



2018 NATIONAL HOME IMPROVEMENT ESTIMATOR

Edited by Ray F. Hicks

SAMPLE

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Contents

1 Pricing Home Improvement Jobs	5	7 Roofing and Flashing.....	117
This book works two ways	8	Flashing leaks	118
Craft codes and crews	15	Roof repairs	121
Area modification factors	18	Roofing material	122
2 Demolition	27	<i>Cost estimates</i>	
Before you begin	27	Roof repairs	129
<i>Cost estimates</i>		Composition shingles	130
Equipment rental	28	Built-up roofing	131
Sitework demolition	29	Roof patching	134
Building demolition	30	Wood shingle roofing	137
Wood framing demolition	33	Slate and tile roofing	139
3 Foundations and Slabs	37	Roof flashing	141
Pre-construction checklist	38	Gutters and downspouts	146
<i>Cost estimates</i>		8 Windows	147
Equipment rental	39	Window repair	149
Concrete flatwork	40	Sash repair	151
Concrete finishing	49	Counterweighted windows	152
4 Rough Carpentry	53	Adding or moving a window	153
Floor beams	53	<i>Cost estimates</i>	
Wood floor repairs	56	Window repairs	156
Wall framing	57	Vinyl windows	157
Roof repairs	58	Aluminum windows	161
<i>Cost estimates</i>		Wood windows	163
Framing repairs	62	Storm windows	166
Framing room additions	64	Window accessories	166
Subflooring	66	Window glazing	170
Wall and ceiling changes	70	Skylights	173
Roof framing changes	75	9 Doors	175
5 Insulation and Moisture Control	79	Door repair and replacement	175
Ceiling insulation	79	Adding or moving a door	182
Wall and floor insulation	80	Hanging a slab door	184
Attic and roof ventilation	83	Door terms	188
<i>Cost estimates</i>		<i>Cost estimates</i>	
Fiberglass insulation	84	Exterior doors	191
Panel insulation	85	Prehung doors	197
Vapor barrier	87	Screen and storm doors	202
Vents and louvers	88	Interior doors	206
Roof ventilators	91	Patio doors	214
6 Siding and Trim	93	Closet doors	218
Vinyl siding installation	96	Garage doors	223
Wood siding installation	97	10 Walls and Ceilings	227
Estimating procedure for siding	104	Drywall installation	228
Masonry fireplaces	104	Wood paneling	235
<i>Cost estimates</i>		Removing partitions	239
Siding and soffit repairs	105	<i>Cost estimates</i>	
Vinyl siding	107	Drywall	242
Wood board siding	108	Textured finishes for drywall	244
Texture 1-11 plywood siding	111	Drywall bead and tools	247
Fiber cement siding	112	Wall paneling	251
Aluminum siding and soffit	113	Suspended ceilings	255
Stucco and masonry siding	114	Moldings	259
		Partition walls	270

11 Floors and Tile 271

Wood flooring installation	272
Ceramic tile installation	276
<i>Cost estimates</i>	
Wood strip and plank flooring	278
Laminate plank flooring	283
Vinyl flooring.....	286
Ceramic tile.....	293
Natural stone and slate flooring	298
Ceramic field wall tile	301
Carpet	308

12 Kitchens..... 309

Kitchen cabinet standards.....	312
<i>Cost estimates</i>	
Kitchen demolition	315
Cabinets and countertops	317
Cabinet knobs, pulls and hinges	324
Sinks and faucets.....	328
Appliances	339

13 Bathrooms 345

Bathroom additions.....	345
<i>Cost estimates</i>	
Tubs, enclosures and shower stalls	352
Tub and shower faucets	360
Toilets	362
Lavatory sinks	367
Vanity cabinets and countertops	374
Bath exhaust fans.....	378
Medicine cabinets.....	382
Bathroom accessories.....	385

14 Plumbing and HVAC 391

Heating types and considerations	391
Framing for plumbing and HVAC.....	394
<i>Cost estimates</i>	
Furnace replacement.....	396
Chimney flue components	399
Water heaters	405
DWV pipe replacement.....	407

15 Electrical..... 409

Wiring residences	411
Adding outlets and switches.....	414
<i>Cost estimates</i>	
Non-metallic cable.....	417
PVC conduit and fittings.....	420
EMT conduit and fittings	422
Flex conduit and fittings	426
Rigid and IMC conduit and fittings	429
Switches and receptacles.....	434
Distribution panels	436
Lighting.....	440
Smart home electrical mgmt. system.....	444

16 Porches and Decks 445

Adding a porch.....	446
Elevated decks	448
<i>Cost estimates</i>	
Deck lumber.....	452
Alternative deck materials	454
Porch and deck stairs.....	457
Pool replastering	459
Spa replastering.....	460

17 Painting and Finishing..... 461

Paint application techniques	464
<i>Cost estimates</i>	
Labor estimates for painting.....	466
Stains and finishes	487
Wood preservatives.....	490
Interior paints	492
Exterior paints	494

18 Earthquake Damage 497

Types of damage	497
What FEMA recommends.....	499
When making alterations	504
When adding a room.....	505
Checking for earthquake damage.....	505
Repair of foundations and floor slabs.....	506
Framing repairs	508
Cracks in plaster and stucco	509
Fireplaces and chimneys.....	510
Mechanical, electrical, and plumbing systems.....	511
<i>Cost estimates</i>	
Foundation anchors and brackets.....	512
Cripple wall bracing	512
Hold-down anchors.....	512
Bracing a water heater	512
Framing straps and braces	512
Concrete repairs	513
Straighten a frame wall.....	514
Straighten a window opening	514
Plaster and stucco repair	514

19 Water Damage and

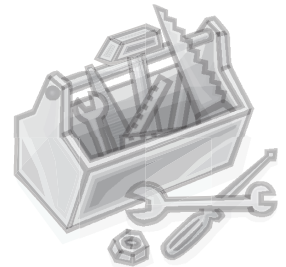
Mold Remediation 515

Building Dryout	515
Mold Remediation.....	525
<i>Cost estimates</i>	
Water extraction	529, 531
Pre-drying	529
Remove appliances	530
HVAC system cleaning	530
Carpet removal	531
Drywall repairs	532
Demolition.....	532-534
Cleanup after water extraction	534
Mold inspection and remediation protocol.....	535
Containment structure.....	536
Remove mold by abrading.....	537
Encapsulation	537
Personal protection equipment	538
Air movers, dryers and drying systems.....	539
Other dryout and mold equipment	540

Index..... 541

Pricing Home Improvement Jobs

1



Estimating home improvement costs requires specialized skills. You can't price home improvement work the same way you'd price new construction. The proportion of labor expense is greater. There's far more risk because there are far more variables and unknowns. An example will make this clear.

Hanging doors in new construction is a 1-2-3 affair. You know ahead of time exactly what's required. You built the wall, installed the frame and know each door will fit right the first time. There won't be any surprises. An experienced estimator can forecast the cost of hanging a door in a new home with a high degree of certainty.

Now let's look at the same task on a home improvement project. First, remember that you may be hanging only one door. There's no chance to improve the production rate on second or later doors. Installing this door is probably different from the last door you installed on a similar project and will be different from your next door installation.

Work starts with removing the old door. That's probably not too hard — once you break through six coats of accumulated paint on the hinges. Let's assume you work carefully and don't damage the casing or trim. The next step is to install a blind Dutchman where the original hinges were attached. If the frame's badly chewed up from years of neglect and abuse, you'll have to remove and replace the entire frame. Don't forget that the building has settled over the years. The frame has probably twisted out of plumb. More time will be needed to shim and level the frame.

Finally the door is installed and swings smoothly. But the job still isn't finished. You have to paint the door to match and will certainly have to haul away the old door and the debris.

Every home improvement cost estimate comes with dozens of chances to make an expensive mistake. Surprises are inevitable and nearly all surprises will add to the cost, not reduce the cost. Estimating new construction is a snap by comparison.

All home improvement has similar problems:

- ❖ No chance for economies of scale (mass production),
- ❖ Difficulty in removing just enough of the old,
- ❖ Work doesn't follow the normal (from the ground, up) sequence of construction,
- ❖ Difficulty adding new materials to deteriorated or nonstandard existing materials,
- ❖ The need to match designs, colors and textures,
- ❖ Covering up for another contractor's mistakes,
- ❖ Struggling to get access to the place where the work is to be done,
- ❖ Protecting adjacent surfaces and pathway to the work area,
- ❖ Initial uncertainty about how much work is needed.

If you're an experienced home improvement contractor, you understand this already. Whether experienced or not, you know full well that accurate pricing is crucial to survival in the home improvement business. Unfortunately, most home improvement specialists have far less experience in pricing their work than in getting the work done. No wonder so many home improvement companies sink into obscurity.

But it doesn't have to be that way.

The chapters that follow explain how to price each type of home improvement work. Emphasis will be on avoiding risk — pricing pitfalls that can turn any home improvement contract into a financial nightmare.

No Price Fits All Jobs

There's no single way to arrive at the correct price for home improvement work. Neither is there a single correct price for most home improvement projects. But there are both good and bad ways to estimate prices and there are good and bad prices for any proposed job. Your task as a home improvement estimator is to produce consistently good estimates on most jobs. If you're already doing that, congratulations. You don't need this book. Return it where you bought it and get a refund. But if you're not, information in the following chapters will make or save you many times what you paid for the book.

It's accepted wisdom among home improvement specialists that salespeople need authority to quote prices when closing a sale. When trying to wrap up a deal, there's no substitute for having current cost information at your fingertips. That's especially true on larger jobs where you've prepared detailed plans and a written estimate. The owner will have questions and suggestions that change the job specs. If you want to close the sale then and there, you'd better know how much to add or subtract for each change the owner wants.

Most home improvement companies authorize salespeople to quote prices from an approved list in a price book. That simplifies the salesperson's job, eliminates most major errors, and saves the owner of the company from approving every item in every estimate. In our opinion, quoting from a price book is the only way to build sales volume in the home improvement business. That means every home improvement contractor needs a good price book.

Of course, the best price book for your company would be based on your actual cost experience — work done by your crews on your jobs with materials from your dealers and installed by your subcontractors. Since every contractor uses different crews, subcontractors and suppliers, every price book should be different. And, of course, prices in the company price book should be revised regularly to reflect current labor and material costs.

Having admitted that there's no substitute for developing your own price book, we'll suggest that you not bother. Most home improvement contractors don't have the time or patience to maintain current installed prices for thousands of repair and

remodeling items. Even if you did, spending hundreds of hours a year keeping a price book current would be a waste of time. Prices for home improvement work are usually negotiated on site. There's little value in keeping a book of exact costs if you have to cut a special deal to close each sale.

Instead, we suggest that you let this manual serve as your company price book. Using the prices in this book (and included software download) will eliminate most of the common estimating mistakes. If your labor costs are higher or if your crews aren't as skilled as most tradesmen, you may have to increase the selling prices listed here to make a reasonable profit. And, of course, sometimes you're going to have a job with costs that exceed what any reasonable estimate could have predicted. This manual isn't a substitute for the exercise of good judgment. That's always your job.

Cost Plus Markup Equals Selling Price

The figures in this manual show both costs to the contractor and a recommended selling price. The difference between your cost and your selling price is your markup. Markup varies widely, far more than either material cost or labor cost. You're the final authority on markup. You decide what markup fits best — based on market conditions, your client, and the profit you feel is reasonable. Once you decide on the "right" markup, it's easy to plug that percentage into the bid, assuming you use National Estimator.

Every construction contractor needs to distinguish between "markup" and "profit." Markup is what you add to estimated labor and material costs (usually called "hard costs") to find the selling price. Profit is what you have left when all bills have been paid. The two are very different. Profit is just the frosting on the cake.

Markup is also different from "margin." Figure 1-1 shows percentages of markup for various levels of hard costs. For example, if your markup on a \$20,000 job is 50 percent, the selling price will be \$30,000. The margin on that job is 33 percent, \$10,000 divided by the selling price of \$30,000. (Note the bottom row in Figure 1-1.) Margin is what's left after hard costs are recovered, and includes profit.

Markup vs. Margin				
Hard Cost	Price at 50% Markup	Price at 70% Markup	Price at 100% Markup	Price at 150% Markup
\$50	\$75	\$85	\$100	\$125
\$100	\$150	\$170	\$200	\$250
\$200	\$300	\$340	\$400	\$500
\$300	\$450	\$510	\$600	\$750
\$400	\$600	\$680	\$800	\$1,000
\$500	\$750	\$850	\$1,000	\$1,250
\$1,000	\$1,500	\$1,700	\$2,000	\$2,500
\$2,000	\$3,000	\$3,400	\$4,000	\$5,000
\$3,000	\$4,500	\$5,100	\$6,000	\$7,500
\$4,000	\$6,000	\$6,800	\$8,000	\$10,000
\$5,000	\$7,500	\$8,500	\$10,000	\$12,500
\$6,000	\$9,000	\$10,200	\$12,000	\$15,000
\$7,000	\$10,500	\$11,900	\$14,000	\$17,500
\$8,000	\$12,000	\$13,600	\$16,000	\$20,000
\$9,000	\$13,500	\$15,300	\$18,000	\$22,500
\$10,000	\$15,000	\$17,000	\$20,000	\$25,000
\$11,000	\$16,500	\$18,700	\$22,000	\$27,500
\$12,000	\$18,000	\$20,600	\$24,000	\$30,000
\$13,000	\$19,500	\$22,100	\$26,000	\$32,500
\$14,000	\$21,000	\$23,800	\$28,000	\$35,000
\$15,000	\$22,500	\$25,500	\$30,000	\$37,500
\$16,000	\$24,000	\$27,200	\$32,000	\$40,000
\$17,000	\$25,500	\$28,900	\$34,000	\$42,500
\$18,000	\$27,000	\$30,600	\$36,000	\$45,000
\$19,000	\$28,500	\$32,300	\$38,000	\$47,500
\$20,000	\$30,000	\$34,000	\$40,000	\$50,000
\$30,000	\$45,000	\$51,000	\$60,000	\$75,000
\$40,000	\$60,000	\$68,000	\$80,000	\$100,000
\$50,000	\$75,000	\$85,000	\$100,000	\$125,000
Hard Cost	33% Margin	41% Margin	50% Margin	60% Margin

Figure 1-1

Markup (based on cost) vs. Margin (based on selling price)

Many successful home improvement contractors find they can stay in business if hard costs are 59 percent of selling price. Hard costs include material expense, subcontract costs and labor (including taxes and insurance). The other 41 percent of selling price (“margin”) compensates the sales staff, covers overhead, supervision and contingency, and should yield a modest profit. From Figure 1-1, you can see that markup on hard costs has to be 70 percent to yield a margin of 41 percent.

To put this formula to work in your home improvement company, add 70 percent to your hard costs to find the selling price. Of course, some jobs need more markup and others can get by on less. A smaller job with more risk done for a demanding client may require greater markup. A larger job done mostly by subcontractors can usually carry a smaller markup.

Home improvement contractors have all the overhead of any business: office rent, telephone, owner’s salary, office salaries, legal and accounting expense, insurance, auto and truck expense, and more. But unlike other contractors, home improvement specialists routinely deal with high risk from both the unknown and the unknowable — at least until work actually begins. Since most of what you didn’t or couldn’t anticipate will inflate your costs, you’re assuming significant risk. That’s why markups for home improvement work have to be higher than for new construction.

Naturally, competition dictates markup. If you’re not getting enough work at 70 percent markup, maybe 70 percent is too much for your area. But remember that you shouldn’t have to bid remodeling work on a level playing field. New construction usually goes to the lowest responsible bidder. A creative salesman who follows the recommendations in this book has an advantage over lowball bidders who rely on price alone to sell their services.

If you have trouble using *National Estimator*, we’ll be glad to help, and we don’t charge you for it.

Free telephone assistance is available from 8 a.m. until 5 p.m. Pacific time Monday through Friday (except holidays). Call 760-438-7828, Ext. 2.

This Book Works Two Ways



When the *National Estimator* program has been installed, click Help on the menu bar to see a list of topics that will get you up and running. Or, go online to www.craftsman-book.com and click on Support, then Tutorials, to view an interactive tutorial for *National Estimator*.

Estimates That Work Two Ways

This manual is designed for use by both the owner of a home improvement business and by company sales staff. Prices shown in this manual include both hard costs (labor and material) and a recommended selling price (usually based on 70 percent markup). Sales staff will use the selling price.

Figure 1-2 shows the last page of an estimate for the Stillwel room addition, including 70 percent markup. The company estimator created this estimate from a job survey prepared by a sales representative. Figure 1-2 is for company use and was created in the National Estimator program.

Qty	Craft@Hours	Unit	Material	Labor	Equipment	Total
Roll & brush 1 coat of water base undercoat on interior flush doors						
Medium .3 MH/Door, 11.5 Doors/Gal						
3.00	2P@.9000	Ea	5.07	21.36	0.00	26.43
Roll & brush 1st finish coat of water base enamel on interior flush doors						
Medium .25 MH/Door, 12.5 Doors/Gal						
3.00	2P@.7500	Ea	5.39	17.80	0.00	23.19
Roll & brush 1 coat water base undercoat on vanity cabinet						
Medium 93 SF/MH, 250 SF/Gal						
0.90	2P@.9720	CSF	6.99	23.06	0.00	30.05
Roll & brush 1st finish coat of water base enamel on vanity cabinet						
Medium 103 SF/MH, 288 SF/Gal						
0.90	2P@.8740	CSF	7.02	20.70	0.00	27.72
Roll 1st coat of water base stain on rough sawn or resawn wood siding						
Medium 225 SF/MH, 213 SF/Gal						
17.00	2P@7.548	CSF	157.08	178.50	0.00	335.58
Roll 2nd coat of water base stain on rough sawn or resawn wood siding						
Medium 275 SF/MH, 273 SF/Gal						
17.00	2P@6.188	CSF	122.63	146.73	0.00	269.36
**Subtotal: Painting						
	40.7		1,014.54	973.48	0.00	1,988.00
Total Manhours, Material, Labor, and Equipment:						
	456.0		18,641.82	11,675.42	540.29	30,857.53
Total Only (Subcontract) Costs:						
						4,028.33
Subtotal:						34,885.85
70.00% Markup:						24,420.10
Estimate Total:						59,305.95

Figure 1-2

Estimate with a 70 percent markup shown

Figure 1-3 shows the last page of a proposal for the same job. This is what the customer sees. It was created by the Job Cost Wizard program. Both National Estimator and Job Cost Wizard are included in the free download that comes with this book. Notice that the total is nearly the same in both documents, \$59,305.95. Figure 1-2, the estimate, shows 70 percent markup on hard costs. Figure 1-3, the proposal, doesn't show the markup at all. Instead, markup has been distributed proportionately throughout each cost item in the job. Job Cost Wizard does this distribution at the click of a button.

Craftsman Construction

6058 Corte del Cedro
Box 6500
Fairfield, GA 30456
856-3806

Proposal

Date	Estimate #
8/3/18	494
Customer	Job
Bill Stillwel	Room Addition

Description	Qty	Rate	Amount
Roll & brush 1st finish coat of water base enamel on vanity cabinet. Medium 103 SF/MH, 288 SF/Gal			
Material, per CSF	0.90	13.26	11.94
Labor, per CSF	0.90	39.09	35.18
Roll 1st coat of water base stain on rough sawn or resawn wood siding. Medium 225 SF/MH, 213 SF/Gal			
Material, per CSF	17	15.71	267.04
Labor, per CSF	17	17.85	303.45
Roll 2nd coat of water base stain on rough sawn or resawn wood siding. Medium 275 SF/MH, 273 SF/Gal			
Material, per CSF	17	12.26	208.47
Labor, per CSF	17	14.67	249.44
*Painting subtotal			3,379.60
*Project Subtotal			59,305.96
*Project Total			59,305.96

Figure 1-3

Proposal for the same job not showing the markup

Once an estimate is finished in the National Estimator program and saved to computer disk, press **Ctrl** on your keyboard and tap the letter **J** to convert the estimate into a proposal in Job Cost Wizard. You can't make changes in the Job Cost Wizard screen. But it's easy to toggle back to National Estimator program (press **Alt** and tap the **Tab** key), make a change, and then press **Ctrl-J** once again.

Job Cost Wizard offers dozens of choices on what you show and don't show in written proposals. Your bids can be long (full description for everything in the estimate) or short (only a summary of each category). You can show or hide labor and material cost detail. You can show or hide markup and profit.

Once work begins, you'll want to monitor job expenses to be sure actual costs remain consistent with estimated costs. If you use QuickBooks to pay bills and figure payroll, let QuickBooks do the comparisons for you. Job Cost Wizard exports the proposal to QuickBooks, where you can prepare progress invoices and track expenses against estimates.

The National Estimator program lets you change anything in the costbook or even add your own estimated costs. Make the *National Home Improvement Estimator* your collection point for all estimating and pricing information. Anything you add to the costbook shows up in red and can be migrated to later editions of this manual when available. The *National Home Improvement Estimator* starts out as your most useful estimating reference. What you add to the costbook will make it even more valuable.

Job Survey (Scope of Work)

Of course, neither a good price book nor a computer estimating program will solve all of your estimating problems. Computers seldom make mistakes in addition or multiplication. But nothing prevents you from making expensive estimating mistakes on your own. By far the most common estimating mistake will be omitting something essential to the job.

Get in the habit of completing an exhaustive job survey before beginning any estimate for home improvement work. Some of your estimates on a job may be too high. Other estimates on a job may be too low. With any luck, your over-estimates will roughly balance with your under-estimates, leaving the job total about where it should be. But the estimated price for anything omitted from a job survey is always zero. That's a 100 percent miss. It's hard to balance a complete miss with anything. A few of those can create a financial disaster.

Material Costs in This Book

Material costs for each item are listed in the column headed Material. These are neither retail nor wholesale prices. They are estimates of what most contractors who buy in moderate volume will pay suppliers as of mid-2018. Discounts may be available for purchases in larger volumes.

Add Delivery Expense to the material cost for other than local delivery of reasonably large quantities. Cost of delivery varies with the distance from source of supply, method of transportation, and quantity to be delivered. But most material dealers absorb the delivery cost on local delivery (5 to 15 miles) of larger quantities to good customers. Add the expense of job site delivery when it's a significant part of the material cost.

Add Sales Tax when sales tax will be charged to the contractor buying the materials. In some states, contractors have to collect sales tax based on the contract price. No matter what your state (or county) requires, National Estimator can handle the task. Click **Edit** on the National Estimator menu bar. Then click **Sales Tax**.

Waste and Coverage Loss is included in the installed material cost. The cost of many materials per unit after installation is greater than the purchase price for the same unit because of waste, shrinkage or coverage loss during installation. For example, about 120 square feet of nominal 1" x 4" square edge boards will be needed to cover 100 square feet of floor or wall. There's no coverage loss with plywood sheathing, but waste due to cutting and fitting will average about 6 percent.

Costs in the Material column of this book assume normal waste and coverage loss. Small and irregular jobs may require a greater waste allowance. Materials priced without installation (with no labor cost) don't include an allowance for waste and coverage except as noted.

Labor Costs for installing the material or doing the work described are listed in the column headed Labor. The labor cost per unit is the labor cost per hour multiplied by the manhours per unit shown after the @ sign in the Craft@Hrs column. Labor cost includes the basic wage, the employer's contribution to welfare, pension, vacation and apprentice funds, and all tax and insurance charges based on wages.

Supervision Expense to the general contractor isn't included in the labor cost. The cost of supervision and non-productive labor varies widely from job to job. Calculate the cost of supervision and non-productive labor and add this to the estimate.

Payroll Taxes and Insurance are included in the labor cost. See the following section for more on the "contractor's burden."

Manhours per Unit and the Craft performing the work are listed in the Craft@Hrs column. To find the units of work done per worker in an 8-hour day, divide 8 by the manhours per unit. To find the units done by a crew in an 8-hour day, multiply the units per worker per 8-hour day by the number of crew members.

Manhours include all productive labor normally associated with installing the materials described.

This will usually include tasks such as:

- ❖ Unloading and storing construction materials, tools and equipment on site.
- ❖ Moving tools and equipment from a storage area or truck on site at the beginning of the day.
- ❖ Returning tools and equipment to a storage area or truck on site at the end of the day.
- ❖ Normal time lost for work breaks.
- ❖ Planning and discussing the work to be performed.
- ❖ Normal handling, measuring, cutting and fitting.
- ❖ Keeping a record of the time spent and work done.
- ❖ Regular cleanup of construction debris.
- ❖ Infrequent correction or repairs required because of faulty installation.

Adjust the Labor Cost to the job you're figuring when your actual hourly labor cost is known or can be estimated. The labor costs listed in Figure 1-5 will apply within a few percent on many jobs. But labor costs may be much higher or much lower on the job you're estimating.

If the hourly wage rates listed in Figure 1-5 aren't accurate, divide your known or estimated cost per hour by the listed cost per hour. The result is your adjustment for any figure in the Labor column for that craft.

Adjust for Unusual Labor Productivity. Costs in the Labor column are for normal conditions: experienced craftsmen working on reasonably well-planned and managed home improvement projects with fair to good productivity. Labor estimates assume that materials are standard grade, appropriate tools are on hand, work done by other crafts is adequate, layout and installation are relatively uncomplicated, and working conditions don't slow progress.

Working conditions at the jobsite have a major effect on labor cost. Estimating experience and careful analysis can help you predict the effect of most changes in working conditions. Obviously, no single adjustment will apply on all jobs. But the adjustments that follow should help you produce more accurate labor estimates. More than one condition may apply on a job.

Jobsite conditions affect labor costs

- ❖ Add 10% to 15% when working temperatures are below 40 degrees or above 95 degrees.
- ❖ Add 30% to 35% when temperatures are below 20 degrees. Materials and tools are hard to handle. Bulky clothing restricts freedom of movement.
- ❖ Add 15% to 25% for work on a ladder or a scaffold, in a 36" crawl space, in a congested area, or remote from the material storage point.
- ❖ Add 50% for work in an 18" to 36" crawl space. Allow extra time for cleaning out the area before work begins.
- ❖ Add 200% if portions of the crawl space are less than 18". Allow extra time for passing tools and materials. Few contractors bid on work like this.
- ❖ Deduct 10% when the work is in an open area with excellent access and good light.
- ❖ Add 1% for each 10 feet that materials must be lifted above ground level.
- ❖ Add 5% to 50% for tradesmen with below-average skills. Deduct 5% to 25% for highly-motivated, highly-skilled tradesmen.
- ❖ Deduct 10% to 20% when an identical task is repeated many times for several days at the same site.
- ❖ Add 20% to 50% on small jobs where fitting and matching of materials is required, adjacent surfaces have to be protected and the job site is occupied during construction.
- ❖ Add 25% to 50% for work done following a major flood, fire, earthquake, hurricane or tornado while skilled tradesmen are not readily available. Material costs may also be higher after a major disaster.
- ❖ Add 10% to 35% for demanding specs, rigid inspections, unreliable suppliers, a difficult owner or an inexperienced architect.

Use an Area Modification Factor from pages 18 through 26 if your material, hourly labor or equipment costs are unknown and can't be estimated. Here's how: Use the labor and material costs in this manual without modification. Then add or deduct the percentages shown for labor, material and equipment.

Equipment Costs for small tools and expendable supplies (such as saws and tape) are usually considered overhead expense and are covered by your markup. Equipment costs for larger equipment (such as a compressor or backhoe) should be

based on the rental rate for the period needed. Equipment rental costs are included in sections where heavy equipment may be needed.

Labor and Material Costs Change. These costs were compiled in the fall of 2017 and projected to mid-2018 by adding a small percentage. This projection will be accurate for some materials and inaccurate for others. No one can predict material price changes accurately.

How Accurate Are These Figures? They're as accurate as possible considering that the estimators who wrote this book don't know your subcontractors or material suppliers, haven't seen the plans or specifications, don't know what building code applies or where the job is, had to project material costs at least six months into the future, and had no record of how much work the crew that will be assigned to the job can handle.

You wouldn't bid a job under those conditions. And we don't claim that all construction is done at these prices.

Estimating Is an Art, not a science. On many jobs the range between high and low bid will be 20 percent or more. There's room for legitimate disagreement on what the correct costs are, even when complete plans and specifications are available, the date and site are established, and labor and material costs are identical for all bidders.

No cost fits all jobs. Good estimates are custom-made for a particular project and a single contractor through judgment, analysis and experience.

This book isn't a substitute for judgment, analysis and sound estimating practice. It's an *aid* in developing an *informed opinion* of cost. If you're using this book as your sole cost authority for contract bids, you're reading more into these pages than the editors intend.

Use These Figures to compile preliminary estimates, when a "snap" bid is needed to close the deal, and when no actual costs are available. This book will reduce the chance of error or omission on bid estimates, speed "ball park" estimates, and be a good guide when there's no time to get a quote.

Where Do We Get These Figures? From the same sources all professional estimators use: material suppliers, material price services, analysis of plans, specifications, estimates and completed project costs, and both published and unpublished cost studies compiled by both private and government agencies. In addition, we conduct nationwide mail and phone surveys and have the use of several major national estimating databases.

We'll Answer Your Questions about any part of this book and explain how to apply these costs. Free telephone assistance is available from 8 a.m. until 5 p.m. Pacific time Monday through Friday except holidays. Phone 760-438-7828, Ext. 2. We don't accept collect calls and can't estimate the job for you. But if you need clarification on something in this manual, we can help.

Labor Costs and Crews

Throughout this manual you'll see a column headed *Craft@Hrs.* Letters and numbers in this column show our estimates of:

- ❖ Who will do the work (the craft code)
- ❖ An @ symbol which means at
- ❖ How long the work will take (manhours).

For example, in Chapter 4, page 70, you'll find estimates for installing BC plywood wall sheathing by the square foot. The Craft@Hrs column opposite 1/2" plywood wall sheathing shows:

B1@.016

That means we estimate the installation rate for crew B1 at 0.016 manhours per square foot. That's the same as 16 manhours per 1,000 square feet.

Figure 1-4 is a table that defines each of the craft codes used in this book. Notice that crew B1 is composed of two craftsmen: one laborer and one carpenter. To install 1,000 square feet of 1/2" BC wall sheathing at 0.016 manhours per square foot, that crew would need 16 manhours (one 8-hour day for a crew of two).

Notice also in the table that the cost per manhour for crew B1 is listed as \$33.44. That's the average for a laborer (listed at \$29.93 per hour) and a carpenter (listed at \$36.94 per hour): \$29.93 plus \$36.94 is \$66.87. Divide by 2 to get \$33.44, the average cost per manhour for crew B1.

In the table, the cost per manhour is the sum of hourly costs of all crew members divided by the number of crew members. That's the average cost per manhour.

Costs in the Labor column in this book are the product of the installation time (in manhours) multiplied by the cost per manhour. For example, in Chapter 4, the labor cost listed for 1/2" BC wall sheathing is \$0.54 per square foot. That's the installation time (0.016 manhours per square foot) multiplied by \$33.44, the average cost per manhour for crew B1.

Figure 1-5 shows hourly labor costs components — base wage, typical fringe benefits, payroll taxes, insurance and the total hourly cost.

The labor costs shown in Column 6 were used to compute the manhour costs for crews and the figures in the Labor column.

Craft Codes		
Craft Code	Cost Per Manhour	Crew Composition
B1	\$33.44	1 laborer, 1 carpenter
B2	\$34.60	1 laborer, 2 carpenters
B3	\$32.27	2 laborers, 1 carpenter
B4	\$36.90	1 laborer, 1 operating engineer, 1 reinforcing iron worker
B5	\$36.57	1 laborer, 1 carpenter, 1 cement mason, 1 operating engineer, 1 reinforcing iron worker
B6	\$32.48	1 laborer, 1 cement mason
B7	\$30.32	1 laborer, 1 truck driver
B8	\$36.03	1 laborer, 1 operating engineer
B9	\$32.62	1 bricklayer, 1 bricklayer's helper
BB	\$37.47	1 bricklayer
BC	\$36.94	1 carpenter
BE	\$40.04	1 electrician
BF	\$33.79	1 floor layer
BG	\$35.68	1 glazier
BH	\$27.76	1 bricklayer's helper
BL	\$29.93	1 laborer
BR	\$35.45	1 lather
BS	\$32.78	1 marblesetter
CF	\$35.03	1 cement mason
CT	\$34.83	1 mosaic & terrazzo worker
D1	\$35.92	1 drywall installer, 1 drywall taper
DI	\$35.95	1 drywall installer
DT	\$35.89	1 drywall taper
HC	\$29.01	1 plasterer helper
OE	\$42.13	1 operating engineer
P1	\$36.39	1 laborer, 1 plumber
PM	\$42.85	1 plumber
PP	\$33.82	1 painter, 1 laborer
PR	\$36.99	1 plasterer
PT	\$37.70	1 painter
R1	\$35.60	1 roofer, 1 laborer
RI	\$38.83	1 reinforcing iron worker
RR	\$41.27	1 roofer
SW	\$41.59	1 sheet metal worker
T1	\$32.55	1 tile layer, 1 laborer
TL	\$35.17	1 tile layer
TR	\$30.71	1 truck driver

Figure 1-4

Craft codes used in this manual

Hourly Labor Cost						
	1	2	3	4	5	6
Craft	Base wage per hour	Taxable fringe benefits (5.50% of base wage)	Insurance and employer taxes (%)	Insurance and employer taxes (\$)	Non-Taxable fringe benefits (4.86% of base wage)	Total hourly cost used in this book
Bricklayer	\$27.34	\$1.50	25.30%	\$7.30	\$1.33	\$38.47
Bricklayer's Helper	20.26	1.11	25.30	5.41	0.98	27.76
Building Laborer	20.67	1.14	32.66	7.12	1.00	29.93
Carpenter	25.72	1.41	31.56	8.56	1.25	36.94
Cement Mason	26.00	1.43	23.12	6.34	1.26	35.03
Drywall Installer	26.60	1.46	23.53	6.60	1.29	35.95
Drywall Taper	26.55	1.46	23.53	6.59	1.29	35.84
Electrician	30.50	1.68	19.82	6.38	1.48	40.04
Floor Layer	24.95	1.37	23.79	6.26	1.21	33.79
Glazier	25.95	1.43	25.73	7.04	1.26	35.68
Lather	26.69	1.47	21.26	5.99	1.30	35.45
Marble Setter	24.67	1.36	21.34	5.55	1.20	32.78
Millwright	26.16	1.44	21.22	5.86	1.27	34.73
Mosaic & Terrazzo Worker	26.22	1.44	21.34	5.90	1.27	34.83
Operating Engineer	30.77	1.69	25.18	8.17	1.50	42.13
Painter	27.60	1.52	24.85	7.24	1.34	37.70
Plasterer	26.33	1.45	28.53	7.93	1.28	36.99
Plasterer Helper	20.65	1.14	28.53	6.22	1.00	29.01
Plumber	31.53	1.73	24.24	8.06	1.53	42.85
Reinforcing Ironworker	27.64	1.52	28.56	8.33	1.34	38.83
Roofer	26.32	1.45	44.02	12.24	1.28	41.27
Sheet Metal Worker	30.19	1.66	25.97	8.27	1.47	41.59
Sprinkler Fitter	30.98	1.70	25.05	8.19	1.51	42.38
Tile Layer	26.46	1.46	21.36	5.96	1.29	35.17
Truck Driver	22.26	1.22	26.18	6.15	1.08	30.71

Figure 1-5

Components of hourly labor costs

It's important that you understand what's included in the figures in each of the six columns in the table. Here's an explanation:

Column 1, the base wage per hour, is the craftsman's hourly wage. These figures are representative of what many contractors will be paying craftsmen working on home improvement jobs in 2018.

Column 2, taxable fringe benefits, includes vacation pay, sick leave and other taxable benefits. These fringe benefits average 5.50 percent of the base wage for many construction contractors. This benefit is in addition to the base wage.

Column 3, insurance and employer taxes in percent, shows the insurance and tax rate for construction trades. The cost of insurance in this column includes workers' compensation and contractor's casualty and liability coverage. Insurance rates vary

widely from state to state and depend on a contractor's loss experience. Note that taxes and insurance increase the hourly labor cost by 30 to 35 percent for most trades. There is no legal way to avoid these costs.

Column 4, insurance and employer taxes in dollars, shows the hourly cost of taxes and insurance for each construction trade. Insurance and taxes are paid on the costs in both columns 1 and 2.

Column 5, non-taxable fringe benefits, includes employer paid non-taxable benefits such as medical coverage and tax-deferred pension and profit sharing plans. These fringe benefits average 4.86 percent of the base wage for many construction contractors. The employer pays no taxes or insurance on these benefits.

Column 6, the total hourly cost in dollars, is the sum of columns 1, 2, 4 and 5.

These hourly labor costs will apply within a few percent on many jobs. But wage rates may be much higher or lower in the area where you do business. We recommend using your actual labor cost rather than national averages. That's easy with the National Estimator program. When copying and pasting any cost to your estimate, adjust the assumed hourly labor cost to your actual cost. You need do this only once for each trade. And you can make this adjustment at any time. Any change you make is applied to that trade throughout the estimate.

Abbreviations			
4WD	four-wheel drive	EPA	Environmental Protection Agency
ABS	acrylonitrile butadiene styrene	F	Fahrenheit
AC	alternating current	GFCI	ground fault circuit interrupter
ACQ	Alkaline Copper Quat	GRS	galvanized rigid steel
ADA	Americans with Disabilities Act	H	height
ANSI	American Nat. Standards Institute	HOM	higher order mode
APP	atactic polypropylene	HP	horsepower
ASTM	Amer. Society for Testing Materials	HVAC	heating, ventilating & air cond.
AWG	American Wire Gauge	ID	inside diameter
BF	board foot	IMC	intermediate metal conduit
Btr	better	KD	kiln dried
Btu(s)	British thermal unit(s)	KO	knockout
C	Celsius/Centigrade	kW	kilowatt(s)
CF	cubic foot	L	length
CFM	cubic feet per minute	Lb(s)	pound(s)
CLF	100 linear feet	LF	linear foot
CPM	cycles per minute	LS	lump sum
CSF	100 square feet	MBF	1,000 board feet
CY	cubic yard	MDF	medium density fiberboard
d	penny	mm	millimeter(s)
D	depth	Mo	month
DWV	drain, waste & vent	MPH	miles per hour
Ea	each	MSF	1,000 square feet
EMT	electric metallic tube	NEC	National Electrical Code
		NEMA	National Electrical Manufacturer's Assoc.
		OC	spacing from center to center
		OD	outside diameter
		OSB	oriented strand board
		OSHA	Occupational Safety & Health Admin.
		oz.	ounce(s)
		PSI	pounds per square inch
		PVC	polyvinyl chloride
		R	thermal resistance
		S4S	surfaced 4 sides
		SBS	styrene butadiene styrene
		SF	square foot
		SFCA	(per) square foot of contact area
		Sq	100 square feet
		Std	standard
		SY	square yard
		T	thick
		T&G	tongue & groove edge
		UL	Underwriter's Laboratory
		USDA	United States Dept. of Agriculture
		UV	ultraviolet
		W	width
		X	by or times

Figure 1-6

Abbreviations used in this manual

Area Modification Factors

Construction costs are higher in some areas than in other areas. Add or deduct the percentages shown on the following pages to adapt the costs in this book to your jobsite. Adjust your cost estimate by the appropriate percentages in this table to find the estimated cost for the site selected. Where 0% is shown, it means no modification is required.

Modification factors are listed by state and province. Areas within each state are listed by the first three digits of the postal zip code. For convenience, one representative city is identified in each three-digit zip or range of zips. Percentages are based on the average of all data points in the table. Factors listed for each state and province are the average of all data in that state or province. Figures for the zips are the average of all information in that area. And figures in the Total column are the weighted average of factors for Labor, Material and Equipment.

The National Estimator program will apply an area modification factor for any five-digit zip you select. Click Utilities. Click Options. Then select the Area Modification Factors tab.

These percentages are composites of many costs and will not necessarily be accurate when estimating the cost of any particular part of a building. But when used to modify costs for an entire structure, they should improve the accuracy of your estimates.

Area Modification Factors

Location	Zip	Mat.	Lab.	Equip.	Total Wtd. Avg.
Alabama Average		-1	-7	0	-4%
Anniston	362	-3	-13	-1	-8%
Auburn	368	-1	-8	0	-4%
Bellamy	369	-2	13	-1	5%
Birmingham	350-352	-3	8	-1	2%
Dothan	363	0	-13	0	-6%
Evergreen	364	-1	-20	0	-10%
Gadsden	359	-4	-15	-1	-9%
Huntsville	358	1	-3	0	-1%
Jasper	355	-2	-16	-1	-8%
Mobile	365-366	-1	-3	0	-2%
Montgomery	360-361	-1	-3	0	-2%
Scottsboro	357	0	-8	0	-4%
Selma	367	-1	-10	0	-5%
Sheffield	356	-1	1	0	0%
Tuscaloosa	354	1	-9	0	-4%
Alaska Average		14	32	5	22%
Anchorage	995	17	38	6	27%
Fairbanks	997	16	40	5	27%
Juneau	998	18	22	6	20%
Ketchikan	999	3	29	1	15%
King Salmon	996	16	32	5	23%
Location	Zip	Mat.	Lab.	Equip.	Total Wtd. Avg.
Arizona Average		1	-9	0	-4%
Chambers	865	1	-18	0	-8%
Douglas	855	0	-15	0	-7%
Flagstaff	860	2	-18	1	-7%
Kingman	864	1	-11	0	-5%
Mesa	852	1	5	0	3%
Phoenix	850	1	6	0	3%
Prescott	863	3	-16	1	-6%
Show Low	859	1	-18	0	-8%
Tucson	856-857	0	-10	0	-5%
Yuma	853	0	5	0	2%
Arkansas Average		-2	-13	0	-7%
Batesville	725	0	-20	0	-9%
Camden	717	-3	1	-1	-1%
Fayetteville	727	0	-8	0	-4%
Fort Smith	729	-1	-14	0	-7%
Harrison	726	-1	-25	0	-12%
Hope	718	-3	-15	-1	-8%
Hot Springs	719	-2	-25	-1	-13%
Jonesboro	724	-1	-18	0	-9%
Little Rock	720-722	-1	-6	0	-3%
Pine Bluff	716	-4	-19	-1	-11%

Area Modification Factors

Location	Zip	Mat.	Lab.	Equip.	Total Wtd. Avg.
Russellville	728	0	-9	0	-4%
West Memphis	723	-3	-1	-1	-2%
California Average		2	12	1	7%
Alhambra	917-918	3	15	1	8%
Bakersfield	932-933	1	4	0	2%
El Centro	922	1	-1	0	0%
Eureka	955	1	-12	0	-5%
Fresno	936-938	0	-5	0	-2%
Herlong	961	2	-8	1	-3%
Inglewood	902-905	3	16	1	9%
Irvine	926-927	3	24	1	13%
Lompoc	934	3	2	1	3%
Long Beach	907-908	3	17	1	9%
Los Angeles	900-901	3	13	1	8%
Marysville	959	1	-7	0	-3%
Modesto	953	1	2	0	1%
Mojave	935	0	11	0	5%
Novato	949	3	21	1	11%
Oakland	945-947	3	33	1	17%
Orange	928	3	22	1	12%
Oxnard	930	3	1	1	2%
Pasadena	910-912	4	16	1	9%
Rancho Cordova	956-957	2	6	1	4%
Redding	960	1	-8	0	-3%
Richmond	948	2	35	1	17%
Riverside	925	1	7	0	4%
Sacramento	958	1	6	0	3%
Salinas	939	3	-1	1	1%
San Bernardino	923-924	0	4	0	2%
San Diego	919-921	3	13	1	8%
San Francisco	941	3	55	1	27%
San Jose	950-951	3	33	1	17%
San Mateo	943-944	4	40	1	21%
Santa Barbara	931	3	11	1	7%
Santa Rosa	954	3	7	1	5%
Stockton	952	2	7	1	4%
Sunnyvale	940	3	39	1	20%
Van Nuys	913-916	3	14	1	8%
Whittier	906	3	14	1	8%
Colorado Average		2	1	1	1%
Aurora	800-801	3	11	1	7%
Boulder	803-804	3	5	1	4%
Colorado Springs	808-809	2	-3	1	0%
Denver	802	3	13	1	8%
Durango	813	1	-3	0	-1%
Fort Morgan	807	2	-6	1	-2%
Glenwood Springs	816	2	6	1	4%
Grand Junction	814-815	1	-1	0	0%
Greeley	806	3	8	1	5%
Longmont	805	3	2	1	3%
Pagosa Springs	811	0	-9	0	-4%
Pueblo	810	-1	2	0	0%
Salida	812	2	-15	1	-6%

Location	Zip	Mat.	Lab.	Equip.	Total Wtd. Avg.
Connecticut Average		1	16	0	8%
Bridgeport	066	0	13	0	6%
Bristol	060	1	24	0	12%
Fairfield	064	2	17	1	9%
Hartford	061	0	23	0	11%
New Haven	065	1	15	0	7%
Norwich	063	0	7	0	3%
Stamford	068-069	4	21	1	12%
Waterbury	067	1	12	0	6%
West Hartford	062	1	9	0	5%
Delaware Average		1	3	0	2%
Dover	199	1	-9	0	-4%
Newark	197	2	10	1	6%
Wilmington	198	0	9	0	4%
District of Columbia					
Washington	200-205	3	23	1	12%
Florida Average		0	-10	0	-5%
Altamonte Springs	327	-1	-6	0	-3%
Bradenton	342	0	-12	0	-6%
Brooksville	346	0	-16	0	-7%
Daytona Beach	321	-2	-18	-1	-9%
Fort Lauderdale	333	3	1	1	2%
Fort Myers	339	0	-12	0	-6%
Fort Pierce	349	-2	-20	-1	-10%
Gainesville	326	-1	-18	0	-9%
Jacksonville	322	-1	-3	0	-2%
Lakeland	338	-3	-13	-1	-8%
Melbourne	329	-2	-15	-1	-8%
Miami	330-332	2	-1	1	1%
Naples	341	3	-8	1	-2%
Ocala	344	-2	-23	-1	-12%
Orlando	328	0	2	0	1%
Panama City	324	-2	-21	-1	-11%
Pensacola	325	0	-17	0	-8%
Saint Augustine	320	-1	-4	0	-2%
Saint Cloud	347	0	-5	0	-2%
St Petersburg	337	0	-12	0	-6%
Tallahassee	323	0	-13	0	-6%
Tampa	335-336	-1	-1	0	-1%
West Palm Beach	334	1	-5	0	-2%
Georgia Average		-1	-7	0	-4%
Albany	317	-2	-10	-1	-6%
Athens	306	0	-11	0	-5%
Atlanta	303	3	23	1	12%
Augusta	308-309	-2	-2	-1	-2%
Buford	305	0	-5	0	-2%
Calhoun	307	-1	-19	0	-9%
Columbus	318-319	-1	-6	0	-3%
Dublin/Fort Valley	310	-3	-13	-1	-8%
Hinesville	313	-2	-11	-1	-6%
Kings Bay	315	-2	-19	-1	-10%

Area Modification Factors

Location	Zip	Mat.	Lab.	Equip.	Total Wtd. Avg.
Macon	312	-2	-7	-1	-4%
Marietta	300-302	1	8	0	4%
Savannah	314	-1	-7	0	-4%
Statesboro	304	-2	-21	-1	-11%
Valdosta	316	-1	-1	0	-1%
Hawaii Average	17	25	6	20%	
Aliamanu	968	17	29	6	22%
Ewa	967	17	23	6	20%
Halawa Heights	967	17	23	6	20%
Hilo	967	17	23	6	20%
Honolulu	968	17	29	6	22%
Kailua	968	17	29	6	22%
Lualualei	967	17	23	6	20%
Millilani Town	967	17	23	6	20%
Pearl City	967	17	23	6	20%
Wahiawa	967	17	23	6	20%
Waianae	967	17	23	6	20%
Wailuku (Maui)	967	17	23	6	20%
Idaho Average	0	-19	0	-9%	
Boise	837	1	-12	0	-5%
Coeur d'Alene	838	0	-21	0	-10%
Idaho Falls	834	-1	-19	0	-9%
Lewiston	835	0	-24	0	-11%
Meridian	836	0	-19	0	-9%
Pocatello	832	-1	-20	0	-10%
Sun Valley	833	0	-18	0	-8%
Illinois Average	-1	9	0	4%	
Arlington Heights	600	1	29	0	14%
Aurora	605	2	29	1	14%
Belleville	622	-2	2	-1	0%
Bloomington	617	1	-4	0	-1%
Carbondale	629	-3	-6	-1	-4%
Carol Stream	601	2	28	1	14%
Centralia	628	-3	-3	-1	-3%
Champaign	618	-1	-3	0	-2%
Chicago	606-608	2	31	1	15%
Decatur	623	-2	-13	-1	-7%
Galesburg	614	-2	-6	-1	-4%
Granite City	620	-3	11	-1	3%
Green River	612	-1	12	0	5%
Joliet	604	0	29	0	13%
Kankakee	609	-2	-4	-1	-3%
Lawrenceville	624	-4	-9	-1	-6%
Oak Park	603	3	35	1	18%
Peoria	615-616	-1	15	0	6%
Peru	613	0	4	0	2%
Quincy	602	3	31	1	16%
Rockford	610-611	-2	8	-1	3%
Springfield	625-627	-2	2	-1	0%
Urbana	619	-3	-6	-1	-4%

Location	Zip	Mat.	Lab.	Equip.	Total Wtd. Avg.
Indiana Average		-2	-3	-1	-3%
Aurora	470	-1	-9	0	-5%
Bloomington	474	1	-6	0	-2%
Columbus	472	0	-9	0	-4%
Elkhart	465	-2	-7	-1	-4%
Evansville	476-477	-2	12	-1	4%
Fort Wayne	467-468	-3	1	-1	-1%
Gary	463-464	-4	23	-1	8%
Indianapolis	460-462	-1	10	0	4%
Jasper	475	-1	-14	0	-7%
Jeffersonville	471	-1	-11	0	-6%
Kokomo	469	-2	-15	-1	-8%
Lafayette	479	-2	-9	-1	-5%
Muncie	473	-4	-13	-1	-8%
South Bend	466	-4	0	-1	-2%
Terre Haute	478	-4	-2	-1	-3%
Iowa Average		-2	-4	-1	-3%
Burlington	526	0	2	0	1%
Carroll	514	-3	-20	-1	-11%
Cedar Falls	506	-1	-7	0	-4%
Cedar Rapids	522-524	0	5	0	2%
Cherokee	510	-2	4	-1	1%
Council Bluffs	515	-2	1	-1	-1%
Creston	508	-3	6	-1	1%
Davenport	527-528	-1	3	0	1%
Decorah	521	-2	-14	-1	-8%
Des Moines	500-503	-2	13	-1	5%
Dubuque	520	-1	-7	0	-4%
Fort Dodge	505	-2	-5	-1	-3%
Mason City	504	0	-6	0	-3%
Ottumwa	525	0	-13	0	-6%
Sheldon	512	0	-15	0	-7%
Shenandoah	516	-3	-26	-1	-14%
Sioux City	511	-2	14	-1	5%
Spencer	513	-1	-14	0	-7%
Waterloo	507	-4	-1	-1	-3%
Kansas Average		-2	-1	-1	-2%
Colby	677	-1	-17	0	-8%
Concordia	669	-1	-25	0	-12%
Dodge City	678	-2	-7	-1	-4%
Emporia	668	-3	20	-1	8%
Fort Scott	667	-2	-11	-1	-6%
Hays	676	-2	-26	-1	-13%
Hutchinson	675	-3	-9	-1	-6%
Independence	673	-3	39	-1	16%
Kansas City	660-662	0	10	0	5%
Liberal	679	-2	24	-1	10%
Salina	674	-3	-11	-1	-7%
Topeka	664-666	-3	2	-1	-1%
Wichita	670-672	-2	-6	-1	-4%

Area Modification Factors

Location	Zip	Mat.	Lab.	Equip.	Total Wtd. Avg.
Kentucky Average		-1	-8	0	-4%
Ashland	411-412	-3	-5	-1	-4%
Bowling Green	421	0	-11	0	-5%
Campton	413-414	-1	-23	0	-11%
Covington	410	-1	5	0	2%
Elizabethtown	427	-1	-20	0	-10%
Frankfort	406	1	13	0	7%
Hazard	417-418	-2	-19	-1	-10%
Hopkinsville	422	-2	-9	-1	-5%
Lexington	403-405	1	1	0	1%
London	407-409	-1	-13	0	-7%
Louisville	400-402	-1	5	0	2%
Owensboro	423	-2	-6	-1	-4%
Paducah	420	-2	2	-1	0%
Pikeville	415-416	-3	-14	-1	-8%
Somerset	425-426	0	-23	0	-11%
White Plains	424	-3	-6	-1	-4%

Louisiana Average		-1	7	-1	2%
Alexandria	713-714	-3	13	-1	5%
Baton Rouge	707-708	0	21	0	10%
Houma	703	-2	11	-1	4%
Lafayette	705	0	18	0	9%
Lake Charles	706	-2	30	-1	14%
Mandeville	704	-1	-5	0	-3%
Minden	710	-2	-8	-1	-5%
Monroe	712	-2	-14	-1	-8%
New Orleans	700-701	0	5	0	2%
Shreveport	711	-2	-6	-1	-4%

Maine Average		0	-10	0	-5%
Auburn	042	-1	-7	0	-4%
Augusta	043	-1	-9	0	-5%
Bangor	044	-1	-11	0	-6%
Bath	045	1	-15	0	-6%
Brunswick	039-040	1	-3	0	-1%
Camden	048	-1	-21	0	-10%
Cutler	046	-1	-15	0	-7%
Dexter	049	-1	-8	0	-4%
Northern Area	047	-2	-16	-1	-8%
Portland	041	2	2	1	2%

Maryland Average		1	3	0	2%
Annapolis	214	3	13	1	8%
Baltimore	210-212	-1	16	0	7%
Bethesda	208-209	3	24	1	13%
Church Hill	216	2	-10	1	-4%
Cumberland	215	-4	-12	-1	-8%
Elkton	219	2	-14	1	-5%
Frederick	217	1	13	0	7%
Laurel	206-207	2	15	1	8%
Salisbury	218	1	-14	0	-6%

Location	Zip	Mat.	Lab.	Equip.	Total Wtd. Avg.
Massachusetts Average		2	23	1	12%
Ayer	015-016	1	11	0	6%
Bedford	017	3	30	1	15%
Boston	021-022	3	77	1	37%
Brockton	023-024	3	41	1	20%
Cape Cod	026	2	6	1	4%
Chicopee	010	1	14	0	7%
Dedham	019	2	36	1	18%
Fitchburg	014	2	21	1	11%
Hingham	020	3	37	1	19%
Lawrence	018	2	28	1	14%
Nantucket	025	3	16	1	9%
New Bedford	027	1	12	0	6%
Northfield	013	2	3	1	2%
Pittsfield	012	1	0	0	1%
Springfield	011	-1	18	0	8%

Michigan Average		-2	4	-1	1%
Battle Creek	490-491	-3	1	-1	-1%
Detroit	481-482	0	15	0	7%
Flint	484-485	-3	-5	-1	-4%
Grand Rapids	493-495	-2	4	-1	1%
Grayling	497	1	-17	0	-7%
Jackson	492	-3	1	-1	-1%
Lansing	488-489	-1	1	0	0%
Marquette	498-499	-1	7	0	3%
Pontiac	483	-3	30	-1	12%
Royal Oak	480	-2	18	-1	7%
Saginaw	486-487	-2	-9	-1	-5%
Traverse City	496	-1	-4	0	-2%

Minnesota Average		0	-1	0	-1%
Bemidji	566	-1	-11	0	-6%
Brainerd	564	0	-6	0	-3%
Duluth	556-558	-2	7	-1	2%
Fergus Falls	565	-1	-20	0	-10%
Magnolia	561	0	-18	0	-8%
Mankato	560	0	-8	0	-4%
Minneapolis	553-555	1	28	0	13%
Rochester	559	0	-3	0	-1%
St Cloud	563	-1	6	0	2%
St Paul	550-551	1	26	0	12%
Thief River Falls	567	0	-5	0	-2%
Willmar	562	-1	-11	0	-6%

Mississippi Average		-2	-11	-1	-6%
Clarksdale	386	-3	-16	-1	-9%
Columbus	397	-1	1	0	0%
Greenville	387	-4	-26	-1	-14%
Greenwood	389	-3	-18	-1	-10%
Gulfport	395	-2	-11	-1	-6%
Jackson	390-392	-3	-2	-1	-3%
Laurel	394	-3	-11	-1	-7%

Area Modification Factors

Location	Zip	Mat.	Lab.	Equip.	Total Wtd. Avg.
McComb	396	-2	-22	-1	-11%
Meridian	393	-2	8	-1	3%
Tupelo	388	-1	-13	0	-7%

Missouri Average		-1	-5	0	-3%
Cape Girardeau	637	-2	-8	-1	-5%
Caruthersville	638	-1	-15	0	-7%
Chillicothe	646	-2	-7	-1	-4%
Columbia	652	1	-9	0	-4%
East Lynne	647	-1	10	0	4%
Farmington	636	-3	-15	-1	-8%
Hannibal	634	0	-4	0	-2%
Independence	640	-1	13	0	5%
Jefferson City	650-651	1	-11	0	-5%
Joplin	648	-2	-10	-1	-6%
Kansas City	641	-2	15	-1	6%
Kirksville	635	0	-33	0	-15%
Knob Noster	653	0	7	0	3%
Lebanon	654-655	-2	-23	-1	-12%
Poplar Bluff	639	-1	-21	0	-10%
Saint Charles	633	1	2	0	1%
Saint Joseph	644-645	-3	2	-1	-1%
Springfield	656-658	-2	-15	-1	-8%
St Louis	630-631	-2	20	-1	8%

Montana Average		0	-7	0	-3%
Billings	590-591	0	-4	0	-2%
Butte	597	1	-7	0	-3%
Fairview	592	-1	27	0	12%
Great Falls	594	-1	-11	0	-6%
Havre	595	-1	-19	0	-9%
Helena	596	0	-4	0	-2%
Kalispell	599	1	-15	0	-6%
Miles City	593	-1	-15	0	-7%
Missoula	598	1	-14	0	-6%

Nebraska Average		-1	-17	0	-8%
Alliance	693	-1	-21	0	-10%
Columbus	686	0	-15	0	-7%
Grand Island	688	0	-18	0	-8%
Hastings	689	0	-20	0	-9%
Lincoln	683-685	0	-9	0	-4%
McCook	690	1	-21	0	-9%
Norfolk	687	-3	-19	-1	-10%
North Platte	691	0	-14	0	-6%
Omaha	680-681	-1	1	0	0%
Valentine	692	-2	-31	-1	-15%

Nevada Average		2	0	1	1%
Carson City	897	2	-12	1	-4%
Elko	898	1	19	0	9%
Ely	893	2	-8	1	-3%
Fallon	894	2	-2	1	0%
Las Vegas	889-891	2	5	1	3%
Reno	895	2	-4	1	-1%

Location	Zip	Mat.	Lab.	Equip.	Total Wtd. Avg.
New Hampshire Average		1	-4	0	-1%
Charlestown	036	1	-11	0	-5%
Concord	034	1	-7	0	-3%
Dover	038	1	1	0	1%
Lebanon	037	2	-8	1	-3%
Littleton	035	-1	-12	0	-6%
Manchester	032-033	0	4	0	2%
New Boston	030-031	1	5	0	3%

New Jersey Average		1	20	0	9%
Atlantic City	080-084	-2	12	-1	4%
Brick	087	2	2	1	2%
Dover	078	1	19	0	9%
Edison	088-089	1	28	0	13%
Hackensack	076	3	18	1	10%
Monmouth	077	3	22	1	12%
Newark	071-073	1	23	0	11%
Passaic	070	2	23	1	12%
Paterson	074-075	2	13	1	7%
Princeton	085	-2	23	-1	10%
Summit	079	3	32	1	16%
Trenton	086	-3	19	-1	7%

New Mexico Average		0	-17	0	-8%
Alamogordo	883	-1	-22	0	-11%
Albuquerque	870-871	2	-8	1	-3%
Clovis	881	-2	-22	-1	-11%
Farmington	874	2	-4	1	-1%
Fort Sumner	882	-3	0	-1	-2%
Gallup	873	1	-17	0	-7%
Holman	877	2	-24	1	-10%
Las Cruces	880	-1	-17	0	-8%
Santa Fe	875	3	-20	1	-8%
Socorro	878	1	-32	0	-14%
Truth or Consequences	879	-2	-15	-1	-8%
Tucumcari	884	-1	-17	0	-8%

New York Average		0	13	0	6%
Albany	120-123	-1	16	0	7%
Amityville	117	2	18	1	9%
Batavia	140	-3	5	-1	1%
Binghamton	137-139	-3	0	-1	-2%
Bronx	104	2	19	1	10%
Brooklyn	112	3	12	1	7%
Buffalo	142	-4	7	-1	1%
Elmira	149	-4	-1	-1	-3%
Flushing	113	3	30	1	15%
Garden City	115	3	29	1	15%
Hicksville	118	3	27	1	14%
Ithaca	148	-4	-6	-1	-5%
Jamaica	114	3	27	1	14%
Jamestown	147	-4	-11	-1	-7%
Kingston	124	0	-8	0	-4%
Long Island	111	3	62	1	30%

Area Modification Factors

Location	Zip	Mat.	Lab.	Equip.	Total Wtd. Avg.
Montauk	119	1	15	0	7%
New York (Manhattan)	100-102	3	64	1	31%
New York City	100-102	3	64	1	31%
Newcomb	128	-1	2	0	0%
Niagara Falls	143	-4	-8	-1	-6%
Plattsburgh	129	1	-3	0	-1%
Poughkeepsie	125-126	1	2	0	1%
Queens	110	4	33	1	17%
Rochester	144-146	-3	8	-1	2%
Rockaway	116	3	18	1	10%
Rome	133-134	-3	-6	-1	-4%
Staten Island	103	3	15	1	8%
Stewart	127	-1	-9	0	-5%
Syracuse	130-132	-3	7	-1	2%
Tonawanda	141	-4	2	-1	-1%
Utica	135	-4	-8	-1	-6%
Watertown	136	-2	0	-1	-1%
West Point	109	1	11	0	6%
White Plains	105-108	3	27	1	14%

North Carolina Average

		1	-9	0	-4%
Asheville	287-289	1	-16	0	-7%
Charlotte	280-282	1	15	0	7%
Durham	277	2	-3	1	0%
Elizabeth City	279	1	-18	0	-8%
Fayetteville	283	-1	-12	0	-6%
Goldsboro	275	1	-2	0	0%
Greensboro	274	1	-7	0	-3%
Hickory	286	-1	-17	0	-8%
Kinston	285	-1	-19	0	-9%
Raleigh	276	3	2	1	3%
Rocky Mount	278	0	-14	0	-6%
Wilmington	284	1	-14	0	-6%
Winston-Salem	270-273	0	-10	0	-5%

North Dakota Average

		-1	10	0	4%
Bismarck	585	0	6	0	3%
Dickinson	586	-1	34	0	15%
Fargo	580-581	0	1	0	0%
Grand Forks	582	0	-3	0	-1%
Jamestown	584	-1	-7	0	-4%
Minot	587	-1	21	0	9%
Nekoma	583	-1	-20	0	-10%
Williston	588	-1	47	0	21%

Ohio Average

		-2	2	-1	-1%
Akron	442-443	-2	4	-1	1%
Canton	446-447	-3	-3	-1	-3%
Chillicothe	456	-2	-3	-1	-2%
Cincinnati	450-452	-1	7	0	3%
Cleveland	440-441	-3	11	-1	3%
Columbus	432	0	11	0	5%
Dayton	453-455	-3	6	-1	1%

Location	Zip	Mat.	Lab.	Equip.	Total Wtd. Avg.
Lima	458	-3	-8	-1	-5%
Marietta	457	-3	-8	-1	-5%
Marion	433	-3	-9	-1	-6%
Newark	430-431	-1	8	0	3%
Sandusky	448-449	-2	-5	-1	-3%
Steubenville	439	-3	6	-1	1%
Toledo	434-436	-1	16	0	7%
Warren	444	-4	-6	-1	-5%
Youngstown	445	-5	-1	-2	-3%
Zanesville	437-438	-2	0	-1	-1%

Oklahoma Average

		-3	-7	-1	-5%
Adams	739	-2	-20	-1	-10%
Ardmore	734	-3	1	-1	-1%
Clinton	736	-3	-2	-1	-3%
Durant	747	-4	-20	-1	-11%
Enid	737	-4	-4	-1	-4%
Lawton	735	-2	-15	-1	-8%
McAlester	745	-4	-10	-1	-7%
Muskogee	744	-2	-16	-1	-8%
Norman	730	-2	-6	-1	-4%
Oklahoma City	731	-2	-4	-1	-3%
Ponca City	746	-3	1	-1	-1%
Poteau	749	-2	-13	-1	-7%
Pryor	743	-2	-11	-1	-6%
Shawnee	748	-4	-13	-1	-8%
Tulsa	740-741	-1	1	0	0%
Woodward	738	-4	15	-1	5%

Oregon Average

		1	-9	1	-3%
Adrian	979	-1	-24	0	-12%
Bend	977	1	-11	0	-5%
Eugene	974	2	-9	1	-3%
Grants Pass	975	2	-13	1	-5%
Klamath Falls	976	2	-19	1	-8%
Pendleton	978	0	-7	0	-3%
Portland	970-972	2	19	1	10%
Salem	973	2	-7	1	-2%

Pennsylvania Average

		-3	0	-1	-1%
Allentown	181	-2	8	-1	3%
Altoona	166	-3	-14	-1	-8%
Beaver Springs	178	-3	-8	-1	-5%
Bethlehem	180	-1	10	0	4%
Bradford	167	-4	-13	-1	-8%
Butler	160	-4	1	-1	-2%
Chambersburg	172	-1	-13	0	-7%
Clearfield	168	2	-8	1	-3%
DuBois	158	-2	-19	-1	-10%
East Stroudsburg	183	0	-11	0	-5%
Erie	164-165	-3	-10	-1	-6%
Genesee	169	-4	-5	-1	-4%
Greensburg	156	-4	-5	-1	-4%
Harrisburg	170-171	-2	8	-1	3%

Area Modification Factors

Location	Zip	Mat.	Lab.	Equip.	Total Wtd. Avg.
Hazleton	182	-3	-3	-1	-3%
Johnstown	159	-4	-16	-1	-9%
Kittanning	162	-4	-9	-1	-6%
Lancaster	175-176	-2	1	-1	-1%
Meadville	163	-4	-16	-1	-9%
Montrose	188	-3	-6	-1	-4%
New Castle	161	-4	-1	-1	-3%
Philadelphia	190-191	-3	27	-1	11%
Pittsburgh	152	-4	17	-1	6%
Pottsville	179	-4	-12	-1	-8%
Punxsutawney	157	-4	-1	-1	-3%
Reading	195-196	-4	9	-1	2%
Scranton	184-185	-2	4	-1	1%
Somerset	155	-4	-16	-1	-9%
Southeastern	193	0	18	0	8%
Uniontown	154	-4	-9	-1	-6%
Valley Forge	194	-3	27	-1	11%
Warminster	189	-1	24	0	11%
Warrendale	150-151	-4	16	-1	5%
Washington	153	-4	23	-1	8%
Wilkes Barre	186-187	-3	2	-1	-1%
Williamsport	177	-3	-1	-1	-2%
York	173-174	-3	2	-1	-1%

Rhode Island Average		1	10	0	5%
Bristol	028	1	9	0	5%
Coventry	028	1	9	0	5%
Cranston	029	1	12	0	6%
Davisville	028	1	9	0	5%
Narragansett	028	1	9	0	5%
Newport	028	1	9	0	5%
Providence	029	1	12	0	6%
Warwick	028	1	9	0	5%

South Carolina Average		-1	-2	0	-1%
Aiken	298	0	9	0	4%
Beaufort	299	-1	-4	0	-2%
Charleston	294	-1	0	0	-1%
Columbia	290-292	0	-4	0	-2%
Greenville	296	0	17	0	8%
Myrtle Beach	295	0	-17	0	-8%
Rock Hill	297	-1	-11	0	-6%
Spartanburg	293	-1	-6	0	-3%

South Dakota Average		-1	-12	0	-6%
Aberdeen	574	-1	-15	0	-7%
Mitchell	573	-1	-11	0	-6%
Mobridge	576	-2	-18	-1	-9%
Pierre	575	-2	-20	-1	-10%
Rapid City	577	-2	-14	-1	-8%

Location	Zip	Mat.	Lab.	Equip.	Total Wtd. Avg.
Sioux Falls	570-571	0	-2	0	-1%
Watertown	572	-1	-7	0	-4%

Tennessee Average		0	-5	0	-2%
Chattanooga	374	-1	5	0	2%
Clarksville	370	1	2	0	1%
Cleveland	373	-1	-1	0	-1%
Columbia	384	-1	-14	0	-7%
Cookeville	385	0	-18	0	-8%
Jackson	383	-1	-3	0	-2%
Kingsport	376	0	-11	0	-5%
Knoxville	377-379	-1	-3	0	-2%
McKenzie	382	-1	-16	0	-8%
Memphis	380-381	-1	3	0	1%
Nashville	371-372	1	4	0	2%

Texas Average		-2	12	-1	5%
Abilene	795-796	-4	0	-1	-2%
Amarillo	790-791	-2	-2	-1	-2%
Arlington	760	-1	4	0	1%
Austin	786-787	1	24	0	13%
Bay City	774	-1	86	0	41%
Beaumont	776-777	-3	43	-1	20%
Brownwood	768	-3	-14	-1	-8%
Bryan	778	0	18	0	10%
Childress	792	-3	-28	-1	-14%
Corpus Christi	783-784	-2	41	-1	19%
Dallas	751-753	-1	15	0	6%
Del Rio	788	-3	4	-1	0%
El Paso	798-799	-3	3	-1	1%
Fort Worth	761-762	-1	5	0	2%
Galveston	775	-3	55	-1	25%
Giddings	789	0	-2	0	-1%
Greenville	754	-3	9	-1	3%
Houston	770-772	-1	58	0	28%
Huntsville	773	-2	59	-1	28%
Longview	756	-2	4	-1	1%
Lubbock	793-794	-3	-11	-1	-7%
Lufkin	759	-3	20	-1	9%
McAllen	785	-3	-9	-1	-5%
Midland	797	-3	25	-1	10%
Palestine	758	-2	7	-1	2%
Plano	750	0	15	0	7%
San Angelo	769	-3	-9	-1	-6%
San Antonio	780-782	-2	19	-1	9%
Texarkana	755	-3	-15	-1	-8%
Tyler	757	-1	-15	0	-7%
Victoria	779	-2	29	-1	14%
Waco	765-767	-3	-2	-1	-3%
Wichita Falls	763	-3	-16	-1	-9%
Woodson	764	-3	-3	-1	-3%

Area Modification Factors

Location	Zip	Mat.	Lab.	Equip.	Total Wtd. Avg.
Utah Average		1	-9	1	-3%
Clearfield	840	2	-3	1	0%
Green River	845	1	-7	0	-3%
Ogden	843-844	0	-19	0	-9%
Provo	846-847	2	-16	1	-6%
Salt Lake City	841	2	-1	1	1%
Vermont Average		1	-11	0	-5%
Albany	058	1	-16	0	-7%
Battleboro	053	1	-9	0	-4%
Beecher Falls	059	1	-19	0	-8%
Bennington	052	-1	-12	0	-6%
Burlington	054	2	5	1	3%
Montpelier	056	2	-10	1	-4%
Rutland	057	-1	-13	0	-7%
Springfield	051	-1	-11	0	-6%
White River Junction	050	1	-12	0	-5%
Virginia Average		0	-8	0	-4%
Abingdon	242	-2	-18	-1	-9%
Alexandria	220-223	3	18	1	10%
Charlottesville	229	1	-15	0	-6%
Chesapeake	233	0	-8	0	-4%
Culpeper	227	1	-12	0	-5%
Farmville	239	-2	-24	-1	-12%
Fredericksburg	224-225	1	-11	0	-5%
Galax	243	-2	-20	-1	-10%
Harrisonburg	228	1	-14	0	-6%
Lynchburg	245	-2	-17	-1	-9%
Norfolk	235-237	0	-4	0	-2%
Petersburg	238	-2	-5	-1	-3%
Radford	241	-1	-18	0	-9%
Reston	201	3	12	1	7%
Richmond	232	-1	5	0	2%
Roanoke	240	-1	-18	0	-9%
Staunton	244	0	-15	0	-7%
Tazewell	246	-3	-10	-1	-6%
Virginia Beach	234	0	-6	0	-3%
Williamsburg	230-231	0	-6	0	-3%
Winchester	226	0	9	0	4%
Washington Average		1	-2	1	0%
Clarkston	994	0	-18	0	-8%
Everett	982	2	2	1	2%
Olympia	985	2	-6	1	-2%
Pasco	993	0	2	0	1%
Seattle	980-981	3	21	1	11%
Spokane	990-992	0	-7	0	-3%
Tacoma	983-984	2	3	1	2%
Vancouver	986	2	4	1	3%

Location	Zip	Mat.	Lab.	Equip.	Total Wtd. Avg.
Wenatchee	988	1	-14	0	-6%
Yakima	989	0	-10	0	-5%
West Virginia Average		-2	-8	-1	-5%
Beckley	258-259	1	-11	0	-5%
Bluefield	247-248	-1	2	0	0%
Charleston	250-253	1	8	0	4%
Clarksburg	263-264	-3	-11	-1	-7%
Fairmont	266	0	-24	0	-11%
Huntington	255-257	-1	-7	0	-4%
Lewisburg	249	-2	-29	-1	-14%
Martinsburg	254	-1	-10	0	-5%
Morgantown	265	-3	-6	-1	-4%
New Martinsville	262	-2	-18	-1	-9%
Parkersburg	261	-3	5	-1	1%
Romney	267	-4	-10	-1	-7%
Sugar Grove	268	-3	-14	-1	-8%
Wheeling	260	-3	14	-1	5%
Wisconsin Average		-1	1	0	0%
Amery	540	0	-3	0	-1%
Beloit	535	0	10	0	5%
Clam Lake	545	-1	-17	0	-8%
Eau Claire	547	-1	-4	0	-2%
Green Bay	541-543	0	6	0	3%
La Crosse	546	-2	3	-1	0%
Ladysmith	548	-2	-1	-1	-2%
Madison	537	2	14	1	8%
Milwaukee	530-534	0	12	0	6%
Oshkosh	549	-1	9	0	4%
Portage	539	0	0	0	0%
Prairie du Chien	538	-2	-12	-1	-7%
Wausau	544	-1	-6	0	-3%
Wyoming Average		0	-1	0	-1%
Casper	826	-2	4	-1	1%
Cheyenne/Laramie	820	1	-6	0	-2%
Gillette	827	-1	7	0	3%
Powell	824	0	-7	0	-3%
Rawlins	823	0	17	0	8%
Riverton	825	-1	-12	0	-6%
Rock Springs	829-831	0	2	0	1%
Sheridan	828	1	-8	0	-3%
Wheatland	822	0	-7	0	-3%
UNITED STATES TERRITORIES					
Guam		53	-21	-5	18%
Puerto Rico		2	-47	-5	-21%
VIRGIN ISLANDS (U.S.)					
St. Croix		18	-15	-4	2%
St. John		52	-15	-4	20%
St. Thomas		23	-15	-4	5%

Canadian Area Modification Factors

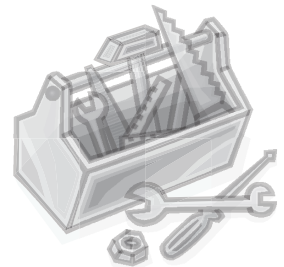
To find the cost in Canada in Canadian dollars, increase the costs in this book by the appropriate percentage listed below. These figures convert costs to Canadian dollars based on \$1.00 Canadian to \$0.76 U.S.

Location	Mat.	Lab.	Equip.	Total Wtd. Avg.
Alberta Average	26	-1	7	13%
Calgary	26	1	7	14%
Edmonton	25	2	7	14%
Fort McMurray	28	-7	7	12%
British Columbia Average	26	-15	7	7%
Fraser Valley	26	-16	7	6%
Okanagan	27	-18	7	6%
Vancouver	26	-11	7	9%
Manitoba Average	20	-22	5	0%
North Manitoba	20	-22	5	0%
Selkirk	20	-22	5	0%
South Manitoba	20	-22	5	0%
Winnipeg	20	-22	5	0%
New Brunswick	16	-47	3	-13%
Moncton	16	-47	3	-13%

Location	Mat.	Lab.	Equip.	Total Wtd. Avg.
Newfoundland/Labrador	19	-29	4	-3%
Nova Scotia Average	17	-36	4	-8%
Amherst	16	-36	3	-8%
Nova Scotia	17	-35	4	-7%
Sydney	17	-37	4	-8%
Ontario Average	22	-11	5	7%
London	22	-10	5	7%
Thunder Bay	24	-14	6	6%
Toronto	21	-9	5	7%
Quebec Average	19	-24	4	-1%
Montreal	19	-24	4	-1%
Quebec City	19	-24	4	-1%
Saskatchewan Average	23	-18	5	4%
La Ronge	24	-21	6	3%
Prince Albert	22	-20	5	2%
Saskatoon	22	-14	5	5%

Demolition

2



Nearly all home improvement projects require some breaking out and removing of existing materials and disposal of debris. Most will require protection of adjacent surfaces, taking safety precautions (such as setting up barricades), closing off doorways or windows, and normal cleanup. The demolition figures in this chapter include these tasks and will apply on most home improvement jobs that don't involve unusual conditions or complications. Costs will be higher when access to the work is limited, when your crew doesn't have complete control of the construction site, or when debris must be moved longer distances or around obstacles. All figures assume that debris is piled on site or in a bin. Add the cost of hauling to the nearest disposal site and tippage charges, if required. No salvage value is assumed except as noted.

Many of the following chapters include estimated costs to remove the old and replace with new materials of a similar description. For example, you'll find costs for removing shingles and replacing shingles in the roofing chapter. That's appropriate because they're part of the same task and usually performed by the same contractor. The estimates in this chapter are for demolition only and don't consider the cost of replacing what has been removed.

Of all construction tasks, demolition is probably the most difficult to estimate with any certainty. You're never sure what's in a wall to be demolished until the job begins. That's why it's best to exclude from your demolition bid what isn't in your estimate. Use the checklist to the right to help identify potential problems before they develop.

Demolition Checklist

- ☐ Can you anticipate any problem getting a demolition permit for this job?
- ☐ Is there a noise ordinance which will limit hours of operation or selection of equipment?
- ☐ Can the debris box be located close to the work?
- ☐ Can a trencher get to the job site?
- ☐ Is the site accessible to wheeled equipment?
- ☐ Will the debris have to be hand-carried to the roll-off box or gondola?
- ☐ Is there a direct route from the demolition site to the debris box?
- ☐ Will you need to re-route any plumbing, electrical, phone or gas lines?
- ☐ Will you need to remove and replace lawn sprinklers?
- ☐ Will you need to cut back or remove any bushes or trees?
- ☐ Will you have to remove and re-install a fence or gate?
- ☐ Does a septic tank or drain field extend into the site of construction?
- ☐ Can (must) materials generated from your project be recycled or salvaged?

	Day	Week	Month
Equipment Rental for Demolition.			
Air compressors, wheel-mounted			
16 CFM, shop type, electric	70.00	169.00	506.00
30 CFM, shop type, electric	77.00	232.00	697.00
80 CFM, shop type, electric	91.00	275.00	823.00
100 CFM, gasoline unit	113.00	338.00	950.00
125 CFM, gasoline unit	140.00	422.00	1,270.00
Paving breakers (no bits included) hand-held, pneumatic			
To 40 lb	42.00	132.00	306.00
41 - 55 lb	62.00	223.00	474.00
56 - 70 lb	55.00	187.00	427.00
71 - 90 lb	69.00	196.00	475.00
Paving breakers jackhammer bits			
Moil points, 15" to 18"	6.00	14.00	30.00
Chisels, 3"	7.00	17.00	44.00
Clay spades, 5-1/2"	10.00	23.00	62.00
Asphalt cutters, 5"	8.00	24.00	51.00
Pneumatic chippers, medium weight, 10 lb	31.00	93.00	258.00
Air hose rental, 50 LF section			
5/8" air hose	6.00	16.00	41.00
3/4" air hose	8.00	21.00	52.00
1" air hose	11.00	29.00	63.00
1-1/2" air hose	19.00	60.00	154.00
Dump truck rental rate plus mileage			
3 CY	350.00	954.00	1,880.00
5 CY	387.00	1,080.00	2,950.00
Hammer rental			
Electric brute breaker	63.00	258.00	773.00
Gas breaker	82.00	330.00	953.00
Demolition hammer, electric	64.00	256.00	650.00
Roto hammer, 7/8", electric	60.00	235.00	670.00
Roto hammer, 1-1/2", electric	62.00	248.00	600.00
Stump grinder, 9 HP	129.00	530.00	1,450.00
Brush chipper, trailer-mounted 40 HP	259.00	780.00	1,940.00
Chain saw, 18", gasoline	64.00	255.00	1,737.00
Chop saw, 14", electric	38.00	155.00	450.00
Backhoe/loader, wheel-mounted, diesel or gasoline			
1/2 CY bucket capacity, 55 HP	230.00	700.00	1,640.00
1 CY bucket capacity, 65 HP	215.00	663.00	2,000.00
1-1/4 CY bucket capacity, 75 HP	210.00	700.00	1,960.00
1-1/2 CY bucket capacity, 100 HP	360.00	1000.00	2,580.00
Wheel loader, front-end load and dump, diesel			
3/4 CY bucket, 4WD, articulated	180.00	615.00	1,840.00
1 CY bucket, 4WD, articulated	315.00	915.00	2,570.00
2 CY bucket, 4WD, articulated	470.00	1,380.00	3,760.00

	Craft@Hrs	Unit	Material	Labor	Total	Sell
Sitework Demolition						
Debris disposal and removal. Tipping charges for solid waste disposal at the dump vary from \$30 to \$120 per ton. For planning purposes, estimate waste disposal at \$75 per ton, plus the hauling cost. Call the dump or trash disposal company for actual charges. Typical costs are shown below.						
Dumpster, 3 CY trash bin, emptied weekly	—	Mo	—	—	330.00	—
Dumpster, 40 CY solid waste bin (lumber, drywall, roofing)						
Hauling cost, per load	—	Ea	—	—	230.00	—
Add to per load charge, per ton	—	Ton	—	—	55.00	—
Low-boy, 14 CY solid waste container (asphalt, dirt, masonry, concrete)						
Hauling cost, per load (7 CY maximum load)	—	Ea	—	—	230.00	—
Add to per load charge, per ton	—	Ton	—	—	55.00	—
Recycler fees. Recycling construction waste materials can substantially reduce disposal costs. Recycling charges vary from \$95 to \$120 per load, depending on the type of material and the size of the load. Add the cost of hauling to a recycling facility.						
Greenwaste	—	Ton	—	—	30.00	—
Asphalt, per load (7 CY)	—	Ea	—	—	100.00	—
Concrete, masonry or rock, per load (7 CY)	—	Ea	—	—	100.00	—
Dirt, per load (7 CY)	—	Ea	—	—	100.00	—
Mixed loads, per load (7 CY)	—	Ea	—	—	100.00	—
Bush and tree removal. Includes cutting into manageable pieces with power hand tools and dumping debris in a trash bin on site. Add the cost of power equipment rental, if needed.						
Shrubs and bushes, including stump removal.						
4' high, per each	BL@.750	Ea	—	22.40	22.40	38.10
Tree removal. Costs will vary widely depending on the condition, size, location and accessibility of the tree. Includes cutting into manageable pieces with power hand tools and dumping debris in a trash bin or chipper on site. Does not include stump removal or grinding. Add the cost of power equipment rental, bucket truck, and other specialized equipment if needed. Large shade tree removal may require a crew of 5 or more. Use \$2,000 as a minimum job charge for trees with a 36" diameter trunk and larger.						
8" to 12" diameter trunk	B8@2.50	Ea	—	90.10	90.10	153.00
13" to 18" diameter trunk	B8@3.50	Ea	—	126.00	126.00	214.00
19" to 24" diameter trunk	B8@5.50	Ea	—	198.00	198.00	337.00
25" to 36" diameter trunk	B8@7.00	Ea	—	252.00	252.00	428.00
Stump grinding, using a 9 HP wheel-mounted stump grinder						
6" to 10" diameter stump	B8@.800	Ea	—	28.80	28.80	49.00
11" to 14" diameter stump	B8@1.04	Ea	—	37.50	37.50	63.80
15" to 18" diameter stump	B8@1.30	Ea	—	46.80	46.80	79.60
19" to 24" diameter stump	B8@1.50	Ea	—	54.00	54.00	91.80
Fencing demolition. Remove chain link fence and cemented posts for disposal. These figures assume fencing is removed by cutting ties at posts and rails and rolling the fabric. These rolls can be heavy. A larger crew will be needed on larger jobs.						
To 6' high	BL@.100	LF	—	2.99	2.99	5.08
Remove chain link fence and cemented posts for salvage,						
To 6' high	BL@.120	LF	—	3.59	3.59	6.10
Remove board fence and cemented posts for disposal,						
To 6' high	BL@.100	LF	—	2.99	2.99	5.08

	Craft@Hrs	Unit	Material	Labor	Total	Sell
Building Demolition						
Single-story room demolition. Includes breaking out a concrete or masonry foundation using pneumatic tools, breaking materials into manageable pieces with hand tools and handling debris to a trash bin on site. Includes the cost of erecting a temporary vapor barrier to seal the wall opening in the existing structure. Add the cost of wall patching on the remaining structure. Add the cost of equipment rental.						
Demolish a wood-frame addition built on a concrete slab, including grade beams. Use these figures to estimate the cost of demolishing an attached garage.						
Per square foot of floor area demolished	BL@.100	SF	—	2.99	2.99	5.08
Demolish a wood-frame addition built on a conventional foundation, including wood deck, stairs to grade, and the concrete or concrete block foundation.						
Per square foot of floor area demolished	BL@.120	SF	—	3.59	3.59	6.10
Detached garage demolition. Includes breaking materials into manageable pieces with hand tools and handling debris to a trash bin on site. No slab or foundation demolition included. No salvage of materials assumed.						
Frame garage with wood or aluminum siding						
One-car garage, to 10' wide by 22' deep	BL@16.5	Ea	—	494.00	494.00	840.00
Two-car garage, to 20' wide by 28' deep	BL@23.0	Ea	—	688.00	688.00	1,170.00
Frame garage with stucco siding						
One-car garage to 12' wide by 22' deep	BL@23.5	Ea	—	703.00	703.00	1,200.00
One-car to 16' wide by 22' deep	BL@28.5	Ea	—	853.00	853.00	1,450.00
Two-car garage to 22' wide by 28' deep	BL@42.5	Ea	—	1,270.00	1,270.00	2,160.00
Brick or block garage						
One-car garage to 12' wide by 22' deep	BL@23.0	Ea	—	688.00	688.00	1,170.00
One-car garage to 16' wide by 22' deep	BL@28.0	Ea	—	838.00	838.00	1,420.00
Two-car garage to 20' wide by 22' deep	BL@33.0	Ea	—	988.00	988.00	1,680.00
Gutting a building. Interior finish stripped back to the structural walls. Building structure to remain. No allowance for salvage value. These costs include loading and hauling up to 6 miles but no dump fees. Costs are per square foot of floor area based on 8' ceiling height. Add the cost of equipment rental. Figures in parentheses show the approximate "loose" volume of materials after demolition.						
Residential building (125 SF per CY)	BL@.100	SF	—	2.99	2.99	5.08
Building Component Demolition. Itemized costs for demolition of building components when building is being remodeled, repaired or rehabilitated and not completely demolished. Costs include protecting adjacent areas and normal clean-up. Costs are to break out the items listed and pile debris on site or in a bin.						
Brick wall demolition. Cost per square foot removed measured on one face. Removed using a pneumatic breaker. Add the cost of equipment rental. Figures in parentheses show the volume before and after demolition and weight of the materials after demolition.						
4" thick walls						
(60 SF per CY and 36 lbs. per SF)	BL@.061	SF	—	1.83	1.83	3.11
8" thick walls						
(30 SF per CY and 72 lbs. per SF)	BL@.110	SF	—	3.29	3.29	5.59

2. Press the paper tape into the mud with a drywall knife, not your hand. Then smooth the surface with the knife. Press hard enough to force joint compound through the small perforations in the tape, if the tape has perforations. But don't press too hard. Some mud should remain under the tape. When you're done taping and embedding the tape, let everything dry overnight before beginning the finish coats.

3. Cover the tape with cement, feathering the outer edges at least 2" on each side of the paper tape. Feather an additional 2" when covering a cut joint, as there's no taper. Then let the cement dry overnight.

4. When dry, sand lightly. A pole sander speeds this work. Then apply a thin second finish coat, feathering the edges a little past the edge of the prior coat. Use drywall topping compound designed for finish coats to create a smooth joint that's easy to sand. You can buy "all-purpose" compound, which can be used both for bedding and topping. But it's better to use bedding compound for bedding, and topping compound for finishing. Use a wider drywall knife for this finish coat, up to 12" wide. To save sanding time, keep this finish coat as smooth as possible. For top quality work, apply a third coat of mud after the second coat has dried and been sanded.

5. When the last coat of cement is dry, sand smooth.

6. Fill all nail and screw dimples with at least one coat of joint compound. Sand the surface after each coat is dry.

Use folded perforated tape on interior corners. See Figure 10-6. Fold tape down the center to form a right angle. Tape designed for this purpose already has a crease down the middle. Then apply cement on each side of the corner and press the tape in place with the putty knife. Use a drywall corner knife to embed the tape on both intersecting walls at the same time. Finish the corner with a coat of joint compound. Smooth the cement on both surfaces of a corner at the same time with a corner knife. Let the corner dry overnight and then sand the surface smooth.

For exterior corners, use metal or plastic drywall corner bead. This makes a more durable corner, able to withstand impacts that are likely at external corners. Also apply paper drywall tape over the edge of the metal bead. Nail or screw outside corners to the board every 8" and finish with joint compound. When you're finished applying tape, bead and mud at both internal and external corners, you should have a 4" strip of mud on each side of every corner. Don't worry if this strip isn't smooth. Sanding and more finishing will follow.

Drywall mud shrinks as it dries. So apply a little more than actually needed to make a smooth finish, especially over fastener heads. Bear in mind that drywall sanding is very messy! It creates huge, choking clouds of dust. Wear a dust mask to avoid inhaling this stuff. In an unoccupied house, the mess isn't as much of a problem. However, if you're working in an occupied home, you'll need to control the dust. Homeowners don't appreciate having everything in their home covered with a thick layer of white powder. You'll either need to seal off your work area with plastic sheeting, or use a dustless sanding system, such as a wet sanding sponge.

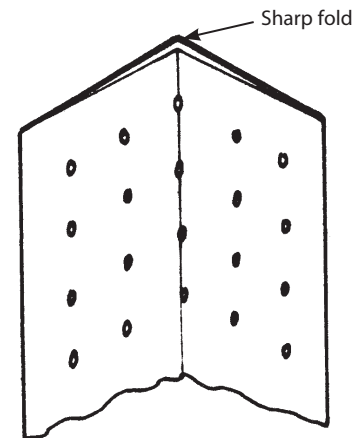


Figure 10-6
Corner tape

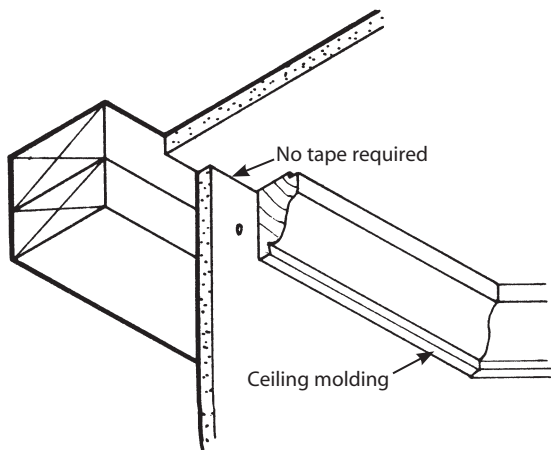


Figure 10-7
Ceiling molding

If you plan to install crown molding, no taping is needed where walls meet the ceiling. See Figure 10-7. Set the trim with 8d finishing nails spaced 12" to 16" apart. Be sure to nail into the top wall plate.

Drywall Ceilings

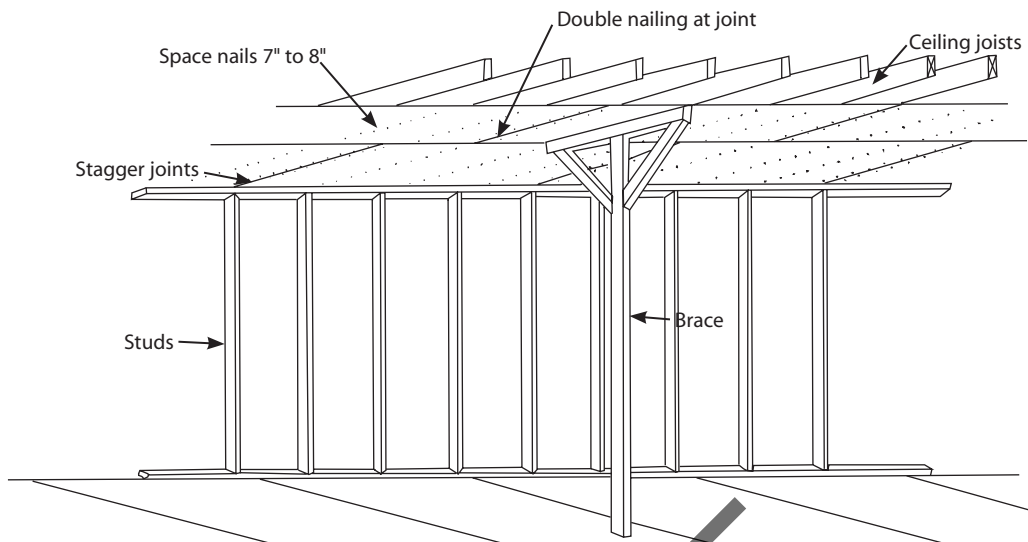
You can apply new drywall directly over old plaster or on furring strips nailed over an uneven plaster ceiling. Applying furring strips on a ceiling won't create the problems that furring would on a wall. But furring out the ceiling will usually be more work than tearing down the ceiling cover and starting over. Use 2" x 2" or 2" x 3" furring strips nailed perpendicular to the joists. Space these furring strips 16" on center for 3/8" drywall or 24" on center for 1/2" drywall. Nail the furring strips with two 8d nails at each joist. Stagger board end joints. Be sure board edges end on a joist or furring strip. Don't jam the boards tightly together. It's best if there's only light contact at each edge.

Hanging ceiling panels is easier with a drywall lift that allows precise positioning while leaving two hands free for driving nails or screws. If you don't have a drywall lift, cut two braces like the one shown in Figure 10-8. Make them slightly longer than the ceiling height. Nail or screw the drywall to all supporting members, spacing the fasteners 7" to 8" apart. If you use nails, select 5d (1 1/4") ring-shank nails for 1/2" drywall and 4d (1") ring shank nails for 3/8" drywall. Again, don't break the surface of the paper when driving fasteners. Finish ceiling joints the same way you finish wall joints.

Textured Finishes for Drywall

Wall finish is usually smooth to make cleaning easier. But the ceiling finish may be textured, usually with some form of joint compound. Texture hides ridges and bumps in the ceiling and improves acoustics by eliminating echo off the ceiling. But textured ceilings are also an admission that there's something to hide. Many owners don't like textured ceilings and know that texture is used to hide defects. The first thing they'll say when they see a textured ceiling is, "What's wrong with your ceiling?"

Orange peel texture consists of thinned joint compound applied with a long-nap paint roller. In an emergency, you can make ceiling texture by thinning out joint compound with water until it reaches a consistency similar to that of paint. But it's better to buy mix that's specifically made for texturing. It's much easier than trying to make your own. To ensure proper consistency, try applying some mixture to a scrap piece of drywall held upright. Adjust the consistency as necessary by adding

**Figure 10-8***Installing drywall on ceiling*

more water or joint compound to the bucket of mixture. When you've got the mixture just right, roll it onto the ceiling or wall. Keep the rolling pattern uniform so the texture appears to have a grain. When the mixture dries, avoid the temptation to sand the surface. The texture is very fragile. Sanding can knock off too much of the desirable surface.

Spatter finish is done with a compressor-operated spatter gun that shoots globules of thinned drywall mud on the ceiling at random. Scrape overspray off the walls. Other mixes are available to create different effects. You can get nearly the same spatter effect by dipping a stiff-bristle brush in thinned drywall mud and slinging mud on the ceiling with a snap of the wrist. This takes practice. Don't count on getting this right on the first attempt. Control the size of the spatters by making the mix thinner or thicker. Obviously, this is messy work. But it's an effective technique when you have to match only a few square feet of spatter-finished ceiling. For minor patching, you can also buy spatter finish in an aerosol can.

Knockdown finish uses the same technique — spatter blown or snapped on the ceiling. But the mix should be stiffer so spatters are between the size of a pea and a grape. Let the globules dry for a few minutes. Then knock the tops off with a masonry trowel. Work the trowel in all directions to avoid creating an obvious grain in the texture.

Skip trowel or imperial texture is like a knockdown finish, only more so. Apply mud to the ceiling or wall in a random pattern. Then smooth out what's there, leaving irregular patterns of texture in some areas and no texture in others. When done, it should look like Spanish stucco.

Veneer plaster is used in one or two $\frac{1}{8}$ " coats over a veneer plaster base such as blueboard. Blueboard is similar to drywall, with a paper surface designed to bond

well with the veneer plaster. Apply enough plaster to trowel a smooth, even finish over the entire surface. It's a lot of work, but veneer plaster hides imperfections and joints better than regular plaster, and provides a hard coat that protects the paper surface below.

Cottage cheese or popcorn texture is applied with a compressor, hopper and applicator gun. Although popcorn ceiling texture isn't currently in fashion, and you're not likely to be installing it, you may still be called on to do a repair job. Aerosol sprays are available to match the existing cottage cheese texture if you're only patching a small area.

No matter what finish you apply, the job isn't done until the surface has been primed and painted.

Repairing Drywall

Fill nail holes and small cracks in boards by applying a smooth coat of drywall compound. Let it dry. Then sand the surface smooth. Repairing larger holes in drywall isn't as easy. There's nothing but wall cavity behind a full penetration of the board. Drywall compound will fall into holes wider than about $\frac{1}{2}$ ". Cover larger cracks and small holes with self-adhesive fiberglass tape. Then press stiff drywall compound into the mesh. When the first coat is dry, apply a finish coat. With a patch like this, feather the drywall compound 12" on each side of the crack to avoid leaving an obvious ridge. Again, don't count on getting this right the first time.

Holes larger than a golf ball need some type of backing to hold the drywall mud until it sets. You can buy a drywall repair kit with clips that support drywall cut to cover nearly any size hole. If these drywall clips create lumps or otherwise don't work for you, make a patch kit with cardboard, string and a short length of dowel. Cut a piece of stiff cardboard slightly larger than the hole. Loop a short length of string through the center of the cardboard patch. Then fold the cardboard in half and insert it into the cavity. Pull the string tight, flattening the cardboard against the cavity side of the board and closing off the hole. Tie the loose end of the string around a short dowel laid across the hole. Then apply a coat of drywall compound over the hole and against the cardboard backing. Leave the patch slightly concave. When dry, cut the string and remove the dowel.

Many experienced drywall experts use neither clips nor cardboard. Instead, they cut a piece of scrap wood that will fit through the hole and extend about 2" to either side. They screw this in place with drywall screws on either side of the hole. This puts a firm foundation behind a portion of the hole. Then they cut a piece of drywall to fit the hole and screw it to the scrap wood. Once it's in place, they lay lengths of self-adhesive fiberglass drywall tape over the patch so it laps several inches onto firm wallboard. Then they apply a finish coat of joint compound and feather out several inches beyond the patch. When dry, they sand the patch smooth. Once primed and painted, there should be no evidence of the repair.

A hole more than 12" across is probably too large for a cardboard-backed patch. Instead, mark and cut out a rectangular section of wallboard all the way to the middle of the studs at both sides. Cut two nailing blocks to fit horizontally between the studs. Insert the blocks into the cutout and toenail them at the top and bottom of the rectangular cutout. Then cut drywall to fit in the cutout. Tape and finish the perimeter of the cutout as with any drywall joint.

Wood Paneling

Plywood paneling is sold in many grains and species. Hardboard imprinted with a wood grain pattern is generally less expensive. Better hardboard paneling has a realistic wood grain pattern. Both plywood and hardboard paneling are sold with a hard, plastic finish that's easily wiped clean. Hardboard is also available with vinyl coatings in many patterns and colors, including some that have the appearance of ceramic tile.

Wood paneling should be delivered to the site a few days before application. Panels need time to adapt to room temperature and humidity before you put them up. Stack panels in the room separated by full length furring strips so air can circulate to panel faces and backs. Figure 10-9.

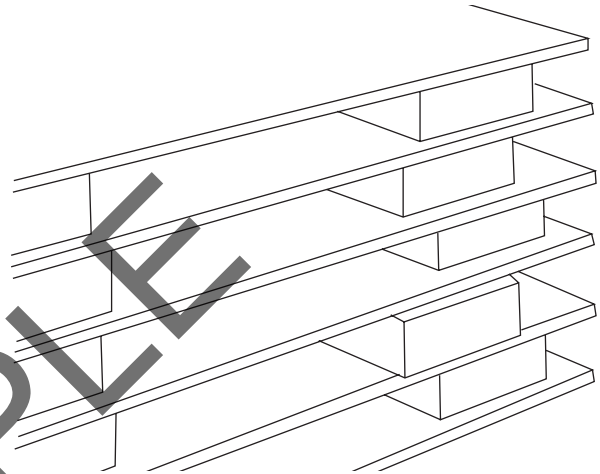


Figure 10-9

Stacking panels for conditioning to room environment prior to use

Always start a panel application with a truly vertical edge. If a corner is straight and vertical, butt the first panel into that corner. Cut subsequent panels so they lap on studs. If you don't have a vertical corner, tack a panel perfectly vertical and 2" from the starting corner. Use an art compass to scribe the outline of the corner on the panel edge. See Figure 10-10. Cut the panel along this line and move it into the corner. Butt the next panel against the first, being careful to keep the long edges truly vertical. Use the same art compass to scribe a line for panel top edges.

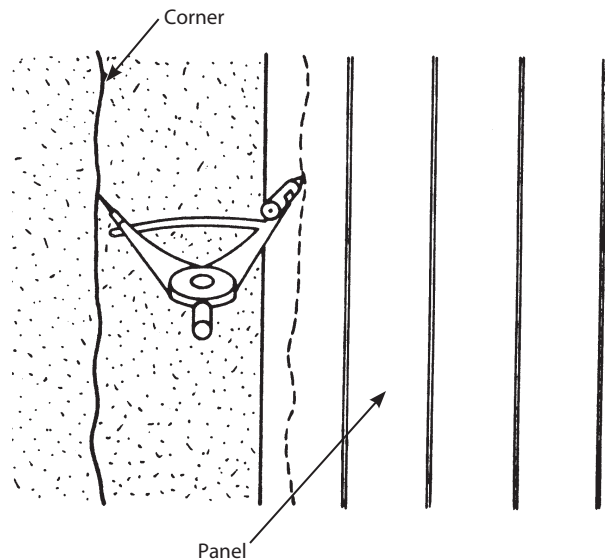


Figure 10-10

Scribing of cut at panel edge to provide exact fit in a corner or at ceiling

Fasten the panels with nails or adhesive. Adhesive saves filling nail holes on the panel surface. Use adhesive that provides "work time" before forming a tight bond. That makes it easier to adjust panels for a good fit. If panels are nailed, use small finishing nails (brads). Use 1½"-long brads for ¼"- or ⅜"-thick materials. Drive a brad each 8" to 10" along edges and at intermediate supports. Most panels are grooved to simulate hardboard panels. Drive brads in these grooves. Set brads slightly below the surface

with a nail set. Many vendors of prefinished paneling also sell matching nails that require no putty to fill nail holes. Other vendors sell wood-filler putty to match their panels.

Hardwood Paneling

Most hardwood paneling is 8" wide or less. Hardwood paneling needs several days to adapt to room temperature and moisture conditions before being applied. Most paneling is applied with the long edges running vertically. But rustic patterns may be applied horizontally or diagonally to achieve a special effect.

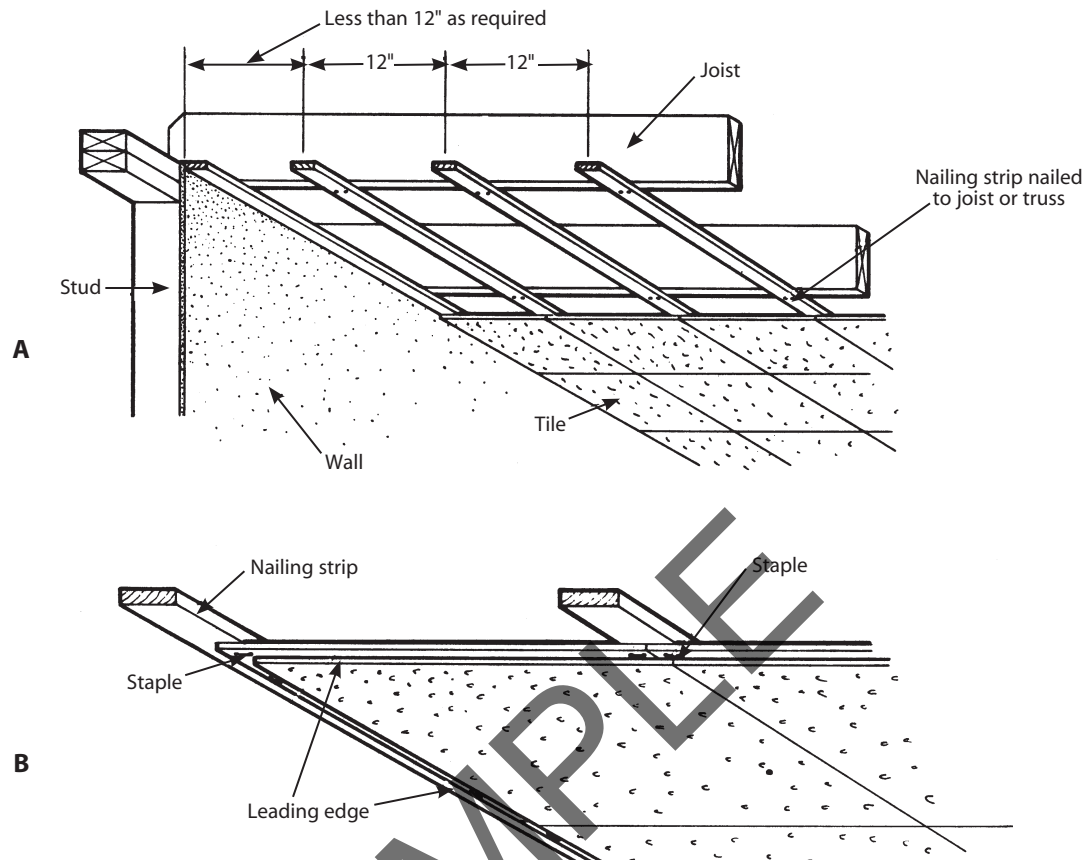
Nail vertical paneling to horizontal furring strips or to nailing blocks set between studs. Use 1½" to 2" finishing or casing nails. Blind nail through the tongue on narrow strips. For 8" boards, face nail near each edge.

Ceiling Tile

Tile attached to the ceiling is usually 12" x 12". Suspended ceiling panels are usually 2' x 2' or 2' x 4'. Ceiling tile can be set with adhesive if the surface is smooth, level and firm. Dab a small spot of adhesive at the center and at each corner of the tile. Edge-matched tile can be stapled if the backing is wood.

You can set tile on furring strips to cover unsightly defects. But it's usually faster, cheaper and results in a better job if you tear off the existing cover and start over. If you want to try setting tile over the existing ceiling, use 1" x 3" or 1" x 4" furring strips where ceiling joists are 16" or 24" on center. Fasten the furring with two 7d or 8d nails at each joist. Where trusses or ceiling joists are spaced up to 48" apart, fasten 2" x 2" or 2" x 3" furring strips with two 10d nails at each joist. The furring should be a low-density wood, such as a soft pine, if tile is to be stapled to the furring.

Lay furring strips from the center of the room to the edges. Find the center by snapping chalklines from opposite corners. The ceiling center is where the diagonal lines cross. Place the first furring strip at the room center and at a right angle to the joists. Run parallel furring strips 12" each to both edges of the room. See Figure 10-11A. Edge courses on opposite walls should be equal in width. Plan spacing perpendicular to joists the same way. End courses should also be equal in width. Install tile the same way, working from the center to the edges. Set edge tile last so you get a close fit. Ceiling tile usually has a tongue on two adjacent edges and grooves on the other edges. Keep the tongue edges on the open side so they can be stapled to furring strips. Attach edge tile on the groove side with finishing nails or adhesive. Use one staple at each furring strip on the leading edge and two staples along the side, as in Figure 10-11B. Drive a small finishing nail or use adhesive to set edge tile against the wall.

**Figure 10-11**

Ceiling tile installation: **A**, nailing strip location; **B**, stapling

Be careful not to soil the tile surface. Grease will leave permanent stains on ceiling tile. Professional tile installers rub cornmeal between their palms to keep their hands oil-free.

Suspended Ceilings

These are fine for basements, or other informal areas. Using them in “formal” rooms, like a living room or dining room, creates a “low-income” effect that may not be exactly what your client intends. Suspended ceilings cover imperfections, lower the ceiling to a more practical height, and add a plenum for running new electrical, plumbing, and HVAC lines.

The ceiling grid is suspended from wires or straps attached to joists. Panels drop into the completed grid. Ceiling height can be any level. Hanger wires may be only 2" or 3" long if the primary purpose is to cover fractured plaster. In earthquake zones, seismic bracing may be required by the building code. Your building department will have more information on this.

Interior Trim

Many older homes have trim styles no longer available at building material dealers. Matching trim exactly may require expensive custom fabrication. Try to remove trim in salvage condition so it can be re-installed. If trim is damaged or if you have to move doors or windows, it may be easier to replace all the trim in the room rather than try to match existing trim.

Keep in mind that trim work requires a very high level of carpentry skill. Trim needs to be essentially perfect: sloppy joints and visible nail heads won't do. Don't ask a rough carpenter to do trim work — the results will be a disappointment. If trim is going to be painted, select a trim made of extruded polymer, ponderosa pine or northern white pine, or primed MDF. Highly decorative cast trim is another good choice if trim will be painted. Most natural finish trim in modern homes is pine or oak. These woods can be very attractive if they're nicely finished.

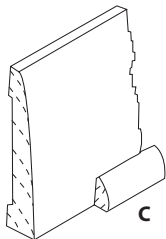
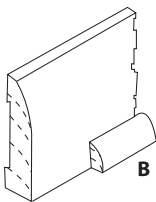
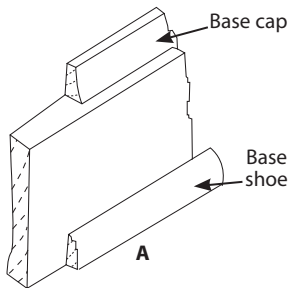


Figure 10-12

Baseboard: **A**, two-piece;
B, narrow; **C**, medium width

Casing

Casing is the interior edge trim for door and window openings. Modern casing patterns vary in width from $2\frac{1}{4}$ " to $3\frac{1}{2}$ " and in thickness from $\frac{1}{2}$ " to $\frac{3}{4}$ ". Install casing about $\frac{3}{16}$ " back from the face of the door or window jamb. Nail with 6d or 7d casing or finishing nails, depending on the thickness of the casing. Space nails in pairs about 16" apart, nailing to both jambs and framing. Casing with molded forms requires mitered joints, while rectangular casing can be butt-joined.

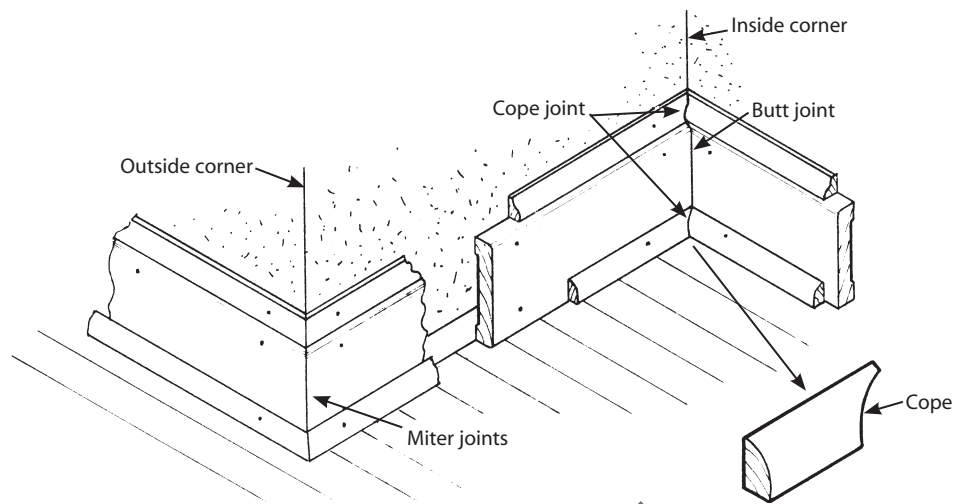
Baseboard

Finish the joint between the wall and floor with baseboard. Figure 10-12 shows several sizes and forms of baseboard. Two-piece base consists of a baseboard topped with a small base cap. The cap covers any gap caused by irregularities in the wall finish. Base shoe is nailed into the subfloor and covers irregularities in the finished floor. Walls made of drywall seldom need a base cap. Carpeted floors hide variations in the floor and make base shoe unnecessary.

Install square-edged baseboard with butt joints at inside corners and mitered joints at outside corners. Nail at each stud with two 8d finishing nails. Molded base, base cap, and base shoe require a coped joint at inside corners and a mitered joint at outside corners. See Figure 10-13.

Other Molding

Ceiling molding may be strictly decorative or may be used to hide the joint where the wall and ceiling meet. Use crown molding to cover the gap where wood paneling meets the ceiling. Attach crown molding with finishing nails driven into upper wall plates. Wide crown molding should be nailed both to the wall plate and the ceiling joists.

**Figure 10-13***Installation of base molding*

Removing Partitions

Modern taste favors more open space in homes. For example, new homes often have the family room and kitchen combined as one open area. Many older homes have a formal dining room or kitchen dining area enclosed by four walls and with a door that can be closed. Removing a nonbearing wall (partition) can add livability to an older home.

Nonbearing partitions support neither the roof nor a floor above. Breaking out a partition is only a cosmetic change. If wall cover is plaster or drywall, there's no salvage value in the partition. But save the trim, if possible. You may need it later.

Many partition walls include plumbing, electric or HVAC lines. Plan how those will be handled before you begin demolition.

When the partition is gone, there will be a strip of exposed floor, ceiling and wall where bottom, top and side edges of the partition had been. Finish the ceiling and walls with strips of drywall, tape, joint compound and paint. Filling the strip in the floor isn't as easy. Usually the best you can do is level the surface and cover the area with carpet or vinyl. With oak strip floors, it's possible to patch holes by weaving in new oak strips. However, this is a tricky job, and the entire floor may have to be refinished to get a perfect match of colors.

Removing a loadbearing partition requires the same patching of walls, ceiling, and floor. But you also have to add support for ceiling joists. If there's attic space above the partition, install a support beam above the ceiling joists. If it's a loadbearing wall on the first floor of a two-story house, it's holding up the second floor. If you remove it, the upstairs rooms could collapse onto the first floor. You'll need a large beam and posts to carry the weight that the wall was carrying. In this case, the beam will have to be below the ceiling joists, since the ceiling joists of

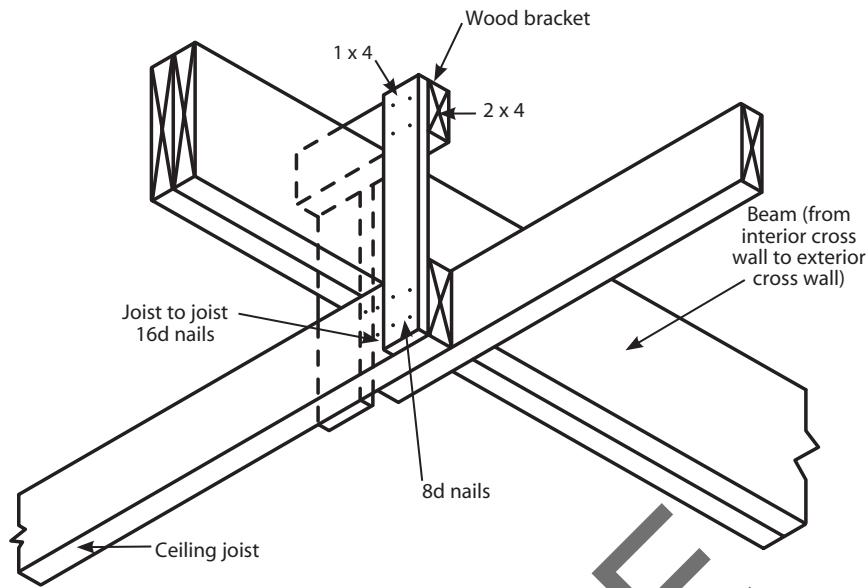


Figure 10-14

Framing for flush ceiling with wood brackets

the first floor are also the floor joists of the second floor. Be sure both ends of the beam are well supported on a bearing wall or post that is supported by the foundation. Support joists with metal framing anchors or wood brackets, as illustrated in Figure 10-14. To eliminate the need for temporary support, install the new beam before demolition begins.

If there's no attic space for a concealed beam, substitute an exposed beam at least 6'8" above the floor. Support ceiling joists temporarily with jacks and blocking while the partition is demolished and until the new beam is in place.

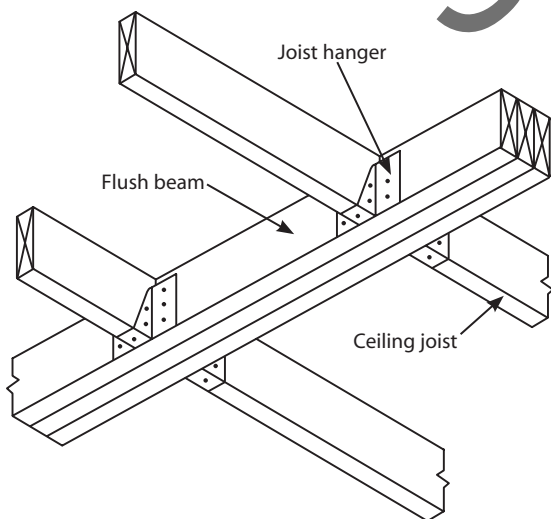


Figure 10-15

Flush beam with joist hangers

Figure 10-15 illustrates another option if an exposed beam is objectionable and there's no attic space for a concealed beam. Existing joists are supported by a new beam inserted where the top of the bearing wall had been. Place temporary joist supports on both sides of the bearing wall. Then remove the bearing wall and cut the joists as needed. Insert the new beam and install a hanger for each joist. Posts will also be needed to support this new beam.

The size of the beam required will vary with the span, load and lumber grade. Beam sizing like this is work for a civil engineer. In some communities, you'll need the approval of a licensed engineer before a permit is issued. Your building department or lumber yard probably has span tables for beams and load tables for posts that cover the most common residential situations. You probably won't need an engineer unless you're spanning a huge opening. For example, licensed contractors are often allowed to do simple engineering like this for houses up to

3,000 square feet. Houses this size and smaller are fairly straightforward. Larger houses and commercial buildings are more likely to present more complex engineering problems. When in doubt, make the framing much stronger than necessary. Building departments never have a problem with this.

Adding Partitions

Partition walls support nothing but their own weight and can be framed from 2"x 3" lumber, though 2" x 4" studs and plates are more common. The first step is to install the top plate. If ceiling joists are perpendicular to the partition, nail the top plate to each joist using 16d nails. If ceiling joists are parallel to the top plate and the partition is not directly under a joist, install solid blocking between joists. Blocks should be no more than 24" on center. See Figure 10-16. Nail the top plate to the blocks.

To be sure the new partition will be vertical, hold a plumb line along the side of the top plate at several points. Mark where the plumb bob touches the floor. Nail the sole plate to the floor joist at that position. If there's no joist where needed, nail solid blocking between joists. Blocks should be no more than 24" on center. Cut studs to fit snugly between the plates every 16" on center. Stud lengths may vary, so measure for each stud. Toenail the studs to the plates using 8d nails.

If you have enough space, assemble the wall on the floor and tilt it into place. Nail the top plate to the studs first. Tilt the assembled wall into place. Then toenail the studs to the bottom plate as described above.

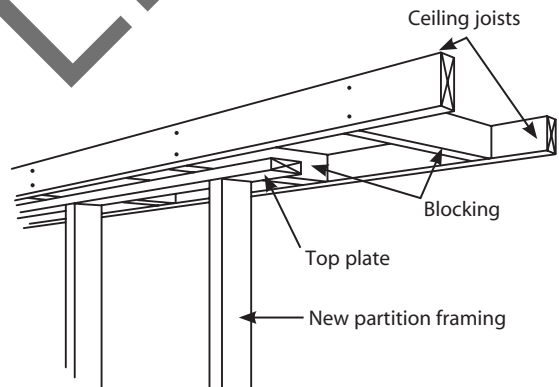


Figure 10-16

Blocking between joists to which the top plate of a new partition is nailed

	Craft@Hrs	Unit	Material	Labor	Total	Sell
Drywall						
Ceiling and wall demolition. Knock down with hand tools at heights to 9' and handle debris to a trash bin on site. Building structure to remain. Includes the cost of breaking out old ceiling or wall cover, pulling or driving the old fasteners and cleaning up the debris. Add the cost of hauling debris off the site and dump fees. These figures assume demolition with a crowbar. Knock a hole with a crowbar, hook the crowbar in the hole, pull, and get out of the way! Ceilings come down fast. Add extra time if you're planning to save the floor, and put down floor protection. Plaster will fall in big chunks that can gouge holes in the floor. Figures in parentheses show the volume and weight of materials after demolition.						
Plaster on ceiling (175 to 200 SF per CY and 8 pounds per SF)						
Lath and plaster only	BL@.010	SF	—	.30	.30	.51
Lath, plaster and furring	BL@.015	SF	—	.45	.45	.77
Suspended lath and plaster	BL@.010	SF	—	.30	.30	.51
Plaster on walls (150 SF per CY and 8 pounds per SF)						
Lath and plaster only	BL@.011	SF	—	.33	.33	.56
Lath, plaster and furring	BL@.015	SF	—	.45	.45	.77
Remove drywall. Includes the cost of breaking out old board, pulling or driving the old fasteners and cleaning up the debris. Add the cost of hauling debris off the site and dump fees.						
Remove full panels on ceilings	BL@.009	SF	—	.27	.27	.46
Remove full panels on walls	BL@.008	SF	—	.24	.24	.41
Remove full panels and furring strips	BL@.028	SF	—	.84	.84	1.43
Remove and install drywall, no joint treatment						
per square foot	BC@.022	SF	—	.81	.81	1.38
Add for job setup, per room	BC@.200	Ea	—	7.39	7.39	12.60
Repair drywall. Includes joint tape, three coats of joint compound and finish sanding.						
Cut out section, to 4' x 4'	D1@.288	Ea	—	10.30	10.30	17.50
Remove and replace section, to 4' x 4'	D1@.840	Ea	6.44	30.20	36.64	62.30
Taping and finishing only, ceilings	DT@.010	SF	.11	.36	.47	.80
Taping and finishing only, walls	DT@.008	SF	.11	.29	.40	.68
Tape and finish cracks, ceilings	DT@.060	LF	.16	2.15	2.31	3.93
Tape and finish cracks, walls	DT@.050	LF	.16	1.79	1.95	3.32
Patch hole in drywall. Cut back drywall, insert backing in wall cavity, apply three coats of joint compound, sand smooth.						
Per patch	BC@1.00	Ea	6.37	36.90	43.27	73.60
Regular core drywall. Tapered edges. Cut ends. Labor includes cutting board around electrical boxes and obstacles, installing on wall studs or ceiling joists 8' to 12' above floor level, joint tape, three coats of joint compound and finish sanding. Material includes 1/2 gallon of premixed joint compound per 100 square feet, 38 linear feet of 2" perforated joint tape per 100 square feet, 1/2 pound of drywall screws per 100 square feet and 10% waste.						
3/8" x 4' x 8', ceilings	D1@.023	SF	.41	.83	1.24	2.11
3/8" x 4' x 8', walls	D1@.017	SF	.41	.61	1.02	1.73
1/2" x 4' x 8', ceilings	D1@.024	SF	.51	.86	1.37	2.33
1/2" x 4' x 8', walls	D1@.018	SF	.51	.65	1.16	1.97
1/2" x 4' x 9', ceilings	D1@.024	SF	.46	.86	1.32	2.24
1/2" x 4' x 9', walls	D1@.018	SF	.46	.65	1.11	1.89
1/2" x 4' x 10', ceilings	D1@.024	SF	.41	.86	1.27	2.16
1/2" x 4' x 10', walls	D1@.018	SF	.41	.65	1.06	1.80
1/2" x 4' x 12', ceilings	D1@.024	SF	.44	.86	1.30	2.21
1/2" x 4' x 12', walls	D1@.018	SF	.44	.65	1.09	1.85
1/2" x 54" x 12', ceilings	D1@.024	SF	.41	.86	1.27	2.16
1/2" x 54" x 12', walls	D1@.018	SF	.41	.65	1.06	1.80

	Craft@Hrs	Unit	Material	Labor	Total	Sell
1/2" x 4' x 12', ceilings, sag resistant	D1@.024	SF	.59	.86	1.45	2.47
1/2" x 4' x 12', soffit board	D1@.035	SF	.71	1.26	1.97	3.35
1/2" panels on ceilings, no tape or finish	D1@.012	SF	.37	.43	.80	1.36
1/2" panels on walls, no tape or finish	D1@.008	SF	.37	.29	.66	1.12
Arches, soffits, recesses, columns, angles	D1@.035	SF	—	1.26	1.26	2.14

Firecode Type X drywall. Fire-resistant gypsum core. Labor includes cutting board around electrical boxes and obstacles, installing on wall studs or ceiling joists 8' to 12' above floor level, joint tape, three coats of joint compound and finish sanding. Material includes 1/2 gallon of premixed joint compound per 100 square feet, 38 linear feet of 2" perforated joint tape per 100 square feet, 1/2 pound of drywall screws per 100 square feet and 10% waste.

5/8" x 4' x 6', ceilings	D1@.025	SF	.51	.90	1.41	2.40
5/8" x 4' x 6', walls	D1@.019	SF	.51	.68	1.19	2.02
5/8" x 4' x 8', ceilings	D1@.025	SF	.47	.90	1.37	2.33
5/8" x 4' x 8', walls	D1@.019	SF	.47	.68	1.15	1.96
5/8" x 4' x 9', ceilings	D1@.025	SF	.45	.90	1.35	2.30
5/8" x 4' x 9', walls	D1@.019	SF	.45	.68	1.13	1.92
5/8" x 4' x 10', ceilings	D1@.025	SF	.43	.90	1.33	2.26
5/8" x 4' x 10', walls	D1@.019	SF	.43	.68	1.11	1.89
5/8" x 4' x 12', ceilings	D1@.025	SF	.47	.90	1.37	2.33
5/8" x 4' x 12', walls	D1@.019	SF	.47	.68	1.15	1.96
5/8" panels on ceilings, no tape or finish	D1@.013	SF	.35	.47	.82	1.39
5/8" panels on walls, no tape or finish	D1@.009	SF	.35	.32	.67	1.14

Water-resistant drywall. Moisture-resistant gypsum core and paper as a base for tile or plastic-faced wall panels in bathrooms and kitchens. Not designed for use in high-moisture areas such as tub and shower surrounds. Includes cutting board around obstacles and 10% waste but no taping or finishing.

1/2" x 4' x 8'	D1@.008	SF	.45	.29	.74	1.26
1/2" x 4' x 12'	D1@.008	SF	.44	.29	.73	1.24
5/8" x 4' x 8'	D1@.009	SF	.79	.32	1.11	1.89
5/8" x 4' x 12'	D1@.009	SF	.51	.32	.83	1.41

Mold- and mildew-resistant drywall. DensArmor has a glass mat backing. DensArmor Plus has glass mat on both front and back. Includes cutting board around obstacles and 10% waste but no taping or finishing.

1/2" x 4' x 8' DensArmor	D1@.008	SF	.66	.29	.95	1.62
1/2" x 4' x 8' DensArmor Plus	D1@.008	SF	.70	.29	.99	1.68
1/2" x 4' x 12' DensArmor Plus	D1@.009	SF	.70	.32	1.02	1.73
5/8" x 4' x 8' DensArmor Plus	D1@.009	SF	.74	.32	1.06	1.80
5/8" x 4' x 12' DensArmor Plus	D1@.009	SF	.74	.32	1.06	1.80

Moisture- and fire-resistant drywall. For use under masonry veneer, aluminum, steel and vinyl siding, wood and mineral shingles, and stucco. Includes cutting board around obstacles and 10% waste, but no taping or finishing. Used to meet fire code in some types of multi-unit residential applications.

1/2" x 4' x 8'	D1@.008	SF	.39	.29	.68	1.16
5/8" x 4' x 8'	D1@.009	SF	.51	.32	.83	1.41

Sound-deadening drywall. For use as a base layer under drywall finish. Interior applications only. Must be kept dry. Includes cutting board around electrical boxes and obstacles, hanging on wall studs or ceiling joists 8' to 12' above floor level and 10% waste.

1/2" x 4' x 8', ceilings	D1@.012	SF	.38	.43	.81	1.38
1/2" x 4' x 8', walls	D1@.008	SF	.38	.29	.67	1.14

	Craft@Hrs	Unit	Material	Labor	Total	Sell
Flexible drywall. For covering curved surfaces. Includes cutting board around electrical boxes and obstacles, hanging board on wall studs or ceiling joists 8' to 12' above floor level, joint tape, three coats of joint compound and finish sanding. Material includes 1/2 gallon of premixed joint compound per 100 square feet, 38 linear feet of 2" perforated joint tape per 100 square feet, 1/2 pound of drywall screws per 100 square feet and 10% waste.						
1/4" x 4' x 8', ceilings	D1@.035	SF	.34	1.26	1.60	2.72
1/4" x 4' x 8', walls	D1@.035	SF	.34	1.26	1.60	2.72
Drywall repair sheet. Includes taping and finishing.						
1/2" x 16" x 16", greenboard	D1@1.00	Ea	3.65	35.90	39.55	67.20
1/2" x 24" x 24", regular	D1@1.00	Ea	2.21	35.90	38.11	64.80
5/8" x 16" x 16", regular	D1@1.00	Ea	2.50	35.90	38.40	65.30
Drywall texture. Finish applied to gypsum wallboard.						
Orange peel, rolled on, one coat	PT@.006	SF	.19	.23	.42	.71
Spatter finish, one coat	PT@.007	SF	.20	.26	.46	.78
Knockdown finish, one coat	PT@.008	SF	.20	.30	.50	.85
Skip trowel finish, one coat	PT@.009	SF	.17	.34	.51	.87
Smooth finish veneer plaster, one coat	PR@.018	SF	.18	.67	.85	1.45
Wall and ceiling spray texture, unaggregated. Creates spatter, knock down and orange peel texture. Powder mixes with water. Can be spray applied over drywall, concrete or plaster.						
40-pound bag, walls and ceilings	—	Ea	15.50	—	15.50	—
50-pound bag, walls and ceilings	—	Ea	16.00	—	16.00	—
Wall and ceiling spray texture, aggregated. Polystyrene aggregate mixes with water for spray application. Produces a white, simulated acoustical ceiling finish. Coarser mix conceals minor surface defects better. For gypsum, plaster and concrete ceilings. One pound of dry mix covers 8 square feet.						
Regular, 40-pound bag	PT@1.60	Ea	12.60	60.30	72.90	124.00
Medium, 32-pound bag	PT@1.28	Ea	10.80	48.30	59.10	100.00
Medium, 40-pound bag	PT@1.60	Ea	15.50	60.30	75.80	129.00
Coarse, 40-pound bag	PT@1.60	Ea	13.00	60.30	73.30	125.00
Spray texture touch-up kit. Hand-operated sprayer for small repairs and touch-up work. Pump body adjusts to spray orange peel, spatter, or knockdown textures. Reusable and refillable. Kit covers 15 square feet. Refill covers 10 square feet for orange peel and medium spatter or 6 square feet for heavy spatter/knockdown finish.						
Spray texture touch-up kit	PT@.250	Ea	16.80	9.43	26.23	44.60
Premixed refill kit	PT@.167	Ea	10.70	6.30	17.00	28.90
Popcorn ceiling texture. Finish applied to gypsum ceiling board. Applied with a compressed air hopper gun. Add the cost of a compressor.						
Blown on polystyrene texture	PT@.005	SF	.39	.19	.58	.99
Pneumatic hopper gun, purchase	—	Ea	72.40	—	72.40	—
Shop-type compressor rental, per day	—	Ea	60.00	—	60.00	—
Popcorn ceiling spray mix. Polystyrene. Mix with water and spray. 13-pound bag.						
Bag, titanium white	PT@1.00	Ea	13.60	37.70	51.30	87.20
Popcorn ceiling texture touch-up kit. Hand-operated sprayer for small repair and touch-up work. Pump body sprays acoustic popcorn texture. Reusable and refillable. Includes texture with polystyrene chip material for matching. Covers two square feet.						
Touch-up kit	PT@.500	Ea	16.80	18.90	35.70	60.70
Pack of 2 dry refills	PT@1.00	Ea	6.57	37.70	44.27	75.30

	Craft@Hrs	Unit	Material	Labor	Total	Sell
Popcorn ceiling patch. For repair of popcorn or acoustical rough-textured ceilings. Blends with most existing textures to cover holes, scuffs and scars. Apply with a paint roller or putty knife. One gallon covers 200 square feet.						
14 pound spray	PT@.250	Ea	9.42	9.43	18.85	32.00
5 gallons	PT@3.50	Ea	25.40	132.00	157.40	268.00
Ceiling spray texture. Premixed. Bottle attaches to spray texture hopper gun and covers 200 square feet.						
2.2 liter bottle	PT@1.00	Ea	15.70	37.70	53.40	90.80
Textured ceiling finish aerosol. 10-ounce aerosol can. Repair for small patches and cracks. Water cleanup.						
Popcorn, white	PT@.167	Ea	21.30	6.30	27.60	46.90
Knockdown or heavy spatter	PT@.167	Ea	26.10	6.30	32.40	55.10
Orange peel	PT@.167	Ea	26.10	6.30	32.40	55.10
Imperial veneer plaster base, USG. Rigid plaster base resists sag and sound transmission. Face paper resist plaster slide. Includes 10% waste.						
1/2" x 4' x 8', square edge	BC@.012	SF	.35	.44	.79	1.34
1/2" x 4' x 12', square edge	BC@.012	SF	.32	.44	.76	1.29
5/8" x 4' x 8', fire-resistant Type X	BC@.013	SF	.48	.48	.96	1.63
5/8" x 4' x 12', fire-resistant Type X	BC@.013	SF	.45	.48	.93	1.58
Cameo Veneer Plaster Base Board, Georgia-Pacific. High-suction face paper. Use as a base for 1- or 2-coat Cameo Veneer Plaster. Includes 10% waste.						
3/8" x 4' x 8', tapered edge	BC@.012	SF	.41	.44	.85	1.45
1/2" x 4' x 12'	BC@.012	SF	.41	.44	.85	1.45
DensShield® Tile Backer, Georgia-Pacific. Glass mat facing acrylic coating that blocks moisture. For walls, floors, countertops, showers, laboratories. Includes 10% waste.						
1/4" x 4' x 4'	TL@.042	SF	.83	1.48	2.31	3.93
1/2" x 32" x 5'	TL@.042	Ea	12.10	1.48	13.58	23.10
Durock® Cement Board, USG. Tile base for tub and shower areas, underlayment for tile on floors and countertops. Use the smooth side for ceramic tile mastic and the rough side for thin-set mortar and Portland cement. Hang with Durock® screws or galvanized roofing nails. Includes taping and sealing seams with Durock tape and 10% waste.						
5/16" x 4' x 4'	TL@.037	SF	.77	1.30	2.07	3.52
1/2" x 3' x 5'	TL@.042	SF	.77	1.48	2.25	3.83
1/2" x 4' x 8', interior	TL@.042	SF	.98	1.48	2.46	4.18
5/8" x 3' x 5'	TL@.047	SF	1.00	1.65	2.65	4.51
5/8" x 4' x 8', interior	TL@.047	SF	1.00	1.65	2.65	4.51
Drywall Joint Compound						
Lightweight ready-mix joint compound. For embedding drywall joint tape and finishing drywall joints. One-half gallon finishes three 4' x 8' drywall panels. Installation cost is included in the cost of hanging drywall.						
3.5 gallon carton	—	Ea	8.77	—	8.77	—
4.5 gallon carton, tinted	—	Ea	10.90	—	10.90	—
4.5 gallon pail	—	Ea	14.60	—	14.60	—

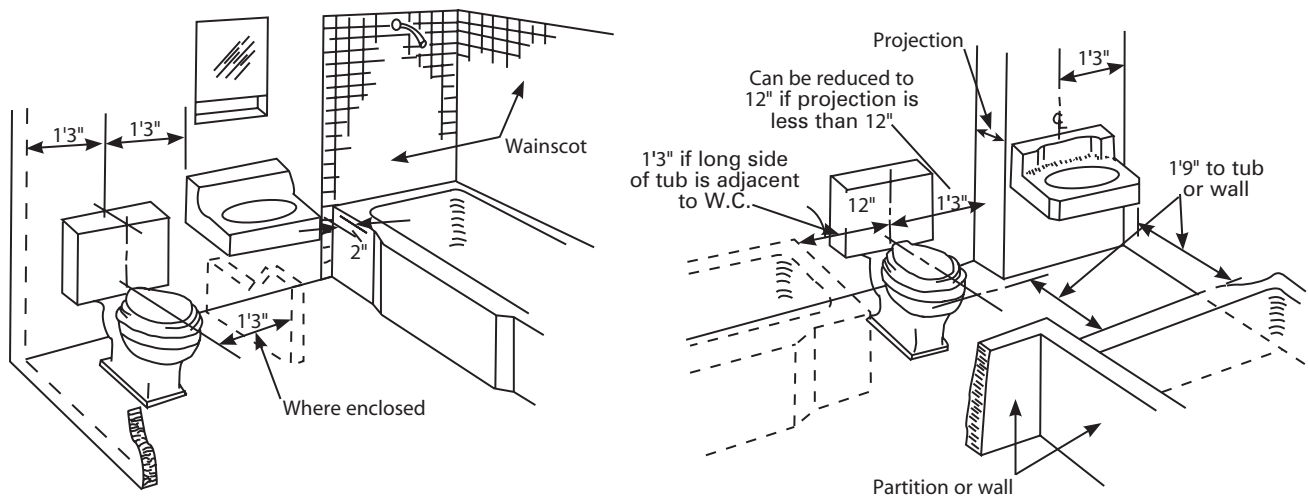
	Craft@Hrs	Unit	Material	Labor	Total	Sell
All-purpose ready-mix joint compound. For embedding joint tape, finishing drywall joints, repairing small cracks and holes in drywall and plaster surfaces, and simple hand-applied texturing. One-half gallon finishes three 4' x 8' drywall panels. Installation cost is included in the cost of hanging drywall.						
3 pound, 1 quart tub	—	Ea	3.64	—	3.64	—
12 pound pail	—	Ea	7.12	—	7.12	—
48 pound carton	—	Ea	8.77	—	8.77	—
50 pound carton	—	Ea	10.20	—	10.20	—
61.7 pound carton	—	Ea	10.30	—	10.30	—
61.7 pound pail	—	Ea	14.60	—	14.60	—
Lightweight setting-type joint compound powder. 20-, 45-, and 90-minute setting ranges allow one-day drywall joint finishing with next-day texturing. After a coat has set, apply another coat. No need to wait for each coat to dry completely. Weighs 25% less than all-purpose compound. Sands as easily as ready-mix joint compound. Ideal for patching drywall and plaster surfaces. 18-pound bag.						
20-minute set time	—	Ea	10.50	—	10.50	—
45-minute set time	—	Ea	10.50	—	10.50	—
90-minute set time	—	Ea	10.50	—	10.50	—
Ready-mix joint topping compound. For filling, leveling and finishing coats over drywall joints. Sands easier and faster than all-purpose compound, and weighs 35% less. Not suitable for embedding joint tape, skim coating, or texturing.						
3.5 gallon carton	—	Ea	9.28	—	9.28	—
Drywall ready-mix primer. Primes new drywall panel walls and ceilings before texturing or painting. Brush, roller, or spray application. Dries white in 30 minutes. Topcoat in 1 hour. 200 square feet per gallon.						
5 gallon pail	—	Ea	62.80	—	62.80	—
Tuf-Tex hopper gun spray texture. For use with hopper gun or trailer-mounted spray rig. Approximately 500 square feet per bag.						
40 pound bag	—	Ea	16.50	—	16.50	—
Plaster of Paris. For patching interior drywall or plaster walls and ceilings. Sets hard in 30 minutes.						
25 pounds	—	Ea	16.80	—	16.80	—
One coat veneer plaster. High resistance to cracking, nail-popping, impact and abrasion failure. Mill-mixed plaster components help assure uniform installation performance and finished job quality. Can be applied directly to concrete block.						
50 pounds	—	Ea	12.90	—	12.90	—
Drywall Joint Tape						
Drywall joint tape. Center-creased paper tape. Six 4' x 8' drywall panels require about 75 linear feet of tape. Tape installation cost is included in the cost of hanging drywall. 2-1/16" wide. Perforated.						
250' roll	—	Ea	2.08	—	2.08	—
500' roll	—	Ea	3.65	—	3.65	—
Fiberglass drywall tape. For drywall joints and repairs, veneer plastering, stucco and tile backer board. Self-adhesive 100% fiberglass mesh. Apply directly to drywall joint to eliminate embedding coat. 1-7/8" wide. Six 4' x 8' drywall panels require about 75 linear feet of tape. Cost of joint tape application is included in the Drywall section above.						
50' long, white	—	Ea	2.89	—	2.89	—
150' long, white	—	Ea	5.66	—	5.66	—
150' long, yellow	—	Ea	5.05	—	5.05	—
300' long, white	—	Ea	8.24	—	8.24	—
300' long, yellow	—	Ea	7.32	—	6.91	—
500' long, white	—	Ea	10.90	—	10.90	—
500' long, yellow	—	Ea	11.00	—	11.00	—

	Craft@Hrs	Unit	Material	Labor	Total	Sell
Drywall Bead						
Galvanized bullnose corner bead. All-metal galvanized steel reinforcement for protecting external drywall corners. Rounded 3/4" radius outside corner on 1/2" or 5/8" drywall. Attached with nails or crimping tool. Finish with USG joint compounds.						
3/4" x 8' long	DI@.128	Ea	5.03	4.60	9.63	16.40
3/4" x 10' long	DI@.128	Ea	8.04	4.60	12.64	21.50
Plastic bullnose corner bead. For use where smooth or rounded corners are specified. Will not dent or rust. Paint and drywall mud adhere well. Finish compatible with drywall mud and all paint finishes.						
3/4" x 8'	DI@.128	Ea	4.12	4.60	8.72	14.80
135-degree open-angle bullnose drywall arch. Plastic. For hard-to-do arches. No shiner. Wide flange.						
3/4" x 8'	DI@.128	Ea	6.28	4.60	10.88	18.50
Bullnose open plastic corner. Used where three exterior corners intersect. Treated for maximum joint adhesion and rust protection. Wide flange.						
3-way	DI@.160	Ea	1.03	5.75	6.78	11.50
Paper-faced metal bullnose outside corner, tape-on. Smooth, rounded radius outside corner for 1/2" or 5/8" drywall. Paper tape cover is laminated to a rust-resistant metal profile for good adhesion of joint compound. Held in place with joint compound instead of nails to bond the bead to the drywall surface. Bead is covered with joint compound.						
3/4" x 8' long	DI@.128	Ea	3.53	4.60	8.13	13.80
9/16" x 13/16" x 10'	DI@.160	Ea	2.77	5.75	8.52	14.50
11/16" x 15/16" x 8'	DI@.216	Ea	3.02	7.77	10.79	18.30
1-1/16" x 1-1/16" x 8'	DI@.216	Ea	2.93	7.77	10.70	18.20
1-1/16" x 1-1/16" x 10'	DI@.270	Ea	4.18	9.71	13.89	23.60
Galvanized bullnose corner bead. Protects corners from damage with a more rounded edge for curves. Textured flanges allow for better bonding.						
1-1/4" x 8'	DI@.128	Ea	1.86	4.60	6.46	11.00
1-1/4" x 9'	DI@.144	Ea	2.08	5.18	7.26	12.30
1-1/4" x 10'	DI@.160	Ea	2.08	5.75	7.83	13.30
Beadex® paper-faced metal L-shaped tape-on trim. Edge reinforcement for drywall panels where panels abut other materials such as suspended ceilings, beams, plaster, masonry, concrete, door or window jambs. Paper tape covering laminated to an L-shaped rust-resistant metal profile provides excellent adhesion of joint compound, texture and paint. Applied using joint compound instead of nails to bond trim to the drywall surface. Trim is finished with joint compound. For use with 1/2" drywall.						
1/2" x 8'	DI@.160	Ea	2.49	5.75	8.24	14.00
1/2" x 10'	DI@.160	Ea	2.60	5.75	8.35	14.20
Paper-faced metal inside corner bead. Tape-on trim used to protect drywall panel assembly edges, corners and sides. Forms a true, inner (90-degree) corner. No fasteners required, adheres to compound. Eliminates edge cracking, nail pops and chipping.						
8' long	DI@.216	Ea	4.18	7.77	11.95	20.30
Drywall flex corner bead. For use where curve or arch is formed. Pre-slotted flange allows for perfect arches. Tapered flanges are perforated and striated for adhesion. No need to tape the flange. Finish is compatible with drywall mud and all paint finishes.						
1-1/4" x 10'	DI@.270	Ea	3.67	9.71	13.38	22.70

	Craft@Hrs	Unit	Material	Labor	Total	Sell
Tape-on flexible metal corner. Provides straight, strong inside or outside corners of any angle. Paper tape is 2-1/16" wide laminated to two 7/16" wide galvanized steel strips with a 1/16" gap between the strips. The strength of steel with the superior bond of joint compound on paper. Strong, chip-resistant, smooth finish. Applied with joint compound instead of nails. Guaranteed against edge cracking. Bead is finished with joint compound.						
100' roll	DI@.267	Ea	13.00	96.00	109.00	185.00
Drywall metal J-bead. Protects drywall edges around doors and windows. Textured flanges allow for better bonding.						
1/2" x 8'	DI@.216	Ea	2.14	7.77	9.91	16.80
1/2" x 10'	DI@.270	Ea	2.59	9.71	12.30	20.90
Drywall plastic J-bead. For capping vertical and horizontal edges of raw drywall. Helps keep moisture out of board. Finish is compatible with drywall mud and paint finishes.						
1/2" x 10'	DI@.270	Ea	1.85	9.71	11.56	19.70
5/8" x 10'	DI@.270	Ea	2.13	9.71	11.84	20.10
Drywall metal J-trim. Galvanized steel. Provides maximum protection and neat finished edges where panels join window and door jambs, and at internal angles. Install with nails or screws.						
1/2" x 8'	DI@.216	Ea	1.65	7.77	9.42	16.00
1/2" x 10'	DI@.270	Ea	2.86	9.71	12.57	21.40
5/8" x 8'	DI@.216	Ea	1.98	7.77	9.75	16.60
5/8" x 10'	DI@.270	Ea	3.13	9.71	12.84	21.80
Vinyl drywall outside corner bead. Rust- and impact-resistant. Tapered legs are perforated and striated for better adhesion. No need to tape flange. Prevents electrolysis. Finish compatible with drywall mud and all paint finishes.						
1-1/4" x 8' outside corner	DI@.216	Ea	1.96	7.77	9.73	16.50
1-1/4" x 10' outside corner	DI@.270	Ea	2.50	9.71	12.21	20.80
1/2" x 10' zip corner	DI@.270	Ea	3.13	9.71	12.84	21.80
10' bullnose corner	DI@.270	Ea	2.70	9.71	12.41	21.10
10' arch bullnose	DI@.270	Ea	4.18	9.71	13.89	23.60
1/2" x 8' J-trim	DI@.216	Ea	1.55	7.77	9.32	15.80
5/8" x 8' J-trim	DI@.216	Ea	1.55	7.77	9.32	15.80
Drywall L-trim. Metal covered with paper. Trims drywall where it abuts with other building components such as suspended ceilings, beams, plaster, masonry, or concrete walls, and untrimmed door or window jambs.						
1/2" x 8'	DI@.216	Ea	4.01	7.77	11.78	20.00
1/2" x 10'	DI@.270	Ea	4.18	9.71	13.89	23.60
Utility access door. For plumbing and electrical access. 28-gauge galvanized steel. Piano hinge. Pressure fit door. Drywall frame with nailing flange.						
14" x 14"	DI@.500	Ea	15.70	18.00	33.70	57.30
Drywall repair kit. Includes 1-pound bag of setting compound, 5' of drywall, fiberglass drywall tape, 120-grit sandpaper, plastic spreader, four drywall repair clips, and eight drywall screws.						
Kit	—	Ea	14.30	—	14.30	—
Drywall repair patch. No-rust aluminum plate provides rigid backing. Fiberglass mesh eliminates the need to embed tape.						
4" x 4"	—	Ea	4.18	—	4.18	—
8" x 8"	—	Ea	5.23	—	5.23	—
Crack repair mesh, Quik-Tape™. Self-adhesive 100% fiberglass mesh tape. Provides tensile strength and dimensional stability.						
6" wide, 25' long	—	Ea	3.53	—	3.53	—

	Craft@Hrs	Unit	Material	Labor	Total	Sell
Drywall repair clips. For repair of holes over 2". Suitable for both 1/2" and 5/8" thick drywall. Clips hold and reinforce the new piece of drywall sized to fit the hole being repaired.						
Kit with 6 clips	—	Ea	4.61	—	4.61	—
Tile backer tape. Pressure sensitive, anti-corrosion coating.						
2" x 50'	—	Ea	4.17	—	4.17	—
Flexible metal corner tape. For inside and outside corners.						
2" x 25'	DI@.175	Ea	5.69	6.29	11.98	20.40
2" x 100'	DI@.700	Ea	13.00	25.20	38.20	64.90
Corner bead spray adhesive, 3M Company. Quick grab so corner bead can be joined without delay. Longer open time allows assembly flexibility. Covers up to 1,200 linear feet per can. Tinted adhesive helps provide better wall coverage in hard-to-see areas.						
Adhesive	—	Ea	7.32	—	7.32	—
Drywall Fasteners						
Drywall screws, Twinfast. Sharp, non-walking point. Dual lead. Each 100 square feet of board requires approximately 170 screws (1/2 pound). The cost of fasteners needed to hang drywall is included in the previous section, Drywall.						
#6 x 1", 5 pounds, 2,000 screws	—	Ea	23.10	—	23.10	—
#6 x 1-1/4", 5 pounds, 1,700 screws	—	Ea	23.10	—	23.10	—
#6 x 1-5/8", 5 pounds, 1,550 screws	—	Ea	23.10	—	23.10	—
Drywall nails. Approximately 300 nails per pound. Each 100 square feet of board requires approximately 200 nails (2/3 of a pound). The cost of fasteners needed to hang drywall is included in the previous section, Drywall.						
1-3/8", 30 pounds	—	Ea	42.00	—	42.00	—
1-1/2", 1 pound	—	Ea	4.12	—	4.12	—
1-1/2", coated, 1 pound	—	Ea	3.65	—	3.65	—
1-1/2", galvanized, 1 pound	—	Ea	4.14	—	4.14	—
Drywall Tools						
Electronic stud sensor. Detects wood at 3/4" depth.						
Electronic stud sensor	—	Ea	21.00	—	21.00	—
Drywall screwdriver, 6-amp, DeWalt. Helical-cut steel, heat-treated gears. Quiet clutch. Depth-sensitive nose piece. Tool weight: 2.9 pounds. UL Listed and OSHA approved. 60 inch-pounds of torque.						
0 To 4,000 RPM	—	Ea	104.00	—	104.00	—
Battery-powered drywall screw gun, DuraSpin, Senco. Drives 600 1" to 3" drywall screws an hour. Adjustable nose piece. Includes spare drive, bits and case.						
18 volts	—	Ea	226.00	—	226.00	—
Drywall to wood collated screws, Senco. Collated pack of 1,000.						
#6 x 1-1/4"	—	Ea	17.30	—	17.30	—
#6 x 1-5/8"	—	Ea	18.70	—	18.70	—
#7 x 2"	—	Ea	21.70	—	21.70	—
Drywall to steel collated screws, Senco. Collated pack of 1,000.						
#6 x 1-1/4", light steel	—	Ea	18.80	—	18.80	—
#6 x 1-1/4", heavy steel	—	Ea	24.40	—	24.40	—

	Craft@Hrs	Unit	Material	Labor	Total	Sell
Phillips-head drywall screwdriver bit.						
#1 insert bit, pack of 5	—	Ea	2.63	—	2.63	—
#2 insert bit, pack of 5	—	Ea	2.85	—	2.85	—
Drywall hammer. All solid steel construction. Head and handle forged in one piece. Fully polished. Shock-reduction nylon vinyl grip. Crowned and scored face.						
13-1/2" long, 14 ounce	—	Ea	19.90	—	19.90	—
Drywall T-square. Head riveted to blade. Silver anodized aluminum. 1/8" and 1/16" graduations.						
48" blade	—	Ea	11.50	—	11.50	—
Stainless steel curved drywall trowel. Soft handle.						
11" trowel	—	Ea	35.30	—	35.30	—
14" trowel	—	Ea	60.00	—	60.00	—
Drywall corner trowel. Blade set at 80-degree angle that flexes to 90 degrees during use.						
Hardwood handle	—	Ea	12.20	—	12.20	—
Single-texture drywall brush. Horsehair plastic, round for swirled or sponged effects on ceilings and walls. Standard threaded hole in center can be used with any standard broom handle.						
2-1/2" trim, 4-3/4" block	—	Ea	14.70	—	14.70	—
Stippling brush	—	Ea	9.43	—	9.43	—
Crow's foot texturing brush. Tampico hemp bristles set in a wooden base. Can be hand held or center-hole pole mounted.						
13" x 9"	—	Ea	26.20	—	26.20	—
Drywall stilts. High-strength aluminum alloy with adjustable heights. Spring wishbone locks securely to prevent legs from sliding. Rubber soles prevent slipping. To 225 pounds.						
18" to 28" lift	—	Ea	160.00	—	160.00	—
Drywall panel lift. Lifts and holds drywall in place on the ceiling.						
Daily rental	—	Ea	34.00	—	34.00	—
Panel lift deposit	—	Ea	400.00	—	400.00	—
Drywall sander kit. For drywall sanding without dust. Includes 6' hose with swivel ends, 2 hose adapters, 1 medium grit sandscreen, 1-piece high-impact polystyrene plastic sanding head, and instructions.						
Drywall sander kit	—	Ea	21.00	—	21.00	—
Drywall sanding fiberglass respirator. Strengthened outer shell helps prevent collapse due to moisture buildup. Soft inner shell for comfort and durability. Adjustable metal nosepiece with foam seal fits variety of face sizes. Heavy-duty pre-stretched straps.						
Respirator (6 pack)	—	Ea	8.92	—	8.92	—
Drywall sanding sponge. For sanding drywall and plaster during spot repair. Resists clogging and buildup. Fine and medium sanding grits in one sponge.						
Small	—	Ea	4.16	—	4.16	—
Large	—	Ea	7.33	—	7.33	—
Plastic drywall hand sander. Lightweight, durable plastic base with multiple sandpaper usage. Use with die-cut or 1/2-sheet standard sandpaper.						
3-1/4" x 9-1/4"	—	Ea	6.08	—	6.08	—

**Figure 13-11**

Recommended dimensions for fixture spacing

- ❖ 15" — from the center of a lavatory to an adjacent wall or shower stall
- ❖ 30" — distance between two lavatories mounted in the same countertop
- ❖ 32" to 34" — usual height for the top of vanities and lavatories
- ❖ 32" x 32" — width and depth of a square shower stall
- ❖ 30" x 60" — width and length of standard tubs
- ❖ 26" — height of the toilet paper roll holder above the floor
- ❖ 21" — depth of standing space while washing hands at a lavatory
- ❖ 36" — depth of standing space to open a sliding shower door
- ❖ 44" — depth of standing space to open a hinged shower door

Some building codes set minimum bathroom dimensions. As usual, the code is the last word. Figure 13-11 shows recommended minimum distances between and around bathroom fixtures. Remember that these are *minimums*, and more space is usually better.

	Craft@Hrs	Unit	Material	Labor	Total	Sell
Plumbing Repairs						
Repair a compression faucet. Turn valves off. Remove packing nut. Remove valve stem and cap. Remove seat washer from stem. Pry out old washer. Install new washer. Install stem. Tighten main gland valves if necessary. Turn valve on. Test faucet.						
Per valve repaired	P1@.350	Ea	—	12.70	12.70	21.60
Remove and replace fixture gasket. Turn valve off. Loosen locknut. Remove spud connection. Remove gasket or washer. Clean spud seat. Install new gasket or washer. Assemble spud connection. Tighten locknut. Reassemble fixture and inspect connection.						
Per gasket replaced	P1@.120	Ea	—	4.37	4.37	7.43
Remove and replace toilet fill valve. Turn water off. Empty tank. Remove valve nut and disconnect supply tube. Install new toilet fill valve. Tighten nut. Attach supply tube. Turn water on. Check operation.						
Per fill valve	P1@.300	Ea	—	10.90	10.90	18.50
Remove and replace lavatory trap. Unscrew trap plug from drain. Disconnect union. Remove and inspect trap. Replace trap. Reconnect union and tighten plug. Test operation.						
Per trap	P1@.155	Ea	—	5.64	5.64	9.59
Remove and replace basin strainer and P-trap. Disconnect strainer from wall nipple and packing nut. Remove strainer lock nut. Remove strainer washer and trap. Clean out trap and strainer. Install strainer nut, packing nut and connect trap to wall nipple. Test operation.						
Per strainer and trap	P1@.446	Ea	—	16.20	16.20	27.50
Remove and replace showerhead. Remove showerhead from 1/2" threaded pipe. Inspect as necessary. Replace and test showerhead.						
Per showerhead	P1@.108	Ea	—	3.93	3.93	6.68
Reset toilet bowl. Turn off angle valve. Remove packing nuts. Remove flange bolts. Remove bowl from flange. Replace gasket or ring. Clean bowl foundation. Reset bowl and connect flange nuts. Replace packing nuts. Turn on water and check operation.						
Per bowl reset	P1@1.27	Ea	—	46.20	46.20	78.50
Bathtubs						
Remove bathtub. No salvage of materials assumed. Add for repairs to wall and floor surfaces. Debris piled on site. Labor cost does not include clearing of area or removal of wall finish.						
Remove tub	P1@.722	Ea	—	26.30	26.30	44.70
Enameled steel bathtub. One-piece construction for recess installations. Diagonal brace. Sound-deadening foundation pad. Straight tiling edges. Full wall flange. Slip-resistant bottom. 40-gallon capacity. 60" x 30" x 15-1/4". Labor includes setting and fastening in place only. Add for water supply and drain connections as required. White.						
Left-hand drain	P1@2.50	Ea	132.00	91.00	223.00	379.00
Right-hand drain	P1@2.50	Ea	125.00	91.00	216.00	367.00
Molded bathtub. Clear, molded color. Structural ribs for added strength. Slip-resistant bottom. Available with shower wall set. Faucet sold separately. 60" x 42" x 18". Resistant to chipping, cracking and peeling. Easy-to-clean high-gloss surface. Durable material with color molded throughout fixture. Labor includes setting and fastening in place only. Add for water supply and drain connections as required. White.						
Left-hand drain	P1@2.50	Ea	239.00	91.00	330.00	561.00
Right-hand drain	P1@2.50	Ea	239.00	91.00	330.00	561.00

Oval acrylic soaking tub. Universal drain location. Slip-resistant textured bottom. Integral armrests. Island configuration. Comfort sloped backrest. Pre-leveled base. 60" x 42" x 23". Labor includes setting and fastening in place only. Add for water supply and drain connections as required.

	Craft@Hrs	Unit	Material	Labor	Total	Sell
Ariel I, white	P1@2.50	Ea	828.00	91.00	919.00	1,560.00

Princeton recessed bathtub, American Standard. Integral lumbar support. Slip-resistant. Faucet sold separately. Glossy porcelain finish. Americast material insulates, holding water temperature and reducing the noise of running water. Half the weight of cast iron for easy installation. 60" x 30" x 14". Labor includes setting and fastening in place only. Add for water supply and drain connections as required.

Bone, left-hand drain	P1@2.50	Ea	464.00	91.00	555.00	944.00
Bone, right-hand drain	P1@2.50	Ea	464.00	91.00	555.00	944.00
White, left-hand drain	P1@2.50	Ea	377.00	91.00	468.00	796.00
White, right-hand drain	P1@2.50	Ea	383.00	91.00	474.00	806.00

Villager™ bathtub, Kohler. Sloping back and safeguard bottom. Flat front rim provides ideal base for shower enclosure tracks. Faucet, fixture trim and accessories sold separately. Labor includes setting and fastening in place only. Add for water supply and drain connections as required.

Almond, left-hand drain	P1@2.50	Ea	760.00	91.00	851.00	1,450.00
Almond, right-hand drain	P1@2.50	Ea	760.00	91.00	851.00	1,450.00
Bisque, left-hand drain	P1@2.50	Ea	726.00	91.00	817.00	1,390.00
Bisque, right-hand drain	P1@2.50	Ea	726.00	91.00	817.00	1,390.00
White, left-hand drain	P1@2.50	Ea	442.00	91.00	533.00	906.00
White, right-hand drain	P1@2.50	Ea	442.00	91.00	533.00	906.00

Whirlpool Tubs

Renaissance whirlpool bath, American Standard. 60" x 32" x 19-3/4". High-gloss acrylic. 1-HP pump. 4 body side jets, 2 lumbar back jets, 1 bubble massage control. Deck-mounted on and off switch. Faucet, fixture trim and accessories sold separately. Labor includes setting and fastening in place only. Add for water supply, drain and electrical connections as required.

Bone	P1@4.00	Ea	471.00	146.00	617.00	1,050.00
White	P1@4.00	Ea	471.00	146.00	617.00	1,050.00

Cadet Elite whirlpool tub, American Standard. Acrylic with fiberglass reinforcement. Form-fitted backrest. Molded-in arm rests with elbow supports. Includes 1.5-HP pump. Labor includes setting and fastening in place only. Add for water supply, drain and electrical connections as required.

5' x 36", white	P1@4.00	Ea	1,230.00	146.00	1,376.00	2,340.00
5' x 42", white	P1@4.00	Ea	1,380.00	146.00	1,526.00	2,590.00

Whirlpool tub, American Standard. Built-in apron model for easy, attractive installation. Jet comfort system featuring 6 interchangeable universal flex-jets. Includes 1.5-HP pump. 60" x 32" x 21-1/2". Labor includes setting and fastening in place only. Add for water supply, drain and electrical connections as required.

White	P1@4.00	Ea	808.00	146.00	954.00	1,620.00
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	Craft@Hrs	Unit	Material	Labor	Total	Sell
Devonshire™ whirlpool tub, Sterling Plumbing. Includes 1.25-HP pump with air switch actuator. 8 color-matched Kohler jets direct-adjustable hydro-massage. Crafted of high-gloss acrylic and backed with a solid layer of fiberglass to ensure durability and resistance to chipping, cracking and flexing. Labor includes setting and fastening in place only. Add for water supply, drain and electrical connections as required.						
5', drop-in	P1@4.00	Ea	1,220.00	146.00	1,366.00	2,320.00
5', left-hand drain, white	P1@4.00	Ea	1,150.00	146.00	1,296.00	2,200.00
5', right-hand drain, white	P1@4.00	Ea	1,120.00	146.00	1,266.00	2,150.00
Portrait™ whirlpool tub, Kohler. Traditional styling. 8 flexjets. Adjustable hydro-massage. Drop-in installation. High-gloss acrylic and backed with fiberglass. Labor includes setting and fastening in place only. Add for water supply, drain and electrical connections as required.						
5-1/2', with heater	P1@4.00	Ea	2,860.00	146.00	3,006.00	5,110.00
Whirlpool bath heater. Pre-plumbed for easy installation. Maintains constant water temperature. Labor includes setting and fastening in place only. Add for electrical service and connection.						
EZHeat-100	P1@1.00	Ea	162.00	36.40	198.40	337.00
Whirlpool tub apron, American Standard. Labor includes setting and fastening in place only.						
5', white	P1@.500	Ea	237.00	18.20	255.20	434.00
Renaissance or Cadet, bone	P1@.500	Ea	237.00	18.20	255.20	434.00
Williamsburg J-spout Roman tub deck-mount tub filler, Williamsburg. Lifetime finish. Will not tarnish. Ceramic disc valving. Mounts on 8" to 12" centers. Labor includes set in place and connection only. Add the cost of plumbing rough-in as required.						
Brushed satin nickel finish	P1@1.00	Ea	360.00	36.40	396.40	674.00
Chrome finish	P1@1.00	Ea	292.00	36.40	328.40	558.00
Satin chrome finish	P1@1.00	Ea	359.00	36.40	395.40	672.00
Roman tub trim kit, Delta. Chrome and polished brass finish. Flexible deck- and ledge-mount. Brilliant anti-tarnish finish. Installation kit included.						
18 GPM fill rate	P1@1.00	Ea	265.00	36.40	301.40	512.00
Tub Enclosure Walls						
One-piece tub wall with shelf. Bath and shower wall surround. Seamless. One extra-long molded soap dish. High-gloss finish.						
58" to 61" x 31" x 59", white	B1@3.00	Ea	390.00	100.00	490.00	833.00
One-piece tile finish tub wall. Wall surround. High-gloss finish. With integrated soap dishes and simulated ceramic tile finish.						
58" to 60" x 32" x 58", white	B1@3.00	Ea	365.00	100.00	465.00	791.00
Three-piece bathtub wall kit, Pro-Wall 3™. Heavy-gauge, high-impact co-polymer plastic. 2 clear towel bars, 3 molded shelves. Easy installation with few seams to caulk. Back panel can be cut for window opening. Fits alcoves 57" to 61" across the back and 30" across the ends without trimming. Permanent, waterproof, colorfast panels are easy to clean. Resistant to mold and mildew.						
58" wall height, white	B1@3.00	Ea	140.00	100.00	240.00	408.00

	Craft@Hrs	Unit	Material	Labor	Total	Sell
Three-piece bathtub tile kit. Tub wall surround. Mold- and mildew-resistant. Limited lifetime warranty.						
30" x 60", beige, ceramic tile look	B1@3.00	Ea	250.00	100.00	350.00	595.00
Five-piece tub wall surround kit. High-gloss finish. Shower base sold separately.						
49" to 60" x 32" x 59", white	B1@3.00	Ea	235.00	100.00	335.00	570.00
Five-piece overlap construction design tub surround, Tall Elite. 2 towel bars and 6 shelves. Fits alcoves from 49" to 60-1/2" wide by 28" to 31" deep. Panels are easy to trim for window openings. White high-gloss finish.						
80" high x 60" wide	B1@3.00	Ea	276.00	100.00	376.00	639.00
Bathtub wall surround kit, Elite. Walls only. Tub and shower faucets sold separately. 6 shelves. 2 clear towel bars. Thicker corners provide greater strength and durability.						
58" wall height, bone	B1@3.00	Ea	180.00	100.00	280.00	476.00
58" wall height, white	B1@3.00	Ea	180.00	100.00	280.00	476.00
Bathtub tile wall kit. Rounded corners, bullnose edges, and engraved white grout for ceramic tile appearance. Groutless design. PVC finish resists stains, mold and mildew. Panels can be cut to fit window openings. 3 panels. Tub and shower faucets sold separately.						
30" x 60" x 60"	B1@3.00	Ea	339.00	100.00	439.00	746.00
Bathtub walls, Sterling Plumbing. Resistant to chipping, cracking and peeling. Easy-to-clean high-gloss surface. Durable material with color molded throughout fixture. Labor includes fastening in place only.						
Bone	B1@3.00	Ea	324.00	100.00	424.00	721.00
Fiberglass bath wall window trim.						
White	B1@1.00	Ea	131.00	33.40	164.40	279.00
Bypass Door Tub Enclosures						
Bypass door tub enclosure. 60" wide opening. With track.						
Brass, ellipse glass	BC@1.20	Ea	264.00	44.30	308.30	524.00
Brass, hammertone glass	BC@1.20	Ea	181.00	44.30	225.30	383.00
Brass, hammertone mirror glass	BC@1.20	Ea	202.00	44.30	246.30	419.00
Silver, ellipse glass	BC@1.20	Ea	252.00	44.30	296.30	504.00
Silver, frameless, clear glass	BC@1.20	Ea	431.00	44.30	475.30	808.00
Silver, frameless, rainglass	BC@1.20	Ea	378.00	44.30	422.30	718.00
Silver, fluted glass	BC@1.20	Ea	316.00	44.30	360.30	613.00
Silver, hammertone glass	BC@1.20	Ea	164.00	44.30	208.30	354.00
Silver, hammertone mirror glass	BC@1.20	Ea	187.00	44.30	231.30	393.00
Silver, obscure glass	BC@1.20	Ea	286.00	44.30	330.30	562.00
Silver, rainglass	BC@1.20	Ea	209.00	44.30	253.30	431.00
White, ellipse glass	BC@1.20	Ea	264.00	44.30	308.30	524.00

	Craft@Hrs	Unit	Material	Labor	Total	Sell
Sliding tub enclosure door. 60" wide opening. With track.						
Bright nickel, frameless, 1/4" glass	BC@1.20	Ea	423.00	44.30	467.30	794.00
Bright silver finish, rain glass	BC@1.20	Ea	186.00	44.30	230.30	392.00
Deluxe frameless, radiance glass	BC@1.20	Ea	356.00	44.30	400.30	681.00
Deluxe gold, glue chip glass	BC@1.20	Ea	408.00	44.30	452.30	769.00
Deluxe silver finish, rain glass	BC@1.20	Ea	327.00	44.30	371.30	631.00
Deluxe silver, glue chip glass	BC@1.20	Ea	381.00	44.30	425.30	723.00
Gold finish, rain glass	BC@1.20	Ea	207.00	44.30	251.30	427.00
Silver, frameless, 1/4" clear glass	BC@1.20	Ea	313.00	44.30	357.30	607.00
Silver, frameless, clear glass	BC@1.20	Ea	284.00	44.30	328.30	558.00
Silver, frameless, clear glass	BC@1.20	Ea	269.00	44.30	313.30	533.00
Silver, frameless, radiance glass	BC@1.20	Ea	291.00	44.30	335.30	570.00
Silver finish, obscure glass	BC@1.20	Ea	142.00	44.30	186.30	317.00
Silver finish, swan glass	BC@1.20	Ea	199.00	44.30	243.30	414.00
White finish, rain glass	BC@1.20	Ea	205.00	44.30	249.30	424.00

Framed bypass door tub enclosure, Keystone. Fits 57" to 59" wide by 57-3/8" openings. 6'8" high. EZ Kleen® track system. Factory-installed towel bar. No exposed screws.

Nickel, obscure glass	BC@1.20	Ea	211.00	44.30	255.30	434.00
Silver frame, 3/8" rain glass	BC@1.20	Ea	275.00	44.30	319.30	543.00
Polished Brass	BC@1.20	Ea	385.00	44.30	429.30	730.00

Frameless bypass door shower enclosure. 54" to 59" wide, 71" high.

Satin nickel track, 3/8" glass	BC@1.20	Ea	643.00	44.30	687.30	1,170.00
Satin nickel track, clear glass	BC@1.20	Ea	424.00	44.30	468.30	796.00
Silver track, 3/8" clear glass	BC@1.20	Ea	855.00	44.30	899.30	1,530.00
Silver track, clear glass	BC@1.20	Ea	360.00	44.30	404.30	687.00
Silver track, Krystal flute glass	BC@1.20	Ea	426.00	44.30	470.30	800.00
White track, clear glass	BC@1.20	Ea	399.00	44.30	443.30	754.00

Fiberglass Tub and Shower Combinations

Tub and shower unit. Integral toiletry shelves. Installed acrylic grab bar. Slip-resistant textured bottom. 60" x 30" x 72". White. Smooth wall. Labor includes setting and fastening in place only. Add for water supply and drain connections as required. Be sure any tub and shower unit you select for replacement purposes will fit through existing doorways.

Left-hand drain	P1@4.75	Ea	425.00	173.00	598.00	1,020.00
Right-hand drain	P1@4.75	Ea	425.00	173.00	598.00	1,020.00

Two-piece fiberglass tub and shower unit. Front installation system. Integral toiletry shelves and acrylic grab bar. Smooth wall design. Leak-proof right angle joint flanges. Slip-resistant textured bottom. White. 60" x 30" x 72". Labor includes setting and fastening in place only. Add for water supply and drain connections as required.

Left-hand drain	P1@4.75	Ea	460.00	173.00	633.00	1,080.00
Right-hand drain	P1@4.75	Ea	460.00	173.00	633.00	1,080.00

Tub and shower. 4" smooth tile design. Integral soap shelf. Slip-resistant, textured bottom. 60" x 32" x 72". White. Labor includes setting and fastening in place only. Add for water supply and drain connections as required. Be sure any tub and shower unit you select for replacement purposes will fit through existing doorways.

Left-hand drain	P1@4.75	Ea	435.00	173.00	608.00	1,030.00
Right-hand drain	P1@4.75	Ea	435.00	173.00	608.00	1,030.00

Two-piece tub and shower. Smooth wall tile design. Front installation system. Leak-proof right-angle joint flanges. Integral soap shelves. Specially designed to hide seam. 60" x 30" x 72". White. Acrylic grab bar. Labor includes setting and fastening in place only. Add for water supply and drain connections as required.

Left-hand drain	P1@4.75	Ea	483.00	173.00	656.00	1,120.00
Right-hand drain	P1@4.75	Ea	483.00	173.00	656.00	1,120.00

Three-piece molded fiberglass sectional tub and shower. 60" x 30" x 72". Smooth wall design. Front installation system. Leak-proof right-angle joint flanges. Integral toiletry shelves. Acrylic grab bar. Slip-resistant textured bottom. Labor includes setting and fastening in place only. Add for water supply and drain connections as required.

Left-hand drain	P1@4.75	Ea	461.00	173.00	634.00	1,080.00
Right-hand drain	P1@4.75	Ea	461.00	173.00	634.00	1,080.00

Two-piece fiberglass tub and shower unit. With towel bar, shelf, and soap dish. Smooth wall design. BathLock™ front installation system. Leak-proof right-angle joint flanges. Slip-resistant textured bottom. Acrylic grab bar. Bone finish. 60" x 30" x 72". Labor includes setting and fastening in place only. Add for water supply and drain connections as required.

Left-hand drain	P1@4.75	Ea	436.00	173.00	609.00	1,040.00
Right-hand drain	P1@4.75	Ea	436.00	173.00	609.00	1,040.00

Shower Stalls

Demolish stall shower. Remove 3 walls and receptor. Remove supply pipe and insulation. Remove drain with a cutting torch. Stack debris on site.

Per shower stall	BL@1.55	Ea	—	46.40	46.40	78.90
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Shower stall kit. Free-standing shower stall. Includes heavy-gauge walls in one-piece design. Molded soap dish and shampoo holder. 2 hand rails for convenient support. Base with no-caulk drain. Faucet, showerhead and installation hardware included. Add the cost of water supply and drain connection.

White	P1@2.90	Ea	468.00	106.00	574.00	976.00
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One-piece shower stall. Dimpled tile finish. Center drain location. Comfort-molded rear corner seats. Slip-resistant textured bottom. Simulated 4" textured tile design. Integral toiletry shelves. Acrylic grab bar. Space-saver design. Add for water supply, drain, valve and showerhead. White. 72" high.

32" x 32", smooth finish	P1@2.90	Ea	358.00	106.00	464.00	789.00
36" x 36", 4" tile finish	P1@2.90	Ea	414.00	106.00	520.00	884.00
48" x 35", smooth finish	P1@3.25	Ea	461.00	118.00	579.00	984.00

Two-piece molded sectional shower stall. Front installation system. Leak-proof right-angle joint flanges. Central drain. Integral soap shelf. Smooth walls. Slip-resistant textured bottom. Specially designed to hide seam. Add the cost of water supply and drain connection, valve and showerhead. White.

32" x 32" x 72-3/4"	P1@2.90	Ea	450.00	106.00	556.00	945.00
36" x 36" x 72"	P1@2.90	Ea	450.00	106.00	556.00	945.00

Smooth wall shower stall. Center drain. BathLock™ front installation system. Leak-proof right-angle joint flanges. Integral soap shelf. Slip-resistant textured bottom. Add for water supply, drain, valve and showerhead. White. 72" high.

36" x 36", 3-piece	P1@2.90	Ea	350.00	106.00	456.00	775.00
38" x 38", 2-piece, neo-angle	P1@2.90	Ea	439.00	106.00	545.00	927.00
48" x 34", 2-piece	P1@3.25	Ea	484.00	118.00	602.00	1,020.00
48" x 34", 3-piece	P1@3.25	Ea	415.00	118.00	533.00	906.00
60" x 34", 3-piece	P1@3.25	Ea	462.00	118.00	580.00	986.00

	Craft@Hrs	Unit	Material	Labor	Total	Sell
Corner entry shower stall kit, American Shower & Bath. White aluminum frame with clear tempered safety glass. Easy-to-clean walls and corner caddy with four shelves and towel bar. Heavy-duty base. Drain, drain cover and installation hardware included. Add the cost of water supply and drain connection, valve and showerhead. White.						
32" x 32" x 71"	P1@2.90	Ea	497.00	106.00	603.00	1,030.00

Round shower stall kit. Includes shower stall, door, and drain. Installs directly to either studs or finished walls. Reversible sliding door. Non-slip textured base. Bottle holder and shelves. 33-3/4" x 33-3/4" base measured at walls. 78-1/4" height. Easy to clean. Add for water supply, drain connection, valve and showerhead.						
34" x 34"	P1@2.90	Ea	566.00	106.00	672.00	1,140.00

Neo-angle 38-inch shower stall kit. Includes anodized aluminum frame and tempered safety glass pivot door. Easy-to-clean walls. Corner caddy with 4 shelves and towel bar. Heavy-duty base, drain, drain cover and installation hardware. Add the cost of valve, water supply and drain connection.						
Chrome frame, obscure glass	P1@3.25	Ea	602.00	118.00	720.00	1,220.00
Chrome frame, rainfall glass	P1@3.25	Ea	602.00	118.00	720.00	1,220.00
Chrome with clear glass	P1@3.25	Ea	774.00	118.00	892.00	1,520.00
Chrome with radiance glass	P1@3.25	Ea	614.00	118.00	732.00	1,240.00
Gold frame, autumn glass	P1@3.25	Ea	582.00	118.00	700.00	1,190.00
Gold frame, rainfall glass	P1@3.25	Ea	612.00	118.00	730.00	1,240.00
Silver frame, obscure glass	P1@3.25	Ea	420.00	118.00	538.00	915.00
White frame, rainfall glass	P1@3.25	Ea	470.00	118.00	588.00	1,000.00

Hazel three-piece neo-angle shower stall kit. Includes shower stall, door, and drain. Large soap dishes and clear acrylic towel bar. Reversible pivot glass panel door with left and right central opening. Magnetic watertight seal. Drip channel on door. Non-slip textured 38" x 38" base. 74" high. Easy to clean. Add the cost of valve, water supply and drain connection.						
Chrome finish, clear glass	P1@3.25	Ea	454.00	118.00	572.00	972.00
White frame, obscure glass	P1@3.25	Ea	454.00	118.00	572.00	972.00

Durastall® three-piece fiberglass shower stall, E.L. Mustee. Tongue-and-groove interlocking seams. Semi-gloss surface. Colorfast, waterproof, and mold- and mildew-resistant. Seamless corners. Swing doors. Shelf and towel bar molded in. Molded fiberglass panels. Fits Mustee Durabase. Easy to clean. Add the cost of base, water supply and drain connection, valve and showerhead. White.						
32" x 32"	P1@3.25	Ea	263.00	118.00	381.00	648.00
36" x 36"	P1@3.25	Ea	272.00	118.00	390.00	663.00

Durabase® one-piece shower base, E.L. Mustee. Underbody ribbed for added strength. Slip-resistant. Mold- and mildew-resistant. Semi-gloss surface. Labor includes setting and fastening in place only. Add for drain connections as required.						
32" long, 32" wide, square, single threshold	P1@.600	Ea	115.00	21.80	136.80	233.00
36" long, 36" wide, neo-angle corner threshold	P1@.600	Ea	115.00	21.80	136.80	233.00
36" long, 36" wide, square, single threshold	P1@.600	Ea	104.00	21.80	125.80	214.00
38" long, 38" wide, neo-angle corner threshold	P1@.800	Ea	140.00	29.10	169.10	287.00
48" long, 32" wide, rectangular, single threshold	P1@.800	Ea	136.00	29.10	165.10	281.00
48" long, 34" wide, rectangular, single threshold	P1@.800	Ea	146.00	29.10	175.10	298.00

	Craft@Hrs	Unit	Material	Labor	Total	Sell
Shower pan. Gel coat finish. Center drain location. Slip-resistant textured bottom. Integral nailing flange. 3-year warranty on Lascoat finish. White. 7-1/4" height. Labor includes setting and fastening in place only. Add for drain connections as required.						
32" long, 32" wide	P1@.600	Ea	125.00	21.80	146.80	250.00
36" long, 36" wide	P1@.800	Ea	125.00	29.10	154.10	262.00
42" long, 34" wide	P1@.800	Ea	181.00	29.10	210.10	357.00
60" long, 34" wide	P1@.800	Ea	199.00	29.10	228.10	388.00

Shower Enclosure Doors

Pivot shower enclosure door. Obscure glass. Silver frame. Drip apron stops water drips when opening door. Reversible for left- or right-hand opening. Lifetime warranty. 3" adjustment allowance. Factory-installed handle. No exposed screws.

23-3/4" to 26-3/4" wide	BG@1.20	Ea	177.00	42.80	219.80	374.00
27-3/4" to 30-3/4" wide	BG@1.20	Ea	146.00	42.80	188.80	321.00
30-3/4" to 33-3/4" wide	BG@1.20	Ea	156.00	42.80	198.80	338.00
33-3/4" to 36-3/4" wide	BG@1.20	Ea	208.00	42.80	250.80	426.00

Pivot shower enclosure door. Silver with rain glass.

24" wide	BG@1.20	Ea	194.00	42.80	236.80	403.00
27" wide	BG@1.20	Ea	200.00	42.80	242.80	413.00
30" wide	BG@1.20	Ea	207.00	42.80	249.80	425.00
33" wide	BG@1.20	Ea	213.00	42.80	255.80	435.00

Pivot shower enclosure door, Contractors Wardrobe.

Bright clear, rain glass, 59-1/8" x 69-1/2"	BG@1.20	Ea	388.00	42.80	430.80	732.00
Bright clear, rain glass, 59-1/2" x 63-1/4"	BG@1.20	Ea	231.00	42.80	273.80	465.00
Frameless, bright clear, clear glass, 59-3/8" x 68-7/8"	BG@1.20	Ea	297.00	42.80	339.80	578.00
Frameless, bright gold, clear glass, 59-3/8" x 68-7/8"	BG@1.20	Ea	329.00	42.80	371.80	632.00

Pivot shower enclosure door, Sterling Plumbing. Silver frame.

24" to 27-1/2"	BG@1.20	Ea	183.00	42.80	225.80	384.00
32" to 35-1/2"	BG@1.20	Ea	171.00	42.80	213.80	363.00
36" to 39-1/2"	BG@1.20	Ea	183.00	42.80	225.80	384.00
42" to 45-1/2"	BG@1.20	Ea	219.00	42.80	261.80	445.00
48" to 51-1/2"	BG@1.20	Ea	261.00	42.80	303.80	516.00

Swinging shower enclosure door, Sterling Plumbing. Standard hinged. Use in either right- or left-handed opening. Height is 64". Silver frame finish. Hammered glass texture. Self-draining, easy-to-clean bottom track. Fits most fiberglass surround units.

23-1/2" to 25" wide	BG@1.20	Ea	115.00	42.80	157.80	268.00
27" to 28-1/2" wide	BG@1.20	Ea	124.00	42.80	166.80	284.00
31" to 32-1/2" wide	BG@1.20	Ea	144.00	42.80	186.80	318.00

Hinged shower enclosure door. Silver frame.

24", hammertone glass	BG@1.20	Ea	124.00	42.80	166.80	284.00
31", pebble glass	BG@1.20	Ea	216.00	42.80	258.80	440.00
36", pebble glass	BG@1.20	Ea	240.00	42.80	282.80	481.00

	Craft@Hrs	Unit	Material	Labor	Total	Sell
Bypass door shower enclosure.						
48", silver, hammertone glass	BG@1.20	Ea	179.00	42.80	221.80	377.00
60", brass, hammertone glass	BG@1.20	Ea	208.00	42.80	250.80	426.00
60", silver, hammertone glass	BG@1.20	Ea	238.00	42.80	280.80	477.00
60", silver, rain glass	BG@1.20	Ea	285.00	42.80	327.80	557.00

Single-Control Tub and Shower Faucets

Single-control tub and shower faucet. Round acrylic mixing valve handle. Labor includes set in place and connection only. Add the cost of plumbing rough-in as required.

Chrome	P1@1.40	Ea	120.00	50.90	170.90	291.00
Chrome, shower only	P1@1.00	Ea	99.00	36.40	135.40	230.00

Single-knob tub and shower faucet set. Pressure balance faucet prevents uncomfortable water temperature changes. Durable chrome finish. Labor includes set in place and connection only. Add the cost of plumbing rough-in as required.

Chrome handle	P1@1.40	Ea	193.00	50.90	243.90	415.00
Clear handle	P1@1.40	Ea	101.00	50.90	151.90	258.00
Porcelain and brass inserts	P1@1.40	Ea	121.00	50.90	171.90	292.00

Single-handle tub and shower set. Pressure balanced. Classic styling. Washerless cartridge design. Labor includes set in place and connection only. Add the cost of plumbing rough-in as required.

Polished chrome finish, Villeta	P1@1.40	Ea	125.00	50.90	175.90	299.00
Platinum with chrome accents	P1@1.40	Ea	211.00	50.90	261.90	445.00

Lever-handle tub and shower faucet set. Pressure balanced. Metal lever handle. Ceramic disc valving resists hard and sandy water. 1/2" direct sweat or IPS FPT. High-temperature limit helps prevent scalding. Labor includes set in place and connection only. Add the cost of plumbing rough-in as required.

Chrome, shower only	P1@1.00	Ea	116.00	36.40	152.40	259.00
Polished chrome	P1@1.40	Ea	116.00	50.90	166.90	284.00

Single-control tub and shower faucet. Anti-scald pressure balanced mechanism. Brass showerhead with adjustable spray pattern. Drip-free washerless cartridge design.

Chrome	P1@1.40	Ea	95.70	50.90	146.60	249.00
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Single-control tub and shower faucet, Price Pfister. Pforever Pfauet™ warranty. Covers function and finish for life. Labor includes set in place and connection only. Add the cost of plumbing rough-in as required.

Chrome finish	P1@1.40	Ea	153.00	50.90	203.90	347.00
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Single-control tub and shower set. Pressure balanced. Lever handle. Includes adjustable spray showerhead, arm and flange, and diverter spout with flange. ADA compliant. Labor includes set in place and connection only. Add the cost of plumbing rough-in as required.

Chrome, brass accents	P1@1.40	Ea	209.00	50.90	259.90	442.00
Chrome, chrome handle	P1@1.40	Ea	184.00	50.90	234.90	399.00
Polished brass	P1@1.40	Ea	359.00	50.90	409.90	697.00

Single-control tub and shower faucet. Pressure balanced. Lever handle. Washerless valves. Adjustable showerhead, arm, and flange. Diverter spout. ADA compliant. Labor includes set in place and connection only. Add the cost of plumbing rough-in as required.

Chrome, brass accent	P1@1.40	Ea	201.00	50.90	251.90	428.00
Chrome, porcelain handle	P1@1.40	Ea	175.00	50.90	225.90	384.00
Nickel, brass accent	P1@1.40	Ea	243.00	50.90	293.90	500.00

	Craft@Hrs	Unit	Material	Labor	Total	Sell
Lever-handle tub and shower set. Lifetime finish, will not tarnish. Ceramic disc valving, great for hard water. Both porcelain and metal lever inserts. Pressure balanced valve prevents accidental scalding. Lifetime warranty on function and finish. Labor includes set in place and connection only. Add the cost of plumbing rough-in as required.						
Brass and chrome finish	P1@1.40	Ea	217.00	50.90	267.90	455.00
Brass with chrome and brass	P1@1.40	Ea	208.00	50.90	258.90	440.00
Brass with satin and chrome	P1@1.40	Ea	327.00	50.90	377.90	642.00
Brass with velvet and chrome	P1@1.40	Ea	277.00	50.90	327.90	557.00
Brushed satin nickel finish	P1@1.40	Ea	273.00	50.90	323.90	551.00
Chrome finish	P1@1.40	Ea	181.00	50.90	231.90	394.00
Chrome and brass finish	P1@1.40	Ea	220.00	50.90	270.90	461.00
Satin chrome finish	P1@1.40	Ea	273.00	50.90	323.90	551.00
Single-control tub and shower faucet. Pressure balanced. Lever handle. Showerhead, arm, and flange. Rite-Temp™ pressure-balancing valves eliminate surges of hot and cold water. Nostalgic design. Polished chrome finish. Labor includes set in place and connection only. Add the cost of plumbing rough-in as required.						
With diverter spout	P1@1.40	Ea	186.00	50.90	236.90	403.00
Lever-handle tub and shower faucet. Individual temperature and volume control. Large, decorative showerhead delivers a good spray pattern. Single-hole mount centerset. Brass. Pressure balanced with Scald-Guard®. Labor includes set in place and connection only. Add the cost of plumbing rough-in as required.						
Chrome finish	P1@1.40	Ea	220.00	50.90	270.90	461.00
Single-handle tub and shower faucet. Pressure balanced. 1/4 turn, anti-scald valve temperature control mechanism. Bell-shaped deluxe head with adjustable arm. Favorite temperature set. Shutoff valve. Labor includes set in place and connection only. Add the cost of plumbing rough-in as required.						
Brushed nickel	P1@1.40	Ea	296.00	50.90	346.90	590.00
Brushed nickel, shower only	P1@1.00	Ea	270.00	36.40	306.40	521.00
Chrome	P1@1.40	Ea	248.00	50.90	298.90	508.00
Chrome, shower only	P1@1.00	Ea	208.00	36.40	244.40	415.00
Innovations single-handle tub and shower faucet. Pressure balanced. Labor includes set in place and connection only. Add the cost of plumbing rough-in as required.						
Pearl nickel finish	P1@1.40	Ea	270.00	50.90	320.90	546.00
Two-handle tub and shower faucet. Knob handles. Includes showerhead, flange, and arm. Polished chrome. Labor includes set in place and connection only. Add the cost of plumbing rough-in as required.						
Porcelain handle, shower only	P1@1.40	Ea	207.00	50.90	257.90	438.00
Metal handle, shower only	P1@1.00	Ea	120.00	36.40	156.40	266.00
Windsor, acrylic handle	P1@1.40	Ea	139.00	50.90	189.90	323.00
Two-handle tub and shower faucet, Masco. Scald-Guard® keeps water temperature within 3 degrees Fahrenheit to prevent sudden temperature changes. Touch-Clean® showerhead. Lifetime warranty. Labor includes set in place and connection only. Add the cost of plumbing rough-in as required.						
Polished brass and chrome finish	P1@1.40	Ea	275.00	50.90	325.90	554.00
Three-handle tub and shower faucet set, Price Pfister. Chrome. Includes showerhead, arm, flanges and tub spout. Labor includes set in place and connection only. Add the cost of plumbing rough-in as required.						
Porcelain cross handles	P1@1.40	Ea	189.00	50.90	239.90	408.00
Chrome handles	P1@1.40	Ea	93.50	50.90	144.40	245.00
Windsor® acrylic handles	P1@1.40	Ea	129.00	50.90	179.90	306.00

Three-handle tub and shower faucet. Clear knobs. Includes showerhead, arm, flange, and diverter spout. Full-spray, water-saving showerhead. Reliable washerless cartridge. Labor includes set in place and connection only. Add the cost of plumbing rough-in as required.

Chrome	P1@1.50	Ea	150.00	54.60	204.60	348.00
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Three-handle tub and shower faucet set. Ceramic disc valving. Porcelain levers. Solid brass construction. Pressure balanced with Scald-Guard®. Labor includes set in place and connection only. Add the cost of plumbing rough-in as required.

White porcelain lever handles	P1@1.50	Ea	240.00	54.60	294.60	501.00
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Add-on shower kit for built-in tub. Includes water-saver showerhead, diverter spout, adjustable risers, and wall bracket. Labor includes set in place and connection only. Add the cost of plumbing rough-in as required.

Kit	P1@1.00	Ea	48.80	36.40	85.20	145.00
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Bath and Shower Accessories

Power massage showerhead. 3 massage settings: pulsating, gentle and combination. Great for low pressure. Self-cleaning, water-saving showerhead for continuous flow.

Chrome	P1@.200	Ea	42.00	7.28	49.28	83.80
Brushed Nickel	P1@.200	Ea	54.60	7.28	61.88	105.00

Sunflower showerhead.

8", easy clean	P1@.200	Ea	68.40	7.28	75.68	129.00
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Toilets (Water Closets)

Hot and cold bidet. Drilled for hot and cold valves. Labor includes setting and connection only. Add the cost of valves and piping.

BidetP1@1.50	Ea	350.00	54.60	404.60	688.00	
Bidet	P1@1.50	Ea	600.00	54.60	654.60	1,110.00

Bidet faucet set, three-handle. Fits 5" to 9" center holes. Ceramic disc valves. Labor includes set in place and connection only. Add the cost of plumbing rough-in as required.

Chrome	P1@1.10	Ea	246.00	40.00	286.00	486.00
Bronze	P1@1.10	Ea	400.00	40.00	440.00	748.00

Toilet To Go kit. 1.6-gallon flush. Includes tank, bowl, seat, wax ring and toilet bolts. Easy to install. Exceeds ANSI standards. Expanded 2" trapway. Large 9" x 8-1/2" water surface. Labor includes setting and connection only. Add the cost of wall stop valve and piping.

Round, Bel-Air, white	P1@1.10	Ea	198.00	40.00	238.00	405.00
Round, Metro, stylish, white	P1@1.10	Ea	240.00	40.00	280.00	476.00
Elongated, Metro	P1@1.10	Ea	286.00	40.00	326.00	554.00

Cadet compact toilet, American Standard. Fits into space of a round front bowl toilet. 1.6-gallon flush. Sanitary dam. Labor includes setting and connection only. Add the cost of wall stop valve, piping and the seat.

Elongated bowl	P1@.550	Ea	115.00	20.00	135.00	230.00
Tank	P1@.550	Ea	80.50	20.00	100.50	171.00

	Craft@Hrs	Unit	Material	Labor	Total	Sell
One-piece toilet. 1.6-gallon flush. Round front. Seat included. Labor includes setting and connection only. Add the cost of wall stop valve and piping.						
White	P1@1.10	Ea	150.00	40.00	190.00	323.00
Hamilton one-piece toilet, American Standard. Vitreous china. Low consumption. Elongated siphon action bowl. Includes color-matched Rise and Shine™ plastic seat and cover with lift-off hinge. 2-bolt cap. Labor includes setting and connection only. Add the cost of wall stop valve and piping.						
Bone	P1@1.10	Ea	325.00	40.00	365.00	621.00
Linen	P1@1.10	Ea	350.00	40.00	390.00	663.00
White	P1@1.10	Ea	300.00	40.00	340.00	578.00
Cadet pressure-assist toilet, American Standard. Labor includes setting and connection only. Add the cost of wall stop valve, piping and the seat.						
Round front bowl	P1@.550	Ea	180.00	20.00	200.00	340.00
Tank, 1.6 gallon	P1@.550	Ea	311.00	20.00	331.00	563.00
Champion toilet, American Standard. Labor includes setting and connection only. Add the cost of wall stop valve, piping and the seat.						
16-1/2" toilet bowl, white	P1@.550	Ea	208.00	20.00	228.00	388.00
Toilet tank, white	P1@.550	Ea	157.00	20.00	177.00	301.00
Antiquity one-piece toilet, American Standard. Elongated front model fits in the space of a round toilet. 2" trapway. Seat included. Labor includes setting and connection only. Add the cost of wall stop valve and piping.						
Elongated, white	P1@1.10	Ea	452.00	40.00	492.00	836.00
Gabrielle Comfort Height™ one-piece toilet, Kohler. Contemporary look and superior flush. Rim height of 16-1/8" is consistent with standard height of chair. Vigorous flush is a result of siphon-jet flushing technology and 2" fully glazed trapway. 10" x 9" water surface, which maintains a cleaner bowl. Ingenium™ flushing system. Labor includes setting and connection only. Add the cost of wall stop valve and piping.						
Elongated, white	P1@1.10	Ea	791.00	40.00	831.00	1,410.00
San Raphael™ toilet, Kohler. One-piece design. Kohler's quietest flushing toilet. 2" fully glazed trapway. Polished chrome trip lever. Includes seat. Labor includes setting and connection only. Add the cost of wall stop valve and piping.						
Elongated, white	P1@1.10	Ea	971.00	40.00	1,011.00	1,720.00
One-piece wall-mount toilet. Vitreous china. Full glazed trapway. Condensation channel. Flush valve. Direct-fed siphon jet action. 10" x 12" water surface area. 25" x 14-3/4" x 15". Labor includes setting and connection only. Add the cost of a flush valve, carrier and piping.						
Top spud, elongated, white	P1@1.10	Ea	730.00	40.00	770.00	1,310.00
Sloan Royal flush valve. Water saver. For floor or wall-hung top spud bowls.						
Sloan No. 110	P1@.600	Ea	189.00	21.80	210.80	358.00
Sloan Royal urinal flush valve. Water saver. 1.5-gallon flush. For 3/4" top spud urinals.						
Sloan No. 186	P1@.600	Ea	189.00	21.80	210.80	358.00

	Craft@Hrs	Unit	Material	Labor	Total	Sell
Urinal. One-gallon flush. Labor includes setting and connection only. Add the cost of a flush valve, hanger and piping.						
3/4" top spud, white	P1@1.50	Ea	260.00	54.60	314.60	535.00
Urinal. Vitreous china. Flushing rim. Elongated 14" rim from finished wall. Washout flush action. Includes two wall hangers and outlet connection. Labor includes setting and connection only. Add the cost of a flush valve, hanger and piping.						
3/4" top spud	P1@1.50	Ea	405.00	54.60	459.60	781.00
Toilet Installation and Repair						
Low-Boy toilet supply hook-up kit. For iron pipe or copper tube stub-outs. Kit includes 1-1/2" female pipe thread by 3/8" OD tube compression by 1/2" male pipe thread union adapter, and Teflon [®] tape. Includes 9" braided Speedi-Plumb water supply connector.						
Kit	P1@.250	Ea	25.00	9.10	34.10	58.00
Angle valve.						
1/2" with 3/8" x 12" supply tube kit	P1@.250	Ea	11.00	9.10	20.10	34.20
Toilet Supply Line. Braided stainless steel.						
3/8" x 7/8" x 12" supply line	P1@.150	Ea	4.90	5.46	10.36	17.60
Decorative flexible supply stop. 1/2" iron pipe size by 3/8" outside diameter.						
Angle valve, polished brass	P1@.250	Ea	12.10	9.10	21.20	36.00
No-Seep wax toilet bowl gasket. Wax gasket with polyethylene flange fits 3" and 4" lines, closet bowls only. Includes 1/4" x 2-1/4" brass bolt kit with stainless washers and brass nuts.						
With brass bolt kit	P1@.100	Ea	6.70	3.64	10.34	17.60
Cast iron water closet flange. Use on heavyweight plastic or soil pipe. Complete with body, brass ring, bolts and gasket.						
4" diameter, compression	P1@.250	Ea	16.10	9.10	25.20	42.80
Toilet base plate cover. For toilet replacement. Conceals ring around smaller base of new toilet. Plastic. Plates can be stacked to raise toilet. 11" wide.						
Round nose, 22-1/2" long	P1@.080	Ea	17.00	2.91	19.91	33.80
Square nose, 18-3/4" long	P1@.080	Ea	15.20	2.91	18.11	30.80
Leak Sentry™ anti-siphon toilet fill valve, Fluidmaster. Prevents automatic refill of a leaky tank. At most, only one tank of water can escape a toilet. Toilet always remains operational. Bowl refill adjustment prevents wasteful overfilling. Fits most toilets, including 1.6 gallon-per-flush models. Corrosion-resistant plastic and stainless steel.						
1.6 gallon flush	P1@.300	Ea	12.60	10.90	23.50	40.00
Complete toilet tank repair kit, Fluidmaster. Includes flush valve with Adjust-Flush™ flapper, anti-siphon fill valve, Sure-Fit [®] tank lever, 3 bolts and gasket. Flapper dial regulates volume. Valve height adjusts 9" to 14". Lever trims and bends to fit. Universal gasket.						
Kit	P1@.850	Ea	19.80-	30.90	50.70	86.20
One-piece toilet repair kit, Fluidmaster. Replaces many one-piece toilet assemblies. Fewer parts. Ideal for wet or dry inlet tubes.						
Kit	P1@.850	Ea	52.30	30.90	83.20	141.00
Tank-to-bowl bolt kit, Fluidmaster. Two 5/16" x 3" brass bolts with washers and wing nuts.						
Kit	P1@.275	Ea	4.87	10.00	14.87	25.30

Craft@Hrs	Unit	Material	Labor	Total	Sell
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Toilet Seats

Molded wood toilet seat, Bemis Manufacturing. Multi-coat enamel finish. Closed front and cover to fit a regular bowl. Color-matched bumpers and hinges. Top-Tite® hinges with non-corrosive, top-tightening bolts and wing nuts. 1" ring thickness including bumper. Includes lid.

Round, beige	P1@.250	Ea	11.60	9.10	20.70	35.20
Round, bone	P1@.250	Ea	13.60	9.10	22.70	38.60
Round, gold	P1@.250	Ea	14.30	9.10	23.40	39.80
Round, pink	P1@.250	Ea	14.30	9.10	23.40	39.80
Round, seafoam	P1@.250	Ea	14.30	9.10	23.40	39.80
Round, sky blue	P1@.250	Ea	14.30	9.10	23.40	39.80
Round, silver	P1@.250	Ea	13.60	9.10	22.70	38.60
Round, white	P1@.250	Ea	10.50	9.10	19.60	33.30
Round, white, fits Eljer Emblem	P1@.250	Ea	19.80	9.10	28.90	49.10
Round, black, chrome hinge	P1@.250	Ea	29.10	9.10	38.20	64.90
Round, bone, chrome hinge	P1@.250	Ea	27.30	9.10	36.40	61.90
Round, silver, chrome hinge	P1@.250	Ea	27.30	9.10	36.40	61.90
Round, white, chrome hinge	P1@.250	Ea	26.00	9.10	35.10	59.70

Molded wood open-front toilet seat, Bemis Manufacturing. Multi-coat enamel finish. Color-matched bumpers and hinges. Top-Tite® hinges with non-corrosive, top-tightening bolts and wing nuts. 1" ring thickness including bumper. Includes lid. 3-year warranty.

Elongated, biscuit	P1@.250	Ea	15.70	9.10	24.80	42.20
Elongated, bone	P1@.250	Ea	17.20	9.10	26.30	44.70
Elongated, white	P1@.250	Ea	16.40	9.10	25.50	43.40
Round, biscuit	P1@.250	Ea	12.90	9.10	22.00	37.40
Round, bone	P1@.250	Ea	11.90	9.10	21.00	35.70
Round, white	P1@.250	Ea	11.70	9.10	20.80	35.40

Plastic open-front toilet seat. Open-front with cover. Easy to install top-tightening hinges. White.

Elongated, no cover	P1@.250	Ea	25.20	9.10	34.30	58.30
Elongated, with cover	P1@.250	Ea	38.20	9.10	47.30	80.40
Round, no cover	P1@.250	Ea	23.60	9.10	32.70	55.60
Round, with cover	P1@.250	Ea	24.70	9.10	33.80	57.50

Molded wood shell design toilet seat. Multi-coat enamel finish. Closed front and cover to fit a regular bowl. Color-matched bumpers and hinges. Top-Tite® hinges with non-corrosive, top-tightening bolts and wing nuts. 1" ring thickness including bumper. Includes lid.

Elongated, bone	P1@.250	Ea	35.70	9.10	44.80	76.20
Round, bone	P1@.250	Ea	27.70	9.10	36.80	62.60

Sculpted wood toilet seat. Durable high-gloss finish. Non-corrosive hinges. Installs without tools.

Elongated, bone	P1@.250	Ea	36.00	9.10	45.10	76.70
Elongated, white	P1@.250	Ea	36.00	9.10	45.10	76.70
Elongated, ivy, white	P1@.250	Ea	39.20	9.10	48.30	82.10
Round, ivy, bone	P1@.250	Ea	31.30	9.10	40.40	68.70
Round, ivy, white	P1@.250	Ea	31.80	9.10	40.90	69.50
Round, rose, white	P1@.250	Ea	31.00	9.10	40.10	68.20
Round, shell, black	P1@.250	Ea	30.70	9.10	39.80	67.70
Round, wave, bone	P1@.250	Ea	31.60	9.10	40.70	69.20

	Craft@Hrs	Unit	Material	Labor	Total	Sell
Soft decorator toilet seat, Bemis Manufacturing. Cushioned for comfort. High-density padding. Durable antibacterial color-fast vinyl with molded wood core. Dial On [®] exclusive no-wobble hinges. Installs without tools.						
Round, bone	P1@.250	Ea	17.60	9.10	26.70	45.40
Round, pink	P1@.250	Ea	17.10	9.10	26.20	44.50
Round, sky blue	P1@.250	Ea	17.20	9.10	26.30	44.70
Round, white	P1@.250	Ea	19.90	9.10	29.00	49.30
Round, white, chrome hinges	P1@.250	Ea	23.00	9.10	32.10	54.60
Round, white, embroidered butterfly	P1@.250	Ea	21.50	9.10	30.60	52.00
Round, white, Roman marble	P1@.250	Ea	21.50	9.10	30.60	52.00

Natural maple toilet seat. Durable, long-lasting furniture-grade finish. Decorative chrome-plated brass hinge. Will not warp, crack or split.

Elongated	P1@.250	Ea	50.70	9.10	59.80	102.00
Elongated with diamond inlay	P1@.250	Ea	55.70	9.10	64.80	110.00
Round	P1@.250	Ea	45.60	9.10	54.70	93.00
Round with diamond inlay	P1@.250	Ea	54.20	9.10	63.30	108.00

Pedestal Lavatories

Pedestal lavatory. Labor includes setting and connecting only. Add the cost of faucet and accessories.

Gray	P1@.800	Ea	180.00	29.10	209.10	355.00
Sky rose	P1@.800	Ea	180.00	29.10	209.10	355.00
White	P1@.800	Ea	180.00	29.10	209.10	355.00

Pedestal lavatory. Elegant turn-of-the-century styling. 24-1/2" x 19" top. Labor includes setting and connecting only. Add the cost of faucet and accessories.

4" centers, linen	P1@.800	Ea	241.00	29.10	270.10	459.00
4" centers, white	P1@.800	Ea	260.00	29.10	289.10	491.00
8" centers, linen	P1@.800	Ea	260.00	29.10	289.10	491.00
8" centers, white	P1@.800	Ea	249.00	29.10	278.10	473.00

Repertoire pedestal lavatory. Labor includes setting and connecting only. Add the cost of faucet and accessories.

4" centers, white	P1@.800	Ea	334.00	29.10	363.10	617.00
8" centers, linen	P1@.800	Ea	414.00	29.10	443.10	753.00

Seychelle pedestal lavatory. Labor includes setting and connecting only. Add the cost of faucet and accessories.

4" centers, white	P1@.800	Ea	315.00	29.10	344.10	585.00
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Memoirs™ pedestal lavatory, Kohler. Traditional styling. Integrates with the Memoirs suite. Labor includes setting and connecting only. Add the cost of faucet and accessories.

4" centers, white	P1@.800	Ea	232.00	29.10	261.10	444.00
8" centers, white	P1@.800	Ea	218.00	29.10	247.10	420.00

Memoirs™ pedestal lavatory, Kohler. Integral backsplash. 27" x 19-3/8" x 34". Vitreous china. Drilled centers. Traditional styling integrates with the Memoirs Suite. Labor includes setting and connecting only. Add the cost of faucet and accessories.

4" centers, white, stately design	P1@.800	Ea	372.00	29.10	401.10	682.00
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	Craft@Hrs	Unit	Material	Labor	Total	Sell
Memoirs™ pedestal lavatory base, Kohler. Traditional styling integrates with the Memoirs™ suite.						
White	P1@.350	Ea	183.00	12.70	195.70	333.00
Classic pedestal lavatory base.						
Bone	P1@.350	Ea	76.00	12.70	88.70	151.00
Coral	P1@.350	Ea	76.00	12.70	88.70	151.00
Silver	P1@.350	Ea	76.00	12.70	88.70	151.00
White	P1@.350	Ea	76.00	12.70	88.70	151.00
Lavatory leg set, Melard.						
Chrome	P1@.350	Ea	25.00	12.70	37.70	64.10
Pedestal lavatory metal leg set.						
Chrome	P1@.350	Ea	367.00	12.70	379.70	645.00
Satin	P1@.350	Ea	406.00	12.70	418.70	712.00
Lavatory Sinks						
Remove pedestal, counter- or wall-mounted lavatory. Turn off water. Disconnect hot and cold supply lines from the wall valves. Unscrew trap plug to the drain. Disconnect trap unions. Remove trap. Remove basin retaining screws or wall hangers. Remove wash basin.						
Per lavatory basin	P1@.630	Ea	—	22.90	22.90	38.90
Round vitreous china lavatory sink, Eljer Plumbingware. Self-rimming drop-in counter mount. 19" diameter. Front overflow. Labor includes setting only. Add the cost of connection, faucet and accessories.						
4" centers, natural	P1@.850	Ea	41.00	30.90	71.90	122.00
4" centers, white	P1@.850	Ea	41.00	30.90	71.90	122.00
Drop-in lavatory sink. Self-rimming installation. 19-1/4" x 16-1/4" overall. Cast iron. Labor includes setting only. Add the cost of connection, faucet and accessories.						
4" centers, almond	P1@.850	Ea	130.00	30.90	160.90	274.00
4" centers, white	P1@.850	Ea	130.00	30.90	160.90	274.00
8" centers, white	P1@.850	Ea	130.00	30.90	160.90	274.00
Drop-in lavatory sink. Vitreous china. Self-rimming. Round, 19" overall dimensions. Labor includes setting only. Add the cost of connection, faucet and accessories.						
4" centers, bone	P1@.850	Ea	97.00	30.90	127.90	217.00
4" centers, white	P1@.850	Ea	97.00	30.90	127.90	217.00
Lavatory sink, American Standard. Tapered edges for style. Vitreous china. 19" diameter. Labor includes setting only. Add the cost of connection, faucet and accessories.						
4" centers, linen	P1@.850	Ea	98.90	30.90	129.80	221.00
Drop-in lavatory sink, American Standard. Vitreous china. Tapered edges for style. Self-rimming. Front overflow. Supplied with template and color-matched sealant. 20-3/8" x 17". Labor includes setting only. Add the cost of connection, faucet and accessories.						
4" centers, linen	P1@.850	Ea	92.70	30.90	123.60	210.00
Drop-in lavatory sink. Vitreous china. Self-rimming. Bowl has distinctive sculptured pattern. Front overflow. Labor includes setting only. Add the cost of connection, faucet and accessories.						
4" centers, white	P1@.850	Ea	55.70	30.90	86.60	147.00

	Craft@Hrs	Unit	Material	Labor	Total	Sell
Cadet drop-in lavatory sink, American Standard. European-style interior bowl. Self-rimming oval countertop lavatory. Front overflow. Supplied with template and color-matched sealant. Vitreous china, 20" x 17" oval. Labor includes setting only. Add the cost of connection, faucet and accessories.						
4" centers, bone	P1@.850	Ea	106.00	30.90	136.90	233.00
4" centers, white	P1@.850	Ea	106.00	30.90	136.90	233.00
8" centers, white	P1@.850	Ea	117.00	30.90	147.90	251.00
Standard Collection drop-in lavatory sink, American Standard. Oval self-rimming design includes color-matched caulk for seamless, easy installation. Generous interior bowl with "invisible" front overflow. Nominal dimensions 22-7/8" x 18-1/2". Bowl size 15-3/4" wide by 11-1/4" front to back, 6-1/2" deep. Labor includes setting only. Add the cost of connection, faucet and accessories.						
8" centers, white	P1@.850	Ea	102.00	30.90	132.90	226.00
Williamsburg drop-in lavatory sink, American Standard. European-style interior bowl. Self-rimming oval countertop lavatory. Front overflow. Supplied with template and color-matched sealant. 24-1/2" x 18". Vitreous china. Labor includes setting only. Add the cost of connection, faucet and accessories.						
4" centers, linen	P1@.850	Ea	125.00	30.90	155.90	265.00
4" centers, white	P1@.850	Ea	114.00	30.90	144.90	246.00
8" centers, white	P1@.850	Ea	114.00	30.90	144.90	246.00
Memoirs™ drop-in lavatory sink, Kohler. Vitreous china. Glossy finish. Labor includes setting only. Add the cost of connection, faucet and accessories.						
4" centers, white	P1@.850	Ea	186.00	30.90	216.90	369.00
8" centers, white	P1@.850	Ea	186.00	30.90	216.90	369.00
Oval drop-in lavatory sink. Vitreous china. 20" x 17". Self-rimming. Front overflow. Labor includes setting only. Add the cost of connection, faucet and accessories.						
4" centers, natural	P1@.850	Ea	46.20	30.90	77.10	131.00
4" centers, white	P1@.850	Ea	37.80	30.90	68.70	117.00
Ovalyn II undercounter-mount lavatory sink, American Standard. Vitreous china. Unglazed rim. Rear overflow. Supplied with mounting kit. Labor includes setting only. Add the cost of connection, faucet and accessories.						
Bone, 17" x 14"	P1@.850	Ea	72.40	30.90	103.30	176.00
Linen, 17" x 14"	P1@.850	Ea	74.60	30.90	105.50	179.00
White, 17" x 14"	P1@.850	Ea	62.11	30.90	93.01	158.00
Laurel round enameled steel lavatory sink. Self-rimming counter mount. 19" diameter. Labor includes setting only. Add the cost of connection, faucet and accessories.						
4" centers, natural finish	P1@.850	Ea	31.90	30.90	62.80	107.00
Radiant lavatory sink, Kohler. Vitreous china. Glossy finish. Self-rimming, counter mount. Labor includes setting only. Add the cost of connection, faucet and accessories.						
4" centers, white	P1@.850	Ea	123.00	30.90	153.90	262.00
Seychelle countertop lavatory sink, American Standard. Labor includes setting only. Add the cost of connection, faucet and accessories.						
4" centers, bone	P1@.800	Ea	117.00	29.10	146.10	248.00
Summit acrylic lavatory sink, International Thermocast. 20-3/4" x 18" x 6-3/4" deep. 2-gallon bowl. High-gloss finish. Resists stain, rust, oxidation, chipping, and scratches. Labor includes setting only. Add the cost of connection, faucet and accessories.						
4" centers, bone	P1@.850	Ea	72.60	30.90	103.50	176.00
4" centers, white	P1@.850	Ea	52.80	30.90	83.70	142.00

	Craft@Hrs	Unit	Material	Labor	Total	Sell
Magnolia acrylic lavatory sink, International Thermocast. 22" x 19" x 6-3/4" deep. 3-gallon bowl. High-gloss finish. Resists stain, rust, oxidation, chipping, and scratches. Self-rimming counter mount. Labor includes setting only. Add the cost of connection, faucet and accessories.						
4" centers, white	P1@.850	Ea	114.00	30.90	144.90	246.00
8" centers, white	P1@.850	Ea	119.00	30.90	149.90	255.00
Reminiscence lavatory sink, American Standard. Vitreous china. Vintage-style design with raised motif backsplash. Self-rimming. Front overflow. Supplied with template and color-matched sealant. Labor includes setting only. Add the cost of connection, faucet and accessories.						
8" centers, white	P1@.850	Ea	270.00	30.90	300.90	512.00
Morning above-counter lavatory sink, American Standard. For above-counter installation. Integral faucet deck for single-hole faucet. Center drain outlet. Without overflow. Supplied with template and color-matched sealant. Labor includes setting only. Add the cost of connection, faucet and accessories.						
Single-hole faucet, white	P1@.850	Ea	263.00	30.90	293.90	500.00
Memoirs™ lavatory sink, Kohler. Vitreous china. Complies with Americans with Disabilities Act when installed per requirements of Accessibility Guidelines, Section 4.19 Lavatories & Mirrors. Traditional styling coordinates with the Memoirs Suite. Self-rimming, counter mount. Labor includes setting only. Add the cost of connection, faucet and accessories.						
8" centers, white	P1@.850	Ea	489.00	30.90	519.90	884.00
Miami wall-hung lavatory sink. 19-1/2" x 17-1/4". Labor includes setting only. No area prep work included. Add the cost of connection, faucet and accessories.						
4" centers, white	P1@.850	Ea	41.90	30.90	72.80	124.00
Hydra wall-hung lavatory sink, American Standard. Labor includes setting only. No area prep work included. Add the cost of connection, faucet and accessories.						
4" centers, white	P1@.850	Ea	55.50	30.90	86.40	147.00
Wall-hung lavatory sink. Labor includes setting only. No area prep work included. Add the cost of connection, faucet and accessories.						
4" centers, white	P1@.850	Ea	33.60	30.90	64.50	110.00
Lucerne wall-hung lavatory sink, American Standard. Labor includes setting only. No area prep work included. Add the cost of connection, faucet and accessories.						
4" centers, white	P1@.850	Ea	98.90	30.90	129.80	221.00
Minette corner wall-hung lavatory sink, American Standard. Vitreous china. Front overflow. Furnished with two wall hangers. Labor includes setting only. No area prep work included. Add the cost of connection, faucet and accessories.						
4" centers, white	P1@.850	Ea	218.00	30.90	248.90	423.00
Murro wall-hung lavatory sink, American Standard. Vitreous china. Rear overflow. Recessed self-draining deck. For concealed arm or wall. Universal design. Labor includes setting only. No area prep work included. Add the cost of connection, faucet and accessories.						
4" centers, white	P1@.850	Ea	198.00	30.90	228.90	389.00
Lavatory hanger bracket. Supports wall hung china lavatory basin.						
Lavatory hanger bracket	P1@.250	Pr	4.97	9.10	14.07	23.90

	Craft@Hrs	Unit	Material	Labor	Total	Sell
Single-Handle Bath Faucets, 4" Center Set						
Single-handle lavatory faucet, Glacier Bay. Deck-mount. 4" center set. Chrome finish. Lever handle. Washerless cartridge. Includes mechanical pop-up assembly. Labor includes set in place and connection only. Add the cost of plumbing rough-in as required.						
Chrome with brass accents	P1@.900	Ea	94.30	32.80	127.10	216.00
Polished chrome finish	P1@.900	Ea	37.40	32.80	70.20	119.00
Zinc single-handle lavatory faucet. Deck-mount. 4" center set. Lever handle. Washerless cartridge. With mechanical pop-up assembly. Labor includes set in place and connection only. Add the cost of plumbing rough-in as required.						
Chrome finish, zinc	P1@.900	Ea	66.00	32.80	98.80	168.00
Acrylic knob single-control lavatory faucet. Includes pop-up plug and waste assembly. Washerless cartridge. 4" center set. Water- and energy-saving aerator. Labor includes set in place and connection only. Add the cost of plumbing rough-in as required.						
Chrome	P1@.900	Ea	74.50	32.80	107.30	182.00
Reliant single-handle lavatory faucet, American Standard. Deck-mount. Lever handle. All-metal construction. Ceramic disc valve cartridge with adjustable hot temperature limit safety stop. Includes mechanical pop-up assembly. 2.5-gallons-per-minute flow-restricted aerator. 1/2" male threaded copper connector and nuts. 4" center set. Labor includes set in place and connection only. Add the cost of plumbing rough-in as required.						
Polished chrome	P1@.900	Ea	68.20	32.80	101.00	172.00
Classic single-handle lavatory faucet. Deck-mount. 4" center set. Lever handle. Washerless cartridge. Lifetime warranty. Includes mechanical pop-up assembly. Labor includes set in place and connection only. Add the cost of plumbing rough-in as required.						
Chrome finish	P1@.900	Ea	91.00	32.80	123.80	210.00
Single-handle lavatory faucet. Lever handle. 4" center set. Metal poppet. ADA compliant. Labor includes set in place and connection only. Add the cost of plumbing rough-in as required.						
Chrome	P1@.900	Ea	78.70	32.80	111.50	190.00
Villela single-handle lavatory faucet. Deck-mount. 4" center set. Lever handle. Includes mechanical pop-up assembly. Lifetime limited warranties against leaks, drips and finish defects. Labor includes set in place and connection only. Add the cost of plumbing rough-in as required.						
Chrome finish	P1@.900	Ea	86.10	32.80	118.90	202.00
Chateau single-control lavatory faucet, Moen. With waste assembly. ADA approved. Washerless cartridge. 4" center set. Includes pop-up assembly. Chrome finish. Labor includes set in place and connection only. Add the cost of plumbing rough-in as required.						
Acrylic knob control	P1@.900	Ea	96.30	32.80	129.10	219.00
Handle control	P1@.900	Ea	60.90	32.80	93.70	159.00
Single-handle lavatory faucet, Delta. 4" center set. Deck-mount. 3-hole installation. Lifetime warranty. ADA compliant. Includes mechanical pop-up assembly. Labor includes set in place and connection only. Add the cost of plumbing rough-in as required.						
Chrome finish	P1@.900	Ea	103.00	32.80	135.80	231.00
Chrome finish, brass accents	P1@.900	Ea	128.00	32.80	160.80	273.00
Polished brass, brass accents	P1@.900	Ea	167.00	32.80	199.80	340.00
Parisa single-handle lavatory faucet, Price Pfister. Solid brass. 4" center set. Single-control ceramic disc cartridge with temperature memory. High arc spout. Use with or without the deckplate for single-hole mounting. ADA approved. Add the cost of plumbing rough-in as required.						
Brushed nickel finish	P1@.900	Ea	93.50	32.80	126.30	215.00
Chrome finish	P1@.900	Ea	60.90	32.80	93.70	159.00

	Purchase	Rental Day	Rental Week
Other Dryout and Mold Equipment.			
Temporary power distribution (spider) box, 100 amps	902.00	66.60	342.00
Environmental control unit, cool/heat	711.00	41.60	162.00
Submersible trash pump, 1/2 HP, 1-1/2" to 2" outlet	318.00	46.80	188.00
Wheelbarrow, 2-wheel, 5 cubic foot capacity	68.70	10.40	54.10
Ultrasonic cleaner, 10 gallon, 1.3 CF	1,920.00	104.00	415.00
HEPA filter vacuum, 100 CFM	477.00	48.90	219.00
Power generators. Drying equipment draws approximately 1.2 KW for each 100 SF of water extraction map.			
5 KW, gasoline	817.00	71.80	281.00
15 KW, diesel	2,550.00	138.00	461.00
60 KW, diesel, towable	37,400.00	294.00	892.00
Water Claw extractor			
Small, 8" x 14"	318.00	—	—
Medium, 10" x 17" (650 SF per hour)	393.00	—	—
Large, 12" x 21" (1,000 SF per hour)	558.00	—	—
Van with truck-mounted blower-vacuum package, add \$1 per mile for travel			
23 HP, 288 CFM, 150' hose	38,200.00	48.90	274.00
26 HP, 330 CFM, 250' hose	40,300.00	55.20	311.00
29 HP, 495 CFM, 300' hose	47,700.00	61.40	355.00
Pressure washer			
2,000 PSI, electric	212.00	25.00	61.40
3,000 PSI, gas, hot water	2,820.00	159.00	806.00

Index

- A**
- Abbreviations..... 17
 - ABS pipe 408
 - Absorber, shock
water surge..... 407
 - ABTCO 251
 - AC cable..... 419
 - AC quiet rocker switch
Decora 434
 - AC quiet toggle switch..... 434
 - Access door..... 248
 - Access doors
foundation..... 88
 - Accessories, ridge vents ... 90
 - Acid cleaning
masonry..... 115
 - wash 50, 115
 - Acid wash, manhours 466
 - Acknowledgments 2
 - Acoustic ceiling texture
labor 469
 - Acoustic roll-on..... 493
 - Acoustic tile
demolition 34, 315
 - Acoustical ceiling
demolition 254
 - panel..... 255-257
 - patch..... 245
 - suspended..... 256
 - texture touch-up kit..... 244
 - tile adhesive 254
 - Acrylic
latex paint 492
 - mirrored sheet 171
 - mortar admix 307
 - paint..... 40
 - roof coating..... 137
 - sheet..... 171
 - skylights 173
 - stain 487
 - suspended lighting
panel..... 258
 - tape 291
 - wood filler 281
 - Actuating devices,
garage doors 225
 - Adapter, box 421
 - Additive
feather edge 286
 - resilient flooring 285
 - Additives
coloring..... 47
 - concrete..... 47
 - perlite paint texturing 493
 - Adhesive
acoustical ceiling tile 254
 - bond 133
 - cold process 133
 - cove base 290
 - field..... 134
 - flooring..... 282
 - marble & granite..... 306
 - modified bitumen 133
 - nozzle 291
 - primer 282
 - resilient tile 290
 - sheet flooring..... 290
 - spray..... 249
 - tile..... 293-294
 - vinyl tile..... 290
 - white silicone 171
 - wood flooring 282
 - Adhesive caulk,
ceramic tile 307
 - Adhesive remover 282
 - flooring..... 285
 - Admix, acrylic mortar..... 307
 - Admixtures
coloring..... 47
 - concrete..... 47
 - Aggregate
base..... 40, 46
 - roofing 132
 - Aggregate sealer..... 495
 - Air compressor, rental 28
 - Air conditioner 397
 - Air gap 334
 - cover..... 334
 - Air hose, rental 28
 - Air mover 539
 - Air scrubber 539
 - Alkyd gloss enamel 493
 - All-season storm
doors 204-205
 - All-season storm
doors, triple-track..... 204
 - Alpine ceiling panel 257
 - Aluminum
door bottom 196
 - drip edge 141
 - fascia 114
 - foil 88
 - patio cover..... 459
 - patio doors..... 215
 - roll flashing 141
 - roof coating..... 137
 - screen rolls..... 168
 - siding 113
 - siding removal..... 106
 - siding repair..... 105
 - soffit..... 114
 - storm windows..... 165
 - thermal door sill..... 195
 - windows, fixed 162
 - Aluminum conduit
threaded 431
 - Aluminum siding
painting..... 482
 - Aluminum wiring 411
 - Amber shellac..... 490
 - American Flexible
Conduit..... 419
 - American Marazzi..... 296-298
 - American Molding..... 262
 - American Shower &
Bath 337, 357-358
 - American Standard..... 330,
333-334, 338, 353-354,
360-363, 366-372, 385-386
 - Anchor clip..... 458
 - Anchor, foundation 512
 - Anchor, hold-down 512
 - Andersen 214, 216
 - Angle flashing..... 142
 - Angle bay windows..... 164
 - Angle valve 364
 - Ann Arbor birch paneling ... 252
 - Anti-fracture
membrane kit..... 307
 - membrane water-
proofing 305
 - tile membrane..... 305
 - Antimicrobial..... 536
 - Anti-siphon toilet fill valve... 364
 - Appliance receptacle..... 435
 - Appliance removal..... 530
 - Appliances
connect..... 417
 - disconnect 417
 - kitchen, removal 315
 - new connection 417
 - remove & replace cable... 417
 - Apron
roof 143
 - whirlpool tub 354
 - Aqua Mix 307
 - Aqua-Tough tile
underlayment..... 295
 - Arch, bullnose drywall 247
 - Architectural laminate
shingles 130
 - Area modification factors... 18
 - Area modification factors,
Canadian 26
 - Area walls, sheet metal ... 389
 - Ariston 407
 - Arlington Industries..... 422
 - Armstrong..... 255-257,
285-291, 293
 - Asceri Hi-Arc lavatory
faucet..... 373
 - Ashland sink 329
 - Asphalt
base..... 51
 - fiberglass shingles..... 130
 - paving 51
 - paving, demolition 32, 51
 - recycling 29
 - Asphalt roofing 132
 - built-up..... 132
 - emulsion 133
 - fabric..... 131
 - saturated cotton roof
patch..... 136
 - SEBS..... 135
 - Asphalt shingles
fiberglass 131
 - repair 130
 - Astragal, T-..... 194
 - Attachments, skid steer
equipment..... 39
 - Attic conversions 57
 - Attic fans
belt drive..... 91
 - Attic ventilation 83
 - Attic vents 91
 - Avenite counters..... 322
 - Awning, remove &
replace..... 106
 - Awning windows
aluminum 162
 - operators 166
 - vinyl-clad wood..... 160
 - B**
 - Bacharach kitchen
faucet..... 331
 - Backer, tile 245
 - Backer tape, tile..... 249
 - Backerboard
ceramic tile 295
 - RhinoBoard 295
 - tile 295
 - Wonderboard..... 295
 - Backfill, concrete
excavation 40
 - Backhoe, rental 28
 - Backing, carpentry..... 73
 - Backplate, knob..... 326
 - Backsplash 322
 - Baffle, sound 340
 - Baffle light kit..... 440
 - Bahama pedestal
lavatory, bowl 366
 - Balance, sash..... 166
 - Ballista range hood..... 343
 - Baluster 455
 - deck rail..... 456
 - Balustrade
deck..... 456
 - Bamboo
flooring trim..... 280
 - hardwood flooring..... 280
 - plank flooring 280
 - Banner 329
 - Bar doors..... 209
 - Bar faucet 338
 - single handle 338
 - two-handle 338-339
 - Bar kit, QO load
center ground 440
 - Bar light fixture 441
 - Bar sink
composite 338
 - Manchester composite... 338
 - polycast 338
 - single bowl..... 337
 - stainless steel..... 338
 - Bar, towel 305,
385-386, 388
 - Barn & fence paint..... 496
 - Barrier, foil 88
 - Base
adhesive 290
 - asphalt..... 51
 - ceramic tile 295
 - lavatory 367
 - rubber wall..... 292
 - self-stick wall 293
 - shower, one-piece 358
 - slab 49
 - vinyl wall 292-293
 - Base cabinets..... 318
 - end panel..... 317
 - finished 320-321
 - oak..... 320
 - unfinished birch 317
 - unfinished oak 318
 - Base cap molding,
primed finger joint..... 260
 - Base corner molding 259
 - MDF primed..... 261
 - Base molding..... 263
 - colonial 263
 - combination 264
 - MDF colonial 261
 - paperwrap colonial 263
 - paperwrap ranch base ... 264
 - polystyrene colonial..... 264
 - primed finger joint..... 260
 - shoe..... 264
 - Victorian hardwood..... 259
 - Base plate cover, toilet.... 364
 - Base sheet, fiberglass.... 133
 - Base shoe molding,
primed finger joint..... 260
 - Base, wall
thermoplastic 292

Baseboard		Farmington	367	Bead, corner, spray		Board siding	
demolition	34	Laurel	368	adhesive	249	cedar	108
painting labor	468	Lucerne	369	Beaded baseboard		pine	108
Baseboard heater,		Memoirs	369	molding	259	repair	105
electric	404	Miami	369	Beaded Cape Cod plank	252	Board, cement	245
Baseboard molding		Minette	369	Beaded paneling	251	Bobcats	39
beaded	259	Murro	369	Beadex paper faced		Boiler, hydronic heating	
MDF	261	oval	368	metal	247	system	398
Basement doors	226	Ovalyn	368	Beams		Boiler breeching	401-403
Basement HVAC		Radiant	368	ceiling	68	Bolt	
restoration	92	Renaissance	367	collar	75	bolt kit	324
Basement post removal	63	round	368	grade	48	foundation	512
Basement storm		Seychelle	367-368	needle	62	toilet tank	364
windows	165	steel	368	Bed molding	263	Bolt-on A type	
Basin strainer, remove &		under counter mount	368	Bedding mortar,		universal hub	438
replace	352	wall hung	369	CustomFloat	306	Bolts, double-hung	
Basket strainer		wall hung, corner	369	Behr	487, 490, 492-495	window	166
garbage disposal	335	Bathroom vanity top	376	Bell wire	433	Bond adhesive	
junior	338	Bathrooms		Bemis Mfg	365-366	permanent	133
kitchen sink	335-336	additions	345	Berm	530	Bonding mortar	305-306
Basket strainer washer		conversions	346	Bestview Ltd	298	flexible	306
kitchen sink	336	exterior additions	348	Bevel siding		Bonding primer	
Basswood molding	259	floor plans	349	cedar	108	concrete	493
Bath accessories	385-388	in basements	347	pine	108	Bookcase, painting labor	468
black finish	388	in garages	348	western red cedar	108	Boone International	293
brass	386, 388	naming conventions	345	Beveled mirror bath bar	441	Bosch	407
brass & chrome	386, 388	space minimums	350	Bidet, hot & cold	362	Boston polish	491
ceramic & chrome	387	Bathtub	353	Bidet faucet set	362	Bottle jacks	62
ceramic tile	294	enameled steel	352	Bi-fold doors	219-221	Bow window roof	164-165
chrome	386-388	Princeton	353	hardware	221	Bowl, lavatory	366
chrome & brass	386	recessed	353	Metal	220	Bowl sink, utility	337
chrome & porcelain	386	removal	352	mirrored	221	Bowling alley wax	491
economy	386	soaker	353	Bilco	226	Box	428
nickel	388	surround	355	Bin, trash	29	2 gang weatherproof	
Bath accessory set,		surround kit	355	Biocidal coating	92	electrical	427
porcelain	305	three-piece tile kit	355	Birch doors	192,	drawn 2-device switch	425
Bath cabinet		tile kit	355	206-207, 210		drawn handy	424
framed	382	tile wall kit	355	Birch paneling	252	drawn octagon	425
stainless steel	382	Villager	353	Birdstop	140	multi gang switch	425
storage	383	wall surround kit	355	Bitumen adhesive,		non-metallic old work	
swing door	383	whirlpool	353-354	modified	133	switch	422
top lighted	383	Bathtub & shower		Bitumen cold process		non-metallic round	
Bath ceiling blower	378	units	356-357	adhesive, modified	133	conduit	428
Bath fan	378-380	Bathtub door	356	Bituminous roofing	132	rectangular weather-	
ceiling	381	bypass	355	Blank cover		proof	427
ceiling & wall	378	sliding	356	2 gang	428	Super Blue non-	
ceiling or wall	379	Bathtub filler	354	handy box	424	metallic three gang	422
chain-operated	380	Bathtub framing	395	weatherproof	428	Super Blue non-	
Designer Series	381	Bathtub wall	354	Blasting, dry ice	537	metallic two gang	422
exhaust	380	one-piece with shelf	354	Bleach kit, wood	487	welded square	425
exhaust with heater	381	Bathtub, molded	352	Blinds, painting	481-482	Box adapter	421
exhaust with light	380	Bathtub, wall kit, three-		Block Furniture	529	Box cover	426
Heat-A-Lamp	381	piece	354	Block masonry painting	476	blank handy	424
QuietTest	380	Batt insulation	84	Blocking		finished	425
solitaire	381	Batten tileboard	251	corner	262	square surface	425
timer switch	382	Bay vent channel, rafter	88	rosette	259	Box for ceiling fan	425
Ultra Silent	379	Bay window roof	164	Blocking		pancake	425
vertical discharge	379	Bay windows	158, 164	fire	66	Box room contents	529
with heater, infrared	381	Bead		fireblocks	68	Boxes, cardboard	538
with light	380-381	bullnose corner	247	Blow-in cellulose		Brace plate installation	92
Bath heater		corner	248	insulation	85	Braces, wall	513
exhaust fan	381	drywall	248	Blue Board insulation	85	Bracing	
Heat-A-Lamp	381	drywall corner	247	Blueboard	245	carpentry	67
infrared bulb	381	glazing	170	Board		cripple wall	512
Bath light bar	441	inside corner	247	blue	245	temporary	67
Bath Unlimited	387-388	L-trim	248	forming	44	Bracket	
Bath vent kit	382	metal J-trim	248	sheathing	66	foundation	512
Bathrobe hook	385-386, 388	outside corner	247	Board insulation	80, 85	non-metallic low	
Bathroom accessories		plastic	248	fire resistance	80	voltage mounting	422
ceramic tile soap dish	304	tape on	247	polystyrene	80	Bracket, hanger, lavatory	369
towel bar, ceramic	305	Bead molding	263	polyurethane	80	Brass storm doors	205
Bathroom sink	367-369	primed finger joint	260			Brass Craft	334, 362, 364
cadet	368						
drop-in	367-368						

- Breaker
arc fault, HomeLine 437
GFCI 437
ground fault interrupter
plug-on circuit 440
HomeLine 437
main circuit 438
QO miniature circuit 439
tandem circuit 439
Breaker box, ground
bar kit 440
Breaker, paving, rental 28
Brick
cleaning 115
demolition 30
painting 477-478
pointing 115
repainting 115
Brick masonry
painting labor 476
Brick molding 195
Brick molding set
primed finger joint 260
Brick paver tile 300
Bridging, carpentry 65
Broan Manufacturing 344,
378-382
Brookfield cast iron
kitchen sink 330
Brookstone birch
paneling 252
Broom finish, concrete 49
Brown coat plaster 114
Bruce 278, 282
Brush
painting labor 468
wire 50
Brush chipper, rental 28
Brushes
crow's foot 250
drywall texture 250
Bubble wrap 538
Buggies, rental 39
Building dryout,
interior work
appliances 516
basement 517
ceiling 516
flooring 516
furniture 516
heavy items 517
lamps 516
mud and debris 517
outlets 516
securing valuables 516
vents and registers 517
wall switches 516
walls 516
Building paper 87, 134
Building wire
type THHN 432
Built-up girders, carpentry 62
Built-up roofing 132, 134
Cold-Ap cement 133
demolition 33
insulation 131-132
patch 131
tear-off 129
torch and mop system 134
Bulb heater & fan,
Heat-A-Lamp 381
Bulkhead light fixture
outdoor 443
Bull float, rental 39
Bullnose
ceramic tile 301
corner bead 247
corner tile 302
drywall arch 247
outside corner 247
plastic corner 247
Bulls Eye shellac 490
Bumper, garage door 224
Buried cable 419
Burn off paint labor 466
Bush removal 29
Bushing
insulated metallic
grounding 430
non-metallic reducer 420
rigid or IMC reducing 430
thermoplastic
insulating 430
Butcher's 491
BX cable, flexible
armored 419
Bypass door 218
accessories 219
bathtub 355
beveled mirror 218
closet 218
hardware 222
mirrored 218-219
shower 356
C
Cabinet demolition, wet 534
Cabinet door 316
Cabinet drawer front 316
Cabinet hinge
overlay 327
self-closing 328
semi-concealed 328
Cabinet knobs 324-326
Cabinet trim 320
Cabinets
base 317-318, 320-321
bath 382-383
bathroom vanity 374-375
corner 383
door trim 316
end panel 316-318
filler strip 318-319
finished 320
frameless 383
kitchen, unfinished
birch 317
medicine 382-384
oak 320-321
painting labor 469
pantry 319-321
removal 315
trim 320
trim, finished 322
utility 317-321
vanity 378
wall 317-321
Cable
AC 419
appliance connection 417
appliance re-connect 417
appliance, remove &
replace 417
BX 419
coaxial 433
data communication 433
fish through stud wall 417
flexible armored BX 419
thermostat 433
Type NM-B Romex
sheathed 417-418
Type UF-B sheathed 419
underground 419
Cable coupling, EMT to
non-metallic sheathed 424
Cable snake flat wire
fish tape 417
Cadet Series bar faucet 338
Cafe doors 209
Calcium chloride 47
Cambay vinyl sheet
flooring 287
Cambria countertop 323
Can, ceiling light 440
Canopy, remove &
replace 106
Cant strips 137
roofing 86
Cap 146
ceramic surface 302
chimney 146
PVC service entrance 422
service entrance 432
Cap molding, colonial 264
Cap sheet, roofing 133
Cap, post 456-457
Cape Cod plank 252
Carbon monoxide alarm,
battery powered 436
Carborundum rub 50
Cardboard boxes 538
Carflex liquid-tight
flexible conduit 427
Carlson 420-422, 427-428
Carol Cable 433
Carpentry
backing and nailers 73
beams and girders 62
bridging or blocking 65
ceiling beams 68
ceiling joists 73
door openings 69
dormer studs 76
fascia board 76
fireblocks 68
floor joists 64-65
floor repairs 62
furring 72
plates 67
posts 63
rafters 75
roof sheathing 77
roof trusses 76
room additions 64
sheathing 70
sill plates 64
studs 66
subflooring 66
wall assemblies 70
wall framing 66
window openings 69
Carpet 308
cleaning 532
demolition 35
removal 278
removal 531
roller, extendable 291
transition strip 292
water extraction 531
Cartridge, disposal 340
Casement windows 164
lock handle 166
operator handle 166
vinyl-clad wood 160
Casing 263
aluminum siding 114
colonial 260
colonial door 195
door 191, 206
economy 265
paperwrap colonial 264
paperwrap ranch 265
polystyrene 266
polystyrene colonial 264
polystyrene fluted 265
polystyrene ranch 265
prefinished colonial 264
prefinished fluted 265
ranch 260, 265
Casing, MDF 261
Caspian sheet vinyl
flooring 286
Cast iron
pipe, remove &
replace 408
radiator, remove &
replace 398
water closet flange 364
Cast iron kitchen
sink 329-330
Cast molding 262
chair rail 262
Cast-in-place concrete 47
Cat doors 216
Catalina Lighting 443
Caulk
ceramic tile 307
ceramic tile adhesive 307
removal 157
roof 136
window exterior 157
Caulking, manhours 466
Cedar
panels, sidewall
shingle 113
roofing 137
shingles 138
siding 108-109
Cedar louvered vents 90
Cedarmill 112
Ceiling
beams 68
demolition 242
demolition, wet 533
joists 73
painting 470
painting manhours 469-470
repair 244
staining manhours 470
texture manhours 469
tile adhesive 254
touch-up kit 244
Ceiling and wall pane
FRP 253
Ceiling fan
bath 378
bath heater & fan 381
gazebo 444
QuietTest 380
San Marino 444

Ceiling fan box.....	425	Cement, roofing		Chimneys.....	399-403	Clip, anchor	458
non-metallic	422	cold process	133	A vent	402-403	Clips & screws.....	329
pancake	425	flashing	135	all fuels	402-403	Clips, drywall repair.....	249
Ceiling fixture.....	440	Kool Patch	135	aluminum	399-400	Closers, door	217
drum	441	lap roof	133	B vent	401	Closet, painting labor.....	470
fluorescent	441	rubber wet patch	135	base tee.....	400-402	Closet doors	210
flush mount.....	441	Wet Stick	135	C vent.....	399-400	bi-fold.....	219-220
glass globe	442	Center, HomeLine		cap	146	bypass.....	218
incandescent flush		indoor main lug load.....	437	double wall	401-402	mirrored bypass.....	218-219
mount	442	Central air conditioning....	397	double wall		Closet pole molding.....	263
mushroom flush		Central air filtration		insulated.....	402-403	Closure strips, horizontal... 141	
mount	442	retrofit, HEPA	398	elbow	400-403	CMU, painting.....	477
remove & replace	441	Central humidifier	397	flue.....	399-403	CO/ALR duplex	
Sunburst flush mount ...	442	Ceramic		flue rain cap.....	399	receptacle.....	435
swirl dome light.....	442	floor & wall.....	297	gas or propane	399-402	Coal furnace.....	404
Ceiling insulation		Ceramic tile		L vent.....	401-402	Coated glass fabric.....	136
batt and roll blanket.....	79	accessories	304	liner.....	399	yellow resin.....	136
Kraft-faced	79	accessory set	305	liner (flue) aluminum....	399	Coating	
loose-fill	79	adhesive	293	liner rain cap.....	399	elastomeric roof.....	137
R-value	79	adhesive caulk.....	307	masonry, repair	104	fibered roof	137
Ceiling latex paint.....	492	backer.....	295	rain cap.....	400-403	floor, epoxy.....	495
Ceiling lighting panel		backerboard	295	repairing earthquake		foundation and roof	129
acrylic	258	bullnose	301	damage	510	roof	137
styrene.....	258	bullnose corner.....	302	roof flashing.....	400-403	roof and foundation	129
Ceiling panel.....	256	caulk	307	single wall.....	399-400	weather-resistant.....	488
acoustical	256	demolition	35, 315	stack	401-402	wood.....	488
classic fine-textured.....	256	floor.....	295-298	storm collar.....	400-403	Coating kit	
fiberglass	257	floor warming system ...	305	supports & brackets	403	seam.....	291
Firecode Fifth Avenue ...	257	glazed	303	termination		corrosion.....	92
fissured	257	installation	293	assembly	400-403	Coatings	
fissured fire guard	256	mosaic accent	304	Chlorinated rubber paint... 496		concrete.....	495
Grenoble.....	256	mosaic octagon	304	C-hook, garage door	224	epoxy gloss	496
gypsum lay-in	257	Natura	296	Chop saw, rental.....	28	epoxy primer.....	496
mineral fiber	257	removal.....	278	Chrome light fixture	441	specialty	496
plain white	256	Saltillo	299	Circuit breaker		Coaxial cable	433
Prestige	256	sink rail	302	arc fault, HomeLine	437	wall plate	433
random textured	255	soap dish	304	GFCI.....	437	Coaxial F-connector	
Sahara	256	surface cap	302	ground fault interrupter		for RG6.....	433
suspended	255-257	surface cap corner	302	plug-on	440	Cobra Rigid ridge vent ... 145	
textured	257	threshold.....	301	HomeLine	437	Cofair Products.....	135
Ceiling repair	245	toilet tissue holder	304	main	438	Coffer dam.....	92
Ceiling texture	246	tool	291	main, all-in-one.....	438	Coil, kickplate	459
patch.....	245	toothbrush & tumbler		QO miniature	439	Cold process adhesive,	
popcorn patch.....	245	holder	305	tandem	439	modified bitumen	133
spray.....	244-245	wall	301, 303	Circular windows half		Cold process cement.....	133
touch-up kit.....	244	window sill	301	circle, vinyl.....	159	Collar beams, carpentry ... 75	
Ceiling tile	254	Ceramic tile definitions ... 276		Civic Square	290	Collar ties	75
acoustical	253	Ceramic tile flooring.....	276	Clamp		Colonial base molding....	263
tin design	254	tips on.....	277	ground rod	432	MDF.....	261
wood fiber	254	Chain link fence		Snap Strap PVC		paperwrap	263
Ceiling tile grid system		demolition	29	conduit.....	420	polystyrene	264
zero-clearance tile grid... 255		Chain saw, rental.....	28	wood floor.....	281	Colonial cap	
Ceiling tile, wet	533	Chain-operated wall		Clamp connector,		paperwrap molding.....	264
Ceiling wire hanging kit ... 255		exhaust fan	380	two-piece	419	Colonial casing	
Ceiling, suspended		Chair rail		Classic faucet handle	370	finger jointed.....	260
cross tee	255	cast polyurethane	262	Clay roofing tile.....	139	paperwrap	264
installation	254	Clearwood PS	266	Cleaning		polystyrene	264
main beam.....	255	MDF.....	261	after water extraction....	534	prefinished.....	264
wall molding.....	255	paperwrap	266	antimicrobial	536	Colonial crown	
CeilingMAX.....	255	polymer.....	263	brick	115	paperwrap molding.....	268
Ceilings, suspended.....	237	polystyrene	266	carpet	532	Colonial door casing.....	195
Cellar doors, steel	194	prefinished	266	HVAC.....	530	Colonial outside corner	
Cement		primed finger joint.....	260	masonry.....	115	molding.....	267
board	245	Chalk line, self chalking... 291		pressure wash.....	468	Colonial stop molding....	269
coloring	47	Chandelier	442	stone.....	115	Colonial storm doors,	
joint compound	245	Channel vent, rafter bay.... 88		terra cotta	115	triple-track.....	205
mixer, rental.....	39	Chesapeake floor tile.....	289	Ultrasonic.....	530	Colonnade kitchen	
siding	113	Chime kit, door	436	Clear cedar siding	108	faucet.....	332
soffit, fiber.....	112			Clear wood		Colorant, grout.....	307
tile	139			preservative	491	Coloring agents	
underlayment.....	285			protector	490	concrete.....	47, 49
white	114			Clearshield.....	488	Column, porch	455

- Combination base
 molding.....264
- Combination coupling.....424
- Combination service
 entrance device.....438
- Combination service
 entrance load center.....437
- Commercial Electric.....440
- Communication cable,
 category 5E.....433
- Composite kitchen sink...338
- bar.....338
- Beaumont.....331
- double bowl.....330
- Forsyth.....330
- Greenwich.....330
- single bowl.....330
- 60/40 bowl.....331
- Composition tile,
 vinyl.....289-290
- Compound
 glazing.....170
- latex glazing.....170
- Compression conduit
 coupling, rigid or IMC....430
- Compression connector
 EMT.....423
- EMT-to-box offset.....424
- non-metallic UF.....419
- Compression faucet
 repair.....352
- Compression inlet
 dishwasher connector...341
- Compressor, rental.....28
- Concrete
 additives.....47
- architectural.....47
- bonding primer.....493
- coatings.....495
- coloring.....47
- curb.....44
- delivery charges.....46
- driveways.....46
- embossed finish.....50
- enamel.....495
- epoxy floor coating.....495
- expansion joints.....46
- exposed aggregate.....49
- finishing.....50
- flatwork.....40
- floor painting
 labor.....474-475
- footings, demolition.....31
- form stripping.....43
- forms.....42, 48
- foundations.....48
- grade beams.....48
- granite aggregate.....46
- grinding.....513
- grout mix.....46
- grouting.....50
- high early strength.....47
- joints.....46
- keyway.....48
- lightweight.....46
- mix.....46
- patching.....50
- planing.....513
- plasticized.....47
- protective coating.....495
- pump mix.....46
- pumping.....39
- ready-mix.....46
- recycling.....29
- reinforcing steel.....44
- repair.....513
- retaining walls.....47
- sawing.....50
- sealer.....495
- shingles.....140
- sidewalk.....49
- slab demolition.....32
- slabs.....49
- specialty finishes.....50
- stain.....495
- stamped finish.....50
- tile.....139
- tile roofing.....140
- topping.....50
- walks.....49
- wall demolition.....32
- wall form.....43
- walls.....47
- waterproof.....495
- waterproofing sealer.....495
- Concrete & masonry
 waterproof.....495
- Concrete block
 demolition.....31
- painting.....476-478
- Concrete conveyor, rental...39
- Concrete deck patch
 built-up roofing.....131
- Concrete pier
 replacement.....63
- Concrete saws, rental.....39
- Conditioner, wood.....491
- Conduit
 Carflex liquid-tight.....427
- EMT.....422, 426
- EMT, removal.....422
- ENT.....427
- flex appliance
 connection.....417
- flexible aluminum.....426
- flexible steel.....426
- galvanized IMC.....429
- GRS.....429
- IMC.....429
- installation, rigid.....429
- removal, rigid.....429
- Schedule 40 PVC.....420
- Schedule 80 PVC.....420
- Conduit body.....421
- PVC Type T.....421
- threaded aluminum.....431
- Conduit box
 adapter.....421
- cover, steel.....424, 426
- installation.....424
- non-metallic round.....428
- steel.....425
- three-gang non-
 metallic.....422
- two-gang non-
 metallic.....422
- Conduit bushing, rigid.....430
- Conduit clamp, Snap
 Strap PVC.....420
- Conduit connector
 90-degree.....426
- flex.....427
- Conduit coupling
 rigid.....429-430
- Conduit elbow
 45-degree rigid steel....429
- rigid or IMC steel.....429
- Conduit fitting
 Carflex.....427
- non-metallic.....421
- Conduit hub, watertight...430
- Conduit installation
 confined area.....429
- Conduit locknut.....430
- Conduit nipple.....431
- Conduit sill plate
 service entrance.....432
- Conduit strap.....431
- Connector
 90-degree flexible.....426
- dishwasher.....340-341
- EMT compression.....423
- EMT offset screw.....423
- EMT set screw.....423
- EMT-to-box offset
 compression.....424
- flex screw-in.....426
- flex squeeze.....427
- non-metallic UF
 compression.....419
- two-piece clamp.....419
- Containment
 dust.....536
- mold.....536
- Contents.....3
- Continuous vents.....89
- Contractors Wardrobe.....359
- Contractors, state license
 dryout.....515
- mold remediation.....515
- Control switch, fan.....382
- Convection heating,
 baseboard.....398
- Cooktop
 electric.....342
- electric ceramic glass...342
- gas.....342
- Cooling system, patio.....458
- Copper
 formed flashing.....141
- roll flashing.....141
- window roofs.....164
- Copper pipe
 DWV.....408
- water.....408
- Copper step flashing.....141
- Copper wire, type
 THHN.....432
- Copper wood
 preservative.....491
- Cord, disposal
 accessory kit.....340
- Corian countertops.....322
- Cork
 roll.....293
- tile flooring.....275
- tile, natural.....293
- Corner
 MDF primed base.....261
- plastic bullnose.....247
- Corner and cove molding
 inside.....266-267
- paperwrap.....266
- prefinished.....267
- Corner bead
 bullnose.....247
- drywall.....247
- flex.....248
- inside.....247
- outside.....248
- spray adhesive.....249
- Corner block
 polyurethane.....262
- Corner cabinet,
 frameless.....383
- Corner entry shower kit...358
- Corner molding
 inside.....267
- paperwrap outside.....267
- polystyrene inside.....267
- polystyrene outside.....267
- prefinished inside.....267
- prefinished outside.....267
- Corner shelf, ceramic.....304
- Corner tape, flexible
 metal.....249
- Corner trowel.....250
- Cornices, painting.....480
- Corrosion coatings.....92
- Corrugated
 fiberglass.....140
- metal roofing.....138
- metal siding.....113
- CorStone.....330, 331
- Cost plus markup
 equals selling price.....7
- Cotton insulation.....87
- Cotton roof patch
 asphalt saturated.....136
- Counter edge, oak.....268
- Counterflashing.....144
- Countertops.....322
- Corian.....322
- granite.....323
- laminated plastic.....323-324
- marble vanity.....376
- miter bolt kit.....324
- plastic laminate.....323
- setting with adhesive.....294
- setting with mortar.....294
- solid surface.....322
- stone, engineered.....323
- tile.....295
- Coupling, combination.....424
- EMT to non-metallic
 sheathed cable.....424
- non-metallic standard....421
- rigid conduit.....429
- rigid or IMC
 compression conduit....430
- Cove and corner
 molding
 inside.....266-267
- paperwrap.....266
- Cove base
 adhesive.....290
- adhesive nozzle.....291
- Cove molding.....268
- Cove spring.....268
- Cover
 faucet hole.....335
- patio, aluminum.....459
- Covers
 2 gang blank.....428
- blank handy box.....424
- dual weatherproof
 lampholder.....428

GFCI wet location receptacle.....	428	painting.....	475	wet materials.....	532	Door accessories	
horizontal duplex weatherproof recept.....	428	post & beam.....	452	windows.....	35, 156	bypass.....	219
receptacle.....	428	post cap.....	457	wood framing.....	30	Door bar.....	226
steel conduit box ...	424, 426	posts.....	453, 456	DensArmor gypsum board.....	243	Door bell, wireless.....	436
switch.....	428	railing.....	455-456	DensShield tile backer.....	245	Door bottom	
weatherproof blank.....	428	railing, turned spindle ...	456	Dentil cast molding.....	262	aluminum & vinyl.....	196
Crack filler, siliconizer.....	136	repair.....	452	Dentil chair rail.....	262	drip cap.....	196
Crack repair.....	513	roof.....	455	Designer panel		Door casing.....	191, 206
mesh.....	248	screws.....	459	wallcovering.....	252	colonial.....	195, 260
Craft codes.....	15	staining.....	475	Designer Series bath fan.....	381	ranch.....	195
Crawlspace ventilation, free circulation area.....	82	stairs.....	458	Detaching membrane.....	308	ranch, pine.....	195
Cribbing.....	62	Deck & siding stain.....	487	Detector		Door chime builder's kit.....	436
Cripple wall.....	512	Deck Plus stain.....	487	dual-ionization smoke....	436	Door closers.....	217
Cross bridging.....	65	Deck, roof		smoke.....	436	hinge pin.....	217
Cross head cast molding.....	262	removal.....	129	Devoe Coatings.....	496	hydraulic.....	217
Crow's foot brush.....	250	repair.....	129	DeWalt.....	249	installation.....	217
Crown molding		walking.....	140	De-watering.....	529	pneumatic.....	217
paperwrap colonial.....	268	Deck, roofing, patching		DeWitts.....	135	Door frame, painting	
Crown molding.....	259, 263	built-up.....	131-132	Difficulty factors, painting		labor.....	471
cabinet.....	320, 322	Decora AC quiet rocker switch.....	434	manhours.....	466	Door frames.....	194
MDF.....	262	Decora wall plate, single		overhang.....	480	fire-rated.....	194
MDF ultralite.....	262	gang.....	435	Diffuser fixture		pocket.....	222
polystyrene.....	268	Deflect-O.....	382	fluorescent.....	441	removal.....	197
prefinished.....	268	Dehumidifiers.....	538	Diffusers, duct, installation.....	397	Door grille.....	216
primed finger joint.....	261	Delta.....	332-333, 354	Dimmer		Door handles, patio.....	216
Crystalite countertop.....	323	.....	370, 372-373	illuminated slide.....	436	Door hangers.....	222
Curb mount fixed skylights.....	173	Demolition		incandescent slide.....	436	Door hardware.....	216
Curbs, concrete.....	44	acoustic tile ceiling.....	315	Dirt, recycling.....	29	track.....	222
Cure-Seal concrete sealer.....	495	acoustical ceiling ...	254, 315	Disconnect		Door hinge, remove.....	196
Curing and sealing compound.....	49	asphalt paving.....	51	appliances.....	417	Door installation.....	191
Curved glass wall lantern.....	443	baseboard.....	34	distribution panel.....	437	.....	206, 209
Custom Building Products.....	305-307	brick sidewalk.....	31	Dish, soap.....	304	Door jambs	
CustomBlend		brick wall.....	30	Dishwasher.....	341	exterior.....	194
Thin-Set Mortar.....	306	building components.....	30	compression inlet.....	341	garage.....	224
CustomFloat		carpet.....	35	connector.....	340-341	interior.....	209
bedding mortar.....	306	ceiling.....	34, 242	removal.....	315	patio door.....	216
Cutter		checklist.....	27	Dispenser		pocket.....	222
glass.....	171	concrete block.....	31	hot water.....	336	remove & replace... 191, 206	
vinyl tile.....	291	concrete sidewalk.....	31	soap.....	335	Door kit.....	222
Cutting		concrete slab.....	32	Disposal, garbage.....	339-340	Door lever, privacy.....	213
slabs.....	50	concrete wall.....	32	basket strainer.....	335	Door locks.....	217
		decks, wood.....	32, 452	batch feed.....	339	patio.....	216
		doors.....	35	cartridge.....	340	Door locksets.... 183, 201-202	
		dry wall.....	242	cord accessory kit.....	340	Door push bar.....	226
		dry wall ceiling.....	315	food waste.....	339-340	Door roller.....	216
		equipment rental.....	28	mounting assembly.....	340	Door stop.....	213
		estimating.....	27	septic system.....	339	Door threshold.....	216
		fence.....	29	sink flange.....	340	Door track hardware.....	222
		floor cover.....	315	sink stopper.....	340	Door trim.....	194
		flooring.....	278	waste.....	29	painting labor.....	471
		framing.....	33	Distribution box, electric... 540		Doors	
		garage.....	30	Distribution panel		4-panel.....	193
		guardrail.....	29	disconnect & remove.... 437		6-panel.....	192
		joists.....	33	Ditching.....	41	adding or removing..... 182	
		kitchen cabinets.....	315	Ditra.....	308	bar.....	209
		kitchen fixtures.....	315	Dock & fence post		basement.....	226
		masonry.....	30	preservative.....	490	bathtub.....	356
		molding.....	34	Dome light ceiling fixture... 442		bi-fold.....	219-221
		paneling.....	252	Door		bi-fold, louvered..... 220-221	
		plaster.....	242	cabinet.....	316	birch.....	192, 210
		plaster ceiling.....	315	demolition, wet.....	534	birch, prehung.....	197
		porch.....	32, 452	framing.....	69	bypass, closet.....	218
		shower stall.....	357	hinges, brass.....	196	bypass, mirrored.... 218-219	
		sidewalks.....	31	kick plates.....	213	cafe.....	209
		skylight, poly dome.....	172	knockers.....	213	camber top.....	199
		slab.....	30	openers.....	225	casing.....	195
		stairs.....	35	painting labor.....	471-473	cellar.....	194
		suspended ceiling... 254, 315		peep sights.....	214	closers.....	217
		wall.....	270	pull plates.....	213	closet..... 186, 210, 218-219	
		wall cover.....	316	push plates.....	213	closet, bypass.....	218
		walls.....	30-31			demolition.....	35
						Douglas fir.....	193

D

Dado partition	
demolition.....	316
Dal-Tile.....	297, 303-304
Danco.....	336
Danish Oil.....	488
DAP.....	170
Data communication cable	
category 5E.....	433
Deadbolts.....	202
Debris	
Removal.....	529
Debris removal.....	29
Deck	
demolition.....	452
lumber.....	452-454
lumber, Fiberon.....	454
lumber, Thompsonized... 454	
misting system.....	458

- entrance 194
 entry..... 193, 198-200
 entry, decorative fan..... 200
 entry, decorative
 half lite..... 200
 exterior..... 192-193, 197-198
 exterior fan lite..... 197
 exterior flush..... 197
 exterior prehung 197-199
 exterior prehung,
 with mini-blind 198
 exterior, installation 191
 fiberglass 200-201
 fir..... 193
 fire..... 192
 fire-rated 197
 flush 219
 flush closet 219
 flush closet, lauan 219
 folding, accordion 217
 foundation access 88
 French 193
 French, interior 208
 garage 223-224
 garage, extension
 spring..... 225
 garage, jamb hinge 224
 handle sets 202
 hanging slab doors 184
 hardboard 192, 209
 hardware 221
 hardware, exit..... 226
 hemlock 197
 installation 191, 197
 206, 209
 interior..... 207-208, 211-212
 interior cafe 209
 interior slab 206
 interior, birch..... 206
 interior, colonial 211
 interior, colonist 211
 interior, fir 208
 interior, French 212-213
 interior, full louver,
 pine 212
 interior, hardboard 207
 interior, hardboard,
 colonist 207
 interior, lauan..... 206-207
 interior, oak..... 206, 208, 212
 interior, pine 208
 interior, pine louver..... 212
 interior, prehung 209-210
 interior, prehung,
 knotty alder..... 212
 interior, solid core 207
 lauan 210
 lever latchset 213
 lockset repair 201
 metal, reversible 194
 mirrored 221
 mirrored, frameless 221
 mobile home 222
 molded face 207-208
 oak 210
 pantry 212
 patio 214
 patio grille 216
 patio handle 216
 patio lock 216
 patio roller..... 216
 patio threshold..... 216
 patio, aluminum 215
 patio, double 215
 patio, fiberglass 215
 patio, gliding 214
 patio, hinged 214
 patio, sliding 214
 patio, sliding,
 aluminum..... 215
 patio, steel..... 215
 patio, swinging..... 214-215
 patio, vinyl 215
 pet 216
 pet, cat..... 216
 pocket..... 222
 prehung 186, 197
 red oak 192
 removal..... 35, 197
 repair 175, 191
 replacement..... 175
 replacement
 procedure 185
 screen 203
 screen, installation..... 202
 screen, metal..... 203
 screen, pine 203
 screen, replace..... 203, 216
 screen, steel 203
 screen, vinyl 203
 screen, wood 203
 security 205
 security, Paradise-
 style 205
 security, with screen,
 heavy-duty..... 205
 setting trim 184
 shower 356, 359-360
 sidelites 198
 slab 192-193
 solid core 192, 197
 steel 198
 steel exterior..... 199
 steel, 6-panel..... 198
 steel, entry..... 198
 steel, exterior..... 199
 steel, prehung..... 198
 steel, prehung, with
 mini-blind 198
 stile & rail..... 208
 storm..... 204-205
 storm, all-season 204
 storm, aluminum..... 204
 storm, aluminum
 and wood..... 204
 storm, removal..... 204
 storm, self-storing 204
 storm, triple-track..... 204
 storm, woodcore..... 205
 terms..... 188
 weatherstripping 196
 Doors, entry 175
 antiquing..... 176
 reassembling 179
 rebuilding 178
 refinishing 176
 repairing holes..... 177
 Doors, exterior
 framing and replacing..... 179
 Doors, interior 181
 Dormer
 studs 75-76
 vents..... 90, 144
 Double bowl kitchen
 sink 329
 cast iron..... 329
 stainless steel..... 328
 Double cylinder door
 handle..... 202
 Double doors 211-212
 Double oven, wall 342
 Double-hung windows
 insulated 159
 replacement..... 157
 screens 160
 vinyl-clad..... 159
 wood 163
 Double-track storm
 windows..... 165
 Downlight ceiling fixture... 440
 Downspouts
 acid wash 466
 galvanized steel..... 146
 painting labor..... 476
 remove and replace 106
 residential 146
 Drain connector
 garbage disposal to
 dishwasher 341
 Drain stopper 336
 flat sink 336
 Drain, waste and vent
 lines, plumbing for..... 393
 Drainboards, countertops... 295
 Drawer front
 cabinet 316
 Drawn box
 2-device switch..... 425
 handy..... 424
 octagon..... 425
 Drip cap 141
 door bottom seal 196
 molding, wood 114
 Drip edge 142
 aluminum 141
 Driveway forms..... 43, 49
 Driveways, concrete 49
 Drop ceiling
 panel..... 255-257
 soffit..... 316
 Drop-in lavatory sink..... 367
 Drum mushroom
 ceiling fixture 441
 Dry ice blasting..... 537
 Dry rot remediation..... 92
 Dry tile grout
 non-sanded 307
 Dryback vinyl wall base... 292
 Dryer, wall cavity 539
 Dry-out..... 529
 Drywall
 arch, bullnose..... 247
 ceiling, demolition..... 315
 ceilings 232
 corner bead 247
 corner tape 249
 demolition 34, 242, 316
 demolition, wet 532
 dustless sanding
 system..... 251
 finish 244
 fire code type X 243
 fire-resistant..... 243
 flexible 244
 greenboard 244
 hand sander 250
 hanging 228
 installation 242, 244
 J-bead 248
 joint compound 245-246
 joint tape 246
 J-trim..... 248
 L-trim 248
 mildew resistant..... 243
 moisture resistant..... 243
 moisture-resistant..... 243
 mold resistant..... 243
 nails 249
 outside corner trowel 250
 painting..... 483-484
 panel lift 250
 patch 242
 primer 246
 repair 242
 repair clips 249
 repair kit..... 248
 repair patch 248
 repair sheet 244
 repairing 234
 sander kit..... 250
 sanding respirator..... 250
 sanding sponge 250
 screws 249
 sound deadening..... 243
 spray texture..... 244
 tape 246
 tape, white, fiberglass ... 246
 taping and finishing 230
 texture 244
 texture spray..... 244
 textured finishes 232
 topping compound..... 246
 vinyl outside corner
 bead 248
 Drywall tools
 electronic stud sensor ... 249
 hammer 250
 sander 251
 screw gun, battery-
 powered 249
 screwdriver 249
 screwdriver bit 250
 screws, collated 249
 stilts 250
 texture brush 250
 trowel 250
 trowel, corner..... 250
 T-square 250
 Dual sensing smoke
 alarm..... 436
 Dual weatherproof
 lampholder & cover 428
 Dual-ionization
 smoke detector..... 436
 Duct
 heating, removal..... 396
 runs, installation 397
 Duct tape 538
 Dumont kitchen sink 329
 Dump fees 29
 Dump trucks
 rental 28
 Dumpster 538
 rental 29
 trash..... 29

Duplex receptacle		mechanical systems..... 511	Electrical management	Entertainment sink..... 338
CO/ALR..... 435		plaster..... 509	system, Smart home 444	Entrance cap, PVC..... 422
commercial grade..... 435		plumbing systems..... 511	Electrical non-metallic	Entry doors 193, 198-200
handy box cover..... 424		stucco..... 509	tubing conduit..... 427	deco fan lite..... 193
straight blade..... 434		Earthquake damage,	Electrical systems	fiberglass..... 200-201
waterproof cover..... 428		checking for	licensing and code	oak..... 194
Durabase..... 358		before making repairs... 506	compliance..... 410	Epoxy crack repair..... 513
Durastall..... 358		jobsite walk..... 506	National Electrical	Epoxy floor coating..... 495
Duratemp panel siding 111		structural engineer..... 506	Code (NEC)..... 410	Epoxy gloss coating..... 496
Durock backerboard..... 295		Earthquake damage,	power shortfall..... 409	Epoxy mortar..... 306
Durock cement board..... 245		cosmetic..... 497	repairing earthquake	Epoxy primer..... 496
Dust control..... 536		Earthquake damage,	damage..... 511	Equipment costs..... 13
Dustless drywall		increased risk	service upgrade..... 410	Equipment rental
sanding system..... 251		when adding a room..... 504	Eliane ceramic tile..... 297	demolition..... 28
DWV pipe remove &		when making	Eljer..... 329	foundations and slabs 39
replace..... 408		alterations..... 504	Eljer Plumbingware..... 367	Escape window..... 172
		when removing wall	Elkay Mfg..... 328, 338	Estimating home
		bracing..... 505	Embossed basswood	improvement costs
E		Earthquake damage,	molding..... 259	hanging doors..... 5
E.L. Mustee..... 336, 358		structural..... 497	Embossed concrete..... 50	price book..... 6
Earthquake anchor..... 512		Easysills..... 165	Embossed decorative	problems..... 5
Earthquake damage		Eave closure..... 140	molding..... 259	Estwing..... 250
(IBC) seismic safety		Eave vents..... 90	Embossed polystyrene	Eternit..... 139
standards..... 497		Decomesh..... 89	casing..... 265	Excavation..... 41
(IPMC) seismic safety		Eaves painting..... 480	Embossed polystyrene	backfilling..... 40
standards..... 497		Edeck..... 452	molding	fine grading..... 40
(IRC) seismic safety		Edge	base..... 263	footings..... 40
standards..... 497		counter..... 268	chair rail..... 266	rock..... 40
structural		drip..... 141-142	crown..... 268	spreading..... 41
improvements..... 498		flashing, roof..... 143	Embossed prefinished	tamping..... 41
structural		Edge forms, concrete... 40, 43	molding	topsoil..... 41
improvements, (IRC).... 498		Edge protection tile..... 303	chair rail..... 266	Excelon vinyl
structural		Edge pulls..... 222	Embossed tileboard..... 251	composition tile..... 289-290
improvements,		Edge V-plank..... 252	Embossing leveler..... 285	Exhaust fan..... 380
permits for..... 498		Efficiency cast iron	Emergency dry-out	bath..... 378-381
Earthquake damage		kitchen sink..... 329	service..... 529	bath, vertical discharge... 379
prevention		Egg & dart cast molding... 262	Emser International..... 298	ceiling..... 379
anchors, hold-down..... 500		Egg knob locksets..... 202	EMT conduit..... 422, 426	QuietTest..... 380
bracing hillside homes... 502		Eggshell wall paint, latex... 492	45-degree elbow..... 423	timer switch..... 382
bracing, cripple walls..... 500		Elastocaulk..... 136	90-degree elbow..... 423	utility, vertical discharge... 379
bracing, open front..... 501		Elastomastic..... 136	combination coupling.... 424	ValueTest with light..... 380
foundation bolting..... 499		Elastomeric roof coat..... 137	compression connector... 423	vertical discharge..... 379
masonry chimneys,		Elastomeric water-	coupling..... 424	wall..... 379
anchoring..... 503		proofing paint..... 494	offset compression	with heater..... 381
tension ties on		Elastotape..... 136	connector..... 424	with infrared heater..... 381
split-level homes..... 503		Elbow	offset screw connector... 423	Exhauster, roof..... 145
Earthquake damage		45-degree plain end..... 421	set screw connector..... 423	Exit bar..... 226
prevention, FEMA		90-degree..... 423	strap..... 424	Expansion bolt..... 512
recommendations..... 499		90-degree standard	EMT conduit, removal 422	Expansion joints
bracing hillside homes... 502		radius..... 421	EMT strap..... 424	concrete..... 46
cripple wall bracing..... 500		EMT 45-degree..... 423	Emulsion, asphalt..... 133	Exposed aggregate finish... 49
foundation bolting..... 499		EMT 90-degree..... 423	Enamel	Exposed aggregate
hold-down anchors..... 500		pulling..... 423	floor & porch..... 495	sealer..... 495
masonry chimneys,		rigid or IMC steel	interior & exterior..... 493	Exposed round conduit
anchoring..... 503		conduit..... 429	latex..... 492	box, non-metallic..... 428
open front bracing..... 501		rigid steel conduit..... 429	oil-based..... 496	Extendable roller..... 291
tension ties on split-level		rigid steel conduit..... 429	painting..... 483-484	Extension kit, jamb..... 216
homes..... 503		service entrance..... 432	wall & trim..... 492	Exterior & interior stain,
Earthquake damage repair		Electric baseboard	Enamel undercoater	acrylic..... 487
chimneys..... 510		heaters..... 404	interior..... 491	Exterior clear finish..... 489
concrete cracks..... 507		Electric cooktop..... 342	Encapsulate mold..... 537	Exterior door jambs..... 194
cracks in plaster		Electric metallic tube	Encapsulated fiberglass	Exterior doors..... 193
and stucco..... 509		conduit..... 422, 426	roll insulation..... 85	fir..... 192
drywall..... 510		Electric metallic tube	Enclosure, shower..... 356	flush..... 192
electrical systems..... 511		conduit removal..... 422	pivot door..... 359	prehung..... 197
epoxy injection..... 507		Electric service panel..... 439	End panel	Exterior jambs, kerfed 194
fireplaces..... 510		Electric space heaters..... 392	base cabinets..... 317	Exterior pain, satin flat.... 494
floors out of level..... 508		Electric wall oven..... 342	cabinets..... 316, 318	Exterior painting..... 466
foundations and slabs ... 507		Electric water	wall cabinets..... 319	Exterior sanding,
framing..... 508		heater..... 406-407	Energy-efficient	manhours..... 467
gypsum drywall..... 510		PowerStar™..... 407	electrical upgrades..... 444	Exterior stain..... 487
		tankless..... 407	ENT conduit..... 427	Plus 10..... 487

- Exterior trim, painting 463
 Exterior wall assemblies..... 71
 Exterior window shutters... 167
 Extraction, water..... 529
 Extruded polymer
 molding..... 263
 Eyeball trim light kit 440
- F**
- F channel..... 459
 F connector for
 RG6 coaxial cable 433
 Fabbback acrylic
 mirrored sheet 171
 Fabric
 asphalt roofing..... 131
 polyester stress-block.... 136
 Factors
 high time painting 466
 painting difficulty..... 480
 Fairfax faucet,
 two-handle..... 374
 Fairfax kitchen faucet 333
 Fan lite doors..... 197, 201
 Fans..... 444
 attic exhaust 91
 bath 378-381
 bath exhaust..... 378-381
 bath exhaust & heater ... 381
 bath exhaust,
 QuietTest..... 380
 bath exhaust, vertical
 discharge..... 379
 bath, premium 379
 SensAire control
 switch 382
 utility exhaust, vertical
 discharge..... 379
 utility, thru-the-wall 380
 wall exhaust,
 chain-operated 380
 Fascia
 aluminum..... 114
 board 76
 staining 473
 vinyl 108
 Fashion Series 252
 Fasteners..... 458-459
 deck screws..... 459
 Fast-setting patch..... 285
 Faucet hole cover..... 335
 Faucets
 bar 338
 bar, single handle..... 338
 bar, two-handle..... 338-339
 bidet..... 362
 compression, repair..... 352
 kitchen 331-333
 kitchen, two-handle ... 333-334
 kitchen, two-handle,
 with spray 334
 laundry, two-handle 337
 lavatory..... 370-372
 lavatory, adjustable
 center 374
 lavatory, center set ... 371-374
 lavatory, infrared..... 371
 lavatory, two-handle 372
 pressure balanced..... 361
 Roman tub..... 354
 shower and tub..... 360
 supply 374
 tub & shower 360-362
 tub and shower..... 360
 Feather edge additive..... 286
 Federal Emergency
 Management Agency
 (FEMA)
 recommendations..... 499
 structural improvements... 498
 Fees, recycling 29
 Felt
 roofing 133
 roofing, glass fiber..... 134
 scribing 291
 Fence
 demolition 29
 staining labor 474
 Fence & barn paint..... 496
 Fence post preservative... 490
 Fernco 341
 Fiber cement
 lap siding 112
 siding 113
 siding panel 112
 soffit..... 112
 trim for siding..... 112
 Fiber-cement
 roofing 139
 Fibered aluminum
 roof coating..... 137
 Fibered roof coating 137
 Fiberglass
 base sheet..... 133
 bathtubs..... 357
 panels..... 140
 reinforcing membrane ... 136
 screen rolls 168
 shower stall 358
 window trim, bath..... 355
 Fiberglass asphalt
 shingles 131
 Fiberglass ceiling
 panel 256-257
 Fiberglass entry
 doors..... 200-201
 Fiberglass insulation
 batt 84
 Kraft-faced..... 84
 roll..... 84-85
 unfaced..... 84
 Fiberglass mat roof patch ... 135
 Fiberglass reinforced
 plastic panels..... 253
 Fiberon 452, 454
 Field adhesive, SBS 134
 Field tile
 setting with adhesive..... 294
 setting with mortar..... 294
 Fill, excavation..... 40
 Filler, crack 136
 Filler strip 317-319
 oak..... 321
 wood 138
 Film, polyethylene 87
 Finish carpentry
 countertops..... 322
 siding 107
 Finish sealer, high-gloss ... 307
 Finished box cover 425
 Finishes
 exterior clear..... 489
 flat latex 492
 floor, oil-based..... 489
 interior classic clear..... 489
 log home gloss 489
 rust-resistant..... 496
 stain gel, non-wood 488
 wood 487
 Finishing, concrete 49-50
 Finishing compound
 wallboard 246
 Finishing putty, Pergo..... 283
 Fink truss 76
 Fir doors 192-193
 Fire doors 192
 Fireblocks 68
 Firebrick..... 115
 Fireplaces
 demolition 115
 masonry, repair 104
 prefabricated 116
 repair 115
 repairing earthquake
 damage 510
 Fire-rated door frames..... 194
 Fire-rated doors 197
 Fire-resistant drywall 243
 Fish tape..... 413
 cable snake 417
 Fissured ceiling
 panel 256-257
 Fixed skylights..... 172-173
 Fixture removal..... 530
 Fixture gasket removal.... 352
 Fixture supply lines..... 374
 Fixture valve lines..... 374
 Fixture, light
 ceiling 442
 chandelier..... 442
 chrome bath bar 441
 fluorescent ceiling..... 441
 flush mount ceiling 441
 jelly jar 443
 motion sensing 443
 mushroom flush mount... 442
 outdoor bulkhead..... 443
 outdoor wall lantern..... 443
 remove & replace 441
 wave bath 441
 Fixtures
 troffer fluorescent 258
 U-lamp troffer
 fluorescent..... 258
 Flange kit, load center..... 437
 Flashing
 aluminum roll 141
 aluminum siding 113
 angle 142
 copper formed 141
 counterflash 144
 galvanized 141
 gravel stop..... 142
 lead 143, 145
 patch..... 135
 pipe 143, 145
 removal..... 129
 repair 129
 roll valley 141, 143
 roof 134
 roof edge 143-144
 roof, removal 134
 roof-to-wall..... 144
 service entrance roof.... 432
 shingle 144
 step..... 144
 w-valley..... 144
 Flashing cement
 pro-grade..... 135
 Flashing leaks 118
 Flashing paper, roof 88
 Flashing, pipe, tile roof.... 145
 Flat masonry & stucco
 paint..... 494
 Flat paint..... 492
 exterior, satin..... 494
 interior..... 492
 latex..... 494
 Flat sink drain stopper.... 336
 Flex conduit appliance
 connection 417
 Flex screw-in connector ... 426
 FlexBond bonding
 mortar 306
 Flexible aluminum
 conduit..... 426
 Flexible armored BX
 cable 419
 Flexible bonding mortar... 306
 Flexible connector
 90-degree 426
 90-degree insulated..... 426
 Flexible metal corner
 tape 249
 Flexible steel conduit..... 426
 Flip locks, window 171
 Float, carpet 531
 Float finish, concrete 49
 Floating floor
 installation kit..... 280
 Flood abatement 531
 Flood Company, The..... 490
 Flooding, effects of..... 515
 Floor
 beam 62
 beam, shimming 62
 clamp 281
 decking, subflooring 66
 demolition 35
 furring 72
 joists 64-65
 repairs, framing 62
 slab, concrete..... 49
 staining 475
 Floor & porch enamel..... 495
 Floor & porch oil gloss..... 495
 Floor & wall tile, ceramic... 297
 Floor beams
 decay 53
 reinforcement with
 jack posts 55
 repair 53
 Floor coating, epoxy 495
 Floor covering
 tile, resilient 271
 wood..... 271
 Floor drying system..... 539
 Floor enamel 495
 Floor finish, oil-based 489
 Floor furnace, gas 404
 Floor insulation 80
 Floor jacks 54
 Floor joist
 demolition 33
 repair 54-55
 Floor molding, hardwood ... 278

Floor plank choices	white oak strip	281	Foil	aluminum	88	Framing lumber	452
for porches and decks... 450	wood	281	aluminum	88	Framing straps	512	
Floor primer	wood laminate	283	barrier	88	Franklin Brass	386-387	
Floor tile	wood plank	280	Folding doors	locks	French doors	193, 208	
ceramic..... 295-298	wood, installation tools... 281		locks	217	interior, double..... 212-213		
granite	Flooring installation system		accordion	217	painting labor..... 471-472		
marble..... 298	laminate floor..... 284		Footings..... 48		Frenchwood..... 214, 216		
natural stone..... 299	Flooring over concrete..... 276		concrete..... 46, 48		Frieze cast molding	262	
parquet	Flooring trim	284	continuous	48	FRP panel molding..... 253		
Place n Press	bamboo	280	demolition	31	FRP wall and ceiling		
Saltillo ceramic	heart pine	281	excavation	40	panel..... 253		
slate	Flooring, resilient		keyway..... 48		Full-view storm doors	205	
travertine	sheet vinyl	274	Forced air furnace	397	Fungicide..... 92		
vinyl	Flooring, tile		Forced-air heating	391	Furnace		
vinyl, slip-retardant..... 289	ceramic..... 276		Formica countertops..... 322		coal..... 404		
wood	ceramic, tips on	277	Forms		counterflow, gas	397	
Floor trim, wood..... 279	cork..... 275		board	43	flue..... 399-403		
Floor warming system 305	granite	275	concrete..... 48		gas..... 398		
thermostat	marble..... 275		curb..... 44		gas, duct..... 396		
Flooring	Flooring, wood		footings	44	gas, floor..... 404		
adhesive for rubber tile ... 290	hardwood..... 272		foundation..... 43-44		gas, thru-wall	404	
adhesive for vinyl	laminate..... 274		keyway..... 44		gas, wall	404	
sheet	softwood	272	plywood	43	horizontal flow, gas	397	
adhesive for vinyl tile..... 290	strip..... 272		stripping..... 44		low boy, gas	396	
adhesive for wood	Floors, sagging..... 54		wall	43	oil fired..... 397		
adhesive remover..... 285	Floors, wood fixing		Formwork, stripping..... 44		remove & replace	398	
bamboo plank..... 280	squeaks	56	Forsyth composite sink... 330		wood burning..... 404		
carpet	Flue		Foundation		Furniture		
ceramic tile	chimney	399	access doors	88	blocking	529	
demolition	chimney, aluminum	399	anchor	512	moving	529	
demolition, wet	furnace	399-403	bracket..... 512		Furniture pad	538	
hardwood plank..... 280	Fluidmaster..... 364		crack repair..... 513		Furring		
hardwood, sanding..... 281	Fluorescent ceiling		demolition	31	floor..... 72		
heart pine plank..... 280	fixture..... 441		vent..... 88		wood	72	
Hevea parquet..... 282	Fluorescent diffuser		vents	88			
installation spacer..... 283	fixture, low profile	441	Foundation and roof				
laminate floor	Fluorescent fixtures		coating, non-fibered..... 129				
underlayment	parabolic troffer	258	Foundation and slab				
laminate strip	troffer	258	pre-construction				
maple hardwood	U-lamp troffer	258	checklist..... 38				
maple strip, unfinished... 281	Flush doors..... 219		Foundation bolt..... 512				
molding, laminate	bi-fold closet..... 219		Foundation insulation	86			
molding, wood laminate... 283	birch exterior..... 192, 197		Foundations				
Northwoods hardwood ... 278	birch interior..... 206-207, 210		concrete..... 46-47				
oak..... 279	fire-rated	192	cracks (active or				
oak parquet	hardboard	192	dormant)	37			
oak self-stick parquet ... 282	hardboard	192	equipment rental..... 39				
oak, solid hardwood	hardboard exterior	197	footings	48			
Pergo	hardboard interior..... 206-209		forms..... 43				
Pergo underlayment	hardwood exterior... 192, 197		leaky basement walls	37			
red oak, strip	luan exterior..... 192		repair	37			
removal..... 278	luan interior... 206-207, 210		Frame				
repairs..... 62	oak entry..... 194		painting labor..... 471				
rustic oak plank	oak interior..... 206, 210		sink	334			
sealant, laminate	painting labor..... 471-472		Frame wall, aligning	514			
setting with adhesive..... 294	red oak interior	210	Framed bypass door,				
setting with mortar	steel exterior..... 198-199		bathtub	356			
sheet vinyl	steel utility..... 198		Frameless corner				
strips, natural wood	Flush mount ceiling		cabinet..... 383				
surface preparation	fixture..... 441-442		Frames, door	194			
teak..... 279	Flush mount light fixture... 442		Framing				
TrafficMaster laminate... 284	Flush valve		cut window opening..... 156				
transition reducer strip... 292	urinal, Sloan Royal	363	damage	53			
transition strip	Flute & reed molding	261	demolition	33, 270			
trim, hardwood..... 281	Fluted casing embossed		estimating, problems				
underlayment..... 285	polystyrene molding	265	with	53			
underlayment & patch ... 286	Fluted casing		interior doors	206, 209			
underlayment skimcoat... 286	prefinished molding	265	partitions, wood	66-67			
vinyl roll	Foam insulation	85	repairs..... 62				
vinyl sheet	Foam underlayment... 283-284		room additions..... 64				
vinyl wall base	Foam weatherstripping.... 196		straightening..... 514				
water extraction	Foamular XAE	85	wall studs..... 66				

G	Gable, truss	76
Gable louver, metal	90	
Gable vents	89	
metal	90	
power attic	92	
redwood	90	
Gabrielle Comfort		
Height toilet	363	
GAF	130-131, 134, 145	
GAFGLAS		
ply 4 glass felt	134	
Torch and Mop System ... 134		
Galvanized bullnose		
corner bead	247	
Galvanized flashing	141	
Galvanized rigid steel		
conduit	429	
Galvanized roofing	138	
louver..... 145		
Galvanized steel rain		
gutters	146	
Garage demolition	30	
Garage doors	223	
bonded steel..... 224		
bottom seal..... 223		
extension springs	225	
hardware	224-225	
installation	223	
insulated	224	
jamb hinge..... 224		
locks	224	
low headroom kit	224	
operators	225	
raised panel..... 223		

G

Gable, truss	76
Gable louver, metal	90
Gable vents	89
metal..... 90	
power attic	92
redwood..... 90	
Gabrielle Comfort	
Height toilet	363
GAF	130-131, 134, 145
GAFGLAS	
ply 4 glass felt	134
Torch and Mop System ... 134	
Galvanized bullnose	
corner bead	247
Galvanized flashing	141
Galvanized rigid steel	
conduit..... 429	
Galvanized roofing	138
louver..... 145	
Galvanized steel rain	
gutters	146
Garage demolition	30
Garage doors	223
bonded steel..... 224	
bottom seal..... 223	
extension springs	225
hardware	224-225
installation	223
insulated	224
jamb hinge..... 224	
locks	224
low headroom kit	224
operators	225
raised panel..... 223	

replacement.....	223	Glazing compound	170	Gypsum base, Imperial ...	245	strip.....	278
steel.....	223	Glazing points.....	170	Gypsum board		TapTight	280
steel, non-insulated	224	Glazing putty, remove		DensArmor	243	trim.....	281
torsion spring.....	223	and replace.....	170	Gypsum lay-in ceiling		Hardwood molding	259,
trolleys, installation	223	Glazing tool	171	panel.....	257	.....	278, 280
weather seal.....	224	Glidden.....	492-495	Gypsum panel lift.....	250	Bruce parquet.....	282
Garage slabs.....	42	Gloss, polyurethane oil....	495	Gypsum wallboard		Harris-Tarkett....	278, 280-281
Garbage disposal	339-340	Gloss & seal, tile	308	demolition	242	Hartland cast iron	
basket strainer.....	335	Gloss enamel, alkyd.....	493	fire code.....	243	kitchen sink.....	330
connector, dishwasher		Gloss finish, log home....	489	flexible	244	HazMat protection	538
drain	341	Glue, Pergo laminate		installation	242, 244	Headers, carpentry.....	68
cord kit.....	340	floor.....	283	joint cement.....	246	Headroom kit.....	224
disposer	339-340	Grade beams		joint tape.....	246	Heart pine	
mounting assembly	340	concrete.....	48	mold resistant.....	243	flooring trim.....	281
mounting gasket.....	340	formwork.....	44	primer	246	plank flooring	280
removal.....	315	Granite		repair	242	Heat recovery ventilator	
sink flange	340	aggregate concrete	46	spray texture.....	244	retrofit	406
sink stopper	340	countertop	323	water resistant.....	243	Heat-A-Lamp bulb	
switch, sink top.....	340	floor tile	299			heater & fan.....	381
Garden windows.....	158	mortar mix	306			Heat-A-Ventlite heater.....	382
Gardner	135-136	setting adhesive	306	H		Heaters	
Gas breaker, rental.....	28	tile, natural.....	299	Hammer, drywall	250	baseboard, electric.....	404
Gas cooktop	342	tile flooring.....	275	Hampton Bay™.....	441, 443	water, gas.....	405
Gas furnace		vanity top.....	377	Hand sander.....	251	whirlpool bath	
counterflow	397	Granules, roofing.....	136	drywall	250	EZ-Install.....	354
exterior wall duct	396	Gravel stop	142	Handle sets	216	Heating duct, removal	396
horizontal flow	397	Gravity heating.....	391	double cylinder	202	Heating system	
interior wall duct	396	Gray Board insulation.....	85	entry door	202	component removal.....	396
low boy	396	Grecian cast molding.....	262	Handrail		Heating systems,	
Gas water heater.....	405	Greek key chair rail.....	262	painting.....	481	electric space heaters ...	392
power vent.....	407	Greenboard	71	patio deck	455	hot water, radiant	
tankless	407	Greenhouse panels.....	140	Handy box		heating	392
Gasket		Greenwaste, recycling.....	29	cover, blank.....	424	Heating systems, warm air	
fixture, remove &		Greenwich kitchen sink ...	330	drawn.....	424	forced-air	391
replace	352	Grilles, door, patio.....	216	welded	424	gravity.....	391
mounting.....	340	Ground bar kit		Hanger bracket, lavatory...	369	Heating, hydronic	398
wax, toilet bowl.....	364	breaker box	440	Hangers, pocket door.....	222	Helmsman spar	
Gates, security	205	QO load center.....	440	Harbour Collection.....	289	urethane	488
Gazebo ceiling fan.....	444	Ground fault interrupter		Hardboard		Hemlock doors	212
GE Appliances.....	341-342	plug-on circuit breaker...	440	lap siding	112	Henry	133, 135-137,
Gel stain	488	Ground rod clamp.....	432	panel siding	111	.....	254, 285-286, 290
General requirements.....	29	Grounding bushing		Hardboard doors	192,	HEPA central air	
Generator	540	insulated metallic.....	430	.....	207, 209	filtration retrofit.....	398
Genesis kitchen faucet....	332	Grout		fire-rated	197	HEPA vacuum	540
Georgetown lavatory		colorant.....	307	Hardboard siding	100	Hevea parquet flooring....	282
faucet.....	373	Saltillo	307	Hardbacker	295	High boy threshold, oak ...	195
Georgia-Pacific... 245, 251, 253		sanded.....	307	Hardie	112	High early strength	
GFCI circuit breaker	437	sealer.....	308	Hardipanel	112	concrete.....	47
plug-on	440	tile	294	Hardiplank	112	High time factors	466
GFCI receptacle	425, 435	tile, non-sanded dry.....	307	Hardisoffit	112	High-gloss enamel.....	493
duplex waterproof.....	428	Grout mix concrete	46	Hardware		High-gloss finish sealer ...	307
hospital grade.....	435	Grouting, concrete.....	50	bi-fold door	221	Hinges	
vertical	428	GRS conduit.....	429	door, patio	216	cabinet.....	328
wet location cover	428	removal.....	429	garage door	224-225	cabinet, Euro	327
GFI plug-on circuit		Guard, window	167	pocket door.....	222	door	196
breaker	440	Guardrail, demolition	29	screen door	203	garage door.....	224
Girders, carpentry.....	62	Gutters		Hardwood		solid brass	196
Glacier Bay..... 331, 333,		acid wash	466	flooring demolition	315	Hip and ridge shingles....	130
..... 337, 360, 370-372		aluminum	146	molding, embossed	259	Hip shingles.....	131
Glacier Extensa		flashing cement	135	molding, Victorian base...	259	Hold-down anchor	512
kitchen faucet	332	galvanized steel.....	146	paneling	251	Hole cover, faucet	335
Glaslock interlocking		painting labor.....	476	Hardwood doors.....	192	Hollow core doors.....	207
shingles	130	patching material	135	fire-rated	192	Hollow metal doors.....	194
Glass		remove and replace	106	prehung	197	Homax	493
jalousie	169	roof caulk.....	136	Hardwood flooring		HomeLine	
measure & cut	170	vinyl	146	demolition	35	circuit breaker.....	437
Glass block, mortar mix...	306	Gutting, demolition	30	maple.....	279	indoor main lug load	
Glass cutters	171	Gypboard, painting... 483, 484		molding.....	278, 280	center	437
Glass felt, ply 4.....	134	Gypsum		oak.....	278-279	HomeStyle	
Glass globe ceiling		demolition	34	removal.....	278	suspended ceiling.....	256
fixture.....	442	greenboard	71	rosewood.....	279		
Glazing bead	170	Type X.....	71	sanding.....	281		

[illegible]

- design..... 309
 electrical service
 checklist..... 315
 remodeling checklist..... 313
 work triangle..... 310
 Klean-Strip..... 487
 Knob and tube wiring..... 411
 Knobs, cabinet..... 324-326
 Knock down door
 frames..... 194
 Knockdown ceiling..... 245
 Knockdown drywall
 texture..... 244
 Knockdown stucco..... 493
 Knockers, door..... 213
 Kohler..... 328-330,
332-333, 353-354, 363,
366-369, 371, 374
 Kool Patch acrylic roof
 patching cement..... 135
 Kool Seal..... 135
 Kraft-faced fiberglass
 roll insulation..... 84
- L**
- Labor costs..... 12
 hourly..... 16
 jobsite conditions..... 13
 Labor
 high time painting..... 466
 Labor, manhours
 apply acoustic ceiling
 texture..... 469
 apply masonry block
 filler on brick masonry..... 476
 burn off paint..... 466
 caulking..... 466
 cutting-in..... 466
 masking..... 466
 paint, stripping..... 467
 painting aluminum..... 482
 painting baseboard..... 468
 painting bookcases and
 shelves..... 468
 painting cabinets..... 469
 painting closet shelf &
 pole..... 470
 painting concrete
 floor..... 474-475
 painting (CMU)..... 477-478
 painting decorative wood
 handrail..... 481
 painting door frame &
 trim..... 471
 painting exterior
 French door..... 471
 painting exterior louver
 door..... 471
 painting exterior panel
 (entry) door..... 471
 painting exterior plaster
 for stucco..... 480-481
 painting flush exterior
 door..... 471
 painting gutters &
 downspouts..... 476
 painting gypsum
 drywall ceiling..... 484
 painting gypsum drywall
 walls..... 483
 painting interior flush
 door..... 471-472
 painting interior French
 door..... 472
 painting interior louver
 door..... 472
 painting interior panel
 door..... 472-473
 painting molding or trim..... 479
 painting roof
 overhang..... 479-480
 painting shutters or
 blinds..... 481-482
 painting smooth brick
 masonry..... 477
 painting tongue &
 groove ceiling..... 469-470
 painting windows..... 486, 487
 painting wood deck or
 floor..... 475
 painting wood paneled
 walls..... 485
 pressure washing
 (waterblasting)..... 468
 repaint home exterior..... 466
 repaint home interior..... 466
 sandblasting..... 467
 sanding, exterior..... 467
 sanding, interior..... 466
 staining fascia..... 473
 staining picket fence..... 474
 staining rough wood
 siding..... 482
 staining tongue-and-groove
 ceiling..... 470
 staining wood deck or
 floor..... 475
 staining wood paneled
 walls..... 485
 wash down..... 467
 waterblasting (pressure
 washing)..... 468
 Lag screws
 drill tip suspension..... 255
 Laminate flooring
 finishing putty..... 283
 glue..... 283
 installation spacer..... 283
 installation system..... 284
 molding..... 284
 Pergo Presto..... 283
 sealant..... 283
 strip..... 284
 TrafficMaster..... 284
 trim..... 284
 underlayment..... 283-284
 Laminate shingles
 architectural..... 130
 Laminated plastic
 countertops..... 322-323
 Laminated plastic
 countertop..... 324
 Lampholder & cover
 dual weatherproof..... 428
 Lantern
 curved glass wall..... 443
 motion sensing..... 443
 outdoor wall..... 443
 Lap
 cement..... 133
 Lap siding
 fiber cement..... 112
 hardboard..... 112
 OSB..... 111
 spruce..... 110
 textured..... 111
 Lasco Bathware..... 356-357
 Lascoat..... 356
 Latch, knob
 passage..... 213
 Latchsets
 privacy lever..... 213
 privacy, egg knob..... 213
 Latex glazing compound..... 170
 Latex paint
 eggshell..... 492
 enamel..... 492-493
 exterior..... 494
 flat finish, interior..... 492
 masonry & stucco..... 494
 semi-gloss..... 493
 waterproofing..... 494
 Latex primer
 PVA..... 491
 resilient flooring..... 285
 Lattice molding..... 269
 Lauan doors..... 206-207, 210
 flush..... 192
 Laundry faucet
 two-handle..... 337
 wall mount..... 337
 Laundry tub
 double bowl..... 337
 overflow tube..... 337
 single bowl..... 336
 Utilatub..... 336
 utility kit..... 336
 Lavatory base..... 367
 Lavatory bowl..... 366
 Lavatory faucet
 adjustable center..... 374
 decorator..... 373
 hands free..... 371
 hi-arc..... 373
 single-handle..... 370-371
 single-handle, zinc..... 370
 two-handle..... 371-374
 two-handle, acrylic..... 371
 two-lever..... 371
 Lavatory hanger bracket..... 369
 Lavatory leg set..... 367
 Lavatory sink..... 367-369
 above counter..... 369
 Cadet..... 368
 drop-in..... 367-368
 Farmington..... 367
 Laurel..... 368
 Magnolia..... 369
 Miami..... 369
 Murro..... 369
 oval..... 368
 Ovalyn..... 368
 pedestal..... 366
 Radiant..... 368
 Reminiscence..... 369
 removal..... 367
 Renaissance..... 367
 round..... 368
 Seychelle..... 367-368
 Summit..... 368
 under counter mount..... 368
 wall hung..... 369
 wall hung, corner..... 369
 Lavatory trap, remove
 & replace..... 352
 Lay-in ceiling panel
 gypsum..... 257
 LB conduit body, PVC,
 Type LB..... 421
 LDR Industries..... 335
 Lead flashing..... 143, 145
 Leak Sentry toilet fill
 valve..... 364
 Leak Stopper rubberized
 roof patch..... 135
 Leaks roof penetrations..... 120
 LED lighting system
 retrofit..... 444
 Ledgers..... 73
 Leg set, pedestal
 lavatory..... 367
 Lenape..... 304-305
 Let-in bracing..... 67
 Let-in ribbons..... 73
 Leveler, embossing..... 285
 Lever locksets..... 202
 Leviton..... 434-435
 Lexan XL-10..... 171
 L-flashing..... 143
 Lift sash..... 166
 Light bar
 beveled..... 384
 medicine cabinet..... 384-385
 Light fixture
 ceiling..... 440
 chandelier..... 442
 chrome bath bar..... 441
 drum, mushroom..... 441
 jelly jar..... 443
 mushroom flush mount..... 442
 outdoor bulkhead..... 443
 remove & replace..... 441
 wave bath..... 441
 Light kit
 mini can..... 440
 mini can recessed
 eyeball..... 440
 recessed..... 440
 recessed non-IC baffle..... 440
 slot aperture..... 440
 Light-emitting diodes..... 444
 Lighting
 motion sensor..... 443
 recessed..... 440
 Lighting fixtures, soffit,
 kitchen..... 316
 Lighting panel
 acrylic..... 258
 styrene..... 258
 Lights, suspended troffer
 fixture..... 258
 Lightweight concrete..... 46
 Linoleum, sheet
 demolition..... 35
 Liquid underlayment..... 285
 Liquid-tight flexible
 conduit, Carflex..... 427
 Listello tumbled marble
 tile..... 300
 Litex..... 493
 Lithonia Lighting..... 441
 Load center
 combination ring type..... 437
 flange kit..... 437
 ground bar kit..... 440

HomeLine indoor	Main lug load center.....	439	light bar.....	384-385	Miter bolt kit.....	324
main lug.....	HomeLine indoor.....	437	lighted.....	383	Mobile home doors.....	222
indoor main lug.....	indoor.....	438	mirrored.....	383	Modified bitumen	
outdoor.....	Mallet, rubber.....	291	octagonal.....	383	adhesive.....	133
Loading trucks.....	Man-O-War marine		oval.....	383	Moen.....	332, 360, 362,
Locknut steel sealing	spar varnish.....	488	single door.....	383	.....	370, 373-374
conduit.....	Maple plank flooring.....	280	sliding door.....	383	Moisturbloc poly-	
Locks	Maple hardwood		swing door.....	383	ethylene film.....	284
deadbolt.....	flooring, solid.....	279	tri-view.....	384	Moisture barrier	
door, folding.....	molding.....	279	Medium density fiberboard		polyethylene.....	284
garage door.....	Maple strip flooring.....	281	molding.....	261	Moisture-resistant	
installation.....	Marble		Megatrade.....	297	drywall.....	243
patio door.....	countertop.....	376	Melard.....	367	Mold	
sash.....	floor tile.....	298	Membrane		abrading.....	537
sliding window.....	Listello tumbled tile.....	300	anti-fracture.....	305	blasting.....	537
window flip.....	mortar mix.....	306	fiberglass reinforcing.....	136	containment structure.....	536
Locksets	setting adhesive.....	306	polyethylene.....	308	encapsulation.....	537
and deadbolt.....	threshold.....	300	tile, anti-fracture.....	305	protective equipment.....	538
colonial knob.....	tile.....	298	Memoirs pedestal		removal.....	537
egg knob.....	tile flooring.....	275	lavatory bowl.....	366-367	sampling.....	535
installation.....	Margin notch trowel.....	291	Mesh, crack repair.....	248	testing.....	535
keyed entry.....	Marine varnish.....	488	Metal conduit		Mold and mildew	
lever.....	Markup vs. margin.....	7	flexible.....	426	sanitizer.....	531
Log cabin siding.....	Masco.....	361, 372-373	galvanized.....	429	Mold inspection.....	535
Log home gloss finish.....	Mask, safety.....	250	Metal corner bead.....	247, 249	Mold remediation.....	535
Log lap siding.....	Masonite Corp.....	253	Metal doors.....	194	by job size.....	526
Longstrip oak flooring.....	Masonry		bi-fold.....	220	cleaning methods.....	528
Louver	chimneys, repair.....	104	Metal primer.....	496	industrial hygienist.....	526
gable.....	cleaning.....	115	rust converting.....	496	insurance coverage.....	525
roof.....	demolition.....	30	Metal screen doors.....	203	sampling and protocol.....	527
roofing.....	fireplace demolition.....	115	Metallic grounding		Mold remediation	
Louver doors	fireplaces.....	115	bushing.....		protocol.....	535
painting.....	fireplaces, repair.....	104	insulated.....	430	Mold Retarder.....	92
Louver windows.....	furring.....	72	Meter main load center.....	437	Molded face closet	
Louvered doors.....	insulation.....	87	Meter socket.....	437	doors.....	220
Louvered exterior	joints.....	115	Metro sheet vinyl		Molded sectional	
window shutters.....	painting labor.....	476-478	flooring.....	287	shower stall.....	357
Louvered vents.....	pointing.....	115	Microwave oven		Molding	
Louvers	protective coating.....	495	Advantium.....	342	base.....	263-264
midget.....	recycling.....	29	over-the-range.....	342	base cap.....	260
roof.....	repointing.....	115	Midget louvers.....	91	base corner.....	259
wall.....	veneering.....	103	Milban.....	531	base shoe.....	260, 264
Low voltage wiring.....	walls, waterproofing.....	130	Milban 1-2-3.....	536	bead.....	260
Low-Boy toilet kit.....	Masonry & concrete		Mildew resistant drywall.....	243	beaded baseboard.....	259
Low-boy, trash disposal.....	waterproofing.....	495	Mineral fiber ceiling		brick.....	195
Low-sound bath fan	waterproof.....	495	panel.....	257	casing.....	264-265
QuietTTTest.....	Masonry & stucco paint.....	494	Mineral siding.....	93	casing paperwrap.....	265
Low-voltage light kit.....	Masterchem.....	492, 494	asbestos cement.....	94	casing polystyrene.....	265
L-straps.....	Mastic, tile.....	294	asbestos testing.....	94	cast.....	262
L-trim, drywall.....	Material costs.....	11	Mineral surface roll		chair rail.....	260, 262, 266
Lug load center	Mayfield sink.....	329	roofing.....	133	chair rail paperwrap.....	266
HomeLine indoor.....	Maytag.....	342	Mini can recessed light		chair rail polystyrene.....	266
Lumber	MDF		kit.....	440	chair rail prefinished.....	266
alternative building	casing.....	261	Miniature circuit breaker		colonial crown	
materials.....	chair rail.....	261	QO.....	439	paperwrap.....	268
deck.....	molding, base corner.....	261	Minwax.....	487-489, 491	cove.....	268
pressure treated.....	molding, colonial base.....	261	pickling stain.....	488	crown.....	259
recycled plastic.....	molding, crown.....	262	polycrylic.....	489	crown embossed	
Thompsonized.....	molding, plinth block.....	262	polyshades.....	488	polystyrene.....	268
Luna ceiling panel.....	molding, ultralite crown.....	262	polyurethane.....	489	crown polystyrene.....	268
	paneling.....	251	spar urethane.....	488	crown prefinished.....	268
	Mechanical systems,		Miracle Sealants Co.....	307	demolition.....	34
	repairing earthquake		Mirror bath light bar.....	441	embossed basswood.....	259
	damage.....	511	Mirrored doors		embossed decorative	
Magna.....	Medicine cabinet		bi-fold.....	221	hardwood.....	259
Magnetic weatherstrip.....	beveled edge.....	383-384	bypass.....	218	extruded polymer.....	263
Magnolia Brick and Tile.....	bi-view.....	384	Mirrored sheet.....	171	hardwood.....	259, 280
Mahogany doors.....	etched glass.....	383	Mirrors		hardwood floor.....	278
Main circuit breaker.....	framed.....	383	frosted.....	382	hardwood parquet.....	282
Main load center	framed door.....	382	oval.....	382	heart pine.....	281
combination.....	frameless.....	383-384	vanity.....	382	inside corner.....	266-267
			Mission tile roofing.....	139	laminated flooring.....	284

- lattice 269
MDF colonial base 261
MDF ultralite crown 262
MDF, crown 262
medium density
fiberboard 261
oak, unfinished 281
outside corner 267
painting labor 479
panel 253
paperwrap 263-264
polystyrene 263-265
prefinished casing 264
primed finger joint
base 260
quarter round 261
reversible flute & reed 261
rosette block 259
round edge stop 261
spring cove 268
stool 261
stop 195, 269
stop paperwrap 269
stop polystyrene 269
stucco 196
T-astragal 194
Victorian hardwood
base 259
vinyl tileboard 270
wall base 284
wall, suspended
ceiling 255
Molding set, brick 260
Molding, crown 261
Molding, hardwood 279
rosewood 279
Monticello lavatory
faucet 373
Mop, roof 136
Mortar
acrylic admix 307
bedding 306
bonding 305-306
CustomBlend thin-set 306
epoxy 306
flexible bonding 306
porcelain 306
thin-set 306
thin-set tile 293
tile 294
tile repair 306
underwater tile repair 307
Mortar mix
glass block 306
marble & granite 306
Mosaic ceramic tile 304
Motion sensor security
light 443
heavy-duty 443
lantern 443
Moulding, hardwood 259
Mount Vernon paneling 251
Mounting assembly
disposal 340
Mounting bracket non-
metallic low voltage 422
Mounting kit, sink 334
Mud
joint cement 245
wallboard 246
Mullions, window 166
Multi gang switch box 425
Mushroom light fixture 442
- N**
Nail plate, stud 419
Nailer strip, carpentry 73
Nailers 73
Nailite siding 107
Nails
drywall 249
vinyl siding 107
National Electrical Code
(NEC) 410
National Estimator 8
Natural Images floor tile 289
Natural stone floor tile 299
Needle beams 62
Negative air scrubber 539
Neo-angle shower kit 358
Neptune 328
Neptune marble
countertop 376
New wood treatment 490
Nipple, rigid conduit 431
NM-B Romex sheathed cable
indoor & outdoor 418
NM-B Romex sheathed
indoor cable 417
Non-fibered roof and
foundation coating 129
Non-metallic
ceiling fan box 422
conduit fitting 421
low voltage device
mounting bracket 422
old work switch box 422
reducer bushing 420
sheathed cable 418
standard coupling 421
UF compression
connector 419
Non-metallic cable 417
Non-metallic sheathed
cable (Romex) 412
Northwoods hardwood
flooring 278
Notched trowels 291
NuTone 343, 378-382
Nylon carpet 308
Nylon paneling rivets 253
- O**
Oak
counter edge molding 268
hardwood flooring 278
molding, unfinished 281
parquet flooring 282
plank flooring 280
strip flooring 278, 281
Oak doors 192, 206, 210
entry 194
Oak fill strip 321
Oak threshold 195
OakCrest Products 282
Octagon box, drawn 425
Octagonal windows 163
Offset compression
connector, EMT-to-box 424
Offset screw connector,
EMT 423
Oil, Danish 488
Oil fired furnace 397
Oil gloss, polyurethane 495
Oil, teak 491
Oil, tung 491
Oil-based enamel 496
Oil-based floor finish
Varathane 489
Oil-based primer sealer 493
Oil-fired water heater 405
Old work switch box
non-metallic 422
Olefin carpet 308
Opal glass wall light 441
Open light kit 440
Openers, garage door 225
Opening, breakthrough
wall 72
Operators, window 166
Orange peel
ceiling 245
drywall texture 244
Oriental carpet, hang dry 531
Oriented strand board
siding 111
OSB
roof sheathing 77
shear wall 512
sheathing 66, 70
siding 111
subfloor 66
Outdoor ceiling fan 444
Outdoor wall lantern 443
Outlet box
connecting appliance 417
re-connect appliance 417
Outside corner bead,
drywall 248
Outside corner
molding 263, 267
colonial 267
paperwrap 267
polystyrene 267
polystyrene colonial 267
prefinished 267
Outside corner trowel,
drywall 250
Oval light fixture
outdoor bulkhead 443
Oven
double wall 342
microwave 342
microwave, above range 342
wall 342
Overhang, painting 479-480
Overhang painting,
difficulty 480
Overhead doors, garage 223
Owens Corning 130, 144
- P**
Pad, furniture 538
Paint
acrylic latex 492
alkyd 493
barn & fence 496
ceiling 492
elastomeric 494
flat 492, 494
floor & porch 495
gloss 493
house & trim 494
interior 492
latex 494
latex ceiling 492
latex interior 492
masonry & stucco 494
polyurethane oil gloss 495
satin flat 494
semi-gloss 493
semi-gloss latex 493
swimming pool 496
texture 493
wall & trim 492-493
waterproofing 494
Paint additive, Perlite
texturing 493
Paint seal removal 156
Paint stripping
labor 467
Painting
burn off, manhours 466
high-time difficulty
factors 466
Painting and finishing
application methods 464
exterior trim 463
paint color and gloss 462
penetrating stains 463
recoating 461
surface preparation 461
wood preservatives 463
Painting labor, manhours
acid wash 466
baseboard 468
blinds 481-482
bookcases 468
brick masonry 477
burn off paint 466
cabinets 469
caulking 466
ceiling texture 469
ceilings 469-470
closet shelf and pole 470
concrete floor 474-475
CMU 477-478
cutting-in 466
door frame and trim 471
drywall ceiling 484
drywall walls 483
eaves and cornices 480
entry doors 471
exterior doors 471
French doors 471-472
gutters and downspouts 476
handrail 481
house exterior 466
house interior 466
interior doors 471-473
louver doors 471
masking 466
molding 479
paneled walls 485
plaster or stucco 480-481
pressure washing 468
roof overhang 479-480
shutters 481-482
siding 482
stripping paint 467
trim 479
windows 486-487
wood deck 475
Paling, rail 455
Pan, shower 359
Pancake box, ceiling fan 425
Panel molding, FRP 253

Panel siding.....98	Parquet molding.....282	Memoirs.....366	Plank floor clamp.....281
cedar shingle.....113	Parquet flooring.....282	Memoirs base.....367	Plank flooring.....280
fiber cement siding.....112	Hevea.....282	metal leg set.....367	bamboo.....280
fiber-overlaid plywood.....99	oak.....282	removal.....367	heart pine.....280
hardboard.....98, 111	oak, self-stick.....282	Repertoire.....366	rustic oak.....280
MDO.....99	tile.....282	Seychelle.....366	wood.....280
OSB.....111	Parting stop molding.....269	Williamsburg.....366	Plank paneling.....252-253
particleboard.....98	Partition walls.....270	Peel & Patch water- proofing.....135	beaded.....252
plywood.....98, 111	adding.....270	Peep sights.....214	Edge-V.....252
Panel wallcovering.....252	removal.....70	Pellets, dry ice.....537	Plaster.....34, 242, 316
designer.....253	Pass & Seymour/ Legrand.....435	Penetrating stains.....463	demolition, wet.....533
Panel, ceiling.....256	Passage latch, knob.....213	Penetrating wood finish Preserva-Wood.....487	painting.....480-481
acoustical.....257	Paste wax.....491	Pergo.....283	repair.....514
lay-in.....257	Patch.....131-132	finishing putty.....283	veneer.....246
lighting.....258	built-up roofing.....131-132	flooring.....283	Plaster of Paris.....246
suspended.....255-257	drywall.....248	flooring sealant.....283	Plastering.....460
Panel, distribution.....437	Elastocaulk roof patch.....136	flooring underlayment.....283	pool.....460
Panel, electric service.....439	Elastomastic roof patch.....136	installation.....283	spa.....460
Paneling.....251	flashing.....135	installation kit.....283	Plastic.....420
beaded.....252	Kool Patch cement.....136	laminated glue.....283	gutters.....146
birch.....252	PondPatch.....136	Presto floor molding.....283	lumber.....457
demolition.....252	popcorn.....245	Presto laminate flooring.....283	siding.....107
fiberboard.....251	roof caulk.....135	Pergola patio cover.....459	Plasticized concrete.....47
FRP.....253	roof cement.....135	Perimeter berm.....530	Plate.....342, 432
hardboard.....251	roofing.....134-135	Perimeter wall insulation.....86	service entrance conduit sill.....432
hardwood.....252	roofing, cotton.....136	Perlite texturing paint additive.....493	single gang Decora wall.....435
hardwood plank.....251-252	roofing, wood shingle.....137	Permanent Bond Adhesive.....133	single gang plastic wall.....435
MDF.....251	underlayment.....285-286	Perma-Shield.....216	stud nail.....419
oak print.....251	vinyl.....285	Pet doors.....216	Plate cover, toilet base.....364
pine plank.....252-253	Wet Patch roof cement.....135	Phone wall plate.....433	Plate straps.....513
plywood.....251-253	Wet Stick roof cement.....135	Picket fence staining labor.....474	Plate, splash.....344
prefinished.....252	Patching.....135	Pickling stain white wash.....488	Plates.....64
rivets.....253	cement, roof.....135	Picture windows.....162	carpentry.....67
tileboard.....251-252	concrete.....50	Pier, concrete.....63	carpentry piecework rates.....373
trim pack.....252-253	Patio cover, aluminum.....459	Pine.....195	Platinum lavatory faucet.....171
wainscot.....253	Patio doors.....214-215	door casing.....195	Plexiglas.....455
Panelized shingles.....113	aluminum.....214-215	door casing, fluted.....195	Plinth block.....259
Panels.....140	aluminum, double.....214	flooring trim.....281	MDF primed.....262
fiberglass.....140	fiberglass, swinging.....215	plank flooring.....280	Plug.....417
greenhouse.....140	gliding, vinyl.....214	screen doors.....203	connecting appliance.....417
sun.....140	grille.....216	siding.....108-110	Plug-on circuit breaker, ground fault interrupter.....440
Panic bar, door.....226	handles.....216	Pine doors.....208	Plumb bob.....291
Panic door hardware.....226	hardware.....216	Pine jamb sets.....209	Plumb Shop.....336, 341
Pantry.....319-321	hinged, vinyl-clad.....214	Pine planking.....252-253	Plumbing and HVAC bathtub framing.....395
cabinet.....319-321	installation.....214	Pine square rosette molding.....259	framing for improve- ments.....394
doors.....212	jamb extension kit.....216	Pipe.....408	repairs, cutting floor joists.....394
Paper.....87	locks.....216	ABS replacement of cast iron.....408	repairs, pricing.....394
Aquabar.....134	roller.....216	copper replacement of cast iron.....408	repairs, utility walls.....395
building.....134	screen.....216	copper replacement of galvanized.....408	Plumbing drain, waste and vent lines.....393
Moistop.....88	screen & track.....216	PVC DWV.....408	Plumbing systems repair earthquake damage.....511
Pyro-Kure.....88	swinging, double.....214	PVC replacement of cast iron.....408	Plumbing vent.....389
roof flashing.....88	threshold.....216	Pipe flashing.....143, 145	relocate.....389
roof underlay.....88	vinyl.....215	tile roof.....145	Plus 10 Exterior Stain.....487
Seekure.....88	Patio roof.....455	Pitch pan.....129	Ply 4 glass felt.....134
vapor barrier.....87	Patio screens replacement.....216	Pitch pocket.....129	Plywood.....77
Paper holder.....304	Pavement.....46, 49	Pits, excavation.....40	roof sheathing.....66, 70
toilet tissue.....304	concrete.....46, 49	Place n Press floor tile.....289	siding.....111
Paper-faced metal trim.....247	demolition.....32	Plain end 45-degree elbow.....421	siding, T 1-11.....111
Paperwrap molding.....263	Paver tile.....299	Planing concrete.....513	subfloor.....66
base.....264-265	brick.....300		
casing.....266	Paving.....51		
chair rail.....264	asphalt.....46, 49		
colonial cap.....268	concrete.....32		
colonial crown.....266	demolition.....28		
inside corner & cove.....267	Paving breaker, rental.....46		
outside corner.....269	Pea gravel, concrete.....366		
stop.....269	Pedestal lavatory Bahama.....367		
Parabolic troffer.....258	Classic base.....367		
fluorescent fixture.....370	leg set.....367		
Parisa faucet.....489			
Parks Corporation.....489			

- Plywood cap molding 263
 Plywood siding 99
 pre-finished 99
 Pneumatic breaker
 rental 28
 Pocket doors
 edge pull 222
 hangers 222
 hardware 222
 jamb 222
 kit, converging 222
 Pointing trowel 291
 Pointing, masonry 115
 Points, glazing 170
 Pole sander 251
 Polish, Boston 491
 Poly bags 538
 Poly sheeting 536
 Polyblend ceramic tile
 caulk 307
 Polycarbonate sheet 171
 Polycast kitchen sink 330
 Polycrylic protective
 finish 489
 Polyester stress-block
 fabric 136
 Polyester carpet 308
 Polyethylene film 40, 87
 moisture barrier 284
 Polyethylene membrane
 Schluter Ditra 308
 Polymer molding 263
 Polyshades polyurethane
 stain 488
 Polystyrene casing ... 264-265
 reversible 266
 Polystyrene insulation ... 85, 86
 Polystyrene molding
 base 264
 base embossed 263
 chair rail 266
 crown 268
 crown embossed 268
 embossed 265
 inside corner 267
 lattice 269
 outside corner 267
 spring cove 268
 stop 269
 Polyurethane
 fast-drying 489
 oil gloss 495
 stain 488
 Polyurethane cast
 molding 262
 chair rail 262
 corner block 262
 cross head 262
 frieze 262
 rope 262
 PondPatch 136
 Pool paint 496
 Pool replastering 460
 Popcorn ceiling
 patch 245
 spray 244
 spray texture 244
 Porcelain
 bath accessory set 305
 mortar 306
 towel bar 305
 Porcelain, glazed floor
 tile 296
 Porch
 columns 455
 columns, aluminum 455
 demolition 452
 enclosure screen 458
 misting system 458
 repair 452
 roof framing 455
 screen frame 458
 support posts 455
 Porch & floor enamel 495
 Porches
 additions 446
 balustrades 448
 columns and posts 447
 elevated decks 448
 Porches and decks
 choices in floor plank 450
 inspecting for decay 445
 maintenance 451
 Portland cement, stucco 114
 Portrait whirlpool bath 354
 Post base, plinth 455
 Posts
 basement 63
 cap 456-457
 carpentry 63
 deck 452-453, 456
 jack posts 63
 porch 452, 455
 wood 455
 Pouring insulation 87
 Power attic gable vents 92
 Power distribution box 540
 Power massage shower
 head 362
 Power vent, gas water
 heater 407
 Power ventilators
 attic gable 92
 roof-mount 92
 Power washing 468
 PowerStar 407
 PowerStream 407
 Power-vent
 water heater 405
 PPE 538
 Pre-drying 529
 Prefinished molding
 casing 264-265
 chair rail 266
 crown 268
 inside corner 267
 inside corner & cove 267
 outside corner 267
 Prefinished paneling 252
 Prehung doors 209-211
 double 212
 exterior 198
 fire-rated 197, 211
 French 212-213
 hardboard 197
 heater closet 210
 installation 197
 interior 212
 oak 212
 pantry 212
 patio, steel 215
 steel 199-200
 steel, exterior, with
 mini-blind 198
 steel, half lite 198
 steel, installation 197
 Prelude 255
 Premium Plus 495
 interior flat paint 492
 primer sealer 493
 satin flat exterior paint 494
 Preserva products 487
 Preservative
 dock & fence post 490
 wood 490-491
 Preserva-Wood
 penetrating finish 487
 Pressure wash interior 530
 Pressure washer 540
 Pressure washing
 manhours 468
 Price Pfister 332-333,
 337, 360-362,
 370-371, 373
 Primed finger joint casing
 colonial 260
 ranch 260
 Primed finger joint molding
 base 260
 base cap 260
 base shoe 260
 bead 260
 brick 260
 chair rail 260
 crown 261
 flute and reed 261
 quarter round 261
 stool 261
 Primed tilt double-hung
 windows 163
 Primer
 adhesive 282
 bonding 493
 clean metal 496
 concrete 493
 epoxy 496
 flooring 285
 gypsum wallboard 246
 latex 491
 metal 496
 resilient flooring 285
 rusty metal 496
 water-based 492
 Primer sealer 494
 oil-based 493
 stainblocker 494
 Privacy latchset 213
 Pro Finisher 489
 Propane water heater 405
 Propane-fired water
 heater 405
 Protection, tile edge 303
 Protector wood 490
 ProtectoWrap 307
 Protocol, mold
 remediation 535
 Provisa range hood 343
 Pro-Wall 3 354
 P-trap remove &
 replace 352
 Pull
 brass-plated spoon-foot 327
 cabinet 326-327
 S swirl 327
 wire 327
 wire, solid brass 327
 Pull bar 281
 Pull plates, door 213
 Pulling elbow, 90-degree 423
 Pulls, edge, pocket door 222
 Pump, water 540
 Pump mix concrete 46
 Pumps, sewer 389
 Purity siding 113
 Purlins, carpentry 76
 Push bar, door 226
 Push plates, door 213
 Pushbutton garage door 224
 Putty, finishing 283
 PVA latex primer 491
 PVC faucet supply 374
 PVC conduit
 coupling 421
 elbow 421
 Schedule 40 420
 Schedule 80 420
 PVC conduit body 421
 PVC conduit clamp,
 Snap Strap 420
 PVC pipe 408
 DWV 408
 PVC service entrance
 cap 422
 Pyro-Kure paper 88
- Q**
- QO circuit breaker
 GFI plug-on 440
 main 438
 miniature 439
 tandem 439
 QO load center ground
 bar kit 440
 QO main lug load
 center 438-439
 Quarry tile 299
 Quarrybasics 299
 Quarter round
 bamboo 280
 floor molding ... 278-280, 284
 molding 263
 primed finger joint 261
 Quick Roof 135
 QuickBooks 10
 QuietTest bath fan 380
 Quietzone 86
 Quik-Tape 248
 Qwik-Gard 440
- R**
- RACO 424-426
 RADAR Illusion
 ceiling panel 257
 Radiant heating systems 392
 Radiator
 cast iron 398
 Rafter
 bay vent channel 88
 spacing 88
 Rafters
 demolition 33
 rough carpentry 75
 Ragione 296

Rail		floor molding..... 278-279	Resilient tile		bow window..... 164
deck..... 456		lamineate flooring..... 284	adhesive..... 290		built-up..... 132
painting..... 481	Reducer floor	molding..... 279-280	demolition..... 35		cant strips..... 86
sink..... 302	molding..... 279-280		removal..... 278		deck..... 455
Rail molding	Reducer strip		Resin siding..... 107		demolition..... 33
chair..... 266	tile..... 304		Respirator..... 538		flashing..... 88
embossed polystyrene... 266	vinyl flooring..... 292		sanding drywall..... 250		flashing, removal..... 134
embossed prefinished... 266	Reducing window		Retaining wall forms..... 47		flashing, self-adhesive... 134
paperwrap..... 266	opening size..... 156		Reversible doors..... 194		insulation..... 86
prefinished chair..... 266	Reducing bushing		Reversible flute & reed		louver..... 91, 145
Railing	non-metallic..... 420		molding		membrane..... 132
patio deck..... 455	rigid or IMC..... 430		primed finger joint..... 261		patch..... 135
Rain cap, chimney..... 400	Redwood		Reversible polystyrene		patch, shingle..... 137
Rain gutters..... 146	siding..... 109		casing..... 266		patio..... 455
aluminum..... 146	vents..... 90		R-Gard insulation..... 86		patio cover..... 459
galvanized steel..... 146	Reed & flute molding..... 261		RhinoBoard..... 295		sagging ridge board..... 59
Ranch base paperwrap	Refinishing in-ground		Ribbands..... 73		sheathing, OSB..... 70, 77
molding..... 264	spa..... 460		Ribbons, carpentry..... 73		sheathing, plywood..... 77
Ranch casing..... 195, 265	Reinforcing		Ridge and hip shingles... 130		silicone coating..... 141
Clearwood PS..... 265	bars..... 44		Ridge shingles..... 131		tile, clay..... 139
paperwrap..... 265	membrane, fiberglass... 136		Ridge vent..... 144		tile, concrete..... 140
polystyrene..... 265	slab..... 47		aluminum..... 90		trusses..... 76
primed finger joint..... 260	steel..... 44		Cobra Rigid..... 145		underlay..... 88
Ranch door casing	steel, galvanized..... 45		coil..... 90		urethane spray foam 140
primed finger joint..... 195	Remediation		rigid..... 145		Roof and foundation
Ranch stop molding..... 269	dry rot..... 92		shingle-over..... 145		coatingnon-fibered..... 129
Random textured	mold..... 535		VentSure..... 144		Roof apron..... 143
ceiling panel..... 255	Removal		Rigid conduit		Roof caulk..... 136
Range hood..... 343	appliance..... 530		coupling..... 429		Roof cement..... 135
Ballista..... 343	carpet..... 531		strap..... 431		wet patch..... 135
custom..... 344	fixture..... 530		Rigid insulation..... 85		Wet-Stick..... 135
Provisa..... 343	glazing putty..... 170		Rigid steel conduit		Roof coating
vented..... 343	skylight..... 172		elbow..... 429		acrylic..... 137
RCA..... 433	window..... 156		galvanized..... 429		aluminum..... 137
Ready-mix concrete..... 46	window glass..... 170		installation..... 429		elastomeric..... 137
Rebar..... 44	windows..... 156		removal..... 429		fibered..... 137
Rebond..... 308	Remover		Ring type meter socket... 437		silicone..... 137
Receptacle	adhesive..... 282		Rings, towel..... 385-386, 388		Snow Roof..... 137
appliance flush mount... 435	flooring adhesive..... 285		Rivets..... 255		Roof covers..... 164
CO/ALR duplex..... 435	Rental		paneling..... 253		Roof deck
duplex..... 435	air mover..... 539		Robe hook..... 385-386, 388		removal..... 129
duplex straight blade... 434	dehumidifiers..... 538		Roberts..... 282		repair..... 129
GFCI..... 435	dry ice blaster..... 537		Rock, recycling..... 29		walking..... 140
GFCI, hospital grade.... 435	floor drying system..... 539		Rocker switch, Decora		Roof edge flashing... 143-144
remove..... 434	generator..... 540		AC quiet..... 434		Roof exhaust vent T-top... 145
side-wired single..... 435	gypsum panel lift..... 250		Rockwool insulation..... 87		Roof flashing
Receptacle cover	negative air scrubber... 539		Rod clamp, ground..... 432		chimney..... 400-401
GFCI, wet location..... 428	remediation equipment... 538		Roll, screen..... 168		service entrance..... 432
horizontal duplex	wall cavity dryer..... 539		Roll flashing		Roof framing..... 75
weatherproof..... 428	Repainting a home..... 466		aluminum..... 141		jacking..... 75
Recessed bathtub	Repair shingles, tin..... 144		copper..... 141		Roof jack..... 145
Princeton..... 353	Repair clips, drywall... 249		Roll roofing..... 134		rubber..... 145
Recessed light kit..... 440	Repair kit		mineral surface..... 133		Roof loading..... 140
Recessed lighting..... 440	drywall..... 248		Roll valley flashing..... 143		Roof openings, cut
Recoating..... 461	toilet..... 364		Roller		for skylights..... 172
Rectangular weather-	Repair mesh, crack..... 248		extendable..... 291		Roof overhang
proof box..... 427	Repair patch, drywall... 248		painting labor..... 468		painting..... 479-480
Recycler fees..... 29	Repairs, door..... 191		Roller spline tool..... 168		adding..... 61
Recycling	Repertoire pedestal		Rollers, door, patio..... 216		Roof patch
fees..... 29	lavatory bowl..... 366		Roll-on		cotton..... 136
Red cedar, western,	Replace-A-Vent..... 89		texture, acoustic..... 493		rubberized..... 135
siding..... 108	Replacement screen		texture, stucco..... 493		Roof patching cement,
Red Dot..... 427-428	doors..... 203		Rollup doors, garage..... 223		white..... 135
Red oak	Replacement windows		Roman tub		Roof repair..... 58
plank flooring..... 280	vinyl..... 157		filler..... 354		Roof sheathing..... 60
strip flooring..... 278, 281	vinyl double-hung..... 157		trim & rough-in..... 354		Roof turbine vents..... 91, 146
Red rosin sheathing..... 87	vinyl single-hung..... 158		Romex..... 412		Roof vent
RedGard waterproofing	Replastering		Romex sheathed cable		repair, waterproofing 130
membrane..... 305	pool..... 460		indoor..... 417-418		waterproofing..... 130
Reducer	spa..... 460		indoor & outdoor..... 418		Roof vent kit, bath..... 382
bamboo..... 280	Resilient flooring, sheet		Roof		Roof ventilation..... 83
carpet..... 284	vinyl..... 274		bay window..... 164		

Roof waterproofing	135	Rosewood		Sanded grout	307	Screws & clips, sink	
repair	129	hardwood flooring	279	Sander		mount	329
replace	130	flooring trim	279	drywall	250	Scribing felt	291
Roofing		Roto hammer rental	28	gypsum wallboard	251	Scrubber, negative air	539
asphalt	132	Rough carpentry	53	Sanding hardwood floor	281	Seal, garage door	223
base sheet	133	backing and nailers	73	Sanding sealer,		Seal & tile gloss	308
broom with scraper	136	bracing	67	waterborne	489	Sealant, laminate flooring	283
built-up	132, 134	ceiling joists	73	Sanding sponge	250	Sealer	
built-up, patch	131-132	ceilings and joists	73	Sanding system		concrete	495
built-up, tear-off	129	collar beams	75	drywall	251	exposed aggregate	495
cement trowel	136	collar ties	75	dustless	251	grout	308
clay tile	139	curbs	75	Sanding, paint prep		high-gloss finish	307
concrete tile	140	dormer studs	75	manhours	466-467	oil-based	493
demolition	33	floor joists	64	Sand-Texture wall texture	493	painting	483-484
felt	133	floor trusses	65	Sash		primer	493
fiber-cement slate	139	furring	72	balance	166	sanding	489
fiberglass panels	140	girders	62	cord repair	156	sill	86
flashing, removal	134	joists	68	lift	166	tile	308
flashing, self-adhesive	134	ledger strips	73	locks	166	tile & stone	307
galvanized	138	plates	67	springs, wood window	166	water-based	492
granules	136	posts	63	window, repair	156	waterproofing	495
gravel	132	purlins	76	Saturated cotton roof patch		Sealer primer	
membrane	132	rafters	75	asphalt	136	stainblocker	494
mop	136	ribbons	73	Savannah lavatory faucet	373	water-base	494
patch	135	roof trusses	76	Sawing concrete slab	50	Sealer's Choice 15 Gold	307
roll	133-134	sill plates	64	SBS field adhesive	134	Sealing conduit locknut,	
sheet metal	138	studding	66-67	ScapeWel window	172	steel	430
sheets	138	subflooring	66	Schedule 40 PVC		Seal-Krete	495
shingle remover	136	trimmers	75	conduit	420	Seam coating kit	291
shingle starter strip	131	wall openings	72	Schedule 80 PVC		Seats, toilet	365-366
shingles, algae-		wall studs	66	conduit	420	SEBS styrene-ethylene-	
resistant	130	window openings	72	Schluter Ditra poly-		butylene-styrene	
shingles, architectural	130	Round conduit box		ethylene membrane	308	asphalt	135
shingles, asphalt		non-metallic	428	Schluter Systems	303-304	Security doors	205
fiberglass	130-131	Round edge stop		Scotchguard	532	heavy-duty	205
shingles, hip and ridge	131	molding	261	Scratch coat, plaster	114	Security doors, Paradise-	
slate	139	Royal Mouldings	263-270	Screed, rental	39	style	205
tar	132	Royelle vinyl sheet		Screen		Security gates, folding	205
tear-off	129	flooring	287	aluminum rolls	168	Security light, motion	
tile	140	Rub, carborundum	50	fiberglass rolls	168	sensor	443
tile, clay	139	Rubber		frame kit	167	Security storm doors	205
tools	136	mallet	291	patch	168	Seckure paper	88
Roofing cement, built-up	133	roof jack	145	porch enclosure	458	Seismic safety standards,	
Roofing fabric, asphalt	131	wall base	292	spline	168, 459	earthquakes	497
Roofing louver,		wet patch roof cement	135	window	168	Self-stick	
galvanized	145	Rubber studded tile	290	Screen doors		parquet flooring, oak	282
Roofing material,		Rubber tile adhesive	290	hardware	203	vinyl wall base	293
for new roof	122	Rubberized roof patch	135	installation	202-203	wall base	293
built-up	127	Rust resistant finish	496	metal	203	Self-storing storm doors	204
modified bitumen		Rustic oak plank flooring	280	pine	203	Self-tapping screws	141
(APP and SBS)	127	Rustic siding, pine	108, 110	replacement	203	Semco	305
shingles, asphalt-		Rust-Oleum	488-489, 496	security, steel	203	Semi-gloss	
fiberglass (composition)	124	S		steel, replacement	203	latex paint	493
shingles, wood	123	Sack finish	50	vinyl	203	wall enamel	492
Roofing materials, life		Saddle & sill	300	wood	203	Senco	249
expectancy	121	Safety respirator mask	250	Screen frame	458	SensAire wall control	
Roof-mount power		Safety Zone vinyl floor		Screen vents	89	switch	382
ventilator	92	Safety tile	289	Screen wire	458	Sentinel Products	285
Roofs		Sahara ceiling panels	256	Screens		Sentinel sheet vinyl	
flashing leaks	118	Saltillo		patio door	216	flooring	287
how to measure area	128	ceramic floor tile	299	window	160	Septic disposal cartridge	340
repairs	121	grout mix	307	Screw gun, drywall	249	Sequentia	253
source of leaks	117	Salvage, demolition	35	Screwdriver, drywall	249	Service entrance	
Roof-to-wall flashing	144	Sampling, mold	535	Screwdriver bit, drywall	250	cap	432
Rope cast molding	262	San Marino ceiling fan	444	Screw-in connector, flex	426	cap, PVC	422
Rope crown cast molding	262	Sand, fill	40, 49	Screws		device, combination	438
Roppe	292-293	Sand & Kleen	251	deck	459	elbow	432
Rosette molding	259	Sandblasting		drywall	249	meter main load center	437
square	259	manhours	467	drywall to steel	249	roof flashing	432
Rosette set	195	masonry	115	drywall to wood	249	Service entrance conduit	
				lag, drill tip	255	sill plate	432
				self-tapping	141	Service panel, electric	439

Set screw connector	Shingle starter strip	131	corrugated	113	Single-hung windows	158,
EMT	Shingles	34	demolition	34	.....	160-161
Setting adhesive, marble	algae-resistant	130	fiber cement	112	Single-texture drywall	
& granite stone	architectural	130	fiber cement shingles	113	brush	250
Seychelle pedestal	asphalt	130	hardboard	100	Sink	
lavatory	asphalt, repair	130	hardboard lap	112	bathroom	367-369
bowl	cedar	138	hardboard panel	111	frame	334
Shake felt	demolition	33	lap	110	hardware	329
Shakertown siding	fiberglass asphalt	131	log cabin	110	lavatory	367-369
Shakes	hip and ridge	131	mineral	93-94	mounting kit	334
siding, replacement	interlocking	130	mounting block, fixture	107	removal	315
cedar	laminated	130	Nailite	107	strainer shank nut	336
Shank nut sink strainer	panelized	113	OSB	111	under counter mount	368
Shaping slopes	roofing	130	painting	482	Sink rail, ceramic	302
Shaw HardSurfaces	siding	113	panel	98	Sink trap remove &	
Shear wall	siding, replacement	105	panelized shingles	113	replace	352
Sheathed cable	slate	139	pine	108	Sink, lavatory	
indoor	tin repair	144	pine rustic	108, 110	Hydra	369
indoor & outdoor	wood	137	pine shiplap	110	Magnolia	369
Romex	wood, repair	137	plywood	99, 111	Morning	369
Type NM-B Romex	ShockWave	536	redwood	109	Reminiscence	369
Sheathing	Shoe molding, base	264	removal	106	Sinks	
board	Shower & bathtub		repair	105	bar	337-338
carpentry	units	356-357	resin	107	bowl	337
demolition	Shower & tub faucet		shingle	113	Breckenridge	331
insulated	single control	360	shingle and shake	100	Cambridge	331
plywood	single-knob	360	shingles, replacement	105	cast iron	329-330
roof	Shower base	358	southern yellow		composite	330-331, 338
T 1-11	Shower curtain rod,		pine	109-110	double bowl	328, 330
Sheathing paper	permanent	389	staining	482	double bowl composite	331
Sheet	Shower door	356	T 1-11 plywood	111	entertainment	338
acrylic	bypass	360	thermoplastic	107	kitchen	329-331
mirrored	hinged	359	touch up paint	108	kitchen, basket strainer	335
Plexiglas	pivot	359	trim	114	mounting clips	329
Sheet flooring	swinging	359	vinyl	96, 107	polycast	330
adhesive	Shower faucet	360-362	western red cedar	108	Silhouette polycast	330
removal	lever handle	361	wood	93	single bowl	328, 330
vinyl	single-knob	360	wood, diagonal	97	stainless steel	328-329
Sheet metal	Shower head		wood, horizontal	97	stainless steel kitchen	328
gutters, downspouts	power massage	362	wood, vertical	97	stainless steel single	
roofing	remove & replace	352	Siding & deck stain	487	bowl	328
Sheetrock	sunflower	362	Siding and roofing, metal	247	utility	337
ceiling panel	Shower pan	359	Siding installation,		Skid steer loaders rental	39
demolition	Shower stall	357	removing old siding	95	Skimcoat patch &	
fire code	demolition	357	Siding, estimating		underlayment	286
flexible	smooth wall	357	procedure	104	Skylight removal	172
installation	three-piece	358	Signature kitchen faucet	332	Skylights	
painting	Shower stall kit		SilentStep	283	acrylic	173
repair	neo-angle	358	Silestone countertop	323	cut roof opening	172
water resistant	round	358	Silhouette polycast		fixed	172-173
Sheets, roofing	Showers	356-357	kitchen sink	330	trimmers	75
Shelf	corner entry kit	358	Silicone roof		tubular	172
bath, with glass	fiberglass	357	coating	137, 141	venting	173
bathroom	stall	357	Silicone sealant		Slab doors	192-194, 206-207
corner	stall kit	357	window caulk	157	installation	191
glass	stall kit, add-on	362	Siliconizer crack filler	136	Slab leveling	513
painting	ShowMe	8	Sill		Slabs	
Shellac, amber	Shutters		door, thermal	195	base	49
ShellGard RTU	painting	481-482	window	165	calculating area	42
Shelves, painting labor	remove and replace	106	window, ceramic	301	concrete	46
Sherwin-Williams	window	167	Sill & saddle	300	finishes	49
Shield, ice & water	Sidelites, steel door	198	Sill plate, service		forms	43
Shim shingles	Sidewalk demolition	31	entrance conduit	432	garage	42
Shims	Sidewalks, concrete	46, 49	Sill plate gasket	86	on grade	49
flooring	Side-wired receptacle,		Sill plates	64	repair	37
stud	single	435	removal	63	Slate	
Shingle flashing	Siding	107, 112	Sill sealer	86	floor tile, natural	299
Shingle and shake siding	accessories, mounting	107	Single bowl kitchen sink		roofing	139
furring, estimating	aluminum	93, 114	stainless steel	328	tile, tumbled	300
Shingle panels	aluminum corrugated	113	Single gang wall plate	435	Sleepers, carpentry	73
Shingle siding	cedar	108	Single receptacle			
cedar	cedar T&G	109	side-wired	435		

- Slide dimmer
illuminated 436
incandescent 436
Sliding windows 161-162
Sloan Royal flush valve 363
Slopes, shaping 41
Slot aperture light kit 440
Smart home electrical
management system 444
Smoke alarm, dual
sensing 436
Smoke and CO Alarm 436
Smoke detectors 416
basic 436
dual sensing 436
dual-ionization 436
Snap Strap PVC conduit
clamp 420
Soaker bathtub 353
Soap dish 386-388
ceramic 304
porcelain 305
Soap dispenser 335
Soffit
painting 479-480
wood 73
Soffit vents, louvered 89
Soffits
aluminum 114
demolition 34
fiber cement 112
kitchen 316
pendent lighting 316
refrigerator, under
counter 316
removal 106
stucco 114
vinyl 108
Soil compaction 41
Solar lens 172
Solid core doors
birch exterior 192, 197
entry 193
fir entry 193
hardboard exterior 192, 197
hardboard interior 207
hardwood exterior 192
lauan exterior 192
prehung exterior 197
red oak 192
red oak exterior 192
Solid surface countertop 322
Solitaire bath fan 381
Sound baffle, removable 340
Sound control 86
Soundbloc foam
underlayment 283
Southern yellow pine
siding 109-110
Spa replastering 460
Spacer, laminate flooring 283
Spacing, rafter 88
Spanish tile roofing 139
Spar urethane
Helmsman 488
Spar varnish, marine 488
Spatter ceiling 245
Spatter drywall texture 244
Speaker wire 433
Speed-Wall
interior latex enamel 493
PVA latex primer 491
Spider box, electric 540
Spin-N-Lock sink strainer 335
Splash plate 344
Spline
screen, porch 459
tool 168
window screen 168
Split system, remove 398
Sponge, sanding, drywall 250
Spray adhesive 249
Spray painting, labor 468
Spray texture 244-246
ceiling 244
wallboard 244
Spreading soil 41
Spring cove molding 268
Spring wound timer
in-wall 436
Springs
garage door 223
garage, extension 225
window sash 166
Spruce lap siding 110
Square box
surface cover 425
welded 425
Square D 437-440
Square rosette molding 259
Squeeze connector, flex 427
Stain
acrylic interior &
exterior 487
concrete 495
deck 487
deck & siding 487
Deck Plus 487
exterior 487
gel 488
Plus 10 487
polyurethane 488
siding 487
white wash 488
wood 488
Stainblocker
primer sealer 494
water-based 492
Staining labor, manhours
ceiling 470
fascia 473
paneled walls 485
picket fence 474
siding 482
wood deck 475
Stainless steel sink 328-329
double bowl 328
single bowl 328
Stair nose 284
bamboo 280
molding 278-280
Stair stringers, basement 226
Stairs
basement 226
deck 457-458
demolition 35
porch 457-458
stringers 458
Stall kit, shower 357
add-on 362
corner entry 358
neo-angle 358
round 358
Stall, shower 357
fiberglass 358
Stamped concrete 50
Stanadyne 334, 360
Standard coupling
non-metallic 421
Standard radius elbow 421
Starter strip 131
Starter strip, aluminum
siding 114
Steam cleaning, masonry 115
Steel conduit
elbow 429
elbow, rigid or IMC 429
galvanized rigid 429
Steel doors
entry 199-200
exterior 198-199
exterior, with mini-blind 198
frames 194
garage 223
installation 197
screen 203
Steel octagon box cover 426
Steel sealing conduit
locknut 430
Stem wall 48
Step flashing 141, 144
copper 141
Sterling Plumbing 354-355
Stile & rail doors 208
Stilts, drywall 250
Stone
base 49
cleaning 115
countertops 323
floor tile 299
roofing 139
sealer 307
setting adhesive 306
slate 139
tile, travertine 298
tile, tumbled 300
Stonit 139
Stool molding primed
finger joint 261
Stop, gravel 142
Stop fixture supply 364
Stop molding 195
colonial 269
paperwrap colonial 269
parting 269
polystyrene colonial 269
polystyrene ranch 269
ranch 269
round edge 261
Stopper, drain 336
Stops Rust 496
Storage, off site 538
Storage cabinet
bath 383
etched glass 383
Store-in-Door 204
Storm collar
chimney 400-401
Storm doors 204-205
aluminum 205
full-view 205
removal 204
security 205
self-storing 204
triple-track 204
woodcore 205
Storm windows 149, 165
remove and replace 106
StormGuard 88
Straight blade receptacle
duplex 434
Straightening framing 514
Strainer
junior basket 338
sink shank nut 336
Strainer, basin remove
& replace 352
Strap
EMT 424
rigid conduit 431
Straps
framing 512
hardware 513
T 513
tie 513
Stress-block fabric
polyester 136
Stretch wrap 538
Stringers, deck stair 458
Strip, transition 292
Strip flooring
laminate 284
maple, unfinished 281
natural wood 279
red oak 281
white oak 281
Stripping
forms 44
soil 41
Stripping paint labor 467
Strips
asphalt roofing starter 131
cant 137
shingle starter 131
Structoglas 253
Stucco
knockdown 493
molding, redwood 196
paint 494
painting 480-481
plastering 114
portland cement 114
removal 106
repair 103, 105, 514
soffit vents 89
texture 493
wall assembly, wood
framed 71
Stud sensor, electronic 249
Stud straightening 67
Stud wall, demolition 33
Studding 66
Studs
carpentry piecework
rates 66
dormer 76
straps 513
wall assemblies 66
Stump grinder, rental 28
Stump grinding 29
Stylistik II floor tile 289
Styrene suspended
lighting panel 258
Styrene-ethylene-butylene-
styrene asphalt 135

Subfloor	fish.....	417	Tile	Tile accessory set,	
board sheathing.....	tile backer.....	249	accessories, ceramic.....	porcelain.....	305
OSB.....	Tape-on bead.....	247	accessories, toilet	Tile adhesive	
plywood.....	Tapping block.....	281	tissue holder.....	ceramic.....	293
Subflooring	TapTight		accessories,	resilient.....	290
installation.....	hardwood flooring.....	280	toothbrush holder.....	rubber.....	290
piecwork rates.....	hardwood molding.....	280	accessories, towel bar...	stone.....	306
Sump pump.....	Tar, roofing.....	132	acoustic, demolition.....	thin-set.....	306
Sundial vinyl sheet	T-astragal.....	194	anti-fracture membrane...	vinyl.....	290
flooring.....	Teak flooring.....	279	anti-fracture membrane	Tile adhesive caulk,	
Sunflower shower head...	Teak oil.....	491	kit.....	ceramic.....	307
Supply lines.....	Tear-off, roofing.....	129	backerboard.....	Tile backer.....	245
toilet.....	Temporary wall bracing....	67	bullnose, ceramic ...	Tile backer tape.....	249
Supply stop.....	Termin-8 wood		carpet.....	Tile backerboard.....	295
Surface box cover,	preservative.....	490	ceiling.....	Tile cutter, vinyl.....	291
square.....	Terrazzo, demolition.....	35	ceiling, acoustical.....	Tile flooring, cork.....	275
Surface preparation	Testing, mold.....	535	ceiling, tin design.....	Tile forms.....	355
flooring.....	Textolite counters.....	322	ceiling, wood fiber.....	Tile kit, bathtub.....	355
labor.....	Texture		ceramic caulk.....	Tile Perfect.....	307
manhours.....	paint.....	493	ceramic floor.....	Tile repair	
Surface preparation for	paint additive.....	493	ceramic floor & wall.....	mortar.....	306
painting or finishing.....	roll-on.....	493	ceramic wall.....	mortar, underwater.....	307
Surround, bathtub.....	Sand-Texture wall.....	493	ceramic, demolition.....	Tile tool, ceramic.....	291
Surround kit	stucco.....	493	clay, roofing.....	Tile tub wall.....	354
bathtub.....	Texture 1-11 plywood		concrete roof.....	Tile underlayment	
tub wall.....	siding.....	111	demolition.....	Aqua-Tough.....	295
Suspended ceiling	Texture brushes, drywall...	250	edge protection.....	Tile wall kit.....	355
demolition.....	Texture spray, gypsum		finish.....	Tile, ceiling, zero	
installation.....	board.....	244	floor.....	clearance grid system ...	255
installation kit.....	Texture touch-up kit		glazed ceramic.....	Tileboard	
light kit.....	acoustic ceiling.....	244	glazed porcelain.....	batten.....	251
lighting panel.....	Texture, drywall.....	244	gloss & seal.....	embossed.....	251
panel.....	ceiling.....	245	granite.....	Tileboard molding, vinyl...	270
panel, acoustical.....	spray.....	244, 246	granite floor.....	Tilt double-hung windows ...	163
Suspended ceiling	Textured ceiling panels ...	257	grout.....	Timberline Ultra.....	130
panel.....	Textured lap siding.....	111	grout, sanded.....	Timbertex.....	131
systems.....	Texturing paint additive		installation.....	Timer, in-wall, spring	
Suspended ceilings.....	Perlite.....	493	marble.....	wound.....	436
Sweep, door.....	The Association of Bay		marble floor.....	Timer switch.....	382
Swimming pools	Area Governments.....	500	mortar.....	Tin repair shingles.....	144
paint.....	Themes sheet vinyl		mosaic ceramic.....	Tissue holder.....	387-388
refinishing.....	flooring.....	287	natural cork.....	TJI joists.....	65
Switch	Thermal expansion tank...	406	non-sanded dry grout...	T-molding.....	280
AC quiet toggle.....	Thermal sill.....	195	parquet floor.....	bamboo.....	280
Decora AC quiet rocker	Thermoplastic siding.....	107	paver.....	wood floor.....	279
remove.....	Thermostat, floor		Place n Press floor.....	hardwood.....	279
sink top.....	warming system.....	305	polyethylene	Toggle switch, AC quiet ...	434
Switch & cover.....	Thermostat cable.....	433	membrane.....	Toilet base plate cover	364
Switch box	THHN copper wire,		quarry.....	Toilet bowl	
drawn 2-device.....	gauge.....	432	reducer strip.....	gasket.....	364
multi gang.....	Thin-set mortar.....	306	repair, mortar.....	reset.....	352
non-metallic old work	CustomBlend.....	306	resilient, demolition.....	Toilet fill valve	
Switches	Thompson's.....	490	roofing.....	anti-siphon.....	364
fan control.....	Thompsonized decking		rubber studded.....	remove & replace.....	352
timer, exhaust fan.....	lumber.....	454	Saltillo ceramic floor	Toilet flange, cast iron	364
	Thoro.....	495	sealer.....	Toilet paper holder ...	385-386,
	Thorseal protective		sealer, high-gloss.....	recessed.....	388
	coating.....	495	setting with adhesive.....	Toilet repair kit.....	364
	Threaded conduit body....	431	setting with mortar.....	Toilet seat	
	Three gang box		slate floor.....	cushioned vinyl.....	366
	Super Blue, non-		thin-set mortar.....	molded wood.....	365
	metallic.....	422	travertine floor.....	natural maple.....	366
	Threshold		tumbled marble listello ..	plastic open-front.....	365
	ceramic.....	301	tumbled slate.....	wood.....	365
	high boy.....	195	tumbled stone.....	Toilet supply line.....	364
	marble.....	300	vinyl composition	Toilet tank bolt kit.....	364
	patio door.....	216	vinyl floor.....	Toilet tissue paper	
	Thru-the-wall utility fan ...	380	wall.....	holder.....	304-305
	Thrutone.....	139	wall, ceramic.....	Toilet To Go Kit.....	362
	Thru-wall furnace, gas....	404	wood flooring.....		
	Tie straps.....	513			
	Ties, collar.....	75			

T

T 1-11 plywood siding.....	111
T molding.....	284
wood floor.....	278
Tall boy water heater.....	405
Tall Elite.....	355
Tamping, excavation.....	41
Tandem circuit breaker....	439
Tank, thermal expansion...	406
Tape	
acrylic.....	291
corner bead.....	249
drywall.....	246
drywall joint.....	246

- Toilets
 cadet..... 362
 Cadet..... 363
 Champion..... 363
 Comfort Height..... 363
 compact..... 362
 Gabrielle..... 363
 Hamilton..... 363
 hook-up kit for low-boy... 364
 one-piece..... 363
 pressure assist..... 363
 San Raphael..... 363
 urinals..... 364
 wall-mount..... 363
 Williamsburg..... 363
 Tongue and groove
 siding, cedar..... 109
 Tools
 ceramic tile..... 291
 drywall..... 249-251
 glazing..... 171
 roof repair..... 136
 spline..... 168
 Toothbrush & tumbler
 holder..... 305
 Toothbrush holder... 385-386,
 388
 porcelain..... 305
 Top, laminated
 plastic..... 323-324
 Topping compound
 wallboard..... 246
 Topping, concrete..... 50
 Topsoil, excavation..... 41
 Torsion springs..... 223
 Touch control lavatory
 faucet..... 371
 Touch-up kit
 spray texture..... 244
 wood floor..... 278
 Towel bar..... 385-388
 ceramic..... 305
 porcelain..... 305
 Towel ring..... 385-388
 Track, patio door..... 216
 TrafficMaster laminate
 flooring..... 284
 Transit mix concrete..... 46
 Transition reducer strip
 vinyl flooring..... 292
 Transition strip
 carpet to tile..... 292
 oak to tile..... 292
 Trap, lavatory, remove
 & replace..... 352
 Trash bins..... 29
 Trash compactor removal... 315
 Trash pump..... 540
 Travertine
 floor tile..... 299
 stone tile..... 298
 Treads, concrete, finishing 49
 Treatment, wood..... 490
 Tree removal..... 29
 Trenchers, rental..... 39
 Trenching..... 41
 hand..... 40
 Trim
 aluminum siding..... 114
 bamboo flooring..... 280
 door..... 194
 fiber cement siding..... 112
 hardwood flooring..... 281
 heart pine flooring..... 281
 painting labor..... 471, 479
 window..... 355
 wood flooring..... 279
 Trim & rough-in Roman
 tub..... 354
 Trim enamel, latex satin... 492
 Trim pack wood paneling... 252
 Trim paint..... 492
 eggshell..... 492
 flat..... 494
 Trimmers..... 75
 Trimming, trench bottom... 40
 Trine..... 436
 Triple-track storm
 doors..... 204-205
 Troffer fluorescent
 fixtures..... 258
 parabolic..... 258
 U-lamp..... 258
 Trowel
 drywall..... 250
 outside corner..... 250
 Trowel finishing, concrete... 49
 Troweling machine, rental... 39
 Trowels
 margin notch..... 291
 notched..... 291
 pointing..... 291
 Tru-Glaze 4508 epoxy
 gloss coating..... 496
 Trusses
 fink..... 76
 gable..... 76
 roof..... 76
 T-square, drywall..... 250
 T-straps..... 513
 T-top roof exhaust vent... 145
 Tub
 laundry..... 336
 utility laundry, kit..... 336
 Tub & shower faucet
 single control..... 360
 single-handle..... 360
 single-knob..... 360
 Tub door
 bypass..... 355
 sliding..... 356
 Tub faucet..... 360-362
 lever handle..... 361
 single-knob..... 360
 Tub, bath, removal..... 352
 Tub, laundry
 hose..... 337
 overflow tube..... 337
 Tubular skylights..... 172
 Tuf-Tex spray texture..... 246
 Tumbled tile
 marble listello..... 300
 slate..... 300
 stone..... 300
 Tumbler & toothbrush
 holder..... 305
 Tung oil..... 491
 Turbine vent, roof..... 91, 146
 Turned spindle deck rail... 456
 Twinfast..... 249
 Two-gang box, Super
 Blue, non-metallic..... 422
 Two-handle lavatory
 faucet..... 372
 Type X gypsum board..... 243
 Tyvec suit..... 538
 Tyvek house wrap..... 88
U
 U.S. Ceramic
 Tile..... 299, 301-303
 UF compression connector
 non-metallic..... 419
 UF-B sheathed cable..... 419
 U-lamp troffer fluorescent
 fixture..... 258
 Ultra Silent bath fan..... 379
 Ultra Touch..... 87
 Ultra-Hide
 alkyd gloss enamel..... 493
 interior latex eggshell..... 492
 interior latex paint..... 492
 interior paint..... 492
 Ultrasonic, Cleaning..... 530
 Undercoater interior
 enamel..... 491
 Undercounter refrigerator... 316
 Underground cable, UF-B
 sheathed..... 419
 Underground feeder
 compression connector,
 non-metallic..... 419
 Underlay, roof..... 88
 Underlayment..... 140, 283
 cement-based..... 285
 fast-setting patch..... 285
 foam..... 283-284
 laminate flooring..... 283-284
 liquid..... 285
 roof..... 134
 tile..... 295
 tile backerboard..... 295
 Underlayment & floor
 patch..... 286
 Underwater tile repair
 mortar..... 307
 Unfaced fiberglass batt
 insulation..... 84
 Universal hub bolt-on
 A type..... 438
 Urethane roof, spray
 foam..... 140
 Urethane sheathing..... 86
 Urinal flush valve, Sloan
 Royal..... 363
 Urinals, Dover..... 364
 USG..... 245, 254
 USG Interiors..... 257, 295
 Utilatub laundry tub..... 336
 Utility access door..... 248
 Utility bowl sink..... 337
 Utility cabinets
 birch..... 317
 finished..... 320
 maple..... 321
 oak..... 319, 321
 red oak..... 318
 Utility fan
 thru-the-wall..... 380
 vertical discharge..... 379
 Utility laundry tub kit..... 336
 Utility sink..... 337
V
 V siding, pine..... 108
 Vacuum, HEPA..... 540
 Valance, cabinet..... 316, 319
 Valley flashing
 aluminum..... 141
 roll..... 143
 Valspar..... 488, 491
 ValueTest exhaust fan..... 378
 ValueTest vertical
 discharge bath fan..... 379
 ValuSeries pointing
 trowel..... 291
 Valve lines..... 374
 Valves
 angle..... 364
 flush, Sloan Royal..... 363
 flush, urinal..... 363
 toilet, remove & replace... 352
 wall stop..... 364
 Vance Industries..... 334
 Vanguard hardwood
 flooring..... 280
 Vanity
 Arkansas..... 375
 Charleston..... 374
 Danville..... 375
 Kingston..... 374
 maple..... 375
 Monterey..... 375
 oak..... 374-375
 solid surface sink top..... 377
 Springfield..... 374
 Virginia..... 375
 with drawer..... 375
 with marble top..... 377-378
 Vanity cabinet..... 378
 mirrored with marble
 top..... 378
 Vanity mirror..... 382
 Vanity top
 granite..... 377
 Neptune shell marble.... 376
 Newport cultured
 marble..... 376
 oval bowl cultured
 marble..... 376-377
 rectangular cultured
 marble..... 376
 shell bowl cultured
 marble..... 376-377
 Vanity top and bowl
 cultured marble..... 377
 Vapor barrier..... 40, 81, 283
 blanket insulation..... 82
 paper..... 87
 perm rating..... 82
 vapor-resistant coating... 82
 Vapor retarder..... 92
 Varathane
 exterior classic clear..... 489
 exterior clear finish..... 489
 interior classic clear..... 489
 oil-based floor finish..... 489
 Varnish, marine..... 488
 Velux..... 172-173
 Veneer base board..... 245
 Veneer plaster..... 246
 Vent
 plumbing..... 389
 soffit..... 89

Vent channel, rafter bay 88	Vinyl flooring	Wall kit	Water
Vent kit, bath 382	removal..... 278	bathtub 354	blasting 115
Vent, roof	roll..... 286-287	tile..... 355	extraction 529
dormer..... 144	sheet..... 286-287	tub 354	Water Claw..... 531
ridge 144-145	transition reducer strip... 292	Wall lantern 443	Water closet
T-top exhaust 145	Vinyl flooring tools	Wall light, opal glass 441	flange, cast iron..... 364
turbine 146	roller, extendable..... 291	Wall louvers 91	toilet..... 362-363
waterproofing..... 130	Vinyl sheet flooring..... 287	Wall materials	Water damage
Vented range hood..... 343	Vinyl siding	ceiling tile..... 236	cleanup..... 524
Ventilation	mounting block 96	drywall 227	contaminated flood-
attic..... 83	trim pieces..... 96	gypsum wallboard 227	water..... 516
crawlspace 82	Vinyl tile	lath and plaster 227	dryout 515
roof 83	adhesive 290	wood paneling 235	restorative drying..... 515
Ventilator, bath 382	cutter..... 291	Wall oven..... 342	Water damage and mold
Ventilator retrofit, heat	Vinyl tile cutter..... 291	double..... 342	remediation..... 515
recovery..... 406	Vinyl tileboard molding... 270	Wall paint..... 492	insurance coverage 515
Ventilators, power..... 92	Vinyl wall base	eggshell..... 492	(OSHA) 516
Venting skylights 173	dryback..... 292	latex..... 492	personal protective
Ventlite doors	self-stick..... 293	Wall plate	gear 516
fiberglass exterior..... 201	Vinyl-clad	coaxial cable..... 433	Water damage, dryout
steel exterior..... 199	wood awning windows ... 160	decorator phone 433	air movers..... 518
Vents	wood casement	single gang Decora 435	basement..... 520
attic..... 91	windows..... 160	single gang plastic..... 435	concrete block 520
cedar 90	wood windows..... 159	Wall registers,	dehumidifiers 518
continuous 89		installation 397	dessicants 518
dormer..... 90		Wall stop..... 364	electric system..... 521
eave..... 90		Wall surround kit	floor cover..... 520
foundation..... 88		bathtub 355	floors..... 520
gable..... 89-90		tub 355	gas and oil appliances... 521
louvered..... 90		Wall texture	hygrometer 518
redwood..... 90		Sand Texture..... 493	insulation 519
ridge 90		Wall tile, ceramic..... 301, 303	paneling..... 520
roof turbine 91		Wallboard	plaster..... 519
screen..... 89		demolition 34, 316	stucco 519
soffit..... 89		L-trim 248	wallboard 519
under eave 89		mold resistant..... 243	wallcovering..... 520
VentSure ridge vent..... 144		painting..... 483-484	wood..... 519
Vermiculite insulation 87		primer 246	Water damage, dryout,
Vertical discharge bath		sander 250	structural drying
fan 379		texture spray..... 244	air movers 522
ValueTest 379		Wallboard stilts..... 250	ceilings 522
Vertical discharge utility		Wallcovering, designer	hardwood flooring..... 523
fan 379		panel..... 252	negative air scrubbers... 523
Vibrators, rental..... 39		Wall-mount lantern,	walls..... 522
Victorian base molding,		curved glass 443	Water dispenser 336
hardwood..... 259		Wall-mounted lavatory,	Water extraction 529-531
Victorian lavatory faucet... 373		removal..... 367	carpet 531
Viewer, door 214		Walls	hard surface 531
Villela faucet..... 370		adding..... 241	Water hammer..... 393
Vinyl		concrete..... 47	arrester 407
bay windows..... 158		demolition 30	Water heaters 394
circular windows 159		painting..... 480-485	100-gallon commercial... 405
door bottom 196		partition, adding..... 270	Ariston 407
double-hung		removal..... 239	bracing..... 512
replacement windows... 157		setting with adhesive.... 294	connection 512
fascia 108		setting with mortar..... 294	electric 406-407
garden windows 158		staining 485	electric, tankless..... 407
hopper windows 159		tile 294	FVIR 405
jealousie windows 159		Warming system	gas..... 405
patch..... 285		ceramic tile floor 305	gas fired..... 405
screen doors..... 203		thermostat 305	gas, tankless 407
siding 107		Wash down, manhours... 467	high altitude 405
siding removal 106		Washer kitchen sink	oil fired..... 405
siding repair..... 105		basket strainer..... 336	point-of-use 407
single-hung windows 158		Washer dryer wall	PowerStream..... 407
soffit..... 108		cabinets 319	power-vent..... 405
Vinyl composition		Washing	propane 405
tile..... 289-290		masonry..... 115	propane fired 405
Vinyl drywall outside		pressure 468	tall boy 405
corner bead 248		Washing, paint prep,	Water pipe, remove &
Vinyl floor tile..... 288-289		manhours 467	replace..... 408
Vinyl floor tile,		Waste disposal..... 29	Water pump..... 540
slip-retardant 289		Watco 488	Water resistant gypsum
			board 243

- Water Seal waterproofer ... 490
 Water shield 88
 Water supply, low water pressure 393
 Water surge shock absorber 407
 Water table 38
 Water-based primer 493
 Water-based wood stain ... 488
 Waterblasting
 manhours 468
 masonry 115
 Waterborne sanding sealer 489
 Waterfall kitchen faucet ... 333
 Waterproofer, concrete & masonry 495
 WaterSeal 490
 Waterproofing
 masonry walls 130
 material 135
 membrane 305
 metal roof 135
 paint, elastomeric 494
 paper 88
 roof vent 130
 roof, remove & replace ... 130
 roof, repair 129
 sealer 495
 wood protector 490
 Watertight conduit hub ... 430
 Watts Radiant 305
 Wave bath light fixture 441
 Wax
 bowling alley 491
 paste 491
 Wax toilet bowl gasket ... 364
 Weather head 432
 PVC 422
 Weatherproof blank cover, non-metallic 428
 Weatherproof conduit box 427
 Weatherproof electrical box, 2 gang 427
 Weatherproof lampholder & cover 428
 Weatherproofing 88
 Weather-resistant wood coating 488
 Weatherstripping
 aluminum, adjustable ... 196
 foam 196
 garage door 223
 magnetic 196
 vinyl, remove & replace ... 196
 window seal sets 171
 Weco 307
 Welded handy box 424
 Welded square box 425
 Welded wire mesh 45
 Western red cedar siding ... 108
 Westminster Ceramics ... 300
 Wet location conduit box cover 428
 Wet location receptacle cover, GFCI 428
 Wet patch roof cement 135
 rubber 135
 Wet-Stick roof cement 135
 Wheel glass cutters 171
 Wheel loader, rental 28, 39
 Wheelbarrow 540
 Whirlpool bath
 Cadet Elite 353
 Devonshire 354
 Elite EZ-Install heater ... 354
 Portrait 354
 Renaissance 353
 Williamsburg Elite 353
 Whirlpool tub apron 354
 White cement 114
 White Diamond bowling alley wax 491
 White oak strip flooring ... 281
 White wash pickling stain ... 488
 Whole house fans 91
 Williamsburg
 lavatory faucet 372
 pedestal lavatory bowl ... 366
 Roman tub filler 354
 Wilsonart counters 322
 Wind clips 140
 Window
 demolition, wet 534
 drip cap 141
 framing 69
 screen 168
 straighten opening 514
 Window bolt
 double-hung 166
 Window glass, remove & replace 170
 Window grille systems 169
 Window guards 167
 Window locks
 flip lock 171
 key, sliding 171
 thumbscrew bar 171
 Window mullions 166
 Window openings
 closure, masonry wall ... 156
 closure, wood frame 156
 cut new 156
 Window operators
 awning 166
 jalousie 166
 Window painting
 labor 486-487
 Window roof covers, bay ... 164
 Window roofs 164-165
 Window screens 160
 patch 168
 spline 168
 Window shutters 167
 Window sill 165
 ceramic 301
 Window trim, bath wall ... 355
 Window wrap 141
 Windows
 adding or moving 153
 aluminum 148
 aluminum single hung 160-161
 aluminum sliding 161-162
 aluminum, horizontal ... 161
 awning 160
 awning, aluminum 162
 bay 158
 bay, angle 164
 building codes 148
 casement 160
 casement bow 164
 casement, bay 158
 caulk 157
 caulk removal 157
 circular, vinyl 159
 counterweighted 152
 cut new opening 156
 double-hung 157, 163
 egress window 172
 energy-efficiency standards 148
 escape wells 172
 fixed aluminum 162
 fixed octagonal 163
 garden 158
 glass setting labor 170
 glazing putty replacement 150
 grille sets, tilt sash 169
 heat loss and gain 147
 jalousie 159, 163
 louvered, aluminum 163
 Low-E glass 147
 measure & cut glass 170
 modern 147
 octagonal, wood 163
 picture 162
 removal 35, 156
 replacement 155, 157-158
 sash repair 151, 156
 sash springs 166
 sill, ceramic 301
 size, reducing 156
 storm 149, 165
 trim removal 156
 vinyl bay 158
 vinyl double hung 157
 vinyl garden 158
 vinyl hopper 159
 vinyl jalousie 159
 vinyl single hung 158
 vinyl, custom 157
 vinyl, replacement 157
 vinyl-clad awning 160
 vinyl-clad casement 160
 vinyl-clad double-hung 159-160
 vinyl-clad wood 159
 weatherstripping 171
 wood 147
 wood, repair 149
 wood, replacement 156
 Wire
 bell 433
 screen 458
 speaker 433
 thermostat cable 433
 Type THHN copper 432
 UF cable 419
 Wire brush 50
 Wire mesh, welded 45
 Wireless door bell 436
 Wiring residences
 adding outlets and switches 414
 aluminum wiring 411
 ground wire 413
 knob and tube wiring ... 411
 low voltage wiring 414
 non-metallic sheathed cable (Romex) 412
 smoke detectors 416
 Wonderboard tile backerboard 295
 Wood
 shakes 137
 shingles 137
 siding removal 106
 Wood bleach kit 487
 Wood coating, weather-resistant 488
 Wood conditioner 491
 Wood deck
 patch built-up roofing ... 132
 staining 475
 Wood doors
 entry 193
 screen 203
 screen, installation 202
 screen, remove & replace 202
 Wood filler
 acrylic 281
 Wood finish 487
 penetrating 487
 Wood flooring 281
 adhesive 282
 hardwood 272
 installation tools 281
 laminate 274
 plank 280
 softwood 272
 strip 272
 strips 279
 tile 282
 touch-up 278
 trim 279
 Wood paneling trim pack ... 252
 Wood preservative 463, 490-491
 copper 491
 Termin-8 490
 Wood protector
 clear 490
 waterproofing 490
 WaterSeal 490
 Wood shingle, patch 137
 Wood siding
 bevel 93
 board and batten 98
 bungalow 93
 clapboard 93
 decay 93
 horizontal 97
 horizontal patterns 97
 lap 93
 moisture damage 93
 painting 93
 repair 93
 vertical 97
 vertical patterns 97
 vertical tongue and groove 97
 Wood stain
 water-based 488
 Wood toilet seat 365
 Wood treatment 490
 Wood window repair 149
 Wood-burning furnace 404
 Woodcore storm doors 205
 Wool carpet 308
 Wrap
 window 141
X - Y - Z
 X type gypsum board 243
 Zinsser 490
 ZPW clear wood preservative 491