

Deconstruction Opportunities



Career Options After Deconstruction Training



ABOUT THIS PUBLICATION

This report was developed by the Delta Institute to help illuminate opportunities for career development in the emerging deconstruction and reuse industry. Content for this report was derived from the following sources:

1. Brookings Institute: Sizing the Clean Economy: A National and Regional Green Jobs Assessment (http://www.brookings.edu/reports/2011/0713_clean_economy.aspx)

The Brookings Institute is a global think-tank comprised of experts in government and academia, which is dedicated to providing high quality research, recommendations and analysis on public policy issues. Data and information released in July 2011 provides a snapshot of the current state of the green jobs market in the United States, highlighting leading metropolitan regions and the industry sub-sectors that have contributed the most to the green sector job creation. According to the report, the “green” or “clean” economy is the sector of the economy that produces goods and services with an environmental benefit; with the clean economy presently accounting for 2.7 million jobs in the United States. Most notably, the Brookings report lends detail to the contributions in the green sector economy regionally, ranking the Illinois-Indiana-Wisconsin metro as the third largest metropolitan contributor to green sector, amongst the leading 100 metros.

2. The ReUse People of America (TRP)

The west-coast based non-profit organization; The ReUse People of America has a developed into a recognized, industry leader in construction and demolition (C&D) waste diversion since 1993. TRP provided support to this report by lending background to the concept of deconstruction, a relatively new industry practice. In addition to industry background, TRP was credited with assisting Delta to develop a training model that focuses on transferable skill-set development for trainees, thus allowing them to maximize opportunities following training. Lastly, TRP was been instrumental to the understanding of the existing requirements for entry level career opportunities following training, and the growth potential for high-demand manufacturing sectors related to the deconstruction industry.

3. Illinois Department of Employment Security (IDES), Workforce Information Center (<https://illinois.virtuallmi.com/>)

The Illinois Workforce Information Center, operated by the Illinois Department of Employment Security, provides basic worker descriptions, salary/wage information, education/training requirements, advancement opportunities, and projected growth potential across hundreds of industry sectors and titles based on the U.S. Department of Labor’s – Bureau of Labor Statistics (BLS) and the U.S. Employment and Training Administration (ETA). For this report, we reviewed six of the most directly aligned industry sectors relevant to deconstruction to determine career potential, salary, growth potential and projected industry growth potential (as expressed in job creation) for each of them. Salary and wage distributions were based on data from annual wage surveys for the lower 1/3 and upper 2/3 wages, as obtained from IDES annual wage surveys within each respective industry. Employment demand figures were based on data from IDES – Projections Unit.



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EXECUTIVE SUMMARY

The ReBuilding Exchange: Milestones Achieved through Deconstruction

In 2008, the Chicago-based non-profit organization, Delta Institute, launched a research study focused on building material waste and subsequent landfill diversion. This research sought to strengthen Delta's understanding of the market opportunity for deconstruction, while providing the foundation for the development of a unique, regionally-based green economy initiative that would convert the liability of building material waste into a valuable community asset.

From this initial research it was concluded that the local waste stream would support a large deconstruction initiative. Fueled by these findings, Delta secured start-up capital from the Searle Funds at the Chicago Community Trust and launched Chicago's first building material reuse center—the ReBuilding Exchange—in February of 2009.

Since opening, the ReBuilding Exchange has demonstrated the potential of deconstruction and reuse to create jobs and make a positive impact on the environment. The ReBuilding Exchange gets its materials from deconstruction projects, materials which would otherwise end up in the landfill. These materials are then sold for a fraction of the cost of new, so they stay out of our landfills, and are available to residents at all income levels, particularly those who can't afford the rising costs of such materials.



Deconstruction Job Training

While the building deconstruction and material reuse industry continues to grow exponentially, we need a trained workforce to meet growing demand. The ReBuilding Exchange developed the first deconstruction job training program for the Chicago area in 2010. The pilot program was launched in partnership with the Safer Foundation and The ReUse People of America.

This training introduced approximately 70 displaced workers to the industry principles of deconstruction, while also equipping them with several other transferable skill sets, thus enabling these workers to pursue multiple forms of viable employment. Funding for this program was provided by the City of Chicago, the Polk Brother Foundation and The Boeing Company.

Employment Alternatives and Their Descriptions

After receiving formal deconstruction training, skilled workers are prepared to pursue permanent jobs and advancement opportunities in the deconstruction industry; however, due in large part to the many transferable skills obtained in their training, many other viable employment options are also made available for newly trained workers.

The following section provides a description of multiple positions, including pertinent employment information for an entry level deconstruction worker, while also highlighting alternative entry-level job titles deconstruction trainees are equipped to pursue following their training. While these descriptions provide a snapshot of each position, they should be viewed as a general guide. Ultimately, employment needs vary depending on the hiring company's needs and the position being filled.

Deconstruction Worker

Level	All
Description	Deconstruction workers use building and construction principles to systematically dismantle structures, specifically for re-use, recycling, and waste management.
Supervises Others	Based on experience.
Education Requirements	H.S. Diploma/G.E.D.
Work Experience	1-2 years previous experience with both on-the-job and informal training.
Certifications	Trade specific
Salary/Wages	\$9.38 – \$27/Hour <i>Bonuses may be included for Project Supervisors</i>
Advancement Opportunity	<p>Deconstruction trainees receive training under a standardized, industry-specific deconstruction curriculum, a trainee is prepared for advanced opportunities in the deconstruction.</p> <p>Crew Member – Assists on multiple deconstruction projects (typically in this role for less than a year).</p> <p>Crew Chief – After receiving crew oversight training, crew chief’s project manage work crews (typically in this role for 2-3 years).</p> <p>Project Supervisor – After receiving training in such tasks as project estimating, project supervisors are prepared to oversee multiple crews and project sites at one time.</p>
Source	ReBuilding Exchange; The ReUse People of America

Deconstruction is projected to be among the more highly-demanded career sectors in future local green sector jobs.





Deconstruction Worker

Employment Demand

Deconstruction is projected to be among the more highly-demanded career sectors in future local green sector jobs. Deconstruction incorporates multiple clean economy industry sectors: greenhouse gas reduction, material recycling, waste diversion and environmental management.

As of 2010, national figures in these industry sectors were comprised of jobs in such relevant fields as waste management and treatment (386,116), and recycling and reuse (129,252).

This data specifically reflects an absolute change in positive employment growth of the clean economy industry sector, yielding 38,668 jobs, an annual average change of 5.4 percent.

These data trends seem to suggest a continued positive impact locally, as the Chicago-Joliet-Naperville, IL-IN-WI Metropolitan Area ranked third overall, amongst the top 100 largest metro areas, as of 2010.

As of 2010 findings, 39 industry subsectors comprised the overall clean economy industry, with waste management being the leading segment in terms of number of jobs. Moreover, the Chicago-Joliet-Naperville, IL-IN-WI Metropolitan Area ranked third overall amongst the top 100 largest metro areas with the most clean economy jobs.

With both arrows pointed up, these data trends suggest that the opportunity for deconstruction remains strong, while its overall impact on the local green economy will continue.

Industry Competence

Employees in this occupation need anywhere from a few days to a few months of training. Usually, an experienced worker can demonstrate how to do the job.

- Knowledge of materials, methods, and the tools involved in the construction or repair of houses, buildings, or other structures such as highways and roads.

Furniture Makers and Shop Carpenters

Level	Entry level - Experienced
Description	Use hand-tools and/or operate woodworking machines (power saws, jointers, mortises, etc.) to shape, assemble, finish, and refinish lumber into finished wood-based products.
Supervises Others	No
Education Requirements	H.S. Diploma/G.E.D. Cabinetmakers and Bench Carpenters usually require more than 12 months of on-the-job training; however, not all employers may make this a hiring requirement. <i>A recognized apprenticeship program may be associated with these occupations.</i>
Work Experience	Employees in these occupations usually need one or two years of training involving both on-the-job experience and informal training with experienced workers.
Certifications	None Required
Salary/Wages	\$12 - \$22/Hour
Source	ReBuilding Exchange; Illinois Workforce Info Center

Furniture makers and shop carpenters represent 70 percent of the furniture and related product manufacturing community employed in Illinois.





Furniture Makers and Shop Carpenters

Employment Demand

Furniture makers and shop carpenters represent 70 percent of the employed furniture and related product manufacturing industry, and 11 percent of the employed wood product manufacturing industry in Illinois.

Other industries that employ furniture makers and shop carpenters include: specialty trade contractors, construction companies, merchant wholesalers of durable goods and building materials, and garden supply stores.

Furniture makers and shop carpenters can expect 85 net annual openings over the next seven years. These openings will be primarily due to worker replacement, representing a projected industry growth rate of 5 percent during this time.

Industry Competence

- Knowledge of design techniques, tools, and principles involved in the production of precision technical plans, blueprints, drawings and models.
- Knowledge of hand tools, power tools, and machinery, including knowledge of their design, use, repair, and maintenance.

Warehousing and Inventory Clerks

Level	Entry Level
Description	<p>Receive, store, and issue materials, equipment, and other items from stockroom, warehouse, or storage yard.</p> <p>Keep records and compile stock reports.</p> <p>Routinely provide retail services for new building materials, garden equipment & supplies merchandise from fixed point-of-sale locations.</p>
Supervises Others	No
Education Requirements	H.S. Diploma/G.E.D.
Work Experience	<p>Employees in these occupations need anywhere from a few days to a few months of training. Usually, an experienced worker can show a clerk- in-training how to perform work activities.</p> <p><i>Task- specific demonstrations to three months of on-the-job training are common training for this role.</i></p>
Certifications	Forklift operator certification required for some positions.
Salary/Wages	<p>\$8.50 – \$13/Hour</p> <p>Industry Sub-sector: Building Material & Garden Supply Clerks (BMGS)</p> <p>In 2009, the average weekly wage for Material & Garden Supply Clerks was \$530, which roughly translated to \$13.25 per hour or \$27,560 per year, assuming a 40-hour week was worked for the entire year.</p>
Source	ReBuilding Exchange; Illinois Workforce Info Center

In the next seven years, stock clerks in general are expected to grow by 2,222 openings annually.





Warehouse and Inventory Clerks

Employment Demand

As of 2008, there were a total of 62,475 warehousing and inventory clerks employed in Illinois. Of this total, BMGS clerks comprised 2,386 (3.1 percent) of these positions. In the next seven years, stock clerks in total are expected to grow by 2,222 openings annually.

Industry Sub-sector: Building Material & Garden Supply Clerks, 2008 -2009 Growth

In 2009, there were a total of 2,518 BMGS-related establishments located in Illinois, employing 43,921 total employees. Among these employees, 2,386 were stock clerks, roughly 5.4 percent of the total BMGS staffing.

Assuming the BMGS industry subsector continues to comprise 3 to 5 percent of the overall warehousing clerk positions in Illinois, a total of 100 BMGS positions can be projected annually.

Industry Competence

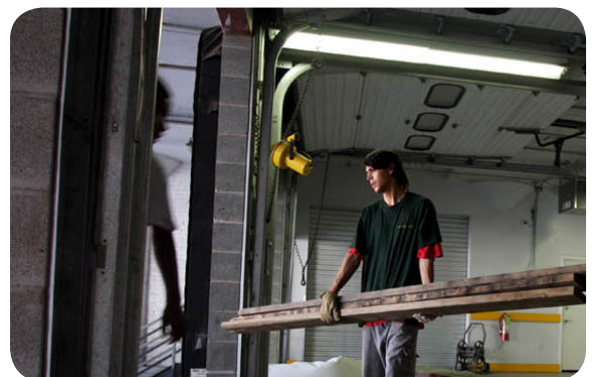
Clerks are required to manually handle, install, position, and move materials and inventoried products. Computer literacy is required.

These activities are typically strenuous and physical in nature, and may require considerable use of upper and lower body strength, while performing such tasks as climbing, lifting, balancing, walking, stooping, and handling materials

Shipping and Receiving Agents

Level	Entry level - Experienced
Description	Shipping and receiving agents verify and keep records on incoming and outgoing shipments, and prepare items for shipment. Duties include assembling, addressing, stamping, and shipping merchandise or material; receiving, unpacking, verifying and recording incoming merchandise or material; and arranging for the transportation of products.
Supervises Others	Experience required. Shipping and receiving agents may be promoted to supervisory roles, and those with an understanding of other tasks in their firm can move into other positions, such as purchasing managers or logisticians.
Education Requirements	H.S. Diploma/G.E.D., Some College
Work Experience	1-2 years previous experience with experienced employees
Certifications	-Warehouse/Receiving Clerk License required for some positions. -Forklift operator certification required for some positions.
Salary/Wages	\$10 - \$17/Hour
Source	Illinois Workforce Info Center

Shipping and receiving agents in Illinois are expected to experience a significant turnover, at an average of 920 positions per year for the next seven years.





Shipping and Receiving Agents

Employment Demand

Over the next seven years, shipping and receiving agents in Illinois are expected to experience significant worker turnover, as an average of 920 positions per year for the next seven years project to be open due to worker replacement.

While the shipping and receiving industry anticipates limited industry growth amongst its agent staffing over the next seven years, this projected annual worker turnover can be largely attributed to senior level retirement, while generating potential new job placement opportunities for a younger, newly trained, skilled-worker demographic.

Industry Competence

Shipping and receiving agents typically learn the job by doing routine tasks under close supervision. They first learn how to count and mark stock, and then start keeping records and taking inventory. However, due to increasing automation, employers prefer to hire those familiar with computers and other electronic office and business equipment.

- Knowledge of principles and methods for moving people or goods by air, rail, sea, or road, including the relative costs and benefits.
- Knowledge of business and management principles involved in strategic planning, resource allocation, human resources modeling, leadership technique, production methods, and coordination of people and resources.
- Knowledge of administrative and clerical procedures and systems such as word processing, managing files and records, stenography and transcription, designing forms, and other office procedures and terminology.

Retail & Customer Service

Level	Entry level - Experienced
Description	Retail and customer service representatives sell goods for wholesalers or manufacturers to individual customers, or businesses. Work requires substantial knowledge of the industry/trade/items sold.
Supervises Others	Frequently, sales representatives who lack the necessary expertise on a given product may team with a technical expert. In this arrangement, the technical expert—sometimes a sales engineer—attends sales presentations to further explain the product and answer questions or concerns. The sales representative makes the preliminary contact with customers, introduces the company's product, and closes the sale. Under such an arrangement, the representative is able to spend more time maintaining and soliciting accounts and less time acquiring technical knowledge.
Education Requirements	H.S. Diploma/G.E.D., Some College Moderate-term on-the-job training (1-12 months)
Work Experience	1-2 years previous experience with both on-the-job training and informal training. A recognized apprenticeship program may be associated with these occupations.
Certifications	None required
Salary/Wages	\$15 - \$40/Hour (Industry Specific)
Source	Illinois Workforce Info Center

Retail sales representatives are projected to average 1,742 new openings annually over the next seven years in Illinois.



Retail and Customer Service

Employment Demand

Retail sales representatives in the wholesale and manufacturing industry are projected to average 1,742 new openings annually over the next seven years in Illinois.

Of these projected openings, 194 positions (11 percent) are expected to be from growth (new positions) and 1,548 positions (89 percent) from worker replacements.

Industry Competence

Retail & customer service representatives must possess a broad understanding of the product and/or have direct insight on the respective trade.

- Knowledge of the principles and methods for showing, promoting, and selling products or services. This includes marketing strategy and tactics, product demonstration, sales techniques, and sales control systems.
- Knowledge of business and management principles involved in strategic planning, resource allocation, human resources modeling, leadership technique, production methods, and coordination of people and resources.
- Knowledge of the principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction.

Construction Laborer

Level	Entry level - Experienced
Description	Construction laborers perform tasks involving physical labor at buildings. Construction laborers may clean and prepare sites, dig trenches, set braces to support the sides of excavations, erect scaffolding, clean up rubble and debris, and assist other craft workers.
Supervises Others	Based on experience.
Education Requirements	H.S. Diploma/G.E.D.
Work Experience	1-2 years previous experience with both on-the-job and informal training.
Certifications	Trade specific
Salary/Wages	\$9.38 - \$27/Hour
Source	Illinois Workforce Info Center

Construction laborers in Illinois are projected to increase by 8,951 new openings over the next seven years.





Construction Laborer

Employment Demand

Construction laborers in Illinois are projected to increase by 8,951 new openings over the next seven years, representing a total annual average opening of 1,276.

Of these 1,200+ new jobs annually, 70 percent are projected openings due to growth, and 30 percent projected due to worker replacement.

Industry Competence

Employees in these occupations need anywhere from a few days to a few months of training. Usually, an experienced worker can demonstrate how to do the job.

- Knowledge of materials, methods, and the tools involved in the construction or repair of houses, buildings, or other structures such as highways and roads.

Transportation Logistics

Level	Mid-Level Experience
Description	<p>Cargo and freight agents help transportation companies manage incoming and outgoing shipments in airline, train, or trucking terminals or on shipping docks.</p> <p>Agents expedite shipments by determining a route, preparing all necessary documents, and arranging for the pickup of freight or cargo and its delivery to loading platforms. They may also keep records of the cargo, including its amount, type, weight, dimensions, destination, and time of shipment. They also keep a tally of missing items and record the condition of damaged items.</p>
Supervises Others	No
Education Requirements	H.S. Diploma/G.E.D., Bachelor's Degree
Work Experience	<p>Employees in these occupations need anywhere from a few months to one year of working with experienced employees.</p> <p><i>A recognized apprenticeship program may be associated with these occupation.</i></p>
Certifications	None required
Salary/Wages	\$11.50 - \$23/Hour
Source	Illinois Workforce Info Center

Cargo and freight agents are projected to increase by a total of 1,039 positions over the next seven years.





Transportation Logistics

Employment Demand

Cargo and freight agents are projected to increase by a total of 1,039 positions over the next seven years. This represents a total annual average of 265 openings per year.

Of these openings, 104 (39 percent) are projected to be from industry growth, with 161 (61 percent) projected from worker replacement.

Industry Competence

- Knowledge of principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction.
- Knowledge of principles and methods for moving people or goods by air, rail, sea, or road, including the relative costs and benefits.

