



Producing *Alaskan Workers* for Alaska's Workforce





Careers

Competitive wages, excellent benefits and opportunities to work outside or in an office – The construction industry offers variety opportunity & great pay – with or without a college degree!

Training

There are many paths into and within the construction industry, take a look at the many different paths you can follow in your career and discover the one that's right for you!

Find a Job

After all of the training and on site experience has taken place, you are ready to join the industry! You've got the skills and the experience – Check out who's hiring in Alaska.

\$2.3

Total Labor Income of Alaskan Construction Workers
(Billions)

23,700

Number of Construction Workers in Alaska

9.8%

Predicted Growth in Alaska Construction Trades between
2020 and 2030



2023 JOBS FORECAST

Capitalizing on federal investment to strengthen Alaska's future

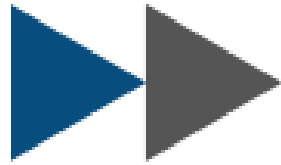
- \$1.2 trillion infrastructure bill – workforce needed for roads, bridges, broadband, ferry system, water, and wastewater projects
 - CDL Drivers
 - Construction Managers
 - Heat/Air/Ref Mechanics
 - General Ops Managers
 - Telecommunication Install/Rep
 - Engineers & Engineering Techs
 - Architects
 - Welders
 - Surveyors
 - Facilities Repair & Management
 - Business Services
- Job growth also anticipated in health care, transportation, public schools, resource extraction, and energy development



**UA is Key to Meeting
Alaska's Workforce Needs**

UA PROGRAMS SUPPORTING INFRASTRUCTURE PROJECTS

Strengthening Outcomes Through Partnerships





UA CONSTRUCTION PROGRAMS

Targeting \$800K in Investments

Marketing | Faculty | Program Support



Our Shared Vision

UA System Construction Management Workforce Development Initiative

Background & Overview:

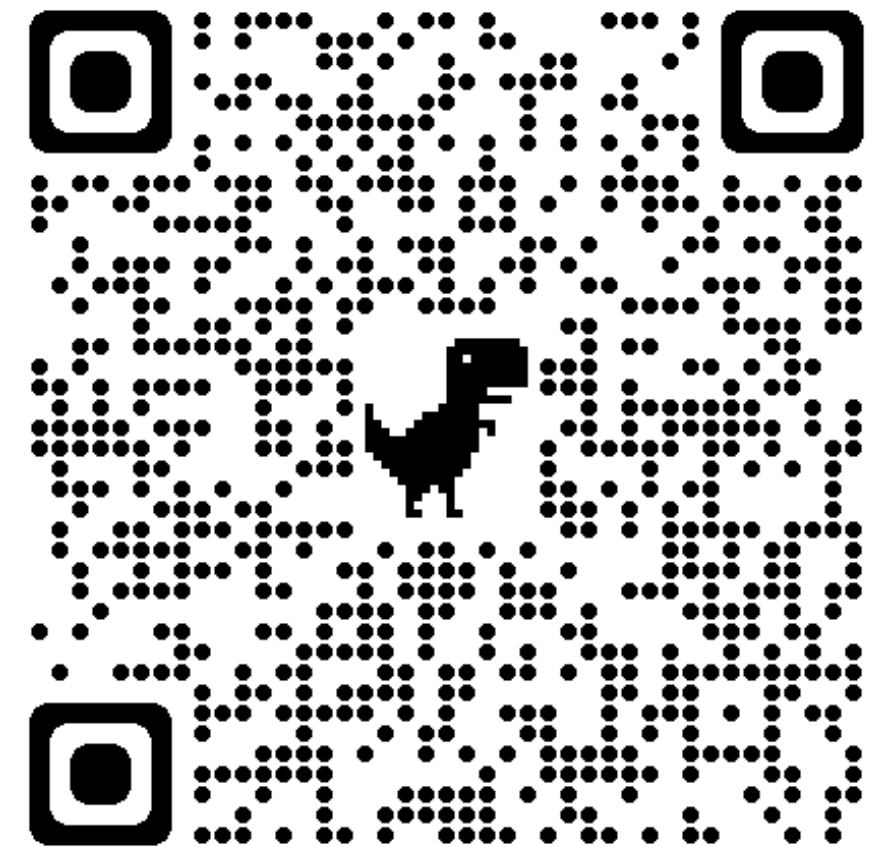
- Workforce scarcity and shortfall of incoming graduates
- Infrastructure Bill
- Combined resources and impact

Fundraising Challenge:

- Target investment of \$800,000 in private philanthropy
- Internships
- Enrollment Increase

Creating Awareness / Showcasing Pathways:

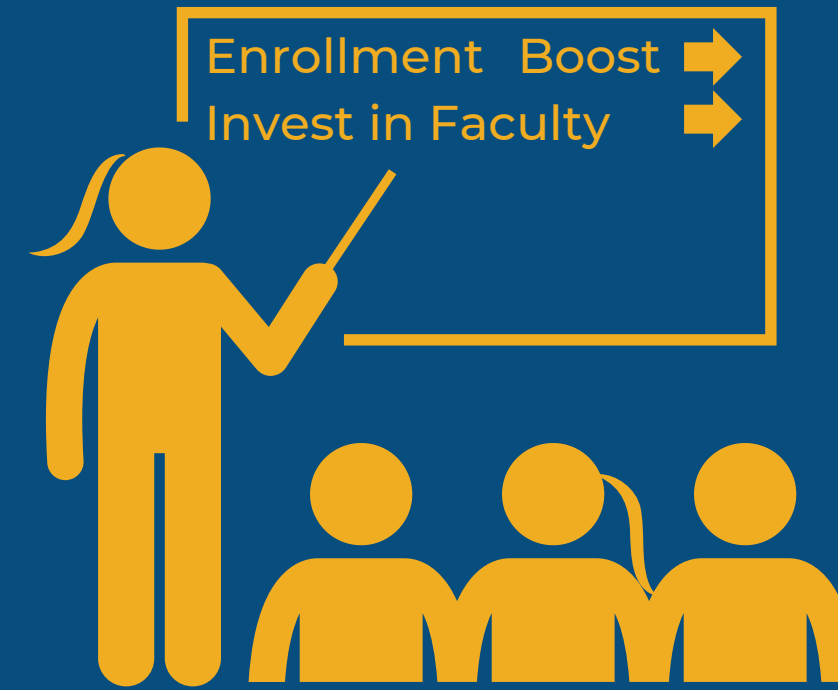
- Alignment
- Identifying target markets
- Examples: UA Construction Report; Empower Alaska; AGC Panel
- University of Alaska + Industry Alignment = Student Pathways to Alaska's Workforce



Scan this QR code to support the
Construction Management Workforce
Development Initiative

University of Alaska Construction Management Programs

A University & Industry Partnership:
Producing Alaskan workers for Alaska's construction workforce



Faculty Recruitments are Actively Underway

Searches are in progress for talented, experienced program instruction, including:

UAA: tenure track faculty member
UAF: full time faculty member
UAS: adjunct faculty member

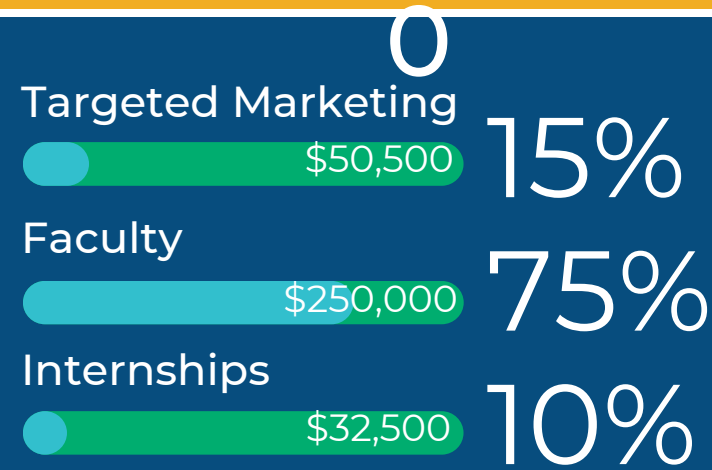


Target Investment of
Private Philanthropy: **\$800,000**

A Wise Investment:

\$333,000
raised to date*

*as of 9/15/2023



A Shared Vision

This initiative aligns the universities' curriculum and strategic recruitments to meet industry needs.

UAA Activities

- Targeted marketing
- Highlighting career growth opportunities
- Shifting internship opportunities to first and second year students

UAF Activities

- Adjusting course requirements to align with industry demand
- Transferring applied knowledge towards college credit, recognizing the value of on-the-job training
- Offering fully online construction management programming

UAS Activities

- Traveling to communities and providing 2-day workshops (tools & materials)
- Providing courses for K-12 students in remote communities
- Using video storytelling to attract and recruit new students

Empower Alaska Video



This initiative has forged new relationships and sparked conversations for Alaska's future workforce.

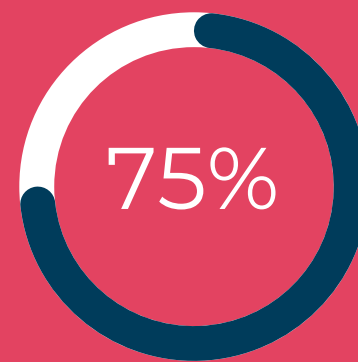
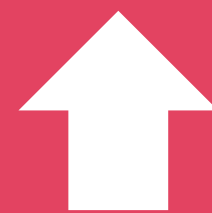
*Updates and figures are accurate as of 10/12/2023



Increased Enrollment from Fall 2022 to Fall 2023

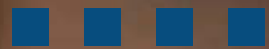


132 students are enrolled in Construction Management and related programs across the state at UAA, UAF, and UAS.



Enrollment for Construction Management and related programs is up an average of 75% from Fall 2022 across UA.

To see how UA grads are building up Alaska's workforce, visit:
www.alaska.edu/research/wd/reports.php



I tell anyone who comes and talks to me about a career path in construction, that if they have a passion for creating, for helping, for building the economy, building opportunity — this is a place for them. I think that the university is such a valuable partner.

Meg Nordale, President, GHEMM Company



Scan the QR code to watch the video

UA SYSTEM

Three Universities, One System

Unique Missions Offering Diverse Value

16+

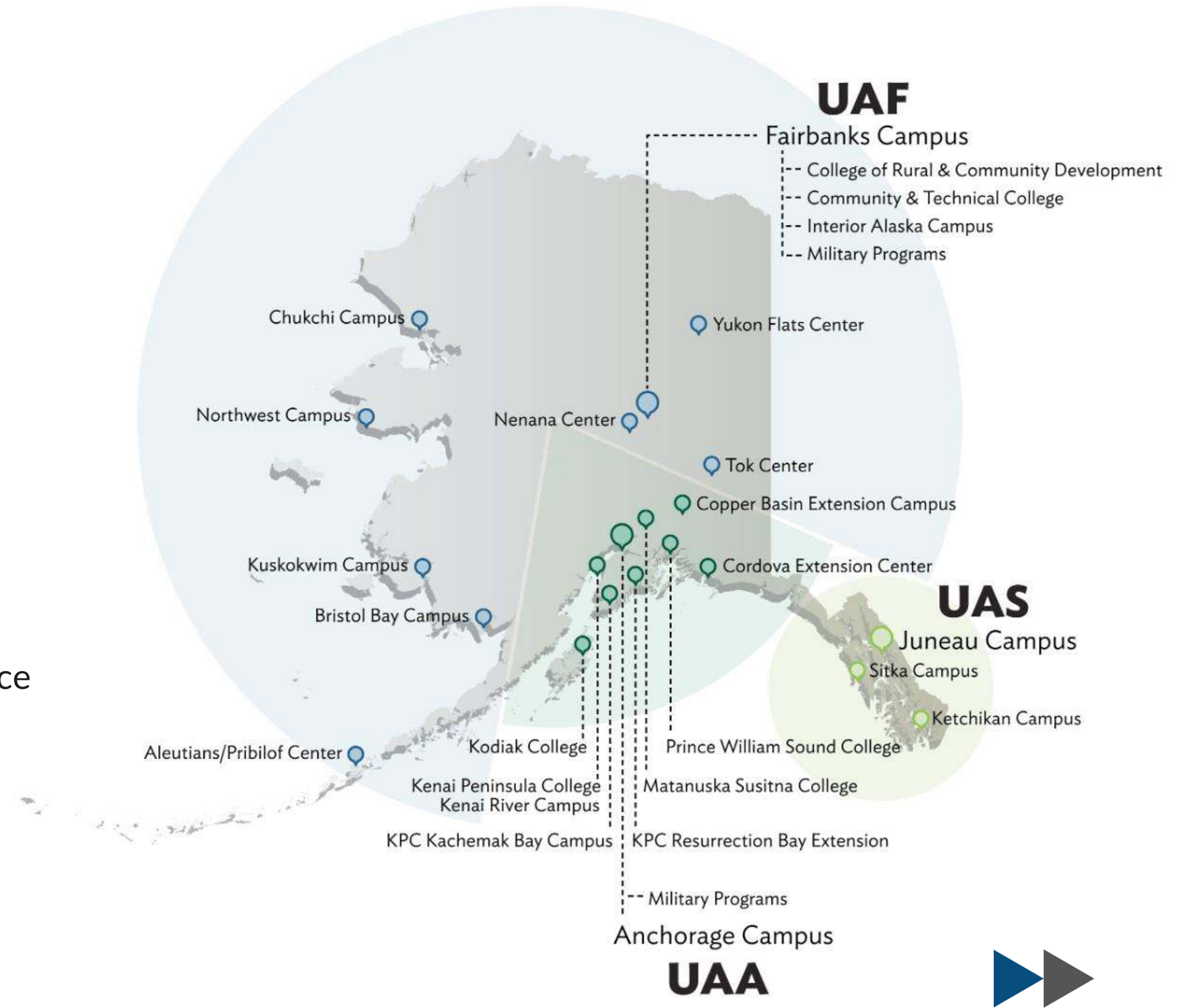
Colleges, campuses, and extension sites providing access statewide

400+

Breadth of programs from workforce credentialing to doctoral degrees

20K+

Students served across all six economic regions



2023

UA WORKFORCE REPORTS

11 INDUSTRIES HIGHLIGHTED

Administration & Finance

Construction

Education

Fisheries & Marine Science

Health

Hospitality & Tourism

Information Technology

Law & Public Safety

Mining

Oil & Gas

Transportation





CONSTRUCTION UA WORKFORCE REPORT

The University of Alaska has identified 46 programs whose graduates are important to the construction industry in Alaska. Detailed below are their employment and wage outcomes, plus other information that can be used to assess UA programs and their usefulness to one of the state's key industries.

FAST FACTS
CONSTRUCTION PROGRAMS
UA GRADUATES

The University of Alaska has identified 46 programs whose graduates are important to the construction industry in Alaska. Detailed below are their employment and wage outcomes, plus other information that can be used to assess UA programs and their usefulness to one of the state's key industries.

Graduates from Key UA Programs

Working in Alaska within One Year of Graduating
(Rate | Actual)

CARPENTRY
78.7% | 334

ENGINEERING
73.7% | 1,781

CONSTRUCTION MANAGEMENT
76.7% | 455

Wage Growth

Program	Year 1 (\$)	Year 5 (\$)	Year 10 (\$)
CARPENTRY	42,745	52,720	111,291
ENGINEERING	61,767	93,536	207,974
CONSTRUCTION MANAGEMENT	86,811	103,127	114,596

Note: Data reflects the actual employment and wage data of all graduates, and is not limited to those employed in construction.

UA Programs Boost Alaska's Hire Rate
96.2%
Of Working Graduates are Alaska Residents

For comparison, residency is...
79.8% for all Alaska Workers
81.4% for all Construction Workers

Program Graduates' Average Wage

Year	Average Wage
1 Year	\$42,745
5 Year	\$93,536
10 Year	\$207,974

AVERAGE ALASKA WAGE \$58,683

UA Graduates | Construction Programs | February 2023

FAST FACTS
CONSTRUCTION PROGRAMS
UA GRADUATES

Industries Where First-Year Graduates Work

- Construction
- Professional, Scientific, & Technical Services
- Public Administration
- Transportation & Warehousing
- Mining, Quarrying, Oil & Gas Extraction
- Other Industries

Rates & Actuals

Rate	Actuals
14.0%	418
22.6%	673
9.1%	272
6.2%	184
18.6%	555
29.4%	877

Over the last three years, the construction industry hired...

- 1,195 Heavy and Tractor-Trailer Truck Drivers
- 442 Construction Managers
- 320 Heating, Air Conditioning, and Refrigeration Mechanics and Installers
- 278 Telecommunications Equipment Installers, Repairers, and Line Installers
- 220 Engineers

Regions where UA construction program graduates work

Note: These occupations require postsecondary education and include all hires, not just UA grads, to identify greatest demand.

UA Graduates | Construction Programs | February 2023

FAST FACTS
CONSTRUCTION PROGRAMS
UA GRADUATES

Programs and the Industry Connection

Education pays — people working jobs in Alaska that require a high school degree earn an average of \$44,679 annually, which jumps to \$63,883 for jobs that require associate degrees, \$86,140 for those that require bachelor degrees, and \$102,511 for jobs in Alaska that require graduate or professional degrees.

Skilled construction workers are critical to building and maintaining Alaska's roads, ports, bridges, and other infrastructure. Growth for construction jobs almost always signals growth for the Alaska economy. The university's construction program graduates work directly in the construction industry as well as in closely related industries such as transportation, architecture, and engineering, among many others. Significant numbers also work in state and local government.

The number of job openings in Alaska has jumped by 40 percent from 2019 to 2022, and spending from the 2021 Infrastructure Act—nearly \$3 billion has already been announced so far for Alaska—will make filling high-wage jobs, most of which require postsecondary training or education, even more difficult. The state's ten consecutive years of negative net migration (more people moving out of the state than moving in) creates an additional challenge for Alaska employers looking to fill open positions. These challenges, however, create unprecedented opportunities for Alaska workers, especially those with sought-after education and training credentials.

Attempts to precisely match the supply of graduates with the demand for certain workers by industry would be misguided, but the data shown here are appropriate for general conclusions about the benefits of certain UA programs. More importantly, this information can help facilitate conversations with key industries about how programs could be expanded, changed, or developed to provide them with more and better-trained workers.

Since 2011, 3,837 people have graduated from programs relevant to the state's construction industry, producing the following outcomes:

Degree Type*	Graduates	% Employed in Alaska within 1 Year	Average First-Year Wage (\$)	Average Fifth-Year Wage (\$)	Average Tenth-Year Wage (\$)
Certificate	907	82.9%	42,816	58,998	67,590
Associate	624	82.2%	57,558	72,481	82,805
Bachelor and Above	2,306	74.4%	66,831	96,029	110,106

*Certificates (1-2 yrs); Associate Degrees (2 yrs); Bachelor Degrees and Above (4+ yrs).

UA Graduates | Construction Programs | February 2023

FAST FACTS
CONSTRUCTION PROGRAMS
UA GRADUATES

Questions and Answers

Do graduates work only in the construction industry?
No, they work in a variety of industries. Graduates being hired and paid well by employers in any industry indicate successful outcomes for both the program graduates and the Alaska economy.

Can this information be used for program evaluation?
It can inform those types of decisions, as well as decisions about which programs to expand, but there is far more to consider than which programs have the highest earnings or best employment outcomes. Other data such as short-term and long-term industry and occupational projections, enrollment numbers, and tuition and program costs are important, and so are less formal insights and information gathered from industry and other key stakeholders. When making key decisions about university programs, it is also important to consider the most recent developments in the economy that cannot yet be measured.

How long does it take to earn a certificate, associate degree, or bachelor degree?
If a student is attending classes full-time, certificate programs take less than 2 years (often 1 year or less); associate degrees are generally 2 years; bachelor degrees are four years; and advanced degrees are more than 4 years.

Where do the employment numbers come from?
The University of Alaska and the Alaska Department of Labor and Workforce Development's Research and Analysis Section work together each year to identify where university graduates are working in the state and what their wages are.

The detailed employment and wage information comes from quarterly reports that nearly all Alaska employers are required to file under state unemployment insurance law. Those records do not include federal workers or the self-employed, so university program graduates in those categories are not shown here.

Wages numbers have been annualized and have been inflation adjusted to 2022 wages to make them comparable across the ten-year window of this report. Annualizing wages is a method used to calculate what the wages would be if all workers worked all four quarters in the year.

How were programs & target occupations selected?
The University of Alaska analyzed labor market information to determine the largest and fastest-growing occupations in the construction industry, then linked programs based on occupations' titles and characteristics. While other UA programs also provide some preparation for construction jobs, this report excludes general administrative training programs that are useful for all sectors, such as accountants and human resource professionals.

UA Graduates | Construction Programs | February 2023

FAST FACTS
CONSTRUCTION PROGRAMS
UA GRADUATES

46 Programs Linked to Construction

Target Occupations	University	Major	Degree	Graduates	% Employed in Alaska within 1 year	1st year average wage	6th year average wage
Heavy and Tractor-Trailer Truck Drivers (43-302)	UAF	Power Technology	Occupational Endorsement Cert	69	81.2%	\$5,111	\$28,979
	UAA	Diesel Power Technology	Certificate	13	82.3%	47,412	-
	UAF	Construction Equipment	Certificate	198	91.0%	\$8,239	74,824
	UAA	Heavy Duty Trains & Equip	Associate of Applied Science	46	87.0%	\$8,961	71,701
Carpenters (47-201)	UAA	Power Technology	Associate of Applied Science	31	90.3%	49,340	-
	UAF	Power Technology	Associate of Applied Science	49	82.7%	55,207	79,568
	UAF	Basic Carpentry	Occupational Endorsement Cert	86	87.9%	10,264	39,911
	UAF	CTT Facilities Maintenance	Occupational Endorsement Cert	101	80.1%	38,864	40,104
	UAS	Construction Technology	Occupational Endorsement Cert	17	89.9%	28,204	45,977
	UAF	Sustainable Energy	Occupational Endorsement Cert	85	88.2%	44,326	60,728
	UAA	Apprenticeship Technology	Associate of Applied Science	28	83.3%	88,875	100,909
	UAF	Apprenticeship Technology	Associate of Applied Science	13	76.9%	86,493	-
	UAS	Construction Technology	Associate of Applied Science	13	81.5%	52,751	65,525
	UAA	Construction Management	Associate of Applied Science	31	86.7%	67,327	94,367
Construction Managers (11-602)	UAF	Construction Management	Associate of Applied Science	86	86.7%	67,263	76,463
	UAA	Construction Management	Bachelor of Science	196	82.1%	75,713	94,654
	UAA	Project Management	Master of Science	149	68.8%	106,108	128,518
	UAF	Civil Engineering	Bachelor of Science	317	83.0%	63,168	92,444
	UAF	Civil Engineering	Bachelor of Science	235	87.2%	58,283	84,391
	UAF	Civil Engineering	Master of Science	81	68.1%	73,364	103,616
	UAF	Civil Engineering	Master of Science	36	77.8%	83,688	109,807
	UAA	Electrical Engineering	Bachelor of Science	184	77.7%	62,196	93,520
	UAF	Electrical Engineering	Master of Science	133	72.9%	54,750	86,807
	UAF	Electrical Engineering	Master of Science	45	33.3%	54,091	-
Civil, Electrical, Mechanical, and All Other Engineers (17-201, 17-207, 17-208, 17-241, 17-249)	UAF	Geological Engineering	Bachelor of Science	73	79.3%	56,348	80,264
	UAF	Geological Engineering	Master of Science	15	68.7%	59,064	84,517
	UAA	Mechanical Engineering	Bachelor of Science	370	72.7%	59,887	107,542
	UAF	Mechanical Engineering	Bachelor of Science	314	71.0%	57,800	89,330
	UAA	Mechanical Engineering	Master of Science	10	90.0%	53,968	-
	UAF	Mechanical Engineering	Master of Science	37	61.4%	61,741	100,194
	UAF	Engineering	Doctor of Philosophy	24	41.7%	71,007	-
	UAA	Advanced Welding	Occupational Endorsement Cert	34	76.8%	42,561	67,206
	UAA	Nondestructive Testing Tech	Occupational Endorsement Cert	165	87.7%	60,976	76,181
	Sheet Metal Workers and Welders (67-211, 51-121)	UAF	Welding	Occupational Endorsement Cert	69	82.6%	44,773
UAF		Entry Level Welder	Occupational Endorsement Cert	95	82.1%	34,288	72,245
UAF		Welding	Occupational Endorsement Cert	125	81.8%	31,583	43,906
UAA		Welding Technology	Certificate	32	81.3%	43,423	48,468
Civil Engineering Technicians (17-602, 17-502)	UAF	Geographic Information Systems	Occupational Endorsement Cert	11	81.8%	53,587	68,327
	UAF	Drafting Technology	Certificate	56	73.2%	36,887	63,945
	UAS	Drafting Technology	Certificate	10	80.0%	40,831	61,206
Surveyors (17-602, 17-101, 17-301)	UAA	Architecture & Engineering Technology	Associate of Applied Science	19	79.5%	41,726	60,196
	UAA	Geomatics	Associate of Applied Science	35	80.0%	67,040	78,051
Heating, Air Conditioning, and Refrigeration Mechanics/Installers (49-902)	UAA	Refrigeration and Heating	Occupational Endorsement Cert	65	81.5%	43,800	66,110
	UAA	Occupational Safety & Health	Associate of Applied Science	166	84.9%	64,768	72,508
Occupational Safety & Health Technicians (29-901, 29-902)	UAA	Occupational Safety & Health	Associate of Applied Science	166	84.9%	64,768	72,508
	UAA	Occupational Safety & Health	Bachelor of Science	19	89.5%	62,480	-

Note: This report is a collaboration among UA Student Development, UA State Strategy and Institutional Research, and the Alaska Department of Labor and Workforce Development's Research and Analysis Section. For more information, visit www.alaska.gov/education.

UA Graduates | Construction Programs | February 2023

CONSTRUCTION

UA Workforce Report Highlights

46 UA Programs Support the Construction Industry

3,837 Graduates since 2011



Graduates from Key UA Programs

Working in Alaska within One Year of Graduating

(Rate | Actual)

CARPENTRY

78.7% | 334

ENGINEERING

73.7% | 1,781

CONSTRUCTION MANAGEMENT

76.7% | 455

Wage Growth

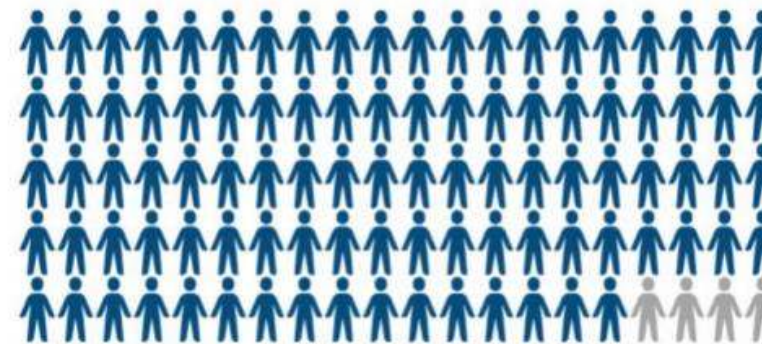


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UA Programs Boost Alaska's Hire Rate

96.2%

Of Working Graduates are Alaska Residents

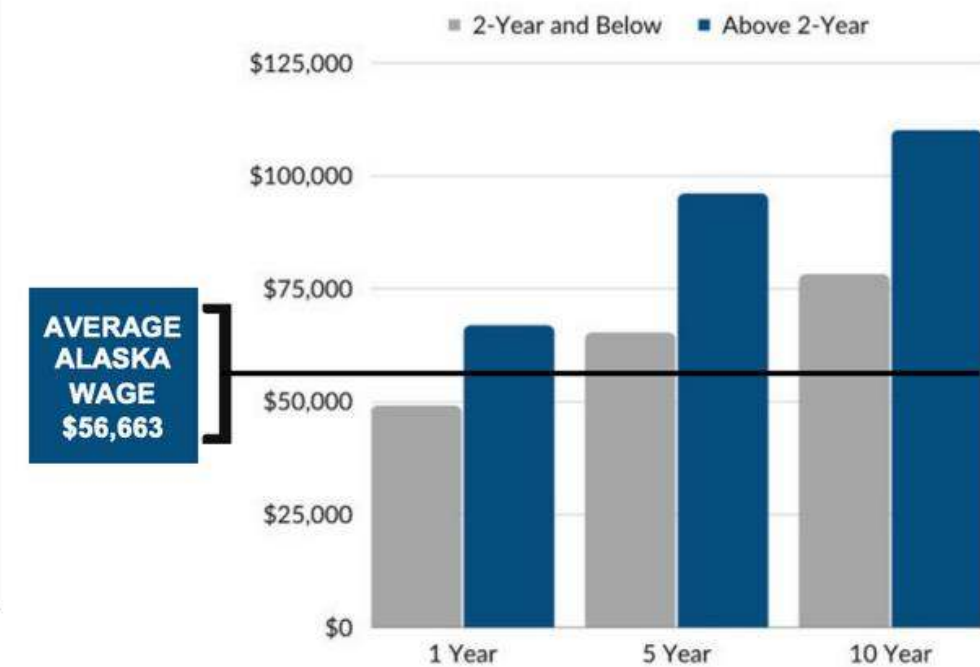


For comparison, residency is...

79.8% for all Alaska Workers

81.4% for all Construction Workers

Program Graduates' Average Wage



Since 2011
3,837

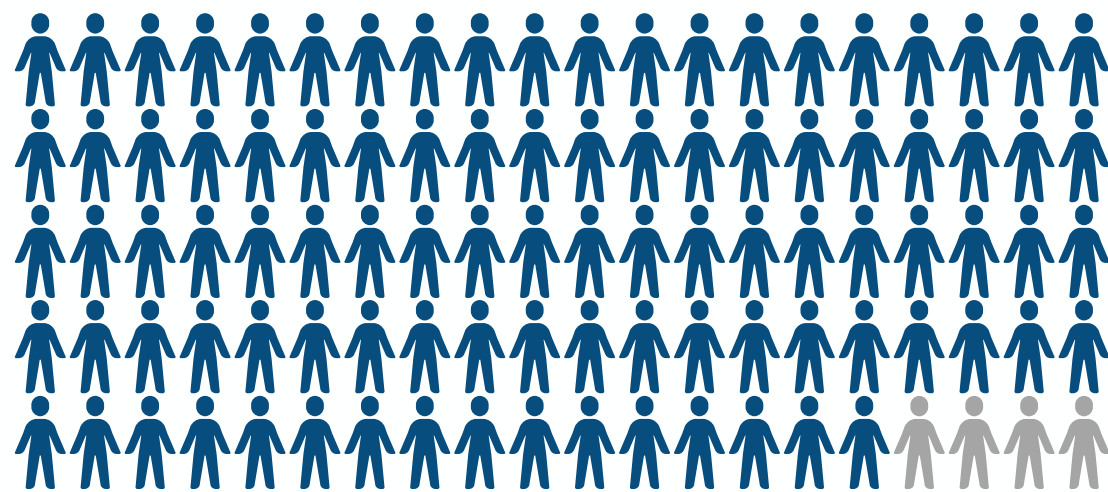
Students have graduated from programs relevant to the state's construction industries, producing the following outcomes:

UA'S IMPACT ON ALASKA'S CONSTRUCTION WORKFORCE

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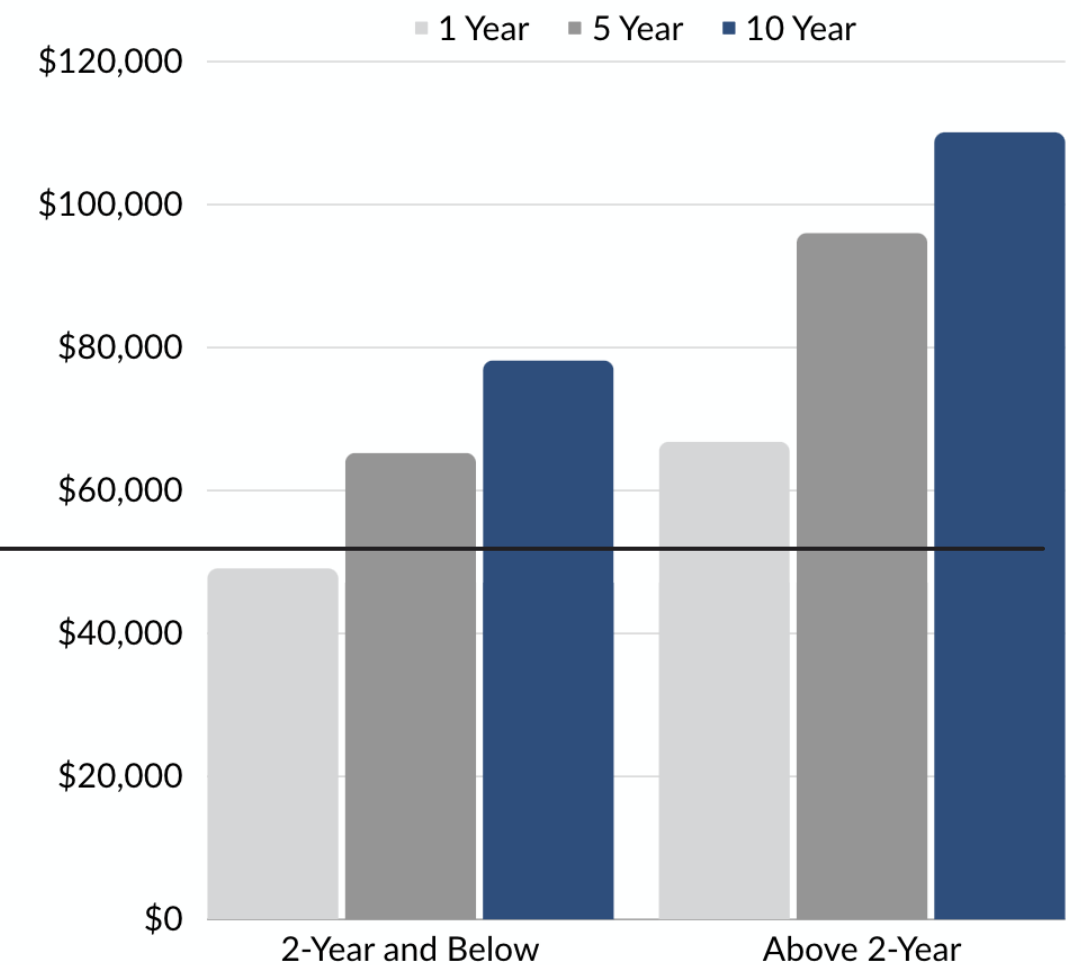
96.2% Of Working Construction Program Graduates are Alaskan Residents



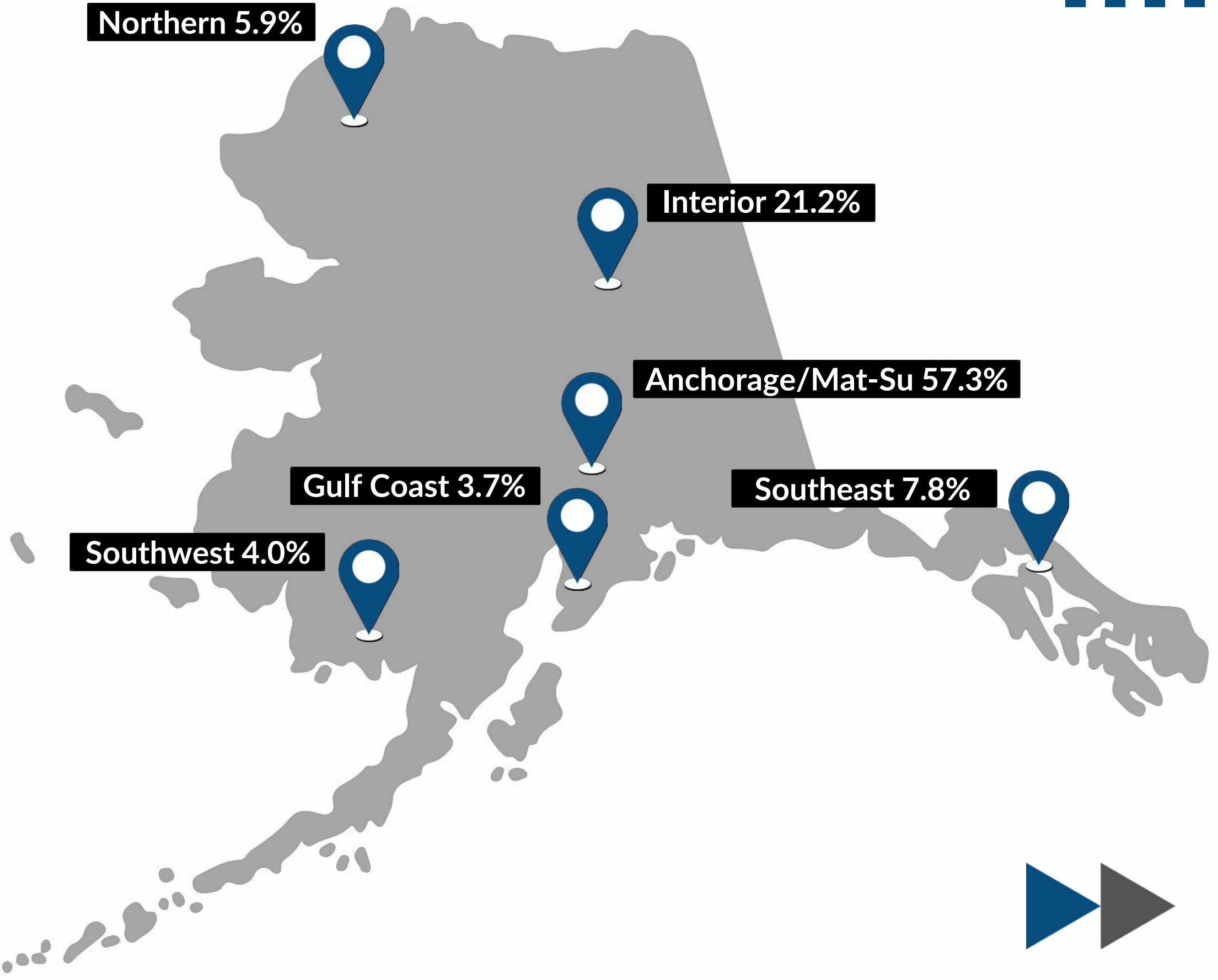
For comparison, residency is 79.8% for all Alaskan Workers and 81.4% for all Construction Workers

Program Graduates' Average Wage

**Average Alaska Wage
\$56,663**



UA CONSTRUCTION GRADUATES WORK IN ALL OF ALASKA'S SIX ECONOMIC REGIONS



UAA Construction Overview

CONSTRUCTION MANAGEMENT

- Associates of applied Science and Bachelor's of Science in Construction Management
- Externally Accredited by The American Council of Construction Education
- Bachelor students sit for the ASC Associate Constructor Exam
- All online program since 2020



UAA Construction Overview

ARCHITECTURAL & ENGINEERING TECHNOLOGY

- Associates
- 3d Modeling
- Graphic Design focused on Arctic Construction
- Design studies include mechanical, electrical, and plumbing systems into building design



UAA Construction Overview

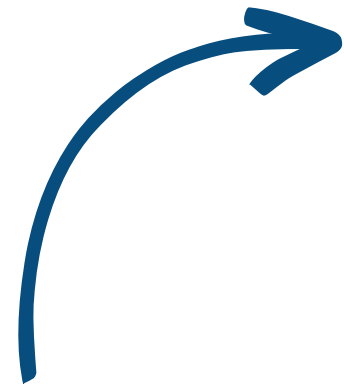
OCCUPATIONAL SAFETY AND HEALTH

- Program options
 - OEC in safety Specialist
 - AAS in OSH
 - BS in OSH
- Online program available across the state
- Focuses on construction safety management, process safety, incident investigation and analysis, legal aspects of occupational safety and health, and the economic value of safety
- Paths to ASP and CSP



UAF Construction Overview

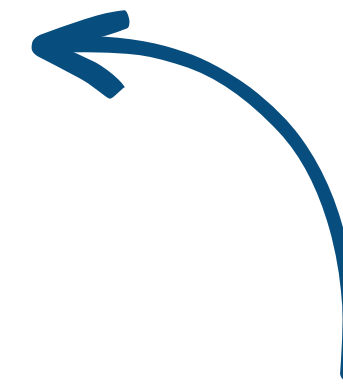
Associate of Applied Science Degree Construction Management (CM)



Certificate
Drafting Technology



Occupational Endorsement
Construction Trades Technology
(Facility Maintenance) (Basic Carpentry)



Prior Learning
Apprenticeship
Work Experience



- Program revisions submitted, affective fall 2024
- CM courses all online as of fall 2023
- Increased enrollment by 30 over last year
- 20 course seat capacity



UAS Construction Overview

Occupation Endorsements:

Computer Aided Drafting Technician
Residential Light Construction
Welding

Certificates:

Drafting Technology

Associates Degree:

Construction Technology



UNIVERSITY of ALASKA SOUTHEAST



UAS Construction Overview

Pathways

Dual Enrollment for high school students

House Build Program

Collaboration to build affordable housing



UAS
Construction
Technology
Program



Juneau School
District



Juneau Housing
Trust



UNIVERSITY of ALASKA SOUTHEAST

Alumni Spotlight

Mack Pennington, Sr. Project Manager, PMP



Alaska Grown, Alaska Trained

UAA Construction Management Graduate

6+ years with STG Pacific LLC





UA Construction & Planning *Listening Session*

Tuesday, November 28 | 2-4 p.m. via Zoom



Please tell us how we can better partner with the construction community or start building a relationship with your company



Scan the QR code
to register





The most successful folks in our industry are the ones that are homegrown, and they play a vital role in helping the entire state meet the workforce needs long into the future. I have a lot better success when securing and retaining staff when I hire UA graduates.

-Meg Nordale, President, GHEMM Company



Questions?



UNIVERSITY
of ALASKA
Many Traditions One Alaska