

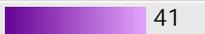


# TORQ Analysis of Construction Carpenters to Brickmasons and Blockmasons

ANALYSIS INPUT					
Transfer	Title	O*NET	Filters		
From Title:	Construction Carpenters	47-2031.01	Abilities:	Importance Level: 50	Weight: 1
To Title:	Brickmasons and Blockmasons	47-2021.00	Skills:	Importance Level: 69	Weight: 1
Labor Market Area:	Maine Statewide		Knowledge:	Importance Level: 69	Weight: 1

TORQ RESULTS							
Grand TORQ:					89		
Ability TORQ		Skills TORQ		Knowledge TORQ			
Level	 92	Level	 84	Level	 89		
Gaps To Narrow if Possible			Upgrade These Skills		Knowledge to Add		
Ability	Level	Gap	Impt	Skill	Level	Gap	Impt
Trunk Strength	57	6	68	No Skills Upgrade Required!		No Knowledge Upgrades Required!	

LEVEL and IMPT (IMPORTANCE) refer to the Target Brickmasons and Blockmasons. GAP refers to level difference between Construction Carpenters and Brickmasons and Blockmasons.

ASK ANALYSIS			
Ability Level Comparison - Abilities with importance scores over 50			
Description	Construction Carpenters	Brickmasons and Blockmasons	Importance
Trunk Strength	51 	57 	68 
Visualization	60 	51 	62 
Manual Dexterity	55 	42 	62 
Near Vision	50 	48 	62 
Problem Sensitivity	50 	41 	59 
Information Ordering	59 	48 	56 
Oral Comprehension	51 	50 	53 
Arm-Hand Steadiness	53 	34 	53 
Extent Flexibility	64 	55 	53 
Multilimb Coordination	50 	37 	50 
Static Strength	57 	44 	50 
Stamina	44 	41 	50 
Skill Level Comparison - Abilities with importance scores over 69			
Description	Construction Carpenters	Brickmasons and Blockmasons	Importance
Knowledge Level Comparison - Knowledge with importance scores over 69			



Description	Construction Carpenters	Brickmasons and Blockmasons	Importance
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### Experience & Education Comparison

Related Work Experience Comparison			Required Education Level Comparison		
Description	Construction Carpenters	Brickmasons and Blockmasons	Description	Construction Carpenters	Brickmasons and Blockmasons
10+ years	3%	11%	Doctoral	0%	0%
8-10 years	0%	1%	Professional Degree	0%	0%
6-8 years	18%	0%	Post-Masters Cert	0%	0%
4-6 years	36%	10%	Master's Degree	0%	0%
2-4 years	0%	49%	Post-Bachelor Cert	0%	0%
1-2 years	21%	13%	Bachelors	0%	0%
6-12 months	15%	1%	AA or Equiv	0%	0%
3-6 months	1%	0%	Some College	1%	0%
1-3 months	0%	0%	Post-Secondary Certificate	44%	11%
0-1 month	0%	0%	High School Diploma or GED	24%	50%
None	2%	10%	No HSD or GED	28%	37%

Construction Carpenters

Brickmasons and Blockmasons

#### Most Common Educational/Training Requirement:

Long-term on-the-job training

Long-term on-the-job training

#### Job Zone Comparison

3 - Job Zone Three: Medium Preparation Needed

2 - Job Zone Two: Some Preparation Needed

Previous work-related skill, knowledge, or experience is required for these occupations. For example, an electrician must have completed three or four years of apprenticeship or several years of vocational training, and often must have passed a licensing exam, in order to perform the job.

Some previous work-related skill, knowledge, or experience may be helpful in these occupations, but usually is not needed. For example, a teller might benefit from experience working directly with the public, but an inexperienced person could still learn to be a teller with little difficulty.

Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree. Some may require a bachelor's degree.

These occupations usually require a high school diploma and may require some vocational training or job-related course work. In some cases, an associate's or bachelor's degree could be needed.

Employees in these occupations usually need one or two years of training involving both on-the-job experience and informal training with experienced workers.

Employees in these occupations need anywhere from a few months to one year of working with experienced employees.

### Tasks

Construction Carpenters

Brickmasons and Blockmasons

Core Tasks

Core Tasks

Generalized Work Activities:

Generalized Work Activities:

- Controlling Machines and Processes - Using either control mechanisms or direct physical activity to operate machines or processes (not including computers or vehicles).
- Judging the Qualities of Things, Services, or People - Assessing the value, importance, or quality of things or people.
- Monitor Processes, Materials, or Surroundings - Monitoring and reviewing information from materials, events, or the environment, to detect or assess problems.
- Communicating with Supervisors, Peers, or Subordinates - Providing information to

- Getting Information - Observing, receiving, and otherwise obtaining information from all relevant sources.
- Performing General Physical Activities - Performing physical activities that require considerable use of your arms and legs and moving your whole body, such as climbing, lifting, balancing, walking, stooping, and handling of materials.
- Handling and Moving Objects - Using hands and arms in handling, installing, positioning, and moving materials, and manipulating things.



supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.

- Coordinating the Work and Activities of Others- Getting members of a group to work together to accomplish tasks.

#### Specific Tasks

##### Occupation Specific Tasks:

- Apply shock-absorbing, sound-deadening, and decorative paneling to ceilings and walls.
- Arrange for subcontractors to deal with special areas such as heating and electrical wiring work.
- Assemble and fasten materials to make framework or props, using hand tools and wood screws, nails, dowel pins, or glue.
- Build or repair cabinets, doors, frameworks, floors, and other wooden fixtures used in buildings, using woodworking machines, carpenter's hand tools, and power tools.
- Construct forms and chutes for pouring concrete.
- Cover subfloors with building paper to keep out moisture and lay hardwood, parquet, and wood-strip-block floors by nailing floors to subfloor or cementing them to mastic or asphalt base.
- Erect scaffolding and ladders for assembling structures above ground level.
- Fill cracks and other defects in plaster or plasterboard and sand patch, using patching plaster, trowel, and sanding tool.
- Finish surfaces of woodwork or wallboard in houses and buildings, using paint, hand tools, and paneling.
- Follow established safety rules and regulations and maintain a safe and clean environment.
- Inspect ceiling or floor tile, wall coverings, siding, glass, or woodwork to detect broken or damaged structures.
- Install structures and fixtures, such as windows, frames, floorings, and trim, or hardware, using carpenter's hand and power tools.
- Maintain records, document actions and present written progress reports.
- Measure and mark cutting lines on materials, using ruler, pencil, chalk, and marking gauge.
- Perform minor plumbing, welding or concrete mixing work.
- Prepare cost estimates for clients or employers.
- Remove damaged or defective parts or sections of structures and repair or replace, using hand tools.
- Select and order lumber and other required materials.
- Shape or cut materials to specified measurements, using hand tools, machines, or power saw.

- Inspecting Equipment, Structures, or Material - Inspecting equipment, structures, or materials to identify the cause of errors or other problems or defects.
- Making Decisions and Solving Problems - Analyzing information and evaluating results to choose the best solution and solve problems.

#### Specific Tasks

##### Occupation Specific Tasks:

- Apply and smooth mortar or other mixture over work surface.
- Break or cut bricks, tiles, or blocks to size, using trowel edge, hammer, or power saw.
- Calculate angles and courses and determine vertical and horizontal alignment of courses.
- Clean working surface to remove scale, dust, soot, or chips of brick and mortar, using broom, wire brush, or scraper.
- Construct corners by fastening in plumb position a corner pole or building a corner pyramid of bricks, and filling in between the corners using a line from corner to corner to guide each course, or layer, of brick.
- Examine brickwork or structure to determine need for repair.
- Fasten or fuse brick or other building material to structure with wire clamps, anchor holes, torch, or cement.
- Interpret blueprints and drawings to determine specifications and to calculate the materials required.
- Lay and align bricks, blocks, or tiles to build or repair structures or high temperature equipment, such as cupola, kilns, ovens, or furnaces.
- Measure distance from reference points and mark guidelines to lay out work, using plumb bobs and levels.
- Mix specified amounts of sand, clay, dirt, or mortar powder with water to form refractory mixtures.
- Remove burned or damaged brick or mortar, using sledgehammer, crowbar, chipping gun, or chisel.
- Remove excess mortar with trowels and hand tools, and finish mortar joints with jointing tools, for a sealed, uniform appearance.
- Spray or spread refractory material over brickwork to protect against deterioration.

#### Detailed Tasks

##### Detailed Work Activities:

- adhere to safety procedures
- apply adhesives, caulking, sealants, or coatings
- apply cleaning solvents
- apply grouting or other masonry adhesives
- apply plaster, stucco or related material



- Study specifications in blueprints, sketches or building plans to prepare project layout and determine dimensions and materials required.
- Verify trueness of structure, using plumb bob and level.
- Work with or remove hazardous material.

#### Detailed Tasks

##### Detailed Work Activities:

- adhere to safety procedures
- anchor or brace wooden structures, frameworks, or forms
- apply adhesives, caulking, sealants, or coatings
- attach moisture barrier sheeting over construction surfaces
- build or install cabinets or related interior wood fixtures
- build or repair structures in construction, repair, or manufacturing setting
- climb ladders, scaffolding, or utility or telephone poles
- construct, erect, or repair wooden frameworks or structures
- cut, shape, fit, or join wood or other construction materials
- determine dimensions of wooden furnishings or structures to be built
- determine installation, service, or repair needed
- determine material or tool requirements
- determine project methods and procedures
- direct and coordinate activities of workers or staff
- erect scaffold
- estimate time or cost for installation, repair, or construction projects
- examine products or work to verify conformance to specifications
- fabricate, assemble, or disassemble manufactured products by hand
- finish or refinish floor, furniture, or related wood surfaces
- inspect premises or structure for evidence of deterioration or damage
- install doors, wood floors, window frames, trim, or stairs
- install drywall, plasterboard, or wallboard
- install insulating materials
- install lathing to support plaster, stucco, or related construction material
- install locks, hinges, or related finish hardware
- install or replace glass in windows, skylights, or other structural surfaces
- install prefabricated building components
- install siding or sheeting
- install sub flooring, rough framing, or

- build or repair masonry structures, including kilns or furnaces
- build or repair structures in construction, repair, or manufacturing setting
- climb ladders, scaffolding, or utility or telephone poles
- compute production, construction, or installation specifications
- cut or shape stone, tile, brick, or related material
- determine material or tool requirements
- distinguish colors
- erect scaffold
- fabricate, assemble, or disassemble manufactured products by hand
- inspect premises or structure for evidence of deterioration or damage
- lay or install brick, block, stone, tile, or related masonry material
- lay out masonry work
- measure tile or masonry materials
- mix mortar, grout, slurry, concrete, or related masonry material
- mix paint, ingredients, or chemicals, according to specifications
- move or fit heavy objects
- perform safety inspections in construction or resource extraction setting
- plan or organize work
- prepare site or surfaces for concrete or masonry work
- read blueprints
- read tape measure
- read technical drawings
- repair or replace damaged bricks, tile, or related masonry
- select masonry material to be installed according to specifications
- understand construction specifications
- use acetylene welding/cutting torch
- use arc welding equipment
- use hand or power tools
- use measuring devices in construction or extraction work
- verify levelness or verticality, using level or plumb bob
- weld together metal parts, components, or structures

#### Technology - Examples

##### Accounting software

- Intuit QuickBooks

##### Analytical or scientific software

- Construction Management Software ProEst

##### Project management software



- install sub flooring, rough framing, or partitions
- install wall or ceiling shock-absorbing paneling or acoustical tiles
- laminate objects
- lay out woodworking projects
- lubricate machinery, equipment, or parts
- maintain records, reports, or files
- measure and mark reference points or cutting lines on workpieces
- measure, weigh, or count products or materials
- move materials or goods between work areas
- move or fit heavy objects
- obtain information from clients, customers, or patients
- operate hoist, winch, or hydraulic boom
- operate woodworking equipment/machinery
- order or purchase supplies, materials, or equipment
- paint walls or other structural surfaces
- perform safety inspections in construction or resource extraction setting
- position, align, or level machines, equipment, or structures
- prepare building surfaces for paint, finishes, wallpaper, or adhesives
- prepare reports
- read blueprints
- read specifications
- read tape measure
- read technical drawings
- recognize wood characteristics
- recognize wood species characteristics
- repair cracks, defects, or damage in installed building materials
- repair or replace locks, hinges, or related finish hardware
- repair prefabricated wooden building components
- signal directions or warnings to coworkers
- understand construction specifications
- use basic carpentry techniques
- use basic plumbing techniques
- use building materials for routine building maintenance
- use building or land use regulations
- use concrete fabrication techniques
- use hand or power tools
- use hand or power woodworking tools
- use hazardous materials information
- use measuring devices in construction or extraction work
- use oral or written communication techniques
- verify trueness of structure using plumb bob

- BVH Gregg Concrete
- CPR International Visual Estimator
- Daystar Masonry
- Estimating software
- RISA Technologies RISAMasonry
- Tradesman's Software Master Estimator

#### Tools - Examples

- Rubbing stones
- Adjustable widemouth pliers
- Adjustable wrenches
- Air compressors
- Block and tackle equipment
- Cutting torches
- Bolt cutters
- C clamps
- Caulking guns
- Chalk lines
- Pitching chisels
- Compasses
- Screeds
- Concrete vibrators
- Power joint cutters
- Desktop computers
- Edgers
- Floats
- Forklifts
- Gas generators
- Grease guns
- Brick hammers
- Grout pumps
- Hard hats
- Mortar hoes



- verify trueness of structure using plumb bob or level
- weld together metal parts, components, or structures

#### Technology - Examples

##### Accounting software

- Intuit QuickBooks
- Intuit Quicken software
- Job costing software

##### Computer aided design CAD software

- Drawing and drafting software

##### Information retrieval or search software

- Renaissance MasterCarpenter

##### Internet browser software

- Web browser software

##### Office suite software

- Microsoft Office

##### Project management software

- Bosch Punch List
- Craftsman CD Estimator
- Estimating software
- Turtle Creek Software Goldenseal Architect
- Virtual Boss software

##### Spreadsheet software

- Microsoft Excel

##### Web page creation and editing software

- Web page creation and editing software

##### Word processing software

- Microsoft Word
- Wilhelm Publishing Threshold

#### Tools - Examples

- Compressors
- Baluster jigs
- Bandsaws
- Sliding t-bevels
- Joiners
- Calculators
- Calipers

- Hoisting equipment
- Hydraulic jacks
- Ladders
- Transit levels
- Laser levels
- Outriggers
- Rubber mallets
- Bosun chairs
- Dust masks
- Notebook computers
- Picks
- Cement mixers
- Swing stages
- Plumb bobs
- Jackhammers
- Pneumatic chipping guns
- Hammer drills
- Angle grinders
- Circular saws
- Power screw guns
- Pressure gauges
- Power washers
- Protractors
- Crowbars
- Scrapers
- Brick spacing rulers
- Safety glasses
- Fall arrest systems
- Scaffolding
- Bracing equipment
- Round point shovels
- Skid steer loaders



- Caulking guns
- Pencil compasses
- Cranes
- Auger bits
- Push sticks
- Wood files
- Pettibones
- Power generators
- Chain saw jigs
- Rotary hammers
- Framing hammers
- Hard hats
- Electric impact wrenches
- Beam-lifting jacks
- Extension ladders
- Laser measuring tools
- Transits
- A-frame levels
- Marking gauges
- Moisture meters
- Needlenose pliers
- Notebook computers
- Personal computers
- Personal digital assistants PDA
- Planes
- Plumb bobs
- Pneumatic nail guns
- Cordless drills
- Disc grinders
- Electric planers
- Plunge routers
- Belt sanders
- Slings
- Socket wrench sets
- Precision squares
- Staple guns
- Measuring tapes
- Brick tongs
- Torque wrenches
- Tower cranes
- Adhesive trowels
- Utility knives
- Arc welders
- Electric winches
- Masonry brushes
- Wire snips
- Wood chisels
- Workshop cranes



- Beam saws
- Brad tackers
- Protractors
- Mini pry bars
- Cat's paws
- Respirators
- Rulers
- Work boots
- Fall arrest systems
- Dado blades
- Saw guides
- Hand saws
- Ladder jacks
- Ladder levelers
- Multi-tip screwdrivers
- Combination squares
- Hammer staplers
- Cross-curve tape measures
- Templates
- Theodolites
- Snips
- Right triangles
- Utility knives
- Chisels
- Drill presses

### Labor Market Comparison

Maine Department of Labor.

Description	Construction Carpenters	Brickmasons and Blockmasons	Difference
Median Wage	\$ 32,710	\$ 38,960	\$ 6,250
10th Percentile Wage	\$ 25,700	\$ 19,990	\$(5,710)
25th Percentile Wage	N/A	N/A	N/A



75th Percentile Wage	\$ 38,540	\$ 47,750	\$ 9,210
90th Percentile Wage	\$ 46,230	\$ 54,360	\$ 8,130
Mean Wage	\$ 34,030	\$ 38,530	\$ 4,500
Total Employment - 2452	6,150	270	-5,880
Employment Base - 2006	11,492	376	-11,116
Projected Employment - 2461	11,306	397	-10,909
Projected Job Growth - 2006-2461	-1.6 %	5.6 %	7.2 %
Projected Annual Openings - 2006-2461	156	10	-146
Special		★	
Special Occupations:	★ Maine High Wage - In Demand		

## National Job Posting Trends

Trend for Construction Carpenters and Brickmasons and Blockmasons



Data from [Indeed](#)

## Programs

### Related Programs

Mason and Tile Setter

Mason/Masonry. A program that prepares individuals to apply technical knowledge and skills in the laying and/or setting of brick, concrete block, hard tile, marble and related materials, using trowels, levels, hammers, chisels, and other hand tools. Includes instruction in technical mathematics, blueprint reading, structural masonry, decorative masonry, foundations, reinforcement, mortar preparation, cutting and finishing, and applicable codes and standards.

Institution	Address	City	URL
Southern Maine Community College	2 Fort Road	South Portland	<a href="http://www.smccME.edu">www.smccME.edu</a>



Southern Maine Community College

2 Fort Road

South Portland

[www.smccME.edu](http://www.smccME.edu)**Maine Statewide Promotion Opportunities for Construction Carpenters**

O*NET Code	Title	Grand TORQ	Job Zone	Employment	Median Wage	Difference	Growth	Annual Job Openings	Special
47-2031.01	Construction Carpenters	100	3	6,150	\$32,710.00	\$0.00	-2%	156	
47-2021.00	Brickmasons and Blockmasons	89	2	270	\$38,960.00	\$6,250.00	6%	10	★
47-2081.00	Drywall and Ceiling Tile Installers	89	3	340	\$39,090.00	\$6,380.00	5%	8	
47-2211.00	Sheet Metal Workers	87	2	1,260	\$35,650.00	\$2,940.00	7%	40	★
47-2031.02	Rough Carpenters	87	2	6,150	\$32,710.00	\$0.00	-2%	156	
47-2132.00	Insulation Workers, Mechanical	86	3	180	\$35,060.00	\$2,350.00	2%	4	
47-2082.00	Tapers	86	2	70	\$39,910.00	\$7,200.00	5%	3	
51-4192.00	Lay-Out Workers, Metal and Plastic	85	2	180	\$43,870.00	\$11,160.00	-24%	3	
51-4121.06	Welders, Cutters, and Welder Fitters	84	2	1,610	\$38,030.00	\$5,320.00	7%	49	★
47-2151.00	Pipelayers	84	2	60	\$33,170.00	\$460.00	8%	3	
47-2221.00	Structural Iron and Steel Workers	82	3	420	\$36,030.00	\$3,320.00	0%	12	
49-9096.00	Riggers	82	3	250	\$39,140.00	\$6,430.00	-12%	2	
47-1011.00	First-Line Supervisors/Managers of Construction Trades and Extraction Workers	81	3	3,190	\$46,630.00	\$13,920.00	3%	77	★
49-9044.00	Millwrights	79	3	830	\$41,280.00	\$8,570.00	-12%	11	
51-2041.00	Structural Metal Fabricators and Fitters	79	3	680	\$36,030.00	\$3,320.00	5%	15	

Special Occupations: ★ Maine High Wage - In Demand

**Top Industries for Brickmasons and Blockmasons**

Industry	NAICS	% of Industry	Employment	Projected Employment	% Change
Masonry contractors	238140	56.59%	89,591	99,250	10.78%
Self-employed workers, primary job	000601	23.44%	37,114	39,540	6.54%
Nonresidential building construction	236200	5.56%	8,795	9,855	12.05%



Other specialty trade contractors	238900	2.90%	4,584	5,066	10.52%
Residential building construction	236100	2.33%	3,693	4,159	12.61%
Poured concrete foundation and structure contractors	238110	2.13%	3,367	3,796	12.73%
Self-employed workers, secondary job	000602	1.06%	1,674	1,667	-0.45%
Employment services	561300	0.91%	1,441	1,824	26.56%
Iron and steel mills and ferroalloy manufacturing	331100	0.55%	863	581	-32.68%
Drywall and insulation contractors	238310	0.43%	674	719	6.66%
Local government, excluding education and hospitals	939300	0.25%	390	438	12.34%
Colleges, universities, and professional schools, public and private	611300	0.20%	323	361	11.87%
Highway, street, and bridge construction	237300	0.18%	286	308	7.67%
Elementary and secondary schools, public and private	611100	0.11%	167	176	5.38%
Landscaping services	561730	0.09%	137	159	15.79%

### Top Industries for Construction Carpenters

Industry	NAICS	% of Industry	Employment	Projected Employment	% Change
Self-employed workers, primary job	000601	30.54%	446,483	475,671	6.54%
Residential building construction	236100	21.02%	307,298	346,046	12.61%
Nonresidential building construction	236200	10.73%	156,942	175,852	12.05%
Drywall and insulation contractors	238310	2.97%	43,454	46,350	6.66%
Employment services	561300	1.98%	28,968	36,663	26.56%
Other wood product manufacturing	321900	1.33%	19,516	18,391	-5.77%
Poured concrete foundation and structure contractors	238110	1.30%	18,976	21,392	12.73%
Self-employed workers, secondary job	000602	1.24%	18,094	18,903	4.47%
Highway, street, and bridge construction	237300	0.99%	14,411	15,516	7.66%
Other specialty trade contractors	238900	0.97%	14,210	15,706	10.52%
Wood kitchen cabinet and countertop manufacturing	337110	0.78%	11,337	12,552	10.72%
Building material and supplies dealers	444100	0.71%	10,317	13,185	27.79%
Local government, excluding education and hospitals	939300	0.61%	8,942	10,045	12.34%
Other heavy and civil engineering construction	237900	0.45%	6,529	7,013	7.41%
Ship and boat building	336600	0.43%	6,281	7,030	11.93%

# TORQ Analysis of Construction Carpenters to Drywall and Ceiling Tile Installers

ANALYSIS INPUT					
Transfer	Title	O*NET	Filters		
From Title:	Construction Carpenters	47-2031.01	Abilities:	Importance Level: 50	Weight: 1
To Title:	Drywall and Ceiling Tile Installers	47-2081.00	Skills:	Importance Level: 69	Weight: 1
Labor Market Area:	Maine Statewide		Knowledge:	Importance Level: 69	Weight: 1

TORQ RESULTS											
Grand TORQ:										89	
Ability TORQ			Skills TORQ				Knowledge TORQ				
Level			93	Level			85	Level			90
Gaps To Narrow if Possible				Upgrade These Skills				Knowledge to Add			
Ability	Level	Gap	Impt	Skill	Level	Gap	Impt	Knowledge	Level	Gap	Impt
No Critical Gaps Recorded!				Installation	74	20	79	Mechanical	65	11	85
				Reading Comprehension	60	20	69				
				Mathematics	80	7	87				
				Instructing	69	6	74				
LEVEL and IMPT (IMPORTANCE) refer to the Target Drywall and Ceiling Tile Installers. GAP refers to level difference between Construction Carpenters and Drywall and Ceiling Tile Installers.											

ASK ANALYSIS			
Ability Level Comparison - Abilities with importance scores over 50			
Description	Construction Carpenters	Drywall and Ceiling Tile Installers	Importance
Arm-Hand Steadiness	53 	46 	68 
Trunk Strength	51 	48 	68 
Near Vision	50 	46 	68 
Oral Expression	55 	46 	65 
Extent Flexibility	64 	51 	65 
Gross Body Equilibrium	50 	46 	65 
Oral Comprehension	51 	48 	62 
Problem Sensitivity	50 	42 	62 
Manual Dexterity	55 	42 	62 
Finger Dexterity	46 	44 	59 
Deductive Reasoning	46 	42 	56 
Control Precision	53 	44 	56 

Static Strength	57	41	56
Inductive Reasoning	41	39	53
Visualization	60	50	53
Multilimb Coordination	50	42	53
Gross Body Coordination	46	37	53
Speech Recognition	41	37	53
Selective Attention	39	39	50
Reaction Time	46	42	50
Stamina	44	37	50
Speech Clarity	39	37	50

Skill Level Comparison - Abilities with importance scores over 69

Description	Construction Carpenters	Drywall and Ceiling Tile Installers	Importance
Mathematics	73	80	87
Installation	54	74	79
Instructing	63	69	74
Reading Comprehension	40	60	69

Knowledge Level Comparison - Knowledge with importance scores over 69

Description	Construction Carpenters	Drywall and Ceiling Tile Installers	Importance
Mechanical	54	65	85

### Experience & Education Comparison

Related Work Experience Comparison			Required Education Level Comparison		
Description	Construction Carpenters	Drywall and Ceiling Tile Installers	Description	Construction Carpenters	Drywall and Ceiling Tile Installers
10+ years	3%	0%	Doctoral	0%	0%
8-10 years	0%	4%	Professional Degree	0%	0%
6-8 years	18%	0%	Post-Masters Cert	0%	0%
4-6 years	36%	6%	Master's Degree	0%	0%
2-4 years	0%	13%	Post-Bachelor Cert	0%	0%
1-2 years	21%	47%	Bachelors	0%	0%
6-12 months	15%	0%	AA or Equiv	0%	0%
3-6 months	1%	0%	Some College	1%	0%
1-3 months	0%	0%	Post-Secondary Certificate	44%	19%
0-1 month	0%	0%	High School Diploma or GED	24%	73%
None	2%	26%	No HSD or GED	28%	6%

Construction Carpenters

Drywall and Ceiling Tile Installers

Most Common Educational/Training Requirement:

Long-term on-the-job training

Moderate-term on-the-job training

Job Zone Comparison

3 - Job Zone Three: Medium Preparation Needed

3 - Job Zone Three: Medium Preparation Needed



<p>Previous work-related skill, knowledge, or experience is required for these occupations. For example, an electrician must have completed three or four years of apprenticeship or several years of vocational training, and often must have passed a licensing exam, in order to perform the job.</p>	<p>Previous work-related skill, knowledge, or experience is required for these occupations. For example, an electrician must have completed three or four years of apprenticeship or several years of vocational training, and often must have passed a licensing exam, in order to perform the job.</p>
<p>Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree. Some may require a bachelor's degree.</p>	<p>Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree. Some may require a bachelor's degree.</p>
<p>Employees in these occupations usually need one or two years of training involving both on-the-job experience and informal training with experienced workers.</p>	<p>Employees in these occupations usually need one or two years of training involving both on-the-job experience and informal training with experienced workers.</p>

## Tasks

Construction Carpenters	Drywall and Ceiling Tile Installers
<p style="text-align: center; background-color: #f2f2f2; margin: 0;">Core Tasks</p> <hr/> <p>Generalized Work Activities:</p> <ul style="list-style-type: none"> <li>Controlling Machines and Processes - Using either control mechanisms or direct physical activity to operate machines or processes (not including computers or vehicles).</li> <li>Judging the Qualities of Things, Services, or People - Assessing the value, importance, or quality of things or people.</li> <li>Monitor Processes, Materials, or Surroundings - Monitoring and reviewing information from materials, events, or the environment, to detect or assess problems.</li> <li>Communicating with Supervisors, Peers, or Subordinates - Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.</li> <li>Coordinating the Work and Activities of Others- Getting members of a group to work together to accomplish tasks.</li> </ul>	<p style="text-align: center; background-color: #f2f2f2; margin: 0;">Core Tasks</p> <hr/> <p>Generalized Work Activities:</p> <ul style="list-style-type: none"> <li>Performing General Physical Activities - Performing physical activities that require considerable use of your arms and legs and moving your whole body, such as climbing, lifting, balancing, walking, stooping, and handling of materials.</li> <li>Handling and Moving Objects - Using hands and arms in handling, installing, positioning, and moving materials, and manipulating things.</li> <li>Getting Information - Observing, receiving, and otherwise obtaining information from all relevant sources.</li> <li>Inspecting Equipment, Structures, or Material - Inspecting equipment, structures, or materials to identify the cause of errors or other problems or defects.</li> <li>Estimating the Quantifiable Characteristics of Products, Events, or Information - Estimating sizes, distances, and quantities; or determining time, costs, resources, or materials needed to perform a work activity.</li> </ul>
<p style="text-align: center; background-color: #f2f2f2; margin: 0;">Specific Tasks</p> <hr/> <p>Occupation Specific Tasks:</p> <ul style="list-style-type: none"> <li>Apply shock-absorbing, sound-deadening, and decorative paneling to ceilings and walls.</li> <li>Arrange for subcontractors to deal with special areas such as heating and electrical wiring work.</li> <li>Assemble and fasten materials to make framework or props, using hand tools and wood screws, nails, dowel pins, or glue.</li> <li>Build or repair cabinets, doors, frameworks, floors, and other wooden fixtures used in buildings, using woodworking machines, carpenter's hand tools, and power tools.</li> <li>Construct forms and chutes for pouring concrete.</li> <li>Cover subfloors with building paper to keep out moisture and lay hardwood, parquet, and wood-strip-block floors by nailing floors to subfloor or cementing them to mastic or asphalt base.</li> <li>Erect scaffolding and ladders for assembling structures above ground level.</li> <li>Fill cracks and other defects in plaster or</li> </ul>	<p style="text-align: center; background-color: #f2f2f2; margin: 0;">Specific Tasks</p> <hr/> <p>Occupation Specific Tasks:</p> <ul style="list-style-type: none"> <li>Apply cement to backs of tiles and press tiles into place, aligning them with layout marks or joints of previously laid tile.</li> <li>Apply or mount acoustical tile or blocks, strips, or sheets of shock-absorbing materials to ceilings and walls of buildings to reduce reflection of sound or to decorate rooms.</li> <li>Assemble and install metal framing and decorative trim for windows, doorways, and vents.</li> <li>Coordinate work with drywall finishers who cover the seams between drywall panels.</li> <li>Cut and screw together metal channels to make floor and ceiling frames, according to plans for the location of rooms and hallways.</li> <li>Cut fixture and border tiles to size, using keyhole saws, and insert them into surrounding frameworks.</li> <li>Cut metal or wood framing, and trim to size, using cutting tools.</li> </ul>



plasterboard and sand patch, using patching plaster, trowel, and sanding tool.

- Finish surfaces of woodwork or wallboard in houses and buildings, using paint, hand tools, and paneling.
- Follow established safety rules and regulations and maintain a safe and clean environment.
- Inspect ceiling or floor tile, wall coverings, siding, glass, or woodwork to detect broken or damaged structures.
- Install structures and fixtures, such as windows, frames, floorings, and trim, or hardware, using carpenter's hand and power tools.
- Maintain records, document actions and present written progress reports.
- Measure and mark cutting lines on materials, using ruler, pencil, chalk, and marking gauge.
- Perform minor plumbing, welding or concrete mixing work.
- Prepare cost estimates for clients or employers.
- Remove damaged or defective parts or sections of structures and repair or replace, using hand tools.
- Select and order lumber and other required materials.
- Shape or cut materials to specified measurements, using hand tools, machines, or power saw.
- Study specifications in blueprints, sketches or building plans to prepare project layout and determine dimensions and materials required.
- Verify trueness of structure, using plumb bob and level.
- Work with or remove hazardous material.

#### Detailed Tasks

##### Detailed Work Activities:

- adhere to safety procedures
- anchor or brace wooden structures, frameworks, or forms
- apply adhesives, caulking, sealants, or coatings
- attach moisture barrier sheeting over construction surfaces
- build or install cabinets or related interior wood fixtures
- build or repair structures in construction, repair, or manufacturing setting
- climb ladders, scaffolding, or utility or telephone poles
- construct, erect, or repair wooden frameworks or structures
- cut, shape, fit, or join wood or other construction materials
- determine dimensions of wooden furnishings or structures to be built
- determine installation, service, or repair needed

using cutting tools.

- Fasten metal or rockboard lath to the structural framework of walls, ceilings, and partitions of buildings, using nails, screws, staples, or wire-ties.
- Fit and fasten wallboard or drywall into position on wood or metal frameworks, using glue, nails, or screws.
- Hang dry lines (stretched string) to wall moldings in order to guide positioning of main runners.
- Hang drywall panels on metal frameworks of walls and ceilings in offices, schools, and other large buildings, using lifts or hoists to adjust panel heights when necessary.
- Inspect furrings, mechanical mountings, and masonry surface for plumbness and level, using spirit or water levels.
- Install blanket insulation between studs and tack plastic moisture barriers over insulation.
- Install horizontal and vertical metal or wooden studs to frames so that wallboard can be attached to interior walls.
- Install metal lath where plaster applications will be exposed to weather or water, or for curved or irregular surfaces.
- Measure and cut openings in panels or tiles for electrical outlets, windows, vents, and plumbing and other fixtures, using keyhole saws or other cutting tools.
- Measure and mark surfaces to lay out work according to blueprints and drawings, using tape measures, straightedges or squares, and marking devices.
- Mount tile, using adhesives, or by nailing, screwing, stapling, or wire-tying lath directly to structural frameworks.
- Nail channels or wood furring strips to surfaces to provide mounting for tile.
- Read blueprints and other specifications to determine methods of installation, work procedures, and material and tool requirements.
- Remove existing plaster, drywall, or paneling, using crowbars and hammers.
- Scribe and cut edges of tile to fit walls where wall molding is not specified.
- Seal joints between ceiling tiles and walls.
- Suspend angle iron grids and channel irons from ceilings, using wire.
- Trim rough edges from wallboard to maintain even joints, using knives.
- Wash concrete surfaces before mounting tile to increase adhesive qualities of surfaces, using washing soda and zinc sulfate solution.

#### Detailed Tasks

##### Detailed Work Activities:

- adhere to safety procedures
- apply adhesives, caulking, sealants, or coatings
- apply cleaning solvents



- determine material or tool requirements
- determine project methods and procedures
- direct and coordinate activities of workers or staff
- erect scaffold
- estimate time or cost for installation, repair, or construction projects
- examine products or work to verify conformance to specifications
- fabricate, assemble, or disassemble manufactured products by hand
- finish or refinish floor, furniture, or related wood surfaces
- inspect premises or structure for evidence of deterioration or damage
- install doors, wood floors, window frames, trim, or stairs
- install drywall, plasterboard, or wallboard
- install insulating materials
- install lathing to support plaster, stucco, or related construction material
- install locks, hinges, or related finish hardware
- install or replace glass in windows, skylights, or other structural surfaces
- install prefabricated building components
- install siding or sheeting
- install sub flooring, rough framing, or partitions
- install wall or ceiling shock-absorbing paneling or acoustical tiles
- laminate objects
- lay out woodworking projects
- lubricate machinery, equipment, or parts
- maintain records, reports, or files
- measure and mark reference points or cutting lines on workpieces
- measure, weigh, or count products or materials
- move materials or goods between work areas
- move or fit heavy objects
- obtain information from clients, customers, or patients
- operate hoist, winch, or hydraulic boom
- operate woodworking equipment/machinery
- order or purchase supplies, materials, or equipment
- paint walls or other structural surfaces
- perform safety inspections in construction or resource extraction setting
- position, align, or level machines, equipment, or structures
- prepare building surfaces for paint, finishes, wallpaper, or adhesives
- prepare reports
- read blueprints

- apply plaster, stucco or related material
- attach moisture barrier sheeting over construction surfaces
- build or repair structures in construction, repair, or manufacturing setting
- climb ladders, scaffolding, or utility or telephone poles
- construct, erect, or repair wooden frameworks or structures
- cut metal or plastic
- cut, shape, fit, or join wood or other construction materials
- determine material or tool requirements
- determine project methods and procedures
- erect scaffold
- fabricate, assemble, or disassemble manufactured products by hand
- install doors, wood floors, window frames, trim, or stairs
- install drywall, plasterboard, or wallboard
- install insulating materials
- install locks, hinges, or related finish hardware
- install prefabricated building components
- install siding or sheeting
- install wall or ceiling shock-absorbing paneling or acoustical tiles
- lay out woodworking projects
- measure and mark reference points or cutting lines on workpieces
- move or fit heavy objects
- perform safety inspections in construction or resource extraction setting
- read blueprints
- read specifications
- read tape measure
- read technical drawings
- read work order, instructions, formulas, or processing charts
- understand construction specifications
- use basic carpentry techniques
- use hand or power tools
- use hand or power woodworking tools
- use measuring devices in construction or extraction work
- verify trueness of structure using plumb bob or level

#### Technology - Examples

##### Accounting software

- Job costing software

- Turtle Creek Software Goldenseal Architect

##### Data base user interface and query software

- Business management software



- read specifications
- read tape measure
- read technical drawings
- recognize wood characteristics
- recognize wood species characteristics
- repair cracks, defects, or damage in installed building materials
- repair or replace locks, hinges, or related finish hardware
- repair prefabricated wooden building components
- signal directions or warnings to coworkers
- understand construction specifications
- use basic carpentry techniques
- use basic plumbing techniques
- use building materials for routine building maintenance
- use building or land use regulations
- use concrete fabrication techniques
- use hand or power tools
- use hand or power woodworking tools
- use hazardous materials information
- use measuring devices in construction or extraction work
- use oral or written communication techniques
- verify trueness of structure using plumb bob or level
- weld together metal parts, components, or structures

#### Technology - Examples

##### Accounting software

- Intuit QuickBooks
- Intuit Quicken software
- Job costing software

##### Computer aided design CAD software

- Drawing and drafting software

##### Information retrieval or search software

- Renaissance MasterCarpenter

##### Internet browser software

- Web browser software

##### Office suite software

- Microsoft Office

##### Project management software

- Bosch Punch List
- Craftsman CD Estimator
- Estimating software

##### Office suite software

- Microsoft Office

##### Optical character reader OCR or scanning software

- Logic Group Scanner Digitizing Software

##### Project management software

- Construction Software Center EasyEst
- DevWave Estimate Works
- On Center Quick Bid

##### Word processing software

- Microsoft Word
- Wilhelm Publishing Threshold

#### Tools - Examples

- Compressors
- Caulking guns
- Chalk lines
- Adhesive guns
- Crowhead hammers
- Pistol hopper guns
- Drywall hatchets
- Circle cutters
- Drywall jacks
- Ladders
- Laser printers
- Box beam levels
- Drywall lifts
- Notebook computers
- Texture brushes
- Personal computers
- Personal digital assistants PDA
- Drywall mud mixers
- Drills
- Drywall routers
- Hand sanders



- Turtle Creek Software Goldenseal Architect

- Virtual Boss software

#### Spreadsheet software

- Microsoft Excel

#### Web page creation and editing software

- Web page creation and editing software

#### Word processing software

- Microsoft Word

- Wilhelm Publishing Threshold

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#### Tools - Examples

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- Compressors

- Baluster jigs

- Bandsaws

- Sliding t-bevels

- Joiners

- Calculators

- Calipers

- Caulking guns

- Pencil compasses

- Cranes

- Auger bits

- Push sticks

- Wood files

- Pettibones

- Power generators

- Chain saw jigs

- Rotary hammers

- Framing hammers

- Hard hats

- Electric impact wrenches

- Beam-lifting jacks

- Extension ladders

- Laser measuring tools

- Transits

- Chop saws

- Drywall screw guns

- Corner knives

- Rasps

- Respirators

- Safety harnesses

- Drywall ripping tools

- Scaffolding

- Drywall screwdrivers

- Drywall scoring tools

- Wall scrapers

- Heavy duty staple guns

- Drywall T-squares

- Tablet computers

- Tape measures

- Tin snips

- Bullnose trowels

- Edge cutters



- A-frame levels
- Marking gauges
- Moisture meters
- Needlenose pliers
- Notebook computers
- Personal computers
- Personal digital assistants PDA
- Planes
- Plumb bobs
- Pneumatic nail guns
- Cordless drills
- Disc grinders
- Electric planers
- Plunge routers
- Belt sanders
- Beam saws
- Brad tackers
- Protractors
- Mini pry bars
- Cat's paws
- Respirators
- Rulers
- Work boots
- Fall arrest systems
- Dado blades
- Saw guides
- Hand saws
- Ladder jacks
- Ladder levelers
- Multi-tip screwdrivers
- Combination squares
- Hammer staplers



- Cross-curve tape measures
- Templates
- Theodolites
- Snips
- Right triangles
- Utility knives
- Chisels
- Drill presses

### Labor Market Comparison

Maine Department of Labor.

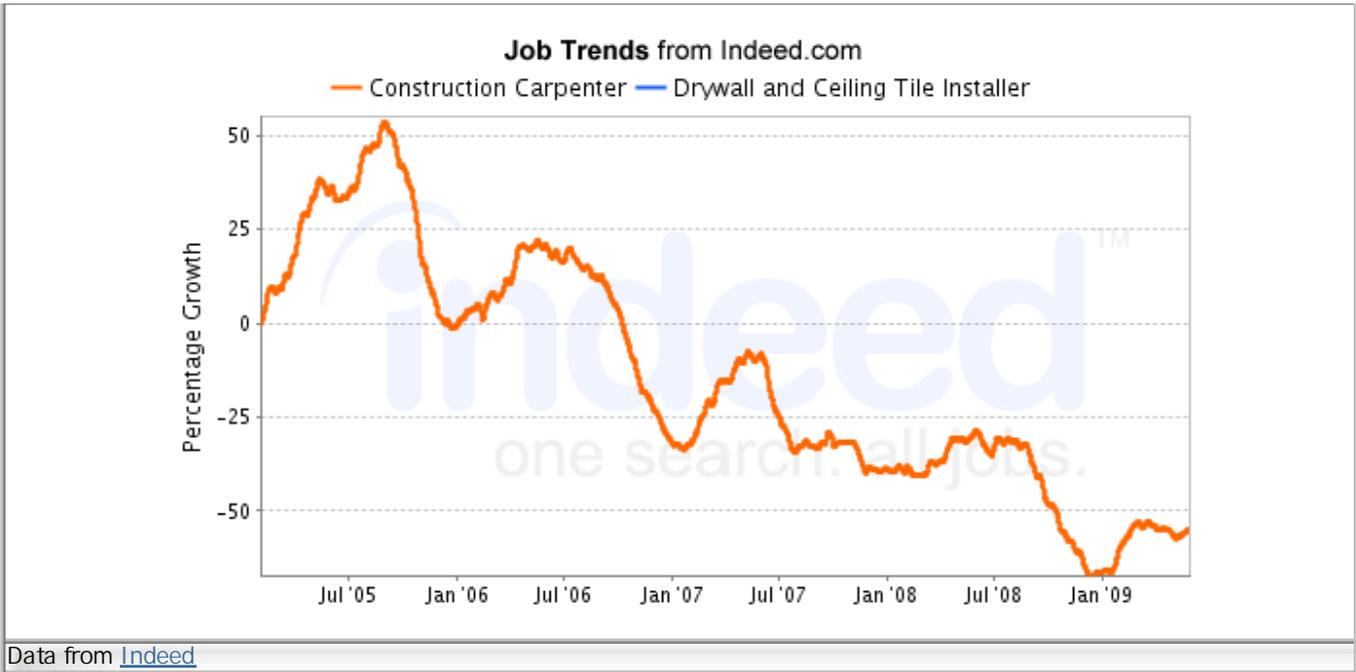
Description	Construction Carpenters	Drywall and Ceiling Tile Installers	Difference
Median Wage	\$ 32,710	\$ 39,090	\$ 6,380
10th Percentile Wage	\$ 25,700	\$ 26,640	\$ 940
25th Percentile Wage	N/A	N/A	N/A
75th Percentile Wage	\$ 38,540	\$ 44,880	\$ 6,340
90th Percentile Wage	\$ 46,230	\$ 48,570	\$ 2,340
Mean Wage	\$ 34,030	\$ 37,850	\$ 3,820
Total Employment - 2452	6,150	340	-5,810
Employment Base - 2006	11,492	464	-11,028
Projected Employment - 2461	11,306	485	-10,821
Projected Job Growth - 2006-2461	-1.6 %	4.5 %	6.1 %
Projected Annual Openings - 2006-2461	156	8	-148
Special			

Special Occupations:

★ Maine High Wage - In Demand

### National Job Posting Trends

Trend for Construction Carpenters and Drywall and Ceiling Tile Installers



Programs			
Related Programs			
Carpenter			
<p>Carpentry/Carpenter. A program that prepares individuals to apply technical knowledge and skills to lay out, cut, fabricate, erect, install, and repair wooden structures and fixtures, using hand and power tools. Includes instruction in technical mathematics, framing, construction materials and selection, job estimating, blueprint reading, foundations and roughing-in, finish carpentry techniques, and applicable codes and standards.</p>			
Institution	Address	City	URL
Northern Maine Community College	33 Edgemont Dr	Presque Isle	<a href="http://www.nmcc.edu">www.nmcc.edu</a>
Northern Maine Community College	33 Edgemont Dr	Presque Isle	<a href="http://www.nmcc.edu">www.nmcc.edu</a>
Northern Maine Community College	33 Edgemont Dr	Presque Isle	<a href="http://www.nmcc.edu">www.nmcc.edu</a>
Southern Maine Community College	2 Fort Road	South Portland	<a href="http://www.smccME.edu">www.smccME.edu</a>
Construction Trades, Other			
<p>Construction Trades, Other. Any instructional program in construction trades not listed above.</p> <p>No information on schools for the program</p>			
Drywall Installation/Drywaller			
<p>Drywall Installation/Drywaller. A program that prepares individuals to apply technical knowledge and skills to install, tape, and plaster drywall installations in interior and exterior construction jobs. Includes instruction in drywall handling and transport, cutting and mounting, taping and spackling, finishing, job analysis and estimation, site safety, tool operation and maintenance, blueprint and specification interpretation, and applicable codes and standards.</p> <p>No information on schools for the program</p>			

## Maine Statewide Promotion Opportunities for Construction Carpenters



O*NET Code	Title	Grand TORQ	Job Zone	Employment	Median Wage	Difference	Growth	Annual Job Openings	Special
47-2031.01	Construction Carpenters	100	3	6,150	\$32,710.00	\$0.00	-2%	156	
47-2021.00	Brickmasons and Blockmasons	89	2	270	\$38,960.00	\$6,250.00	6%	10	★
47-2081.00	Drywall and Ceiling Tile Installers	89	3	340	\$39,090.00	\$6,380.00	5%	8	
47-2211.00	Sheet Metal Workers	87	2	1,260	\$35,650.00	\$2,940.00	7%	40	★
47-2031.02	Rough Carpenters	87	2	6,150	\$32,710.00	\$0.00	-2%	156	
47-2132.00	Insulation Workers, Mechanical	86	3	180	\$35,060.00	\$2,350.00	2%	4	
47-2082.00	Tapers	86	2	70	\$39,910.00	\$7,200.00	5%	3	
51-4192.00	Lay-Out Workers, Metal and Plastic	85	2	180	\$43,870.00	\$11,160.00	-24%	3	
51-4121.06	Welders, Cutters, and Welder Fitters	84	2	1,610	\$38,030.00	\$5,320.00	7%	49	★
47-2151.00	Pipelayers	84	2	60	\$33,170.00	\$460.00	8%	3	
47-2221.00	Structural Iron and Steel Workers	82	3	420	\$36,030.00	\$3,320.00	0%	12	
49-9096.00	Riggers	82	3	250	\$39,140.00	\$6,430.00	-12%	2	
47-1011.00	First-Line Supervisors/Managers of Construction Trades and Extraction Workers	81	3	3,190	\$46,630.00	\$13,920.00	3%	77	★
49-9044.00	Millwrights	79	3	830	\$41,280.00	\$8,570.00	-12%	11	
51-2041.00	Structural Metal Fabricators and Fitters	79	3	680	\$36,030.00	\$3,320.00	5%	15	

Special Occupations: ★ Maine High Wage - In Demand

### Top Industries for Drywall and Ceiling Tile Installers

Industry	NAICS	% of Industry	Employment	Projected Employment	% Change
Drywall and insulation contractors	238310	65.82%	122,337	130,491	6.66%
Self-employed workers, primary job	000601	22.91%	42,574	45,358	6.54%
Nonresidential building construction	236200	4.00%	7,437	8,333	12.05%
Residential building construction	236100	3.09%	5,742	6,466	12.61%
Painting and wall covering contractors	238320	0.71%	1,312	1,460	11.27%
Employment services	561300	0.60%	1,112	1,407	26.56%
Masonry contractors	238140	0.51%	943	1,044	10.78%
Other specialty trade contractors	238900	0.33%	612	676	10.52%



Other wood product manufacturing	321900	0.28%	523	492	-5.77%
Roofing contractors	238160	0.13%	242	283	16.78%
Self-employed workers, secondary job	000602	0.07%	121	121	-0.45%
Colleges, universities, and professional schools, public and private	611300	0.03%	51	57	11.89%

### Top Industries for Construction Carpenters

Industry	NAICS	% of Industry	Employment	Projected Employment	% Change
Self-employed workers, primary job	000601	30.54%	446,483	475,671	6.54%
Residential building construction	236100	21.02%	307,298	346,046	12.61%
Nonresidential building construction	236200	10.73%	156,942	175,852	12.05%
Drywall and insulation contractors	238310	2.97%	43,454	46,350	6.66%
Employment services	561300	1.98%	28,968	36,663	26.56%
Other wood product manufacturing	321900	1.33%	19,516	18,391	-5.77%
Poured concrete foundation and structure contractors	238110	1.30%	18,976	21,392	12.73%
Self-employed workers, secondary job	000602	1.24%	18,094	18,903	4.47%
Highway, street, and bridge construction	237300	0.99%	14,411	15,516	7.66%
Other specialty trade contractors	238900	0.97%	14,210	15,706	10.52%
Wood kitchen cabinet and countertop manufacturing	337110	0.78%	11,337	12,552	10.72%
Building material and supplies dealers	444100	0.71%	10,317	13,185	27.79%
Local government, excluding education and hospitals	939300	0.61%	8,942	10,045	12.34%
Other heavy and civil engineering construction	237900	0.45%	6,529	7,013	7.41%
Ship and boat building	336600	0.43%	6,281	7,030	11.93%



# TORQ Analysis of Construction Carpenters to Sheet Metal Workers

ANALYSIS INPUT					
Transfer	Title	O*NET	Filters		
From Title:	Construction Carpenters	47-2031.01	Abilities:	Importance Level: 50	Weight: 1
To Title:	Sheet Metal Workers	47-2211.00	Skills:	Importance Level: 69	Weight: 1
Labor Market Area:	Maine Statewide		Knowledge:	Importance Level: 69	Weight: 1

TORQ RESULTS							
Grand TORQ:					87		
Ability TORQ		Skills TORQ		Knowledge TORQ			
Level	96	Level	76	Level	90		
Gaps To Narrow if Possible			Upgrade These Skills		Knowledge to Add		
Ability	Level	Gap	Impt	Skill	Level	Gap	Impt
Selective Attention	42	3	59	No Skills Upgrade Required!		No Knowledge Upgrades Required!	
Near Vision	51	1	68				
<p>LEVEL and IMPT (IMPORTANCE) refer to the Target Sheet Metal Workers. GAP refers to level difference between Construction Carpenters and Sheet Metal Workers.</p>							

ASK ANALYSIS			
Ability Level Comparison - Abilities with importance scores over 50			
Description	Construction Carpenters	Sheet Metal Workers	Importance
Near Vision	50	51	68
Manual Dexterity	55	50	62
Oral Comprehension	51	48	59
Problem Sensitivity	50	41	59
Information Ordering	59	53	59
Selective Attention	39	42	59
Visualization	60	57	56
Arm-Hand Steadiness	53	39	56
Control Precision	53	48	56
Static Strength	57	50	56
Written Comprehension	46	46	50
Oral Expression	55	42	50
Deductive Reasoning	46	41	50
Finger Dexterity	46	41	50
Dynamic Strength	48	41	50
Trunk Strength	51	42	50

Skill Level Comparison - Abilities with importance scores over 69

Description	Construction Carpenters	Sheet Metal Workers	Importance
Knowledge Level Comparison - Knowledge with importance scores over 69			
Description	Construction Carpenters	Sheet Metal Workers	Importance

**Experience & Education Comparison**

Related Work Experience Comparison			Required Education Level Comparison		
Description	Construction Carpenters	Sheet Metal Workers	Description	Construction Carpenters	Sheet Metal Workers
10+ years	3%	0%	Doctoral	0%	0%
8-10 years	0%	3%	Professional Degree	0%	0%
6-8 years	18%	1%	Post-Masters Cert	0%	0%
4-6 years	36%	17%	Master's Degree	0%	0%
2-4 years	0%	4%	Post-Bachelor Cert	0%	0%
1-2 years	21%	11%	Bachelors	0%	0%
6-12 months	15%	20%	AA or Equiv	0%	0%
3-6 months	1%	5%	Some College	1%	0%
1-3 months	0%	1%	Post-Secondary Certificate	44%	37%
0-1 month	0%	1%	High School Diploma or GED	24%	49%
None	2%	31%	No HSD or GED	28%	12%

Construction Carpenters

Sheet Metal Workers

Most Common Educational/Training Requirement:

Long-term on-the-job training

Long-term on-the-job training

Job Zone Comparison

3 - Job Zone Three: Medium Preparation Needed

2 - Job Zone Two: Some Preparation Needed

Previous work-related skill, knowledge, or experience is required for these occupations. For example, an electrician must have completed three or four years of apprenticeship or several years of vocational training, and often must have passed a licensing exam, in order to perform the job.

Some previous work-related skill, knowledge, or experience may be helpful in these occupations, but usually is not needed. For example, a teller might benefit from experience working directly with the public, but an inexperienced person could still learn to be a teller with little difficulty.

Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree. Some may require a bachelor's degree.

These occupations usually require a high school diploma and may require some vocational training or job-related course work. In some cases, an associate's or bachelor's degree could be needed.

Employees in these occupations usually need one or two years of training involving both on-the-job experience and informal training with experienced workers.

Employees in these occupations need anywhere from a few months to one year of working with experienced employees.

**Tasks**

Construction Carpenters	Sheet Metal Workers
<p>Core Tasks</p> <p>Generalized Work Activities:</p> <ul style="list-style-type: none"> <li>Controlling Machines and Processes - Using either control mechanisms or direct physical activity to operate machines or processes (not including computers or vehicles).</li> <li>Judging the Qualities of Things, Services, or People - Assessing the value, importance, or quality of things or people.</li> <li>Monitor Processes, Materials, or</li> </ul>	<p>Core Tasks</p> <p>Generalized Work Activities:</p> <ul style="list-style-type: none"> <li>Handling and Moving Objects - Using hands and arms in handling, installing, positioning, and moving materials, and manipulating things.</li> <li>Performing General Physical Activities - Performing physical activities that require considerable use of your arms and legs and moving your whole body, such as climbing,</li> </ul>



Surroundings - Monitoring and reviewing information from materials, events, or the environment, to detect or assess problems.

- Communicating with Supervisors, Peers, or Subordinates - Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
- Coordinating the Work and Activities of Others- Getting members of a group to work together to accomplish tasks.

#### Specific Tasks

##### Occupation Specific Tasks:

- Apply shock-absorbing, sound-deadening, and decorative paneling to ceilings and walls.
- Arrange for subcontractors to deal with special areas such as heating and electrical wiring work.
- Assemble and fasten materials to make framework or props, using hand tools and wood screws, nails, dowel pins, or glue.
- Build or repair cabinets, doors, frameworks, floors, and other wooden fixtures used in buildings, using woodworking machines, carpenter's hand tools, and power tools.
- Construct forms and chutes for pouring concrete.
- Cover subfloors with building paper to keep out moisture and lay hardwood, parquet, and wood-strip-block floors by nailing floors to subfloor or cementing them to mastic or asphalt base.
- Erect scaffolding and ladders for assembling structures above ground level.
- Fill cracks and other defects in plaster or plasterboard and sand patch, using patching plaster, trowel, and sanding tool.
- Finish surfaces of woodwork or wallboard in houses and buildings, using paint, hand tools, and paneling.
- Follow established safety rules and regulations and maintain a safe and clean environment.
- Inspect ceiling or floor tile, wall coverings, siding, glass, or woodwork to detect broken or damaged structures.
- Install structures and fixtures, such as windows, frames, floorings, and trim, or hardware, using carpenter's hand and power tools.
- Maintain records, document actions and present written progress reports.
- Measure and mark cutting lines on materials, using ruler, pencil, chalk, and marking gauge.
- Perform minor plumbing, welding or concrete mixing work.
- Prepare cost estimates for clients or employers.
- Remove damaged or defective parts or sections of structures and repair or replace, using hand tools.

lifting, balancing, walking, stooping, and handling of materials.

- Inspecting Equipment, Structures, or Material - Inspecting equipment, structures, or materials to identify the cause of errors or other problems or defects.
- Making Decisions and Solving Problems - Analyzing information and evaluating results to choose the best solution and solve problems.
- Getting Information - Observing, receiving, and otherwise obtaining information from all relevant sources.

#### Specific Tasks

##### Occupation Specific Tasks:

- Convert blueprints into shop drawings to be followed in the construction and assembly of sheet metal products.
- Determine project requirements, including scope, assembly sequences, and required methods and materials, according to blueprints, drawings, and written or verbal instructions.
- Develop and lay out patterns that use materials most efficiently, using computerized metalworking equipment to experiment with different layouts.
- Drill and punch holes in metal, for screws, bolts, and rivets.
- Fabricate or alter parts at construction sites, using shears, hammers, punches, and drills.
- Fasten roof panel edges and machine-made molding to structures, nailing or welding pieces into place.
- Fasten seams and joints together with welds, bolts, cement, rivets, solder, caulks, metal drive clips, and bonds to assemble components into products or to repair sheet metal items.
- Finish parts, using hacksaws, and hand, rotary, or squaring shears.
- Inspect individual parts, assemblies, and installations for conformance to specifications and building codes, using measuring instruments such as calipers, scales, and micrometers.
- Install assemblies, such as flashing, pipes, tubes, heating and air conditioning ducts, furnace casings, rain gutters, and down spouts, in supportive frameworks.
- Lay out, measure, and mark dimensions and reference lines on material, such as roofing panels, according to drawings or templates, using calculators, scribes, dividers, squares, and rulers.
- Maintain equipment, making repairs and modifications when necessary.
- Maneuver completed units into position for installation, and anchor the units.
- Secure metal roof panels in place, and interlock and fasten grooved panel edges.
- Select gauges and types of sheet metal or



- Select and order lumber and other required materials.
- Shape or cut materials to specified measurements, using hand tools, machines, or power saw.
- Study specifications in blueprints, sketches or building plans to prepare project layout and determine dimensions and materials required.
- Verify trueness of structure, using plumb bob and level.
- Work with or remove hazardous material.

#### Detailed Tasks

##### Detailed Work Activities:

- adhere to safety procedures
- anchor or brace wooden structures, frameworks, or forms
- apply adhesives, caulking, sealants, or coatings
- attach moisture barrier sheeting over construction surfaces
- build or install cabinets or related interior wood fixtures
- build or repair structures in construction, repair, or manufacturing setting
- climb ladders, scaffolding, or utility or telephone poles
- construct, erect, or repair wooden frameworks or structures
- cut, shape, fit, or join wood or other construction materials
- determine dimensions of wooden furnishings or structures to be built
- determine installation, service, or repair needed
- determine material or tool requirements
- determine project methods and procedures
- direct and coordinate activities of workers or staff
- erect scaffold
- estimate time or cost for installation, repair, or construction projects
- examine products or work to verify conformance to specifications
- fabricate, assemble, or disassemble manufactured products by hand
- finish or refinish floor, furniture, or related wood surfaces
- inspect premises or structure for evidence of deterioration or damage
- install doors, wood floors, window frames, trim, or stairs
- install drywall, plasterboard, or wallboard
- install insulating materials
- install lathing to support plaster, stucco, or related construction material
- install locks, hinges, or related finish hardware
- install or replace glass in windows, skylights,

non-metallic material, according to product specifications.

- Shape metal material over anvils, blocks, or other forms, using hand tools.
- Transport prefabricated parts to construction sites for assembly and installation.
- Trim, file, grind, deburr, buff, and smooth surfaces, seams, and joints of assembled parts, using hand tools and portable power tools.

#### Detailed Tasks

##### Detailed Work Activities:

- adhere to safety procedures
- build or repair structures in construction, repair, or manufacturing setting
- climb ladders, scaffolding, or utility or telephone poles
- cut metal or plastic
- determine material or tool requirements
- determine project methods and procedures
- erect scaffold
- examine products or work to verify conformance to specifications
- fabricate ducting
- fabricate sheet metal parts or items
- fabricate, assemble, or disassemble manufactured products by hand
- file, sand, grind, or polish metal or plastic objects
- identify base metals for welding
- identify properties of metals for repair or fabrication activities
- install sheet metal assemblies in supportive framework
- lay out machining, welding or precision assembly projects
- make independent judgment in assembly procedures
- move or fit heavy objects
- operate metal or plastic fabricating equipment/machinery
- operate sheet metal fabrication machines
- perform safety inspections in construction or resource extraction setting
- perform safety inspections in industrial, manufacturing or repair setting
- position, align, or level machines, equipment, or structures
- read blueprints
- read production layouts
- read technical drawings
- recognize characteristics of alloys
- recognize characteristics of metals
- repair sheet metal products
- set up and operate variety of machine tools
- set up production equipment or machinery



- or other structural surfaces
- install prefabricated building components
- install siding or sheeting
- install sub flooring, rough framing, or partitions
- install wall or ceiling shock-absorbing paneling or acoustical tiles
- laminate objects
- lay out woodworking projects
- lubricate machinery, equipment, or parts
- maintain records, reports, or files
- measure and mark reference points or cutting lines on workpieces
- measure, weigh, or count products or materials
- move materials or goods between work areas
- move or fit heavy objects
- obtain information from clients, customers, or patients
- operate hoist, winch, or hydraulic boom
- operate woodworking equipment/machinery
- order or purchase supplies, materials, or equipment
- paint walls or other structural surfaces
- perform safety inspections in construction or resource extraction setting
- position, align, or level machines, equipment, or structures
- prepare building surfaces for paint, finishes, wallpaper, or adhesives
- prepare reports
- read blueprints
- read specifications
- read tape measure
- read technical drawings
- recognize wood characteristics
- recognize wood species characteristics
- repair cracks, defects, or damage in installed building materials
- repair or replace locks, hinges, or related finish hardware
- repair prefabricated wooden building components
- signal directions or warnings to coworkers
- understand construction specifications
- use basic carpentry techniques
- use basic plumbing techniques
- use building materials for routine building maintenance
- use building or land use regulations
- use concrete fabrication techniques
- use hand or power tools
- use hand or power woodworking tools
- use hazardous materials information

- solder metal parts or components together
- stretch, bend, straighten, shape, pound, or press metal or plastic
- understand technical operating, service or repair manuals
- use acetylene welding/cutting torch
- use arc welding equipment
- use combination welding procedures
- use hand or power tools
- use machine tools in installation, maintenance, or repair
- use measuring devices in construction or extraction work
- use precision measuring tools or equipment
- use soldering equipment
- weld together metal parts, components, or structures

#### Technology - Examples

##### Computer aided design CAD software

- Applied Production ProFold
- Autodesk AutoCAD software
- Computer aided design CAD software
- Corte Certo software
- FCC Software AutoPOL Series
- Parametric Technology Pro/ENGINEER software
- QuickPen DuctDesigner 3D
- Revcad Software Sheet Lightning
- UGS NX
- XY Soft Sheet Cutting Suite

##### Computer aided manufacturing CAM software

- Applied Production ProFab
- Computer aided manufacturing CAM software
- JETCAM Expert
- Merry Mechanization SMP/IS
- Striker Systems SS-Profile
- WiCAM PN4000

##### Data base user interface and query software

- Data entry software

##### Spreadsheet software

- Spreadsheet software

#### Tools - Examples



- use measuring devices in construction or extraction work
- use oral or written communication techniques
- verify trueness of structure using plumb bob or level
- weld together metal parts, components, or structures

#### Technology - Examples

##### Accounting software

- Intuit QuickBooks
- Intuit Quicken software
- Job costing software

##### Computer aided design CAD software

- Drawing and drafting software

##### Information retrieval or search software

- Renaissance MasterCarpenter

##### Internet browser software

- Web browser software

##### Office suite software

- Microsoft Office

##### Project management software

- Bosch Punch List
- Craftsman CD Estimator
- Estimating software
- Turtle Creek Software Goldenseal Architect
- Virtual Boss software

##### Spreadsheet software

- Microsoft Excel

##### Web page creation and editing software

- Web page creation and editing software

##### Word processing software

- Microsoft Word
- Wilhelm Publishing Threshold

#### Tools - Examples

- Compressors
- Baluster jigs
- Bandsaws
- Sliding t-bevels
- Joiners

- Widemouth Pliers
- Adjustable wrenches
- Draft gauges
- Ammeters
- Scratch awls
- Bandsaws
- Bolt cutters
- C clamps
- Calipers
- Caulking guns
- Chalk lines
- Cold chisels
- Beam compasses
- Laser cutters
- Burring machines
- Desktop computers
- Hand dollies
- Ear muffs
- Side cutting pliers
- Combustion analyzers
- Files
- Calibrated flow hoods
- Oxyacetylene welding equipment
- Dial indicators
- Safety goggles
- Ball peen hammers
- Hard hats
- Allen wrenches
- Chain hoists
- Hydraulic presses
- Humidity sensors
- Electric impact wrenches



- Calculators
- Calipers
- Caulking guns
- Pencil compasses
- Cranes
- Auger bits
- Push sticks
- Wood files
- Pettibones
- Power generators
- Chain saw jigs
- Rotary hammers
- Framing hammers
- Hard hats
- Electric impact wrenches
- Beam-lifting jacks
- Extension ladders
- Laser measuring tools
- Transits
- A-frame levels
- Marking gauges
- Moisture meters
- Needlenose pliers
- Notebook computers
- Personal computers
- Personal digital assistants PDA
- Planes
- Plumb bobs
- Pneumatic nail guns
- Cordless drills
- Disc grinders
- Electric planers
- Plunge routers

- Ladders
- Laser printers
- Smoke testers
- Transit levels
- Laser levels
- Vise grip pliers
- Hand crimpers
- Inclined manometers
- Aviation snips
- Metal inert gas MIG welders
- Micrometers
- Computer controlled saws
- Digital multimeters
- Nibblers
- Nut drivers
- Ohmmeters
- Oxygen testers
- Personal computers
- Pipe cutters
- Plasma cutters
- Plumb bobs
- Pneumatic hammers
- Pneumatic impact wrenches
- Jigs
- Polishers
- Cordless drills
- Angle grinders
- Power routers
- Power sanders
- Cold-cut saws
- Magnehelic pressure gauges
- Protective clothing
- Safety gloves



- Belt sanders

- Beam saws

- Brad tackers

- Protractors

- Mini pry bars

- Cat's paws

- Respirators

- Rulers

- Work boots

- Fall arrest systems

- Dado blades

- Saw guides

- Hand saws

- Ladder jacks

- Ladder levelers

- Multi-tip screwdrivers

- Combination squares

- Hammer staplers

- Cross-curve tape measures

- Templates

- Theodolites

- Snips

- Right triangles

- Utility knives

- Chisels

- Drill presses

- Protractors

- Psychrometers

- Center punches

- Pipe reamers

- Stack thermometers

- Dimplers

- Safety glasses

- Hacksaws

- Scaffolding

- Scale rulers

- Screwdrivers

- Scribes

- Bar folders

- Foot shears

- Groovers

- Carbon dioxide CO2 monitors

- Slings

- Socket wrench sets

- Soldering furnaces

- Framing squares

- Stencils

- Straightedges

- T squares

- Mechanical tachometers

- Tape measures

- Taps and dies

- Templates

- Tempscribes

- Pipe threaders

- Combination snips

- Double seaming equipment

- Tungsten inert gas TIG welding equipment



- Turning machines
- Millivolt meters
- Portable spot welders
- AC welding power units
- Welding facial shields
- Welding tips
- Wire cutters
- Cleat folders

## Labor Market Comparison

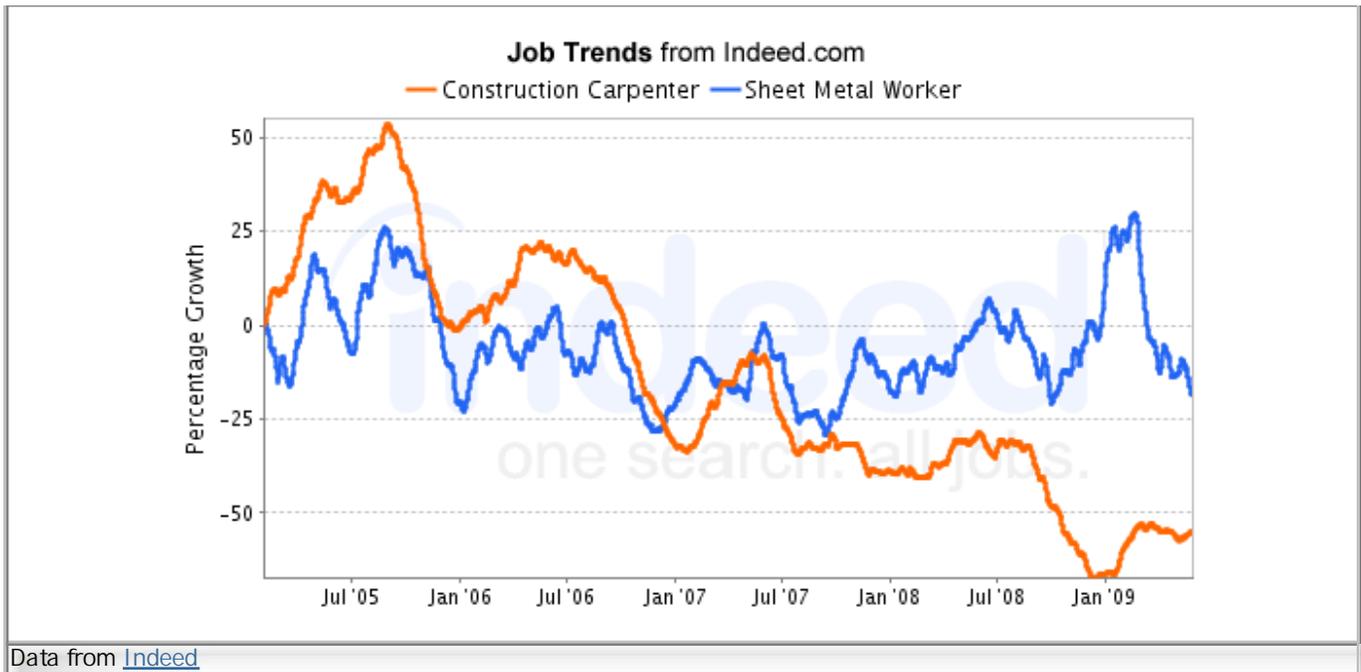
Maine Department of Labor.

Description	Construction Carpenters	Sheet Metal Workers	Difference
Median Wage	\$ 32,710	\$ 35,650	\$ 2,940
10th Percentile Wage	\$ 25,700	\$ 22,760	\$( 2,940)
25th Percentile Wage	N/A	N/A	N/A
75th Percentile Wage	\$ 38,540	\$ 40,770	\$ 2,230
90th Percentile Wage	\$ 46,230	\$ 46,240	\$ 10
Mean Wage	\$ 34,030	\$ 34,760	\$ 730
Total Employment - 2452	6,150	1,260	-4,890
Employment Base - 2006	11,492	1,267	-10,225
Projected Employment - 2461	11,306	1,358	-9,948
Projected Job Growth - 2006-2461	-1.6 %	7.2 %	8.8 %
Projected Annual Openings - 2006-2461	156	40	-116
Special			

Special Occupations: Maine High Wage - In Demand

## National Job Posting Trends

Trend for Construction Carpenters and Sheet Metal Workers



## Programs

### Related Programs

Sheet Metal Worker

Sheet Metal Technology/Sheetworking. A program that prepares individuals to apply technical knowledge and skills to form, shape, bend and fold extruded metals, including the creation of new products, using hand tools and machines such as cornice brakes, forming rolls, and squaring shears.

Institution	Address	City	URL
Northern Maine Community College	33 Edgemont Dr	Presque Isle	<a href="http://www.nmcc.edu">www.nmcc.edu</a>

## Maine Statewide Promotion Opportunities for Construction Carpenters

O*NET Code	Title	Grand TORQ	Job Zone	Employment	Median Wage	Difference	Growth	Annual Job Openings	Special
47-2031.01	Construction Carpenters	100	3	6,150	\$32,710.00	\$0.00	-2%	156	
47-2081.00	Drywall and Ceiling Tile Installers	89	3	340	\$39,090.00	\$6,380.00	5%	8	
47-2021.00	Brickmasons and Blockmasons	89	2	270	\$38,960.00	\$6,250.00	6%	10	★
47-2031.02	Rough Carpenters	87	2	6,150	\$32,710.00	\$0.00	-2%	156	
47-2211.00	Sheet Metal Workers	87	2	1,260	\$35,650.00	\$2,940.00	7%	40	★
47-2082.00	Tapers	86	2	70	\$39,910.00	\$7,200.00	5%	3	
47-2132.00	Insulation Workers, Mechanical	86	3	180	\$35,060.00	\$2,350.00	2%	4	

51-4192.00	Lay-Out Workers, Metal and Plastic	85	2	180	\$43,870.00	\$11,160.00	-24%	3	
51-4121.06	Welders, Cutters, and Welder Fitters	84	2	1,610	\$38,030.00	\$5,320.00	7%	49	★
47-2151.00	Pipelayers	84	2	60	\$33,170.00	\$460.00	8%	3	
47-2221.00	Structural Iron and Steel Workers	82	3	420	\$36,030.00	\$3,320.00	0%	12	
49-9096.00	Riggers	82	3	250	\$39,140.00	\$6,430.00	-12%	2	
47-1011.00	First-Line Supervisors/Managers of Construction Trades and Extraction Workers	81	3	3,190	\$46,630.00	\$13,920.00	3%	77	★
49-9044.00	Millwrights	79	3	830	\$41,280.00	\$8,570.00	-12%	11	
51-2041.00	Structural Metal Fabricators and Fitters	79	3	680	\$36,030.00	\$3,320.00	5%	15	

Special Occupations: ★ Maine High Wage - In Demand

### Top Industries for Sheet Metal Workers

Industry	NAICS	% of Industry	Employment	Projected Employment	% Change
Plumbing, heating, and air-conditioning contractors	238220	45.37%	85,587	94,818	10.79%
Architectural and structural metals manufacturing	332300	9.19%	17,330	18,159	4.78%
Roofing contractors	238160	5.60%	10,562	12,100	14.56%
Federal government, excluding postal service	919999	3.60%	6,789	6,296	-7.26%
Ventilation, heating, air-conditioning, and commercial refrigeration equipment manufacturing	333400	2.88%	5,439	4,908	-9.75%
Self-employed workers, primary job	000601	2.44%	4,599	4,807	4.52%
Self-employed workers, secondary job	000602	2.28%	4,294	4,194	-2.34%
Aerospace product and parts manufacturing	336400	2.08%	3,924	3,921	-0.09%
Electrical contractors	238210	1.89%	3,571	3,674	2.87%
Nonresidential building construction	236200	1.80%	3,401	3,739	9.92%
Employment services	561300	1.24%	2,343	2,910	24.16%
Ship and boat building	336600	0.99%	1,866	2,049	9.81%
Boiler, tank, and shipping container manufacturing	332400	0.90%	1,699	1,502	-11.59%
Other fabricated metal product manufacturing	332900	0.83%	1,572	1,367	-13.07%
Residential building construction	236100	0.64%	1,207	1,334	10.47%

### Top Industries for Construction Carpenters

Industry	NAICS	% of Industry	Employment	Projected Employment	% Change
Self-employed workers, primary job	000601	30.54%	446,483	475,671	6.54%
Residential building construction	236100	21.02%	307,298	346,046	12.61%
Nonresidential building construction	236200	10.73%	156,942	175,852	12.05%
Drywall and insulation contractors	238310	2.97%	43,454	46,350	6.66%
Employment services	561300	1.98%	28,968	36,663	26.56%
Other wood product manufacturing	321900	1.33%	19,516	18,391	-5.77%
Poured concrete foundation and structure contractors	238110	1.30%	18,976	21,392	12.73%
Self-employed workers, secondary job	000602	1.24%	18,094	18,903	4.47%
Highway, street, and bridge construction	237300	0.99%	14,411	15,516	7.66%
Other specialty trade contractors	238900	0.97%	14,210	15,706	10.52%
Wood kitchen cabinet and countertop manufacturing	337110	0.78%	11,337	12,552	10.72%
Building material and supplies dealers	444100	0.71%	10,317	13,185	27.79%
Local government, excluding education and hospitals	939300	0.61%	8,942	10,045	12.34%
Other heavy and civil engineering construction	237900	0.45%	6,529	7,013	7.41%
Ship and boat building	336600	0.43%	6,281	7,030	11.93%



# TORQ Analysis of Construction Carpenters to Helpers--Carpenters

ANALYSIS INPUT					
Transfer	Title	O*NET	Filters		
From Title:	Construction Carpenters	47-2031.01	Abilities:	Importance Level: 50	Weight: 1
To Title:	Helpers--Carpenters	47-3012.00	Skills:	Importance Level: 69	Weight: 1
Labor Market Area:	Maine Statewide		Knowledge:	Importance Level: 69	Weight: 1

TORQ RESULTS											
Grand TORQ:					<b>88</b>						
Ability TORQ		Skills TORQ		Knowledge TORQ							
Level	92	Level	78	Level	93						
Gaps To Narrow if Possible			Upgrade These Skills		Knowledge to Add						
Ability	Level	Gap	Impt	Skill	Level	Gap	Impt	Knowledge	Level	Gap	Impt
No Critical Gaps Recorded!				Installation	60	6	79	No Knowledge Upgrades Required!			
LEVEL and IMPT (IMPORTANCE) refer to the Target Helpers--Carpenters. GAP refers to level difference between Construction Carpenters and Helpers--Carpenters.											

ASK ANALYSIS			
Ability Level Comparison - Abilities with importance scores over 50			
Description	Construction Carpenters	Helpers--Carpenters	Importance
Arm-Hand Steadiness	53	41	59
Static Strength	57	51	59
Near Vision	50	41	59
Manual Dexterity	55	41	56
Trunk Strength	51	44	53
Oral Comprehension	51	48	50
Oral Expression	55	37	50
Problem Sensitivity	50	37	50
Information Ordering	59	35	50
Category Flexibility	44	35	50
Selective Attention	39	37	50
Multilimb Coordination	50	39	50
Dynamic Strength	48	41	50
Extent Flexibility	64	50	50
Far Vision	46	41	50
Depth Perception	46	41	50
Speech Recognition	41	34	50
Skill Level Comparison - Abilities with importance scores over 69			



Description	Construction Carpenters	Helpers--Carpenters	Importance
Installation	54	60	79
Knowledge Level Comparison - Knowledge with importance scores over 69			
Description	Construction Carpenters	Helpers--Carpenters	Importance

Experience & Education Comparison					
Related Work Experience Comparison			Required Education Level Comparison		
Description	Construction Carpenters	Helpers--Carpenters	Description	Construction Carpenters	Helpers--Carpenters
10+ years	3%	0%	Doctoral	0%	0%
8-10 years	0%	0%	Professional Degree	0%	0%
6-8 years	18%	0%	Post-Masters Cert	0%	0%
4-6 years	36%	0%	Master's Degree	0%	0%
2-4 years	0%	0%	Post-Bachelor Cert	0%	0%
1-2 years	21%	21%	Bachelors	0%	0%
6-12 months	15%	5%	AA or Equiv	0%	6%
3-6 months	1%	3%	Some College	1%	0%
1-3 months	0%	1%	Post-Secondary Certificate	44%	1%
0-1 month	0%	0%	High School Diploma or GED	24%	64%
None	2%	67%	No HSD or GED	28%	28%
Construction Carpenters			Helpers--Carpenters		
Most Common Educational/Training Requirement:					
Long-term on-the-job training			Short-term on-the-job training		
Job Zone Comparison					
3 - Job Zone Three: Medium Preparation Needed			2 - Job Zone Two: Some Preparation Needed		
<p>Previous work-related skill, knowledge, or experience is required for these occupations. For example, an electrician must have completed three or four years of apprenticeship or several years of vocational training, and often must have passed a licensing exam, in order to perform the job.</p> <p>Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree. Some may require a bachelor's degree.</p> <p>Employees in these occupations usually need one or two years of training involving both on-the-job experience and informal training with experienced workers.</p>			<p>Some previous work-related skill, knowledge, or experience may be helpful in these occupations, but usually is not needed. For example, a teller might benefit from experience working directly with the public, but an inexperienced person could still learn to be a teller with little difficulty.</p> <p>These occupations usually require a high school diploma and may require some vocational training or job-related course work. In some cases, an associate's or bachelor's degree could be needed.</p> <p>Employees in these occupations need anywhere from a few months to one year of working with experienced employees.</p>		

Tasks	
Construction Carpenters	Helpers--Carpenters
<p>Core Tasks</p> <p>Generalized Work Activities:</p> <ul style="list-style-type: none"> <li>Controlling Machines and Processes - Using either control mechanisms or direct physical activity to operate machines or processes (not including computers or vehicles).</li> <li>Judging the Qualities of Things, Services, or People - Assessing the value, importance, or quality of things or people.</li> </ul>	<p>Core Tasks</p> <p>Generalized Work Activities:</p> <ul style="list-style-type: none"> <li>Performing General Physical Activities - Performing physical activities that require considerable use of your arms and legs and moving your whole body, such as climbing, lifting, balancing, walking, stooping, and handling of materials.</li> <li>Inspecting Equipment, Structures, or Material</li> </ul>



- Monitor Processes, Materials, or Surroundings - Monitoring and reviewing information from materials, events, or the environment, to detect or assess problems.
- Communicating with Supervisors, Peers, or Subordinates - Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
- Coordinating the Work and Activities of Others- Getting members of a group to work together to accomplish tasks.

#### Specific Tasks

#### Occupation Specific Tasks:

- Apply shock-absorbing, sound-deadening, and decorative paneling to ceilings and walls.
- Arrange for subcontractors to deal with special areas such as heating and electrical wiring work.
- Assemble and fasten materials to make framework or props, using hand tools and wood screws, nails, dowel pins, or glue.
- Build or repair cabinets, doors, frameworks, floors, and other wooden fixtures used in buildings, using woodworking machines, carpenter's hand tools, and power tools.
- Construct forms and chutes for pouring concrete.
- Cover subfloors with building paper to keep out moisture and lay hardwood, parquet, and wood-strip-block floors by nailing floors to subfloor or cementing them to mastic or asphalt base.
- Erect scaffolding and ladders for assembling structures above ground level.
- Fill cracks and other defects in plaster or plasterboard and sand patch, using patching plaster, trowel, and sanding tool.
- Finish surfaces of woodwork or wallboard in houses and buildings, using paint, hand tools, and paneling.
- Follow established safety rules and regulations and maintain a safe and clean environment.
- Inspect ceiling or floor tile, wall coverings, siding, glass, or woodwork to detect broken or damaged structures.
- Install structures and fixtures, such as windows, frames, floorings, and trim, or hardware, using carpenter's hand and power tools.
- Maintain records, document actions and present written progress reports.
- Measure and mark cutting lines on materials, using ruler, pencil, chalk, and marking gauge.
- Perform minor plumbing, welding or concrete

- inspecting equipment, structures, or materials to identify the cause of errors or other problems or defects.

- Handling and Moving Objects - Using hands and arms in handling, installing, positioning, and moving materials, and manipulating things.
- Making Decisions and Solving Problems - Analyzing information and evaluating results to choose the best solution and solve problems.
- Getting Information - Observing, receiving, and otherwise obtaining information from all relevant sources.

#### Specific Tasks

#### Occupation Specific Tasks:

- Align, straighten, plumb and square forms for installation.
- Clean work areas, machines, and equipment, to maintain a clean and safe jobsite.
- Construct forms, then assist in raising them to the required elevation.
- Cover surfaces with laminated plastic covering material.
- Cut and install insulating or sound-absorbing material.
- Cut tile or linoleum to fit, and spread adhesives on flooring to install tile or linoleum.
- Cut timbers, lumber and/or paneling to specified dimensions, and drill holes in timbers or lumber.
- Erect scaffolding, shoring, and braces.
- Fasten timbers and/or lumber with glue, screws, pegs, or nails, and install hardware.
- Glue and clamp edges or joints of assembled parts.
- Hold plumb bobs, sighting rods, and other equipment, to aid in establishing reference points and lines.
- Install handrails under the direction of a carpenter.
- Perform tie spacing layout, then measure, mark, drill and/or cut.
- Position and hold timbers, lumber, and paneling in place for fastening or cutting.
- Secure stakes to grids for constructions of footings, nail scabs to footing forms, and vibrate and float concrete.
- Select tools, equipment, and materials from storage and transport items to work site.
- Smooth and sand surfaces to remove ridges, tool marks, glue, or caulking.

#### Detailed Tasks



mixing work.

- Prepare cost estimates for clients or employers.
- Remove damaged or defective parts or sections of structures and repair or replace, using hand tools.
- Select and order lumber and other required materials.
- Shape or cut materials to specified measurements, using hand tools, machines, or power saw.
- Study specifications in blueprints, sketches or building plans to prepare project layout and determine dimensions and materials required.
- Verify trueness of structure, using plumb bob and level.
- Work with or remove hazardous material.

#### Detailed Tasks

##### Detailed Work Activities:

- adhere to safety procedures
- anchor or brace wooden structures, frameworks, or forms
- apply adhesives, caulking, sealants, or coatings
- attach moisture barrier sheeting over construction surfaces
- build or install cabinets or related interior wood fixtures
- build or repair structures in construction, repair, or manufacturing setting
- climb ladders, scaffolding, or utility or telephone poles
- construct, erect, or repair wooden frameworks or structures
- cut, shape, fit, or join wood or other construction materials
- determine dimensions of wooden furnishings or structures to be built
- determine installation, service, or repair needed
- determine material or tool requirements
- determine project methods and procedures
- direct and coordinate activities of workers or staff
- erect scaffold
- estimate time or cost for installation, repair, or construction projects
- examine products or work to verify conformance to specifications
- fabricate, assemble, or disassemble manufactured products by hand
- finish or refinish floor, furniture, or related wood surfaces
- inspect premises or structure for evidence of deterioration or damage
- install doors, wood floors, window frames, trim, or stairs

##### Detailed Work Activities:

- adhere to safety procedures
- anchor or brace wooden structures, frameworks, or forms
- apply adhesives, caulking, sealants, or coatings
- assist mechanic, or extractive or construction trades craft worker
- attach moisture barrier sheeting over construction surfaces
- build or repair structures in construction, repair, or manufacturing setting
- clean equipment or machinery
- clean rooms or work areas
- climb ladders, scaffolding, or utility or telephone poles
- construct, erect, or repair wooden frameworks or structures
- cut, shape, fit, or join wood or other construction materials
- erect scaffold
- fabricate, assemble, or disassemble manufactured products by hand
- install carpet, linoleum, tile, or related material onto floors or walls
- install insulating materials
- install prefabricated building components
- install siding or sheeting
- install sub flooring, rough framing, or partitions
- measure and mark reference points or cutting lines on workpieces
- move materials or goods between work areas
- move or fit heavy objects
- perform safety inspections in construction or resource extraction setting
- position, align, or level machines, equipment, or structures
- prepare building surfaces for paint, finishes, wallpaper, or adhesives
- read tape measure
- repair cracks, defects, or damage in installed building materials
- use basic carpentry techniques
- use concrete fabrication techniques
- use hand or power tools
- use hand or power woodworking tools
- use measuring devices in construction or extraction work
- verify trueness of structure using plumb bob or level

#### Technology - Examples

##### Accounting software

- Intuit QuickBooks



- install drywall, plasterboard, or wallboard
- install insulating materials
- install lathing to support plaster, stucco, or related construction material
- install locks, hinges, or related finish hardware
- install or replace glass in windows, skylights, or other structural surfaces
- install prefabricated building components
- install siding or sheathing
- install sub flooring, rough framing, or partitions
- install wall or ceiling shock-absorbing paneling or acoustical tiles
- laminate objects
- lay out woodworking projects
- lubricate machinery, equipment, or parts
- maintain records, reports, or files
- measure and mark reference points or cutting lines on workpieces
- measure, weigh, or count products or materials
- move materials or goods between work areas
- move or fit heavy objects
- obtain information from clients, customers, or patients
- operate hoist, winch, or hydraulic boom
- operate woodworking equipment/machinery
- order or purchase supplies, materials, or equipment
- paint walls or other structural surfaces
- perform safety inspections in construction or resource extraction setting
- position, align, or level machines, equipment, or structures
- prepare building surfaces for paint, finishes, wallpaper, or adhesives
- prepare reports
- read blueprints
- read specifications
- read tape measure
- read technical drawings
- recognize wood characteristics
- recognize wood species characteristics
- repair cracks, defects, or damage in installed building materials
- repair or replace locks, hinges, or related finish hardware
- repair prefabricated wooden building components
- signal directions or warnings to coworkers
- understand construction specifications
- use basic carpentry techniques
- use basic plumbing techniques
- use building materials for routine building maintenance

- Intuit Quicken software

- Job costing software

#### Computer aided design CAD software

- Drawing and drafting software

#### Office suite software

- Microsoft Office

#### Project management software

- Bosch Punch List

- Cost estimating software

- Craftsman CD Estimator

- Turtle Creek Software Goldenseal Architect

#### Spreadsheet software

- Microsoft Excel

#### Tools - Examples

- Adjustable wrenches

- Air compressors

- Dial calipers

- Caulking guns

- Chalk lines

- Concrete vibrators

- Protective ear plugs

- Wood files

- Concrete floats

- Claw hammers

- Hand clamps

- Braces and bits

- Ladders

- Carpenters' levels

- Marking gauges

- Miter boxes

- Notebook computers

- Personal computers

- Block planes

- Plumb bobs



## maintenance

- use building or land use regulations
- use concrete fabrication techniques
- use hand or power tools
- use hand or power woodworking tools
- use hazardous materials information
- use measuring devices in construction or extraction work
- use oral or written communication techniques
- verify trueness of structure using plumb bob or level
- weld together metal parts, components, or structures

## Technology - Examples

## Accounting software

- Intuit QuickBooks
- Intuit Quicken software
- Job costing software

## Computer aided design CAD software

- Drawing and drafting software

## Information retrieval or search software

- Renaissance MasterCarpenter

## Internet browser software

- Web browser software

## Office suite software

- Microsoft Office

## Project management software

- Bosch Punch List
- Craftsman CD Estimator
- Estimating software
- Turtle Creek Software Goldenseal Architect
- Virtual Boss software

## Spreadsheet software

- Microsoft Excel

## Web page creation and editing software

- Web page creation and editing software

## Word processing software

- Microsoft Word
- Wilhelm Publishing Threshold

## Tools - Examples

- Compressors

- Power drills

- Power sanders

- Circular saws

- Power screwguns

- Respirators

- Hand saws

- Scaffolding

- Phillips head screwdrivers

- Socket wrenches

- Combination squares

- Measuring tapes

- Drywall knives

- Carpenters' chisels

- Baluster jigs
- Bandsaws
- Sliding t-bevels
- Joiners
- Calculators
- Calipers
- Caulking guns
- Pencil compasses
- Cranes
- Auger bits
- Push sticks
- Wood files
- Pettibones
- Power generators
- Chain saw jigs
- Rotary hammers
- Framing hammers
- Hard hats
- Electric impact wrenches
- Beam-lifting jacks
- Extension ladders
- Laser measuring tools
- Transits
- A-frame levels
- Marking gauges
- Moisture meters
- Needlenose pliers
- Notebook computers
- Personal computers
- Personal digital assistants PDA
- Planes
- Plumb bobs

- Pneumatic nail guns
- Cordless drills
- Disc grinders
- Electric planers
- Plunge routers
- Belt sanders
- Beam saws
- Brad tackers
- Protractors
- Mini pry bars
- Cat's paws
- Respirators
- Rulers
- Work boots
- Fall arrest systems
- Dado blades
- Saw guides
- Hand saws
- Ladder jacks
- Ladder levelers
- Multi-tip screwdrivers
- Combination squares
- Hammer staplers
- Cross-curve tape measures
- Templates
- Theodolites
- Snips
- Right triangles
- Utility knives
- Chisels
- Drill presses

## Labor Market Comparison

Maine Department of Labor.

Description	Construction Carpenters	Helpers--Carpenters	Difference
Median Wage	\$ 32,710	\$ 25,410	\$( 7,300)
10th Percentile Wage	\$ 25,700	\$ 19,090	\$( 6,610)
25th Percentile Wage	N/A	N/A	N/A
75th Percentile Wage	\$ 38,540	\$ 28,660	\$( 9,880)
90th Percentile Wage	\$ 46,230	\$ 30,830	\$( 15,400)
Mean Wage	\$ 34,030	\$ 24,980	\$( 9,050)
Total Employment - 2452	6,150	390	-5,760
Employment Base - 2006	11,492	399	-11,093
Projected Employment - 2461	11,306	389	-10,917
Projected Job Growth - 2006-2461	-1.6 %	-2.5 %	-0.9 %
Projected Annual Openings - 2006-2461	156	10	-146
Special			

Special Occupations: ☆ Maine High Wage - In Demand

**National Job Posting Trends**

Trend for Construction Carpenters and Helpers--Carpenters



Data from [Indeed](http://Indeed.com)

**Programs**

Related Programs

Carpentry/Carpenter

Carpentry/Carpenter. A program that prepares individuals to apply technical knowledge and skills to lay out, cut, fabricate, erect, install, and repair wooden structures and fixtures, using hand and power tools. Includes instruction in technical mathematics, framing, construction materials and selection, job estimating, blueprint reading, foundations and roughing-in, finish carpentry techniques, and applicable codes and standards.

Institution	Address	City	URL
Northern Maine Community College	33 Edgemont Dr	Presque Isle	<a href="http://www.nmcc.edu">www.nmcc.edu</a>
Northern Maine Community College	33 Edgemont Dr	Presque Isle	<a href="http://www.nmcc.edu">www.nmcc.edu</a>
Northern Maine Community College	33 Edgemont Dr	Presque Isle	<a href="http://www.nmcc.edu">www.nmcc.edu</a>
Southern Maine Community College	2 Fort Road	South Portland	<a href="http://www.smccME.edu">www.smccME.edu</a>

Maine Statewide Promotion Opportunities for Construction Carpenters									
O*NET Code	Title	Grand TORQ	Job Zone	Employment	Median Wage	Difference	Growth	Annual Job Openings	Special
47-2031.01	Construction Carpenters	100	3	6,150	\$32,710.00	\$0.00	-2%	156	
47-2021.00	Brickmasons and Blockmasons	89	2	270	\$38,960.00	\$6,250.00	6%	10	★
47-2081.00	Drywall and Ceiling Tile Installers	89	3	340	\$39,090.00	\$6,380.00	5%	8	
47-2211.00	Sheet Metal Workers	87	2	1,260	\$35,650.00	\$2,940.00	7%	40	★
47-2031.02	Rough Carpenters	87	2	6,150	\$32,710.00	\$0.00	-2%	156	
47-2132.00	Insulation Workers, Mechanical	86	3	180	\$35,060.00	\$2,350.00	2%	4	
47-2082.00	Tapers	86	2	70	\$39,910.00	\$7,200.00	5%	3	
51-4192.00	Lay-Out Workers, Metal and Plastic	85	2	180	\$43,870.00	\$11,160.00	-24%	3	
51-4121.06	Welders, Cutters, and Welder Fitters	84	2	1,610	\$38,030.00	\$5,320.00	7%	49	★
47-2151.00	Pipelayers	84	2	60	\$33,170.00	\$460.00	8%	3	
47-2221.00	Structural Iron and Steel Workers	82	3	420	\$36,030.00	\$3,320.00	0%	12	
49-9096.00	Riggers	82	3	250	\$39,140.00	\$6,430.00	-12%	2	
47-1011.00	First-Line Supervisors/Managers of Construction Trades and Extraction Workers	81	3	3,190	\$46,630.00	\$13,920.00	3%	77	★
49-9044.00	Millwrights	79	3	830	\$41,280.00	\$8,570.00	-12%	11	
51-2041.00	Structural Metal Fabricators and Fitters	79	3	680	\$36,030.00	\$3,320.00	5%	15	

Special Occupations: ★ Maine High Wage - In Demand

### Top Industries for Helpers--Carpenters

Industry	NAICS	% of Industry	Employment	Projected Employment	% Change
Residential building construction	236100	39.47%	43,042	48,469	12.61%
Nonresidential building construction	236200	14.61%	15,928	17,847	12.05%
Self-employed workers, primary job	000601	3.13%	3,413	3,636	6.54%
Drywall and insulation contractors	238310	2.62%	2,863	3,053	6.66%
Employment services	561300	1.98%	2,159	2,732	26.56%
Poured concrete foundation and structure contractors	238110	1.70%	1,854	2,090	12.73%
Other wood product manufacturing	321900	1.60%	1,740	1,639	-5.77%
Other specialty trade contractors	238900	1.36%	1,480	1,635	10.52%
Highway, street, and bridge construction	237300	0.69%	754	811	7.66%
Building material and supplies dealers	444100	0.61%	667	852	27.79%
Veneer, plywood, and engineered wood product manufacturing	321200	0.42%	461	502	8.90%
Masonry contractors	238140	0.35%	383	424	10.78%
Other heavy and civil engineering construction	237900	0.35%	387	416	7.41%
Household and institutional furniture manufacturing	337120	0.30%	329	250	-23.91%
Electrical contractors	238210	0.30%	330	346	4.86%

### Top Industries for Construction Carpenters

Industry	NAICS	% of Industry	Employment	Projected Employment	% Change
Self-employed workers, primary job	000601	30.54%	446,483	475,671	6.54%
Residential building construction	236100	21.02%	307,298	346,046	12.61%
Nonresidential building construction	236200	10.73%	156,942	175,852	12.05%
Drywall and insulation contractors	238310	2.97%	43,454	46,350	6.66%
Employment services	561300	1.98%	28,968	36,663	26.56%
Other wood product manufacturing	321900	1.33%	19,516	18,391	-5.77%
Poured concrete foundation and structure contractors	238110	1.30%	18,976	21,392	12.73%
Self-employed workers, secondary job	000602	1.24%	18,094	18,903	4.47%
Highway, street, and bridge construction	237300	0.99%	14,411	15,516	7.66%
Other specialty trade contractors	238900	0.97%	14,210	15,706	10.52%
Wood kitchen cabinet and countertop manufacturing	337110	0.78%	11,337	12,552	10.72%

Building material and supplies dealers	444100	0.71%	10,317	13,185	27.79%
Local government, excluding education and hospitals	939300	0.61%	8,942	10,045	12.34%
Other heavy and civil engineering construction	237900	0.45%	6,529	7,013	7.41%
Ship and boat building	336600	0.43%	6,281	7,030	11.93%



# TORQ Analysis of Construction Carpenters to Rough Carpenters

ANALYSIS INPUT					
Transfer	Title	O*NET	Filters		
From Title:	Construction Carpenters	47-2031.01	Abilities:	Importance Level: 50	Weight: 1
To Title:	Rough Carpenters	47-2031.02	Skills:	Importance Level: 69	Weight: 1
Labor Market Area:	Maine Statewide		Knowledge:	Importance Level: 69	Weight: 1

TORQ RESULTS							
Grand TORQ:					87		
Ability TORQ		Skills TORQ		Knowledge TORQ			
Level	95	Level	76	Level	89		
Gaps To Narrow if Possible				Upgrade These Skills		Knowledge to Add	
Ability	Level	Gap	Impt	Skill	Level	Gap	Impt
Hearing Sensitivity	37	7	50	No Skills Upgrade Required!			
Trunk Strength	53	2	62	No Knowledge Upgrades Required!			
Near Vision	51	1	62				
<p>LEVEL and IMPT (IMPORTANCE) refer to the Target Rough Carpenters. GAP refers to level difference between Construction Carpenters and Rough Carpenters.</p>							

ASK ANALYSIS			
Ability Level Comparison - Abilities with importance scores over 50			
Description	Construction Carpenters	Rough Carpenters	Importance
Problem Sensitivity	50	42	68
Oral Comprehension	51	48	62
Deductive Reasoning	46	42	62
Information Ordering	59	46	62
Arm-Hand Steadiness	53	46	62
Manual Dexterity	55	42	62
Trunk Strength	51	53	62
Near Vision	50	51	62
Inductive Reasoning	41	39	59
Visualization	60	51	56
Static Strength	57	51	56
Far Vision	46	44	56
Depth Perception	46	42	56
Written Comprehension	46	39	53
Oral Expression	55	44	53
Category Flexibility	44	39	53



Selective Attention	39	39	53
Control Precision	53	44	53
Multilimb Coordination	50	44	53
Extent Flexibility	64	51	53
Speech Recognition	41	34	53
Speech Clarity	39	37	53
Finger Dexterity	46	39	50
Hearing Sensitivity	30	37	50

Skill Level Comparison - Abilities with importance scores over 69

Description	Construction Carpenters	Rough Carpenters	Importance
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Knowledge Level Comparison - Knowledge with importance scores over 69

Description	Construction Carpenters	Rough Carpenters	Importance
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### Experience & Education Comparison

Related Work Experience Comparison			Required Education Level Comparison		
Description	Construction Carpenters	Rough Carpenters	Description	Construction Carpenters	Rough Carpenters
10+ years	3%	0%	Doctoral	0%	0%
8-10 years	0%	3%	Professional Degree	0%	0%
6-8 years	18%	10%	Post-Masters Cert	0%	0%
4-6 years	36%	29%	Master's Degree	0%	0%
2-4 years	0%	19%	Post-Bachelor Cert	0%	0%
1-2 years	21%	27%	Bachelors	0%	0%
6-12 months	15%	1%	AA or Equiv	0%	16%
3-6 months	1%	0%	Some College	1%	1%
1-3 months	0%	0%	Post-Secondary Certificate	44%	21%
0-1 month	0%	0%	High School Diploma or GED	24%	36%
None	2%	8%	No HSD or GED	28%	24%

Construction Carpenters

Rough Carpenters

Most Common Educational/Training Requirement:

Long-term on-the-job training

Long-term on-the-job training

Job Zone Comparison

**3 - Job Zone Three: Medium Preparation Needed**  
 Previous work-related skill, knowledge, or experience is required for these occupations. For example, an electrician must have completed three or four years of apprenticeship or several years of vocational training, and often must have passed a licensing exam, in order to perform the job.  
 Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree. Some may require a bachelor's degree.  
 Employees in these occupations usually need one or two years of training involving both on-the-job experience and informal training with experienced workers.

**2 - Job Zone Two: Some Preparation Needed**  
 Some previous work-related skill, knowledge, or experience may be helpful in these occupations, but usually is not needed. For example, a teller might benefit from experience working directly with the public, but an inexperienced person could still learn to be a teller with little difficulty.  
 These occupations usually require a high school diploma and may require some vocational training or job-related course work. In some cases, an associate's or bachelor's degree could be needed.  
 Employees in these occupations need anywhere from a few months to one year of working with experienced employees.

### Tasks



## Construction Carpenters

## Core Tasks

## Generalized Work Activities:

- Controlling Machines and Processes - Using either control mechanisms or direct physical activity to operate machines or processes (not including computers or vehicles).
- Judging the Qualities of Things, Services, or People - Assessing the value, importance, or quality of things or people.
- Monitor Processes, Materials, or Surroundings - Monitoring and reviewing information from materials, events, or the environment, to detect or assess problems.
- Communicating with Supervisors, Peers, or Subordinates - Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
- Coordinating the Work and Activities of Others- Getting members of a group to work together to accomplish tasks.

## Specific Tasks

## Occupation Specific Tasks:

- Apply shock-absorbing, sound-deadening, and decorative paneling to ceilings and walls.
- Arrange for subcontractors to deal with special areas such as heating and electrical wiring work.
- Assemble and fasten materials to make framework or props, using hand tools and wood screws, nails, dowel pins, or glue.
- Build or repair cabinets, doors, frameworks, floors, and other wooden fixtures used in buildings, using woodworking machines, carpenter's hand tools, and power tools.
- Construct forms and chutes for pouring concrete.
- Cover subfloors with building paper to keep out moisture and lay hardwood, parquet, and wood-strip-block floors by nailing floors to subfloor or cementing them to mastic or asphalt base.
- Erect scaffolding and ladders for assembling structures above ground level.
- Fill cracks and other defects in plaster or plasterboard and sand patch, using patching plaster, trowel, and sanding tool.
- Finish surfaces of woodwork or wallboard in houses and buildings, using paint, hand tools, and paneling.
- Follow established safety rules and regulations and maintain a safe and clean environment.
- Inspect ceiling or floor tile, wall coverings, siding, glass, or woodwork to detect broken or damaged structures.
- Install structures and fixtures, such as windows, frames, floorings, and trim, or

## Rough Carpenters

## Core Tasks

## Generalized Work Activities:

- Controlling Machines and Processes - Using either control mechanisms or direct physical activity to operate machines or processes (not including computers or vehicles).
- Judging the Qualities of Things, Services, or People - Assessing the value, importance, or quality of things or people.
- Monitor Processes, Materials, or Surroundings - Monitoring and reviewing information from materials, events, or the environment, to detect or assess problems.
- Communicating with Supervisors, Peers, or Subordinates - Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
- Coordinating the Work and Activities of Others- Getting members of a group to work together to accomplish tasks.

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- Arrange for subcontractors to deal with special areas such as heating and electrical wiring work.
- Assemble and fasten materials to make framework or props, using hand tools and wood screws, nails, dowel pins, or glue.
- Build or repair cabinets, doors, frameworks, floors, and other wooden fixtures used in buildings, using woodworking machines, carpenter's hand tools, and power tools.
- Construct forms and chutes for pouring concrete.
- Cover subfloors with building paper to keep out moisture and lay hardwood, parquet, and wood-strip-block floors by nailing floors to subfloor or cementing them to mastic or asphalt base.
- Erect scaffolding and ladders for assembling structures above ground level.
- Fill cracks and other defects in plaster or plasterboard and sand patch, using patching plaster, trowel, and sanding tool.
- Finish surfaces of woodwork or wallboard in houses and buildings, using paint, hand tools, and paneling.
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- Inspect ceiling or floor tile, wall coverings, siding, glass, or woodwork to detect broken or damaged structures.
- Install structures and fixtures, such as windows, frames, floorings, and trim, or



hardware, using carpenter's hand and power tools.

- Maintain records, document actions and present written progress reports.
- Measure and mark cutting lines on materials, using ruler, pencil, chalk, and marking gauge.
- Perform minor plumbing, welding or concrete mixing work.
- Prepare cost estimates for clients or employers.
- Remove damaged or defective parts or sections of structures and repair or replace, using hand tools.
- Select and order lumber and other required materials.
- Shape or cut materials to specified measurements, using hand tools, machines, or power saw.
- Study specifications in blueprints, sketches or building plans to prepare project layout and determine dimensions and materials required.
- Verify trueness of structure, using plumb bob and level.
- Work with or remove hazardous material.

#### Detailed Tasks

##### Detailed Work Activities:

- adhere to safety procedures
- anchor or brace wooden structures, frameworks, or forms
- apply adhesives, caulking, sealants, or coatings
- attach moisture barrier sheeting over construction surfaces
- build or install cabinets or related interior wood fixtures
- build or repair structures in construction, repair, or manufacturing setting
- climb ladders, scaffolding, or utility or telephone poles
- construct, erect, or repair wooden frameworks or structures
- cut, shape, fit, or join wood or other construction materials
- determine dimensions of wooden furnishings or structures to be built
- determine installation, service, or repair needed
- determine material or tool requirements
- determine project methods and procedures
- direct and coordinate activities of workers or staff
- erect scaffold
- estimate time or cost for installation, repair, or construction projects
- examine products or work to verify conformance to specifications
- fabricate, assemble, or disassemble manufactured products by hand

hardware, using carpenter's hand and power tools.

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- build or install cabinets or related interior wood fixtures
- build or repair structures in construction, repair, or manufacturing setting
- climb ladders, scaffolding, or utility or telephone poles
- construct, erect, or repair wooden frameworks or structures
- cut, shape, fit, or join wood or other construction materials
- determine dimensions of wooden furnishings or structures to be built
- determine installation, service, or repair needed
- determine material or tool requirements
- determine project methods and procedures
- direct and coordinate activities of workers or staff
- erect scaffold
- estimate time or cost for installation, repair, or construction projects
- examine products or work to verify conformance to specifications
- fabricate, assemble, or disassemble manufactured products by hand



- finish or refinish floor, furniture, or related wood surfaces
- inspect premises or structure for evidence of deterioration or damage
- install doors, wood floors, window frames, trim, or stairs
- install drywall, plasterboard, or wallboard
- install insulating materials
- install lathing to support plaster, stucco, or related construction material
- install locks, hinges, or related finish hardware
- install or replace glass in windows, skylights, or other structural surfaces
- install prefabricated building components
- install siding or sheeting
- install sub flooring, rough framing, or partitions
- install wall or ceiling shock-absorbing paneling or acoustical tiles
- laminate objects
- lay out woodworking projects
- lubricate machinery, equipment, or parts
- maintain records, reports, or files
- measure and mark reference points or cutting lines on workpieces
- measure, weigh, or count products or materials
- move materials or goods between work areas
- move or fit heavy objects
- obtain information from clients, customers, or patients
- operate hoist, winch, or hydraulic boom
- operate woodworking equipment/machinery
- order or purchase supplies, materials, or equipment
- paint walls or other structural surfaces
- perform safety inspections in construction or resource extraction setting
- position, align, or level machines, equipment, or structures
- prepare building surfaces for paint, finishes, wallpaper, or adhesives
- prepare reports
- read blueprints
- read specifications
- read tape measure
- read technical drawings
- recognize wood characteristics
- recognize wood species characteristics
- repair cracks, defects, or damage in installed building materials
- repair or replace locks, hinges, or related finish hardware
- repair prefabricated wooden building components

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- signal directions or warnings to coworkers
- understand construction specifications
- use basic carpentry techniques
- use basic plumbing techniques
- use building materials for routine building maintenance
- use building or land use regulations
- use concrete fabrication techniques
- use hand or power tools
- use hand or power woodworking tools
- use hazardous materials information
- use measuring devices in construction or extraction work
- use oral or written communication techniques
- verify trueness of structure using plumb bob or level
- weld together metal parts, components, or structures

## Technology - Examples

## Accounting software

- Intuit QuickBooks
- Intuit Quicken software
- Job costing software

## Computer aided design CAD software

- Drawing and drafting software

## Information retrieval or search software

- Renaissance MasterCarpenter

## Internet browser software

- Web browser software

## Office suite software

- Microsoft Office

## Project management software

- Bosch Punch List
- Craftsman CD Estimator
- Estimating software
- Turtle Creek Software Goldenseal Architect
- Virtual Boss software

## Spreadsheet software

- Microsoft Excel

## Web page creation and editing software

- Web page creation and editing software

## Word processing software

- Microsoft Word

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## Technology - Examples

## Computer aided design CAD software

- Drawing and drafting software

## Mobile operator specific application software

- Bosch Punch List

## Office suite software

- Microsoft Office

## Spreadsheet software

- Microsoft Excel

## Word processing software

- Microsoft Word

## Tools - Examples

- Compressors
- Level jigs
- Bandsaws
- Sliding t-bevels
- Calipers
- Caulking guns
- Cranes
- Push sticks
- Pettibones
- Power generators
- Chainsaw jigs
- Rotary hammers



- Wilhelm Publishing Threshold

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 Tools - Examples
 

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- Compressors
- Baluster jigs
- Bandsaws
- Sliding t-bevels
- Joiners
- Calculators
- Calipers
- Caulking guns
- Pencil compasses
- Cranes
- Auger bits
- Push sticks
- Wood files
- Pettibones
- Power generators
- Chain saw jigs
- Rotary hammers
- Framing hammers
- Hard hats
- Electric impact wrenches
- Beam-lifting jacks
- Extension ladders
- Laser measuring tools
- Transits
- A-frame levels
- Marking gauges
- Moisture meters
- Needlenose pliers
- Notebook computers
- Personal computers
- Personal digital assistants PDA

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- Notebook computers
- Personal computers
- Personal digital assistants PDA
- Plumb bobs
- Pneumatic nail guns
- Power drills
- Nail guns
- Routers
- Belt sanders
- Beam saws
- Staple guns
- Protractors
- Mini pry bars
- Cat's paws
- Respirators
- Rulers
- Work boots
- Fall arrest systems
- Dado blades
- Saw guides
- Hand saws
- Ladder jacks



- Planes
- Plumb bobs
- Pneumatic nail guns
- Cordless drills
- Disc grinders
- Electric planers
- Plunge routers
- Belt sanders
- Beam saws
- Brad tackers
- Protractors
- Mini pry bars
- Cat's paws
- Respirators
- Rulers
- Work boots
- Fall arrest systems
- Dado blades
- Saw guides
- Hand saws
- Ladder jacks
- Ladder levelers
- Multi-tip screwdrivers
- Combination squares
- Hammer staplers
- Cross-curve tape measures
- Templates
- Theodolites
- Snips
- Right triangles
- Utility knives
- Chisels

## - Ladder jacks

- Ladder levelers
- Multi-tip screwdrivers
- Combination squares
- Hammer staplers
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- Snips
- Right triangles
- Utility knives
- Drill presses

- Drill presses

### Labor Market Comparison

Maine Department of Labor.

Description	Construction Carpenters	Rough Carpenters	Difference
Median Wage	\$ 32,710	\$ 32,710	\$ 0
10th Percentile Wage	\$ 25,700	\$ 25,700	\$ 0
25th Percentile Wage	N/A	N/A	N/A
75th Percentile Wage	\$ 38,540	\$ 38,540	\$ 0
90th Percentile Wage	\$ 46,230	\$ 46,230	\$ 0
Mean Wage	\$ 34,030	\$ 34,030	\$ 0
Total Employment - 2452	6,150	6,150	0
Employment Base - 2006	11,492	11,492	0
Projected Employment - 2461	11,306	11,306	0
Projected Job Growth - 2006-2461	-1.6 %	-1.6 %	0.0 %
Projected Annual Openings - 2006-2461	156	156	0
Special			

Special Occupations: ☆ Maine High Wage - In Demand

### National Job Posting Trends

Trend for Construction Carpenters and Rough Carpenters



Data from [Indeed](http://Indeed.com)

Programs			
Related Programs			
Carpenter			
Carpentry/Carpenter. A program that prepares individuals to apply technical knowledge and skills to lay out, cut, fabricate, erect, install, and repair wooden structures and fixtures, using hand and power tools. Includes instruction in technical mathematics, framing, construction materials and selection, job estimating, blueprint reading, foundations and roughing-in, finish carpentry techniques, and applicable codes and standards.			
Institution	Address	City	URL
Northern Maine Community College	33 Edgemont Dr	Presque Isle	<a href="http://www.nmcc.edu">www.nmcc.edu</a>
Northern Maine Community College	33 Edgemont Dr	Presque Isle	<a href="http://www.nmcc.edu">www.nmcc.edu</a>
Northern Maine Community College	33 Edgemont Dr	Presque Isle	<a href="http://www.nmcc.edu">www.nmcc.edu</a>
Southern Maine Community College	2 Fort Road	South Portland	<a href="http://www.smccME.edu">www.smccME.edu</a>

Maine Statewide Promotion Opportunities for Construction Carpenters									
O*NET Code	Title	Grand TORQ	Job Zone	Employment	Median Wage	Difference	Growth	Annual Job Openings	Special
47-2031.01	Construction Carpenters	100	3	6,150	\$32,710.00	\$0.00	-2%	156	
47-2021.00	Brickmasons and Blockmasons	89	2	270	\$38,960.00	\$6,250.00	6%	10	★
47-2081.00	Drywall and Ceiling Tile Installers	89	3	340	\$39,090.00	\$6,380.00	5%	8	
47-2211.00	Sheet Metal Workers	87	2	1,260	\$35,650.00	\$2,940.00	7%	40	★
47-2031.02	Rough Carpenters	87	2	6,150	\$32,710.00	\$0.00	-2%	156	
47-2132.00	Insulation Workers, Mechanical	86	3	180	\$35,060.00	\$2,350.00	2%	4	
47-2082.00	Tapers	86	2	70	\$39,910.00	\$7,200.00	5%	3	
51-4192.00	Lay-Out Workers, Metal and Plastic	85	2	180	\$43,870.00	\$11,160.00	-24%	3	
51-4121.06	Welders, Cutters, and Welder Fitters	84	2	1,610	\$38,030.00	\$5,320.00	7%	49	★
47-2151.00	Pipelayers	84	2	60	\$33,170.00	\$460.00	8%	3	
47-2221.00	Structural Iron and Steel Workers	82	3	420	\$36,030.00	\$3,320.00	0%	12	
49-9096.00	Riggers	82	3	250	\$39,140.00	\$6,430.00	-12%	2	
47-1011.00	First-Line Supervisors/Managers of Construction Trades and Extraction Workers	81	3	3,190	\$46,630.00	\$13,920.00	3%	77	★



47-2011.00	Boilermakers	79	4	60	\$39,260.00	\$6,550.00	12%	3	
47-2111.00	Electricians	79	3	2,910	\$43,650.00	\$10,940.00	1%	89	★

Special Occupations: ★ Maine High Wage - In Demand

### Top Industries for Rough Carpenters

Industry	NAICS	% of Industry	Employment	Projected Employment	% Change
Self-employed workers, primary job	000601	30.54%	446,483	475,671	6.54%
Residential building construction	236100	21.02%	307,298	346,046	12.61%
Nonresidential building construction	236200	10.73%	156,942	175,852	12.05%
Drywall and insulation contractors	238310	2.97%	43,454	46,350	6.66%
Employment services	561300	1.98%	28,968	36,663	26.56%
Other wood product manufacturing	321900	1.33%	19,516	18,391	-5.77%
Poured concrete foundation and structure contractors	238110	1.30%	18,976	21,392	12.73%
Self-employed workers, secondary job	000602	1.24%	18,094	18,903	4.47%
Highway, street, and bridge construction	237300	0.99%	14,411	15,516	7.66%
Other specialty trade contractors	238900	0.97%	14,210	15,706	10.52%
Wood kitchen cabinet and countertop manufacturing	337110	0.78%	11,337	12,552	10.72%
Building material and supplies dealers	444100	0.71%	10,317	13,185	27.79%
Local government, excluding education and hospitals	939300	0.61%	8,942	10,045	12.34%
Other heavy and civil engineering construction	237900	0.45%	6,529	7,013	7.41%
Ship and boat building	336600	0.43%	6,281	7,030	11.93%

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## Industry & Occupational Data Sources

TORQ Results: The TORQ Scores is based upon an proprietary algorithm applied against Knowledge, Skills and Ability levels and importance derived from O\*NET 12.

ASK Analysis, Experience & Education Levels and Tasks: O\*Net 12

Labor Market Comparisons Occupational Projections data from Maine Department of Labor

National Posting Trends Indeed.com

Labor Pool & Promotions Opportunities: Occupational Projections data from Maine Department of Labor

Top Industries: Occupational Employment Statistics program (U.S. Bureau of Labor Statistics)