

















# Career Clusters and Pathways

Career Cluster	Career Pathway	Career Cluster	Career Pathway	Career Cluster	Career Pathway
 <b>Agriculture, Food &amp; Natural Resources</b>	<ul style="list-style-type: none"> <li>• Agribusiness Systems</li> <li>• Animal Systems</li> <li>• Environmental Service Systems</li> <li>• Food Products &amp; Processing Systems</li> <li>• Natural Resources Systems</li> <li>• Plant Systems</li> <li>• Power, Structural &amp; Technical Systems</li> </ul>	 <b>Government &amp; Public Administration</b>	<ul style="list-style-type: none"> <li>• Foreign Service</li> <li>• Governance</li> <li>• National Security</li> <li>• Planning</li> <li>• Public Management &amp; Administration</li> <li>• Regulation</li> <li>• Revenue &amp; Taxation</li> </ul>	 <b>Law, Public Safety, Corrections &amp; Security</b>	<ul style="list-style-type: none"> <li>• Correction Services</li> <li>• Emergency &amp; Fire Management Services</li> <li>• Law Enforcement Services</li> <li>• Legal Services</li> <li>• Security &amp; Protective Services</li> </ul>
 <b>Architecture &amp; Construction</b>	<ul style="list-style-type: none"> <li>• Construction</li> <li>• Design/Pre-Construction</li> <li>• Maintenance/Operations</li> </ul>	 <b>Health Science</b>	<ul style="list-style-type: none"> <li>• Biotechnology Research &amp; Development</li> <li>• Diagnostic Services</li> <li>• Health Informatics</li> <li>• Support Services</li> <li>• Therapeutic Services</li> </ul>	 <b>Manufacturing</b>	<ul style="list-style-type: none"> <li>• Health, Safety &amp; Environmental Assurance</li> <li>• Logistics &amp; Inventory Control</li> <li>• Maintenance, Installation &amp; Repair</li> <li>• Manufacturing Production Process Development</li> <li>• Production</li> <li>• Quality Assurance</li> </ul>
 <b>Arts, A/V Technology &amp; Communications</b>	<ul style="list-style-type: none"> <li>• A/V Technology &amp; Film</li> <li>• Journalism &amp; Broadcasting</li> <li>• Performing Arts</li> <li>• Printing Technology</li> <li>• Telecommunications</li> <li>• Visual Arts</li> </ul>	 <b>Hospitality &amp; Tourism</b>	<ul style="list-style-type: none"> <li>• Lodging</li> <li>• Recreation, Amusements &amp; Attractions</li> <li>• Restaurants &amp; Food/Beverage Services</li> <li>• Travel &amp; Tourism</li> </ul>	 <b>Marketing</b>	<ul style="list-style-type: none"> <li>• Marketing Communications</li> <li>• Marketing Management</li> <li>• Marketing Research</li> <li>• Merchandising</li> <li>• Professional Sales</li> </ul>
 <b>Business, Management &amp; Administration</b>	<ul style="list-style-type: none"> <li>• Administrative Support</li> <li>• Business Information Management</li> <li>• General Management</li> <li>• Human Resources Management</li> <li>• Operations Management</li> </ul>	 <b>Human Services</b>	<ul style="list-style-type: none"> <li>• Consumer Services</li> <li>• Counseling &amp; Mental Health Services</li> <li>• Early Childhood Development &amp; Services</li> <li>• Family &amp; Community Services</li> <li>• Personal Care Services</li> </ul>	 <b>Science, Technology, Engineering &amp; Mathematics</b>	<ul style="list-style-type: none"> <li>• Engineering &amp; Technology</li> <li>• Science &amp; Mathematics</li> </ul>
 <b>Education &amp; Training</b>	<ul style="list-style-type: none"> <li>• Administration &amp; Administrative Support</li> <li>• Professional Support Services</li> <li>• Teaching/Training</li> </ul>	 <b>Information Technology</b>	<ul style="list-style-type: none"> <li>• Information Support &amp; Services</li> <li>• Network Systems</li> <li>• Programming &amp; Software Development</li> <li>• Web &amp; Digital Communications</li> </ul>	 <b>Transportation, Distribution &amp; Logistics</b>	<ul style="list-style-type: none"> <li>• Facility &amp; Mobile Equipment Maintenance</li> <li>• Health, Safety &amp; Environmental Management</li> <li>• Logistics Planning &amp; Management Services</li> <li>• Sales &amp; Service</li> <li>• Transportation Operations</li> <li>• Transportation Systems/Infrastructure Planning, Management &amp; Regulation</li> <li>• Warehousing &amp; Distribution Center Operations</li> </ul>
 <b>Finance</b>	<ul style="list-style-type: none"> <li>• Accounting</li> <li>• Banking Services</li> <li>• Business Finance</li> <li>• Insurance</li> <li>• Securities &amp; Investments</li> </ul>				



# Architecture and Construction

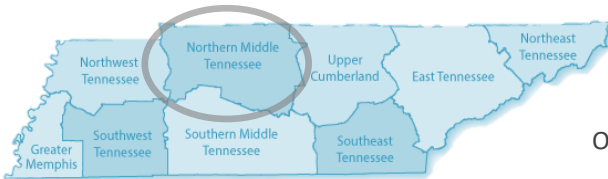
National Career Clusters Pathway ♦ Construction



## Regional Career Opportunities – Listed by Highest Projected Demand



Job Zone 1 High School Diploma or Less	Job Zone 2 High School Diploma	Job Zone 3 Certificate or Associate's Degree	Job Zone 4 Bachelor's Degree	Job Zone 5 Master's or Doctorate Degree
<b>Cement Masons &amp; Concrete Finishers</b> Annual Openings = 117 Median Wage = \$39,108	<b>Construction Laborers</b> Annual Openings = 1121 Median Wage = \$30,603	<b>Electricians</b> Annual Openings = 582 Median Wage = \$45,173	<b>Construction Managers</b> Annual Openings = 235 Median Wage = \$73,169	<i>Few regional occupations in this pathway require education at this degree level.</i>
<b>Conveyor Operators &amp; Tenders</b> Annual Openings = 29 Median Wage = \$26,564	<b>Carpenters</b> Annual Openings = 532 Median Wage = \$41,372	<b>Plumbers, Pipefitters &amp; Steamfitters</b> Annual Openings = 327 Median Wage = \$46,955	<i>Few regional occupations in this pathway require education at this degree level.</i>	
<i>Few regional occupations in this pathway require education at this degree level.</i>	<b>Operating Engineers &amp; Other Construction Equipment Operators</b> Annual Openings = 253 Median Wage = \$37,722	<b>Structural Metal Fabricators &amp; Fitters</b> Annual Openings = 74 Median Wage = \$32,165		
	<b>Painters, Construction &amp; Maintenance</b> Annual Openings = 200 Median Wage = \$35,711	<b>Crane &amp; Tower Operators</b> Annual Openings = 22 Median Wage = \$47,995		
	<b>Helpers - Electricians</b> Annual Openings = 141 Median Wage = \$31,207	<i>Few regional occupations in this pathway require education at this degree level.</i>		<b>Data Source</b> TSBA District Data Dashboard 



★ Top five high-value occupations in this pathway for the Northern Middle Tennessee Region

Occupations with the highest annual openings that are stable or growing with median wages above \$35,000 are considered high-value.

\* = state level data was used due to limitations in regional data.





# Architecture and Construction

National Career Clusters Pathway ♦ *Construction*



## Regional High School Requirements and Programs (Grades 9-12)

English Language Arts	Math	Science	Social Studies	Foreign Language	Physical Education	Fine Arts	Elective Focus
English I	Integrated I	Biology	World History and Geography	Foreign Language I	Lifetime Wellness	Fine Arts Selection	Minimum of Three Courses <i>See career programs and electives below.</i>
English II	Integrated II	Chemistry	U.S. History and Geography	Foreign Language II	Physical Education (.5)	-----	
English III	Integrated III	Physics	Economics / Government	-----	-----	-----	One Additional Elective is Required
English IV	Upper Level Math	-----	Personal Finance (.5)	-----	-----	-----	

Career Programs	Career Program Courses	Additional Electives	Regional Postsecondary Schools	
<input type="checkbox"/> Residential & Commercial Construction  <input type="checkbox"/> Mechanical, Electrical, and Plumbing (MEP Systems)  <i>See other Architecture and Construction pathways for additional career programs and opportunities.</i>  <i>*Note: Programs and courses may vary by high school.</i>	<input type="checkbox"/> Career Exploration <input type="checkbox"/> Fundamentals of Construction <input type="checkbox"/> Residential and Commercial Construction I & II <input type="checkbox"/> Mechanical, Electrical, & Plumbing Systems (MEP Systems) <input type="checkbox"/> HVAC <input type="checkbox"/> Electrical Systems <input type="checkbox"/> Plumbing Systems <input type="checkbox"/> Work-Based Learning / Practicum	<b>English Language Arts</b> <input type="checkbox"/> _____ <input type="checkbox"/> _____ <b>Math</b> <input type="checkbox"/> _____ <input type="checkbox"/> _____ <b>Science</b> <input type="checkbox"/> _____ <input type="checkbox"/> _____ <b>Other</b> <input type="checkbox"/> _____ <input type="checkbox"/> _____	<b>Certificates and Associate's Degrees</b>	<b>Bachelor's and Advanced Degrees</b>
			<b>Community Colleges</b> <ul style="list-style-type: none"> <li>Motlow State Community College</li> <li>Tennessee College of Applied Technology</li> <li>Nashville State Community College</li> </ul>	<b>Colleges and Universities</b> <ul style="list-style-type: none"> <li>Middle Tennessee State University</li> <li>Tennessee State University</li> <li>University of Tennessee</li> <li>Vanderbilt University</li> </ul>

## Postsecondary Programs/Majors for Occupations in this Pathway

	Electrician	Plumbing and Related Water Supply Services	Metal Fabricator	Mobile Crane Operation	
<b>Certificate or AA</b>					***
<b>Bachelor's Degree</b>	Construction Management	***	***	***	***
<b>Advanced Degree</b>	***	***	***	***	***



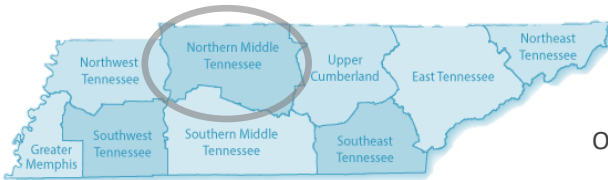
# Architecture and Construction

National Career Clusters Pathways ♦ Design/Pre-Construction ♦ Maintenance/Operations



## Regional Career Opportunities – Listed by Highest Projected Demand

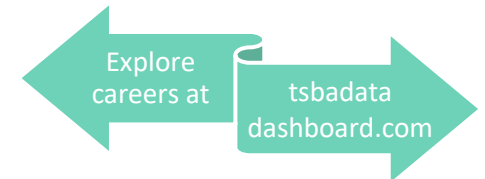
Job Zone 1 High School Diploma or Less	Job Zone 2 High School Diploma	Job Zone 3 Certificate or Associate's Degree	Job Zone 4 Bachelor's Degree	Job Zone 5 Master's or Doctorate Degree
<b>Landscaping &amp; Groundskeeping Workers</b> Annual Openings = 895 Median Wage = \$25,995	<b>Helpers – Installation, Maintenance &amp; Repair Workers</b> Annual Openings = 127 Median Wage = \$23,484	<b>Heating, Air Conditioning &amp; Refrigeration Mechanics</b> Annual Openings = 343 Median Wage = \$46,132 ★	<b>Civil Engineers</b> Annual Openings = 129 Median Wage = \$80,947 ★	<i>Few regional occupations in these pathways require education at this degree level.</i>
<i>Few regional occupations in these pathways require education at this degree level.</i>	<b>Highway Maintenance Workers</b> Annual Openings = 33 Median Wage = \$35,100	<b>Electrical Power-Line Installers &amp; Repairers</b> Annual Openings = 76 Median Wage = \$71,977 ★	<b>Cost Estimators</b> Annual Openings = 121 Median Wage = \$61,463 ★	
	<i>Few regional occupations in these pathways require education at this degree level.</i>	<b>First-Line Supervisors of Landscaping, Lawn Service &amp; ...</b> Annual Openings = 72 Median Wage = \$36,061	<b>Interior Designers</b> Annual Openings = 107 Median Wage = \$41,286 ★	
		<b>Surveying &amp; Mapping Technicians</b> Annual Openings = 48 Median Wage = \$39,484	<b>Architectural &amp; Civil Drafters</b> Annual Openings = 47 Median Wage = \$52,553	
		<b>Civil Engineering Technicians</b> Annual Openings = 38 Median Wage = \$39,284	<b>Architects</b> Annual Openings = 34 Median Wage = \$64,472	<b>Data Source</b> TSBA District Data Dashboard 



★ Top five high-value occupations in these pathways for the Northern Middle Tennessee Region

Occupations with the highest annual openings that are stable or growing with median wages above \$35,000 are considered high-value.

\* = state level data was used due to limitations in regional data.





# Architecture and Construction

National Career Clusters Pathways ♦ Design/Pre-Construction ♦ Maintenance/Operations



## Regional High School Requirements and Programs (Grades 9-12)

English Language Arts	Math	Science	Social Studies	Foreign Language	Physical Education	Fine Arts	Elective Focus
English I	Integrated I	Biology	World History and Geography	Foreign Language I	Lifetime Wellness	Fine Arts Selection	Minimum of Three Courses See career programs and electives below.
English II	Integrated II	Chemistry	U.S. History and Geography	Foreign Language II	Physical Education (.5)	-----	
English III	Integrated III	Physics	Economics / Government	-----	-----	-----	One Additional Elective is Required
English IV	Upper Level Math	-----	Personal Finance (.5)	-----	-----	-----	

Career Programs	Career Program Courses	Additional Electives	Regional Postsecondary Schools	
<input type="checkbox"/> Architectural and Engineering Design  <input type="checkbox"/> Interior Design  <i>See other Architecture and Construction pathways for additional career programs and opportunities.</i>  <i>*Note: Programs and courses may vary by high school.</i>	<input type="checkbox"/> Career Exploration <input type="checkbox"/> Architectural & Engineering Design I, II, & III <input type="checkbox"/> Foundations of Interior Design <input type="checkbox"/> Residential Interior Design <input type="checkbox"/> Commercial Interior Design <input type="checkbox"/> Advanced Interior Design <input type="checkbox"/> Work-Based Learning / Practicum	<b>English Language Arts</b> <input type="checkbox"/> _____ <input type="checkbox"/> _____ <b>Math</b> <input type="checkbox"/> _____ <input type="checkbox"/> _____ <b>Science</b> <input type="checkbox"/> _____ <input type="checkbox"/> _____ <b>Other</b> <input type="checkbox"/> _____ <input type="checkbox"/> _____	<b>Certificates and Associate's Degrees</b>  <b>Community Colleges</b> <ul style="list-style-type: none"> <li>Motlow State Community College</li> <li>Tennessee College of Applied Technology</li> <li>Nashville State Community College</li> </ul>	<b>Bachelor's and Advanced Degrees</b>  <b>Colleges and Universities</b> <ul style="list-style-type: none"> <li>Middle Tennessee State University</li> <li>Tennessee State University</li> <li>University of Tennessee</li> <li>Vanderbilt University</li> </ul>

## Postsecondary Programs/Majors for Occupations in these Pathways

Certificate or AA	Bachelor's Degree	Advanced Degree
HVAC and Refrigeration Engineering Technology	Civil Engineering	***
Electrical and Power Transmission Installation	Facilities Planning and Management	***
Landscaping and Groundskeeping	Interior Design	***
Surveying Technology	Drafting and Design Technology	***
Civil Engineering Technology	Architecture	***

\*\*\* Few regional occupations in these pathways require education at this degree level.