

Why You Should Promote Careers in Construction



Summary

- Meet the Presenters
- Part 1: The Problem
- Part 2: The Opportunity
- Part 3: The Solution
- Conclusion

Salvatore Sciandra

Frey Electric Construction Co.

- Years in Industry: 40
- Profession: Vice President
- Accolades:
 - 1988 Graduate, IBEW Local #41 Apprenticeship
 - Master Electrician Licenses: Buffalo, Niagara Falls + all surrounding municipalities
 - 2nd Generation of 3 Generation Family in Electrical Construction



Joe Benedict

Construction Exchange of Buffalo & WNY

- Years in Industry: 10
- Profession: Executive Director, Previously Laborer/Tradesmen in Paving/Concrete and Residential Remodeling Companies
- Bachelors in Business Administration from Alfred University and Masters in Business Administration from Canisius College



Part 1: The Problem

Construction in US & NY Economy

Employers

US	NY
650,000	46,000

Employees

US	NY
6,000,000	353,500

Average Annual Pay

US	NY
\$55,000	\$65,300

Value of Structures Put In Place

US	NY
\$618 Billion	\$21.2 Billion

Contribution to GDP

US	NY
3.8%	3.1%

Note:

- 2014 Figures
- Does not include supplemental construction related work such as accounting, legal, insurance, etc.

Buffalo-Niagara Metro Area by the Numbers

- 2,500 construction companies
- 27,000 construction workers
- \$913,500,000 in annual payroll
- \$3.3 billion – total construction spending in 2016
- 28.6% construction employment growth from 2010 to 2015 – Hottest Market in the Northeast!

Age Breakdown: Skilled Trades vs. All Jobs



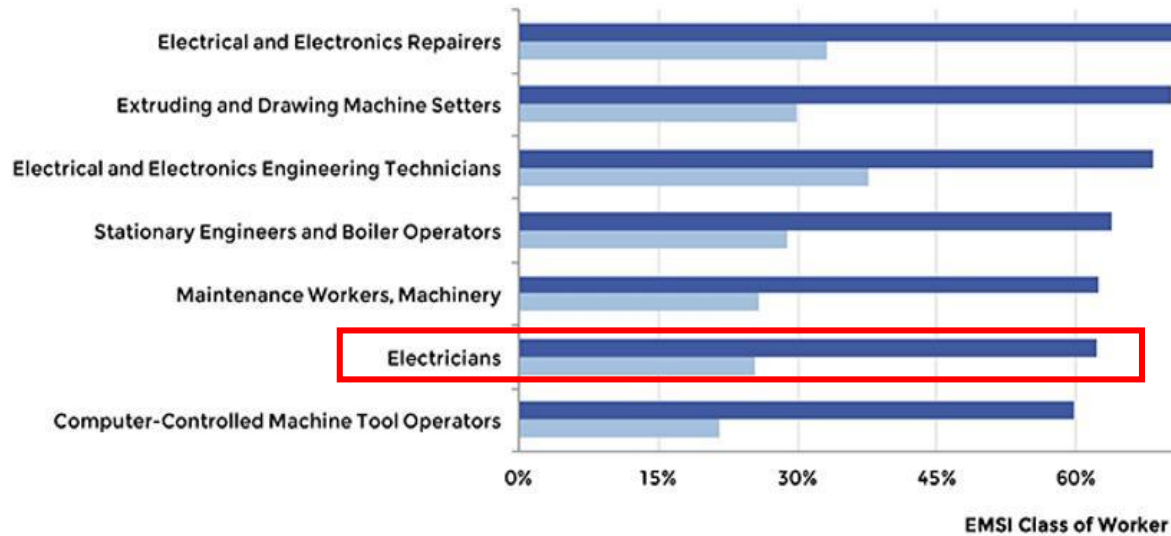
Note:

- 2012 National Figures based on Virginia Manufacturers Association's definition of skilled trades, which encompasses 21 particular occupations.
- States such as Connecticut, Rhode Island, New Jersey & New Hampshire have more than 60% of the skilled trades labor force is 45 or older.

Age Distribution per Skilled Trade

Skilled Trades Group 1: The Oldest Occupations

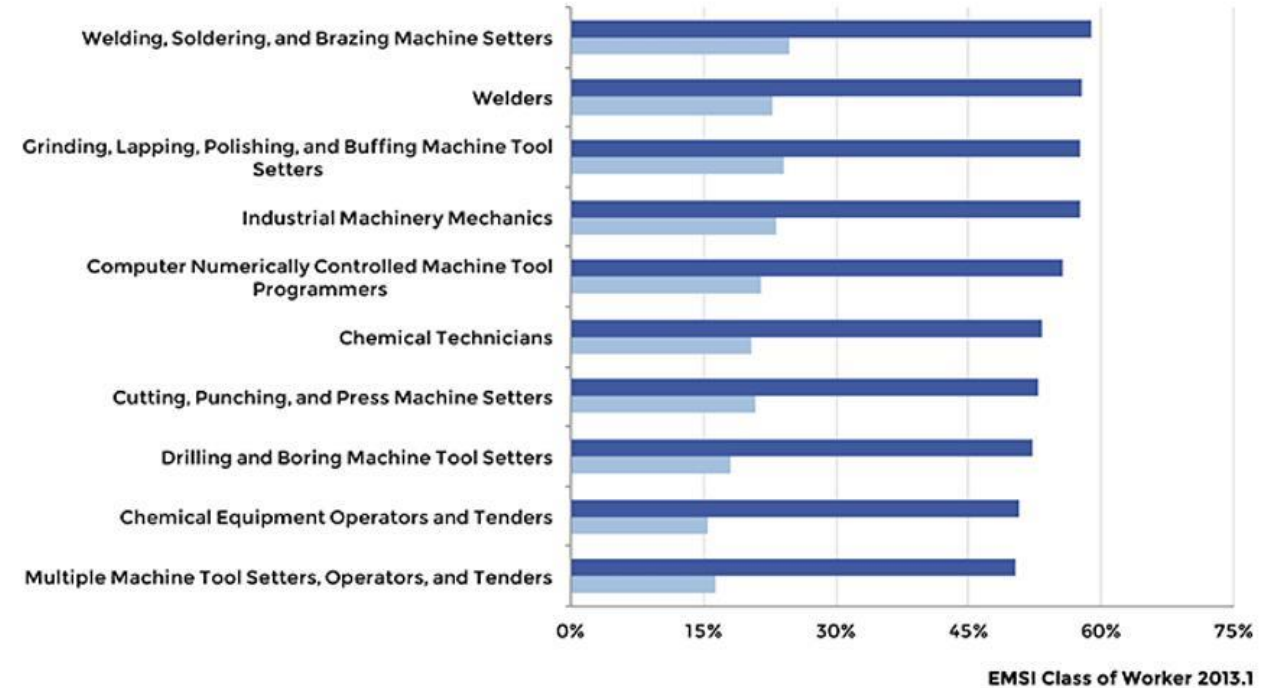
■ Share of 45+ Workers ■ Share of 55+ Workers



***Electricians are the largest of the skilled trades with more than 600,000 jobs in the United States**

Skilled Trades Group 2: Not-So-Old Occupations

■ Share of 45+ Workers ■ Share of 55+ Workers

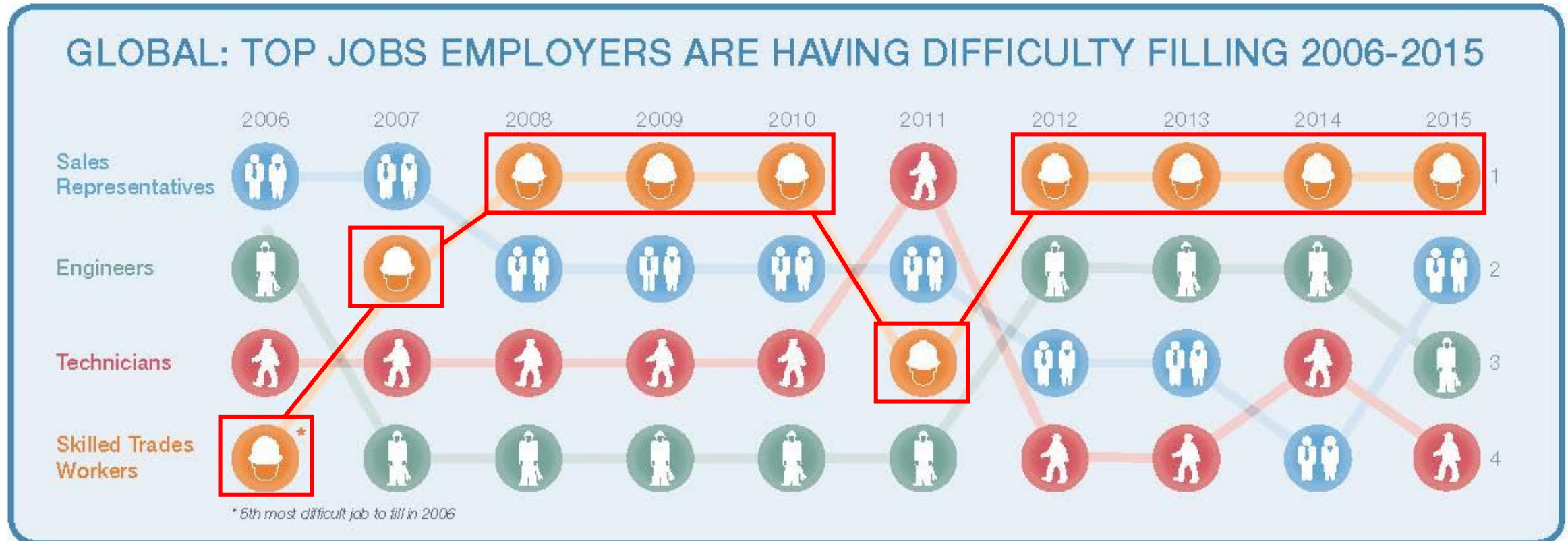


Note:

- 2012 National Figures based on Virginia Manufacturers Association's definition of skilled trades, which encompasses 21 particular occupations.

Talent Shortage

For the sixth consecutive year, **SKILLED TRADES** vacancies are the **HARDEST JOBS TO FILL IN THE US** and for the fourth consecutive year, skilled trades are the **HARDEST TO FILL GLOBALLY.**



TALENT SHORTAGES ARE DRIVEN BY A LACK OF AVAILABLE APPLICANTS – this reason is cited by over a third of employers as to why they cannot fill jobs.

Effects of Talent Shortage

Economic Effects:

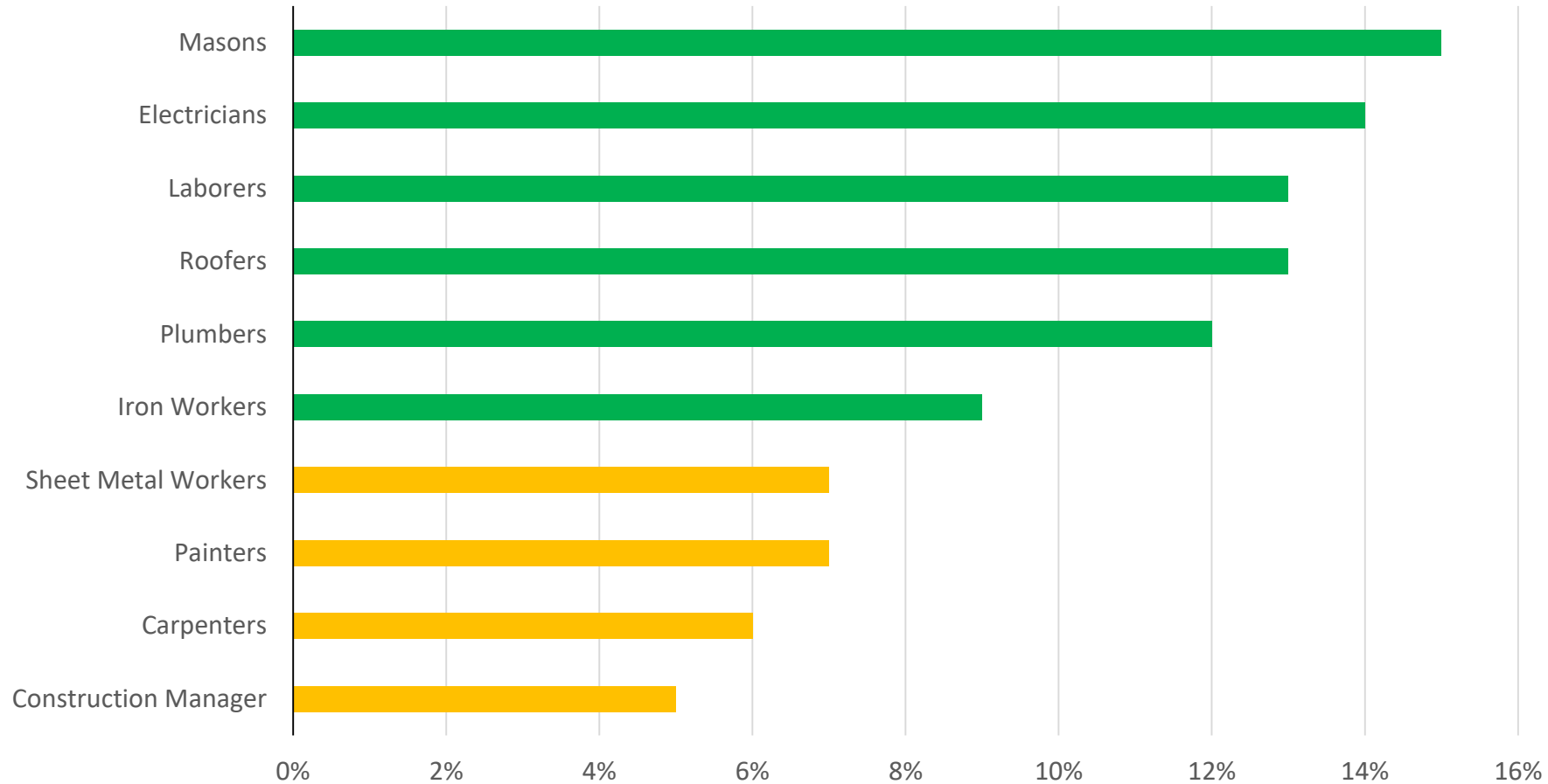
- Impedes progress of infrastructure
 - Jeopardizes national growth
 - In 2015 “Single-family home construction fell to a three-month low in June, which is usually the busiest time for homebuilding. Builders claim there is good demand, but they complain they’re handcuffed by a lack of skilled labor to build new homes.”
 - Source: Diana Olick, CNBC, “Homebuilders Take a ‘Beating’ from Lack of Labor” July 17, 2015
- Construction cost inflation

Organizational Effects:

- Reduced ability to serve clients
- Reduced competitiveness & productivity
- Increased employee turnover
- Higher compensation costs
- Lower employee engagement
- Reduced innovation & creativity

Part 2: The Opportunity

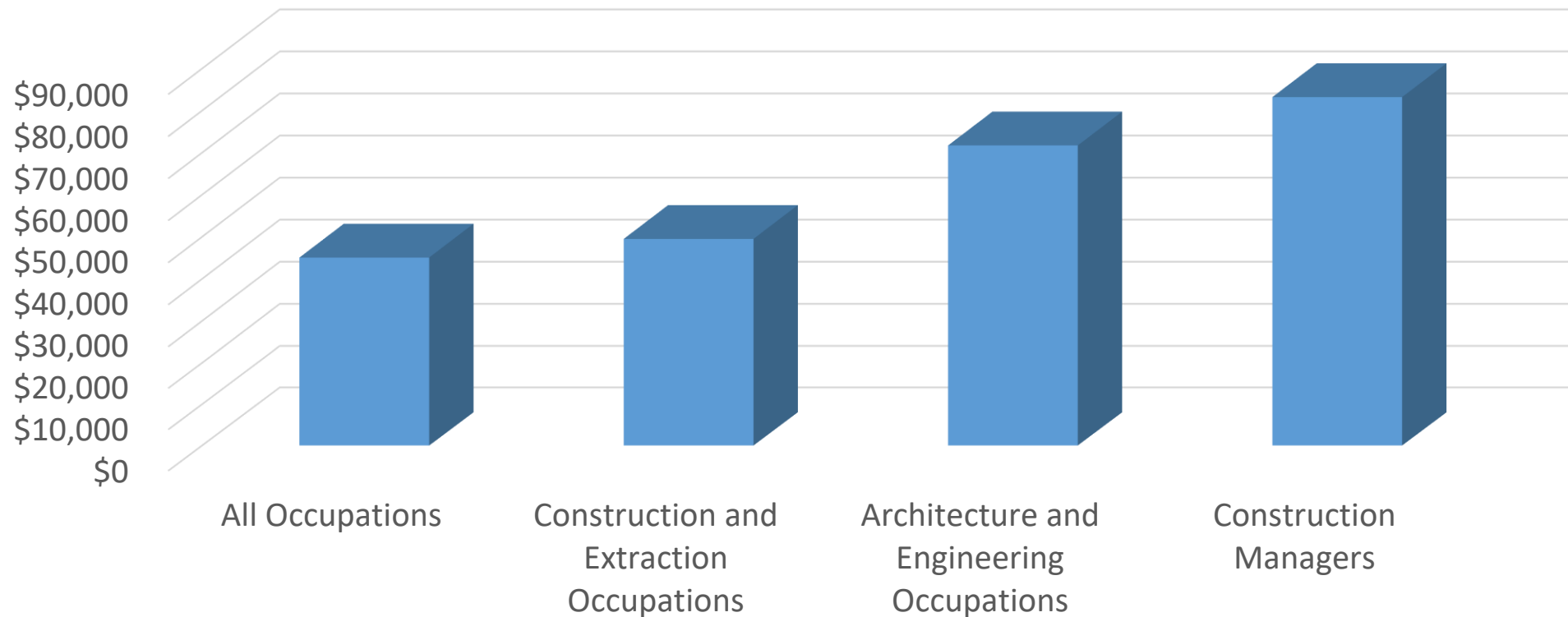
2014-2024 Job Growth Percentages in US



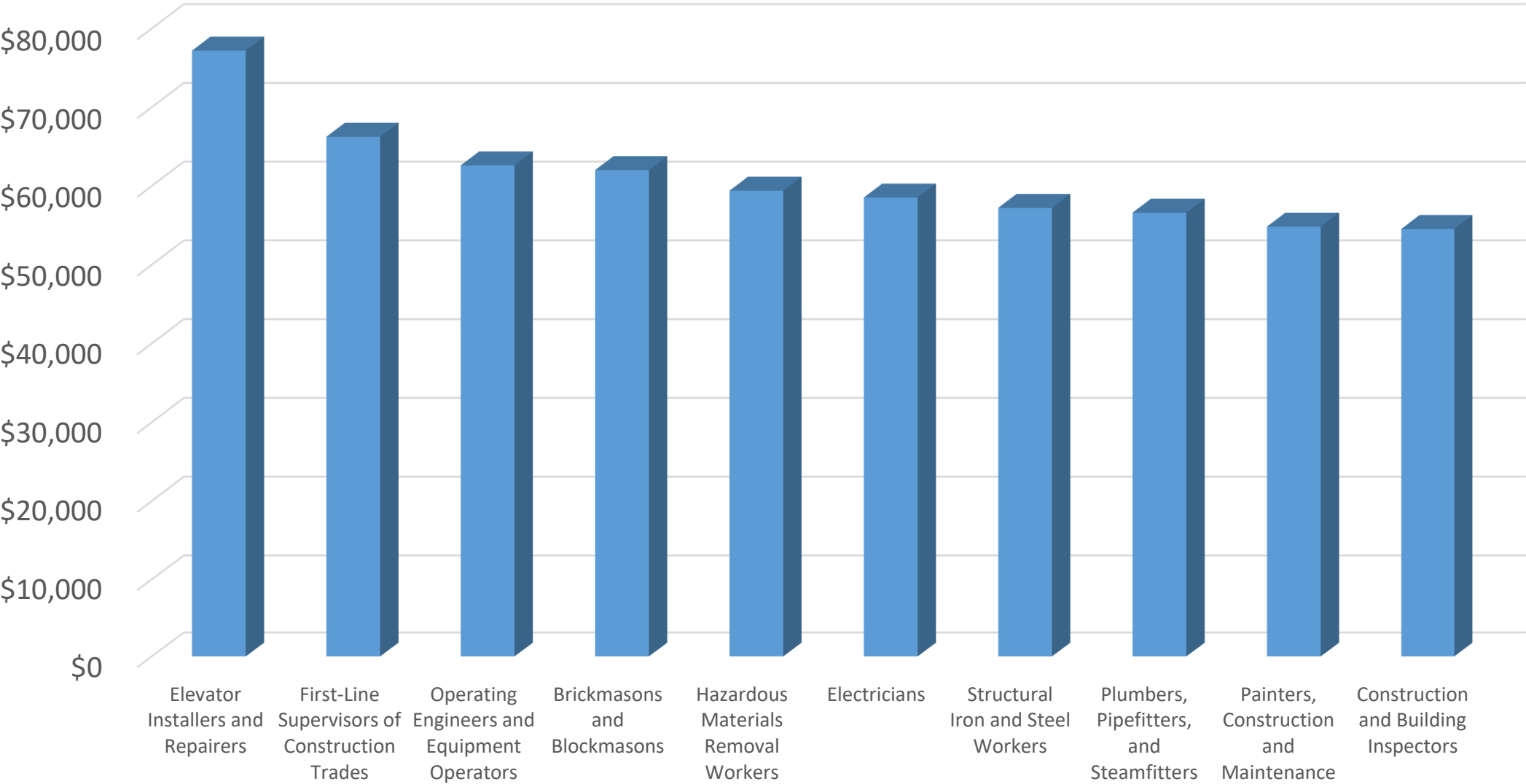
*Average growth rate in United States is between 5-7%

Earning Potential

Annual Average Wage - Buffalo-Niagara Metro



Annual Average Wage of Top Earning Trades - Buffalo-Niagara Metro



Source: US Bureau of Labor Statistics, May 2015

Community Impact



Technology in Construction

- Building Information Modeling (BIM)
- BIM Scheduling, Automation, Take-off and Applying Costs
- Drones
- Virtual Reality and Augmented Reality
<https://www.youtube.com/watch?v=pPdhLfI7LeM>
- Robotics in Construction
https://www.youtube.com/watch?v=G_Pj2GI6-xc

Health Benefits

- “Sitting at a Desk All Day”
 - Cardio-vascular disease, diabetes, dementia, weight, cancer, on and on
- Construction Worker – 8 hours per day of activity, outside/inside, different construction sites
 - 73% of construction workers meet recommended weekly United States physical activity guidelines (source: US National Library of Medicine, January 2016)
- Jobsite Safety – Occupational Safety & Health (OSH) Act

Training Costs

- Student Loan Debt
 - \$1.26 trillion – total US Student Loan Debt (second behind mortgages)
 - 11.1% – student loan delinquency rate
 - \$351 – average monthly student loan payment (borrower aged 20 to 30 years)
 - \$35,051 – average debt per 2015 college graduate
- Building Trades Apprenticeship Training Programs
 - NO COST!
 - Paid on the job training

Part 3: The Solution

Graduate High School

Regents Diploma with Technical Endorsement or 4+1 Option



Adult Education Options



Full Time Programs:

- Air Conditioning, Refrigeration & Heating
- Electrical
- Welding

Part Time Programs:

- Building Trades
- Electricity/Electronics
- Heating, Refrigeration & Air Conditioning
- Heavy Equipment Operator Simulator
- Welding

Certificate Programs:

- Building Trades / Residential Light Construction
- Energy Utility Technology
- Green Building Technology
- Heating, Ventilation, Air Conditioning & Refrigeration

- Exploratory Construction Trades
- Residential Electric
- Carpentry
- Facilities Management
- Heating, Ventilation, Air Conditioning
- Plumbing
- Refrigerant Recovery
- Steam Engineering
- Welding

Skilled Trades

- Non-Union
 - Application, hiring and apprenticeship process determined by the company
 - Wages and benefits determined by company with exceptions
- Union
 - Application, hiring and apprenticeship process overseen by the NYS DOL
 - Typical hiring process
 - Step 1 – Apply with union and get ranked on hire list based on factors such as aptitude test score, past experience, military experience, education, interview
 - Step 2 – If hired from list, begin apprenticeship program which is typically a mix of classroom and on-the-job training
 - Step 3 – After completing requirements of apprenticeship graduate to journeyperson
 - Member of the union – can be hired by any signatory contractor
 - Wages and benefits in accordance with collectively bargained agreement

One isn't better than the other, understand the pros and cons of each



Local 7: Boilermakers

Union Options



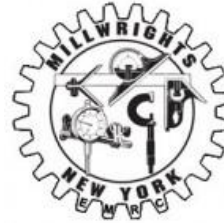
Roofers



Cement Masons



Heat & Frost Insulators



Millwrights



Plasters



Sheet Metal Workers

Local 3: Bricklayers



Local IBEW 41: Electricians



Local 6: Ironworkers



Local 17: Operating Engineers



Plumbers & Steamfitters



Local 289: Carpenters



Elevator Constructors



Local 210: Laborers



Painters & Glazers



Road Sprinkler Fitters



Teamsters

More information can be found at: www.buffalotrades.com

Local 2-Year & 4-Year Colleges



2-Year Programs:

- Building Management & Maintenance
- Civil Engineering Technology
- Computer Aided Drafting/Design Technology
- Construction Management Engineering Technology
- Electrical Engineering Technology
- Mechanical Engineering Technology



2-Year Programs:

- Air Conditioning & Heating Technology
- Building Trades
- Construction Engineering Technology
- Electrical Construction & Maintenance Electrician
- Electrical Engineering Technology
- Masonry
- Mechanical Engineering Technology
- Welding Technology

4-Year Programs:

- Construction Management
- Electrical Engineering Technology
- Mechanical Engineering Technology

Office Staff

Title	Responsibilities	Minimum Qualifications
Estimator	Interpret plans and specifications in order to determine the labor, materials and cost for a project	Typically industry experience or associates degree or certificate program
Project Manager	Overall planning, coordination, and control of a project	Associates or bachelors degree
Project Administrator	Supports project manager in performance of administration tasks and documentation	High school diploma or associates degree
Construction Accounting	Understand project accounting, manage accounts payable/receivable, develop budgets, maintain work-in-process schedule	Associates or bachelors degree
CAD/BIM Draftsperson	Create 2D or 3D computer modeled building plans	Associates or bachelors degree

Construction companies also employ professionals in marketing, sales, human resources, administrative, IT

Managers/Supervisors

Title	Responsibilities	Minimum Qualifications
Construction Manager/Senior Project Manager	Oversees project managers and the planning, coordination, and control of larger projects	Bachelors or masters degree and experience
Senior Estimator	Oversees estimators and typically signs of on or works with senior management on finalizing bid/quotes	Associates degree or bachelors degree and experience
Foreman	Oversees crew of tradespersons in the field	Experience
Superintendent	Oversees day-to-day jobsite operations, coordinates with project managers and subcontractors/suppliers	Experience



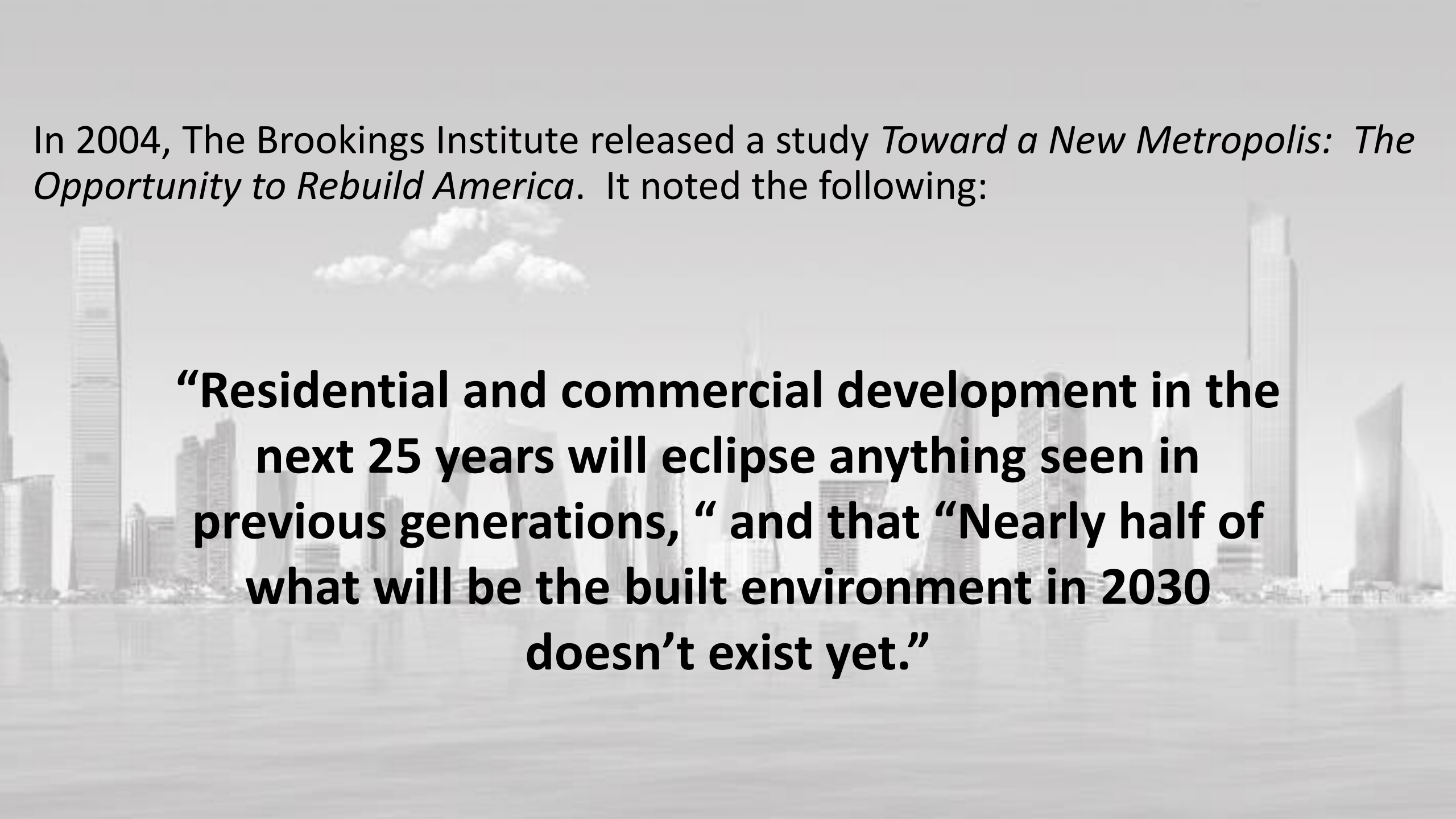
W O M E N in CONSTRUCTION

- Scholarships
- Internships
- Mentors
- Career Fair
- Industry Support
- Job Placement

What Can We Do?

- Address outdated and inaccurate stereotypes
- Improve understanding of construction careers
 - Above Average Pay
 - Above Average Opportunity
 - Opportunity for Advancement
 - Positive Impact on Community
 - Blue Collar and White Collar Careers
 - Little to No College Debt
 - Technology Intensive
- <https://vimeo.com/14217466>





In 2004, The Brookings Institute released a study *Toward a New Metropolis: The Opportunity to Rebuild America*. It noted the following:

“Residential and commercial development in the next 25 years will eclipse anything seen in previous generations, “ and that “Nearly half of what will be the built environment in 2030 doesn’t exist yet.”