

CONSTRUCTION APPRENTICESHIP

THE “OTHER FOUR-YEAR DEGREE”



*“The apprenticeship infrastructure of North America's Building Trades Unions, which today encompasses over **1,900 training centers** across the United States and Canada, and which is privately funded through collectively bargained contributions that exceed **\$1.3 billion per year**, offers young men and women the chance to work and further their education, without the burden of student loans.”*

– Sean McGarvey
President of the North America's Building Trades Unions

A construction worker wearing a white hard hat and a dark t-shirt is seen from the side, operating a crane. The background is a city skyline with various buildings. The image is overlaid with large, flowing, abstract shapes in shades of red, orange, and grey. In the bottom left corner, there is a blue circular graphic containing text.

51%

of apprenticeship programs anticipate an increase in the number of minority apprentices in their programs during the next two years.

INTRODUCTION

For over 100 years, North America's Building Trades Unions and its signatory contractors have funded and operated a skilled craft apprenticeship system that is the envy of the world.

Apprenticeship and workplace-based training is an “earn while you learn” system that offers young people the chance to learn from the best trained construction workers in North America. When they complete their apprenticeship, they also have a portable, nationally recognized credential that they can take anywhere in the country, one that comes with good pay and benefits that will support them and their families.

An additional important feature is that most apprenticeship programs have been assessed for college credit, which participants can apply toward an associate's or bachelor's degree.

To be sure, apprenticeship is the “other four-year degree.”



Apprenticeship programs have also proven to provide a greater return for employers. Economic return on investment (ROI) has shown that employers gain a return for craft training of as much as \$3 to every \$1 that is invested; accounted for by improved safety, elimination of rework, and increased productivity of the craft worker. Similarly, those completing an apprenticeship earn substantially more over a career than the average two-year college degree graduate.

The joint administration of apprenticeship and training enables contractors and craft organizations to develop and modify training in real time, in order to better fit the needs of the industry at any given time.



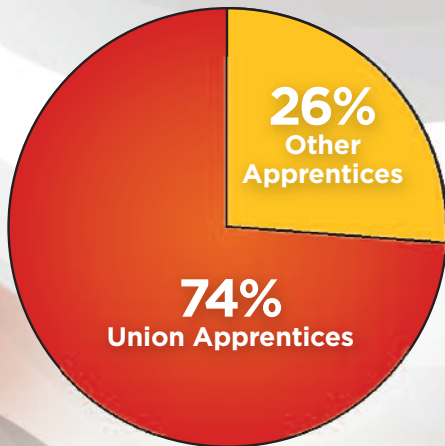
Similarly, training and education curricula are developed in a manner that is career centered, and in keeping with the needs of a lifetime career, rather than narrowly suited to a single employer's immediate needs.

The apprenticeship infrastructure of North America's Building Trades Unions, which today encompasses over 1,900 training centers across the United States and Canada, and which is privately funded through collectively bargained contributions that exceed \$1.3 billion per year, offers young men and women the chance to work and further their education, without the burden of student loans.

No other sector of the North American construction industry operates such a comprehensive and successful training approach; and no other industry in North America has a comparable system in place.

“CII (the Construction Industry Institute) established the Construction Industry Craft Training Research Team to examine construction craft training. The team concludes that each dollar invested in craft training can yield \$1.30 to \$3.00 in benefits. The benefits accrue in the form of increased productivity and reductions in turnover, absenteeism, rework, and other areas.”

– Construction Industry Craft Training in the United States and Canada,” Construction Industry Institute, University of Texas, Research Summary 231-1, August 2000



Percentage of US Construction Apprentices in Union vs Other Programs, 2014



Apprenticeship training is a remarkably successful model when supported broadly by employers, and we feel it should be available to more American construction workers. That is why today our unions are making concerted efforts to work with state and local government, as well as community-based organizations, to open the doors of opportunity through apprenticeship readiness programs that target historically underserved populations - primarily, minorities, women and military veterans. The Building Trades are building such pathways of opportunity with the help of groups like the National Urban League, YouthBuild and Job Corps, in New York City, Los Angeles, Milwaukee, Rochester, Cleveland, Detroit, Minneapolis, Augusta and many, many other urban areas.



Similarly, our "Helmets to Hardhats" program has become a model for helping military veterans transition back into civilian life with a structured path that will ensure a stable and secure life in the middle class. Since its inception in 2003, the program has helped place over 20,000 veterans in skilled craft apprenticeship programs.

Skilled craft apprenticeship programs offer the necessary capacities, resources and flexibility needed to help low-income, minority and female workers achieve and retain construction careers in the great American middle class, while simultaneously assisting local construction employers obtain the skilled workforce they need to help drive growth in their local labor markets.

This booklet is your invitation to learn more about one of America's greatest educational success stories.

Sean McGarvey

President of the North America's Building Trades Unions



46%

of apprenticeship
programs anticipate an
increase in the number
of female apprentices
during next two
years.

THE BUILDING TRADES AND REGISTERED APPRENTICESHIP

All Building Trades apprenticeship programs are registered with either the U.S. Department of Labor's Office of Apprenticeship or a State Apprenticeship Agency. These registered apprenticeship programs provide the participants with a high quality, portable, industry sanctioned, nationally recognized credential that certifies occupational proficiency in the construction industry.

OVERALL TRAINING

Overview

- The safest, most highly skilled and productive construction craft workers in the world receive their training through privately-funded, local joint apprenticeship and training committees (JATCs), which offer nationally-recognized, state-of-the-art curricula
- JATC apprenticeship training combines industry standard technical (classroom) instruction with structured on-the-job learning

Training Capacity

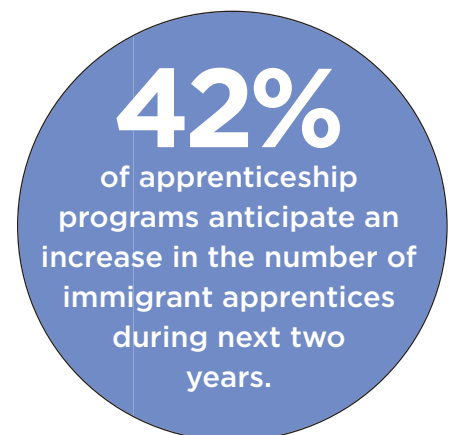
- The Buildings Trades' affiliate unions and their signatory contractors have more than **1,600 training centers** in the United States (Source: North America's Building Trades Unions Research Department Survey)
- Overall, the 15 Building Trades unions maintain 1,900 training centers throughout North America (Source: North America's Building Trades Unions Research Department Survey)
- For an interactive map of the Building Trades training centers, see www.bctd.org
- Nearly two-thirds of all registered apprentices in the US are trained in the construction industry (Source: Department of Labor, Employment and Training Administration data)
- Among construction apprentices, 74 percent are trained in the unionized construction sector – known as the joint apprentice training committee (JATC) system (Source: Department of Labor, Employment and Training Administration data)
- If the JATC system was a college or university, it would be the second largest college or university in the US – 3 ½ times the size of Kaplan University, more than 4 times larger than Miami Dade Community College and almost 5 times the size of Ohio State (Source: North America's Building Trades Unions Research Department)
- If the JATC system was a public university system, it would be the 4th largest US public university system – larger than the University of California and the University of Texas Systems (Source: North America's Building Trades Unions Research Department)
- If the JATC system was a K-12 school district, it would be the 6th largest K-12 school in the country – larger than the Broward County, Florida; Houston, Texas; Hawaii or Orange County, Florida school districts (Source: North America's Building Trades Unions Research Department)

Training Investment

- The Building Trades and their signatory contractors invest over **\$1.3 billion annually in apprentice and journey-level training**. This total does not include the tens of millions invested by the JATCs annually in construction training plant and equipment (Source: North America's Building Trades Unions Research Department Survey)
- The Building Trades and their signatory contractors annually invest \$10 billion in apprentice wages and benefits (Source: North America's Building Trades Unions Research Department)

“The construction skills model is one which can be replicated in cities across our nation. By bringing business, labor and government together as strategic partners, it represents what I believe is the best model not just for the construction industry, but for every sector of the economy.”

– Lou Colletti; President and CEO, Building Trades Employer Association of New York; January 2015



Source: Top Trends in Jointly Managed [Union] Apprenticeship Programs, 2014, International Foundation of Employee Benefit Plans, - based on survey of 145 training funds, 97% were Building Trades.

Industry Growth and the Desire for Increased Diversity

- North America's Building Trades Unions have embarked on an effort to increase the number of apprentices used in the US construction industry as it expands and to provide greater opportunities for people in underserved communities – particularly women, minorities and veterans – to acquire good middle class jobs in the construction industry. One way the Building Trades is confronting these challenges is through the use of Project Labor Agreements (PLAs) that contain what are known as community workforce provisions. These “provisions,” which simply means straightforward language that specifies the number of local residents that must be hired on a specific project, are an essential component in the process of building construction pathways to the middle class for underserved communities. The second way the Building Trades are trying to achieve greater diversity in construction is through the use of apprenticeship readiness programs. Apprenticeship readiness programs, such as those that use the Building Trades' nationally recognized Multi-Craft Core Curriculum (MC3), provide additional skills training for young people looking for a career in a Building Trades registered apprenticeship program. When done right, these “readiness” programs lead to higher retention rates.
- In New York City, the Edward J. Malloy Initiative for Construction Skills places underserved young people in middle class construction industry careers (average salary – \$67,110). From 2001 – October 2013, the Construction Skills program placed 1,443 graduates into union apprenticeship programs. The Construction Skills graduates have an 80 percent retention rate as union apprentices or journey-level workers. Roughly 90 percent of program graduates are African American, Hispanic or Asian.¹
- By 2020 - 65% of jobs will require post-secondary education and 30% could be filled by apprenticeships (*Georgetown Center on Education and Workforce*)
- By 2020 - Apprenticeable occupations in the US are projected to grow by 22.5% (*BLS*)



¹Ester Fuchs, Dorian Warren and Kimberly Bayer, *Expanding Opportunity for Middle Class Jobs in New York City: Minority Youth Employment in the Building and Construction Trades*, Columbia School of International and Public Affairs, March 2014, 1-4.



"As a veteran, this class gives me another opportunity to help support my family and start another career in my life. It also gives these young adults a huge step up in life and a strong grasp at a great career. They will be leaps and bounds ahead of their peers. We are all very grateful for this class and thank everyone for the chance at a better life."

– Dawn Benitez, Augusta Building Trades Apprenticeship
Readiness Program Graduation Speech, Feb. 2, 2015



CERTIFICATIONS/SPECIALTY TRAINING - JOURNEYPERSON UPGRADES

Building Trades Training = Life Long Learning

North America's Building Trades Unions provide training for tens of thousands of journey-level workers each year through Joint Apprenticeship Training Committee facilities, with the goal of continually improving their skills. Journey-level training includes continuing education in OSHA sanctioned health and safety programs, foreman training, instructor certification and other forms of skill upgrades such as welding or painting certifications. The Building Trades prepare and train workers for the ever-changing needs in specialized industries, such as the Nuclear Mechanics Apprenticeship Process (NMAP), which certifies journey-level workers by teaching them cutting edge skills used across the nuclear industry.



More Life Long Learning: The Building Trades, Apprenticeship and College Credit

One of the great advantages of Building Trades registered apprenticeship programs found within the union construction industry is that if an apprentice wants to head back to college, he or she has a head start. The vast majority of joint labor-management training programs found in the construction industry have been assessed for college credit -- so apprentices can apply their training toward an associate's degree, or bachelor's degree. Overall, the Building Trades affiliate unions have "the most extensive and institutionalized partnerships" with community colleges in the US labor movement, which includes articulation agreements with hundreds of US community and technical colleges (Source: *The Aspen Institute, AFL-CIO's UA Apprenticeship Program*, <http://www.aspeninstitute.org/policy-work/economic-opportunities/skills-americas-future/models-success/afl-cio>, accessed 12/17/11); NABTU Research Department Survey.

Construction Management - Rowan University

The Building Trades are working with Rowan University, a comprehensive, public research university in southern New Jersey, to develop a degree completion program in construction management. This program, which would be geared for Building Trades members with some years of experience in the construction industry, would be fully online and accessible from anywhere in North America.

College Credit for Apprenticeship Training: Building Trades and the RACC

North America's Building Trades Unions supports – and has joined – the Registered Apprenticeship-College Consortium (RACC). The RACC is a network of colleges and Registered Apprenticeship programs that work together to provide enhanced educational opportunities to a significant number of apprentices across the country. Through the consortium, colleges agree to provide credit for a Registered Apprenticeship completion certificate towards an Associate's or Bachelor's degree as recommended by a recognized third party evaluator. Thus the consortium will create a national network to help expand opportunities for apprentices to complete their postsecondary degrees at member colleges. The RACC is a joint initiative by the U.S. Department of Labor and the U.S. Department of Education.

The Business Case for Apprenticeship Training

Apprenticeship programs are also a tremendous value for employers. The average employer realizes returns as much as \$3 for every \$1 that is invested in craft training. Those gains arise because craft laborers are more productive, work more safely, and deliver quality craftsmanship that is done right the first time. And when employers partner with craft labor organizations to administer apprenticeship programs, both parties win. Contractors can modify their training programs on the fly to meet the exact needs of the project or a given market. Apprentices, meanwhile, develop skills that are high in demand – and can lead not just to immediate employment, but a secure, middle class career.

“Career readiness is a crucial part of our economic well-being now and into the future”

– Kentucky Governor Steve Beshear (D); February 2015



NORTH AMERICA'S BUILDING TRADES UNIONS: APPRENTICESHIP READINESS PROGRAMS

Our Goal

Across the US, North America's Building Trades Unions are working with policy makers and Community Based Organizations (CBOs) to set up apprenticeship readiness programs. These programs are designed to provide opportunities for candidates from diverse backgrounds to enter Building Trades apprenticeship or Step Up programs. The Building Trades are working with contractors, apprenticeship training directors, business managers, CBO representatives and Building Trades staff to ensure that each of these programs produce the highest quality candidates for Building Trades apprenticeships.

The Need

There is a need today for high quality workforce development programs that provide local residents, many from underserved populations, with the experience, education and skills required to apply to become construction apprentices. These programs satisfy local hire requirements in cities across the US, which have been given increased visibility and emphasis in recent years. They also address the need for greater diversity in the construction industry workforce. Importantly, the Building Trades' apprenticeship readiness programs demonstrates to local and regional elected officials that the Building Trades are committed to diversifying the union workforce in construction and to providing pathways to middle class jobs for underrepresented workers.

The Process

CBOs play an essential role in this process by recruiting, supporting and referring candidates who have the potential for success in Building Trades apprenticeship readiness programs. The first step in recruiting is the vetting of candidates. Qualified candidates for apprenticeship must have a GED and a Driver's License, and they must pass a drug test. CBOs may also provide "wrap around" support services for qualified candidates, such as instruction in with English literacy, provisions for transportation to and from the training, and access to day care. With these services, candidates will have a better chance of succeeding in and completing apprenticeship programs.

Getting In

Apprenticeship readiness program candidates are typically reviewed by a Referral Committee made up of apprenticeship training directors, contractors (or representatives from contractor associations), and representatives from Building Trades state or local Councils and participating Community Based Organizations. These Committees develop criteria for acceptance into the apprenticeship readiness programs, and these criteria may change over time based on the needs or requirements for individual programs. The role of the Committees is to ensure that the very best candidates are referred. Upon graduation, the Referral Committee may also make recommendations to the Building Trades apprenticeship programs.

"We've seen the good work of apprenticeship programs here in Iowa thanks to the leadership of groups like the Central Iowa Building and Construction Trades Council. In fact, that's a big reason why we tripled funding for apprenticeship programs."

– Iowa Governor Terry Branstad (R) May 2014.



Curriculum

The Building Trades uses its own Multi-Craft Core Curriculum (MC3) in these apprentice readiness programs. The MC3 is a comprehensive training program (120 hours) that was developed and approved by the Building Trades National Apprenticeship and Training Committee and recognized as an innovation in the field by the US Department of Labor. The MC3 prepares interested young people and adults to enter and succeed in exciting and challenging apprenticeship programs. The MC3 is only offered in cooperation with state and local Building Trades Councils.

Standards

All Building Trades' Apprenticeship Readiness Programs conform to the definitions and quality framework established by the DOL Employment and Training Administration's Training and Employment Notice Number 13-12, which the Department released November 30, 2012. According to the ETA "TEN," "a quality pre-apprenticeship program is one that incorporates the following elements:"

- Approved training and curriculum,
- Strategies for long-term success,
- Access to appropriate support services,
- Promotes greater use of registered apprenticeship,
- Meaningful hands on training that does not displace paid employees,
- Facilitated entry/or articulation.

All of these elements are part of the design of all Building Trades' ARPs,

Examples of Pre-Apprenticeship Programs

The Edward J. Malloy Initiative for Construction Skills-New York City, NY <http://www.constructionskills.org/index.html>

Building Pathways Building Trades Pre-Apprenticeship Program (Building Pathways)—Boston, MA <http://tcimass.org/apprenticeship-programs-2>

Wisconsin Regional Trades Partnership/ Big Step-Milwaukee, WI <http://wrtpp.org/>

Access for All-Detroit, MI

Augusta Building Trades Apprenticeship Readiness program-Augusta, GA

National Partners

National Urban League

YouthBuild USA

Wider Opportunities for Women (WOW)

Helmets to Hardhats (H2H)

North America's Building Trades Unions National Standing Committee on Apprenticeship and Training

National Standing Committee on Women in the Trades

Build TogetHER - Women in the Building Trades (Canada)



www.bctd.org

www.facebook.com/NorthAmericasBuildingTradesUnions



www.facebook.com/pages/Helmets-to-Hardhats/98321937334



NORTH AMERICA'S BUILDING TRADES UNIONS

International Association of Heat and Frost Insulators and Allied Workers



Members of this union apply insulation to pipes, tanks, boilers, ducts, refrigeration equipment and other surfaces requiring thermal control of temperatures. The responsibilities of these mechanics, improvers and apprentices also include the manufacture, fabrication, assembling, molding, erection, spraying, pouring, mixing, hanging, preparation, application, adjusting, alteration, repairing, dismantling, reconditioning, corrosive control, testing and maintenance of heat or frost insulation. Workers also handle insulation materials made of fiberglass, rubber, calcium silicate and urethane. Insulators also do removal of asbestos containing material.

www.insulators.org

International Union of Painters and Allied Trades



IUPAT members work in one or more of several crafts: painting, wallpaper hanging, glazing (glass work), drywall and taping, floor covering, and sign and display work. Painters and paperhangers work in industrial, commercial and residential settings, from bridges and ships to interior walls of office buildings and homes. Drywall finishers tape, fill in and smooth seams in sheets of drywall. Glaziers prepare and install various kinds of glass, mirrors, metal framing and doors/entrances to buildings. Floor coverers work with resilient floors, as well as carpet and decorative coverings. Exterior sign and display work, like billboards, is another choice. Other types of work are convention display and show decorators.

www.iupat.org

International Brotherhood of Boilermakers, Iron Ship Builders, Blacksmiths, Forgers and Helpers



The Boilermakers are a diverse union of workers in construction, maintenance, manufacturing, professional emergency medical services, repair and related industries. Boilermakers build and repair ships, fishing boats, ferries, barges, cranes, boilers, tanks, pressure vessels, plate and structural fabrications among other things. These skilled workers often use acetylene torches, power grinders and other equipment for welding, burning, cutting, rigging, layout and bolting. It's hard work, and heavy lifting and dedication to the craft is required.

www.boilermakers.org

United Union of Roofers, Waterproofers and Allied Workers



Members of the Roofers union install new roofs and remove old roofs using a variety of materials. Roofers install hot built-up and single-ply roofing systems on mostly commercial/ industrial structures. Waterproofers install moisture-resistant products on below-grade structures and other surfaces to prevent water intrusion into buildings. The work is performed in all weather conditions. Members also operate a variety of mechanical and electrical equipment associated with the installation of roofing and waterproofing products.

www.unionroofers.com



International Association of Sheet Metal, Air, Rail and Transportation Workers

SMART members work in several industries. Sheet metal workers fabricate, install and service heating, venting, and air conditioning (HVAC) systems; blowpipe and industrial systems; metal roofing; coping and flashing; and stainless steel work for restaurants, kitchens and hospitals. They prepare shop and field drawings manually and with computer programs. Members also provide HVAC and refrigeration service.

www.smart-union.org

International Union of Bricklayers and Allied Craftworkers



BAC represents all skilled trowel trades workers, including bricklayers, tile setters, plasterers, cement masons, marble masons, restoration workers, stonemasons, helpers or finishers, terrazzo and mosaic workers. Their work includes buildings, homes, stadiums, monuments and landmarks throughout the United States and Canada.

www.bacweb.org

International Brotherhood of Electrical Workers



The IBEW represents workers in the electrical industry including construction, gas and electric utilities, telecommunications, railroads and government agencies. Construction and residential electricians work in all phases of the electrical construction and service industry. Their worksites range from single-family residences to state-of-the-art industrial plants. Inside wire workers may install and maintain conduits, switches and converters, as well as wire lighting, to complex systems incorporating computerization and high technology. Electricians work in the electric sign industry and increasingly perform more work in the installation of fiber optics and voice/data/video equipment.

www.ibew.org

United Association of Journeymen and Apprentices of the Plumbing and Pipe Fitting Industry of the United States and Canada



UA is a multi-craft union that represents plumbers and pipe, sprinkler, and refrigerator fitters, as well as service technicians. All of these jobs require the installation, remodeling or maintenance of systems that carry water, steam, air and other liquids or gases necessary for sanitation, industrial production, heating and air conditioning, and many other uses. Workers measure, cut, and bend pipe, as well as weld, braze, caulk, solder, glue or thread joints at residential and commercial job sites.

www.ua.org

NORTH AMERICA'S BUILDING TRADES UNIONS

International Union of Operating Engineers



IUOE members are operating and stationary engineers, as well as significant numbers of public employees engaged in a wide variety of occupations. Stationary engineers work in operations and maintenance in building and industrial complexes, and in the service industries. Operating engineers operate heavy construction equipment such as cranes, bulldozers, pavers, trench excavators and many other kinds of equipment used in constructing buildings, dams, airports and highways. Operating engineers also work in the sand and gravel, cement and asphalt industries; in the shipyards; on water dredges, oil refineries and oil pipelines; in sewer and water construction; in ports of major cities and many other industries. Most work is done outdoors and depends on the weather.

Operating Engineers' work includes, for example: cranes, bulldozers, pavers and trench excavators.
www.iuoe.org

United Brotherhood of Carpenters and Joiners of America



Members of the UBC are commercial and residential carpenters, floor layers, millwrights, pile drivers, interior systems carpenters, lathers, cabinetmakers and trade show carpenters. They build forms for concrete and frame buildings, walls, footings, columns and stairs. Carpenters also install doors, windows, storefronts and hand rails, and build cabinets, counter tops and finished stair handrails. Carpenters must read blueprints, measure accurately and calculate dimensions.

Carpenter crafts include: Carpenters and Joiners, Millwrights, Pile Drivers, Residential Carpenters, Interior Systems Carpenters, Lathers and Drywallers, Cabinet Makers and Millworkers and Floor Layers.

www.carpenters.org

International Association of Bridge, Structural, Ornamental and Reinforcing Iron Workers



Members of the Iron Workers assemble and erect steel framework and other metal parts in buildings and on bridges, dams, skyscrapers, factories and other steel structures. They raise, place and join steel girders and columns to form structural frameworks, including the welding for metal decking. In addition iron workers are responsible for the steel reinforcing of concrete construction. Iron workers fabricate and install ornamental, architectural and miscellaneous metal building components. They install as well curtain wall under the umbrella of the Ornamental and Architectural Department.

www.ironworkers.org

Laborers' International Union of North America



LIUNA represents members working in construction, environmental remediation, maintenance, food service, health care, clerical and other occupations, as well as in state, local and municipal government jobs and as mail handlers in the U.S. Postal Service. LIUNA members have helped lay down new highways, build spectacular bridges, dig tunnels and subways, build new plants, factories, dams and power plants, and erect new schools, churches, hospitals and houses. In building construction and housing, Laborers' work includes excavation, footing and foundations, carpenter tending, compaction, concrete placement, power and hand tools, general clean-up and mason tending for bricklayers. Environmental laborers do asbestos removal, hazardous waste and radiation clean-up. The work performed by Laborers is very physical and it includes digging, carrying, pulling and bending—usually outside in all kinds of weather for long hours at a time.

Laborers' work includes, for example: excavation, footing and foundations, carpenter tending, compaction, concrete placement, power and hand tools, general clean up and mason tending for bricklayers.

www.liuna.org

International Brotherhood of Teamsters



The Teamsters union has several divisions, including a Building Material and Construction Trades Division. Members in this division are truck drivers who transport and haul material, merchandise, equipment or personnel between various locations—including construction sites, manufacturing plants, freight depots, warehouses, and wholesale and retail facilities. They may also load and unload, make mechanical repairs and keep trucks in good working order.

Building material and construction Teamsters are employed in the following types of work: rigging, demolition work, landscaping, pipeline construction work, warehousing and building supply manufacturing.

www.teamster.org

Operative Plasterers' and Cement Masons' International Association of the United States and Canada



OPCMIA members represent skilled plasterers, cement masons, shophands and associated members. Plasterers finish interior walls and ceilings of buildings, apply plaster on masonry, metal, wirelath or gypsum. Bridges, canals, dams, reservoirs, roads and many other engineering feats would be impossible without the skills of OPCMIA cement masons. Cement masons are responsible for all concrete construction, including pouring and finishing of slabs, steps, wall tops, curbs and gutters, sidewalks, paving and other concrete construction.

www.opcmia.org

International Union of Elevator Constructors



The IUEC represent the most qualified and trained elevator constructors in the world. Members assemble, install and replace elevators, escalators, dumbwaiters, moving walkways and similar equipment in new and old buildings. Elevator constructors also maintain and repair this equipment once it is in service, as well as modernize older equipment.

www.iuec.org

