50
8"o.d.	51.00
10"o.d.	64.00
12"o.d.	92.00

Pipe fitting cover, Insulated, Pvc, Ips, Mechanical groove, Tee,	
2"o.d.	33.25
2-1/2"o.d.	35.00
3"o.d.	39.00
4"o.d.	52.00
5"o.d.	59.00
6"o.d.	69.00
8"o.d.	82.00
10"o.d.	100.00
12"o.d.	125.00

Costs/Lin. Ft.

Pipe cover, Jacket, Pvc, Ips, Cc with ssl,	
1"o.d.	5.40
2"o.d.	6.00
3"o.d.	6.65
4"o.d.	7.50
1-1/2"o.d.	5.68
2-1/2"o.d.	6.26
3-1/2"o.d.	7.05
4-1/2"o.d.	7.88
4-3/4"o.d.	8.34
5-1/2"o.d.	8.57
5-3/4"o.d.	8.89
6-1/2"o.d.	9.35
6-3/4"o.d.	9.88
7-1/4"o.d.	10.60
8-1/2"o.d.	10.95
8-3/4"o.d.	11.45

Pipe cover, Jacket, Aluminum, Ips, Cc with ssl, Smooth, 16mil,	
1-1/2"o.d.	6.87
2"o.d.	7.39
2-1/2"o.d.	7.76
3"o.d.	8.17
3-1/2"o.d.	8.61
4"o.d.	9.08
4-1/2"o.d.	9.70
5-1/2"o.d.	10.50
7"o.d.	11.75
8"o.d.	12.55
9"o.d.	13.45
10"o.d.	14.35
11"o.d.	15.15

GREEN ADDITIONS

PLUMBING & FIXTURES (CONT.)

Costs/Lin. Ft.

Pipe cover, Jacket, Aluminum, Ips, Cc with ssl, Smooth, 16mil,

12"o.d.	\$16.10
13"o.d.	17.10
15"o.d.	18.40
15-1/2"o.d.	19.15

Pipe cover, Jacket, Aluminum, Ips, Cc with ssl, Stucco embossed, 16mil,

1-1/2"o.d.	6.93
2"o.d.	7.46
2-1/2"o.d.	7.79
3"o.d.	8.26
3-1/2"o.d.	8.71
4"o.d.	9.19
4-1/2"o.d.	9.82
5-1/2"o.d.	10.65
7"o.d.	11.90
8"o.d.	12.70
9"o.d.	13.65
10"o.d.	14.55
11"o.d.	15.35
12"o.d.	16.35
13"o.d.	17.35
15"o.d.	18.65
15-1/2"o.d.	19.45

Pipe cover, Jacket, Aluminum, Ips, Cc with ssl, Smooth, 20mil,

1-1/2"o.d.	7.24
2"o.d.	7.80
2-1/2"o.d.	8.23
3"o.d.	8.69
3-1/2"o.d.	9.18
4"o.d.	9.72
4-1/2"o.d.	10.40
5-1/2"o.d.	11.35
7"o.d.	12.70
8"o.d.	13.60
9"o.d.	14.60
10"o.d.	15.55
11"o.d.	16.45
12"o.d.	17.60
13"o.d.	18.70
15"o.d.	20.05
15-1/2"o.d.	20.95

Pipe cover, Jacket, Aluminum, Ips, Cc with ssl, Stucco embossed, 20mil,

1-1/2"o.d.	7.29
2"o.d.	7.90
2-1/2"o.d.	8.32
3"o.d.	8.80
3-1/2"o.d.	9.28
4"o.d.	9.84
4-1/2"o.d.	10.55
5-1/2"o.d.	11.50
7"o.d.	12.85

Pipe cover, Jacket, Aluminum, Ips, Cc with ssl, Stucco embossed, 20mil,

Costs/Lin. Ft.

8"o.d.	\$13.80
9"o.d.	14.80
10"o.d.	15.75
11"o.d.	16.75
12"o.d.	17.85
13"o.d.	19.00
15"o.d.	20.35
15-1/2"o.d.	21.25

Costs Each

Pipe fitting cover, Insulated, Aluminum, Ips, 90 degree elbow,

1-1/2"o.d.	12.95
2"o.d.	13.70
2-1/2"o.d.	15.00
3"o.d.	15.55
3-1/2"o.d.	17.10
4"o.d.	18.90
4-1/2"o.d.	21.65
5-1/2"o.d.	27.75
7"o.d.	31.00
8"o.d.	33.50
9"o.d.	41.75
10"o.d.	42.75
11"o.d.	49.00
12"o.d.	62.00
13"o.d.	65.00
13-1/2"o.d.	76.00
14"o.d.	77.00

Pipe fitting cover, Insulated, Aluminum, Ips, 45 degree elbow,

1-1/2"o.d.	12.80
2"o.d.	13.45
2-1/2"o.d.	14.15
3"o.d.	15.35
3-1/2"o.d.	16.05
4"o.d.	16.95
4-1/2"o.d.	18.40
5-1/2"o.d.	23.65
7"o.d.	26.00
8"o.d.	30.00
9"o.d.	34.00
10"o.d.	39.75
11"o.d.	43.75
12"o.d.	49.25
13"o.d.	55.00
13-1/2"o.d.	67.00
14"o.d.	73.00

Pipe fitting cover, Insulated, Aluminum, Ips, Tee,

1-1/2"o.d.	35.75
2"o.d.	36.25
2-1/2"o.d.	37.00
3"o.d.	37.25
3-1/2"o.d.	37.75
4"o.d.	38.25
4-1/2"o.d.	39.50

GREEN ADDITIONS

PLUMBING & FIXTURES (CONT.)

Costs Each

Pipe fitting cover, Insulated, Aluminum, Ips, Tee,	
5-1/2"o.d.	\$45.00
7"o.d.	47.00
8"o.d.	48.25
9"o.d.	55.00
10"o.d.	56.00
11"o.d.	58.00
12"o.d.	60.00
13"o.d.	62.00
13-1/2"o.d.	71.00
14"o.d.	73.00

Costs/Lin. Ft.

Insulation, Pipe, Polyethylene, P/c with ssl,	
3/8"o.d. x 3/8"wall	4.87
1/2"o.d. x 3/8"wall	5.12
3/4"o.d. x 3/8"wall	5.42
1"o.d. x 3/8"wall	5.74
1-1/4"o.d. x 3/8"wall	6.08
1-3/4"o.d. x 3/8"wall	6.76
1/4"o.d. x 1/2"wall	5.22
3/8"o.d. x 1/2"wall	5.46
1/2"o.d. x 1/2"wall	5.75
3/4"o.d. x 1/2"wall	6.07
1"o.d. x 1/2"wall	6.39
1-3/4"o.d. x 1/2"wall	6.81
1-1/4"o.d. x 1/2"wall	7.64
2"o.d. x 1/2"wall	7.98
2-1/4"o.d. x 1/2"wall	8.47
2-3/4"o.d. x 1/2"wall	9.47
3/8"o.d. x 3/4"wall	6.18
1/2"o.d. x 3/4"wall	6.56
3/4"o.d. x 3/4"wall	7.14
1"o.d. x 3/4"wall	7.65
1-1/4"o.d. x 3/4"wall	8.68
1-3/4"o.d. x 3/4"wall	10.00
Pipe Insulation - Fiberglass Wrap,	
1/2" pipe	4.46
3/4" pipe	4.71
1" pipe.	4.98
1-1/2" pipe	5.38

HVAC

This area focuses on the efficient use of energy for habitant comfort as it pertains to climate control of a building. Typically items covered may include Minimum Energy Performance, On-site Renewable Energy and Fundamental Refrigerant Management.

Costs Each

High efficiency gas furnace, Forced air,	
With single stage burner, 92% AFUE,	
45 MBH.	\$1,820.00
With 2 stage burner, 95% AFUE,70 MBH	1,930.00
With 2 stage burner, Variable speed blower,	
95% AFUE, 115 MBH.	3,175.00

Costs Each

Heat pump, Geothermal, Forced air, Heat and cooling,	
2.5 tons.	5,500.00
3 tons	5,600.00
4 tons	6,050.00
5 tons	6,450.00

Heat pump, Geothermal, Hydronic, Heat and cooling,	
2.5 tons.	6,800.00
3 tons	6,950.00
4 tons	8,100.00
5 tons	9,250.00
6 tons	11,000.00

Heat pump, Geothermal, Hybrid, Hydronic and forced air,	
Heating and cooling,	
3 ton	9,950.00
4 tons	11,200.00
5 tons	12,400.00
6 tons	14,200.00

Geothermal, Horizontal ground loop system, With tubing and heat transfer fluid,	
3 tons	5,050.00
4 tons	6,350.00
5 tons	7,800.00
6 tons	9,000.00

Costs/Sq. Ft.

Radiant floor, Sub-floor, With heat transfer plates, Circulating pump, Brass manifolds,	
3/4" id BPex tubing at 8" o.c.	7.49
With aluminum covered grooved OSB panels,	
1/2" id BPex tubing at 8" o.c.	9.02
Embedded, Light weight concrete,	
3/4" id BPex tubing, 12" o.c.	3.26
4" concrete, 2" polystyrene insulation,	
3/4" id BPex tubing, 12" o.c.	7.33

Costs Each

Heat recovery ventilator, 4 port, 56 Max CFM,	
18-1/2"x 17-1/4"x 10-1/2"	930.00
4 port, 160 Max CFM, 3 speed,	
28"x 17-1/2"x 25-1/2"	1,400.00
4 port, 240 Max CFM, 3 speed,	
28"x 20-1/2"x 25-1/2"	2,330.00
Combination exhaust fan, With 2- 18W compact fluorescent bulbs, Ceiling mounted, Low profile housing,	
80 CFM, 25 Watts, 13" x 13"	210.00
80 CFM, 25 Watts.	230.00
110 CFM, 36 Watts.	245.00
Combination exhaust fan, With 26W compact fluorescent bulb, Ceiling mounted, Perimeter grill,	
110 CFM, 13" x 13"	285.00
150 CFM.	370.00
Fan, Exhaust, Ceiling mounted, Wall timer, Low profile housing, With 2- 18W compact fluorescent bulbs,	
80 CFM, 25 Watts, 13" x 13"	250.00
Fan, Exhaust, Ceiling mounted, Humidity sensor,	
130CFM, 90 Watts	205.00

GREEN ADDITIONS

HVAC (CONT.)

Costs Each

Attic fan, Roof mounted, Solar powered, With thermostat switch,	
10 watt, 850 CFM	\$620.00
1200 CFM, 20 Watts.	880.00
Attic fan, Gable mounted, Solar powered, With thermostat switch,	
10 watt, 850 CFM	575.00
1275 CFM, 20 Watts.	825.00

ELECTRICAL LIGHTING

Costs Each

Floodlight, Exterior solar powered, Motion/Photo-cell activated, With photovoltaic panel and 4V battery, 2 - 3W LED conical heads, Cast aluminum housing,	
8" x 9" x 6-3/4"H	\$130.00
6V battery, Plastic housing, 80 LED,	
7-7/8" x 7-3/4" x 8-5/8"H.	175.00
6V battery, Plastic housing, 30 watt,	
8"x 7-3/4"x 9"H.	225.00
Light fixture, Wall mounted, Automatic dusk-to-dawn, With photovoltaic module and battery, 8 LEDs, Aluminum housing, Beveled glass,	
6-7/8"x 13"H	230.00
Light fixture, Ceiling mounted, Vandal resistant, Motion sensor, With photovoltaic module and battery, 11 watt compact fluorescent, Aluminum housing,	
8"x 8"x 8"H	860.00

EXTERIOR IMPROVEMENTS

Exterior improvements are items typically independent of the building itself, such as equipment associated with Public Transportation Access, Bicycle Storage, Restoration of Habitat, Stormwater Quantity & Quality Control, Non-Roof heat Island Effect and Water Efficient Landscaping.

PERMEABLE / POROUS PAVING

Costs/Sq. Ft.

Paving, Reclaimed Brick, With 2" sand bed,	
4"x 8"x 2-1/4"	13.05
Herringbone pattern	16.10
Paving, Reclaimed, Granite, With 2" sand bed, Random,	
4"x 6" to 6"x 10"	18.90
Herringbone pattern	22.15
Permeable pavers, interlocking, 2"gravel base and fill,	
precast concrete	12.85
L-shaped, precast concrete	11.50
Turf block, 8 open cells, precast concrete	9.15

DRIP IRRIGATION

Costs Each

Drip irrigation, Micro sprayer kit,	
Small lawn, Up to 450 sf	\$155.00
Medium lawn, Up to 675 sf	220.00
Large lawn, Up to 900 sf	325.00
System timer, Hose end, Electronic,	
Single station	41.00
Digital dial, Dual station.	60.00
Digital programmable, Multi station	67.00

IRRIGATION WEATHER SENSOR

Costs Each

Irrigation control, Rain/Freeze sensor,	
Wireless	120.00
Rain/solar/freeze sensor, Automatic seasonal adjustment, With 40 ft wiring	185.00
Sensor, Mini weather station, Automatic seasonal adjustment.	260.00

RAINWATER HARVESTING SYSTEM

Costs Each

Rain barrel, Brass spigot,	
54 gallon	320.00
Rain barrel, Recycled wood, Brass hose bib,	
55 gallon	650.00
Stained,	
55 gallon	900.00
Rainwater storage tank, Recycled plastic, Modular,	
50 gallon	700.00

PLANT PREP-MULCH

Costs/Sq. Ft.

Mulch, Straw, Hand spread, 1" deep.	1.54
Bark, Mixed hardwood	5.00
Bark, Pine mini nuggets.	6.06
Bark, Aromatic red cedar.	7.38

GROUND COVER AND VINES (NO PREP)

Costs Each

Ground Cover, Standard pot,	
Euonymus fortunei.	5.01
Vinca major	10.10
Kamtschaticum	9.31
Xeriscape, Drought resistant, Potted, Plant ready, Sedum,	
2" pot	4.84
4" pot	6.28
1 gallon	8.29
24 plug tray	90.00

GREEN ADDITIONS

EXTERIOR IMPROVEMENTS

SHRUBS AND TREES

Costs Each

Tree, Evergreen, Potted,

DeGroot's spire, 5 gal, 1-2' tall	95.00
DeGroot's spire, 10 gal, 2-3' tall	150.00
Fir, 15 gal, 4-5' tall	190.00
Fir, 5-6' tall	405.00
Fir, 6-7' tall	550.00
Juniper spartan, 15 gal, 4-5' tall	300.00
Pine, Austrian, 15 gal, 4-5' tall	205.00
Pine, Austrian, 5-6' tall	250.00
Pine, Austrian, 6-7' tall	440.00
Adler, 15 gal, 2-3' tall	230.00
Ash autumn purple, 15 gal, 2-3' tall	205.00
Ash marshall, 15 gal, 2-3' tall	185.00
Hawthorn, 15 gal, 2-3' tall	215.00
Maple, 15 gal, 2-3' tall	215.00
Oak, 15 gal, 4-5' tall	235.00
Willow weeping, 15 gal, 4-5' tall	210.00

PLANTING ACCESSORIES

Costs Each

Planter box, Recycled plastic, White, 12" long . .	245.00
Cedar, 17" long	315.00
Planter box, Recycled plastic lumber,	
Small, 19" x 19" x 17"	250.00
Large, 24" x 24" x 19"	310.00