



Broadband Market Workforce Needs

Research Summary

Continuum Capital on Behalf of the FBA and PCCA

June 26, 2024

Virtual

Engagement Objective

▶ Objective:

1. Define, forecast, and prioritize the Broadband Market potential within 48 contiguous states in three ways:
 - a) Demand for services;
 - b) Workforce supply;
 - c) Wage rates for field and office staff.

Engagement Deliverables

► Deliverables:

1. Demand 1 – Spending on broadband and communications infrastructure on a state-by-state basis broken down by various funding sources including RSA, RDOF, and BEAD among others.
2. Demand 2 – Specific demand for workforce and crews measured in numbers of staff and specific positions.
3. Supply – Availability of workforce, both internal to the ISP and contractor workforce, on a state-by-state basis covering various classifications of telecom and broadband field, field leadership, various technicians, and office construction or project management staff.
4. Wage Rates – For telecom and broadband field, field leadership, various technicians, and office construction or project management staff.

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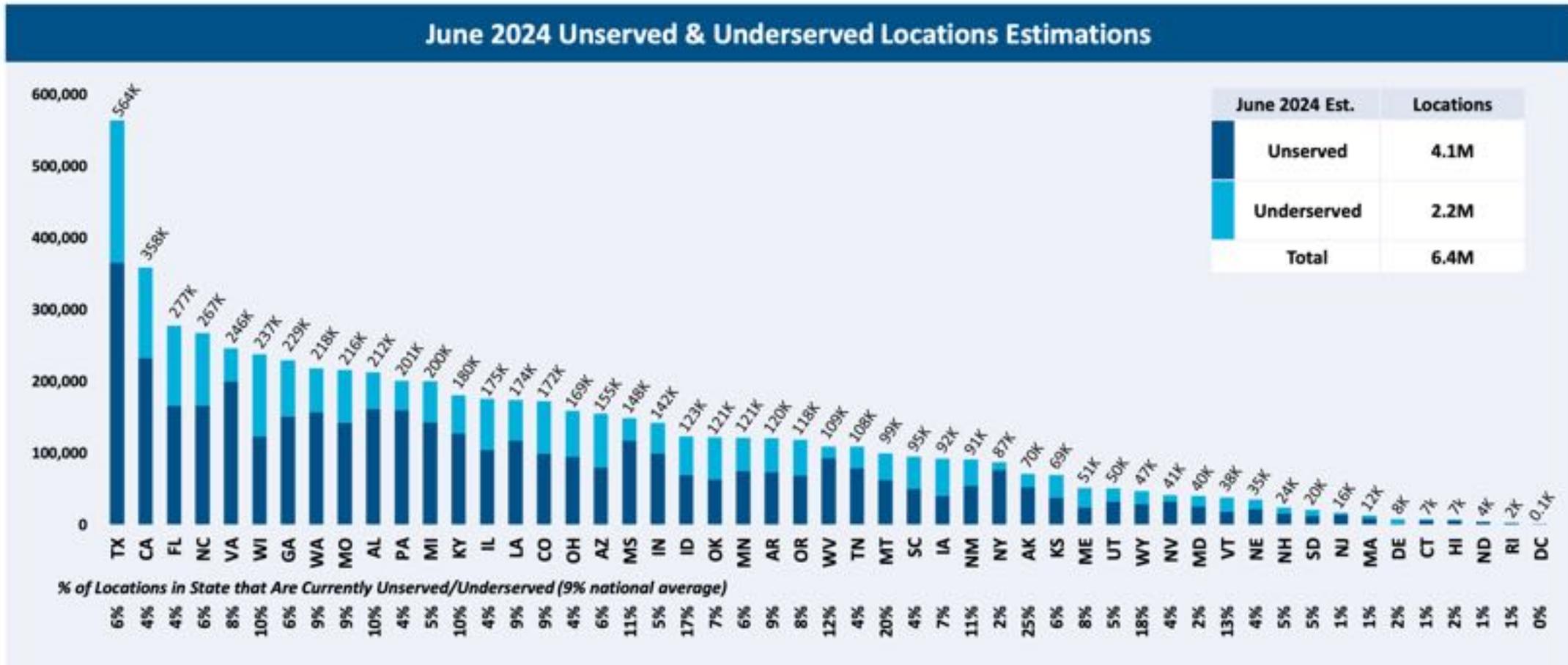
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Executive Summary *(1 of 9)*

- ▶ COVID19 exposed the substantial gap in availability of high-speed broadband.
 - Unserved and underserved areas exist and persist nationwide.
- ▶ Changing perspectives and market dynamics
 - Continuum’s hypothesis going into the research was that the “unprecedented federal funding would serve as a rising tide that will raise all boats.” The results of the research disprove the hypothesis and demonstrate that the spending will be targeted with firms that are aggressive in the challenge and pursuit process and with aggressive management teams comfortable with the pursuit, paperwork, and bureaucracy. In our opinion, many firms that could effectively use the funding will not have access to it.
 - Private equity backed firms, particularly newer broadband providing entities, are set up to aggressively challenge for and pursue the federal funding and view it as “free” money that reduces the amount of financing necessary to build out a system. It is our opinion they will successfully secure this funding over the coming months and result in traditional rural broadband and electric co-ops missing these funding opportunities.
 - During the research effort, multiple traditional rural broadband and electric co-ops disclosed a reluctance to aggressively pursue the available federal funding due to the requirements to participate in the challenge process, the anticipated burden to meeting the paperwork requirements, and trepidation on overcoming the bureaucracy associated with the funding.

Executive Summary (2 of 9)

▶ NTIA BEAD Broadband Serviceable Locations – Demand substantial



Source: Used with permission of FBA.

Executive Summary *(4 of 9)*

- ▶ The unprecedented injection of federal and state money into the broadband market is serving as a disruptive force in the following ways:
 - Causing the formation of state level broadband offices in all 50 states
 - Injection of a massive funding volume into the historically “sleepy” rural broadband and electric co-op markets around the country
 - Bringing an unprecedented volume of engineering activity into a broadband market that is not prepared for this volume of activity and will result in delays
 - Bringing an unprecedented volume of construction activity into a broadband and electric co-op market that is not prepared for this activity level and will result in delays
 - Attracting significant private equity participation into the broadband market in multiple ways:
 - Formation of new ILEC or CLEC entities to compete aggressively for access to new federal funding
 - Formation of engineering rollups to consolidate the market and deliver engineering services across a larger geography
 - Formation of construction rollups to consolidate market capacity and deliver construction services across a larger geography

Executive Summary (5 of 9)

Program*	In progress or anticipated spending	
BEAD	\$52,000,000,000**	
Digital Equity	\$52,000,000	
Middle Mile	\$2,300,000,000	
Tribal (Round 1 & 2)	\$1,800,000,000 & \$980,000,000 (Estimated)	
Broadband Infrastructure	\$560,000,000	
Capital Project Fund	\$7,500,000,000	
RDOF	\$9,000,000,000	
CAF II	\$1,500,000,000	
RUS (2019-2023)	\$5,000,000,000	
Total (Estimated)	Total = \$80.0 Billion	Annual = \$11.5 Billion

- ▶ **Special Funding**
 - Unprecedented injection of federal and state money into the broadband market, measured in billions, that is targeted for engineering and construction, and operation over the next 5-7 years

Source: Continuum analysis and presentation of public data from multiple sources.

Interpretive Note: * Not all special programs and state sponsored programs are listed. In addition, normal and routine spending on Broadband infrastructure is also not described in full detail.

Interpretive Note: ** BEAD legislative funding amount grossed up by 25% to account for anticipated matching amounts.

Executive Summary *(6 of 9)*

- ▶ Construction workforce need to support forecast special funding spending tops 28,000 nationwide for field trades of various types
 - Plus 55,700 for retirement and attrition over the next 10 years
 - Plus project management, design, locator, owner representative, inspection, etc. staff
 - Plus additional workforce growth needed for ongoing and routine, broadband construction activity
- ▶ Technician workforce needed to support forecast special funding spending tops 30,000
 - Plus 63,500 for retirement and attrition over the next 10 years
 - Plus additional workforce growth needed for ongoing and routine, broadband attachment and maintenance activity.
- ▶ Bottlenecks associated with the unprecedented injection of federal and state money into the broadband market will choke and slow the process in unplanned and unanticipated ways.
 - Design, Permitting, Locating, and Construction bottlenecks will occur in a serial fashion

Executive Summary (7 of 9)

Construction & Technician Position	Workforce Estimate	2025-2032 Need*	10 Yr Ret. & Attr. Need
Superintendent/General Foreman	10,300	1,700	3,200
Foreman	20,600	3,400	6,600
Lineman	51,400	8,100	16,400
Apprentice	51,400	8,100	16,400
Field Crew Fiber Splicer	5,100	900	1,700
Groundman / Helper / Laborer	25,700	4,100	8,200
Operator / HDD Operator	10,300	1,700	3,200
Construction Field Total	174,800	28,000	55,700
Tower Equipment Installers and Repairers	13,500	2,200	4,200
Telecom Technician (Non-Specific)	17,300	2,800	6,600
Telecom System Troubleshooter	8,700	1,400	9,400
Telecom System Testing	8,700	1,400	9,400
Premises Installation Tech	86,700	13,900	18,100
Underground Fiber Drop Technician	17,300	2,800	7,400
Aerial Drop Technician	34,700	5,500	8,400
Technician Total	186,900	30,000	63,500

- ▶ National Broadband Construction Workforce Special Funding Need (Estimated)*
 - 28,000 field trades needed
 - Apprentice position captures entry level, field trades performing lineman, splicer, helper, and operator functions.
 - Plus project management, design, locator, owner representative, inspection, etc. staff
 - Plus additional workforce growth needed for ongoing and routine, broadband construction activity
- ▶ National Broadband Technician Workforce Special Funding Need (Estimated)*
 - 30,000 technicians needed
 - Interior and other fiber splicing skills and need are incorporated into each technician position.
 - Plus additional workforce growth needed for ongoing and routine, broadband attachment and maintenance
- ▶ The Broadband workforce average age is 39 - retirement and attrition require replacement of 1/3 of it over 10 years

Source: Continuum led 2024 national and proprietary study of broadband industry workforce size and need on the behalf of PCCA and FBA.

Executive Summary *(8 of 9)*

► Bottlenecks To Asset Construction & Operation

Design: 10%
of spend;
Fiber Cable Spool

Design

- **Bottleneck:** Federal funding coming to the market at the same time, on top of routine activity.

Bidding

- Dependent on owner procurement policy

Permitting

- **Bottleneck:** Will result in unanticipated slowdown to work start and will chew up dollars as municipalities shift responsibility to asset owners

Locating

- **Competition & Bottleneck:** Federal funding coming to the market at the same time, on top of routine activity.

Construction

- **Competition & Bottleneck:** Federal funding coming to the market at the same time, on top of routine activity.

Splicing

- Fractional staffing need versus Construction (**1 field crew splicer for every 10 construction field trades**).

Interior Line Pulling

- Constraint and flexible

Materials / Equipment: 30%
of spend

Locating / Construction / Splicing: 60% of spend – **30-50% of this amount is construction field trade labor**



Cable Stringing



Executive Summary *(9 of 9)*

- ▶ The rollout of the various special funding type has already been delayed as states have set up broadband offices and begun to work within the legislative constrains and rules.
- ▶ As the bottlenecks manifest, further delays will occur.
- ▶ Overall, construction spending activity for large swaths of the special funding will be delayed between 2-3 years and pushed into the future.

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AL - Special Broadband Financing Programs Available

Program*	In progress or anticipated spending	
BEAD	\$1,751,527,377***	
Digital Equity	\$981,081	
Middle Mile	\$72,165,073	
Tribal (Round 1 & 2)	\$0 & \$0 (Estimated)	
Broadband Infrastructure	\$0	
Capital Project Fund	\$182,300,000	
RDOF	\$330,804,828	
CAF II	\$5,384,813	
RUS (2019-2023)	\$178,289,060	
Other (Estimated)	\$900,000,000	
Total (Estimated)	Total = \$3.4 Billion	Annual = \$475 Million

- ▶ Alabama Construction Workforce Special Funding Need (Estimated)**
 - 1200 field trades (helper, laborer, lineman, field crew splicer, operator, foreman, etc.)
 - Plus project management, design, locator, owner representative, inspection, etc.
- ▶ Alabama Technician Workforce Special Funding Need (Estimated)**
 - 1500 technicians (tower, troubleshooter, testing, premises, underground / overhead drop, etc.)

Source: Continuum analysis and presentation of public data from multiple sources.

Interpretive Note: * Not all special programs and state sponsored programs are listed. In addition, normal and routine spending on Broadband infrastructure is also not described in full detail.

Interpretive Note: ** Forecasted labor need does not incorporate retirements, attrition, or additional workforce needed for ongoing and routine, broadband construction activity.

Interpretive Note: ***. BEAD legislative funding amount grossed up by 25% to account for anticipated matching amounts.

AL – Broadband Workforce Size & Need

Construction & Technician Position	Workforce Estimate	2025-2032 Need	10 Yr Ret. & Attr. Need
Superintendent/General Foreman	200	72	60
Foreman	300	144	100
Lineman	800	360	200
Apprentice*	800	360	200
Field Crew Fiber Splicer	100	36	20
Groundman / Helper / Laborer	400	180	130
Operator / HDD Operator	200	72	60
Construction Field Total	2,800	1,224	770
Tower Equipment Installers and Repairers	100	40	50
Telecom Technician (Non-Specific)**	300	150	110
Telecom System Troubleshooter**	200	70	140
Telecom System Testing**	200	70	140
Premises Installation Tech**	1,700	730	310
Underground Fiber Drop Technician**	300	150	120
Aerial Drop Technician**	700	290	130
Technician Total	3,500	1,500	1,000

Source: Continuum led 2024 national and proprietary study of broadband industry workforce size and need on the behalf of PCCA and FBA.
 Interpretive Note: * Apprentice position captures entry level, lower experience, and lower skill field trades performing lineman, splicer, helper, and operator functions.
 Interpretive Note: ** Interior and other fiber splicing skills and need are incorporated into technician positions.

2024 Broadband Industry Wages - South vs. Alabama

Position	South Low End	South Median	South High End	AL Survey Median*	AL BLS Median	National Median
119021 – Construction Manager (Project Manager)	\$58,000	\$81,003	\$158,660	\$77,121*	\$95,190	\$104,900
131051 – Estimator	\$50,120	\$80,462	\$144,880	nc	\$61,590	\$74,740
151141.1 – Contract Administrator	\$50,000	\$69,000	nc	\$158,600*	nc	nc
172051.2 – Engineer Cost & Schedule	\$35,000	\$56,000	\$78,000	\$70,000*	nc	nc
299011 – Safety Specialist / Representative	\$58,000	\$81,120	\$159,994	\$70,750*	\$73,100	\$81,140
471011 – Supervisor (Superintendent, Foreman)	\$50,732	\$73,670	\$126,200	\$46,250*	\$63,100	\$76,760
472061 – Laborer	\$29,000	\$36,000	\$76,400	\$34,000*	\$35,660	\$45,300
472073 – Operator Light & Heavy Equipment	\$42,760	\$50,200	\$75,845	\$38,000*	\$45,420	\$56,160
472111 – Electrician / Fiber Splicer	\$71,282	\$74,310	\$113,206	\$79,625*	\$51,500	\$61,590
474010 – Inspector / Quality Assurance / Quality Control	nc	nc	nc	nc	\$57,360	\$67,700
475031 – Operator HDD	\$36,000	\$54,200	\$115,260	\$51,380*	\$57,590	\$56,660
493042 – Operator Mechanic	\$36,000	\$60,000	\$98,000	\$33,500*	\$59,010	\$61,900
499051 & 499052 – Lineman Electrical & Telecom	\$42,764	\$74,310	\$113,206	\$71,661	\$54,780	\$64,640
514121 – Welder	\$48,000	\$52,000	\$91,000	\$40,250*	\$46,110	\$48,940
533032 – Operator CDL Truck Driver only	\$36,000	\$49,800	\$95,000	\$41,500*	\$49,090	\$54,320

Source: Continuum led 2024 national and proprietary study of broadband industry wages on the behalf of PCCA and FBA.

Interpretive Note: Data does not include overtime (typically 15-30% of annual wage for most positions and as high as 60-100% for critical positions) or monetary/non-monetary benefits; n/c = not calculated, incomplete, or unanalyzed data set;

*=Alabama region including AL, AR, LA, MS, and TN.

2024 Broadband Industry Wages - South vs. Alabama

Position	AL BLS Median	National Median
Telecom/Broadband System Design	\$105,580	\$106,950
Telecom Technician	\$68,890	\$61,290
Telecom System Troubleshooter	See Telecom Tech	See Telecom Tech
Telecom System Testing	See Telecom Tech	See Telecom Tech
492021 - Radio, Cellular, and Tower Equipment Installers and Repairers	\$80,980	\$61,310
492022 - Telecommunications Equipment Installers and Repairers, Except Line Installers (Can include Fiber Optic Technicians/Broadband Technicians, Premises Installation Tech)	\$56,800	\$61,270
Premises Installation Tech	See 492022	See 492022
Underground Fiber Drop Technician	See 492022	See 492022
Aerial Drop Technician	See 492022	See 492022

Source: Bureau of Labor Statistics (BLS) raw data analyzed by Continuum..

Interpretive Note: Technician positions are not broken out in BLS data. Data collected during the research and survey process covered a subset of states and is not presented separately in these materials. n/c = not calculated, incomplete, or unanalyzed data set;

AK - Special Broadband Financing Programs Available

Program*	In progress or anticipated spending	
BEAD	\$1,271,424,591***	
Digital Equity	\$567,800	
Middle Mile	\$150,799,820	
Tribal (Round 1 & 2)	\$448,098,972 & \$235,243,251 (Estimated)	
Broadband Infrastructure	\$0	
Capital Project Fund	\$0	
RDOF	\$0	
CAF II	\$0	
RUS (2019-2023)	\$513,236,875	
Other (Estimated)	\$800,000,000	
Total (Estimated)	Total = \$3.4 Billion	Annual = \$490 Million

- ▶ Alaska Construction Workforce Special Funding Need (Estimated)**
 - 1,200 field trades (helper, laborer, lineman, field crew splicer, operator, foreman, etc.)
 - Plus project management, design, locator, owner representative, inspection, etc.
- ▶ Alaska Technician Workforce Special Funding Need (Estimated)**
 - 1,200 technicians (tower, troubleshooter, testing, premises, underground / overhead drop, etc.)

Source: Continuum analysis and presentation of public data from multiple sources.

Interpretive Note: * Not all special programs and state sponsored programs are listed. In addition, normal and routine spending on Broadband infrastructure is also not described in full detail.

Interpretive Note: ** Forecasted labor need does not incorporate retirements, attrition, or additional workforce needed for ongoing and routine, broadband construction activity.

Interpretive Note: ***. BEAD legislative funding amount grossed up by 25% to account for anticipated matching amounts.

AK – Broadband Workforce Size & Need

Construction & Technician Position	Workforce Estimate	2025-2032 Need	10 Yr Ret. & Attr. Need
Superintendent/General Foreman	10	72	0
Foreman	30	144	10
Lineman	70	360	20
Apprentice*	70	360	20
Field Crew Fiber Splicer	10	36	0
Groundman / Helper / Laborer	30	180	10
Operator / HDD Operator	10	72	0
Construction Field Total	230	1,224	60
Tower Equipment Installers and Repairers	80	90	20
Telecom Technician (Non-Specific)**	100	120	20
Telecom System Troubleshooter**	50	60	20
Telecom System Testing**	50	60	20
Premises Installation Tech**	500	600	100
Underground Fiber Drop Technician**	100	120	20
Aerial Drop Technician**	200	240	40
Technician Total	1,080	1,290	240

Source: Continuum led 2024 national and proprietary study of broadband industry workforce size and need on the behalf of PCCA and FBA.
 Interpretive Note: * Apprentice position captures entry level, lower experience, and lower skill field trades performing lineman, splicer, helper, and operator functions.
 Interpretive Note: ** Interior and other fiber splicing skills and need are incorporated into technician positions.

2024 Broadband Industry Wages - West vs. Alaska

Position	West Low End	West Median	West High End	AK Survey Median	AK BLS Median	National Median
119021 – Construction Manager (Project Manager)	\$58,000	\$100,680	\$158,660	nc	\$131,420	\$104,900
131051 – Estimator	\$54,240	\$91,560	\$196,560	nc	\$66,740	\$74,740
151141.1 – Contract Administrator	\$46,000	\$57,000	\$86,100	nc	nc	nc
172051.2 – Engineer Cost & Schedule	nc	\$67,700	\$89,540	nc	nc	nc
299011 – Safety Specialist / Representative	\$58,000	\$76,502	\$159,994	nc	\$93,450	\$81,140
471011 – Supervisor (Superintendent, Foreman)	\$50,000	\$66,000	\$126,200	nc	\$93,220	\$76,760
472061 – Laborer	\$29,000	\$45,000	\$80,000	nc	\$49,950	\$45,300
472073 – Operator Light & Heavy Equipment	\$40,000	\$56,000	\$90,000	nc	\$72,380	\$56,160
472111 – Electrician / Fiber Splicer	\$40,000	\$56,000	\$82,000	nc	\$82,160	\$61,590
474010 – Inspector / Quality Assurance / Quality Control	\$53,000	\$65,500	\$66,170	nc	\$85,000	\$67,700
475031 – Operator HDD	\$41,500	\$56,000	\$80,100	nc	\$61,530	\$56,660
493042 – Operator Mechanic	\$36,000	\$62,000	\$98,000	nc	\$80,230	\$61,900
499051 & 499052 – Lineman Electrical & Telecom	\$47,260	\$54,000	\$60,000	nc	\$72,720	\$64,640
514121 – Welder	\$48,000	\$52,000	\$91,000	nc	\$77,100	\$48,940
533032 – Operator CDL Truck Driver only	\$36,000	\$52,000	\$95,000	nc	\$63,140	\$54,320

Source: Continuum led 2024 national and proprietary study of broadband industry wages on the behalf of PCCA and FBA.

Interpretive Note: Data does not include overtime (typically 15-30% of annual wage for most positions and as high as 60-100% for critical positions) or monetary/non-monetary benefits; n/c = not calculated, incomplete, or unanalyzed data set;

2024 Broadband Industry Wages - West vs. Alaska

Position	AK BLS Median	National Median
Telecom/Broadband System Design	\$101,710	\$106,950
Telecom Technician	\$94,360	\$61,290
Telecom System Troubleshooter	See Telecom Tech	See Telecom Tech
Telecom System Testing	See Telecom Tech	See Telecom Tech
492021 - Radio, Cellular, and Tower Equipment Installers and Repairers	nc	\$61,310
492022 - Telecommunications Equipment Installers and Repairers, Except Line Installers (Can include Fiber Optic Technicians/Broadband Technicians, Premises Installation Tech)	\$94,360	\$61,270
Premises Installation Tech	See 492022	See 492022
Underground Fiber Drop Technician	See 492022	See 492022
Aerial Drop Technician	See 492022	See 492022

Source: Bureau of Labor Statistics (BLS) raw data analyzed by Continuum..

Interpretive Note: Technician positions are not broken out in BLS data. Data collected during the research and survey process covered a subset of states and is not presented separately in these materials. n/c = not calculated, incomplete, or unanalyzed data set;

AZ - Special Broadband Financing Programs Available

Program*	In progress or anticipated spending	
BEAD	\$1,241,390,289***	
Digital Equity	\$1,116,110	
Middle Mile	\$43,283,954	
Tribal (Round 1 & 2)	\$156,862,121 & \$82,349,565 (Estimated)	
Broadband Infrastructure	\$0	
Capital Project Fund	\$99,400,000	
RDOF	\$195,847,668	
CAF II	\$28,295,979	
RUS (2019-2023)	\$106,925,610	
Other (Estimated)	\$700,000,000	
Total (Estimated)	Total = \$2.6 Billion	Annual = \$375 Million

- ▶ Arizona Construction Workforce Special Funding Need (Estimated)**
 - 900 field trades (helper, laborer, lineman, field crew splicer, operator, foreman, etc.)
 - Plus project management, design, locator, owner representative, inspection, etc.
- ▶ Arizona Technician Workforce Special Funding Need (Estimated)**
 - 500 technicians (tower, troubleshooter, testing, premises, underground / overhead drop, etc.)

Source: Continuum analysis and presentation of public data from multiple sources.

Interpretive Note: * Not all special programs and state sponsored programs are listed. In addition, normal and routine spending on Broadband infrastructure is also not described in full detail.

Interpretive Note: ** Forecasted labor need does not incorporate retirements, attrition, or additional workforce needed for ongoing and routine, broadband construction activity.

Interpretive Note: ***. BEAD legislative funding amount grossed up by 25% to account for anticipated matching amounts.

AZ – Broadband Workforce Size & Need

Construction & Technician Position	Workforce Estimate	2025-2032 Need	10 Yr Ret. & Attr. Need
Superintendent/General Foreman	200	54	80
Foreman	500	108	180
Lineman	1,200	270	500
Apprentice*	1,200	270	500
Field Crew Fiber Splicer	100	27	40
Groundman / Helper / Laborer	600	135	190
Operator / HDD Operator	200	54	80
Construction Field Total	4,000	918	1,570
Tower Equipment Installers and Repairers	60	10	40
Telecom Technician (Non-Specific)**	200	50	120
Telecom System Troubleshooter**	100	20	220
Telecom System Testing**	100	20	220
Premises Installation Tech**	1,200	240	220
Underground Fiber Drop Technician**	200	50	130
Aerial Drop Technician**	500	100	130
Technician Total	2,360	490	1,080

Source: Continuum led 2024 national and proprietary study of broadband industry workforce size and need on the behalf of PCCA and FBA.
 Interpretive Note: * Apprentice position captures entry level, lower experience, and lower skill field trades performing lineman, splicer, helper, and operator functions.
 Interpretive Note: ** Interior and other fiber splicing skills and need are incorporated into technician positions.

2024 Broadband Industry Wages - West vs. Arizona

Position	West Low End	West Median	West High End	AZ Survey Median*	AZ BLS Median	National Median
119021 – Construction Manager (Project Manager)	\$58,000	\$100,680	\$158,660	\$93,800*	\$105,480	\$104,900
131051 – Estimator	\$54,240	\$91,560	\$196,560	\$88,660*	\$80,650	\$74,740
151141.1 – Contract Administrator	\$46,000	\$57,000	\$86,100	nc	nc	nc
172051.2 – Engineer Cost & Schedule	nc	\$67,700	\$89,540	\$54,080*	nc	nc
299011 – Safety Specialist / Representative	\$58,000	\$76,502	\$159,994	\$76,502*	\$79,130	\$81,140
471011 – Supervisor (Superintendent, Foreman)	\$50,000	\$66,000	\$126,200	\$60,000	\$75,570	\$76,760
472061 – Laborer	\$29,000	\$45,000	\$80,000	\$44,000	\$45,650	\$45,300
472073 – Operator Light & Heavy Equipment	\$40,000	\$56,000	\$90,000	\$52,000	\$58,460	\$56,160
472111 – Electrician / Fiber Splicer	\$40,000	\$56,000	\$82,000	\$56,000	\$60,440	\$61,590
474010 – Inspector / Quality Assurance / Quality Control	\$53,000	\$65,500	\$66,170	nc	\$67,790	\$67,700
475031 – Operator HDD	\$41,500	\$56,000	\$80,100	\$58,000*	\$56,570	\$56,660
493042 – Operator Mechanic	\$36,000	\$62,000	\$98,000	\$58,000*	\$61,480	\$61,900
499051 & 499052 – Lineman Electrical & Telecom	\$47,260	\$54,000	\$60,000	\$51,500*	\$51,230	\$64,640
514121 – Welder	\$48,000	\$52,000	\$91,000	\$52,000*	\$48,330	\$48,940
533032 – Operator CDL Truck Driver only	\$36,000	\$52,000	\$95,000	\$52,000*	\$49,610	\$54,320

Source: Continuum led 2024 national and proprietary study of broadband industry wages on the behalf of PCCA and FBA.

Interpretive Note: Data does not include overtime (typically 15-30% of annual wage for most positions and as high as 60-100% for critical positions) or monetary/non-monetary benefits; n/c = not calculated, incomplete, or unanalyzed data set; ;

*= Arizona region including AZ, CA, CO, NM, NV, and UT.

2024 Broadband Industry Wages - National vs. Arizona

Position	AZ BLS Median	National Median
Telecom/Broadband System Design	\$104,950	\$106,950
Telecom Technician	\$69,970	\$61,290
Telecom System Troubleshooter	See Telecom Tech	See Telecom Tech
Telecom System Testing	See Telecom Tech	See Telecom Tech
492021 - Radio, Cellular, and Tower Equipment Installers and Repairers	\$66,320	\$61,310
492022 - Telecommunications Equipment Installers and Repairers, Except Line Installers (Can include Fiber Optic Technicians/Broadband Technicians, Premises Installation Tech)	\$73,620	\$61,270
Premises Installation Tech	See 492022	See 492022
Underground Fiber Drop Technician	See 492022	See 492022
Aerial Drop Technician	See 492022	See 492022

Source: Bureau of Labor Statistics (BLS) raw data analyzed by Continuum..

Interpretive Note: Technician positions are not broken out in BLS data. Data collected during the research and survey process covered a subset of states and is not presented separately in these materials. n/c = not calculated, incomplete, or unanalyzed data set;

AR - Special Broadband Financing Programs Available

Program*	In progress or anticipated spending	
BEAD	\$1,280,379,992***	
Digital Equity	\$843,673	
Middle Mile	\$0	
Tribal (Round 1 & 2)	\$0 & \$0 (Estimated)	
Broadband Infrastructure	\$0	
Capital Project Fund	\$150,200,000	
RDOF	\$424,243,218	
CAF II	\$51,939,634	
RUS (2019-2023)	\$122,734,752	
Other (Estimated)	\$750,000,000	
Total (Estimated)	Total = \$2.8 Billion	Annual = \$400 Million

- ▶ Arkansas Construction Workforce Special Funding Need (Estimated)**
 - 900 field trades (helper, laborer, lineman, field crew splicer, operator, foreman, etc.)
 - Plus project management, design, locator, owner representative, inspection, etc.
- ▶ Arkansas Technician Workforce Special Funding Need (Estimated)**
 - 900 technicians (tower, troubleshooter, testing, premises, underground / overhead drop, etc.)

Source: Continuum analysis and presentation of public data from multiple sources.

Interpretive Note: * Not all special programs and state sponsored programs are listed. In addition, normal and routine spending on Broadband infrastructure is also not described in full detail.

Interpretive Note: ** Forecasted labor need does not incorporate retirements, attrition, or additional workforce needed for ongoing and routine, broadband construction activity.

Interpretive Note: ***. BEAD legislative funding amount grossed up by 25% to account for anticipated matching amounts.

AR – Broadband Workforce Size & Need

Construction & Technician Position	Workforce Estimate	2025-2032 Need	10 Yr Ret. & Attr. Need
Superintendent/General Foreman	100	54	40
Foreman	200	108	60
Lineman	500	270	160
Apprentice*	500	270	160
Field Crew Fiber Splicer	50	27	20
Groundman / Helper / Laborer	300	135	100
Operator / HDD Operator	100	54	40
Construction Field Total	1,750	918	580
Tower Equipment Installers and Repairers	40	20	30
Telecom Technician (Non-Specific)**	200	90	70
Telecom System Troubleshooter**	80	40	100
Telecom System Testing**	80	40	100
Premises Installation Tech**	800	440	210
Underground Fiber Drop Technician**	200	90	90
Aerial Drop Technician**	300	180	80
Technician Total	1,700	900	680

Source: Continuum led 2024 national and proprietary study of broadband industry workforce size and need on the behalf of PCCA and FBA.
 Interpretive Note: * Apprentice position captures entry level, lower experience, and lower skill field trades performing lineman, splicer, helper, and operator functions.
 Interpretive Note: ** Interior and other fiber splicing skills and need are incorporated into technician positions.

2024 Broadband Industry Wages - South vs. Arkansas

Position	South Low End	South Median	South High End	AR Survey Median*	AR BLS Median	National Median
119021 – Construction Manager (Project Manager)	\$58,000	\$81,003	\$158,660	\$96,410	\$87,590	\$104,900
131051 – Estimator	\$50,120	\$80,462	\$144,880	nc	\$60,380	\$74,740
151141.1 – Contract Administrator	\$50,000	\$69,000	nc	\$158,600	nc	nc
172051.2 – Engineer Cost & Schedule	\$35,000	\$56,000	\$78,000	\$70,000*	nc	nc
299011 – Safety Specialist / Representative	\$58,000	\$81,120	\$159,994	\$70,750*	\$63,090	\$81,140
471011 – Supervisor (Superintendent, Foreman)	\$50,732	\$73,670	\$126,200	\$42,750	\$60,930	\$76,760
472061 – Laborer	\$29,000	\$36,000	\$76,400	\$34,000*	\$35,800	\$45,300
472073 – Operator Light & Heavy Equipment	\$42,760	\$50,200	\$75,845	\$37,000	\$42,710	\$56,160
472111 – Electrician / Fiber Splicer	\$71,282	\$74,310	\$113,206	\$79,625*	\$48,480	\$61,590
474010 – Inspector / Quality Assurance / Quality Control	nc	nc	nc	nc	\$56,680	\$67,700
475031 – Operator HDD	\$36,000	\$54,200	\$115,260	\$51,380*	\$47,200	\$56,660
493042 – Operator Mechanic	\$36,000	\$60,000	\$98,000	\$33,500*	\$57,880	\$61,900
499051 & 499052 – Lineman Electrical & Telecom	\$42,764	\$74,310	\$113,206	\$34,000	\$58,460	\$64,640
514121 – Welder	\$48,000	\$52,000	\$91,000	\$40,250*	\$44,970	\$48,940
533032 – Operator CDL Truck Driver only	\$36,000	\$49,800	\$95,000	\$41,500*	\$47,140	\$54,320

Source: Continuum led 2024 national and proprietary study of broadband industry wages on the behalf of PCCA and FBA.

Interpretive Note: Data does not include overtime (typically 15-30% of annual wage for most positions and as high as 60-100% for critical positions) or monetary/non-monetary benefits; n/c = not calculated, incomplete, or unanalyzed data set;

*=Arkansas region including AL, AR, LA, MS, and TN.

2024 Broadband Industry Wages - National vs. Arkansas

Position	AR BLS Median	National Median
Telecom/Broadband System Design	\$80,190	\$106,950
Telecom Technician	\$50,815	\$61,290
Telecom System Troubleshooter	See Telecom Tech	See Telecom Tech
Telecom System Testing	See Telecom Tech	See Telecom Tech
492021 - Radio, Cellular, and Tower Equipment Installers and Repairers	\$53,650	\$61,310
492022 - Telecommunications Equipment Installers and Repairers, Except Line Installers (Can include Fiber Optic Technicians/Broadband Technicians, Premises Installation Tech)	\$47,980	\$61,270
Premises Installation Tech	See 492022	See 492022
Underground Fiber Drop Technician	See 492022	See 492022
Aerial Drop Technician	See 492022	See 492022

Source: Bureau of Labor Statistics (BLS) raw data analyzed by Continuum..

Interpretive Note: Technician positions are not broken out in BLS data. Data collected during the research and survey process covered a subset of states and is not presented separately in these materials. n/c = not calculated, incomplete, or unanalyzed data set;

CA - Special Broadband Financing Programs Available

Program*	In progress or anticipated spending	
BEAD	\$2,330,170,636***	
Digital Equity	\$4,001,520	
Middle Mile	\$235,705,774	
Tribal (Round 1 & 2)	\$215,730,409 & \$113,245,272 (Estimated)	
Broadband Infrastructure	\$0	
Capital Project Fund	\$540,200,000	
RDOF	\$695,158,129	
CAF II	\$149,026,913	
RUS (2019-2023)	\$148,645,533	
Other (Estimated)	\$1,700,000,000	
Total (Estimated)	Total = \$6.1 Billion	Annual = \$875 Million

- ▶ California Construction Workforce Special Funding Need (Estimated)**
 - 2,000 field trades (helper, laborer, lineman, field crew splicer, operator, foreman, etc.)
 - Plus project management, design, locator, owner representative, inspection, etc.
- ▶ California Technician Workforce Special Funding Need (Estimated)**
 - 1600 technicians (tower, troubleshooter, testing, premises, underground / overhead drop, etc.)

Source: Continuum analysis and presentation of public data from multiple sources.

Interpretive Note: * Not all special programs and state sponsored programs are listed. In addition, normal and routine spending on Broadband infrastructure is also not described in full detail.

Interpretive Note: ** Forecasted labor need does not incorporate retirements, attrition, or additional workforce needed for ongoing and routine, broadband construction activity.

Interpretive Note: ***. BEAD legislative funding amount grossed up by 25% to account for anticipated matching amounts.

CA – Broadband Workforce Size & Need

Construction & Technician Position	Workforce Estimate	2025-2032 Need	10 Yr Ret. & Attr. Need
Superintendent/General Foreman	1,100	120	400
Foreman	2,200	240	800
Lineman	5,500	600	2,000
Apprentice*	5,500	600	2,000
Field Crew Fiber Splicer	600	60	190
Groundman / Helper / Laborer	2,800	300	1,000
Operator / HDD Operator	1,100	120	400
Construction Field Total	18,800	2,040	6,790
Tower Equipment Installers and Repairers	900	100	400
Telecom Technician (Non-Specific)**	1,400	150	600
Telecom System Troubleshooter**	700	80	900
Telecom System Testing**	700	80	900
Premises Installation Tech**	6,900	750	1,490
Underground Fiber Drop Technician**	1,400	150	700
Aerial Drop Technician**	2,800	300	800
Technician Total	14,800	1,610	5,790

Source: Continuum led 2024 national and proprietary study of broadband industry workforce size and need on the behalf of PCCA and FBA.
 Interpretive Note: * Apprentice position captures entry level, lower experience, and lower skill field trades performing lineman, splicer, helper, and operator functions.
 Interpretive Note: ** Interior and other fiber splicing skills and need are incorporated into technician positions.

2024 Broadband Industry Wages - West vs. California

Position	West Low End	West Median	West High End	CA Survey Median	CA BLS Median	National Median
119021 – Construction Manager (Project Manager)	\$58,000	\$100,680	\$158,660	\$101,000	\$124,690	\$104,900
131051 – Estimator	\$54,240	\$91,560	\$196,560	\$91,520	\$81,910	\$74,740
151141.1 – Contract Administrator	\$46,000	\$57,000	\$86,100	nc	nc	nc
172051.2 – Engineer Cost & Schedule	nc	\$67,700	\$89,540	\$54,040	nc	nc
299011 – Safety Specialist / Representative	\$58,000	\$76,502	\$159,994	\$137,488	\$102,580	\$81,140
471011 – Supervisor (Superintendent, Foreman)	\$50,000	\$66,000	\$126,200	\$60,000	\$92,060	\$76,760
472061 – Laborer	\$29,000	\$45,000	\$80,000	\$48,000	\$56,720	\$45,300
472073 – Operator Light & Heavy Equipment	\$40,000	\$56,000	\$90,000	\$55,000	\$82,350	\$56,160
472111 – Electrician / Fiber Splicer	\$40,000	\$56,000	\$82,000	\$82,000	\$77,470	\$61,590
474010 – Inspector / Quality Assurance / Quality Control	\$53,000	\$65,500	\$66,170	nc	\$97,750	\$67,700
475031 – Operator HDD	\$41,500	\$56,000	\$80,100	\$60,000	\$59,820	\$56,660
493042 – Operator Mechanic	\$36,000	\$62,000	\$98,000	\$54,000	\$74,820	\$61,900
499051 & 499052 – Lineman Electrical & Telecom	\$47,260	\$54,000	\$60,000	\$54,000	\$82,620	\$64,640
514121 – Welder	\$48,000	\$52,000	\$91,000	nc	\$56,100	\$48,940
533032 – Operator CDL Truck Driver only	\$36,000	\$52,000	\$95,000	\$57,000	\$58,030	\$54,320

Source: Continuum led 2024 national and proprietary study of broadband industry wages on the behalf of PCCA and FBA.

Interpretive Note: Data does not include overtime (typically 15-30% of annual wage for most positions and as high as 60-100% for critical positions) or monetary/non-monetary benefits; n/c = not calculated, incomplete, or unanalyzed data set;

2024 Broadband Industry Wages - National vs. California

Position	CA BLS Median	National Median
Telecom/Broadband System Design	\$139,140	\$106,950
Telecom Technician	\$76,935	\$61,290
Telecom System Troubleshooter	See Telecom Tech	See Telecom Tech
Telecom System Testing	See Telecom Tech	See Telecom Tech
492021 - Radio, Cellular, and Tower Equipment Installers and Repairers	\$82,760	\$61,310
492022 - Telecommunications Equipment Installers and Repairers, Except Line Installers (Can include Fiber Optic Technicians/Broadband Technicians, Premises Installation Tech)	\$71,110	\$61,270
Premises Installation Tech	See 492022	See 492022
Underground Fiber Drop Technician	See 492022	See 492022
Aerial Drop Technician	See 492022	See 492022

Source: Bureau of Labor Statistics (BLS) raw data analyzed by Continuum..

Interpretive Note: Technician positions are not broken out in BLS data. Data collected during the research and survey process covered a subset of states and is not presented separately in these materials. n/c = not calculated, incomplete, or unanalyzed data set;

CO - Special Broadband Financing Programs Available

Program*	In progress or anticipated spending	
BEAD	\$1,033,153,313***	
Digital Equity	\$897,119	
Middle Mile	\$4,631,407	
Tribal (Round 1 & 2)	\$22,727,874 & \$11,931,692 (Estimated)	
Broadband Infrastructure	\$0	
Capital Project Fund	\$162,200,000	
RDOF	\$249,833,710	
CAF II	\$17,405,627	
RUS (2019-2023)	\$53,982,125	
Other (Estimated)	\$600,000,000	
Total (Estimated)	Total = \$2.2 Billion	Annual = \$300 Million

- ▶ Colorado Construction Workforce Special Funding Need (Estimated)**
 - 700 field trades (helper, laborer, lineman, field crew splicer, operator, foreman, etc.)
 - Plus project management, design, locator, owner representative, inspection, etc.
- ▶ Colorado Technician Workforce Special Funding Need (Estimated)**
 - 1,000 technicians (tower, troubleshooter, testing, premises, underground / overhead drop, etc.)

Source: Continuum analysis and presentation of public data from multiple sources.

Interpretive Note: * Not all special programs and state sponsored programs are listed. In addition, normal and routine spending on Broadband infrastructure is also not described in full detail.

Interpretive Note: ** Forecasted labor need does not incorporate retirements, attrition, or additional workforce needed for ongoing and routine, broadband construction activity.

Interpretive Note: ***. BEAD legislative funding amount grossed up by 25% to account for anticipated matching amounts.

CO – Broadband Workforce Size & Need

Construction & Technician Position	Workforce Estimate	2025-2032 Need	10 Yr Ret. & Attr. Need
Superintendent/General Foreman	200	42	60
Foreman	400	84	130
Lineman	900	210	300
Apprentice*	900	210	300
Field Crew Fiber Splicer	90	21	30
Groundman / Helper / Laborer	400	105	130
Operator / HDD Operator	200	42	60
Construction Field Total	3,090	714	1,010
Tower Equipment Installers and Repairers	400	90	110
Telecom Technician (Non-Specific)**	400	90	140
Telecom System Troubleshooter**	200	50	140
Telecom System Testing**	200	50	140
Premises Installation Tech**	1,900	450	410
Underground Fiber Drop Technician**	400	90	140
Aerial Drop Technician**	700	180	130
Technician Total	4,200	1,000	1,210

Source: Continuum led 2024 national and proprietary study of broadband industry workforce size and need on the behalf of PCCA and FBA.
 Interpretive Note: * Apprentice position captures entry level, lower experience, and lower skill field trades performing lineman, splicer, helper, and operator functions.
 Interpretive Note: ** Interior and other fiber splicing skills and need are incorporated into technician positions.

2024 Broadband Industry Wages - West vs. Colorado

Position	West Low End	West Median	West High End	CO Survey Median*	CO BLS Median	National Median
119021 – Construction Manager (Project Manager)	\$58,000	\$100,680	\$158,660	\$91,999*	\$106,650	\$104,900
131051 – Estimator	\$54,240	\$91,560	\$196,560	\$94,261*	\$79,930	\$74,740
151141.1 – Contract Administrator	\$46,000	\$57,000	\$86,100	nc	nc	nc
172051.2 – Engineer Cost & Schedule	nc	\$67,700	\$89,540	\$58,800*	nc	nc
299011 – Safety Specialist / Representative	\$58,000	\$76,502	\$159,994	\$75,005*	\$94,810	\$81,140
471011 – Supervisor (Superintendent, Foreman)	\$50,000	\$66,000	\$126,200	\$64,000*	\$78,010	\$76,760
472061 – Laborer	\$29,000	\$45,000	\$80,000	\$44,000*	\$45,560	\$45,300
472073 – Operator Light & Heavy Equipment	\$40,000	\$56,000	\$90,000	\$58,500*	\$59,420	\$56,160
472111 – Electrician / Fiber Splicer	\$40,000	\$56,000	\$82,000	\$58,000*	\$60,850	\$61,590
474010 – Inspector / Quality Assurance / Quality Control	\$53,000	\$65,500	\$66,170	\$59,250*	\$69,650	\$67,700
475031 – Operator HDD	\$41,500	\$56,000	\$80,100	\$50,000*	\$61,590	\$56,660
493042 – Operator Mechanic	\$36,000	\$62,000	\$98,000	\$58,250*	\$64,230	\$61,900
499051 & 499052 – Lineman Electrical & Telecom	\$47,260	\$54,000	\$60,000	\$80,450*	\$62,650	\$64,640
514121 – Welder	\$48,000	\$52,000	\$91,000	\$91,000*	\$54,560	\$48,940
533032 – Operator CDL Truck Driver only	\$36,000	\$52,000	\$95,000	\$53,000*	\$57,910	\$54,320

Source: Continuum led 2024 national and proprietary study of broadband industry wages on behalf of PCCA and FBA.

Interpretive Note: Data does not include overtime (typically 15-30% of annual wage for most positions and as high as 60-100% for critical positions) or monetary/non-monetary benefits; n/c = not calculated, incomplete, or unanalyzed data set;

*= Colorado region including AZ, CO, KS, NE, NM, OK, UT, and WY.

2024 Broadband Industry Wages - National vs. Colorado

Position	CO BLS Median	National Median
Telecom/Broadband System Design	\$110,010	\$106,950
Telecom Technician	\$61,570	\$61,290
Telecom System Troubleshooter	See Telecom Tech	See Telecom Tech
Telecom System Testing	See Telecom Tech	See Telecom Tech
492021 - Radio, Cellular, and Tower Equipment Installers and Repairers	\$59,040	\$61,310
492022 - Telecommunications Equipment Installers and Repairers, Except Line Installers (Can include Fiber Optic Technicians/Broadband Technicians, Premises Installation Tech)	\$64,100	\$61,270
Premises Installation Tech	See 492022	See 492022
Underground Fiber Drop Technician	See 492022	See 492022
Aerial Drop Technician	See 492022	See 492022

Source: Bureau of Labor Statistics (BLS) raw data analyzed by Continuum..

Interpretive Note: Technician positions are not broken out in BLS data. Data collected during the research and survey process covered a subset of states and is not presented separately in these materials. n/c = not calculated, incomplete, or unanalyzed data set;

CT - Special Broadband Financing Programs Available

Program*	In progress or anticipated spending	
BEAD	\$180,225,991***	
Digital Equity	\$736,567	
Middle Mile	\$0	
Tribal (Round 1 & 2)	\$493,008 & \$258,820 (Estimated)	
Broadband Infrastructure	\$0	
Capital Project Fund	\$111,700,000	
RDOF	\$4,210,411	
CAF II	\$0	
RUS (2019-2023)	\$0	
Other (Estimated)	\$100,000,000	
Total (Estimated)	Total = \$400 Million	Annual = \$50 Million

- ▶ Connecticut Construction Workforce Special Funding Need (Estimated)**
 - 100 field trades (helper, laborer, lineman, field crew splicer, operator, foreman, etc.)
 - Plus project management, design, locator, owner representative, inspection, etc.
- ▶ Connecticut Technician Workforce Special Funding Need (Estimated)**
 - 100 technicians (tower, troubleshooter, testing, premises, underground / overhead drop, etc.)

Source: Continuum analysis and presentation of public data from multiple sources.

Interpretive Note: * Not all special programs and state sponsored programs are listed. In addition, normal and routine spending on Broadband infrastructure is also not described in full detail.

Interpretive Note: ** Forecasted labor need does not incorporate retirements, attrition, or additional workforce needed for ongoing and routine, broadband construction activity.

Interpretive Note: ***. BEAD legislative funding amount grossed up by 25% to account for anticipated matching amounts.

CT – Broadband Workforce Size & Need

Construction & Technician Position	Workforce Estimate	2025-2032 Need	10 Yr Ret. & Attr. Need
Superintendent/General Foreman	50	6	20
Foreman	100	12	40
Lineman	300	30	100
Apprentice*	300	30	100
Field Crew Fiber Splicer	30	3	10
Groundman / Helper / Laborer	100	15	40
Operator / HDD Operator	50	6	20
Construction Field Total	930	102	330
Tower Equipment Installers and Repairers	100	10	30
Telecom Technician (Non-Specific)**	100	10	40
Telecom System Troubleshooter**	60	0	60
Telecom System Testing**	60	0	60
Premises Installation Tech**	600	50	100
Underground Fiber Drop Technician**	100	10	40
Aerial Drop Technician**	300	20	70
Technician Total	1,320	100	400

Source: Continuum led 2024 national and proprietary study of broadband industry workforce size and need on the behalf of PCCA and FBA.
 Interpretive Note: * Apprentice position captures entry level, lower experience, and lower skill field trades performing lineman, splicer, helper, and operator functions.
 Interpretive Note: ** Interior and other fiber splicing skills and need are incorporated into technician positions.

2024 Broadband Industry Wages – Midwest & Northeast vs. **CONTINUUM**

Connecticut

Position	MW & NE Low End	MW & NE Median	MW & NE High End	CT Survey Median*	CT BLS Median	National Median
119021 – Construction Manager (Project Manager)	\$50,000	\$84,000	\$158,660	\$93,600*	\$120,100	\$104,900
131051 – Estimator	\$54,120	\$70,102	\$104,000	nc	\$78,730	\$74,740
151141.1 – Contract Administrator	\$52,500	\$72,068	\$91,097	nc	nc	nc
172051.2 – Engineer Cost & Schedule	\$38,000	\$57,240	\$89,540	\$52,000*	nc	nc
299011 – Safety Specialist / Representative	\$84,000	\$79,872	\$106,660	\$67,600*	\$86,410	\$81,140
471011 – Supervisor (Superintendent, Foreman)	\$72,120	\$82,500	\$124,529	\$129,820*	\$79,730	\$76,760
472061 – Laborer	\$33,600	\$48,000	\$73,600	\$57,250*	\$50,750	\$45,300
472073 – Operator Light & Heavy Equipment	\$47,757	\$65,052	\$75,845	\$72,120*	\$73,770	\$56,160
472111 – Electrician / Fiber Splicer	\$48,000	\$63,000	\$83,200	nc	\$71,500	\$61,590
474010 – Inspector / Quality Assurance / Quality Control	\$50,400	\$65,168	\$96,000	nc	\$91,190	\$67,700
475031 – Operator HDD	\$36,000	\$58,000	\$115,260	nc	\$64,010	\$56,660
493042 – Operator Mechanic	nc	\$54,000	\$120,200	\$62,000*	\$71,310	\$61,900
499051 & 499052 – Lineman Electrical & Telecom	\$71,282	\$96,222	\$113,206	\$120,200*	\$54,640	\$64,640
514121 – Welder	nc	\$51,500	nc	\$50,250*	\$59,580	\$48,940
533032 – Operator CDL Truck Driver only	nc	\$52,000	\$76,800	\$49,000*	\$57,070	\$54,320

Source: Continuum led 2024 national and proprietary study of broadband industry wages on the behalf of PCCA and FBA.

Interpretive Note: Data does not include overtime (typically 15-30% of annual wage for most positions and as high as 60-100% for critical positions) or monetary/non-monetary benefits; n/c = not calculated, incomplete, or unanalyzed data set;

*=Connecticut region including CT, DE, MA, ME, NH, NJ, NY, PA, RI, and VT.

2024 Broadband Industry Wages – National vs. Connecticut

Position	CT BLS Median	National Median
Telecom/Broadband System Design	\$114,260	\$106,950
Telecom Technician	\$86,145	\$61,290
Telecom System Troubleshooter	See Telecom Tech	See Telecom Tech
Telecom System Testing	See Telecom Tech	See Telecom Tech
492021 - Radio, Cellular, and Tower Equipment Installers and Repairers	\$92,050	\$61,310
492022 - Telecommunications Equipment Installers and Repairers, Except Line Installers (Can include Fiber Optic Technicians/Broadband Technicians, Premises Installation Tech)	\$80,240	\$61,270
Premises Installation Tech	See 492022	See 492022
Underground Fiber Drop Technician	See 492022	See 492022
Aerial Drop Technician	See 492022	See 492022

Source: Bureau of Labor Statistics (BLS) raw data analyzed by Continuum..

Interpretive Note: Technician positions are not broken out in BLS data. Data collected during the research and survey process covered a subset of states and is not presented separately in these materials. n/c = not calculated, incomplete, or unanalyzed data set;

DE - Special Broadband Financing Programs Available

Program*	In progress or anticipated spending	
BEAD	\$134,685,481***	
Digital Equity	\$516,096	
Middle Mile	\$0	
Tribal (Round 1 & 2)	\$0 & \$0 (Estimated)	
Broadband Infrastructure	\$0	
Capital Project Fund	\$0	
RDOF	\$13,302,048	
CAF II	\$1,336,400	
RUS (2019-2023)	\$0	
Other (Estimated)	\$50,000,000	
Total (Estimated)	Total = \$200 Million	Annual = \$25 Million

- ▶ Delaware Construction Workforce Special Funding Need (Estimated)**
 - 100 field trades (helper, laborer, lineman, field crew splicer, operator, foreman, etc.)
 - Plus project management, design, locator, owner representative, inspection, etc.
- ▶ Delaware Technician Workforce Special Funding Need (Estimated)**
 - 90 technicians (tower, troubleshooter, testing, premises, underground / overhead drop, etc.)

Source: Continuum analysis and presentation of public data from multiple sources.

Interpretive Note: * Not all special programs and state sponsored programs are listed. In addition, normal and routine spending on Broadband infrastructure is also not described in full detail.

Interpretive Note: ** Forecasted labor need does not incorporate retirements, attrition, or additional workforce needed for ongoing and routine, broadband construction activity.

Interpretive Note: ***. BEAD legislative funding amount grossed up by 25% to account for anticipated matching amounts.

DE – Broadband Workforce Size & Need

Construction & Technician Position	Workforce Estimate	2025-2032 Need	10 Yr Ret. & Attr. Need
Superintendent/General Foreman	20	6	0
Foreman	40	12	20
Lineman	100	30	40
Apprentice*	100	30	40
Field Crew Fiber Splicer	10	3	0
Groundman / Helper / Laborer	50	15	20
Operator / HDD Operator	20	6	0
Construction Field Total	340	102	120
Tower Equipment Installers and Repairers	50	10	10
Telecom Technician (Non-Specific)**	40	10	20
Telecom System Troubleshooter**	20	0	20
Telecom System Testing**	20	0	20
Premises Installation Tech**	200	40	40
Underground Fiber Drop Technician**	40	10	20
Aerial Drop Technician**	90	20	20
Technician Total	460	90	150

Source: Continuum led 2024 national and proprietary study of broadband industry workforce size and need on the behalf of PCCA and FBA.
 Interpretive Note: * Apprentice position captures entry level, lower experience, and lower skill field trades performing lineman, splicer, helper, and operator functions.
 Interpretive Note: ** Interior and other fiber splicing skills and need are incorporated into technician positions.

2024 Broadband Industry Wages - South vs. Delaware

Position	South Low End	South Median	South High End	DE Survey Median*	DE BLS Median	National Median
119021 – Construction Manager (Project Manager)	\$58,000	\$81,003	\$158,660	\$93,600*	\$131,750	\$104,900
131051 – Estimator	\$50,120	\$80,462	\$144,880	nc	\$67,930	\$74,740
151141.1 – Contract Administrator	\$50,000	\$69,000	nc	nc	nc	nc
172051.2 – Engineer Cost & Schedule	\$35,000	\$56,000	\$78,000	\$52,000*	nc	nc
299011 – Safety Specialist / Representative	\$58,000	\$81,120	\$159,994	\$67,600*	\$88,540	\$81,140
471011 – Supervisor (Superintendent, Foreman)	\$50,732	\$73,670	\$126,200	\$109,060	\$80,550	\$76,760
472061 – Laborer	\$29,000	\$36,000	\$76,400	\$56,000*	\$46,190	\$45,300
472073 – Operator Light & Heavy Equipment	\$42,760	\$50,200	\$75,845	\$72,120*	\$50,640	\$56,160
472111 – Electrician / Fiber Splicer	\$71,282	\$74,310	\$113,206	nc	\$60,990	\$61,590
474010 – Inspector / Quality Assurance / Quality Control	nc	nc	nc	nc	\$63,530	\$67,700
475031 – Operator HDD	\$36,000	\$54,200	\$115,260	nc	\$54,690	\$56,660
493042 – Operator Mechanic	\$36,000	\$60,000	\$98,000	\$62,000	\$60,270	\$61,900
499051 & 499052 – Lineman Electrical & Telecom	\$42,764	\$74,310	\$113,206	\$120,200*	nc	\$64,640
514121 – Welder	\$48,000	\$52,000	\$91,000	\$50,250*	\$54,660	\$48,940
533032 – Operator CDL Truck Driver only	\$36,000	\$49,800	\$95,000	\$49,000*	\$54,900	\$54,320

Source: Continuum led 2024 national and proprietary study of broadband industry wages on the behalf of PCCA and FBA.

Interpretive Note: Data does not include overtime (typically 15-30% of annual wage for most positions and as high as 60-100% for critical positions) or monetary/non-monetary benefits; n/c = not calculated, incomplete, or unanalyzed data set

*=Delaware region including DE, MD, NJ, NY, and PA.

2024 Broadband Industry Wages - National vs. Delaware

Position	DE BLS Median	National Median
Telecom/Broadband System Design	\$105,810	\$106,950
Telecom Technician	\$54,720	\$61,290
Telecom System Troubleshooter	See Telecom Tech	See Telecom Tech
Telecom System Testing	See Telecom Tech	See Telecom Tech
492021 - Radio, Cellular, and Tower Equipment Installers and Repairers	\$47,840	\$61,310
492022 - Telecommunications Equipment Installers and Repairers, Except Line Installers (Can include Fiber Optic Technicians/Broadband Technicians, Premises Installation Tech)	\$61,600	\$61,270
Premises Installation Tech	See 492022	See 492022
Underground Fiber Drop Technician	See 492022	See 492022
Aerial Drop Technician	See 492022	See 492022

Source: Bureau of Labor Statistics (BLS) raw data analyzed by Continuum..

Interpretive Note: Technician positions are not broken out in BLS data. Data collected during the research and survey process covered a subset of states and is not presented separately in these materials. n/c = not calculated, incomplete, or unanalyzed data set;

FL - Special Broadband Financing Programs Available

Program*	In progress or anticipated spending	
BEAD	\$1,462,434,241***	
Digital Equity	\$2,407,220	
Middle Mile	\$5,738,951	
Tribal (Round 1 & 2)	\$499,920 and \$262,448 (Estimated)	
Broadband Infrastructure	\$0	
Capital Project Fund	\$247,800,000	
RDOF	\$191,753,610	
CAF II	\$5,032,841	
RUS (2019-2023)	\$42,044,087	
Other (Estimated)	\$1,500,000,000	
Total (Estimated)	Total = \$3.4 Billion	Annual = \$475 Million

- ▶ Florida Construction Workforce Special Funding Need (Estimated)**
 - 1,200 field trades (helper, laborer, lineman, field crew splicer, operator, foreman, etc.)
 - Plus project management, design, locator, owner representative, inspection, etc.
- ▶ Florida Technician Workforce Special Funding Need (Estimated)**
 - 1,200 technicians (tower, troubleshooter, testing, premises, underground / overhead drop, etc.)

Source: Continuum analysis and presentation of public data from multiple sources.

Interpretive Note: * Not all special programs and state sponsored programs are listed. In addition, normal and routine spending on Broadband infrastructure is also not described in full detail.

Interpretive Note: ** Forecasted labor need does not incorporate retirements, attrition, or additional workforce needed for ongoing and routine, broadband construction activity.

Interpretive Note: ***. BEAD legislative funding amount grossed up by 25% to account for anticipated matching amounts.

FL – Broadband Workforce Size & Need

Construction & Technician Position	Workforce Estimate	2025-2032 Need	10 Yr Ret. & Attr. Need
Superintendent/General Foreman	700	72	180
Foreman	1,500	144	400
Lineman	3,700	360	1,000
Apprentice*	3,700	360	1,000
Field Crew Fiber Splicer	400	36	110
Groundman / Helper / Laborer	1,900	180	500
Operator / HDD Operator	700	72	180
Construction Field Total	12,600	1,224	3,370
Tower Equipment Installers and Repairers	800	70	300
Telecom Technician (Non-Specific)**	1,200	110	400
Telecom System Troubleshooter**	600	60	700
Telecom System Testing**	600	60	700
Premises Installation Tech**	6,000	560	1,260
Underground Fiber Drop Technician**	1,200	110	500
Aerial Drop Technician**	2,400	230	600
Technician Total	12,800	1,200	4,460

Source: Continuum led 2024 national and proprietary study of broadband industry workforce size and need on the behalf of PCCA and FBA.
 Interpretive Note: * Apprentice position captures entry level, lower experience, and lower skill field trades performing lineman, splicer, helper, and operator functions.
 Interpretive Note: ** Interior and other fiber splicing skills and need are incorporated into technician positions.

2024 Broadband Industry Wages - South vs. Florida

Position	South Low End	South Median	South High End	FL Survey Median	FL BLS Median	National Median
119021 – Construction Manager (Project Manager)	\$58,000	\$81,003	\$158,660	\$101, 691	\$102,940	\$104,900
131051 – Estimator	\$50,120	\$80,462	\$144,880	\$99,276	\$65,830	\$74,740
151141.1 – Contract Administrator	\$50,000	\$69,000	nc	\$50,000	nc	nc
172051.2 – Engineer Cost & Schedule	\$35,000	\$56,000	\$78,000	\$60,000	nc	nc
299011 – Safety Specialist / Representative	\$58,000	\$81,120	\$159,994	\$93,808	\$66,510	\$81,140
471011 – Supervisor (Superintendent, Foreman)	\$50,732	\$73,670	\$126,200	\$91,533	\$64,440	\$76,760
472061 – Laborer	\$29,000	\$36,000	\$76,400	\$38,000	\$38,230	\$45,300
472073 – Operator Light & Heavy Equipment	\$42,760	\$50,200	\$75,845	\$55,749	\$47,260	\$56,160
472111 – Electrician / Fiber Splicer	\$71,282	\$74,310	\$113,206	\$83,210	\$50,120	\$61,590
474010 – Inspector / Quality Assurance / Quality Control	nc	nc	nc	nc	\$61,730	\$67,700
475031 – Operator HDD	\$36,000	\$54,200	\$115,260	nc	\$49,050	\$56,660
493042 – Operator Mechanic	\$36,000	\$60,000	\$98,000	\$66,000	\$61,210	\$61,900
499051 & 499052 – Lineman Electrical & Telecom	\$42,764	\$74,310	\$113,206	\$74,887	\$50,340	\$64,640
514121 – Welder	\$48,000	\$52,000	\$91,000	\$70,000	\$47,680	\$48,940
533032 – Operator CDL Truck Driver only	\$36,000	\$49,800	\$95,000	\$42,000	\$49,030	\$54,320

Source: Continuum led 2024 national and proprietary study of broadband industry wages on the behalf of PCCA and FBA.

Interpretive Note: Data does not include overtime (typically 15-30% of annual wage for most positions and as high as 60-100% for critical positions) or monetary/non-monetary benefits; n/c = not calculated, incomplete, or unanalyzed data set

2024 Broadband Industry Wages - National vs. Florida

Position	FL BLS Median	National Median
Telecom/Broadband System Design	\$100,200	\$106,950
Telecom Technician	\$60,520	\$61,290
Telecom System Troubleshooter	See Telecom Tech	See Telecom Tech
Telecom System Testing	See Telecom Tech	See Telecom Tech
492021 - Radio, Cellular, and Tower Equipment Installers and Repairers	\$61,310	\$61,310
492022 - Telecommunications Equipment Installers and Repairers, Except Line Installers (Can include Fiber Optic Technicians/Broadband Technicians, Premises Installation Tech)	\$59,730	\$61,270
Premises Installation Tech	See 492022	See 492022
Underground Fiber Drop Technician	See 492022	See 492022
Aerial Drop Technician	See 492022	See 492022

Source: Bureau of Labor Statistics (BLS) raw data analyzed by Continuum..

Interpretive Note: Technician positions are not broken out in BLS data. Data collected during the research and survey process covered a subset of states and is not presented separately in these materials. n/c = not calculated, incomplete, or unanalyzed data set;

GA - Special Broadband Financing Programs Available

Program*	In progress or anticipated spending	
BEAD	\$1,634,017,964***	
Digital Equity	\$1,429,210	
Middle Mile	\$51,801,204	
Tribal (Round 1 & 2)	\$0 & \$0 (Estimated)	
Broadband Infrastructure	\$5,172,043	
Capital Project Fund	\$246,100,000	
RDOF	\$326,454,112	
CAF II	\$6,264,362	
RUS (2019-2023)	\$93,859,727	
Other (Estimated)	\$1,400,000,000	
Total (Estimated)	Total = \$3.8 Billion	Annual = \$550 Million

- ▶ Georgia Construction Workforce Special Funding Need (Estimated)**
 - 1,200 field trades (helper, laborer, lineman, field crew splicer, operator, foreman, etc.)
 - Plus project management, design, locator, owner representative, inspection, etc.
- ▶ Georgia Technician Workforce Special Funding Need (Estimated)**
 - 2,300 technicians (tower, troubleshooter, testing, premises, underground / overhead drop, etc.)

Source: Continuum analysis and presentation of public data from multiple sources.

Interpretive Note: * Not all special programs and state sponsored programs are listed. In addition, normal and routine spending on Broadband infrastructure is also not described in full detail.

Interpretive Note: ** Forecasted labor need does not incorporate retirements, attrition, or additional workforce needed for ongoing and routine, broadband construction activity.

Interpretive Note: ***. BEAD legislative funding amount grossed up by 25% to account for anticipated matching amounts.

GA – Broadband Workforce Size & Need

Construction & Technician Position	Workforce Estimate	2025-2032 Need	10 Yr Ret. & Attr. Need
Superintendent/General Foreman	300	72	100
Foreman	600	144	190
Lineman	1,400	360	400
Apprentice*	1,400	360	400
Field Crew Fiber Splicer	100	36	40
Groundman / Helper / Laborer	700	180	200
Operator / HDD Operator	300	72	100
Construction Field Total	4,800	1,224	1,430
Tower Equipment Installers and Repairers	300	70	110
Telecom Technician (Non-Specific)**	900	220	290
Telecom System Troubleshooter**	400	110	280
Telecom System Testing**	400	110	280
Premises Installation Tech**	4,300	1120	920
Underground Fiber Drop Technician**	900	220	300
Aerial Drop Technician**	1,700	450	350
Technician Total	8,900	2,300	2,530

Source: Continuum led 2024 national and proprietary study of broadband industry workforce size and need on the behalf of PCCA and FBA.
 Interpretive Note: * Apprentice position captures entry level, lower experience, and lower skill field trades performing lineman, splicer, helper, and operator functions.
 Interpretive Note: ** Interior and other fiber splicing skills and need are incorporated into technician positions.

2024 Broadband Industry Wages - South vs. Georgia

Position	South Low End	South Median	South High End	GA Survey Median*	GA BLS Median	National Median
119021 – Construction Manager (Project Manager)	\$58,000	\$81,003	\$158,660	\$82,102*	\$99,540	\$104,900
131051 – Estimator	\$50,120	\$80,462	\$144,880	\$99,276*	\$67,600	\$74,740
151141.1 – Contract Administrator	\$50,000	\$69,000	nc	\$50,000*	nc	nc
172051.2 – Engineer Cost & Schedule	\$35,000	\$56,000	\$78,000	\$60,000*	nc	nc
299011 – Safety Specialist / Representative	\$58,000	\$81,120	\$159,994	\$93,600*	\$82,220	\$81,140
471011 – Supervisor (Superintendent, Foreman)	\$50,732	\$73,670	\$126,200	\$81,743*	\$72,300	\$76,760
472061 – Laborer	\$29,000	\$36,000	\$76,400	\$36,000*	\$37,530	\$45,300
472073 – Operator Light & Heavy Equipment	\$42,760	\$50,200	\$75,845	\$49,786*	\$44,870	\$56,160
472111 – Electrician / Fiber Splicer	\$71,282	\$74,310	\$113,206	\$74,310*	\$55,300	\$61,590
474010 – Inspector / Quality Assurance / Quality Control	nc	nc	nc	nc	\$61,980	\$67,700
475031 – Operator HDD	\$36,000	\$54,200	\$115,260	\$49,630*	\$47,760	\$56,660
493042 – Operator Mechanic	\$36,000	\$60,000	\$98,000	\$64,000*	\$59,440	\$61,900
499051 & 499052 – Lineman Electrical & Telecom	\$42,764	\$74,310	\$113,206	\$74,310*	\$48,990	\$64,640
514121 – Welder	\$48,000	\$52,000	\$91,000	\$70,000*	\$45,930	\$48,940
533032 – Operator CDL Truck Driver only	\$36,000	\$49,800	\$95,000	\$42,000*	\$53,850	\$54,320

Source: Continuum led 2024 national and proprietary study of broadband industry wages on the behalf of PCCA and FBA.

Interpretive Note: Data does not include overtime (typically 15-30% of annual wage for most positions and as high as 60-100% for critical positions) or monetary/non-monetary benefits; n/c = not calculated, incomplete, or unanalyzed data set.

*= Georgia region including AL, FL, GA, NC, SC, and TN.

2024 Broadband Industry Wages - National vs. Georgia

Position	GA BLS Median	National Median
Telecom/Broadband System Design	\$103,460	\$106,950
Telecom Technician	\$62,900	\$61,290
Telecom System Troubleshooter	See Telecom Tech	See Telecom Tech
Telecom System Testing	See Telecom Tech	See Telecom Tech
492021 - Radio, Cellular, and Tower Equipment Installers and Repairers	\$65,830	\$61,310
492022 - Telecommunications Equipment Installers and Repairers, Except Line Installers (Can include Fiber Optic Technicians/Broadband Technicians, Premises Installation Tech)	\$59,970	\$61,270
Premises Installation Tech	See 492022	See 492022
Underground Fiber Drop Technician	See 492022	See 492022
Aerial Drop Technician	See 492022	See 492022

Source: Bureau of Labor Statistics (BLS) raw data analyzed by Continuum..

Interpretive Note: Technician positions are not broken out in BLS data. Data collected during the research and survey process covered a subset of states and is not presented separately in these materials. n/c = not calculated, incomplete, or unanalyzed data set;

HI - Special Broadband Financing Programs Available

Program*	In progress or anticipated spending	
BEAD	\$186,855,617***	
Digital Equity	\$570,883	
Middle Mile	\$87,466,529	
Tribal (Round 1 & 2)	\$17,284,763 & \$9,074,165 (Estimated)	
Broadband Infrastructure	\$0	
Capital Project Fund	\$109,700,000	
RDOF	\$24,740,782	
CAF II	\$18,160,638	
RUS (2019-2023)	\$0	
Other (Estimated)	\$150,000,000	
Total (Estimated)	Total = \$0.6 Billion	Annual = \$90 Million

- ▶ Hawaii Construction Workforce Special Funding Need (Estimated)**
 - 200 field trades (helper, laborer, lineman, field crew splicer, operator, foreman, etc.)
 - Plus project management, design, locator, owner representative, inspection, etc.
- ▶ Hawaii Technician Workforce Special Funding Need (Estimated)**
 - 200 technicians (tower, troubleshooter, testing, premises, underground / overhead drop, etc.)

Source: Continuum analysis and presentation of public data from multiple sources.

Interpretive Note: * Not all special programs and state sponsored programs are listed. In addition, normal and routine spending on Broadband infrastructure is also not described in full detail.

Interpretive Note: ** Forecasted labor need does not incorporate retirements, attrition, or additional workforce needed for ongoing and routine, broadband construction activity.

Interpretive Note: ***. BEAD legislative funding amount grossed up by 25% to account for anticipated matching amounts.

HI – Broadband Workforce Size & Need

Construction & Technician Position	Workforce Estimate	2025-2032 Need	10 Yr Ret. & Attr. Need
Superintendent/General Foreman	40	12	20
Foreman	80	24	20
Lineman	200	60	60
Apprentice*	200	60	60
Field Crew Fiber Splicer	20	6	0
Groundman / Helper / Laborer	100	30	40
Operator / HDD Operator	40	12	20
Construction Field Total	680	204	220
Tower Equipment Installers and Repairers	80	20	30
Telecom Technician (Non-Specific)**	70	20	20
Telecom System Troubleshooter**	40	10	40
Telecom System Testing**	40	10	40
Premises Installation Tech**	400	90	80
Underground Fiber Drop Technician**	70	20	30
Aerial Drop Technician**	100	40	30
Technician Total	800	210	270

Source: Continuum led 2024 national and proprietary study of broadband industry workforce size and need on the behalf of PCCA and FBA.
 Interpretive Note: * Apprentice position captures entry level, lower experience, and lower skill field trades performing lineman, splicer, helper, and operator functions.
 Interpretive Note: ** Interior and other fiber splicing skills and need are incorporated into technician positions.

2024 Broadband Industry Wages - West vs. Hawaii

Position	West Low End	West Median	West High End	HI Survey Median	HI BLS Median	National Median
119021 – Construction Manager (Project Manager)	\$58,000	\$100,680	\$158,660	nc	\$120,670	\$104,900
131051 – Estimator	\$54,240	\$91,560	\$196,560	nc	\$72,600	\$74,740
151141.1 – Contract Administrator	\$46,000	\$57,000	\$86,100	nc	nc	nc
172051.2 – Engineer Cost & Schedule	nc	\$67,700	\$89,540	nc	nc	nc
299011 – Safety Specialist / Representative	\$58,000	\$76,502	\$159,994	nc	\$85,610	\$81,140
471011 – Supervisor (Superintendent, Foreman)	\$50,000	\$66,000	\$126,200	nc	\$100,890	\$76,760
472061 – Laborer	\$29,000	\$45,000	\$80,000	nc	\$62,170	\$45,300
472073 – Operator Light & Heavy Equipment	\$40,000	\$56,000	\$90,000	nc	\$91,100	\$56,160
472111 – Electrician / Fiber Splicer	\$40,000	\$56,000	\$82,000	nc	\$92,750	\$61,590
474010 – Inspector / Quality Assurance / Quality Control	\$53,000	\$65,500	\$66,170	nc	\$69,970	\$67,700
475031 – Operator HDD	\$41,500	\$56,000	\$80,100	nc	\$93,610	\$56,660
493042 – Operator Mechanic	\$36,000	\$62,000	\$98,000	nc	\$79,390	\$61,900
499051 & 499052 – Lineman Electrical & Telecom	\$47,260	\$54,000	\$60,000	nc	\$86,580	\$64,640
514121 – Welder	\$48,000	\$52,000	\$91,000	nc	\$76,540	\$48,940
533032 – Operator CDL Truck Driver only	\$36,000	\$52,000	\$95,000	nc	\$57,210	\$54,320

Source: Continuum led 2024 national and proprietary study of broadband industry wages on the behalf of PCCA and FBA.

Interpretive Note: Data does not include overtime (typically 15-30% of annual wage for most positions and as high as 60-100% for critical positions) or monetary/non-monetary benefits; n/c = not calculated, incomplete, or unanalyzed data set;

2024 Broadband Industry Wages - West vs. Hawaii

Position	HI BLS Median	National Median
Telecom/Broadband System Design	\$110,490	\$106,950
Telecom Technician	\$67,675	\$61,290
Telecom System Troubleshooter	See Telecom Tech	See Telecom Tech
Telecom System Testing	See Telecom Tech	See Telecom Tech
492021 - Radio, Cellular, and Tower Equipment Installers and Repairers	\$54,900	\$61,310
492022 - Telecommunications Equipment Installers and Repairers, Except Line Installers (Can include Fiber Optic Technicians/Broadband Technicians, Premises Installation Tech)	\$80,450	\$61,270
Premises Installation Tech	See 492022	See 492022
Underground Fiber Drop Technician	See 492022	See 492022
Aerial Drop Technician	See 492022	See 492022

Source: Bureau of Labor Statistics (BLS) raw data analyzed by Continuum..

Interpretive Note: Technician positions are not broken out in BLS data. Data collected during the research and survey process covered a subset of states and is not presented separately in these materials. n/c = not calculated, incomplete, or unanalyzed data set;

ID - Special Broadband Financing Programs Available

Program*	In progress or anticipated spending	
BEAD	\$729,070,312***	
Digital Equity	\$564,706	
Middle Mile	\$10,744,863	
Tribal (Round 1 & 2)	\$22,985,261 & \$12,066,815 (Estimated)	
Broadband Infrastructure	\$0	
Capital Project Fund	\$120,000,000	
RDOF	\$112,489,828	
CAF II	\$14,320,176	
RUS (2019-2023)	\$79,719,560	
Other (Estimated)	\$400,000,000	
Total (Estimated)	Total = \$1.5 Billion	Annual = \$200 Million

- ▶ Idaho Construction Workforce Special Funding Need (Estimated)**
 - 500 field trades (helper, laborer, lineman, field crew splicer, operator, foreman, etc.)
 - Plus project management, design, locator, owner representative, inspection, etc.
- ▶ Idaho Technician Workforce Special Funding Need (Estimated)**
 - 900 technicians (tower, troubleshooter, testing, premises, underground / overhead drop, etc.)

Source: Continuum analysis and presentation of public data from multiple sources.

Interpretive Note: * Not all special programs and state sponsored programs are listed. In addition, normal and routine spending on Broadband infrastructure is also not described in full detail.

Interpretive Note: ** Forecasted labor need does not incorporate retirements, attrition, or additional workforce needed for ongoing and routine, broadband construction activity.

Interpretive Note: ***. BEAD legislative funding amount grossed up by 25% to account for anticipated matching amounts.

ID – Broadband Workforce Size & Need

Construction & Technician Position	Workforce Estimate	2025-2032 Need	10 Yr Ret. & Attr. Need
Superintendent/General Foreman	40	30	20
Foreman	70	60	20
Lineman	200	150	60
Apprentice*	200	150	60
Field Crew Fiber Splicer	20	15	0
Groundman / Helper / Laborer	90	75	30
Operator / HDD Operator	40	30	20
Construction Field Total	660	510	210
Tower Equipment Installers and Repairers	80	60	30
Telecom Technician (Non-Specific)**	100	80	30
Telecom System Troubleshooter**	60	40	40
Telecom System Testing**	60	40	40
Premises Installation Tech**	600	420	100
Underground Fiber Drop Technician**	100	80	30
Aerial Drop Technician**	200	170	50
Technician Total	1,200	890	320

Source: Continuum led 2024 national and proprietary study of broadband industry workforce size and need on the behalf of PCCA and FBA.
 Interpretive Note: * Apprentice position captures entry level, lower experience, and lower skill field trades performing lineman, splicer, helper, and operator functions.
 Interpretive Note: ** Interior and other fiber splicing skills and need are incorporated into technician positions.

2024 Broadband Industry Wages - West vs. Idaho

Position	West Low End	West Median	West High End	ID Survey Median*	ID BLS Median	National Median
119021 – Construction Manager (Project Manager)	\$58,000	\$100,680	\$158,660	\$107,100*	\$84,860	\$104,900
131051 – Estimator	\$54,240	\$91,560	\$196,560	\$75,005*	\$70,660	\$74,740
151141.1 – Contract Administrator	\$46,000	\$57,000	\$86,100	\$57,000*	nc	nc
172051.2 – Engineer Cost & Schedule	nc	\$67,700	\$89,540	\$84,000*	nc	nc
299011 – Safety Specialist / Representative	\$58,000	\$76,502	\$159,994	\$80,000*	\$77,870	\$81,140
471011 – Supervisor (Superintendent, Foreman)	\$50,000	\$66,000	\$126,200	\$70,000*	\$66,410	\$76,760
472061 – Laborer	\$29,000	\$45,000	\$80,000	\$46,000*	\$40,620	\$45,300
472073 – Operator Light & Heavy Equipment	\$40,000	\$56,000	\$90,000	\$58,040*	\$55,600	\$56,160
472111 – Electrician / Fiber Splicer	\$40,000	\$56,000	\$82,000	\$54,000*	\$49,310	\$61,590
474010 – Inspector / Quality Assurance / Quality Control	\$53,000	\$65,500	\$66,170	\$65,500*	\$63,990	\$67,700
475031 – Operator HDD	\$41,500	\$56,000	\$80,100	\$54,000*	\$49,830	\$56,660
493042 – Operator Mechanic	\$36,000	\$62,000	\$98,000	\$64,260*	\$61,350	\$61,900
499051 & 499052 – Lineman Electrical & Telecom	\$47,260	\$54,000	\$60,000	nc	\$46,260	\$64,640
514121 – Welder	\$48,000	\$52,000	\$91,000	\$51,000*	\$46,340	\$48,940
533032 – Operator CDL Truck Driver only	\$36,000	\$52,000	\$95,000	\$52,000*	\$50,750	\$54,320

Source: Continuum led 2024 national and proprietary study of broadband industry wages on the behalf of PCCA and FBA.

Interpretive Note: Data does not include overtime (typically 15-30% of annual wage for most positions and as high as 60-100% for critical positions) or monetary/non-monetary benefits; n/c = not calculated, incomplete, or unanalyzed data set;

*= Idaho region including ID, MT, NV, OR, UT, and WY.

2024 Broadband Industry Wages - National vs. Idaho

Position	ID BLS Median	National Median
Telecom/Broadband System Design	\$119,140	\$106,950
Telecom Technician	\$65,020	\$61,290
Telecom System Troubleshooter	See Telecom Tech	See Telecom Tech
Telecom System Testing	See Telecom Tech	See Telecom Tech
492021 - Radio, Cellular, and Tower Equipment Installers and Repairers	\$70,430	\$61,310
492022 - Telecommunications Equipment Installers and Repairers, Except Line Installers (Can include Fiber Optic Technicians/Broadband Technicians, Premises Installation Tech)	\$59,610	\$61,270
Premises Installation Tech	See 492022	See 492022
Underground Fiber Drop Technician	See 492022	See 492022
Aerial Drop Technician	See 492022	See 492022

Source: Bureau of Labor Statistics (BLS) raw data analyzed by Continuum..

Interpretive Note: Technician positions are not broken out in BLS data. Data collected during the research and survey process covered a subset of states and is not presented separately in these materials. n/c = not calculated, incomplete, or unanalyzed data set;

IL - Special Broadband Financing Programs Available

Program*	In progress or anticipated spending	
BEAD	\$1,300,525,939***	
Digital Equity	\$1,515,350	
Middle Mile	\$83,752,765	
Tribal (Round 1 & 2)	\$0 & \$0 (Estimated)	
Broadband Infrastructure	\$0	
Capital Project Fund	\$241,000,000	
RDOF	\$378,310,111	
CAF II	\$99,602,495	
RUS (2019-2023)	\$212,374,959	
Other (Estimated)	\$800,000,000	
Total (Estimated)	Total = \$3.1 Billion	Annual = \$425 Million

- ▶ Illinois Construction Workforce Special Funding Need (Estimated)**
 - 1000 field trades (helper, laborer, lineman, field crew splicer, operator, foreman, etc.)
 - Plus project management, design, locator, owner representative, inspection, etc.
- ▶ Illinois Technician Workforce Special Funding Need (Estimated)**
 - 1,400 technicians (tower, troubleshooter, testing, premises, underground / overhead drop, etc.)

Source: Continuum analysis and presentation of public data from multiple sources.

Interpretive Note: * Not all special programs and state sponsored programs are listed. In addition, normal and routine spending on Broadband infrastructure is also not described in full detail.

Interpretive Note: ** Forecasted labor need does not incorporate retirements, attrition, or additional workforce needed for ongoing and routine, broadband construction activity.

Interpretive Note: ***. BEAD legislative funding amount grossed up by 25% to account for anticipated matching amounts.

IL – Broadband Workforce Size & Need

Construction & Technician Position	Workforce Estimate	2025-2032 Need	10 Yr Ret. & Attr. Need
Superintendent/General Foreman	300	60	100
Foreman	600	120	190
Lineman	1,400	300	400
Apprentice*	1,400	300	400
Field Crew Fiber Splicer	100	30	40
Groundman / Helper / Laborer	700	150	200
Operator / HDD Operator	300	60	100
Construction Field Total	4,800	1,020	1,430
Tower Equipment Installers and Repairers	500	100	150
Telecom Technician (Non-Specific)**	600	130	190
Telecom System Troubleshooter**	300	60	260
Telecom System Testing**	300	60	260
Premises Installation Tech**	3,100	650	620
Underground Fiber Drop Technician**	600	130	200
Aerial Drop Technician**	1,300	260	350
Technician Total	6,700	1,390	2,030

Source: Continuum led 2024 national and proprietary study of broadband industry workforce size and need on the behalf of PCCA and FBA.
 Interpretive Note: * Apprentice position captures entry level, lower experience, and lower skill field trades performing lineman, splicer, helper, and operator functions.
 Interpretive Note: ** Interior and other fiber splicing skills and need are incorporated into technician positions.

2024 Broadband Industry Wages - Midwest vs. Illinois

Position	Midwest Low End	Midwest Median	Midwest High End	IL Survey Median*	IL BLS Median	National Median
119021 – Construction Manager (Project Manager)	\$50,000	\$84,000	\$158,660	\$75,397*	\$108,140	\$104,900
131051 – Estimator	\$54,120	\$70,102	\$104,000	\$103,862*	\$79,430	\$74,740
151141.1 – Contract Administrator	\$52,500	\$72,068	\$91,097	\$50,000*	nc	nc
172051.2 – Engineer Cost & Schedule	\$38,000	\$57,260	\$89,540	\$59,520*	nc	nc
299011 – Safety Specialist / Representative	\$98,780	\$101,380	\$103,980	\$81,120*	nc	\$81,140
471011 – Supervisor (Superintendent, Foreman)	\$61,600	\$76,190	\$123,077	\$76,190*	\$96,890	\$76,760
472061 – Laborer	\$33,600	\$48,000	\$73,600	\$45,000*	\$61,350	\$45,300
472073 – Operator Light & Heavy Equipment	\$47,757	\$65,052	\$75,845	\$64,000*	\$89,720	\$56,160
472111 – Electrician / Fiber Splicer	\$48,000	\$63,000	\$83,200	\$74,520*	\$95,090	\$61,590
474010 – Inspector / Quality Assurance/Quality Control	\$50,400	\$66,000	\$96,000	\$52,000*	\$72,990	\$67,700
475031 – Operator HDD	\$36,000	\$58,000	\$115,260	\$54,000*	\$71,570	\$56,660
493042 – Operator Mechanic	nc	\$53,750	nc	\$53,000*	\$61,750	\$61,900
499051 & 499052 – Lineman Electrical & Telecom	\$46,200	\$94,420	\$101,883	\$94,420*	\$74,480	\$64,640
514121 – Welder	nc	\$49,000	nc	\$56,000*	\$47,080	\$48,940
533032 – Operator CDL Truck Driver only	\$52,000	\$54,500	\$76,800	\$55,500*	\$58,450	\$54,320

Source: Continuum led 2024 national and proprietary study of broadband industry wages on the behalf of PCCA and FBA.

Interpretive Note: Data does not include overtime (typically 15-30% of annual wage for most positions and as high as 60-100% for critical positions) or monetary/non-monetary benefits; n/c = not calculated, incomplete, or unanalyzed data set;

*= Illinois region including IA, IL, IN, KY, MO, and WI

2024 Broadband Industry Wages - National vs. Illinois

Position	IL BLS Median	National Median
Telecom/Broadband System Design	\$104,120	\$106,950
Telecom Technician	\$62,755	\$61,290
Telecom System Troubleshooter	See Telecom Tech	See Telecom Tech
Telecom System Testing	See Telecom Tech	See Telecom Tech
492021 - Radio, Cellular, and Tower Equipment Installers and Repairers	\$62,150	\$61,310
492022 - Telecommunications Equipment Installers and Repairers, Except Line Installers (Can include Fiber Optic Technicians/Broadband Technicians, Premises Installation Tech)	\$63,360	\$61,270
Premises Installation Tech	See 492022	See 492022
Underground Fiber Drop Technician	See 492022	See 492022
Aerial Drop Technician	See 492022	See 492022

Source: Bureau of Labor Statistics (BLS) raw data analyzed by Continuum..

Interpretive Note: Technician positions are not broken out in BLS data. Data collected during the research and survey process covered a subset of states and is not presented separately in these materials. n/c = not calculated, incomplete, or unanalyzed data set;

IN - Special Broadband Financing Programs Available

Program*	In progress or anticipated spending	
BEAD	\$1,085,137,412***	
Digital Equity	\$842,235	
Middle Mile	\$23,415,008	
Tribal (Round 1 & 2)	\$0 & \$0 (Estimated)	
Broadband Infrastructure	\$0	
Capital Project Fund	\$199,800,000	
RDOF	\$169,379,965	
CAF II	\$29,117,494	
RUS (2019-2023)	\$3,088,662	
Other (Estimated)	\$600,000,000	
Total (Estimated)	Total = \$2.1 Billion	Annual = \$300 Million

- ▶ Indiana Construction Workforce Special Funding Need (Estimated)**
 - 700 field trades (helper, laborer, lineman, field crew splicer, operator, foreman, etc.)
 - Plus project management, design, locator, owner representative, inspection, etc.
- ▶ Indiana Technician Workforce Special Funding Need (Estimated)**
 - 600 technicians (tower, troubleshooter, testing, premises, underground / overhead drop, etc.)

Source: Continuum analysis and presentation of public data from multiple sources.

Interpretive Note: * Not all special programs and state sponsored programs are listed. In addition, normal and routine spending on Broadband infrastructure is also not described in full detail.

Interpretive Note: ** Forecasted labor need does not incorporate retirements, attrition, or additional workforce needed for ongoing and routine, broadband construction activity.

Interpretive Note: ***. BEAD legislative funding amount grossed up by 25% to account for anticipated matching amounts.

IN – Broadband Workforce Size & Need

Construction & Technician Position	Workforce Estimate	2025-2032 Need	10 Yr Ret. & Attr. Need
Superintendent/General Foreman	200	42	60
Foreman	400	84	130
Lineman	900	210	300
Apprentice*	900	210	300
Field Crew Fiber Splicer	90	21	30
Groundman / Helper / Laborer	500	105	170
Operator / HDD Operator	200	42	60
Construction Field Total	3,190	714	1,050
Tower Equipment Installers and Repairers	300	60	90
Telecom Technician (Non-Specific)**	300	50	120
Telecom System Troubleshooter**	100	30	120
Telecom System Testing**	100	30	120
Premises Installation Tech**	1,300	270	310
Underground Fiber Drop Technician**	300	50	140
Aerial Drop Technician**	500	110	130
Technician Total	2,900	600	1,030

Source: Continuum led 2024 national and proprietary study of broadband industry workforce size and need on the behalf of PCCA and FBA.
 Interpretive Note: * Apprentice position captures entry level, lower experience, and lower skill field trades performing lineman, splicer, helper, and operator functions.
 Interpretive Note: ** Interior and other fiber splicing skills and need are incorporated into technician positions.

2024 Broadband Industry Wages - Midwest vs. Indiana

Position	Midwest Low End	Midwest Median	Midwest High End	IN Survey Median*	IN BLS Median	National Median
119021 – Construction Manager (Project Manager)	\$50,000	\$84,000	\$158,660	\$75,397*	\$98,840	\$104,900
131051 – Estimator	\$54,120	\$70,102	\$104,000	\$103,862*	\$68,230	\$74,740
151141.1 – Contract Administrator	\$52,500	\$72,068	\$91,097	\$50,000*	nc	nc
172051.2 – Engineer Cost & Schedule	\$38,000	\$57,260	\$89,540	\$59,520*	nc	nc
299011 – Safety Specialist / Representative	\$98,780	\$101,380	\$103,980	\$81,120*	\$77,850	\$81,140
471011 – Supervisor (Superintendent, Foreman)	\$61,600	\$76,190	\$123,077	\$76,190*	\$78,710	\$76,760
472061 – Laborer	\$33,600	\$48,000	\$73,600	\$45,000*	\$48,590	\$45,300
472073 – Operator Light & Heavy Equipment	\$47,757	\$65,052	\$75,845	\$64,000*	\$63,960	\$56,160
472111 – Electrician / Fiber Splicer	\$48,000	\$63,000	\$83,200	\$74,520*	\$68,070	\$61,590
474010 – Inspector / Quality Assurance/Quality Control	\$50,400	\$66,000	\$96,000	\$52,000*	\$60,130	\$67,700
475031 – Operator HDD	\$36,000	\$58,000	\$115,260	\$54,000*	\$54,480	\$56,660
493042 – Operator Mechanic	nc	\$53,750	nc	\$53,000*	\$62,390	\$61,900
499051 & 499052 – Lineman Electrical & Telecom	\$46,200	\$94,420	\$101,883	\$94,420*	\$60,980	\$64,640
514121 – Welder	nc	\$49,000	nc	\$56,000*	\$47,510	\$48,940
533032 – Operator CDL Truck Driver only	\$52,000	\$54,500	\$76,800	\$55,500*	\$57,480	\$54,320

Source: Continuum led 2024 national and proprietary study of broadband industry wages on the behalf of PCCA and FBA.

Interpretive Note: Data does not include overtime (typically 15-30% of annual wage for most positions and as high as 60-100% for critical positions) or monetary/non-monetary benefits; n/c = not calculated, incomplete, or unanalyzed data set;

*= Indiana region including IA, IL, IN, KY, MO, and WI

2024 Broadband Industry Wages - National vs. Indiana

Position	IN BLS Median	National Median
Telecom/Broadband System Design	\$98,270	\$106,950
Telecom Technician	\$54,680	\$61,290
Telecom System Troubleshooter	See Telecom Tech	See Telecom Tech
Telecom System Testing	See Telecom Tech	See Telecom Tech
492021 - Radio, Cellular, and Tower Equipment Installers and Repairers	\$50,550	\$61,310
492022 - Telecommunications Equipment Installers and Repairers, Except Line Installers (Can include Fiber Optic Technicians/Broadband Technicians, Premises Installation Tech)	\$58,810	\$61,270
Premises Installation Tech	See 492022	See 492022
Underground Fiber Drop Technician	See 492022	See 492022
Aerial Drop Technician	See 492022	See 492022

Source: Bureau of Labor Statistics (BLS) raw data analyzed by Continuum..

Interpretive Note: Technician positions are not broken out in BLS data. Data collected during the research and survey process covered a subset of states and is not presented separately in these materials. n/c = not calculated, incomplete, or unanalyzed data set;

IA - Special Broadband Financing Programs Available

Program*	In progress or anticipated spending	
BEAD	\$519,164,141***	
Digital Equity	\$708,924	
Middle Mile	\$142,456,473	
Tribal (Round 1 & 2)	\$424,652 & \$222,934 (Estimated)	
Broadband Infrastructure	\$0	
Capital Project Fund	\$149,000,000	
RDOF	\$143,892,544	
CAF II	\$54,287,717	
RUS (2019-2023)	\$104,135,173	
Other (Estimated)	\$400,000,000	
Total (Estimated)	Total = \$1.5 Billion	Annual = \$200 Million

- ▶ Iowa Construction Workforce Special Funding Need (Estimated)**
 - 500 field trades (helper, laborer, lineman, field crew splicer, operator, foreman, etc.)
 - Plus project management, design, locator, owner representative, inspection, etc.
- ▶ Iowa Technician Workforce Special Funding Need (Estimated)**
 - 600 technicians (tower, troubleshooter, testing, premises, underground / overhead drop, etc.)

Source: Continuum analysis and presentation of public data from multiple sources.

Interpretive Note: * Not all special programs and state sponsored programs are listed. In addition, normal and routine spending on Broadband infrastructure is also not described in full detail.

Interpretive Note: ** Forecasted labor need does not incorporate retirements, attrition, or additional workforce needed for ongoing and routine, broadband construction activity.

Interpretive Note: ***. BEAD legislative funding amount grossed up by 25% to account for anticipated matching amounts.

IA – Broadband Workforce Size & Need

Construction & Technician Position	Workforce Estimate	2025-2032 Need	10 Yr Ret. & Attr. Need
Superintendent/General Foreman	100	30	30
Foreman	200	60	60
Lineman	500	150	150
Apprentice*	500	150	150
Field Crew Fiber Splicer	50	15	20
Groundman / Helper / Laborer	300	75	90
Operator / HDD Operator	100	30	30
Construction Field Total	1,750	510	530
Tower Equipment Installers and Repairers	50	10	30
Telecom Technician (Non-Specific)**	200	60	70
Telecom System Troubleshooter**	100	30	100
Telecom System Testing**	100	30	100
Premises Installation Tech**	1,000	290	210
Underground Fiber Drop Technician**	200	60	90
Aerial Drop Technician**	400	120	100
Technician Total	2,050	600	700

Source: Continuum led 2024 national and proprietary study of broadband industry workforce size and need on the behalf of PCCA and FBA.
 Interpretive Note: * Apprentice position captures entry level, lower experience, and lower skill field trades performing lineman, splicer, helper, and operator functions.
 Interpretive Note: ** Interior and other fiber splicing skills and need are incorporated into technician positions.

2024 Broadband Industry Wages - Midwest vs. Iowa

Position	Midwest Low End	Midwest Median	Midwest High End	IA Survey Median	IA BLS Median	National Median
119021 – Construction Manager (Project Manager)	\$50,000	\$84,000	\$158,660	\$95,424	\$94,910	\$104,900
131051 – Estimator	\$54,120	\$70,102	\$104,000	nc	\$67,640	\$74,740
151141.1 – Contract Administrator	\$52,500	\$72,068	\$91,097	nc	nc	nc
172051.2 – Engineer Cost & Schedule	\$38,000	\$57,260	\$89,540	\$72,800	nc	nc
299011 – Safety Specialist / Representative	\$98,780	\$101,380	\$103,980	\$78,000	\$79,910	\$81,140
471011 – Supervisor (Superintendent, Foreman)	\$61,600	\$76,190	\$123,077	\$97,500	\$75,900	\$76,760
472061 – Laborer	\$33,600	\$48,000	\$73,600	\$48,500	\$46,640	\$45,300
472073 – Operator Light & Heavy Equipment	\$47,757	\$65,052	\$75,845	\$68,200	\$58,920	\$56,160
472111 – Electrician / Fiber Splicer	\$48,000	\$63,000	\$83,200	\$104,920	\$63,670	\$61,590
474010 – Inspector / Quality Assurance/Quality Control	\$50,400	\$66,000	\$96,000	\$50,500	\$68,890	\$67,700
475031 – Operator HDD	\$36,000	\$58,000	\$115,260	\$52,000	\$50,090	\$56,660
493042 – Operator Mechanic	nc	\$53,750	nc	nc	\$60,030	\$61,900
499051 & 499052 – Lineman Electrical & Telecom	\$46,200	\$94,420	\$101,883	\$94,420	\$57,320	\$64,640
514121 – Welder	nc	\$49,000	nc	nc	\$48,520	\$48,940
533032 – Operator CDL Truck Driver only	\$52,000	\$54,500	\$76,800	\$64,000	\$50,810	\$54,320

Source: Continuum led 2024 national and proprietary study of broadband industry wages on the behalf of PCCA and FBA.

Interpretive Note: Data does not include overtime (typically 15-30% of annual wage for most positions and as high as 60-100% for critical positions) or monetary/non-monetary benefits; n/c = not calculated, incomplete, or unanalyzed data set

2024 Broadband Industry Wages - National vs. Iowa

Position	IA BLS Median	National Median
Telecom/Broadband System Design	\$106,770	\$106,950
Telecom Technician	\$54,955	\$61,290
Telecom System Troubleshooter	See Telecom Tech	See Telecom Tech
Telecom System Testing	See Telecom Tech	See Telecom Tech
492021 - Radio, Cellular, and Tower Equipment Installers and Repairers	\$50,460	\$61,310
492022 - Telecommunications Equipment Installers and Repairers, Except Line Installers (Can include Fiber Optic Technicians/Broadband Technicians, Premises Installation Tech)	\$59,450	\$61,270
Premises Installation Tech	See 492022	See 492022
Underground Fiber Drop Technician	See 492022	See 492022
Aerial Drop Technician	See 492022	See 492022

Source: Bureau of Labor Statistics (BLS) raw data analyzed by Continuum..

Interpretive Note: Technician positions are not broken out in BLS data. Data collected during the research and survey process covered a subset of states and is not presented separately in these materials. n/c = not calculated, incomplete, or unanalyzed data set;

KS - Special Broadband Financing Programs Available

Program*	In progress or anticipated spending	
BEAD	\$564,657,498***	
Digital Equity	\$692,664	
Middle Mile	\$69,730,044	
Tribal (Round 1 & 2)	\$4,708,317 & \$2,471,775 (Estimated)	
Broadband Infrastructure	\$0	
Capital Project Fund	\$83,500,000	
RDOF	\$62,107,483	
CAF II	\$46,520,900	
RUS (2019-2023)	\$69,740,915	
Other (Estimated)	\$300,000,000	
Total (Estimated)	Total = \$1.2 Billion	Annual = \$175 Million

- ▶ Kansas Construction Workforce Special Funding Need (Estimated)**
 - 400 field trades (helper, laborer, lineman, field crew splicer, operator, foreman, etc.)
 - Plus project management, design, locator, owner representative, inspection, etc.
- ▶ Kansas Technician Workforce Special Funding Need (Estimated)**
 - 500 technicians (tower, troubleshooter, testing, premises, underground / overhead drop, etc.)

Source: Continuum analysis and presentation of public data from multiple sources.

Interpretive Note: * Not all special programs and state sponsored programs are listed. In addition, normal and routine spending on Broadband infrastructure is also not described in full detail.

Interpretive Note: ** Forecasted labor need does not incorporate retirements, attrition, or additional workforce needed for ongoing and routine, broadband construction activity.

Interpretive Note: ***. BEAD legislative funding amount grossed up by 25% to account for anticipated matching amounts.

KS – Broadband Workforce Size & Need

Construction & Technician Position	Workforce Estimate	2025-2032 Need	10 Yr Ret. & Attr. Need
Superintendent/General Foreman	80	24	20
Foreman	200	48	60
Lineman	400	120	130
Apprentice*	400	120	130
Field Crew Fiber Splicer	40	12	20
Groundman / Helper / Laborer	200	60	60
Operator / HDD Operator	80	24	20
Construction Field Total	1,400	408	440
Tower Equipment Installers and Repairers	100	40	30
Telecom Technician (Non-Specific)**	200	50	70
Telecom System Troubleshooter**	90	20	80
Telecom System Testing**	90	20	80
Premises Installation Tech**	900	230	210
Underground Fiber Drop Technician**	200	50	70
Aerial Drop Technician**	300	90	70
Technician Total	1,880	500	610

Source: Continuum led 2024 national and proprietary study of broadband industry workforce size and need on the behalf of PCCA and FBA.
 Interpretive Note: * Apprentice position captures entry level, lower experience, and lower skill field trades performing lineman, splicer, helper, and operator functions.
 Interpretive Note: ** Interior and other fiber splicing skills and need are incorporated into technician positions.

2024 Broadband Industry Wages - Midwest vs. Kansas

Position	Midwest Low End	Midwest Median	Midwest High End	KS Survey Median*	KS BLS Median	National Median
119021 – Construction Manager (Project Manager)	\$50,000	\$84,000	\$158,660	\$99,150*	\$102,980	\$104,900
131051 – Estimator	\$54,120	\$70,102	\$104,000	\$140,000*	\$72,700	\$74,740
151141.1 – Contract Administrator	\$52,500	\$72,068	\$91,097	nc	nc	nc
172051.2 – Engineer Cost & Schedule	\$38,000	\$57,260	\$89,540	\$38,000*	nc	nc
299011 – Safety Specialist / Representative	\$98,780	\$101,380	\$103,980	nc	\$69,540	\$81,140
471011 – Supervisor (Superintendent, Foreman)	\$61,600	\$76,190	\$123,077	\$86,169*	\$74,730	\$76,760
472061 – Laborer	\$33,600	\$48,000	\$73,600	\$42,000*	\$39,190	\$45,300
472073 – Operator Light & Heavy Equipment	\$47,757	\$65,052	\$75,845	\$57,250*	\$47,760	\$56,160
472111 – Electrician / Fiber Splicer	\$48,000	\$63,000	\$83,200	\$89,391*	\$59,880	\$61,590
474010 – Inspector / Quality Assurance/Quality Control	\$50,400	\$66,000	\$96,000	\$59,250*	\$61,550	\$67,700
475031 – Operator HDD	\$36,000	\$58,000	\$115,260	\$55,000*	\$46,490	\$56,660
493042 – Operator Mechanic	nc	\$53,750	nc	\$75,000*	\$60,570	\$61,900
499051 & 499052 – Lineman Electrical & Telecom	\$46,200	\$94,420	\$101,883	\$80,450*	\$71,420	\$64,640
514121 – Welder	nc	\$49,000	nc	nc	\$48,150	\$48,940
533032 – Operator CDL Truck Driver only	\$52,000	\$54,500	\$76,800	nc	\$53,250	\$54,320

Source: Continuum led 2024 national and proprietary study of broadband industry wages on the behalf of PCCA and FBA.

Interpretive Note: Data does not include overtime (typically 15-30% of annual wage for most positions and as high as 60-100% for critical positions) or monetary/non-monetary benefits; n/c = not calculated, incomplete, or unanalyzed data set;

*= Kansas region including CO, NE, OK, KS, and MO.

2024 Broadband Industry Wages - National vs. Kansas

Position	KS BLS Median	National Median
Telecom/Broadband System Design	\$93,700	\$106,950
Telecom Technician	\$58,795	\$61,290
Telecom System Troubleshooter	See Telecom Tech	See Telecom Tech
Telecom System Testing	See Telecom Tech	See Telecom Tech
492021 - Radio, Cellular, and Tower Equipment Installers and Repairers	\$61,320	\$61,310
492022 - Telecommunications Equipment Installers and Repairers, Except Line Installers (Can include Fiber Optic Technicians/Broadband Technicians, Premises Installation Tech)	\$56,270	\$61,270
Premises Installation Tech	See 492022	See 492022
Underground Fiber Drop Technician	See 492022	See 492022
Aerial Drop Technician	See 492022	See 492022

Source: Bureau of Labor Statistics (BLS) raw data analyzed by Continuum..

Interpretive Note: Technician positions are not broken out in BLS data. Data collected during the research and survey process covered a subset of states and is not presented separately in these materials. n/c = not calculated, incomplete, or unanalyzed data set;

KY - Special Broadband Financing Programs Available

Program*	In progress or anticipated spending	
BEAD	\$1,357,715,671***	
Digital Equity	\$874,236	
Middle Mile	\$0	
Tribal (Round 1 & 2)	\$0 & \$0 (Estimated)	
Broadband Infrastructure	\$18,426,999	
Capital Project Fund	\$179,100,000	
RDOF	\$148,978,767	
CAF II	\$3,055,365	
RUS (2019-2023)	\$117,634,962	
Other (Estimated)	\$700,000,000	
Total (Estimated)	Total = \$2.5 Billion	Annual = \$350 Million

- ▶ Kentucky Construction Workforce Special Funding Need (Estimated)**
 - 800 field trades (helper, laborer, lineman, field crew splicer, operator, foreman, etc.)
 - Plus project management, design, locator, owner representative, inspection, etc.
- ▶ Kentucky Technician Workforce Special Funding Need (Estimated)**
 - 1000 technicians (tower, troubleshooter, testing, premises, underground / overhead drop, etc.)

Source: Continuum analysis and presentation of public data from multiple sources.

Interpretive Note: * Not all special programs and state sponsored programs are listed. In addition, normal and routine spending on Broadband infrastructure is also not described in full detail.

Interpretive Note: ** Forecasted labor need does not incorporate retirements, attrition, or additional workforce needed for ongoing and routine, broadband construction activity.

Interpretive Note: ***. BEAD legislative funding amount grossed up by 25% to account for anticipated matching amounts.

KY – Broadband Workforce Size & Need

Construction & Technician Position	Workforce Estimate	2025-2032 Need	10 Yr Ret. & Attr. Need
Superintendent/General Foreman	90	48	30
Foreman	200	96	60
Lineman	500	240	170
Apprentice*	500	240	170
Field Crew Fiber Splicer	50	24	20
Groundman / Helper / Laborer	200	120	60
Operator / HDD Operator	90	48	30
Construction Field Total	1,630	816	540
Tower Equipment Installers and Repairers	300	140	70
Telecom Technician (Non-Specific)**	200	90	70
Telecom System Troubleshooter**	80	40	100
Telecom System Testing**	80	40	100
Premises Installation Tech**	800	430	210
Underground Fiber Drop Technician**	200	90	70
Aerial Drop Technician**	300	170	70
Technician Total	1,960	1,000	690

Source: Continuum led 2024 national and proprietary study of broadband industry workforce size and need on the behalf of PCCA and FBA.
 Interpretive Note: * Apprentice position captures entry level, lower experience, and lower skill field trades performing lineman, splicer, helper, and operator functions.
 Interpretive Note: ** Interior and other fiber splicing skills and need are incorporated into technician positions.

2024 Broadband Industry Wages - South vs. Kentucky

Position	South Low End	South Median	South High End	KY Survey Median	KY BLS Median	National Median
119021 – Construction Manager (Project Manager)	\$58,000	\$81,003	\$158,660	\$74,781	\$98,670	\$104,900
131051 – Estimator	\$50,120	\$80,462	\$144,880	\$62,362	\$65,090	\$74,740
151141.1 – Contract Administrator	\$50,000	\$69,000	nc	nc	nc	nc
172051.2 – Engineer Cost & Schedule	\$35,000	\$56,000	\$78,000	\$60,000	nc	nc
299011 – Safety Specialist / Representative	\$58,000	\$81,120	\$159,994	\$81,120	\$72,210	\$81,140
471011 – Supervisor (Superintendent, Foreman)	\$50,732	\$73,670	\$126,200	\$53,380	\$67,980	\$76,760
472061 – Laborer	\$29,000	\$36,000	\$76,400	\$40,000	\$42,230	\$45,300
472073 – Operator Light & Heavy Equipment	\$42,760	\$50,200	\$75,845	\$47,757	\$54,610	\$56,160
472111 – Electrician / Fiber Splicer	\$71,282	\$74,310	\$113,206	\$68,641	\$57,140	\$61,590
474010 – Inspector / Quality Assurance / Quality Control	nc	nc	nc	nc	\$56,910	\$67,700
475031 – Operator HDD	\$36,000	\$54,200	\$115,260	nc	\$48,580	\$56,660
493042 – Operator Mechanic	\$36,000	\$60,000	\$98,000	\$53,000	\$56,740	\$61,900
499051 & 499052 – Lineman Electrical & Telecom	\$42,764	\$74,310	\$113,206	\$64,152	\$52,370	\$64,640
514121 – Welder	\$48,000	\$52,000	\$91,000	\$56,000	\$46,240	\$48,940
533032 – Operator CDL Truck Driver only	\$36,000	\$49,800	\$95,000	\$51,000	\$50,740	\$54,320

Source: Continuum led 2024 national and proprietary study of broadband industry wages on the behalf of PCCA and FBA.

Interpretive Note: Data does not include overtime (typically 15-30% of annual wage for most positions and as high as 60-100% for critical positions) or monetary/non-monetary benefits; n/c = not calculated, incomplete, or unanalyzed data set

2024 Broadband Industry Wages - National vs. Kentucky

Position	KY BLS Median	National Median
Telecom/Broadband System Design	\$83,190	\$106,950
Telecom Technician	\$58,055	\$61,290
Telecom System Troubleshooter	See Telecom Tech	See Telecom Tech
Telecom System Testing	See Telecom Tech	See Telecom Tech
492021 - Radio, Cellular, and Tower Equipment Installers and Repairers	\$55,370	\$61,310
492022 - Telecommunications Equipment Installers and Repairers, Except Line Installers (Can include Fiber Optic Technicians/Broadband Technicians, Premises Installation Tech)	\$60,740	\$61,270
Premises Installation Tech	See 492022	See 492022
Underground Fiber Drop Technician	See 492022	See 492022
Aerial Drop Technician	See 492022	See 492022

Source: Bureau of Labor Statistics (BLS) raw data analyzed by Continuum..

Interpretive Note: Technician positions are not broken out in BLS data. Data collected during the research and survey process covered a subset of states and is not presented separately in these materials. n/c = not calculated, incomplete, or unanalyzed data set;

LA - Special Broadband Financing Programs Available

Program*	In progress or anticipated spending	
BEAD	\$1,694,443,191***	
Digital Equity	\$941,542	
Middle Mile	\$19,554,630	
Tribal (Round 1 & 2)	\$2,865,691 and \$1,504,432 (Estimated)	
Broadband Infrastructure	\$35,263,502	
Capital Project Fund	\$171,400,000	
RDOF	\$342,207,315	
CAF II	\$4,649,962	
RUS (2019-2023)	\$27,846,938	
Other (Estimated)	\$900,000,000	
Total (Estimated)	Total = \$3.2 Billion	Annual = \$450 Million

- ▶ Louisiana Construction Workforce Special Funding Need (Estimated)**
 - 1,100 field trades (helper, laborer, lineman, field crew splicer, operator, foreman, etc.)
 - Plus project management, design, locator, owner representative, inspection, etc.
- ▶ Louisiana Technician Workforce Special Funding Need (Estimated)**
 - 3,700 technicians (tower, troubleshooter, testing, premises, underground / overhead drop, etc.)

Source: Continuum analysis and presentation of public data from multiple sources.

Interpretive Note: * Not all special programs and state sponsored programs are listed. In addition, normal and routine spending on Broadband infrastructure is also not described in full detail.

Interpretive Note: ** Forecasted labor need does not incorporate retirements, attrition, or additional workforce needed for ongoing and routine, broadband construction activity.

Interpretive Note: ***. BEAD legislative funding amount grossed up by 25% to account for anticipated matching amounts.

LA – Broadband Workforce Size & Need

Construction & Technician Position	Workforce Estimate	2025-2032 Need	10 Yr Ret. & Attr. Need
Superintendent/General Foreman	50	66	20
Foreman	100	132	40
Lineman	200	330	60
Apprentice*	200	330	60
Field Crew Fiber Splicer	20	33	0
Groundman / Helper / Laborer	100	165	40
Operator / HDD Operator	50	66	20
Construction Field Total	720	1,122	240
Tower Equipment Installers and Repairers	70	100	20
Telecom Technician (Non-Specific)**	200	360	60
Telecom System Troubleshooter**	100	180	50
Telecom System Testing**	100	180	50
Premises Installation Tech**	1,200	1800	200
Underground Fiber Drop Technician**	200	360	60
Aerial Drop Technician**	500	720	110
Technician Total	2,370	3,700	550

Source: Continuum led 2024 national and proprietary study of broadband industry workforce size and need on the behalf of PCCA and FBA.
 Interpretive Note: * Apprentice position captures entry level, lower experience, and lower skill field trades performing lineman, splicer, helper, and operator functions.
 Interpretive Note: ** Interior and other fiber splicing skills and need are incorporated into technician positions.

2024 Broadband Industry Wages - South vs. Louisiana

Position	South Low End	South Median	South High End	LA Survey Median*	LA BLS Median	National Median
119021 – Construction Manager (Project Manager)	\$58,000	\$81,003	\$158,660	\$76,194*	\$103,110	\$104,900
131051 – Estimator	\$50,120	\$80,462	\$144,880	nc	\$67,890	\$74,740
151141.1 – Contract Administrator	\$50,000	\$69,000	nc	\$158,600*	nc	nc
172051.2 – Engineer Cost & Schedule	\$35,000	\$56,000	\$78,000	nc	nc	nc
299011 – Safety Specialist / Representative	\$58,000	\$81,120	\$159,994	\$63,856*	\$81,710	\$81,140
471011 – Supervisor (Superintendent, Foreman)	\$50,732	\$73,670	\$126,200	\$106,172*	\$70,720	\$76,760
472061 – Laborer	\$29,000	\$36,000	\$76,400	\$34,500*	\$39,300	\$45,300
472073 – Operator Light & Heavy Equipment	\$42,760	\$50,200	\$75,845	\$54,000*	\$48,910	\$56,160
472111 – Electrician / Fiber Splicer	\$71,282	\$74,310	\$113,206	\$96,519*	\$59,260	\$61,590
474010 – Inspector / Quality Assurance / Quality Control	nc	nc	nc	nc	\$66,170	\$67,700
475031 – Operator HDD	\$36,000	\$54,200	\$115,260	\$54,200*	\$66,320	\$56,660
493042 – Operator Mechanic	\$36,000	\$60,000	\$98,000	nc	\$59,640	\$61,900
499051 & 499052 – Lineman Electrical & Telecom	\$42,764	\$74,310	\$113,206	\$86,865*	\$44,580	\$64,640
514121 – Welder	\$48,000	\$52,000	\$91,000	\$40,250*	\$56,360	\$48,940
533032 – Operator CDL Truck Driver only	\$36,000	\$49,800	\$95,000	\$50,000*	\$47,100	\$54,320

Source: Continuum led 2024 national and proprietary study of broadband industry wages on the behalf of PCCA and FBA.

Interpretive Note: Data does not include overtime (typically 15-30% of annual wage for most positions and as high as 60-100% for critical positions) or monetary/non-monetary benefits; n/c = not calculated, incomplete, or unanalyzed data set;

*=Louisiana region including AR, LA, MS, and TX.

2024 Broadband Industry Wages - National vs. Louisiana

Position	LA BLS Median	National Median
Telecom/Broadband System Design	\$103,030	\$106,950
Telecom Technician	\$64,125	\$61,290
Telecom System Troubleshooter	See Telecom Tech	See Telecom Tech
Telecom System Testing	See Telecom Tech	See Telecom Tech
492021 - Radio, Cellular, and Tower Equipment Installers and Repairers	\$50,330	\$61,310
492022 - Telecommunications Equipment Installers and Repairers, Except Line Installers (Can include Fiber Optic Technicians/Broadband Technicians, Premises Installation Tech)	\$77,920	\$61,270
Premises Installation Tech	See 492022	See 492022
Underground Fiber Drop Technician	See 492022	See 492022
Aerial Drop Technician	See 492022	See 492022

Source: Bureau of Labor Statistics (BLS) raw data analyzed by Continuum..

Interpretive Note: Technician positions are not broken out in BLS data. Data collected during the research and survey process covered a subset of states and is not presented separately in these materials. n/c = not calculated, incomplete, or unanalyzed data set;

ME - Special Broadband Financing Programs Available

Program*	In progress or anticipated spending	
BEAD	\$339,972,154***	
Digital Equity	\$542,222	
Middle Mile	\$53,353,132	
Tribal (Round 1 & 2)	\$1,000,000 & \$524,981 (Estimated)	
Broadband Infrastructure	\$33,638,916	
Capital Project Fund	\$110,000,000	
RDOF	\$71,175,908	
CAF II	\$4,713,986	
RUS (2019-2023)	\$2,727,976	
Other (Estimated)	\$250,000,000	
Total (Estimated)	Total = \$850 Million	Annual = \$125 Million

- ▶ Maine Construction Workforce Special Funding Need (Estimated)**
 - 300 field trades (helper, laborer, lineman, field crew splicer, operator, foreman, etc.)
 - Plus project management, design, locator, owner representative, inspection, etc.
- ▶ Maine Technician Workforce Special Funding Need (Estimated)**
 - 200 technicians (tower, troubleshooter, testing, premises, underground / overhead drop, etc.)

Source: Continuum analysis and presentation of public data from multiple sources.

Interpretive Note: * Not all special programs and state sponsored programs are listed. In addition, normal and routine spending on Broadband infrastructure is also not described in full detail.

Interpretive Note: ** Forecasted labor need does not incorporate retirements, attrition, or additional workforce needed for ongoing and routine, broadband construction activity.

Interpretive Note: ***. BEAD legislative funding amount grossed up by 25% to account for anticipated matching amounts.

ME – Broadband Workforce Size & Need

Construction & Technician Position	Workforce Estimate	2025-2032 Need	10 Yr Ret. & Attr. Need
Superintendent/General Foreman	60	18	20
Foreman	100	36	40
Lineman	300	90	100
Apprentice*	300	90	100
Field Crew Fiber Splicer	30	9	10
Groundman / Helper / Laborer	100	45	40
Operator / HDD Operator	60	18	20
Construction Field Total	950	306	330
Tower Equipment Installers and Repairers	100	50	30
Telecom Technician (Non-Specific)**	40	20	30
Telecom System Troubleshooter**	20	10	50
Telecom System Testing**	20	10	50
Premises Installation Tech**	200	80	40
Underground Fiber Drop Technician**	40	20	30
Aerial Drop Technician**	80	30	30
Technician Total	500	220	260

Source: Continuum led 2024 national and proprietary study of broadband industry workforce size and need on the behalf of PCCA and FBA.
 Interpretive Note: * Apprentice position captures entry level, lower experience, and lower skill field trades performing lineman, splicer, helper, and operator functions.
 Interpretive Note: ** Interior and other fiber splicing skills and need are incorporated into technician positions.

2024 Broadband Industry Wages – Midwest & Northeast vs. **CONTINUUM**

Maine

Position	MW & NE Low End	MW & NE Median	MW & NE High End	ME Survey Median*	ME BLS Median	National Median
119021 – Construction Manager (Project Manager)	\$50,000	\$84,000	\$158,660	\$93,600*	\$102,610	\$104,900
131051 – Estimator	\$54,120	\$70,102	\$104,000	nc	\$65,780	\$74,740
151141.1 – Contract Administrator	\$52,500	\$72,068	\$91,097	nc	nc	nc
172051.2 – Engineer Cost & Schedule	\$38,000	\$57,240	\$89,540	\$52,000*	nc	nc
299011 – Safety Specialist / Representative	\$84,000	\$79,872	\$106,660	\$67,600*	\$82,830	\$81,140
471011 – Supervisor (Superintendent, Foreman)	\$72,120	\$82,500	\$124,529	\$129,820*	\$69,930	\$76,760
472061 – Laborer	\$33,600	\$48,000	\$73,600	\$57,250*	\$43,290	\$45,300
472073 – Operator Light & Heavy Equipment	\$47,757	\$65,052	\$75,845	\$72,120*	\$51,020	\$56,160
472111 – Electrician / Fiber Splicer	\$48,000	\$63,000	\$83,200	nc	\$61,970	\$61,590
474010 – Inspector / Quality Assurance / Quality Control	\$50,400	\$65,168	\$96,000	nc	\$64,500	\$67,700
475031 – Operator HDD	\$36,000	\$58,000	\$115,260	nc	\$53,910	\$56,660
493042 – Operator Mechanic	nc	\$54,000	\$120,200	\$62,000*	\$57,940	\$61,900
499051 & 499052 – Lineman Electrical & Telecom	\$71,282	\$96,222	\$113,206	\$120,200*	\$81,860	\$64,640
514121 – Welder	nc	\$51,500	nc	\$50,250*	\$53,280	\$48,940
533032 – Operator CDL Truck Driver only	nc	\$52,000	\$76,800	\$49,000*	\$48,860	\$54,320

Source: Continuum led 2024 national and proprietary study of broadband industry wages on the behalf of PCCA and FBA.

Interpretive Note: Data does not include overtime (typically 15-30% of annual wage for most positions and as high as 60-100% for critical positions) or monetary/non-monetary benefits; n/c = not calculated, incomplete, or unanalyzed data set;

*=Maine region including CT, DE, MA, ME, NH, NJ, NY, PA, RI, and VT.

2024 Broadband Industry Wages - National vs. Maine

Position	ME BLS Median	National Median
Telecom/Broadband System Design	\$104,630	\$106,950
Telecom Technician	\$54,390	\$61,290
Telecom System Troubleshooter	See Telecom Tech	See Telecom Tech
Telecom System Testing	See Telecom Tech	See Telecom Tech
492021 - Radio, Cellular, and Tower Equipment Installers and Repairers	\$47,840	\$61,310
492022 - Telecommunications Equipment Installers and Repairers, Except Line Installers (Can include Fiber Optic Technicians/Broadband Technicians, Premises Installation Tech)	\$60,940	\$61,270
Premises Installation Tech	See 492022	See 492022
Underground Fiber Drop Technician	See 492022	See 492022
Aerial Drop Technician	See 492022	See 492022

Source: Bureau of Labor Statistics (BLS) raw data analyzed by Continuum..

Interpretive Note: Technician positions are not broken out in BLS data. Data collected during the research and survey process covered a subset of states and is not presented separately in these materials. n/c = not calculated, incomplete, or unanalyzed data set;

MD - Special Broadband Financing Programs Available

Program*	In progress or anticipated spending	
BEAD	\$334,673,001***	
Digital Equity	\$966,659	
Middle Mile	\$30,889,370	
Tribal (Round 1 & 2)	\$0 & \$0 (Estimated)	
Broadband Infrastructure	\$0	
Capital Project Fund	\$166,200,000	
RDOF	\$48,023,869	
CAF II	\$10,219,148	
RUS (2019-2023)	\$13,108,229	
Other (Estimated)	\$250,000,000	
Total (Estimated)	Total = \$850 Million	Annual = \$125 Million

- ▶ Maryland Construction Workforce Special Funding Need (Estimated)**
 - 300 field trades (helper, laborer, lineman, field crew splicer, operator, foreman, etc.)
 - Plus project management, design, locator, owner representative, inspection, etc.
- ▶ Maryland Technician Workforce Special Funding Need (Estimated)**
 - 200 technicians (tower, troubleshooter, testing, premises, underground / overhead drop, etc.)

Source: Continuum analysis and presentation of public data from multiple sources.

Interpretive Note: * Not all special programs and state sponsored programs are listed. In addition, normal and routine spending on Broadband infrastructure is also not described in full detail.

Interpretive Note: ** Forecasted labor need does not incorporate retirements, attrition, or additional workforce needed for ongoing and routine, broadband construction activity.

Interpretive Note: ***. BEAD legislative funding amount grossed up by 25% to account for anticipated matching amounts.

MD – Broadband Workforce Size & Need

Construction & Technician Position	Workforce Estimate	2025-2032 Need	10 Yr Ret. & Attr. Need
Superintendent/General Foreman	300	18	100
Foreman	500	36	160
Lineman	1,300	90	400
Apprentice*	1,300	90	400
Field Crew Fiber Splicer	100	9	40
Groundman / Helper / Laborer	700	45	200
Operator / HDD Operator	300	18	100
Construction Field Total	4,500	306	1,400
Tower Equipment Installers and Repairers	300	20	110
Telecom Technician (Non-Specific)**	200	20	120
Telecom System Troubleshooter**	100	10	220
Telecom System Testing**	100	10	220
Premises Installation Tech**	1,100	90	220
Underground Fiber Drop Technician**	200	20	140
Aerial Drop Technician**	500	40	150
Technician Total	2,500	210	1,180

Source: Continuum led 2024 national and proprietary study of broadband industry workforce size and need on the behalf of PCCA and FBA.
 Interpretive Note: * Apprentice position captures entry level, lower experience, and lower skill field trades performing lineman, splicer, helper, and operator functions.
 Interpretive Note: ** Interior and other fiber splicing skills and need are incorporated into technician positions.

2024 Broadband Industry Wages – Midwest & Northeast vs. **CONTINUUM**

Maryland

Position	MW & NE Low End	MW & NE Median	MW & NE High End	MD Survey Median*	MD BLS Median	National Median
119021 – Construction Manager (Project Manager)	\$50,000	\$84,000	\$158,660	\$93,600*	\$111,650	\$104,900
131051 – Estimator	\$54,120	\$70,102	\$104,000	\$70,102**	\$78,110	\$74,740
151141.1 – Contract Administrator	\$52,500	\$72,068	\$91,097	nc	nc	nc
172051.2 – Engineer Cost & Schedule	\$38,000	\$57,240	\$89,540	\$52,000*	nc	nc
299011 – Safety Specialist / Representative	\$84,000	\$79,872	\$106,660	\$67,600*	\$79,900	\$81,140
471011 – Supervisor (Superintendent, Foreman)	\$72,120	\$82,500	\$124,529	\$129,820*	\$77,050	\$76,760
472061 – Laborer	\$33,600	\$48,000	\$73,600	\$57,250*	\$46,300	\$45,300
472073 – Operator Light & Heavy Equipment	\$47,757	\$65,052	\$75,845	\$72,120*	\$60,000	\$56,160
472111 – Electrician / Fiber Splicer	\$48,000	\$63,000	\$83,200	nc	\$63,030	\$61,590
474010 – Inspector / Quality Assurance / Quality Control	\$50,400	\$65,168	\$96,000	nc	\$66,440	\$67,700
475031 – Operator HDD	\$36,000	\$58,000	\$115,260	\$52,360**	\$58,770	\$56,660
493042 – Operator Mechanic	nc	\$54,000	\$120,200	\$62,000*	\$67,850	\$61,900
499051 & 499052 – Lineman Electrical & Telecom	\$71,282	\$96,222	\$113,206	\$120,200*	\$89,410	\$64,640
514121 – Welder	nc	\$51,500	nc	\$50,250*	\$55,120	\$48,940
533032 – Operator CDL Truck Driver only	nc	\$52,000	\$76,800	\$49,000*	\$56,040	\$54,320

Source: Continuum led 2024 national and proprietary study of broadband industry wages on the behalf of PCCA and FBA.

Interpretive Note: Data does not include overtime (typically 15-30% of annual wage for most positions and as high as 60-100% for critical positions) or monetary/non-monetary benefits; n/c = not calculated, incomplete, or unanalyzed data set;

*=Maryland region including DE, MD, NJ, NY, and PA.

2024 Broadband Industry Wages - National vs. Maryland

Position	MD BLS Median	National Median
Telecom/Broadband System Design	\$120,240	\$106,950
Telecom Technician	\$63,675	\$61,290
Telecom System Troubleshooter	See Telecom Tech	See Telecom Tech
Telecom System Testing	See Telecom Tech	See Telecom Tech
492021 - Radio, Cellular, and Tower Equipment Installers and Repairers	\$62,670	\$61,310
492022 - Telecommunications Equipment Installers and Repairers, Except Line Installers (Can include Fiber Optic Technicians/Broadband Technicians, Premises Installation Tech)	\$64,680	\$61,270
Premises Installation Tech	See 492022	See 492022
Underground Fiber Drop Technician	See 492022	See 492022
Aerial Drop Technician	See 492022	See 492022

Source: Bureau of Labor Statistics (BLS) raw data analyzed by Continuum..

Interpretive Note: Technician positions are not broken out in BLS data. Data collected during the research and survey process covered a subset of states and is not presented separately in these materials. n/c = not calculated, incomplete, or unanalyzed data set;

MA - Special Broadband Financing Programs Available

Program*	In progress or anticipated spending	
BEAD	\$184,278,080***	
Digital Equity	\$1,003,760	
Middle Mile	\$0	
Tribal (Round 1 & 2)	\$9,130,692 & \$4,793,436 (Estimated)	
Broadband Infrastructure	\$21,575,897	
Capital Project Fund	\$166,600,000	
RDOF	\$32,631,916	
CAF II	\$12,098,761	
RUS (2019-2023)	\$0	
Other (Estimated)	\$150,000,000	
Total (Estimated)	Total = \$575 Million	Annual = \$75 Million

- ▶ Massachusetts Construction Workforce Special Funding Need (Estimated)**
 - 200 field trades (helper, laborer, lineman, field crew splicer, operator, foreman, etc.)
 - Plus project management, design, locator, owner representative, inspection, etc.
- ▶ Massachusetts Technician Workforce Special Funding Need (Estimated)**
 - 100 technicians (tower, troubleshooter, testing, premises, underground / overhead drop, etc.)

Source: Continuum analysis and presentation of public data from multiple sources.

Interpretive Note: * Not all special programs and state sponsored programs are listed. In addition, normal and routine spending on Broadband infrastructure is also not described in full detail.

Interpretive Note: ** Forecasted labor need does not incorporate retirements, attrition, or additional workforce needed for ongoing and routine, broadband construction activity.

Interpretive Note: ***. BEAD legislative funding amount grossed up by 25% to account for anticipated matching amounts.

MA – Broadband Workforce Size & Need

Construction & Technician Position	Workforce Estimate	2025-2032 Need	10 Yr Ret. & Attr. Need
Superintendent/General Foreman	300	12	100
Foreman	500	24	160
Lineman	1,300	60	400
Apprentice*	1,300	60	400
Field Crew Fiber Splicer	100	6	40
Groundman / Helper / Laborer	700	30	200
Operator / HDD Operator	300	12	100
Construction Field Total	4,500	204	1,400
Tower Equipment Installers and Repairers	200	10	90
Telecom Technician (Non-Specific)**	300	10	140
Telecom System Troubleshooter**	100	0	220
Telecom System Testing**	100	0	220
Premises Installation Tech**	1,400	50	320
Underground Fiber Drop Technician**	300	10	160
Aerial Drop Technician**	600	20	150
Technician Total	3,000	100	1,300

Source: Continuum led 2024 national and proprietary study of broadband industry workforce size and need on the behalf of PCCA and FBA.
 Interpretive Note: * Apprentice position captures entry level, lower experience, and lower skill field trades performing lineman, splicer, helper, and operator functions.
 Interpretive Note: ** Interior and other fiber splicing skills and need are incorporated into technician positions.

2024 Broadband Industry Wages – Midwest & Northeast vs. **CONTINUUM**

Massachusetts

Position	MW & NE Low End	MW & NE Median	MW & NE High End	MA Survey Median*	MA BLS Median	National Median
119021 – Construction Manager (Project Manager)	\$50,000	\$84,000	\$158,660	\$93,600*	\$134,460	\$104,900
131051 – Estimator	\$54,120	\$70,102	\$104,000	nc	\$94,990	\$74,740
151141.1 – Contract Administrator	\$52,500	\$72,068	\$91,097	nc	nc	nc
172051.2 – Engineer Cost & Schedule	\$38,000	\$57,240	\$89,540	\$52,000*	nc	nc
299011 – Safety Specialist / Representative	\$84,000	\$79,872	\$106,660	\$67,600*	\$88,090	\$81,140
471011 – Supervisor (Superintendent, Foreman)	\$72,120	\$82,500	\$124,529	\$129,820*	\$97,670	\$76,760
472061 – Laborer	\$33,600	\$48,000	\$73,600	\$57,250*	\$61,240	\$45,300
472073 – Operator Light & Heavy Equipment	\$47,757	\$65,052	\$75,845	\$72,120*	\$68,640	\$56,160
472111 – Electrician / Fiber Splicer	\$48,000	\$63,000	\$83,200	nc	\$81,170	\$61,590
474010 – Inspector / Quality Assurance / Quality Control	\$50,400	\$65,168	\$96,000	nc	\$84,010	\$67,700
475031 – Operator HDD	\$36,000	\$58,000	\$115,260	nc	\$77,240	\$56,660
493042 – Operator Mechanic	nc	\$54,000	\$120,200	\$62,000*	\$75,470	\$61,900
499051 & 499052 – Lineman Electrical & Telecom	\$71,282	\$96,222	\$113,206	\$120,200*	\$98,590	\$64,640
514121 – Welder	nc	\$51,500	nc	\$50,250*	\$59,330	\$48,940
533032 – Operator CDL Truck Driver only	nc	\$52,000	\$76,800	\$49,000*	\$58,960	\$54,320

Source: Continuum led 2024 national and proprietary study of broadband industry wages on the behalf of PCCA and FBA.

Interpretive Note: Data does not include overtime (typically 15-30% of annual wage for most positions and as high as 60-100% for critical positions) or monetary/non-monetary benefits; n/c = not calculated, incomplete, or unanalyzed data set;

*=Massachusetts region including CT, DE, MA, ME, NH, NJ, NY, PA, RI, and VT.

2024 Broadband Industry Wages - National vs. Massachusetts

Position	MA BLS Median	National Median
Telecom/Broadband System Design	\$125,470	\$106,950
Telecom Technician	\$74,575	\$61,290
Telecom System Troubleshooter	See Telecom Tech	See Telecom Tech
Telecom System Testing	See Telecom Tech	See Telecom Tech
492021 - Radio, Cellular, and Tower Equipment Installers and Repairers	\$72,590	\$61,310
492022 - Telecommunications Equipment Installers and Repairers, Except Line Installers (Can include Fiber Optic Technicians/Broadband Technicians, Premises Installation Tech)	\$76,560	\$61,270
Premises Installation Tech	See 492022	See 492022
Underground Fiber Drop Technician	See 492022	See 492022
Aerial Drop Technician	See 492022	See 492022

Source: Bureau of Labor Statistics (BLS) raw data analyzed by Continuum..

Interpretive Note: Technician positions are not broken out in BLS data. Data collected during the research and survey process covered a subset of states and is not presented separately in these materials. n/c = not calculated, incomplete, or unanalyzed data set;

MI - Special Broadband Financing Programs Available

Program*	In progress or anticipated spending	
BEAD	\$1,949,203,099***	
Digital Equity	\$1,327,950	
Middle Mile	\$87,509,580	
Tribal (Round 1 & 2)	\$4,205,614 and \$2,207,865 (Estimated)	
Broadband Infrastructure	\$21,575,897	
Capital Project Fund	\$4,649,962	
RDOF	\$362,985,056	
CAF II	\$33,867,175	
RUS (2019-2023)	\$142,498,620	
Other (Estimated)	\$1,000,000,000	
Total (Estimated)	Total = \$3.6 Billion	Annual = \$525 Million

- ▶ Michigan Construction Workforce Special Funding Need (Estimated)**
 - 1,200 field trades (helper, laborer, lineman, field crew splicer, operator, foreman, etc.)
 - Plus project management, design, locator, owner representative, inspection, etc.
- ▶ Michigan Technician Workforce Special Funding Need (Estimated)**
 - 1,500 technicians (tower, troubleshooter, testing, premises, underground / overhead drop, etc.)

Source: Continuum analysis and presentation of public data from multiple sources.

Interpretive Note: * Not all special programs and state sponsored programs are listed. In addition, normal and routine spending on Broadband infrastructure is also not described in full detail.

Interpretive Note: ** Forecasted labor need does not incorporate retirements, attrition, or additional workforce needed for ongoing and routine, broadband construction activity.

Interpretive Note: ***. BEAD legislative funding amount grossed up by 25% to account for anticipated matching amounts.

MI – Broadband Workforce Size & Need

Construction & Technician Position	Workforce Estimate	2025-2032 Need	10 Yr Ret. & Attr. Need
Superintendent/General Foreman	200	72	60
Foreman	400	144	130
Lineman	1,000	360	400
Apprentice	1,000	360	400
Field Crew Fiber Splicer	100	36	40
Groundman / Helper / Laborer	500	180	160
Operator / HDD Operator	200	72	60
Construction Field Total	3,400	1,224	1,250
Tower Equipment Installers and Repairers	300	90	90
Telecom Technician (Non-Specific)	400	140	140
Telecom System Troubleshooter	200	70	240
Telecom System Testing	200	70	240
Premises Installation Tech	2,000	700	420
Underground Fiber Drop Technician	400	140	160
Aerial Drop Technician	800	280	230
Technician Total	4,300	1,490	1,520

Source: Continuum led 2024 national and proprietary study of broadband industry workforce size and need on the behalf of PCCA and FBA.
 Interpretive Note: * Apprentice position captures entry level, lower experience, and lower skill field trades performing lineman, splicer, helper, and operator functions.
 Interpretive Note: ** Interior and other fiber splicing skills and need are incorporated into technician positions.

2024 Broadband Industry Wages - Midwest vs. Michigan

Position	Midwest Low End	Midwest Median	Midwest High End	MI Survey Median*	MI BLS Median	National Median
119021 – Construction Manager (Project Manager)	\$50,000	\$84,000	\$158,660	\$79,664*	\$104,610	\$104,900
131051 – Estimator	\$54,120	\$70,102	\$104,000	\$70,102*	\$73,430	\$74,740
151141.1 – Contract Administrator	\$52,500	\$72,068	\$91,097	\$50,000*	nc	nc
172051.2 – Engineer Cost & Schedule	\$38,000	\$57,260	\$89,540	\$65,220*	nc	nc
299011 – Safety Specialist / Representative	\$98,780	\$101,380	\$103,980	\$73,840*	\$80,590	\$81,140
471011 – Supervisor (Superintendent, Foreman)	\$61,600	\$76,190	\$123,077	\$73,660*	\$76,110	\$76,760
472061 – Laborer	\$33,600	\$48,000	\$73,600	\$42,000*	\$47,250	\$45,300
472073 – Operator Light & Heavy Equipment	\$47,757	\$65,052	\$75,845	\$65,026*	\$59,510	\$56,160
472111 – Electrician / Fiber Splicer	\$48,000	\$63,000	\$83,200	\$60,000*	\$62,980	\$61,590
474010 – Inspector / Quality Assurance/Quality Control	\$50,400	\$66,000	\$96,000	\$52,000*	\$68,140	\$67,700
475031 – Operator HDD	\$36,000	\$58,000	\$115,260	\$52,380*	\$55,080	\$56,660
493042 – Operator Mechanic	nc	\$53,750	nc	\$53,750*	\$59,690	\$61,900
499051 & 499052 – Lineman Electrical & Telecom	\$46,200	\$94,420	\$101,883	\$97,096*	\$59,620	\$64,640
514121 – Welder	nc	\$49,000	nc	nc	\$46,410	\$48,940
533032 – Operator CDL Truck Driver only	\$52,000	\$54,500	\$76,800	\$49,000*	\$50,680	\$54,320

Source: Continuum led 2024 national and proprietary study of broadband industry wages on the behalf of PCCA and FBA.

Interpretive Note: Data does not include overtime (typically 15-30% of annual wage for most positions and as high as 60-100% for critical positions) or monetary/non-monetary benefits; n/c = not calculated, incomplete, or unanalyzed data set. *=Michigan region including IL, IN, MI, OH, and WI.

2024 Broadband Industry Wages - National vs. Michigan

Position	MI BLS Median	National Median
Telecom/Broadband System Design	\$99,800	\$106,950
Telecom Technician	\$59,405	\$61,290
Telecom System Troubleshooter	See Telecom Tech	See Telecom Tech
Telecom System Testing	See Telecom Tech	See Telecom Tech
492021 - Radio, Cellular, and Tower Equipment Installers and Repairers	\$60,740	\$61,310
492022 - Telecommunications Equipment Installers and Repairers, Except Line Installers (Can include Fiber Optic Technicians/Broadband Technicians, Premises Installation Tech)	\$58,070	\$61,270
Premises Installation Tech	See 492022	See 492022
Underground Fiber Drop Technician	See 492022	See 492022
Aerial Drop Technician	See 492022	See 492022

Source: Bureau of Labor Statistics (BLS) raw data analyzed by Continuum..

Interpretive Note: Technician positions are not broken out in BLS data. Data collected during the research and survey process covered a subset of states and is not presented separately in these materials. n/c = not calculated, incomplete, or unanalyzed data set;

MN - Special Broadband Financing Programs Available

Program*	In progress or anticipated spending	
BEAD	\$814,799,210***	
Digital Equity	\$881,905	
Middle Mile	\$30,387,914	
Tribal (Round 1 & 2)	\$52,501,528 & \$27,562,282 (Estimated)	
Broadband Infrastructure	\$36,329,248	
Capital Project Fund	\$126,700,000	
RDOF	\$408,150,746	
CAF II	\$38,596,509	
RUS (2019-2023)	\$146,642,716	
Other (Estimated)	\$600,000,000	
Total (Estimated)	Total = \$2.3 Billion	Annual = \$325 Million

- ▶ Minnesota Construction Workforce Special Funding Need (Estimated)**
 - 800 field trades (helper, laborer, lineman, field crew splicer, operator, foreman, etc.)
 - Plus project management, design, locator, owner representative, inspection, etc.
- ▶ Minnesota Technician Workforce Special Funding Need (Estimated)**
 - 700 technicians (tower, troubleshooter, testing, premises, underground / overhead drop, etc.)

Source: Continuum analysis and presentation of public data from multiple sources.

Interpretive Note: * Not all special programs and state sponsored programs are listed. In addition, normal and routine spending on Broadband infrastructure is also not described in full detail.

Interpretive Note: ** Forecasted labor need does not incorporate retirements, attrition, or additional workforce needed for ongoing and routine, broadband construction activity.

Interpretive Note: ***. BEAD legislative funding amount grossed up by 25% to account for anticipated matching amounts.

MN – Broadband Workforce Size & Need

Construction & Technician Position	Workforce Estimate	2025-2032 Need	10 Yr Ret. & Attr. Need
Superintendent/General Foreman	200	48	70
Foreman	300	96	100
Lineman	800	240	200
Apprentice*	800	240	200
Field Crew Fiber Splicer	80	24	20
Groundman / Helper / Laborer	400	120	130
Operator / HDD Operator	200	48	70
Construction Field Total	2,780	816	790
Tower Equipment Installers and Repairers	200	60	70
Telecom Technician (Non-Specific)**	200	60	90
Telecom System Troubleshooter**	100	30	120
Telecom System Testing**	100	30	120
Premises Installation Tech**	1,200	320	210
Underground Fiber Drop Technician**	200	60	100
Aerial Drop Technician**	500	130	130
Technician Total	2,500	690	840

Source: Continuum led 2024 national and proprietary study of broadband industry workforce size and need on the behalf of PCCA and FBA.
 Interpretive Note: * Apprentice position captures entry level, lower experience, and lower skill field trades performing lineman, splicer, helper, and operator functions.
 Interpretive Note: ** Interior and other fiber splicing skills and need are incorporated into technician positions.

2024 Broadband Industry Wages - Midwest vs. Minnesota

Position	Midwest Low End	Midwest Median	Midwest High End	MN Survey Median	MN BLS Median	National Median
119021 – Construction Manager (Project Manager)	\$50,000	\$84,000	\$158,660	\$87,490	\$104,370	\$104,900
131051 – Estimator	\$54,120	\$70,102	\$104,000	\$62,330	\$79,260	\$74,740
151141.1 – Contract Administrator	\$52,500	\$72,068	\$91,097	\$72,116	nc	nc
172051.2 – Engineer Cost & Schedule	\$38,000	\$57,260	\$89,540	\$52,040	nc	nc
299011 – Safety Specialist / Representative	\$98,780	\$101,380	\$103,980	\$90,865	\$88,750	\$81,140
471011 – Supervisor (Superintendent, Foreman)	\$61,600	\$76,190	\$123,077	\$83,175	\$92,810	\$76,760
472061 – Laborer	\$33,600	\$48,000	\$73,600	\$51,000	\$55,640	\$45,300
472073 – Operator Light & Heavy Equipment	\$47,757	\$65,052	\$75,845	\$64,500	\$76,350	\$56,160
472111 – Electrician / Fiber Splicer	\$48,000	\$63,000	\$83,200	\$52,000	\$78,050	\$61,590
474010 – Inspector / Quality Assurance/Quality Control	\$50,400	\$66,000	\$96,000	\$66,000	\$83,450	\$67,700
475031 – Operator HDD	\$36,000	\$58,000	\$115,260	\$64,000	\$60,380	\$56,660
493042 – Operator Mechanic	nc	\$53,750	nc	nc	\$70,260	\$61,900
499051 & 499052 – Lineman Electrical & Telecom	\$46,200	\$94,420	\$101,883	\$94,300	\$57,600	\$64,640
514121 – Welder	nc	\$49,000	nc	nc	\$55,370	\$48,940
533032 – Operator CDL Truck Driver only	\$52,000	\$54,500	\$76,800	\$63,000	\$59,430	\$54,320

Source: Continuum led 2024 national and proprietary study of broadband industry wages on the behalf of PCCA and FBA.

Interpretive Note: Data does not include overtime (typically 15-30% of annual wage for most positions and as high as 60-100% for critical positions) or monetary/non-monetary benefits; n/c = not calculated, incomplete, or unanalyzed data set

2024 Broadband Industry Wages - National vs. Minnesota

Position	MN BLS Median	National Median
Telecom/Broadband System Design	\$103,330	\$106,950
Telecom Technician	\$71,340	\$61,290
Telecom System Troubleshooter	See Telecom Tech	See Telecom Tech
Telecom System Testing	See Telecom Tech	See Telecom Tech
492021 - Radio, Cellular, and Tower Equipment Installers and Repairers	\$78,440	\$61,310
492022 - Telecommunications Equipment Installers and Repairers, Except Line Installers (Can include Fiber Optic Technicians/Broadband Technicians, Premises Installation Tech)	\$64,240	\$61,270
Premises Installation Tech	See 492022	See 492022
Underground Fiber Drop Technician	See 492022	See 492022
Aerial Drop Technician	See 492022	See 492022

Source: Bureau of Labor Statistics (BLS) raw data analyzed by Continuum..

Interpretive Note: Technician positions are not broken out in BLS data. Data collected during the research and survey process covered a subset of states and is not presented separately in these materials. n/c = not calculated, incomplete, or unanalyzed data set;

MS - Special Broadband Financing Programs Available

Program*	In progress or anticipated spending	
BEAD	\$1,504,451,954***	
Digital Equity	\$875,586	
Middle Mile	\$19,554,630	
Tribal (Round 1 & 2)	\$8,433,633 & \$4,427,494 (Estimated)	
Broadband Infrastructure	\$36,329,248	
Capital Project Fund	\$151,500,000	
RDOF	\$495,725,800	
CAF II	\$5,484,606	
RUS (2019-2023)	\$93,827,893	
Other (Estimated)	\$450,000,000	
Total (Estimated)	Total = \$2.8 Billion	Annual = \$400 Million

- ▶ Mississippi Construction Workforce Special Funding Need (Estimated)**
 - 900 field trades (helper, laborer, lineman, field crew splicer, operator, foreman, etc.)
 - Plus project management, design, locator, owner representative, inspection, etc.
- ▶ Mississippi Technician Workforce Special Funding Need (Estimated)**
 - 1,200 technicians (tower, troubleshooter, testing, premises, underground / overhead drop, etc.)

Source: Continuum analysis and presentation of public data from multiple sources.

Interpretive Note: * Not all special programs and state sponsored programs are listed. In addition, normal and routine spending on Broadband infrastructure is also not described in full detail.

Interpretive Note: ** Forecasted labor need does not incorporate retirements, attrition, or additional workforce needed for ongoing and routine, broadband construction activity.

Interpretive Note: ***. BEAD legislative funding amount grossed up by 25% to account for anticipated matching amounts.

MS – Broadband Workforce Size & Need

Construction & Technician Position	Workforce Estimate	2025-2032 Need	10 Yr Ret. & Attr. Need
Superintendent/General Foreman	80	54	20
Foreman	200	108	60
Lineman	400	270	130
Apprentice*	400	270	130
Field Crew Fiber Splicer	40	27	20
Groundman / Helper / Laborer	200	135	60
Operator / HDD Operator	80	54	20
Construction Field Total	1,400	918	440
Tower Equipment Installers and Repairers	100	80	30
Telecom Technician (Non-Specific)**	200	110	70
Telecom System Troubleshooter**	80	60	80
Telecom System Testing**	80	60	80
Premises Installation Tech**	800	560	210
Underground Fiber Drop Technician**	200	110	70
Aerial Drop Technician**	300	220	70
Technician Total	1,760	1,200	610

Source: Continuum led 2024 national and proprietary study of broadband industry workforce size and need on the behalf of PCCA and FBA.
 Interpretive Note: * Apprentice position captures entry level, lower experience, and lower skill field trades performing lineman, splicer, helper, and operator functions.
 Interpretive Note: ** Interior and other fiber splicing skills and need are incorporated into technician positions.

2024 Broadband Industry Wages - South vs. Mississippi

Position	South Low End	South Median	South High End	MS Survey Median*	MS BLS Median	National Median
119021 – Construction Manager (Project Manager)	\$58,000	\$81,003	\$158,660	\$65,723	\$83,300	\$104,900
131051 – Estimator	\$50,120	\$80,462	\$144,880	nc	\$63,170	\$74,740
151141.1 – Contract Administrator	\$50,000	\$69,000	nc	nc	nc	nc
172051.2 – Engineer Cost & Schedule	\$35,000	\$56,000	\$78,000	\$70,000*	nc	nc
299011 – Safety Specialist / Representative	\$58,000	\$81,120	\$159,994	\$70,750*	\$66,070	\$81,140
471011 – Supervisor (Superintendent, Foreman)	\$50,732	\$73,670	\$126,200	\$55,790	\$63,020	\$76,760
472061 – Laborer	\$29,000	\$36,000	\$76,400	\$34,000*	\$35,660	\$45,300
472073 – Operator Light & Heavy Equipment	\$42,760	\$50,200	\$75,845	\$48,380	\$43,260	\$56,160
472111 – Electrician / Fiber Splicer	\$71,282	\$74,310	\$113,206	\$79,625*	\$58,580	\$61,590
474010 – Inspector / Quality Assurance / Quality Control	nc	nc	nc	nc	\$57,120	\$67,700
475031 – Operator HDD	\$36,000	\$54,200	\$115,260	\$51,380	\$51,010	\$56,660
493042 – Operator Mechanic	\$36,000	\$60,000	\$98,000	\$33,500*	\$49,860	\$61,900
499051 & 499052 – Lineman Electrical & Telecom	\$42,764	\$74,310	\$113,206	\$66,000	\$41,750	\$64,640
514121 – Welder	\$48,000	\$52,000	\$91,000	\$40,250*	\$49,920	\$48,940
533032 – Operator CDL Truck Driver only	\$36,000	\$49,800	\$95,000	\$41,500*	\$48,430	\$54,320

Source: Continuum led 2024 national and proprietary study of broadband industry wages on the behalf of PCCA and FBA.

Interpretive Note: Data does not include overtime (typically 15-30% of annual wage for most positions and as high as 60-100% for critical positions) or monetary/non-monetary benefits; n/c = not calculated, incomplete, or unanalyzed data set;

*=Mississippi region including AL, AR, LA, MS, and TN.

2024 Broadband Industry Wages - National vs. Mississippi

Position	MS BLS Median	National Median
Telecom/Broadband System Design	\$98,340	\$106,950
Telecom Technician	\$44,380	\$61,290
Telecom System Troubleshooter	See Telecom Tech	See Telecom Tech
Telecom System Testing	See Telecom Tech	See Telecom Tech
492021 - Radio, Cellular, and Tower Equipment Installers and Repairers	\$29,930	\$61,310
492022 - Telecommunications Equipment Installers and Repairers, Except Line Installers (Can include Fiber Optic Technicians/Broadband Technicians, Premises Installation Tech)	\$58,830	\$61,270
Premises Installation Tech	See 492022	See 492022
Underground Fiber Drop Technician	See 492022	See 492022
Aerial Drop Technician	See 492022	See 492022

Source: Bureau of Labor Statistics (BLS) raw data analyzed by Continuum..

Interpretive Note: Technician positions are not broken out in BLS data. Data collected during the research and survey process covered a subset of states and is not presented separately in these materials. n/c = not calculated, incomplete, or unanalyzed data set;

MO - Special Broadband Financing Programs Available

Program*	In progress or anticipated spending	
BEAD	\$2,170,378,385***	
Digital Equity	\$827,338	
Middle Mile	\$83,726,665	
Tribal (Round 1 & 2)	\$0 & \$0 (Estimated)	
Broadband Infrastructure	\$62,762,546	
Capital Project Fund	\$196,700,000	
RDOF	\$346,297,660	
CAF II	\$254,108,191	
RUS (2019-2023)	\$444,746,607	
Other (Estimated)	\$600,000,000	
Total (Estimated)	Total = \$4.2 Billion	Annual = \$600 Million

- ▶ Missouri Construction Workforce Special Funding Need (Estimated)**
 - 1,400 field trades (helper, laborer, lineman, field crew splicer, operator, foreman, etc.)
 - Plus project management, design, locator, owner representative, inspection, etc.
- ▶ Missouri Technician Workforce Special Funding Need (Estimated)**
 - 1,800 technicians (tower, troubleshooter, testing, premises, underground / overhead drop, etc.)

Source: Continuum analysis and presentation of public data from multiple sources.

Interpretive Note: * Not all special programs and state sponsored programs are listed. In addition, normal and routine spending on Broadband infrastructure is also not described in full detail.

Interpretive Note: ** Forecasted labor need does not incorporate retirements, attrition, or additional workforce needed for ongoing and routine, broadband construction activity.

Interpretive Note: ***. BEAD legislative funding amount grossed up by 25% to account for anticipated matching amounts.

MO – Broadband Workforce Size & Need

Construction & Technician Position	Workforce Estimate	2025-2032 Need	10 Yr Ret. & Attr. Need
Superintendent/General Foreman	200	84	60
Foreman	400	168	130
Lineman	1,000	420	400
Apprentice*	1,000	420	400
Field Crew Fiber Splicer	100	42	40
Groundman / Helper / Laborer	500	210	160
Operator / HDD Operator	200	84	60
Construction Field Total	3,400	1,428	1,250
Tower Equipment Installers and Repairers	100	40	50
Telecom Technician (Non-Specific)**	400	180	140
Telecom System Troubleshooter**	200	90	240
Telecom System Testing**	200	90	240
Premises Installation Tech**	2,200	880	420
Underground Fiber Drop Technician**	400	180	160
Aerial Drop Technician**	900	350	230
Technician Total	4,400	1,810	1,480

Source: Continuum led 2024 national and proprietary study of broadband industry workforce size and need on the behalf of PCCA and FBA.
 Interpretive Note: * Apprentice position captures entry level, lower experience, and lower skill field trades performing lineman, splicer, helper, and operator functions.
 Interpretive Note: ** Interior and other fiber splicing skills and need are incorporated into technician positions.

2024 Broadband Industry Wages - Midwest vs. Missouri

Position	Midwest Low End	Midwest Median	Midwest High End	MO Survey Median*	MO BLS Median	National Median
119021 – Construction Manager (Project Manager)	\$50,000	\$84,000	\$158,660	\$79,163*	\$103,870	\$104,900
131051 – Estimator	\$54,120	\$70,102	\$104,000	\$103,862*	\$71,980	\$74,740
151141.1 – Contract Administrator	\$52,500	\$72,068	\$91,097	\$158,600*	nc	nc
172051.2 – Engineer Cost & Schedule	\$38,000	\$57,260	\$89,540	\$72,800*	nc	nc
299011 – Safety Specialist / Representative	\$98,780	\$101,380	\$103,980	\$78,000*	\$74,500	\$81,140
471011 – Supervisor (Superintendent, Foreman)	\$61,600	\$76,190	\$123,077	\$74,250*	\$80,300	\$76,760
472061 – Laborer	\$33,600	\$48,000	\$73,600	\$40,000*	\$47,530	\$45,300
472073 – Operator Light & Heavy Equipment	\$47,757	\$65,052	\$75,845	\$53,347*	\$61,990	\$56,160
472111 – Electrician / Fiber Splicer	\$48,000	\$63,000	\$83,200	\$89,695*	\$62,640	\$61,590
474010 – Inspector / Quality Assurance/Quality Control	\$50,400	\$66,000	\$96,000	\$57,750*	\$60,060	\$67,700
475031 – Operator HDD	\$36,000	\$58,000	\$115,260	\$53,000*	\$49,120	\$56,660
493042 – Operator Mechanic	nc	\$53,750	nc	\$46,000*	\$60,770	\$61,900
499051 & 499052 – Lineman Electrical & Telecom	\$46,200	\$94,420	\$101,883	\$80,450*	\$52,480	\$64,640
514121 – Welder	nc	\$49,000	nc	\$48,000*	\$47,260	\$48,940
533032 – Operator CDL Truck Driver only	\$52,000	\$54,500	\$76,800	\$53,750*	\$49,530	\$54,320

Source: Continuum led 2024 national and proprietary study of broadband industry wages on the behalf of PCCA and FBA.

Interpretive Note: Data does not include overtime (typically 15-30% of annual wage for most positions and as high as 60-100% for critical positions) or monetary/non-monetary benefits; n/c = not calculated, incomplete, or unanalyzed data set.

*=Missouri region including AR, IA, IL, KY, KS, MO, NE, OK, and TN.

2024 Broadband Industry Wages - National vs. Missouri

Position	MO BLS Median	National Median
Telecom/Broadband System Design	\$99,530	\$106,950
Telecom Technician	\$54,485	\$61,290
Telecom System Troubleshooter	See Telecom Tech	See Telecom Tech
Telecom System Testing	See Telecom Tech	See Telecom Tech
492021 - Radio, Cellular, and Tower Equipment Installers and Repairers	\$48,470	\$61,310
492022 - Telecommunications Equipment Installers and Repairers, Except Line Installers (Can include Fiber Optic Technicians/Broadband Technicians, Premises Installation Tech)	\$60,500	\$61,270
Premises Installation Tech	See 492022	See 492022
Underground Fiber Drop Technician	See 492022	See 492022
Aerial Drop Technician	See 492022	See 492022

Source: Bureau of Labor Statistics (BLS) raw data analyzed by Continuum..

Interpretive Note: Technician positions are not broken out in BLS data. Data collected during the research and survey process covered a subset of states and is not presented separately in these materials. n/c = not calculated, incomplete, or unanalyzed data set;

MT - Special Broadband Financing Programs Available

Program*	In progress or anticipated spending	
BEAD	\$786,217,248***	
Digital Equity	\$601,301	
Middle Mile	\$16,795,000	
Tribal (Round 1 & 2)	\$142,978,583 & \$75,060,977 (Estimated)	
Broadband Infrastructure	\$0	
Capital Project Fund	\$119,900,000	
RDOF	\$125,815,440	
CAF II	\$9,193,477	
RUS (2019-2023)	\$124,372,439	
Other (Estimated)	\$250,000,000	
Total (Estimated)	Total = \$1.7 Billion	Annual = \$250 Million

- ▶ Montana Construction Workforce Special Funding Need (Estimated)**
 - 600 field trades (helper, laborer, lineman, field crew splicer, operator, foreman, etc.)
 - Plus project management, design, locator, owner representative, inspection, etc.
- ▶ Montana Technician Workforce Special Funding Need (Estimated)**
 - 600 technicians (tower, troubleshooter, testing, premises, underground / overhead drop, etc.)

Source: Continuum analysis and presentation of public data from multiple sources.

Interpretive Note: * Not all special programs and state sponsored programs are listed. In addition, normal and routine spending on Broadband infrastructure is also not described in full detail.

Interpretive Note: ** Forecasted labor need does not incorporate retirements, attrition, or additional workforce needed for ongoing and routine, broadband construction activity.

Interpretive Note: ***. BEAD legislative funding amount grossed up by 25% to account for anticipated matching amounts.

MT – Broadband Workforce Size & Need

Construction & Technician Position	Workforce Estimate	2025-2032 Need	10 Yr Ret. & Attr. Need
Superintendent/General Foreman	40	36	20
Foreman	90	72	30
Lineman	200	180	70
Apprentice*	200	180	70
Field Crew Fiber Splicer	20	18	0
Groundman / Helper / Laborer	100	90	40
Operator / HDD Operator	40	36	20
Construction Field Total	690	612	250
Tower Equipment Installers and Repairers	40	30	20
Telecom Technician (Non-Specific)**	70	60	20
Telecom System Troubleshooter**	30	30	40
Telecom System Testing**	30	30	40
Premises Installation Tech**	300	280	60
Underground Fiber Drop Technician**	70	60	30
Aerial Drop Technician**	100	110	30
Technician Total	640	600	240

Source: Continuum led 2024 national and proprietary study of broadband industry workforce size and need on the behalf of PCCA and FBA.
 Interpretive Note: * Apprentice position captures entry level, lower experience, and lower skill field trades performing lineman, splicer, helper, and operator functions.
 Interpretive Note: ** Interior and other fiber splicing skills and need are incorporated into technician positions.

2024 Broadband Industry Wages - West vs. Montana

Position	West Low End	West Median	West High End	MT Survey Median*	MT BLS Median	National Median
119021 – Construction Manager (Project Manager)	\$58,000	\$100,680	\$158,660	\$87,490*	\$112,080	\$104,900
131051 – Estimator	\$54,240	\$91,560	\$196,560	\$62,330*	\$65,000	\$74,740
151141.1 – Contract Administrator	\$46,000	\$57,000	\$86,100	\$72,116*	nc	nc
172051.2 – Engineer Cost & Schedule	nc	\$67,700	\$89,540	\$52,080*	nc	nc
299011 – Safety Specialist / Representative	\$58,000	\$76,502	\$159,994	\$90,865*	\$78,310	\$81,140
471011 – Supervisor (Superintendent, Foreman)	\$50,000	\$66,000	\$126,200	\$79,125*	\$76,130	\$76,760
472061 – Laborer	\$29,000	\$45,000	\$80,000	\$49,500*	\$47,590	\$45,300
472073 – Operator Light & Heavy Equipment	\$40,000	\$56,000	\$90,000	\$63,000*	\$58,550	\$56,160
472111 – Electrician / Fiber Splicer	\$40,000	\$56,000	\$82,000	\$51,500*	\$64,590	\$61,590
474010 – Inspector / Quality Assurance / Quality Control	\$53,000	\$65,500	\$66,170	\$70,500*	\$62,080	\$67,700
475031 – Operator HDD	\$41,500	\$56,000	\$80,100	\$64,000*	\$44,240	\$56,660
493042 – Operator Mechanic	\$36,000	\$62,000	\$98,000	\$112,000*	\$65,770	\$61,900
499051 & 499052 – Lineman Electrical & Telecom	\$47,260	\$54,000	\$60,000	\$94,300*	\$55,410	\$64,640
514121 – Welder	\$48,000	\$52,000	\$91,000	nc	\$47,220	\$48,940
533032 – Operator CDL Truck Driver only	\$36,000	\$52,000	\$95,000	\$63,000*	\$56,610	\$54,320

Source: Continuum led 2024 national and proprietary study of broadband industry wages on the behalf of PCCA and FBA.

Interpretive Note: Data does not include overtime (typically 15-30% of annual wage for most positions and as high as 60-100% for critical positions) or monetary/non-monetary benefits;; n/c = not calculated, incomplete, or unanalyzed data set;

*=Montana region including ID, MN, MT, ND, SD, and WY.

2024 Broadband Industry Wages - National vs. Montana

Position	MT BLS Median	National Median
Telecom/Broadband System Design	\$90,600	\$106,950
Telecom Technician	\$52,915	\$61,290
Telecom System Troubleshooter	See Telecom Tech	See Telecom Tech
Telecom System Testing	See Telecom Tech	See Telecom Tech
492021 - Radio, Cellular, and Tower Equipment Installers and Repairers	\$36,030	\$61,310
492022 - Telecommunications Equipment Installers and Repairers, Except Line Installers (Can include Fiber Optic Technicians/Broadband Technicians, Premises Installation Tech)	\$69,800	\$61,270
Premises Installation Tech	See 492022	See 492022
Underground Fiber Drop Technician	See 492022	See 492022
Aerial Drop Technician	See 492022	See 492022

Source: Bureau of Labor Statistics (BLS) raw data analyzed by Continuum..

Interpretive Note: Technician positions are not broken out in BLS data. Data collected during the research and survey process covered a subset of states and is not presented separately in these materials. n/c = not calculated, incomplete, or unanalyzed data set;

NE - Special Broadband Financing Programs Available

Program*	In progress or anticipated spending	
BEAD	\$506,601,338***	
Digital Equity	\$598,746	
Middle Mile	\$36,374,797	
Tribal (Round 1 & 2)	\$41,248,827 & \$21,654,833 (Estimated)	
Broadband Infrastructure	\$18,375,002	
Capital Project Fund	\$87,700,000	
RDOF	\$60,377,537	
CAF II	\$41,090,057	
RUS (2019-2023)	\$15,159,924	
Other (Estimated)	\$300,000,000	
Total (Estimated)	Total = \$1.1 Billion	Annual = \$150 Million

- ▶ Nebraska Construction Workforce Special Funding Need (Estimated)**
 - 400 field trades (helper, laborer, lineman, field crew splicer, operator, foreman, etc.)
 - Plus project management, design, locator, owner representative, inspection, etc.
- ▶ Nebraska Technician Workforce Special Funding Need (Estimated)**
 - 600 technicians (tower, troubleshooter, testing, premises, underground / overhead drop, etc.)

Source: Continuum analysis and presentation of public data from multiple sources.

Interpretive Note: * Not all special programs and state sponsored programs are listed. In addition, normal and routine spending on Broadband infrastructure is also not described in full detail.

Interpretive Note: ** Forecasted labor need does not incorporate retirements, attrition, or additional workforce needed for ongoing and routine, broadband construction activity.

Interpretive Note: ***. BEAD legislative funding amount grossed up by 25% to account for anticipated matching amounts.

NE – Broadband Workforce Size & Need

Construction & Technician Position	Workforce Estimate	2025-2032 Need	10 Yr Ret. & Attr. Need
Superintendent/General Foreman	50	24	20
Foreman	100	48	40
Lineman	300	120	110
Apprentice*	300	120	110
Field Crew Fiber Splicer	30	12	10
Groundman / Helper / Laborer	100	60	40
Operator / HDD Operator	50	24	20
Construction Field Total	930	408	350
Tower Equipment Installers and Repairers	60	30	20
Telecom Technician (Non-Specific)**	100	60	40
Telecom System Troubleshooter**	60	30	60
Telecom System Testing**	60	30	60
Premises Installation Tech**	600	290	100
Underground Fiber Drop Technician**	100	60	40
Aerial Drop Technician**	300	110	70
Technician Total	1,280	610	390

Source: Continuum led 2024 national and proprietary study of broadband industry workforce size and need on the behalf of PCCA and FBA.
 Interpretive Note: * Apprentice position captures entry level, lower experience, and lower skill field trades performing lineman, splicer, helper, and operator functions.
 Interpretive Note: ** Interior and other fiber splicing skills and need are incorporated into technician positions.

2024 Broadband Industry Wages - Midwest vs. Nebraska

Position	Midwest Low End	Midwest Median	Midwest High End	NE Survey Median*	NE BLS Median	National Median
119021 – Construction Manager (Project Manager)	\$50,000	\$84,000	\$158,660	\$93,381*	\$88,590	\$104,900
131051 – Estimator	\$54,120	\$70,102	\$104,000	\$140,000*	\$66,560	\$74,740
151141.1 – Contract Administrator	\$52,500	\$72,068	\$91,097	nc	nc	nc
172051.2 – Engineer Cost & Schedule	\$38,000	\$57,260	\$89,540	\$63,620*	nc	nc
299011 – Safety Specialist / Representative	\$98,780	\$101,380	\$103,980	\$78,000*	\$69,930	\$81,140
471011 – Supervisor (Superintendent, Foreman)	\$61,600	\$76,190	\$123,077	\$86,539*	\$73,190	\$76,760
472061 – Laborer	\$33,600	\$48,000	\$73,600	\$46,000*	\$44,640	\$45,300
472073 – Operator Light & Heavy Equipment	\$47,757	\$65,052	\$75,845	\$64,500*	\$50,880	\$56,160
472111 – Electrician / Fiber Splicer	\$48,000	\$63,000	\$83,200	\$90,000*	\$59,660	\$61,590
474010 – Inspector / Quality Assurance/Quality Control	\$50,400	\$66,000	\$96,000	\$58,500*	\$66,260	\$67,700
475031 – Operator HDD	\$36,000	\$58,000	\$115,260	\$53,000*	\$48,360	\$56,660
493042 – Operator Mechanic	nc	\$53,750	nc	\$75,000*	\$60,290	\$61,900
499051 & 499052 – Lineman Electrical & Telecom	\$46,200	\$94,420	\$101,883	\$89,391*	\$44,650	\$64,640
514121 – Welder	nc	\$49,000	nc	nc	\$48,500	\$48,940
533032 – Operator CDL Truck Driver only	\$52,000	\$54,500	\$76,800	\$64,000*	\$55,320	\$54,320

Source: Continuum led 2024 national and proprietary study of broadband industry wages on the behalf of PCCA and FBA.

Interpretive Note: Data does not include overtime (typically 15-30% of annual wage for most positions and as high as 60-100% for critical positions) or monetary/non-monetary benefits; n/c = not calculated, incomplete, or unanalyzed data set.

*=Nebraska region including CO, IA, KS, MO, NE, SD, and WY.

2024 Broadband Industry Wages - National vs. Nebraska

Position	NE BLS Median	National Median
Telecom/Broadband System Design	\$102,080	\$106,950
Telecom Technician	\$54,470	\$61,290
Telecom System Troubleshooter	See Telecom Tech	See Telecom Tech
Telecom System Testing	See Telecom Tech	See Telecom Tech
492021 - Radio, Cellular, and Tower Equipment Installers and Repairers	\$51,490	\$61,310
492022 - Telecommunications Equipment Installers and Repairers, Except Line Installers (Can include Fiber Optic Technicians/Broadband Technicians, Premises Installation Tech)	\$57,450	\$61,270
Premises Installation Tech	See 492022	See 492022
Underground Fiber Drop Technician	See 492022	See 492022
Aerial Drop Technician	See 492022	See 492022

Source: Bureau of Labor Statistics (BLS) raw data analyzed by Continuum..

Interpretive Note: Technician positions are not broken out in BLS data. Data collected during the research and survey process covered a subset of states and is not presented separately in these materials. n/c = not calculated, incomplete, or unanalyzed data set;

NV - Special Broadband Financing Programs Available

Program*	In progress or anticipated spending	
BEAD	\$520,832,787***	
Digital Equity	\$754,459	
Middle Mile	\$135,214,487	
Tribal (Round 1 & 2)	\$35,459,555 & \$18,615,577 (Estimated)	
Broadband Infrastructure	\$18,375,002	
Capital Project Fund	\$73,700,000	
RDOF	\$63,536,611	
CAF II	\$29,277,976	
RUS (2019-2023)	\$15,159,924	
Other (Estimated)	\$350,000,000	
Total (Estimated)	Total = \$1.3 Billion	Annual = \$200 Million

- ▶ Nevada Construction Workforce Special Funding Need (Estimated)**
 - 400 field trades (helper, laborer, lineman, field crew splicer, operator, foreman, etc.)
 - Plus project management, design, locator, owner representative, inspection, etc.
- ▶ Nevada Technician Workforce Special Funding Need (Estimated)**
 - 300 technicians (tower, troubleshooter, testing, premises, underground / overhead drop, etc.)

Source: Continuum analysis and presentation of public data from multiple sources.

Interpretive Note: * Not all special programs and state sponsored programs are listed. In addition, normal and routine spending on Broadband infrastructure is also not described in full detail.

Interpretive Note: ** Forecasted labor need does not incorporate retirements, attrition, or additional workforce needed for ongoing and routine, broadband construction activity.

Interpretive Note: ***. BEAD legislative funding amount grossed up by 25% to account for anticipated matching amounts.

NV – Broadband Workforce Size & Need

Construction & Technician Position	Workforce Estimate	2025-2032 Need	10 Yr Ret. & Attr. Need
Superintendent/General Foreman	100	24	40
Foreman	200	48	70
Lineman	500	120	180
Apprentice*	500	120	180
Field Crew Fiber Splicer	50	12	20
Groundman / Helper / Laborer	300	60	110
Operator / HDD Operator	100	24	40
Construction Field Total	1,750	408	640
Tower Equipment Installers and Repairers	200	40	60
Telecom Technician (Non-Specific)**	100	30	50
Telecom System Troubleshooter**	60	10	90
Telecom System Testing**	60	10	90
Premises Installation Tech**	600	130	110
Underground Fiber Drop Technician**	100	30	70
Aerial Drop Technician**	200	50	60
Technician Total	1,320	300	530

Source: Continuum led 2024 national and proprietary study of broadband industry workforce size and need on the behalf of PCCA and FBA.
 Interpretive Note: * Apprentice position captures entry level, lower experience, and lower skill field trades performing lineman, splicer, helper, and operator functions.
 Interpretive Note: ** Interior and other fiber splicing skills and need are incorporated into technician positions.

2024 Broadband Industry Wages - West vs. Nevada

Position	West Low End	West Median	West High End	NV Survey Median	NV BLS Median	National Median
119021 – Construction Manager (Project Manager)	\$58,000	\$100,680	\$158,660	\$75,754	\$100,100	\$104,900
131051 – Estimator	\$54,240	\$91,560	\$196,560	\$58,502	\$78,590	\$74,740
151141.1 – Contract Administrator	\$46,000	\$57,000	\$86,100	nc	nc	nc
172051.2 – Engineer Cost & Schedule	nc	\$67,700	\$89,540	nc	nc	nc
299011 – Safety Specialist / Representative	\$58,000	\$76,502	\$159,994	\$76,504	\$88,050	\$81,140
471011 – Supervisor (Superintendent, Foreman)	\$50,000	\$66,000	\$126,200	\$58,000	\$80,030	\$76,760
472061 – Laborer	\$29,000	\$45,000	\$80,000	\$40,000	\$47,250	\$45,300
472073 – Operator Light & Heavy Equipment	\$40,000	\$56,000	\$90,000	\$51,000	\$68,050	\$56,160
472111 – Electrician / Fiber Splicer	\$40,000	\$56,000	\$82,000	\$46,000	\$60,460	\$61,590
474010 – Inspector / Quality Assurance / Quality Control	\$53,000	\$65,500	\$66,170	nc	\$84,980	\$67,700
475031 – Operator HDD	\$41,500	\$56,000	\$80,100	nc	\$60,520	\$56,660
493042 – Operator Mechanic	\$36,000	\$62,000	\$98,000	\$60,000	\$75,930	\$61,900
499051 & 499052 – Lineman Electrical & Telecom	\$47,260	\$54,000	\$60,000	nc	\$50,320	\$64,640
514121 – Welder	\$48,000	\$52,000	\$91,000	\$51,000	\$53,240	\$48,940
533032 – Operator CDL Truck Driver only	\$36,000	\$52,000	\$95,000	\$50,000	\$57,720	\$54,320

Source: Continuum led 2024 national and proprietary study of broadband industry wages on the behalf of PCCA and FBA.

Interpretive Note: Data does not include overtime (typically 15-30% of annual wage for most positions and as high as 60-100% for critical positions) or monetary/non-monetary benefits; n/c = not calculated, incomplete, or unanalyzed data set;

2024 Broadband Industry Wages - National vs. Nevada

Position	NV BLS Median	National Median
Telecom/Broadband System Design	\$95,140	\$106,950
Telecom Technician	\$71,470	\$61,290
Telecom System Troubleshooter	See Telecom Tech	See Telecom Tech
Telecom System Testing	See Telecom Tech	See Telecom Tech
492021 - Radio, Cellular, and Tower Equipment Installers and Repairers	\$75,600	\$61,310
492022 - Telecommunications Equipment Installers and Repairers, Except Line Installers (Can include Fiber Optic Technicians/Broadband Technicians, Premises Installation Tech)	\$67,340	\$61,270
Premises Installation Tech	See 492022	See 492022
Underground Fiber Drop Technician	See 492022	See 492022
Aerial Drop Technician	See 492022	See 492022

Source: Bureau of Labor Statistics (BLS) raw data analyzed by Continuum..

Interpretive Note: Technician positions are not broken out in BLS data. Data collected during the research and survey process covered a subset of states and is not presented separately in these materials. n/c = not calculated, incomplete, or unanalyzed data set;

NH - Special Broadband Financing Programs Available

Program*	In progress or anticipated spending	
BEAD	\$245,700,349***	
Digital Equity	\$525,034	
Middle Mile	\$17,098,571	
Tribal (Round 1 & 2)	\$0 & \$0 (Estimated)	
Broadband Infrastructure	\$0	
Capital Project Fund	\$116,000,000	
RDOF	\$25,257,661	
CAF II	\$0	
RUS (2019-2023)	\$0	
Other (Estimated)	\$150,000,000	
Total (Estimated)	Total = \$550 Million	Annual = \$75 Million

- ▶ New Hampshire Construction Workforce Special Funding Need (Estimated)**
 - 200 field trades (helper, laborer, lineman, field crew splicer, operator, foreman, etc.)
 - Plus project management, design, locator, owner representative, inspection, etc.
- ▶ New Hampshire Technician Workforce Special Funding Need (Estimated)**
 - 200 technicians (tower, troubleshooter, testing, premises, underground / overhead drop, etc.)

Source: Continuum analysis and presentation of public data from multiple sources.

Interpretive Note: * Not all special programs and state sponsored programs are listed. In addition, normal and routine spending on Broadband infrastructure is also not described in full detail.

Interpretive Note: ** Forecasted labor need does not incorporate retirements, attrition, or additional workforce needed for ongoing and routine, broadband construction activity.

Interpretive Note: ***. BEAD legislative funding amount grossed up by 25% to account for anticipated matching amounts.

NH – Broadband Workforce Size & Need

Construction & Technician Position	Workforce Estimate	2025-2032 Need	10 Yr Ret. & Attr. Need
Superintendent/General Foreman	50	12	20
Foreman	100	24	40
Lineman	300	60	100
Apprentice*	300	60	100
Field Crew Fiber Splicer	30	6	10
Groundman / Helper / Laborer	100	30	40
Operator / HDD Operator	50	12	20
Construction Field Total	930	204	330
Tower Equipment Installers and Repairers	200	40	50
Telecom Technician (Non-Specific)**	90	20	40
Telecom System Troubleshooter**	40	10	60
Telecom System Testing**	40	10	60
Premises Installation Tech**	400	80	80
Underground Fiber Drop Technician**	90	20	40
Aerial Drop Technician**	200	30	50
Technician Total	1,060	210	380

Source: Continuum led 2024 national and proprietary study of broadband industry workforce size and need on the behalf of PCCA and FBA.
 Interpretive Note: * Apprentice position captures entry level, lower experience, and lower skill field trades performing lineman, splicer, helper, and operator functions.
 Interpretive Note: ** Interior and other fiber splicing skills and need are incorporated into technician positions.

2024 Broadband Industry Wages – Midwest & Northeast vs. **CONTINUUM** Capital

New Hampshire

Position	MW & NE Low End	MW & NE Median	MW & NE High End	NH Survey Median*	NH BLS Median	National Median
119021 – Construction Manager (Project Manager)	\$50,000	\$84,000	\$158,660	\$93,600*	\$104,900	\$104,900
131051 – Estimator	\$54,120	\$70,102	\$104,000	nc	\$75,260	\$74,740
151141.1 – Contract Administrator	\$52,500	\$72,068	\$91,097	nc	nc	nc
172051.2 – Engineer Cost & Schedule	\$38,000	\$57,240	\$89,540	\$52,000*	nc	nc
299011 – Safety Specialist / Representative	\$84,000	\$79,872	\$106,660	\$67,600*	\$84,500	\$81,140
471011 – Supervisor (Superintendent, Foreman)	\$72,120	\$82,500	\$124,529	\$129,820*	\$74,630	\$76,760
472061 – Laborer	\$33,600	\$48,000	\$73,600	\$57,250*	\$45,220	\$45,300
472073 – Operator Light & Heavy Equipment	\$47,757	\$65,052	\$75,845	\$72,120*	\$62,400	\$56,160
472111 – Electrician / Fiber Splicer	\$48,000	\$63,000	\$83,200	nc	\$61,270	\$61,590
474010 – Inspector / Quality Assurance / Quality Control	\$50,400	\$65,168	\$96,000	nc	\$64,550	\$67,700
475031 – Operator HDD	\$36,000	\$58,000	\$115,260	nc	\$62,010	\$56,660
493042 – Operator Mechanic	nc	\$54,000	\$120,200	\$62,000*	\$62,060	\$61,900
499051 & 499052 – Lineman Electrical & Telecom	\$71,282	\$96,222	\$113,206	\$120,200*	\$80,850	\$64,640
514121 – Welder	nc	\$51,500	nc	\$50,250*	\$55,130	\$48,940
533032 – Operator CDL Truck Driver only	nc	\$52,000	\$76,800	\$49,000*	\$56,820	\$54,320

Source: Continuum led 2024 national and proprietary study of broadband industry wages on the behalf of PCCA and FBA.

Interpretive Note: Data does not include overtime (typically 15-30% of annual wage for most positions and as high as 60-100% for critical positions) or monetary/non-monetary benefits; n/c = not calculated, incomplete, or unanalyzed data set;

*=New Hampshire region including CT, DE, MA, ME, NH, NJ, NY, PA, RI, and VT.

2024 Broadband Industry Wages - National vs. New Hampshire

Position	NH BLS Median	National Median
Telecom/Broadband System Design	\$133,180	\$106,950
Telecom Technician	\$66,065	\$61,290
Telecom System Troubleshooter	See Telecom Tech	See Telecom Tech
Telecom System Testing	See Telecom Tech	See Telecom Tech
492021 - Radio, Cellular, and Tower Equipment Installers and Repairers	\$50,600	\$61,310
492022 - Telecommunications Equipment Installers and Repairers, Except Line Installers (Can include Fiber Optic Technicians/Broadband Technicians, Premises Installation Tech)	\$81,530	\$61,270
Premises Installation Tech	See 492022	See 492022
Underground Fiber Drop Technician	See 492022	See 492022
Aerial Drop Technician	See 492022	See 492022

Source: Bureau of Labor Statistics (BLS) raw data analyzed by Continuum..

Interpretive Note: Technician positions are not broken out in BLS data. Data collected during the research and survey process covered a subset of states and is not presented separately in these materials. n/c = not calculated, incomplete, or unanalyzed data set;

NJ - Special Broadband Financing Programs Available

Program*	In progress or anticipated spending	
BEAD	\$329,611,936***	
Digital Equity	\$1,176,740	
Middle Mile	\$34,538,132	
Tribal (Round 1 & 2)	\$0 & \$0 (Estimated)	
Broadband Infrastructure	\$0	
Capital Project Fund	\$0	
RDOF	\$10,739,474	
CAF II	\$1,621,782	
RUS (2019-2023)	\$0	
Other (Estimated)	\$150,000,000	
Total (Estimated)	Total = \$525 Million	Annual = \$75 Million

- ▶ New Jersey Construction Workforce Special Funding Need (Estimated)**
 - 200 field trades (helper, laborer, lineman, field crew splicer, operator, foreman, etc.)
 - Plus project management, design, locator, owner representative, inspection, etc.
- ▶ New Jersey Technician Workforce Special Funding Need (Estimated)**
 - 100 technicians (tower, troubleshooter, testing, premises, underground / overhead drop, etc.)

Source: Continuum analysis and presentation of public data from multiple sources.

Interpretive Note: * Not all special programs and state sponsored programs are listed. In addition, normal and routine spending on Broadband infrastructure is also not described in full detail.

Interpretive Note: ** Forecasted labor need does not incorporate retirements, attrition, or additional workforce needed for ongoing and routine, broadband construction activity.

Interpretive Note: ***. BEAD legislative funding amount grossed up by 25% to account for anticipated matching amounts.

NJ – Broadband Workforce Size & Need

Construction & Technician Position	Workforce Estimate	2025-2032 Need	10 Yr Ret. & Attr. Need
Superintendent/General Foreman	300	12	100
Foreman	600	24	190
Lineman	1,500	60	500
Apprentice*	1,500	60	500
Field Crew Fiber Splicer	100	6	40
Groundman / Helper / Laborer	700	30	200
Operator / HDD Operator	300	12	100
Construction Field Total	5,000	204	1,630
Tower Equipment Installers and Repairers	1,000	30	250
Telecom Technician (Non-Specific)**	300	10	150
Telecom System Troubleshooter**	100	0	220
Telecom System Testing**	100	0	220
Premises Installation Tech**	1,300	40	320
Underground Fiber Drop Technician**	300	10	160
Aerial Drop Technician**	500	10	150
Technician Total	3,600	100	1,470

Source: Continuum led 2024 national and proprietary study of broadband industry workforce size and need on the behalf of PCCA and FBA.
 Interpretive Note: * Apprentice position captures entry level, lower experience, and lower skill field trades performing lineman, splicer, helper, and operator functions.
 Interpretive Note: ** Interior and other fiber splicing skills and need are incorporated into technician positions.

2024 Broadband Industry Wages – Midwest & Northeast vs. **CONTINUUM**

New Jersey

Position	MW & NE Low End	MW & NE Median	MW & NE High End	NJ Survey Median*	NJ BLS Median	National Median
119021 – Construction Manager (Project Manager)	\$50,000	\$84,000	\$158,660	\$93,600*	\$142,810	\$104,900
131051 – Estimator	\$54,120	\$70,102	\$104,000	\$70,102**	\$80,820	\$74,740
151141.1 – Contract Administrator	\$52,500	\$72,068	\$91,097	nc	nc	nc
172051.2 – Engineer Cost & Schedule	\$38,000	\$57,240	\$89,540	\$52,000*	nc	nc
299011 – Safety Specialist / Representative	\$84,000	\$79,872	\$106,660	\$67,600*	\$92,370	\$81,140
471011 – Supervisor (Superintendent, Foreman)	\$72,120	\$82,500	\$124,529	\$129,820*	\$92,770	\$76,760
472061 – Laborer	\$33,600	\$48,000	\$73,600	\$57,250*	\$60,830	\$45,300
472073 – Operator Light & Heavy Equipment	\$47,757	\$65,052	\$75,845	\$72,120*	\$81,580	\$56,160
472111 – Electrician / Fiber Splicer	\$48,000	\$63,000	\$83,200	\$59,000***	\$68,250	\$61,590
474010 – Inspector / Quality Assurance / Quality Control	\$50,400	\$65,168	\$96,000	nc	\$78,830	\$67,700
475031 – Operator HDD	\$36,000	\$58,000	\$115,260	\$52,360**	\$74,390	\$56,660
493042 – Operator Mechanic	nc	\$54,000	\$120,200	\$62,000*	\$72,060	\$61,900
499051 & 499052 – Lineman Electrical & Telecom	\$71,282	\$96,222	\$113,206	\$120,200*	\$98,890	\$64,640
514121 – Welder	nc	\$51,500	nc	\$50,250*	\$57,300	\$48,940
533032 – Operator CDL Truck Driver only	nc	\$52,000	\$76,800	\$49,000*	\$62,490	\$54,320

Source: Continuum led 2024 national and proprietary study of broadband industry wages on the behalf of PCCA and FBA.

Interpretive Note: Data does not include overtime (typically 15-30% of annual wage for most positions and as high as 60-100% for critical positions) or monetary/non-monetary benefits; n/c = not calculated, incomplete, or unanalyzed data set;

*=New Jersey region including DE, MD, NJ, NY, and PA.

2024 Broadband Industry Wages - National vs. New Jersey

Position	NJ BLS Median	National Median
Telecom/Broadband System Design	\$108,120	\$106,950
Telecom Technician	\$66,415	\$61,290
Telecom System Troubleshooter	See Telecom Tech	See Telecom Tech
Telecom System Testing	See Telecom Tech	See Telecom Tech
492021 - Radio, Cellular, and Tower Equipment Installers and Repairers	\$64,970	\$61,310
492022 - Telecommunications Equipment Installers and Repairers, Except Line Installers (Can include Fiber Optic Technicians/Broadband Technicians, Premises Installation Tech)	\$67,860	\$61,270
Premises Installation Tech	See 492022	See 492022
Underground Fiber Drop Technician	See 492022	See 492022
Aerial Drop Technician	See 492022	See 492022

Source: Bureau of Labor Statistics (BLS) raw data analyzed by Continuum..

Interpretive Note: Technician positions are not broken out in BLS data. Data collected during the research and survey process covered a subset of states and is not presented separately in these materials. n/c = not calculated, incomplete, or unanalyzed data set;

NM - Special Broadband Financing Programs Available

Program*	In progress or anticipated spending	
BEAD	\$844,215,390***	
Digital Equity	\$740,535	
Middle Mile	\$102,348,503	
Tribal (Round 1 & 2)	\$186,765,077 & \$98,048,036 (Estimated)	
Broadband Infrastructure	\$0	
Capital Project Fund	\$117,000,000	
RDOF	\$165,209,719	
CAF II	\$26,232,783	
RUS (2019-2023)	\$370,387,266	
Other (Estimated)	\$600,000,000	
Total (Estimated)	Total = \$2.5 Billion	Annual = \$350 Million

- ▶ New Mexico Construction Workforce Special Funding Need (Estimated)**
 - 800 field trades (helper, laborer, lineman, field crew splicer, operator, foreman, etc.)
 - Plus project management, design, locator, owner representative, inspection, etc.
- ▶ New Mexico Technician Workforce Special Funding Need (Estimated)**
 - 1,500 technicians (tower, troubleshooter, testing, premises, underground / overhead drop, etc.)

Source: Continuum analysis and presentation of public data from multiple sources.

Interpretive Note: * Not all special programs and state sponsored programs are listed. In addition, normal and routine spending on Broadband infrastructure is also not described in full detail.

Interpretive Note: ** Forecasted labor need does not incorporate retirements, attrition, or additional workforce needed for ongoing and routine, broadband construction activity.

Interpretive Note: ***. BEAD legislative funding amount grossed up by 25% to account for anticipated matching amounts.

NM – Broadband Workforce Size & Need

Construction & Technician Position	Workforce Estimate	2025-2032 Need	10 Yr Ret. & Attr. Need
Superintendent/General Foreman	40	48	20
Foreman	80	96	20
Lineman	200	240	60
Apprentice*	200	240	60
Field Crew Fiber Splicer	20	24	0
Groundman / Helper / Laborer	100	120	40
Operator / HDD Operator	40	48	20
Construction Field Total	680	816	220
Tower Equipment Installers and Repairers	100	160	30
Telecom Technician (Non-Specific)**	100	130	30
Telecom System Troubleshooter**	60	70	40
Telecom System Testing**	60	70	40
Premises Installation Tech**	600	670	100
Underground Fiber Drop Technician**	100	130	40
Aerial Drop Technician**	200	270	50
Technician Total	1,220	1,500	330

Source: Continuum led 2024 national and proprietary study of broadband industry workforce size and need on the behalf of PCCA and FBA.
 Interpretive Note: * Apprentice position captures entry level, lower experience, and lower skill field trades performing lineman, splicer, helper, and operator functions.
 Interpretive Note: ** Interior and other fiber splicing skills and need are incorporated into technician positions.

2024 Broadband Industry Wages - West vs. New Mexico

Position	West Low End	West Median	West High End	NM Survey Median*	NM BLS Median	National Median
119021 – Construction Manager (Project Manager)	\$58,000	\$100,680	\$158,660	\$87,006*	\$93,370	\$104,900
131051 – Estimator	\$54,240	\$91,560	\$196,560	\$94,261*	\$72,730	\$74,740
151141.1 – Contract Administrator	\$46,000	\$57,000	\$86,100	nc	nc	nc
172051.2 – Engineer Cost & Schedule	nc	\$67,700	\$89,540	\$58,800*	nc	nc
299011 – Safety Specialist / Representative	\$58,000	\$76,502	\$159,994	\$74,984*	\$81,250	\$81,140
471011 – Supervisor (Superintendent, Foreman)	\$50,000	\$66,000	\$126,200	\$68,000*	\$66,570	\$76,760
472061 – Laborer	\$29,000	\$45,000	\$80,000	\$44,000*	\$37,260	\$45,300
472073 – Operator Light & Heavy Equipment	\$40,000	\$56,000	\$90,000	\$62,000*	\$47,420	\$56,160
472111 – Electrician / Fiber Splicer	\$40,000	\$56,000	\$82,000	\$60,000*	\$56,000	\$61,590
474010 – Inspector / Quality Assurance / Quality Control	\$53,000	\$65,500	\$66,170	nc	\$61,130	\$67,700
475031 – Operator HDD	\$41,500	\$56,000	\$80,100	\$54,200*	nc	\$56,660
493042 – Operator Mechanic	\$36,000	\$62,000	\$98,000	\$58,000*	\$57,720	\$61,900
499051 & 499052 – Lineman Electrical & Telecom	\$47,260	\$54,000	\$60,000	\$86,865*	\$57,530	\$64,640
514121 – Welder	\$48,000	\$52,000	\$91,000	\$91,000*	\$48,990	\$48,940
533032 – Operator CDL Truck Driver only	\$36,000	\$52,000	\$95,000	\$52,000*	\$46,830	\$54,320

Source: Continuum led 2024 national and proprietary study of broadband industry wages on the behalf of PCCA and FBA.

Interpretive Note: Data does not include overtime (typically 15-30% of annual wage for most positions and as high as 60-100% for critical positions) or monetary/non-monetary benefits; n/c = not calculated, incomplete, or unanalyzed data set;

*= New Mexico region including AZ, CO, NM, OK, TX, and UT.

2024 Broadband Industry Wages - National vs. New Mexico

Position	NM BLS Median	National Median
Telecom/Broadband System Design	\$135,880	\$106,950
Telecom Technician	\$66,050	\$61,290
Telecom System Troubleshooter	See Telecom Tech	See Telecom Tech
Telecom System Testing	See Telecom Tech	See Telecom Tech
492021 - Radio, Cellular, and Tower Equipment Installers and Repairers	\$73,600	\$61,310
492022 - Telecommunications Equipment Installers and Repairers, Except Line Installers (Can include Fiber Optic Technicians/Broadband Technicians, Premises Installation Tech)	\$58,500	\$61,270
Premises Installation Tech	See 492022	See 492022
Underground Fiber Drop Technician	See 492022	See 492022
Aerial Drop Technician	See 492022	See 492022

Source: Bureau of Labor Statistics (BLS) raw data analyzed by Continuum..

Interpretive Note: Technician positions are not broken out in BLS data. Data collected during the research and survey process covered a subset of states and is not presented separately in these materials. n/c = not calculated, incomplete, or unanalyzed data set;

NY - Special Broadband Financing Programs Available

Program*	In progress or anticipated spending	
BEAD	\$830,772,814***	
Digital Equity	\$2,178,650	
Middle Mile	\$24,450,000	
Tribal (Round 1 & 2)	\$10,697,449 & \$5,615,953 (Estimated)	
Broadband Infrastructure	\$29,985,800	
Capital Project Fund	\$328,300,000	
RDOF	\$99,891,716	
CAF II	\$0	
RUS (2019-2023)	\$36,110,728	
Other (Estimated)	\$500,000,000	
Total (Estimated)	Total = \$1.9 Billion	Annual = \$275 Million

- ▶ New York Construction Workforce Special Funding Need (Estimated)**
 - 600 field trades (helper, laborer, lineman, field crew splicer, operator, foreman, etc.)
 - Plus project management, design, locator, owner representative, inspection, etc.
- ▶ New York Technician Workforce Special Funding Need (Estimated)**
 - 500 technicians (tower, troubleshooter, testing, premises, underground / overhead drop, etc.)

Source: Continuum analysis and presentation of public data from multiple sources.

Interpretive Note: * Not all special programs and state sponsored programs are listed. In addition, normal and routine spending on Broadband infrastructure is also not described in full detail.

Interpretive Note: ** Forecasted labor need does not incorporate retirements, attrition, or additional workforce needed for ongoing and routine, broadband construction activity.

Interpretive Note: ***. BEAD legislative funding amount grossed up by 25% to account for anticipated matching amounts.

NY – Broadband Workforce Size & Need

Construction & Technician Position	Workforce Estimate	2025-2032 Need	10 Yr Ret. & Attr. Need
Superintendent/General Foreman	900	36	300
Foreman	1,800	72	600
Lineman	4,600	180	1,500
Apprentice*	4,600	180	1,500
Field Crew Fiber Splicer	500	18	160
Groundman / Helper / Laborer	2,300	90	700
Operator / HDD Operator	900	36	300
Construction Field Total	15,600	612	5,060
Tower Equipment Installers and Repairers	200	10	140
Telecom Technician (Non-Specific)**	1,200	50	500
Telecom System Troubleshooter**	600	20	800
Telecom System Testing**	600	20	800
Premises Installation Tech**	5,900	250	1,280
Underground Fiber Drop Technician**	1,200	50	500
Aerial Drop Technician**	2,300	100	600
Technician Total	12,000	500	4,620

Source: Continuum led 2024 national and proprietary study of broadband industry workforce size and need on the behalf of PCCA and FBA.
 Interpretive Note: * Apprentice position captures entry level, lower experience, and lower skill field trades performing lineman, splicer, helper, and operator functions.
 Interpretive Note: ** Interior and other fiber splicing skills and need are incorporated into technician positions.

2024 Broadband Industry Wages – Midwest & Northeast vs. **CONTINUUM** Capital

New York

Position	MW & NE Low End	MW & NE Median	MW & NE High End	NY Survey Median*	NY BLS Median	National Median
119021 – Construction Manager (Project Manager)	\$50,000	\$84,000	\$158,660	\$93,600*	\$139,370	\$104,900
131051 – Estimator	\$54,120	\$70,102	\$104,000	\$70,102**	\$80,460	\$74,740
151141.1 – Contract Administrator	\$52,500	\$72,068	\$91,097	nc	nc	nc
172051.2 – Engineer Cost & Schedule	\$38,000	\$57,240	\$89,540	\$52,000*	nc	nc
299011 – Safety Specialist / Representative	\$84,000	\$79,872	\$106,660	\$67,600*	\$82,040	\$81,140
471011 – Supervisor (Superintendent, Foreman)	\$72,120	\$82,500	\$124,529	\$129,820*	\$89,170	\$76,760
472061 – Laborer	\$33,600	\$48,000	\$73,600	\$57,250*	\$56,650	\$45,300
472073 – Operator Light & Heavy Equipment	\$47,757	\$65,052	\$75,845	\$72,120*	\$73,660	\$56,160
472111 – Electrician / Fiber Splicer	\$48,000	\$63,000	\$83,200	\$59,000**	\$77,430	\$61,590
474010 – Inspector / Quality Assurance / Quality Control	\$50,400	\$65,168	\$96,000	nc	\$80,280	\$67,700
475031 – Operator HDD	\$36,000	\$58,000	\$115,260	\$52,360**	\$75,130	\$56,660
493042 – Operator Mechanic	nc	\$54,000	\$120,200	\$62,000*	\$63,910	\$61,900
499051 & 499052 – Lineman Electrical & Telecom	\$71,282	\$96,222	\$113,206	\$120,200*	\$100,090	\$64,640
514121 – Welder	nc	\$51,500	nc	\$50,250*	\$55,470	\$48,940
533032 – Operator CDL Truck Driver only	nc	\$52,000	\$76,800	\$49,000*	\$58,430	\$54,320

Source: Continuum led 2024 national and proprietary study of broadband industry wages on the behalf of PCCA and FBA.

Interpretive Note: Data does not include overtime (typically 15-30% of annual wage for most positions and as high as 60-100% for critical positions) or monetary/non-monetary benefits; n/c = not calculated, incomplete, or unanalyzed data set;

*=New York region including CT, DE, MA, ME, NH, NJ, NY, PA, RI, and VT.

2024 Broadband Industry Wages - National vs. New York

Position	NY BLS Median	National Median
Telecom/Broadband System Design	\$107,000	\$106,950
Telecom Technician	\$67,655	\$61,290
Telecom System Troubleshooter	See Telecom Tech	See Telecom Tech
Telecom System Testing	See Telecom Tech	See Telecom Tech
492021 - Radio, Cellular, and Tower Equipment Installers and Repairers	\$77,480	\$61,310
492022 - Telecommunications Equipment Installers and Repairers, Except Line Installers (Can include Fiber Optic Technicians/Broadband Technicians, Premises Installation Tech)	\$57,830	\$61,270
Premises Installation Tech	See 492022	See 492022
Underground Fiber Drop Technician	See 492022	See 492022
Aerial Drop Technician	See 492022	See 492022

Source: Bureau of Labor Statistics (BLS) raw data analyzed by Continuum..

Interpretive Note: Technician positions are not broken out in BLS data. Data collected during the research and survey process covered a subset of states and is not presented separately in these materials. n/c = not calculated, incomplete, or unanalyzed data set;

NC - Special Broadband Financing Programs Available

Program*	In progress or anticipated spending	
BEAD	\$1,916,249,351***	
Digital Equity	\$1,415,610	
Middle Mile	\$18,959,598	
Tribal (Round 1 & 2)	\$500,000 and \$262,490 (Estimated)	
Broadband Infrastructure	\$29,985,800	
Capital Project Fund	\$259,900,000	
RDOF	\$166,580,442	
CAF II	\$679,130	
RUS (2019-2023)	\$135,911,426	
Other (Estimated)	\$1,400,000,000	
Total (Estimated)	Total = \$4 Billion	Annual = \$575 Million

- ▶ North Carolina Construction Workforce Special Funding Need (Estimated)**
 - 1,300 field trades (helper, laborer, lineman, field crew splicer, operator, foreman, etc.)
 - Plus project management, design, locator, owner representative, inspection, etc.
- ▶ North Carolina Technician Workforce Special Funding Need (Estimated)**
 - 1,000 technicians (tower, troubleshooter, testing, premises, underground / overhead drop, etc.)

Source: Continuum analysis and presentation of public data from multiple sources.

Interpretive Note: * Not all special programs and state sponsored programs are listed. In addition, normal and routine spending on Broadband infrastructure is also not described in full detail.

Interpretive Note: ** Forecasted labor need does not incorporate retirements, attrition, or additional workforce needed for ongoing and routine, broadband construction activity.

Interpretive Note: ***. BEAD legislative funding amount grossed up by 25% to account for anticipated matching amounts.

NC – Broadband Workforce Size & Need

Construction & Technician Position	Workforce Estimate	2025-2032 Need	10 Yr Ret. & Attr. Need
Superintendent/General Foreman	500	78	160
Foreman	900	156	300
Lineman	2,300	390	700
Apprentice*	2,300	390	700
Field Crew Fiber Splicer	200	39	60
Groundman / Helper / Laborer	1,200	195	400
Operator / HDD Operator	500	78	160
Construction Field Total	7,900	1,326	2,480
Tower Equipment Installers and Repairers	400	70	160
Telecom Technician (Non-Specific)**	600	90	200
Telecom System Troubleshooter**	300	50	360
Telecom System Testing**	300	50	360
Premises Installation Tech**	2,800	470	630
Underground Fiber Drop Technician**	600	90	300
Aerial Drop Technician**	1,100	190	280
Technician Total	6,100	1,010	2,290

Source: Continuum led 2024 national and proprietary study of broadband industry workforce size and need on the behalf of PCCA and FBA.
 Interpretive Note: * Apprentice position captures entry level, lower experience, and lower skill field trades performing lineman, splicer, helper, and operator functions.
 Interpretive Note: ** Interior and other fiber splicing skills and need are incorporated into technician positions.

2024 Broadband Industry Wages - South vs. North Carolina

Position	South Low End	South Median	South High End	NC Survey Median	NC BLS Median	National Median
119021 – Construction Manager (Project Manager)	\$58,000	\$81,003	\$158,660	\$79,632*	\$101,400	\$104,900
131051 – Estimator	\$50,120	\$80,462	\$144,880	nc	\$65,220	\$74,740
151141.1 – Contract Administrator	\$50,000	\$69,000	nc	\$69,000*	nc	nc
172051.2 – Engineer Cost & Schedule	\$35,000	\$56,000	\$78,000	\$56,000*	nc	nc
299011 – Safety Specialist / Representative	\$58,000	\$81,120	\$159,994	\$80,000*	\$79,500	\$81,140
471011 – Supervisor (Superintendent, Foreman)	\$50,732	\$73,670	\$126,200	\$67,800*	\$65,690	\$76,760
472061 – Laborer	\$29,000	\$36,000	\$76,400	\$38,000*	\$38,550	\$45,300
472073 – Operator Light & Heavy Equipment	\$42,760	\$50,200	\$75,845	\$49,786*	\$47,460	\$56,160
472111 – Electrician / Fiber Splicer	\$71,282	\$74,310	\$113,206	\$54,940*	\$50,950	\$61,590
474010 – Inspector / Quality Assurance / Quality Control	nc	nc	nc	nc	\$63,590	\$67,700
475031 – Operator HDD	\$36,000	\$54,200	\$115,260	\$49,940*	\$54,150	\$56,660
493042 – Operator Mechanic	\$36,000	\$60,000	\$98,000	\$57,000*	\$56,530	\$61,900
499051 & 499052 – Lineman Electrical & Telecom	\$42,764	\$74,310	\$113,206	\$71,661*	\$56,390	\$64,640
514121 – Welder	\$48,000	\$52,000	\$91,000	nc	\$48,620	\$48,940
533032 – Operator CDL Truck Driver only	\$36,000	\$49,800	\$95,000	\$56,000*	\$49,090	\$54,320

Source: Continuum led 2024 national and proprietary study of broadband industry wages on the behalf of PCCA and FBA.

Interpretive Note: Data does not include overtime (typically 15-30% of annual wage for most positions and as high as 60-100% for critical positions) or monetary/non-monetary benefits; n/c = not calculated, incomplete, or unanalyzed data set.

*=North Carolina Region including GA, NC, SC, TN, and VA.

2024 Broadband Industry Wages - National vs. North Carolina

Position	NC BLS Median	National Median
Telecom/Broadband System Design	\$101,170	\$106,950
Telecom Technician	\$54,685	\$61,290
Telecom System Troubleshooter	See Telecom Tech	See Telecom Tech
Telecom System Testing	See Telecom Tech	See Telecom Tech
492021 - Radio, Cellular, and Tower Equipment Installers and Repairers	\$50,670	\$61,310
492022 - Telecommunications Equipment Installers and Repairers, Except Line Installers (Can include Fiber Optic Technicians/Broadband Technicians, Premises Installation Tech)	\$58,700	\$61,270
Premises Installation Tech	See 492022	See 492022
Underground Fiber Drop Technician	See 492022	See 492022
Aerial Drop Technician	See 492022	See 492022

Source: Bureau of Labor Statistics (BLS) raw data analyzed by Continuum..

Interpretive Note: Technician positions are not broken out in BLS data. Data collected during the research and survey process covered a subset of states and is not presented separately in these materials. n/c = not calculated, incomplete, or unanalyzed data set;

ND - Special Broadband Financing Programs Available

Program*	In progress or anticipated spending	
BEAD	\$162,703,519***	
Digital Equity	\$516,380	
Middle Mile	\$43,801,277	
Tribal (Round 1 & 2)	\$9,137,952 & \$4,797,247 (Estimated)	
Broadband Infrastructure	\$0	
Capital Project Fund	\$37,300,000	
RDOF	\$20,824,521	
CAF II	\$7,226,602	
RUS (2019-2023)	\$88,035,301	
Other (Estimated)	\$100,000,000	
Total (Estimated)	Total = \$475 Million	Annual = \$75 Million

- ▶ North Dakota Construction Workforce Special Funding Need (Estimated)**
 - 200 field trades (helper, laborer, lineman, field crew splicer, operator, foreman, etc.)
 - Plus project management, design, locator, owner representative, inspection, etc.
- ▶ North Dakota Technician Workforce Special Funding Need (Estimated)**
 - 400 technicians (tower, troubleshooter, testing, premises, underground / overhead drop, etc.)

Source: Continuum analysis and presentation of public data from multiple sources.

Interpretive Note: * Not all special programs and state sponsored programs are listed. In addition, normal and routine spending on Broadband infrastructure is also not described in full detail.

Interpretive Note: ** Forecasted labor need does not incorporate retirements, attrition, or additional workforce needed for ongoing and routine, broadband construction activity.

Interpretive Note: ***. BEAD legislative funding amount grossed up by 25% to account for anticipated matching amounts.

ND – Broadband Workforce Size & Need

Construction & Technician Position	Workforce Estimate	2025-2032 Need	10 Yr Ret. & Attr. Need
Superintendent/General Foreman	20	12	0
Foreman	40	24	20
Lineman	100	60	40
Apprentice*	100	60	40
Field Crew Fiber Splicer	10	6	0
Groundman / Helper / Laborer	60	30	20
Operator / HDD Operator	20	12	0
Construction Field Total	350	204	120
Tower Equipment Installers and Repairers	60	40	10
Telecom Technician (Non-Specific)**	50	40	20
Telecom System Troubleshooter**	30	20	30
Telecom System Testing**	30	20	30
Premises Installation Tech**	300	180	60
Underground Fiber Drop Technician**	50	40	20
Aerial Drop Technician**	100	70	20
Technician Total	620	410	190

Source: Continuum led 2024 national and proprietary study of broadband industry workforce size and need on the behalf of PCCA and FBA.
 Interpretive Note: * Apprentice position captures entry level, lower experience, and lower skill field trades performing lineman, splicer, helper, and operator functions.
 Interpretive Note: ** Interior and other fiber splicing skills and need are incorporated into technician positions.

2024 Broadband Industry Wages - Midwest vs. North Dakota

Position	Midwest Low End	Midwest Median	Midwest High End	ND Survey Median*	ND BLS Median	National Median
119021 – Construction Manager (Project Manager)	\$50,000	\$84,000	\$158,660	\$87,490*	\$99,020	\$104,900
131051 – Estimator	\$54,120	\$70,102	\$104,000	\$62,330*	\$65,510	\$74,740
151141.1 – Contract Administrator	\$52,500	\$72,068	\$91,097	\$72,116*	nc	nc
172051.2 – Engineer Cost & Schedule	\$38,000	\$57,260	\$89,540	\$52,080*	nc	nc
299011 – Safety Specialist / Representative	\$98,780	\$101,380	\$103,980	\$90,865*	\$85,490	\$81,140
471011 – Supervisor (Superintendent, Foreman)	\$61,600	\$76,190	\$123,077	\$79,125*	\$78,130	\$76,760
472061 – Laborer	\$33,600	\$48,000	\$73,600	\$49,500*	\$47,000	\$45,300
472073 – Operator Light & Heavy Equipment	\$47,757	\$65,052	\$75,845	\$63,000*	\$62,020	\$56,160
472111 – Electrician / Fiber Splicer	\$48,000	\$63,000	\$83,200	\$51,500*	\$76,120	\$61,590
474010 – Inspector / Quality Assurance/Quality Control	\$50,400	\$66,000	\$96,000	\$70,500*	\$72,350	\$67,700
475031 – Operator HDD	\$36,000	\$58,000	\$115,260	\$64,000*	\$51,760	\$56,660
493042 – Operator Mechanic	nc	\$53,750	nc	\$112,000*	\$65,540	\$61,900
499051 & 499052 – Lineman Electrical & Telecom	\$46,200	\$94,420	\$101,883	\$94,300*	\$79,740	\$64,640
514121 – Welder	nc	\$49,000	nc	nc	\$58,900	\$48,940
533032 – Operator CDL Truck Driver only	\$52,000	\$54,500	\$76,800	\$63,000*	\$59,190	\$54,320

Source: Continuum led 2024 national and proprietary study of broadband industry wages on the behalf of PCCA and FBA.

Interpretive Note: Data does not include overtime (typically 15-30% of annual wage for most positions and as high as 60-100% for critical positions) or monetary/non-monetary benefits; n/c = not calculated, incomplete, or unanalyzed data set;

*=North Dakota Region includind ID, MN, MT, ND, SD, and WY.

2024 Broadband Industry Wages - National vs. North Dakota

Position	ND BLS Median	National Median
Telecom/Broadband System Design	\$105,230	\$106,950
Telecom Technician	\$81,335	\$61,290
Telecom System Troubleshooter	See Telecom Tech	See Telecom Tech
Telecom System Testing	See Telecom Tech	See Telecom Tech
492021 - Radio, Cellular, and Tower Equipment Installers and Repairers	\$77,330	\$61,310
492022 - Telecommunications Equipment Installers and Repairers, Except Line Installers (Can include Fiber Optic Technicians/Broadband Technicians, Premises Installation Tech)	\$85,340	\$61,270
Premises Installation Tech	See 492022	See 492022
Underground Fiber Drop Technician	See 492022	See 492022
Aerial Drop Technician	See 492022	See 492022

Source: Bureau of Labor Statistics (BLS) raw data analyzed by Continuum..

Interpretive Note: Technician positions are not broken out in BLS data. Data collected during the research and survey process covered a subset of states and is not presented separately in these materials. n/c = not calculated, incomplete, or unanalyzed data set;

OH - Special Broadband Financing Programs Available

Program*	In progress or anticipated spending	
BEAD	\$992,110,135***	
Digital Equity	\$1,470,550	
Middle Mile	\$48,275,817	
Tribal (Round 1 & 2)	\$0 & \$0 (Estimated)	
Broadband Infrastructure	\$0	
Capital Project Fund	\$165,500,000	
RDOF	\$170,038,205	
CAF II	\$13,186,434	
RUS (2019-2023)	\$46,819,658	
Other (Estimated)	\$700,000,000	
Total (Estimated)	Total = \$2.1 Billion	Annual = \$300 Million

- ▶ Ohio Construction Workforce Special Funding Need (Estimated)**
 - 700 field trades (helper, laborer, lineman, field crew splicer, operator, foreman, etc.)
 - Plus project management, design, locator, owner representative, inspection, etc.
- ▶ Ohio Technician Workforce Special Funding Need (Estimated)**
 - 700 technicians (tower, troubleshooter, testing, premises, underground / overhead drop, etc.)

Source: Continuum analysis and presentation of public data from multiple sources.

Interpretive Note: * Not all special programs and state sponsored programs are listed. In addition, normal and routine spending on Broadband infrastructure is also not described in full detail.

Interpretive Note: ** Forecasted labor need does not incorporate retirements, attrition, or additional workforce needed for ongoing and routine, broadband construction activity.

Interpretive Note: ***. BEAD legislative funding amount grossed up by 25% to account for anticipated matching amounts.

OH – Broadband Workforce Size & Need

Construction & Technician Position	Workforce Estimate	2025-2032 Need	10 Yr Ret. & Attr. Need
Superintendent/General Foreman	300	42	100
Foreman	600	84	190
Lineman	1,400	210	400
Apprentice*	1,400	210	400
Field Crew Fiber Splicer	100	21	40
Groundman / Helper / Laborer	700	105	200
Operator / HDD Operator	300	42	100
Construction Field Total	4,800	714	1,430
Tower Equipment Installers and Repairers	300	50	110
Telecom Technician (Non-Specific)**	400	70	170
Telecom System Troubleshooter**	200	30	240
Telecom System Testing**	200	30	240
Premises Installation Tech**	2,200	330	420
Underground Fiber Drop Technician**	400	70	180
Aerial Drop Technician**	900	130	250
Technician Total	4,600	710	1,610

Source: Continuum led 2024 national and proprietary study of broadband industry workforce size and need on the behalf of PCCA and FBA.
 Interpretive Note: * Apprentice position captures entry level, lower experience, and lower skill field trades performing lineman, splicer, helper, and operator functions.
 Interpretive Note: ** Interior and other fiber splicing skills and need are incorporated into technician positions.

2024 Broadband Industry Wages - Midwest vs. Ohio

Position	Midwest Low End	Midwest Median	Midwest High End	OH Survey Median	OH BLS Median	National Median
119021 – Construction Manager (Project Manager)	\$50,000	\$84,000	\$158,660	\$88,774	\$93,050	\$104,900
131051 – Estimator	\$54,120	\$70,102	\$104,000	\$70,102	\$70,200	\$74,740
151141.1 – Contract Administrator	\$52,500	\$72,068	\$91,097	nc	nc	nc
172051.2 – Engineer Cost & Schedule	\$38,000	\$57,260	\$89,540	\$63,600	nc	nc
299011 – Safety Specialist / Representative	\$98,780	\$101,380	\$103,980	\$72,301	\$76,960	\$81,140
471011 – Supervisor (Superintendent, Foreman)	\$61,600	\$76,190	\$123,077	\$63,000	\$75,500	\$76,760
472061 – Laborer	\$33,600	\$48,000	\$73,600	\$42,000	\$48,670	\$45,300
472073 – Operator Light & Heavy Equipment	\$47,757	\$65,052	\$75,845	\$54,000	\$60,390	\$56,160
472111 – Electrician / Fiber Splicer	\$48,000	\$63,000	\$83,200	\$59,000	\$63,370	\$61,590
474010 – Inspector / Quality Assurance/Quality Control	\$50,400	\$66,000	\$96,000	nc	\$67,430	\$67,700
475031 – Operator HDD	\$36,000	\$58,000	\$115,260	nc	\$48,540	\$56,660
493042 – Operator Mechanic	nc	\$53,750	nc	nc	\$60,470	\$61,900
499051 & 499052 – Lineman Electrical & Telecom	\$46,200	\$94,420	\$101,883	\$93,923	\$53,060	\$64,640
514121 – Welder	nc	\$49,000	nc	nc	\$47,700	\$48,940
533032 – Operator CDL Truck Driver only	\$52,000	\$54,500	\$76,800	\$47,000	\$53,700	\$54,320

Source: Continuum led 2024 national and proprietary study of broadband industry wages on the behalf of PCCA and FBA.

Interpretive Note: Data does not include overtime (typically 15-30% of annual wage for most positions and as high as 60-100% for critical positions) or monetary/non-monetary benefits; n/c = not calculated, incomplete, or unanalyzed data set

2024 Broadband Industry Wages - National vs. Ohio

Position	OH BLS Median	National Median
Telecom/Broadband System Design	\$100,230	\$106,950
Telecom Technician	\$61,055	\$61,290
Telecom System Troubleshooter	See Telecom Tech	See Telecom Tech
Telecom System Testing	See Telecom Tech	See Telecom Tech
492021 - Radio, Cellular, and Tower Equipment Installers and Repairers	\$62,010	\$61,310
492022 - Telecommunications Equipment Installers and Repairers, Except Line Installers (Can include Fiber Optic Technicians/Broadband Technicians, Premises Installation Tech)	\$60,100	\$61,270
Premises Installation Tech	See 492022	See 492022
Underground Fiber Drop Technician	See 492022	See 492022
Aerial Drop Technician	See 492022	See 492022

Source: Bureau of Labor Statistics (BLS) raw data analyzed by Continuum..

Interpretive Note: Technician positions are not broken out in BLS data. Data collected during the research and survey process covered a subset of states and is not presented separately in these materials. n/c = not calculated, incomplete, or unanalyzed data set;

OK - Special Broadband Financing Programs Available

Program*	In progress or anticipated spending	
BEAD	\$996,794,614***	
Digital Equity	\$882,088	
Middle Mile	\$29,688,740	
Tribal (Round 1 & 2)	\$210,511,254 and \$110,514,317 (Estimated)	
Broadband Infrastructure	\$0	
Capital Project Fund	\$159,300,000	
RDOF	\$154,556,451	
CAF II	\$112,940,103	
RUS (2019-2023)	\$438,493,028	
Other (Estimated)	\$700,000,000	
Total (Estimated)	Total = \$2.9 Billion	Annual = \$425 Million

- ▶ Oklahoma Construction Workforce Special Funding Need (Estimated)**
 - 1,000 field trades (helper, laborer, lineman, field crew splicer, operator, foreman, etc.)
 - Plus project management, design, locator, owner representative, inspection, etc.
- ▶ Oklahoma Technician Workforce Special Funding Need (Estimated)**
 - 1,000 technicians (tower, troubleshooter, testing, premises, underground / overhead drop, etc.)

Source: Continuum analysis and presentation of public data from multiple sources.

Interpretive Note: * Not all special programs and state sponsored programs are listed. In addition, normal and routine spending on Broadband infrastructure is also not described in full detail.

Interpretive Note: ** Forecasted labor need does not incorporate retirements, attrition, or additional workforce needed for ongoing and routine, broadband construction activity.

Interpretive Note: ***. BEAD legislative funding amount grossed up by 25% to account for anticipated matching amounts.

OK – Broadband Workforce Size & Need

Construction & Technician Position	Workforce Estimate	2025-2032 Need	10 Yr Ret. & Attr. Need
Superintendent/General Foreman	100	60	40
Foreman	200	120	60
Lineman	600	300	190
Apprentice*	600	300	190
Field Crew Fiber Splicer	60	30	20
Groundman / Helper / Laborer	300	150	100
Operator / HDD Operator	100	60	40
Construction Field Total	1,960	1,020	640
Tower Equipment Installers and Repairers	200	80	60
Telecom Technician (Non-Specific)**	200	90	70
Telecom System Troubleshooter**	90	50	110
Telecom System Testing**	90	50	110
Premises Installation Tech**	900	460	210
Underground Fiber Drop Technician**	200	90	90
Aerial Drop Technician**	300	180	80
Technician Total	1,980	1,000	730

Source: Continuum led 2024 national and proprietary study of broadband industry workforce size and need on the behalf of PCCA and FBA.
 Interpretive Note: * Apprentice position captures entry level, lower experience, and lower skill field trades performing lineman, splicer, helper, and operator functions.
 Interpretive Note: ** Interior and other fiber splicing skills and need are incorporated into technician positions.

2024 Broadband Industry Wages - South vs. Oklahoma

Position	South Low End	South Median	South High End	OK Survey Median*	OK BLS Median	National Median
119021 – Construction Manager (Project Manager)	\$58,000	\$81,003	\$158,660	\$79,020*	\$99,170	\$104,900
131051 – Estimator	\$50,120	\$80,462	\$144,880	\$140,000*	\$61,040	\$74,740
151141.1 – Contract Administrator	\$50,000	\$69,000	nc	\$158,600*	nc	nc
172051.2 – Engineer Cost & Schedule	\$35,000	\$56,000	\$78,000	nc	nc	nc
299011 – Safety Specialist / Representative	\$58,000	\$81,120	\$159,994	\$63,856*	\$75,060	\$81,140
471011 – Supervisor (Superintendent, Foreman)	\$50,732	\$73,670	\$126,200	\$106,172*	\$71,850	\$76,760
472061 – Laborer	\$29,000	\$36,000	\$76,400	\$35,000*	\$37,840	\$45,300
472073 – Operator Light & Heavy Equipment	\$42,760	\$50,200	\$75,845	\$52,510*	\$46,230	\$56,160
472111 – Electrician / Fiber Splicer	\$71,282	\$74,310	\$113,206	\$96,519*	\$57,750	\$61,590
474010 – Inspector / Quality Assurance / Quality Control	nc	nc	nc	\$60,000*	\$54,940	\$67,700
475031 – Operator HDD	\$36,000	\$54,200	\$115,260	\$54,200*	\$48,220	\$56,660
493042 – Operator Mechanic	\$36,000	\$60,000	\$98,000	\$36,500*	\$54,740	\$61,900
499051 & 499052 – Lineman Electrical & Telecom	\$42,764	\$74,310	\$113,206	\$86,865*	\$53,110	\$64,640
514121 – Welder	\$48,000	\$52,000	\$91,000	\$40,250*	\$47,180	\$48,940
533032 – Operator CDL Truck Driver only	\$36,000	\$49,800	\$95,000	\$50,000*	\$48,820	\$54,320

Source: Continuum led 2024 national and proprietary study of broadband industry wages on the behalf of PCCA and FBA.

Interpretive Note: Data does not include overtime (typically 15-30% of annual wage for most positions and as high as 60-100% for critical positions) or monetary/non-monetary benefits; n/c = not calculated, incomplete, or unanalyzed data set

*=Oklahoma Region includind AR, CO, KS, MO, NM, OK, and TX.

2024 Broadband Industry Wages - National vs. Oklahoma

Position	OK BLS Median	National Median
Telecom/Broadband System Design	\$100,850	\$106,950
Telecom Technician	\$49,340	\$61,290
Telecom System Troubleshooter	See Telecom Tech	See Telecom Tech
Telecom System Testing	See Telecom Tech	See Telecom Tech
492021 - Radio, Cellular, and Tower Equipment Installers and Repairers	\$41,630	\$61,310
492022 - Telecommunications Equipment Installers and Repairers, Except Line Installers (Can include Fiber Optic Technicians/Broadband Technicians, Premises Installation Tech)	\$57,050	\$61,270
Premises Installation Tech	See 492022	See 492022
Underground Fiber Drop Technician	See 492022	See 492022
Aerial Drop Technician	See 492022	See 492022

Source: Bureau of Labor Statistics (BLS) raw data analyzed by Continuum..

Interpretive Note: Technician positions are not broken out in BLS data. Data collected during the research and survey process covered a subset of states and is not presented separately in these materials. n/c = not calculated, incomplete, or unanalyzed data set;

OR - Special Broadband Financing Programs Available

Program*	In progress or anticipated spending	
BEAD	\$861,143,665***	
Digital Equity	\$782,193	
Middle Mile	\$48,119,568	
Tribal (Round 1 & 2)	\$24,974,861 & \$13,111,317 (Estimated)	
Broadband Infrastructure	\$22,736,861	
Capital Project Fund	\$149,000,000	
RDOF	\$212,027,091	
CAF II	\$13,211,826	
RUS (2019-2023)	\$138,557,515	
Other (Estimated)	\$500,000,000	
Total (Estimated)	Total = \$2 Billion	Annual = \$275 Million

- ▶ Oregon Construction Workforce Special Funding Need (Estimated)**
 - 700 field trades (helper, laborer, lineman, field crew splicer, operator, foreman, etc.)
 - Plus project management, design, locator, owner representative, inspection, etc.
- ▶ Oregon Technician Workforce Special Funding Need (Estimated)**
 - 1,300 technicians (tower, troubleshooter, testing, premises, underground / overhead drop, etc.)

Source: Continuum analysis and presentation of public data from multiple sources.

Interpretive Note: * Not all special programs and state sponsored programs are listed. In addition, normal and routine spending on Broadband infrastructure is also not described in full detail.

Interpretive Note: ** Forecasted labor need does not incorporate retirements, attrition, or additional workforce needed for ongoing and routine, broadband construction activity.

Interpretive Note: ***. BEAD legislative funding amount grossed up by 25% to account for anticipated matching amounts.

OR – Broadband Workforce Size & Need

Construction & Technician Position	Workforce Estimate	2025-2032 Need	10 Yr Ret. & Attr. Need
Superintendent/General Foreman	70	42	20
Foreman	100	84	30
Lineman	400	210	100
Apprentice*	400	210	100
Field Crew Fiber Splicer	40	21	10
Groundman / Helper / Laborer	200	105	50
Operator / HDD Operator	70	42	20
Construction Field Total	1,280	714	330
Tower Equipment Installers and Repairers	400	250	90
Telecom Technician (Non-Specific)**	200	110	60
Telecom System Troubleshooter**	90	50	80
Telecom System Testing**	90	50	80
Premises Installation Tech**	900	530	210
Underground Fiber Drop Technician**	200	110	70
Aerial Drop Technician**	400	210	90
Technician Total	2,280	1,310	680

Source: Continuum led 2024 national and proprietary study of broadband industry workforce size and need on the behalf of PCCA and FBA.
 Interpretive Note: * Apprentice position captures entry level, lower experience, and lower skill field trades performing lineman, splicer, helper, and operator functions.
 Interpretive Note: ** Interior and other fiber splicing skills and need are incorporated into technician positions.

2024 Broadband Industry Wages - West vs. Oregon

Position	West Low End	West Median	West High End	OR Survey Median	OR BLS Median	National Median
119021 – Construction Manager (Project Manager)	\$58,000	\$100,680	\$158,660	\$107,190	\$120,000	\$104,900
131051 – Estimator	\$54,240	\$91,560	\$196,560	\$119,520	\$77,110	\$74,740
151141.1 – Contract Administrator	\$46,000	\$57,000	\$86,100	\$57,870	nc	nc
172051.2 – Engineer Cost & Schedule	nc	\$67,700	\$89,540	\$91,480	nc	nc
299011 – Safety Specialist / Representative	\$58,000	\$76,502	\$159,994	\$66,000	\$77,380	\$81,140
471011 – Supervisor (Superintendent, Foreman)	\$50,000	\$66,000	\$126,200	\$75,240	\$96,460	\$76,760
472061 – Laborer	\$29,000	\$45,000	\$80,000	\$48,000	\$48,140	\$45,300
472073 – Operator Light & Heavy Equipment	\$40,000	\$56,000	\$90,000	\$58,040	\$63,290	\$56,160
472111 – Electrician / Fiber Splicer	\$40,000	\$56,000	\$82,000	\$60,060	\$88,770	\$61,590
474010 – Inspector / Quality Assurance / Quality Control	\$53,000	\$65,500	\$66,170	\$65,500	\$81,620	\$67,700
475031 – Operator HDD	\$41,500	\$56,000	\$80,100	\$56,000	\$62,960	\$56,660
493042 – Operator Mechanic	\$36,000	\$62,000	\$98,000	\$68,000	\$65,590	\$61,900
499051 & 499052 – Lineman Electrical & Telecom	\$47,260	\$54,000	\$60,000	\$54,570	\$62,070	\$64,640
514121 – Welder	\$48,000	\$52,000	\$91,000	nc	\$54,980	\$48,940
533032 – Operator CDL Truck Driver only	\$36,000	\$52,000	\$95,000	\$75,240	\$59,510	\$54,320

Source: Continuum led 2024 national and proprietary study of broadband industry wages on the behalf of PCCA and FBA.

Interpretive Note: Data does not include overtime (typically 15-30% of annual wage for most positions and as high as 60-100% for critical positions) or monetary/non-monetary benefits; n/c = not calculated, incomplete, or unanalyzed data set;

2024 Broadband Industry Wages - National vs. Oregon

Position	OR BLS Median	National Median
Telecom/Broadband System Design	\$120,430	\$106,950
Telecom Technician	\$64,825	\$61,290
Telecom System Troubleshooter	See Telecom Tech	See Telecom Tech
Telecom System Testing	See Telecom Tech	See Telecom Tech
492021 - Radio, Cellular, and Tower Equipment Installers and Repairers	\$65,170	\$61,310
492022 - Telecommunications Equipment Installers and Repairers, Except Line Installers (Can include Fiber Optic Technicians/Broadband Technicians, Premises Installation Tech)	\$64,480	\$61,270
Premises Installation Tech	See 492022	See 492022
Underground Fiber Drop Technician	See 492022	See 492022
Aerial Drop Technician	See 492022	See 492022

Source: Bureau of Labor Statistics (BLS) raw data analyzed by Continuum..

Interpretive Note: Technician positions are not broken out in BLS data. Data collected during the research and survey process covered a subset of states and is not presented separately in these materials. n/c = not calculated, incomplete, or unanalyzed data set;

PA - Special Broadband Financing Programs Available

Program*	In progress or anticipated spending	
BEAD	\$1,452,222,841***	
Digital Equity	\$1,604,130	
Middle Mile	\$0	
Tribal (Round 1 & 2)	\$0 & \$0 (Estimated)	
Broadband Infrastructure	\$22,736,861	
Capital Project Fund	\$200,000,000	
RDOF	\$368,743,200	
CAF II	\$56,831,061	
RUS (2019-2023)	\$750,000	
Other (Estimated)	\$400,000,000	
Total (Estimated)	Total = \$2.5 Billion	Annual = \$350 Million

- ▶ Pennsylvania Construction Workforce Special Funding Need (Estimated)**
 - 1,000 field trades (helper, laborer, lineman, field crew splicer, operator, foreman, etc.)
 - Plus project management, design, locator, owner representative, inspection, etc.
- ▶ Pennsylvania Technician Workforce Special Funding Need (Estimated)**
 - 900 technicians (tower, troubleshooter, testing, premises, underground / overhead drop, etc.)

Source: Continuum analysis and presentation of public data from multiple sources.

Interpretive Note: * Not all special programs and state sponsored programs are listed. In addition, normal and routine spending on Broadband infrastructure is also not described in full detail.

Interpretive Note: ** Forecasted labor need does not incorporate retirements, attrition, or additional workforce needed for ongoing and routine, broadband construction activity.

Interpretive Note: ***. BEAD legislative funding amount grossed up by 25% to account for anticipated matching amounts.

PA – Broadband Workforce Size & Need

Construction & Technician Position	Workforce Estimate	2025-2032 Need	10 Yr Ret. & Attr. Need
Superintendent/General Foreman	300	60	90
Foreman	700	120	200
Lineman	1,700	300	500
Apprentice*	1,700	300	500
Field Crew Fiber Splicer	200	30	60
Groundman / Helper / Laborer	900	150	200
Operator / HDD Operator	300	60	90
Construction Field Total	5,800	1,020	1,640
Tower Equipment Installers and Repairers	300	50	110
Telecom Technician (Non-Specific)**	500	90	200
Telecom System Troubleshooter**	200	40	340
Telecom System Testing**	200	40	340
Premises Installation Tech**	2,300	430	530
Underground Fiber Drop Technician**	500	90	200
Aerial Drop Technician**	900	170	250
Technician Total	4,900	910	1,970

Source: Continuum led 2024 national and proprietary study of broadband industry workforce size and need on the behalf of PCCA and FBA.
 Interpretive Note: * Apprentice position captures entry level, lower experience, and lower skill field trades performing lineman, splicer, helper, and operator functions.
 Interpretive Note: ** Interior and other fiber splicing skills and need are incorporated into technician positions.

2024 Broadband Industry Wages – Midwest & Northeast vs. **CONTINUUM** Capital

Pennsylvania

Position	MW & NE Low End	MW & NE Median	MW & NE High End	PA Survey Median*	PA BLS Median	National Median
119021 – Construction Manager (Project Manager)	\$50,000	\$84,000	\$158,660	\$86,819*	\$104,420	\$104,900
131051 – Estimator	\$54,120	\$70,102	\$104,000	\$70,102*	\$75,050	\$74,740
151141.1 – Contract Administrator	\$52,500	\$72,068	\$91,097	nc	nc	nc
172051.2 – Engineer Cost & Schedule	\$38,000	\$57,240	\$89,540	\$52,000*	nc	nc
299011 – Safety Specialist / Representative	\$84,000	\$79,872	\$106,660	\$67,600	\$78,500	\$81,140
471011 – Supervisor (Superintendent, Foreman)	\$72,120	\$82,500	\$124,529	\$129,820	\$78,790	\$76,760
472061 – Laborer	\$33,600	\$48,000	\$73,600	\$58,750	\$47,820	\$45,300
472073 – Operator Light & Heavy Equipment	\$47,757	\$65,052	\$75,845	\$72,120	\$55,780	\$56,160
472111 – Electrician / Fiber Splicer	\$48,000	\$63,000	\$83,200	\$59,000*	\$65,700	\$61,590
474010 – Inspector / Quality Assurance / Quality Control	\$50,400	\$65,168	\$96,000	nc	\$61,300	\$67,700
475031 – Operator HDD	\$36,000	\$58,000	\$115,260	\$52,360*	\$58,260	\$56,660
493042 – Operator Mechanic	nc	\$54,000	\$120,200	\$62,000	\$60,280	\$61,900
499051 & 499052 – Lineman Electrical & Telecom	\$71,282	\$96,222	\$113,206	\$120,200	\$91,590	\$64,640
514121 – Welder	nc	\$51,500	nc	\$51,750	\$49,400	\$48,940
533032 – Operator CDL Truck Driver only	nc	\$52,000	\$76,800	\$49,000	\$55,840	\$54,320

Source: Continuum led 2024 national and proprietary study of broadband industry wages on the behalf of PCCA and FBA.

Interpretive Note: Data does not include overtime (typically 15-30% of annual wage for most positions and as high as 60-100% for critical positions) or monetary/non-monetary benefits; n/c = not calculated, incomplete, or unanalyzed data set;

*=Pennsylvania region including MD, NJ, NY, OH, PA, and WV.

2024 Broadband Industry Wages - National vs. Pennsylvania

Position	PA BLS Median	National Median
Telecom/Broadband System Design	\$105,000	\$106,950
Telecom Technician	\$72,970	\$61,290
Telecom System Troubleshooter	See Telecom Tech	See Telecom Tech
Telecom System Testing	See Telecom Tech	See Telecom Tech
492021 - Radio, Cellular, and Tower Equipment Installers and Repairers	\$84,710	\$61,310
492022 - Telecommunications Equipment Installers and Repairers, Except Line Installers (Can include Fiber Optic Technicians/Broadband Technicians, Premises Installation Tech)	\$61,230	\$61,270
Premises Installation Tech	See 492022	See 492022
Underground Fiber Drop Technician	See 492022	See 492022
Aerial Drop Technician	See 492022	See 492022

Source: Bureau of Labor Statistics (BLS) raw data analyzed by Continuum..

Interpretive Note: Technician positions are not broken out in BLS data. Data collected during the research and survey process covered a subset of states and is not presented separately in these materials. n/c = not calculated, incomplete, or unanalyzed data set;

RI - Special Broadband Financing Programs Available

Program*	In progress or anticipated spending	
BEAD	\$135,898,526***	
Digital Equity	\$506,100	
Middle Mile	\$0	
Tribal (Round 1 & 2)	\$2,498,250 & \$1,311,533 (Estimated)	
Broadband Infrastructure	\$0	
Capital Project Fund	\$25,000,000	
RDOF	\$1,273,784	
CAF II	\$475,303	
RUS (2019-2023)	\$0	
Other (Estimated)	\$66,000,000	
Total (Estimated)	Total = \$230 Million	Annual = \$33 Million

- ▶ Rhode Island Construction Workforce Special Funding Need (Estimated)**
 - 100 field trades (helper, laborer, lineman, field crew splicer, operator, foreman, etc.)
 - Plus project management, design, locator, owner representative, inspection, etc.
- ▶ Rhode Island Technician Workforce Special Funding Need (Estimated)**
 - 20 technicians (tower, troubleshooter, testing, premises, underground / overhead drop, etc.)

Source: Continuum analysis and presentation of public data from multiple sources.

Interpretive Note: * Not all special programs and state sponsored programs are listed. In addition, normal and routine spending on Broadband infrastructure is also not described in full detail.

Interpretive Note: ** Forecasted labor need does not incorporate retirements, attrition, or additional workforce needed for ongoing and routine, broadband construction activity.

Interpretive Note: ***. BEAD legislative funding amount grossed up by 25% to account for anticipated matching amounts.

RI – Broadband Workforce Size & Need

Construction & Technician Position	Workforce Estimate	2025-2032 Need	10 Yr Ret. & Attr. Need
Superintendent/General Foreman	70	6	20
Foreman	100	12	40
Lineman	400	30	130
Apprentice*	400	30	130
Field Crew Fiber Splicer	40	3	20
Groundman / Helper / Laborer	200	15	60
Operator / HDD Operator	70	6	20
Construction Field Total	1,280	102	420
Tower Equipment Installers and Repairers	20	1	10
Telecom Technician (Non-Specific)**	20	2	20
Telecom System Troubleshooter**	10	1	60
Telecom System Testing**	10	1	60
Premises Installation Tech**	100	9	30
Underground Fiber Drop Technician**	20	2	30
Aerial Drop Technician**	40	4	20
Technician Total	220	20	230

Source: Continuum led 2024 national and proprietary study of broadband industry workforce size and need on the behalf of PCCA and FBA.
 Interpretive Note: * Apprentice position captures entry level, lower experience, and lower skill field trades performing lineman, splicer, helper, and operator functions.
 Interpretive Note: ** Interior and other fiber splicing skills and need are incorporated into technician positions.

2024 Broadband Industry Wages – Midwest & Northeast vs. **CONTINUUM** Capital

Rhode Island

Position	MW & NE Low End	MW & NE Median	MW & NE High End	RI Survey Median*	RI BLS Median	National Median
119021 – Construction Manager (Project Manager)	\$50,000	\$84,000	\$158,660	\$93,600*	\$120,100	\$104,900
131051 – Estimator	\$54,120	\$70,102	\$104,000	nc	\$78,730	\$74,740
151141.1 – Contract Administrator	\$52,500	\$72,068	\$91,097	nc	nc	nc
172051.2 – Engineer Cost & Schedule	\$38,000	\$57,240	\$89,540	\$52,000*	nc	nc
299011 – Safety Specialist / Representative	\$84,000	\$79,872	\$106,660	\$67,600*	\$86,410	\$81,140
471011 – Supervisor (Superintendent, Foreman)	\$72,120	\$82,500	\$124,529	\$129,820*	\$79,730	\$76,760
472061 – Laborer	\$33,600	\$48,000	\$73,600	\$57,250*	\$50,750	\$45,300
472073 – Operator Light & Heavy Equipment	\$47,757	\$65,052	\$75,845	\$72,120*	\$73,770	\$56,160
472111 – Electrician / Fiber Splicer	\$48,000	\$63,000	\$83,200	nc	\$71,500	\$61,590
474010 – Inspector / Quality Assurance / Quality Control	\$50,400	\$65,168	\$96,000	nc	\$91,190	\$67,700
475031 – Operator HDD	\$36,000	\$58,000	\$115,260	nc	\$64,010	\$56,660
493042 – Operator Mechanic	nc	\$54,000	\$120,200	\$62,000*	\$71,310	\$61,900
499051 & 499052 – Lineman Electrical & Telecom	\$71,282	\$96,222	\$113,206	\$120,200*	\$54,640	\$64,640
514121 – Welder	nc	\$51,500	nc	\$50,250*	\$59,580	\$48,940
533032 – Operator CDL Truck Driver only	nc	\$52,000	\$76,800	\$49,000*	\$57,070	\$54,320

Source: Continuum led 2024 national and proprietary study of broadband industry wages on the behalf of PCCA and FBA.

Interpretive Note: Data does not include overtime (typically 15-30% of annual wage for most positions and as high as 60-100% for critical positions) or monetary/non-monetary benefits; n/c = not calculated, incomplete, or unanalyzed data set;

*=Connecticut region including CT, DE, MA, ME, NH, NJ, NY, PA, RI, and VT.

2024 Broadband Industry Wages – National vs. Rhode Island

Position	RI BLS Median	National Median
Telecom/Broadband System Design	\$114,260	\$106,950
Telecom Technician	\$86,145	\$61,290
Telecom System Troubleshooter	See Telecom Tech	See Telecom Tech
Telecom System Testing	See Telecom Tech	See Telecom Tech
492021 - Radio, Cellular, and Tower Equipment Installers and Repairers	\$92,050	\$61,310
492022 - Telecommunications Equipment Installers and Repairers, Except Line Installers (Can include Fiber Optic Technicians/Broadband Technicians, Premises Installation Tech)	\$80,240	\$61,270
Premises Installation Tech	See 492022	See 492022
Underground Fiber Drop Technician	See 492022	See 492022
Aerial Drop Technician	See 492022	See 492022

Source: Bureau of Labor Statistics (BLS) raw data analyzed by Continuum..

Interpretive Note: Technician positions are not broken out in BLS data. Data collected during the research and survey process covered a subset of states and is not presented separately in these materials. n/c = not calculated, incomplete, or unanalyzed data set;

SC - Special Broadband Financing Programs Available

Program*	In progress or anticipated spending	
BEAD	\$689,419,979***	
Digital Equity	\$952,478	
Middle Mile	\$0	
Tribal (Round 1 & 2)	\$900,578 and \$472,786 (Estimated)	
Broadband Infrastructure	\$0	
Capital Project Fund	\$185,100,000	
RDOF	\$121,245,987	
CAF II	\$233,490	
RUS (2019-2023)	\$66,521,324	
Other (Estimated)	\$400,000,000	
Total (Estimated)	Total = \$1.5 Billion	Annual = \$200 Million

- ▶ South Carolina Construction Workforce Special Funding Need (Estimated)**
 - 500 field trades (helper, laborer, lineman, field crew splicer, operator, foreman, etc.)
 - Plus project management, design, locator, owner representative, inspection, etc.
- ▶ South Carolina Technician Workforce Special Funding Need (Estimated)**
 - 500 technicians (tower, troubleshooter, testing, premises, underground / overhead drop, etc.)

Source: Continuum analysis and presentation of public data from multiple sources.

Interpretive Note: * Not all special programs and state sponsored programs are listed. In addition, normal and routine spending on Broadband infrastructure is also not described in full detail.

Interpretive Note: ** Forecasted labor need does not incorporate retirements, attrition, or additional workforce needed for ongoing and routine, broadband construction activity.

Interpretive Note: ***. BEAD legislative funding amount grossed up by 25% to account for anticipated matching amounts.

SC – Broadband Workforce Size & Need

Construction & Technician Position	Workforce Estimate	2025-2032 Need	10 Yr Ret. & Attr. Need
Superintendent/General Foreman	200	30	60
Foreman	300	60	90
Lineman	800	150	200
Apprentice*	800	150	200
Field Crew Fiber Splicer	80	15	20
Groundman / Helper / Laborer	400	75	110
Operator / HDD Operator	200	30	60
Construction Field Total	2,780	510	740
Tower Equipment Installers and Repairers	90	10	50
Telecom Technician (Non-Specific)**	300	50	110
Telecom System Troubleshooter**	100	20	120
Telecom System Testing**	100	20	120
Premises Installation Tech**	1,500	240	310
Underground Fiber Drop Technician**	300	50	120
Aerial Drop Technician**	600	100	130
Technician Total	2,990	490	960

Source: Continuum led 2024 national and proprietary study of broadband industry workforce size and need on the behalf of PCCA and FBA.
 Interpretive Note: * Apprentice position captures entry level, lower experience, and lower skill field trades performing lineman, splicer, helper, and operator functions.
 Interpretive Note: ** Interior and other fiber splicing skills and need are incorporated into technician positions.

2024 Broadband Industry Wages - South vs. South Carolina

Position	South Low End	South Median	South High End	SC Survey Median*	SC BLS Median	National Median
119021 – Construction Manager (Project Manager)	\$58,000	\$81,003	\$158,660	\$75,316*	\$100,610	\$104,900
131051 – Estimator	\$50,120	\$80,462	\$144,880	nc	\$62,290	\$74,740
151141.1 – Contract Administrator	\$50,000	\$69,000	nc	nc	nc	nc
172051.2 – Engineer Cost & Schedule	\$35,000	\$56,000	\$78,000	\$44,780*	nc	nc
299011 – Safety Specialist / Representative	\$58,000	\$81,120	\$159,994	\$83,376*	\$76,150	\$81,140
471011 – Supervisor (Superintendent, Foreman)	\$50,732	\$73,670	\$126,200	\$81,743*	\$63,360	\$76,760
472061 – Laborer	\$29,000	\$36,000	\$76,400	\$33,500*	\$38,180	\$45,300
472073 – Operator Light & Heavy Equipment	\$42,760	\$50,200	\$75,845	\$49,786*	\$46,380	\$56,160
472111 – Electrician / Fiber Splicer	\$71,282	\$74,310	\$113,206	\$74,310*	\$51,950	\$61,590
474010 – Inspector / Quality Assurance / Quality Control	nc	nc	nc	nc	\$58,360	\$67,700
475031 – Operator HDD	\$36,000	\$54,200	\$115,260	\$49,630*	\$50,860	\$56,660
493042 – Operator Mechanic	\$36,000	\$60,000	\$98,000	\$54,000*	\$56,830	\$61,900
499051 & 499052 – Lineman Electrical & Telecom	\$42,764	\$74,310	\$113,206	\$70,000*	\$53,010	\$64,640
514121 – Welder	\$48,000	\$52,000	\$91,000	nc	\$46,900	\$48,940
533032 – Operator CDL Truck Driver only	\$36,000	\$49,800	\$95,000	\$58,000*	\$50,130	\$54,320

Source: Continuum led 2024 national and proprietary study of broadband industry wages on the behalf of PCCA and FBA.

Interpretive Note: Data does not include overtime (typically 15-30% of annual wage for most positions and as high as 60-100% for critical positions) or monetary/non-monetary benefits; n/c = not calculated, incomplete, or unanalyzed data set.

*=South Carolina region including GA, NC, and SC.

2024 Broadband Industry Wages - National vs. South Carolina

Position	SC BLS Median	National Median
Telecom/Broadband System Design	\$96,120	\$106,950
Telecom Technician	\$62,190	\$61,290
Telecom System Troubleshooter	See Telecom Tech	See Telecom Tech
Telecom System Testing	See Telecom Tech	See Telecom Tech
492021 - Radio, Cellular, and Tower Equipment Installers and Repairers	\$66,490	\$61,310
492022 - Telecommunications Equipment Installers and Repairers, Except Line Installers (Can include Fiber Optic Technicians/Broadband Technicians, Premises Installation Tech)	\$57,890	\$61,270
Premises Installation Tech	See 492022	See 492022
Underground Fiber Drop Technician	See 492022	See 492022
Aerial Drop Technician	See 492022	See 492022

Source: Bureau of Labor Statistics (BLS) raw data analyzed by Continuum..

Interpretive Note: Technician positions are not broken out in BLS data. Data collected during the research and survey process covered a subset of states and is not presented separately in these materials. n/c = not calculated, incomplete, or unanalyzed data set;

SD - Special Broadband Financing Programs Available

Program*	In progress or anticipated spending	
BEAD	\$259,034,405***	
Digital Equity	\$527,052	
Middle Mile	\$0	
Tribal (Round 1 & 2)	\$77,341,952 & \$40,603,022 (Estimated)	
Broadband Infrastructure	\$0	
Capital Project Fund	\$0	
RDOF	\$52,285,517	
CAF II	\$4,880,611	
RUS (2019-2023)	\$100,284,076	
Other (Estimated)	\$200,000,000	
Total (Estimated)	Total = \$700 Million	Annual = \$100 Million

- ▶ South Dakota Construction Workforce Special Funding Need (Estimated)**
 - 200 field trades (helper, laborer, lineman, field crew splicer, operator, foreman, etc.)
 - Plus project management, design, locator, owner representative, inspection, etc.
- ▶ South Dakota Technician Workforce Special Funding Need (Estimated)**
 - 100 technicians (tower, troubleshooter, testing, premises, underground / overhead drop, etc.)

Source: Continuum analysis and presentation of public data from multiple sources.

Interpretive Note: * Not all special programs and state sponsored programs are listed. In addition, normal and routine spending on Broadband infrastructure is also not described in full detail.

Interpretive Note: ** Forecasted labor need does not incorporate retirements, attrition, or additional workforce needed for ongoing and routine, broadband construction activity.

Interpretive Note: ***. BEAD legislative funding amount grossed up by 25% to account for anticipated matching amounts.

SD – Broadband Workforce Size & Need

Construction & Technician Position	Workforce Estimate	2025-2032 Need	10 Yr Ret. & Attr. Need
Superintendent/General Foreman	40	12	20
Foreman	80	24	20
Lineman	200	60	60
Apprentice*	200	60	60
Field Crew Fiber Splicer	20	6	0
Groundman / Helper / Laborer	100	30	40
Operator / HDD Operator	40	12	20
Construction Field Total	680	204	220
Tower Equipment Installers and Repairers	40	10	20
Telecom Technician (Non-Specific)**	50	10	20
Telecom System Troubleshooter**	20	0	30
Telecom System Testing**	20	0	30
Premises Installation Tech**	200	50	40
Underground Fiber Drop Technician**	50	10	30
Aerial Drop Technician**	90	20	30
Technician Total	470	100	200

Source: Continuum led 2024 national and proprietary study of broadband industry workforce size and need on the behalf of PCCA and FBA.
 Interpretive Note: * Apprentice position captures entry level, lower experience, and lower skill field trades performing lineman, splicer, helper, and operator functions.
 Interpretive Note: ** Interior and other fiber splicing skills and need are incorporated into technician positions.

2024 Broadband Industry Wages - Midwest vs. South Dakota

Position	Midwest Low End	Midwest Median	Midwest High End	SD Survey Median*	SD BLS Median	National Median
119021 – Construction Manager (Project Manager)	\$50,000	\$84,000	\$158,660	\$87,490*	\$106,580	\$104,900
131051 – Estimator	\$54,120	\$70,102	\$104,000	\$62,330*	\$71,740	\$74,740
151141.1 – Contract Administrator	\$52,500	\$72,068	\$91,097	\$72,116*	nc	nc
172051.2 – Engineer Cost & Schedule	\$38,000	\$57,260	\$89,540	\$53,290*	nc	nc
299011 – Safety Specialist / Representative	\$98,780	\$101,380	\$103,980	\$88,702*	\$74,920	\$81,140
471011 – Supervisor (Superintendent, Foreman)	\$61,600	\$76,190	\$123,077	\$85,800*	\$71,170	\$76,760
472061 – Laborer	\$33,600	\$48,000	\$73,600	\$49,000*	\$39,050	\$45,300
472073 – Operator Light & Heavy Equipment	\$47,757	\$65,052	\$75,845	\$66,000*	\$52,510	\$56,160
472111 – Electrician / Fiber Splicer	\$48,000	\$63,000	\$83,200	\$56,000*	\$57,750	\$61,590
474010 – Inspector / Quality Assurance/Quality Control	\$50,400	\$66,000	\$96,000	\$65,168*	\$58,230	\$67,700
475031 – Operator HDD	\$36,000	\$58,000	\$115,260	\$62,000*	\$49,350	\$56,660
493042 – Operator Mechanic	nc	\$53,750	nc	\$112,000*	\$62,080	\$61,900
499051 & 499052 – Lineman Electrical & Telecom	\$46,200	\$94,420	\$101,883	\$94,360*	\$42,360	\$64,640
514121 – Welder	nc	\$49,000	nc	nc	\$46,300	\$48,940
533032 – Operator CDL Truck Driver only	\$52,000	\$54,500	\$76,800	\$63,000*	\$54,900	\$54,320

Source: Continuum led 2024 national and proprietary study of broadband industry wages on the behalf of PCCA and FBA.

Interpretive Note: Data does not include overtime (typically 15-30% of annual wage for most positions and as high as 60-100% for critical positions) or monetary/non-monetary benefits; n/c = not calculated, incomplete, or unanalyzed data set.

*=South Dakota region including IA, ID, MN, MT, ND, SD, and WY.

2024 Broadband Industry Wages - National vs. South Dakota

Position	SD BLS Median	National Median
Telecom/Broadband System Design	\$88,840	\$106,950
Telecom Technician	\$59,650	\$61,290
Telecom System Troubleshooter	See Telecom Tech	See Telecom Tech
Telecom System Testing	See Telecom Tech	See Telecom Tech
492021 - Radio, Cellular, and Tower Equipment Installers and Repairers	\$59,450	\$61,310
492022 - Telecommunications Equipment Installers and Repairers, Except Line Installers (Can include Fiber Optic Technicians/Broadband Technicians, Premises Installation Tech)	\$59,850	\$61,270
Premises Installation Tech	See 492022	See 492022
Underground Fiber Drop Technician	See 492022	See 492022
Aerial Drop Technician	See 492022	See 492022

Source: Bureau of Labor Statistics (BLS) raw data analyzed by Continuum..

Interpretive Note: Technician positions are not broken out in BLS data. Data collected during the research and survey process covered a subset of states and is not presented separately in these materials. n/c = not calculated, incomplete, or unanalyzed data set;

TN - Special Broadband Financing Programs Available

Program*	In progress or anticipated spending	
BEAD	\$1,016,649,600***	
Digital Equity	\$1,083,810	
Middle Mile	\$30,502,000	
Tribal (Round 1 & 2)	\$0 & \$0 (Estimated)	
Broadband Infrastructure	\$17,398,574	
Capital Project Fund	\$162,000,000	
RDOF	\$148,625,826	
CAF II	\$8,457,337	
RUS (2019-2023)	\$39,510,364	
Other (Estimated)	\$550,000,000	
Total (Estimated)	Total = \$2 Billion	Annual = \$275 Million

- ▶ Tennessee Construction Workforce Special Funding Need (Estimated)**
 - 700 field trades (helper, laborer, lineman, field crew splicer, operator, foreman, etc.)
 - Plus project management, design, locator, owner representative, inspection, etc.
- ▶ Tennessee Technician Workforce Special Funding Need (Estimated)**
 - 700 technicians (tower, troubleshooter, testing, premises, underground / overhead drop, etc.)

Source: Continuum analysis and presentation of public data from multiple sources.

Interpretive Note: * Not all special programs and state sponsored programs are listed. In addition, normal and routine spending on Broadband infrastructure is also not described in full detail.

Interpretive Note: ** Forecasted labor need does not incorporate retirements, attrition, or additional workforce needed for ongoing and routine, broadband construction activity.

Interpretive Note: ***. BEAD legislative funding amount grossed up by 25% to account for anticipated matching amounts.

TN – Broadband Workforce Size & Need

Construction & Technician Position	Workforce Estimate	2025-2032 Need	10 Yr Ret. & Attr. Need
Superintendent/General Foreman	200	42	60
Foreman	400	84	130
Lineman	900	210	300
Apprentice*	900	210	300
Field Crew Fiber Splicer	90	21	30
Groundman / Helper / Laborer	500	105	160
Operator / HDD Operator	200	42	60
Construction Field Total	3,190	714	1,040
Tower Equipment Installers and Repairers	400	80	110
Telecom Technician (Non-Specific)**	300	60	120
Telecom System Troubleshooter**	100	30	120
Telecom System Testing**	100	30	120
Premises Installation Tech**	1,300	310	310
Underground Fiber Drop Technician**	300	60	140
Aerial Drop Technician**	500	120	130
Technician Total	3,000	690	1,050

Source: Continuum led 2024 national and proprietary study of broadband industry workforce size and need on the behalf of PCCA and FBA.
 Interpretive Note: * Apprentice position captures entry level, lower experience, and lower skill field trades performing lineman, splicer, helper, and operator functions.
 Interpretive Note: ** Interior and other fiber splicing skills and need are incorporated into technician positions.

2024 Broadband Industry Wages - South vs. Tennessee

Position	South Low End	South Median	South High End	TN Survey Median*	TN BLS Median	National Median
119021 – Construction Manager (Project Manager)	\$58,000	\$81,003	\$158,660	\$83,304*	\$86,540	\$104,900
131051 – Estimator	\$50,120	\$80,462	\$144,880	\$103,862*	\$71,590	\$74,740
151141.1 – Contract Administrator	\$50,000	\$69,000	nc	\$113,800*	nc	nc
172051.2 – Engineer Cost & Schedule	\$35,000	\$56,000	\$78,000	\$70,000**	nc	nc
299011 – Safety Specialist / Representative	\$58,000	\$81,120	\$159,994	\$80,000*	\$75,920	\$81,140
471011 – Supervisor (Superintendent, Foreman)	\$50,732	\$73,670	\$126,200	\$64,395*	\$66,970	\$76,760
472061 – Laborer	\$29,000	\$36,000	\$76,400	\$35,700*	\$39,870	\$45,300
472073 – Operator Light & Heavy Equipment	\$42,760	\$50,200	\$75,845	\$47,757*	\$47,270	\$56,160
472111 – Electrician / Fiber Splicer	\$71,282	\$74,310	\$113,206	\$54,940*	\$55,380	\$61,590
474010 – Inspector / Quality Assurance / Quality Control	nc	nc	nc	nc	\$54,820	\$67,700
475031 – Operator HDD	\$36,000	\$54,200	\$115,260	\$56,000*	\$47,410	\$56,660
493042 – Operator Mechanic	\$36,000	\$60,000	\$98,000	\$53,500*	\$52,860	\$61,900
499051 & 499052 – Lineman Electrical & Telecom	\$42,764	\$74,310	\$113,206	\$70,000*	\$59,360	\$64,640
514121 – Welder	\$48,000	\$52,000	\$91,000	\$48,000*	\$44,960	\$48,940
533032 – Operator CDL Truck Driver only	\$36,000	\$49,800	\$95,000	\$51,660*	\$51,600	\$54,320

Source: Continuum led 2024 national and proprietary study of broadband industry wages on the behalf of PCCA and FBA.

Interpretive Note: Data does not include overtime (typically 15-30% of annual wage for most positions and as high as 60-100% for critical positions) or monetary/non-monetary benefits; n/c = not calculated, incomplete, or unanalyzed data set;

*=Tennessee region including AL, AR, GA, KY, MO, MS, NC, TN, and VA.

2024 Broadband Industry Wages - National vs. Tennessee

Position	TN BLS Median	National Median
Telecom/Broadband System Design	\$103,170	\$106,950
Telecom Technician	\$56,170	\$61,290
Telecom System Troubleshooter	See Telecom Tech	See Telecom Tech
Telecom System Testing	See Telecom Tech	See Telecom Tech
492021 - Radio, Cellular, and Tower Equipment Installers and Repairers	\$56,160	\$61,310
492022 - Telecommunications Equipment Installers and Repairers, Except Line Installers (Can include Fiber Optic Technicians/Broadband Technicians, Premises Installation Tech)	\$56,180	\$61,270
Premises Installation Tech	See 492022	See 492022
Underground Fiber Drop Technician	See 492022	See 492022
Aerial Drop Technician	See 492022	See 492022

Source: Bureau of Labor Statistics (BLS) raw data analyzed by Continuum..

Interpretive Note: Technician positions are not broken out in BLS data. Data collected during the research and survey process covered a subset of states and is not presented separately in these materials. n/c = not calculated, incomplete, or unanalyzed data set;

TX - Special Broadband Financing Programs Available

Program*	In progress or anticipated spending	
BEAD	\$4,140,770,569***	
Digital Equity	\$3,110,150	
Middle Mile	\$220,478,951	
Tribal (Round 1 & 2)	\$3,123,357 and \$1,639,702 (Estimated)	
Broadband Infrastructure	\$17,398,574	
Capital Project Fund	\$461,000,000	
RDOF	\$362,662,934	
CAF II	\$82,420,436	
RUS (2019-2023)	\$201,639,722	
Other (Estimated)	\$4,200,000,000	
Total (Estimated)	Total = \$9.7 Billion	Annual= \$1.4 Billion

- ▶ Texas Construction Workforce Special Funding Need (Estimated)**
 - 3,200 field trades (helper, laborer, lineman, field crew splicer, operator, foreman, etc.)
 - Plus project management, design, locator, owner representative, inspection, etc.
- ▶ Texas Technician Workforce Special Funding Need (Estimated)**
 - 3,600 technicians (tower, troubleshooter, testing, premises, underground / overhead drop, etc.)

Source: Continuum analysis and presentation of public data from multiple sources.

Interpretive Note: * Not all special programs and state sponsored programs are listed. In addition, normal and routine spending on Broadband infrastructure is also not described in full detail.

Interpretive Note: ** Forecasted labor need does not incorporate retirements, attrition, or additional workforce needed for ongoing and routine, broadband construction activity.

Interpretive Note: ***. BEAD legislative funding amount grossed up by 25% to account for anticipated matching amounts.

TX – Broadband Workforce Size & Need

Construction & Technician Position	Workforce Estimate	2025-2032 Need	10 Yr Ret. & Attr. Need
Superintendent/General Foreman	1,000	192	400
Foreman	1,900	384	700
Lineman	4,800	960	1,700
Apprentice*	4,800	960	1,700
Field Crew Fiber Splicer	500	96	180
Groundman / Helper / Laborer	2,400	480	900
Operator / HDD Operator	1,000	192	400
Construction Field Total	16,400	3,264	5,980
Tower Equipment Installers and Repairers	1,300	250	500
Telecom Technician (Non-Specific)**	1,700	330	600
Telecom System Troubleshooter**	800	170	900
Telecom System Testing**	800	170	900
Premises Installation Tech**	8,400	1,670	1,780
Underground Fiber Drop Technician**	1,700	330	700
Aerial Drop Technician**	3,400	670	900
Technician Total	18,100	3,590	6,280

Source: Continuum led 2024 national and proprietary study of broadband industry workforce size and need on the behalf of PCCA and FBA.
 Interpretive Note: * Apprentice position captures entry level, lower experience, and lower skill field trades performing lineman, splicer, helper, and operator functions.
 Interpretive Note: ** Interior and other fiber splicing skills and need are incorporated into technician positions.

2024 Broadband Industry Wages - South vs. Texas

Position	South Low End	South Median	South High End	TX Survey Median	TX BLS Median	National Median
119021 – Construction Manager (Project Manager)	\$58,000	\$81,003	\$158,660	\$76,096	\$98,290	\$104,900
131051 – Estimator	\$50,120	\$80,462	\$144,880	nc	\$73,110	\$74,740
151141.1 – Contract Administrator	\$50,000	\$69,000	nc	nc	nc	nc
172051.2 – Engineer Cost & Schedule	\$35,000	\$56,000	\$78,000	\$59,000	nc	nc
299011 – Safety Specialist / Representative	\$58,000	\$81,120	\$159,994	\$66,841	\$76,200	\$81,140
471011 – Supervisor (Superintendent, Foreman)	\$50,732	\$73,670	\$126,200	\$106,172	\$67,650	\$76,760
472061 – Laborer	\$29,000	\$36,000	\$76,400	\$40,000	\$37,150	\$45,300
472073 – Operator Light & Heavy Equipment	\$42,760	\$50,200	\$75,845	\$64,665	\$47,380	\$56,160
472111 – Electrician / Fiber Splicer	\$71,282	\$74,310	\$113,206	\$96,519	\$55,890	\$61,590
474010 – Inspector / Quality Assurance / Quality Control	nc	nc	nc	nc	\$61,510	\$67,700
475031 – Operator HDD	\$36,000	\$54,200	\$115,260	\$54,200	\$50,920	\$56,660
493042 – Operator Mechanic	\$36,000	\$60,000	\$98,000	\$51,000	\$60,010	\$61,900
499051 & 499052 – Lineman Electrical & Telecom	\$42,764	\$74,310	\$113,206	\$86,865	\$58,500	\$64,640
514121 – Welder	\$48,000	\$52,000	\$91,000	nc	\$48,500	\$48,940
533032 – Operator CDL Truck Driver only	\$36,000	\$49,800	\$95,000	\$52,000	\$50,170	\$54,320

Source: Continuum led 2024 national and proprietary study of broadband industry wages on the behalf of PCCA and FBA.

Interpretive Note: Data does not include overtime (typically 15-30% of annual wage for most positions and as high as 60-100% for critical positions) or monetary/non-monetary benefits; n/c = not calculated, incomplete, or unanalyzed data set

2024 Broadband Industry Wages - National vs. Texas

Position	TX BLS Median	National Median
Telecom/Broadband System Design	\$102,710	\$106,950
Telecom Technician	\$50,035	\$61,290
Telecom System Troubleshooter	See Telecom Tech	See Telecom Tech
Telecom System Testing	See Telecom Tech	See Telecom Tech
492021 - Radio, Cellular, and Tower Equipment Installers and Repairers	\$49,070	\$61,310
492022 - Telecommunications Equipment Installers and Repairers, Except Line Installers (Can include Fiber Optic Technicians/Broadband Technicians, Premises Installation Tech)	\$51,000	\$61,270
Premises Installation Tech	See 492022	See 492022
Underground Fiber Drop Technician	See 492022	See 492022
Aerial Drop Technician	See 492022	See 492022

Source: Bureau of Labor Statistics (BLS) raw data analyzed by Continuum..

Interpretive Note: Technician positions are not broken out in BLS data. Data collected during the research and survey process covered a subset of states and is not presented separately in these materials. n/c = not calculated, incomplete, or unanalyzed data set;

UT - Special Broadband Financing Programs Available

Program*	In progress or anticipated spending	
BEAD	\$396,749,677***	
Digital Equity	\$676,684	
Middle Mile	\$0	
Tribal (Round 1 & 2)	\$16,354,542 & \$8,585,816	
Broadband Infrastructure	\$0	
Capital Project Fund	\$75,700,000	
RDOF	\$31,384,526	
CAF II	\$6,330,099	
RUS (2019-2023)	\$63,555,684	
Other (Estimated)	\$200,000,000	
Total (Estimated)	Total = \$800 Million	Annual = \$125 Million

- ▶ Utah Construction Workforce Special Funding Need (Estimated)**
 - 300 field trades (helper, laborer, lineman, field crew splicer, operator, foreman, etc.)
 - Plus project management, design, locator, owner representative, inspection, etc.
- ▶ Utah Technician Workforce Special Funding Need (Estimated)**
 - 800 technicians (tower, troubleshooter, testing, premises, underground / overhead drop, etc.)

Source: Continuum analysis and presentation of public data from multiple sources.

Interpretive Note: * Not all special programs and state sponsored programs are listed. In addition, normal and routine spending on Broadband infrastructure is also not described in full detail.

Interpretive Note: ** Forecasted labor need does not incorporate retirements, attrition, or additional workforce needed for ongoing and routine, broadband construction activity.

Interpretive Note: ***. BEAD legislative funding amount grossed up by 25% to account for anticipated matching amounts.

UT – Broadband Workforce Size & Need

Construction & Technician Position	Workforce Estimate	2025-2032 Need	10 Yr Ret. & Attr. Need
Superintendent/General Foreman	50	18	20
Foreman	100	36	30
Lineman	200	90	50
Apprentice*	200	90	50
Field Crew Fiber Splicer	20	9	0
Groundman / Helper / Laborer	100	45	30
Operator / HDD Operator	50	18	20
Construction Field Total	720	306	200
Tower Equipment Installers and Repairers	70	30	20
Telecom Technician (Non-Specific)**	200	80	60
Telecom System Troubleshooter**	90	40	50
Telecom System Testing**	90	40	50
Premises Installation Tech**	900	390	200
Underground Fiber Drop Technician**	200	80	60
Aerial Drop Technician**	400	150	90
Technician Total	1,950	810	530

Source: Continuum led 2024 national and proprietary study of broadband industry workforce size and need on the behalf of PCCA and FBA.
 Interpretive Note: * Apprentice position captures entry level, lower experience, and lower skill field trades performing lineman, splicer, helper, and operator functions.
 Interpretive Note: ** Interior and other fiber splicing skills and need are incorporated into technician positions.

2024 Broadband Industry Wages - West vs. Utah

Position	West Low End	West Median	West High End	UT Survey Median*	UT BLS Median	National Median
119021 – Construction Manager (Project Manager)	\$58,000	\$100,680	\$158,660	\$106,163	\$95,960	\$104,900
131051 – Estimator	\$54,240	\$91,560	\$196,560	\$85,500*	\$71,970	\$74,740
151141.1 – Contract Administrator	\$46,000	\$57,000	\$86,100	nc	nc	nc
172051.2 – Engineer Cost & Schedule	nc	\$67,700	\$89,540	\$95,000	nc	nc
299011 – Safety Specialist / Representative	\$58,000	\$76,502	\$159,994	\$125,000	\$83,240	\$81,140
471011 – Supervisor (Superintendent, Foreman)	\$50,000	\$66,000	\$126,200	\$68,000	\$72,800	\$76,760
472061 – Laborer	\$29,000	\$45,000	\$80,000	\$48,000	\$45,930	\$45,300
472073 – Operator Light & Heavy Equipment	\$40,000	\$56,000	\$90,000	\$62,000	\$57,790	\$56,160
472111 – Electrician / Fiber Splicer	\$40,000	\$56,000	\$82,000	\$66,000	\$59,890	\$61,590
474010 – Inspector / Quality Assurance / Quality Control	\$53,000	\$65,500	\$66,170	nc	\$65,370	\$67,700
475031 – Operator HDD	\$41,500	\$56,000	\$80,100	\$48,000*	\$54,080	\$56,660
493042 – Operator Mechanic	\$36,000	\$62,000	\$98,000	\$52,000	\$62,030	\$61,900
499051 & 499052 – Lineman Electrical & Telecom	\$47,260	\$54,000	\$60,000	\$50,810*	\$49,270	\$64,640
514121 – Welder	\$48,000	\$52,000	\$91,000	\$52,000*	\$51,030	\$48,940
533032 – Operator CDL Truck Driver only	\$36,000	\$52,000	\$95,000	\$57,000	\$57,820	\$54,320

Source: Continuum led 2024 national and proprietary study of broadband industry wages on the behalf of PCCA and FBA.

Interpretive Note: Data does not include overtime (typically 15-30% of annual wage for most positions and as high as 60-100% for critical positions) or monetary/non-monetary benefits; n/c = not calculated, incomplete, or unanalyzed data set;

*=Utah region including AZ, CO, ID, NM, NV, UT, and WY.

2024 Broadband Industry Wages - National vs. Utah

Position	UT BLS Median	National Median
Telecom/Broadband System Design	\$104,800	\$106,950
Telecom Technician	\$73,025	\$61,290
Telecom System Troubleshooter	See Telecom Tech	See Telecom Tech
Telecom System Testing	See Telecom Tech	See Telecom Tech
492021 - Radio, Cellular, and Tower Equipment Installers and Repairers	\$83,210	\$61,310
492022 - Telecommunications Equipment Installers and Repairers, Except Line Installers (Can include Fiber Optic Technicians/Broadband Technicians, Premises Installation Tech)	\$62,840	\$61,270
Premises Installation Tech	See 492022	See 492022
Underground Fiber Drop Technician	See 492022	See 492022
Aerial Drop Technician	See 492022	See 492022

Source: Bureau of Labor Statistics (BLS) raw data analyzed by Continuum..

Interpretive Note: Technician positions are not broken out in BLS data. Data collected during the research and survey process covered a subset of states and is not presented separately in these materials. n/c = not calculated, incomplete, or unanalyzed data set;

VT - Special Broadband Financing Programs Available

Program*	In progress or anticipated spending	
BEAD	\$286,141,274***	
Digital Equity	\$518,154	
Middle Mile	\$0	
Tribal (Round 1 & 2)	\$0 & \$0 (Estimated)	
Broadband Infrastructure	\$0	
Capital Project Fund	\$91,800,000	
RDOF	\$32,533,635	
CAF II	\$0	
RUS (2019-2023)	\$17,463,911	
Other (Estimated)	\$200,000,000	
Total (Estimated)	Total = \$600 Million	Annual = \$75 Million

- ▶ Vermont Construction Workforce Special Funding Need (Estimated)**
 - 200 field trades (helper, laborer, lineman, field crew splicer, operator, foreman, etc.)
 - Plus project management, design, locator, owner representative, inspection, etc.
- ▶ Vermont Technician Workforce Special Funding Need (Estimated)**
 - 200 technicians (tower, troubleshooter, testing, premises, underground / overhead drop, etc.)

Source: Continuum analysis and presentation of public data from multiple sources.

Interpretive Note: * Not all special programs and state sponsored programs are listed. In addition, normal and routine spending on Broadband infrastructure is also not described in full detail.

Interpretive Note: ** Forecasted labor need does not incorporate retirements, attrition, or additional workforce needed for ongoing and routine, broadband construction activity.

Interpretive Note: ***. BEAD legislative funding amount grossed up by 25% to account for anticipated matching amounts.

VT – Broadband Workforce Size & Need

Construction & Technician Position	Workforce Estimate	2025-2032 Need	10 Yr Ret. & Attr. Need
Superintendent/General Foreman	20	12	0
Foreman	40	24	20
Lineman	90	60	30
Apprentice*	90	60	30
Field Crew Fiber Splicer	10	6	0
Groundman / Helper / Laborer	50	30	20
Operator / HDD Operator	20	12	0
Construction Field Total	320	204	100
Tower Equipment Installers and Repairers	20	10	0
Telecom Technician (Non-Specific)**	30	20	20
Telecom System Troubleshooter**	10	10	10
Telecom System Testing**	10	10	10
Premises Installation Tech**	100	90	20
Underground Fiber Drop Technician**	30	20	20
Aerial Drop Technician**	50	40	10
Technician Total	250	200	90

Source: Continuum led 2024 national and proprietary study of broadband industry workforce size and need on the behalf of PCCA and FBA.
 Interpretive Note: * Apprentice position captures entry level, lower experience, and lower skill field trades performing lineman, splicer, helper, and operator functions.
 Interpretive Note: ** Interior and other fiber splicing skills and need are incorporated into technician positions.

2024 Broadband Industry Wages – Midwest & Northeast vs. **CONTINUUM**

Vermont

Position	MW & NE Low End	MW & NE Median	MW & NE High End	VT Survey Median*	VT BLS Median	National Median
119021 – Construction Manager (Project Manager)	\$50,000	\$84,000	\$158,660	\$93,600*	\$99,990	\$104,900
131051 – Estimator	\$54,120	\$70,102	\$104,000	nc	\$75,730	\$74,740
151141.1 – Contract Administrator	\$52,500	\$72,068	\$91,097	nc	nc	nc
172051.2 – Engineer Cost & Schedule	\$38,000	\$57,240	\$89,540	\$52,000*	nc	nc
299011 – Safety Specialist / Representative	\$84,000	\$79,872	\$106,660	\$67,600*	\$83,730	\$81,140
471011 – Supervisor (Superintendent, Foreman)	\$72,120	\$82,500	\$124,529	\$129,820*	\$77,220	\$76,760
472061 – Laborer	\$33,600	\$48,000	\$73,600	\$57,250*	\$43,910	\$45,300
472073 – Operator Light & Heavy Equipment	\$47,757	\$65,052	\$75,845	\$72,120*	\$53,280	\$56,160
472111 – Electrician / Fiber Splicer	\$48,000	\$63,000	\$83,200	nc	\$56,830	\$61,590
474010 – Inspector / Quality Assurance / Quality Control	\$50,400	\$65,168	\$96,000	nc	\$64,080	\$67,700
475031 – Operator HDD	\$36,000	\$58,000	\$115,260	nc	\$61,180	\$56,660
493042 – Operator Mechanic	nc	\$54,000	\$120,200	\$62,000*	\$58,160	\$61,900
499051 & 499052 – Lineman Electrical & Telecom	\$71,282	\$96,222	\$113,206	\$120,200*	\$62,100	\$64,640
514121 – Welder	nc	\$51,500	nc	\$50,250*	\$50,960	\$48,940
533032 – Operator CDL Truck Driver only	nc	\$52,000	\$76,800	\$49,000*	\$49,820	\$54,320

Source: Continuum led 2024 national and proprietary study of broadband industry wages on the behalf of PCCA and FBA.

Interpretive Note: Data does not include overtime (typically 15-30% of annual wage for most positions and as high as 60-100% for critical positions) or monetary/non-monetary benefits; n/c = not calculated, incomplete, or unanalyzed data set;

*=Vermont region including CT, DE, MA, ME, NH, NJ, NY, PA, RI, and VT.

2024 Broadband Industry Wages - National vs. Vermont

Position	VT BLS Median	National Median
Telecom/Broadband System Design	nc	\$106,950
Telecom Technician	\$77,760	\$61,290
Telecom System Troubleshooter	See Telecom Tech	See Telecom Tech
Telecom System Testing	See Telecom Tech	See Telecom Tech
492021 - Radio, Cellular, and Tower Equipment Installers and Repairers	nc	\$61,310
492022 - Telecommunications Equipment Installers and Repairers, Except Line Installers (Can include Fiber Optic Technicians/Broadband Technicians, Premises Installation Tech)	\$77,760	\$61,270
Premises Installation Tech	See 492022	See 492022
Underground Fiber Drop Technician	See 492022	See 492022
Aerial Drop Technician	See 492022	See 492022

Source: Bureau of Labor Statistics (BLS) raw data analyzed by Continuum..

Interpretive Note: Technician positions are not broken out in BLS data. Data collected during the research and survey process covered a subset of states and is not presented separately in these materials. n/c = not calculated, incomplete, or unanalyzed data set;

VA - Special Broadband Financing Programs Available

Program*	In progress or anticipated spending	
BEAD	\$1,851,861,966***	
Digital Equity	\$1,222,080	
Middle Mile	\$53,924,236	
Tribal (Round 1 & 2)	\$1,473,350 and \$773,480 (Estimated)	
Broadband Infrastructure	\$37,057,483	
Capital Project Fund	\$208,800,000	
RDOF	\$238,644,934	
CAF II	\$108,505,806	
RUS (2019-2023)	\$81,449,518	
Other (Estimated)	\$2,600,000,000	
Total (Estimated)	Total = \$5.2 Billion	Annual = \$750 Million

- ▶ Virginia Construction Workforce Special Funding Need (Estimated)**
 - 1,700 field trades (helper, laborer, lineman, field crew splicer, operator, foreman, etc.)
 - Plus project management, design, locator, owner representative, inspection, etc.
- ▶ Virginia Technician Workforce Special Funding Need (Estimated)**
 - 800 technicians (tower, troubleshooter, testing, premises, underground / overhead drop, etc.)

Source: Continuum analysis and presentation of public data from multiple sources.

Interpretive Note: * Not all special programs and state sponsored programs are listed. In addition, normal and routine spending on Broadband infrastructure is also not described in full detail.

Interpretive Note: ** Forecasted labor need does not incorporate retirements, attrition, or additional workforce needed for ongoing and routine, broadband construction activity.

Interpretive Note: ***. BEAD legislative funding amount grossed up by 25% to account for anticipated matching amounts.

VA – Broadband Workforce Size & Need

Construction & Technician Position	Workforce Estimate	2025-2032 Need	10 Yr Ret. & Attr. Need
Superintendent/General Foreman	500	102	180
Foreman	1,000	204	400
Lineman	2,400	510	900
Apprentice*	2,400	510	900
Field Crew Fiber Splicer	200	51	70
Groundman / Helper / Laborer	1,200	255	400
Operator / HDD Operator	500	102	180
Construction Field Total	8,200	1,734	3,030
Tower Equipment Installers and Repairers	600	110	180
Telecom Technician (Non-Specific)**	300	70	260
Telecom System Troubleshooter**	200	30	440
Telecom System Testing**	200	30	440
Premises Installation Tech**	1,700	340	330
Underground Fiber Drop Technician**	300	70	260
Aerial Drop Technician**	700	140	180
Technician Total	4,000	790	2,090

Source: Continuum led 2024 national and proprietary study of broadband industry workforce size and need on the behalf of PCCA and FBA.
 Interpretive Note: * Apprentice position captures entry level, lower experience, and lower skill field trades performing lineman, splicer, helper, and operator functions.
 Interpretive Note: ** Interior and other fiber splicing skills and need are incorporated into technician positions.

2024 Broadband Industry Wages - South vs. Virginia

Position	South Low End	South Median	South High End	VA Survey Median	VA BLS Median	National Median
119021 – Construction Manager (Project Manager)	\$58,000	\$81,003	\$158,660	\$94,515	\$106,740	\$104,900
131051 – Estimator	\$50,120	\$80,462	\$144,880	nc	\$70,370	\$74,740
151141.1 – Contract Administrator	\$50,000	\$69,000	nc	nc	nc	nc
172051.2 – Engineer Cost & Schedule	\$35,000	\$56,000	\$78,000	\$56,000	nc	nc
299011 – Safety Specialist / Representative	\$58,000	\$81,120	\$159,994	\$80,000	\$76,780	\$81,140
471011 – Supervisor (Superintendent, Foreman)	\$50,732	\$73,670	\$126,200	\$66,560	\$72,000	\$76,760
472061 – Laborer	\$29,000	\$36,000	\$76,400	\$40,000	\$37,530	\$45,300
472073 – Operator Light & Heavy Equipment	\$42,760	\$50,200	\$75,845	\$53,000	\$48,890	\$56,160
472111 – Electrician / Fiber Splicer	\$71,282	\$74,310	\$113,206	\$48,000	\$60,320	\$61,590
474010 – Inspector / Quality Assurance / Quality Control	nc	nc	nc	nc	\$65,840	\$67,700
475031 – Operator HDD	\$36,000	\$54,200	\$115,260	nc	\$51,700	\$56,660
493042 – Operator Mechanic	\$36,000	\$60,000	\$98,000	\$51,000	\$59,020	\$61,900
499051 & 499052 – Lineman Electrical & Telecom	\$42,764	\$74,310	\$113,206	\$91,100	\$67,230	\$64,640
514121 – Welder	\$48,000	\$52,000	\$91,000	nc	\$53,970	\$48,940
533032 – Operator CDL Truck Driver only	\$36,000	\$49,800	\$95,000	\$54,000	\$50,380	\$54,320

Source: Continuum led 2024 national and proprietary study of broadband industry wages on the behalf of PCCA and FBA.

Interpretive Note: Data does not include overtime (typically 15-30% of annual wage for most positions and as high as 60-100% for critical positions) or monetary/non-monetary benefits; n/c = not calculated, incomplete, or unanalyzed data set

2024 Broadband Industry Wages - National vs. Virginia

Position	VA BLS Median	National Median
Telecom/Broadband System Design	\$110,840	\$106,950
Telecom Technician	\$62,900	\$61,290
Telecom System Troubleshooter	See Telecom Tech	See Telecom Tech
Telecom System Testing	See Telecom Tech	See Telecom Tech
492021 - Radio, Cellular, and Tower Equipment Installers and Repairers	\$57,140	\$61,310
492022 - Telecommunications Equipment Installers and Repairers, Except Line Installers (Can include Fiber Optic Technicians/Broadband Technicians, Premises Installation Tech)	\$68,660	\$61,270
Premises Installation Tech	See 492022	See 492022
Underground Fiber Drop Technician	See 492022	See 492022
Aerial Drop Technician	See 492022	See 492022

Source: Bureau of Labor Statistics (BLS) raw data analyzed by Continuum..

Interpretive Note: Technician positions are not broken out in BLS data. Data collected during the research and survey process covered a subset of states and is not presented separately in these materials. n/c = not calculated, incomplete, or unanalyzed data set;

WA - Special Broadband Financing Programs Available

Program*	In progress or anticipated spending	
BEAD	\$1,534,677,583***	
Digital Equity	\$1,076,250	
Middle Mile	\$16,831,726	
Tribal (Round 1 & 2)	\$97,790,617 & \$51,338,173 (Estimated)	
Broadband Infrastructure	\$37,057,483	
Capital Project Fund	\$186,000,000	
RDOF	\$222,768,533	
CAF II	\$19,943,507	
RUS (2019-2023)	\$119,066,610	
Other (Estimated)	\$850,000,000	
Total (Estimated)	Total = \$3.1 Billion	Annual = \$450 Million

- ▶ Washington Construction Workforce Special Funding Need (Estimated)**
 - 1,000 field trades (helper, laborer, lineman, field crew splicer, operator, foreman, etc.)
 - Plus project management, design, locator, owner representative, inspection, etc.
- ▶ Washington Technician Workforce Special Funding Need (Estimated)**
 - 2,300 technicians (tower, troubleshooter, testing, premises, underground / overhead drop, etc.)

Source: Continuum analysis and presentation of public data from multiple sources.

Interpretive Note: * Not all special programs and state sponsored programs are listed. In addition, normal and routine spending on Broadband infrastructure is also not described in full detail.

Interpretive Note: ** Forecasted labor need does not incorporate retirements, attrition, or additional workforce needed for ongoing and routine, broadband construction activity.

Interpretive Note: ***. BEAD legislative funding amount grossed up by 25% to account for anticipated matching amounts.

WA – Broadband Workforce Size & Need

Construction & Technician Position	Workforce Estimate	2025-2032 Need	10 Yr Ret. & Attr. Need
Superintendent/General Foreman	100	60	30
Foreman	200	120	60
Lineman	600	300	170
Apprentice*	600	300	170
Field Crew Fiber Splicer	60	30	20
Groundman / Helper / Laborer	300	150	90
Operator / HDD Operator	100	60	30
Construction Field Total	1,960	1,020	570
Tower Equipment Installers and Repairers	600	300	120
Telecom Technician (Non-Specific)**	400	210	110
Telecom System Troubleshooter**	200	100	130
Telecom System Testing**	200	100	130
Premises Installation Tech**	2,100	1,050	410
Underground Fiber Drop Technician**	400	210	130
Aerial Drop Technician**	800	420	220
Technician Total	4,700	2,390	1,250

Source: Continuum led 2024 national and proprietary study of broadband industry workforce size and need on the behalf of PCCA and FBA.
 Interpretive Note: * Apprentice position captures entry level, lower experience, and lower skill field trades performing lineman, splicer, helper, and operator functions.
 Interpretive Note: ** Interior and other fiber splicing skills and need are incorporated into technician positions.

2024 Broadband Industry Wages - West vs. Washington

Position	West Low End	West Median	West High End	WA Survey Median	WA BLS Median	National Median
119021 – Construction Manager (Project Manager)	\$58,000	\$100,680	\$158,660	\$120,500	\$129,680	\$104,900
131051 – Estimator	\$54,240	\$91,560	\$196,560	nc	\$81,860	\$74,740
151141.1 – Contract Administrator	\$46,000	\$57,000	\$86,100	\$56,000	nc	nc
172051.2 – Engineer Cost & Schedule	nc	\$67,700	\$89,540	\$76,310	nc	nc
299011 – Safety Specialist / Representative	\$58,000	\$76,502	\$159,994	\$92,780	\$92,480	\$81,140
471011 – Supervisor (Superintendent, Foreman)	\$50,000	\$66,000	\$126,200	\$72,280	\$102,820	\$76,760
472061 – Laborer	\$29,000	\$45,000	\$80,000	\$48,000	\$55,090	\$45,300
472073 – Operator Light & Heavy Equipment	\$40,000	\$56,000	\$90,000	\$60,120	\$77,230	\$56,160
472111 – Electrician / Fiber Splicer	\$40,000	\$56,000	\$82,000	\$66,340	\$82,020	\$61,590
474010 – Inspector / Quality Assurance / Quality Control	\$53,000	\$65,500	\$66,170	nc	\$81,960	\$67,700
475031 – Operator HDD	\$41,500	\$56,000	\$80,100	\$47,600	\$63,670	\$56,660
493042 – Operator Mechanic	\$36,000	\$62,000	\$98,000	\$74,500	\$69,850	\$61,900
499051 & 499052 – Lineman Electrical & Telecom	\$47,260	\$54,000	\$60,000	\$54,000	\$71,190	\$64,640
514121 – Welder	\$48,000	\$52,000	\$91,000	nc	\$60,350	\$48,940
533032 – Operator CDL Truck Driver only	\$36,000	\$52,000	\$95,000	nc	\$61,190	\$54,320

Source: Continuum led 2024 national and proprietary study of broadband industry wages on the behalf of PCCA and FBA.

Interpretive Note: Data does not include overtime (typically 15-30% of annual wage for most positions and as high as 60-100% for critical positions) or monetary/non-monetary benefits; n/c = not calculated, incomplete, or unanalyzed data set;

2024 Broadband Industry Wages - National vs. Washington

Position	WA BLS Median	National Median
Telecom/Broadband System Design	\$126,800	\$106,950
Telecom Technician	\$66,455	\$61,290
Telecom System Troubleshooter	See Telecom Tech	See Telecom Tech
Telecom System Testing	See Telecom Tech	See Telecom Tech
492021 - Radio, Cellular, and Tower Equipment Installers and Repairers	\$63,840	\$61,310
492022 - Telecommunications Equipment Installers and Repairers, Except Line Installers (Can include Fiber Optic Technicians/Broadband Technicians, Premises Installation Tech)	\$69,070	\$61,270
Premises Installation Tech	See 492022	See 492022
Underground Fiber Drop Technician	See 492022	See 492022
Aerial Drop Technician	See 492022	See 492022

Source: Bureau of Labor Statistics (BLS) raw data analyzed by Continuum..

Interpretive Note: Technician positions are not broken out in BLS data. Data collected during the research and survey process covered a subset of states and is not presented separately in these materials. n/c = not calculated, incomplete, or unanalyzed data set;

WV - Special Broadband Financing Programs Available

Program*	In progress or anticipated spending	
BEAD	\$1,513,501,212***	
Digital Equity	\$728,065	
Middle Mile	\$50,208,602	
Tribal (Round 1 & 2)	\$0 & \$0 (Estimated)	
Broadband Infrastructure	\$25,126,780	
Capital Project Fund	\$130,200,000	
RDOF	\$362,066,660	
CAF II	\$11,997,199	
RUS (2019-2023)	\$34,078,691	
Other (Estimated)	\$850,000,000	
Total (Estimated)	Total = \$3 Billion	Annual = \$425 Million

- ▶ West Virginia Construction Workforce Special Funding Need (Estimated)**
 - 1,000 field trades (helper, laborer, lineman, field crew splicer, operator, foreman, etc.)
 - Plus project management, design, locator, owner representative, inspection, etc.
- ▶ West Virginia Technician Workforce Special Funding Need (Estimated)**
 - 300 technicians (tower, troubleshooter, testing, premises, underground / overhead drop, etc.)

Source: Continuum analysis and presentation of public data from multiple sources.

Interpretive Note: * Not all special programs and state sponsored programs are listed. In addition, normal and routine spending on Broadband infrastructure is also not described in full detail.

Interpretive Note: ** Forecasted labor need does not incorporate retirements, attrition, or additional workforce needed for ongoing and routine, broadband construction activity.

Interpretive Note: ***. BEAD legislative funding amount grossed up by 25% to account for anticipated matching amounts.

WV – Broadband Workforce Size & Need

Construction & Technician Position	Workforce Estimate	2025-2032 Need	10 Yr Ret. & Attr. Need
Superintendent/General Foreman	100	60	40
Foreman	300	120	100
Lineman	700	300	200
Apprentice*	700	300	200
Field Crew Fiber Splicer	70	30	20
Groundman / Helper / Laborer	300	150	100
Operator / HDD Operator	100	60	40
Construction Field Total	2,270	1,020	700
Tower Equipment Installers and Repairers	50	30	30
Telecom Technician (Non-Specific)**	60	30	60
Telecom System Troubleshooter**	30	10	110
Telecom System Testing**	30	10	110
Premises Installation Tech**	300	140	70
Underground Fiber Drop Technician**	60	30	60
Aerial Drop Technician**	100	60	40
Technician Total	630	310	480

Source: Continuum led 2024 national and proprietary study of broadband industry workforce size and need on the behalf of PCCA and FBA.
 Interpretive Note: * Apprentice position captures entry level, lower experience, and lower skill field trades performing lineman, splicer, helper, and operator functions.
 Interpretive Note: ** Interior and other fiber splicing skills and need are incorporated into technician positions.

2024 Broadband Industry Wages – Midwest & Northeast vs. **CONTINUUM** Capital

West Virginia

Position	MW & NE Low End	MW & NE Median	MW & NE High End	WV Survey Median*	WV BLS Median	National Median
119021 – Construction Manager (Project Manager)	\$50,000	\$84,000	\$158,660	\$87,090*	\$90,230	\$104,900
131051 – Estimator	\$54,120	\$70,102	\$104,000	\$67,725*	\$64,890	\$74,740
151141.1 – Contract Administrator	\$52,500	\$72,068	\$91,097	\$69,000*	nc	nc
172051.2 – Engineer Cost & Schedule	\$38,000	\$57,240	\$89,540	\$56,000*	nc	nc
299011 – Safety Specialist / Representative	\$84,000	\$79,872	\$106,660	\$74,880*	\$80,880	\$81,140
471011 – Supervisor (Superintendent, Foreman)	\$72,120	\$82,500	\$124,529	\$68,740*	\$77,150	\$76,760
472061 – Laborer	\$33,600	\$48,000	\$73,600	\$42,000*	\$38,140	\$45,300
472073 – Operator Light & Heavy Equipment	\$47,757	\$65,052	\$75,845	\$53,000*	\$47,320	\$56,160
472111 – Electrician / Fiber Splicer	\$48,000	\$63,000	\$83,200	\$57,000*	\$63,100	\$61,590
474010 – Inspector / Quality Assurance / Quality Control	\$50,400	\$65,168	\$96,000	nc	\$56,360	\$67,700
475031 – Operator HDD	\$36,000	\$58,000	\$115,260	\$52,360*	\$40,180	\$56,660
493042 – Operator Mechanic	nc	\$54,000	\$120,200	\$56,320*	\$53,310	\$61,900
499051 & 499052 – Lineman Electrical & Telecom	\$71,282	\$96,222	\$113,206	\$80,645*	\$80,810	\$64,640
514121 – Welder	nc	\$51,500	nc	\$51,500*	\$46,190	\$48,940
533032 – Operator CDL Truck Driver only	nc	\$52,000	\$76,800	\$50,000*	\$46,850	\$54,320

Source: Continuum led 2024 national and proprietary study of broadband industry wages on the behalf of PCCA and FBA.

Interpretive Note: Data does not include overtime (typically 15-30% of annual wage for most positions and as high as 60-100% for critical positions) or monetary/non-monetary benefits; n/c = not calculated, incomplete, or unanalyzed data set;

*=West Virginia region including KY, OH, MD, PA, TN, VA, and WV.

2024 Broadband Industry Wages - National vs. West Virginia

Position	WV BLS Median	National Median
Telecom/Broadband System Design	\$100,230	\$106,950
Telecom Technician	\$57,375	\$61,290
Telecom System Troubleshooter	See Telecom Tech	See Telecom Tech
Telecom System Testing	See Telecom Tech	See Telecom Tech
492021 - Radio, Cellular, and Tower Equipment Installers and Repairers	\$42,370	\$61,310
492022 - Telecommunications Equipment Installers and Repairers, Except Line Installers (Can include Fiber Optic Technicians/Broadband Technicians, Premises Installation Tech)	\$72,380	\$61,270
Premises Installation Tech	See 492022	See 492022
Underground Fiber Drop Technician	See 492022	See 492022
Aerial Drop Technician	See 492022	See 492022

Source: Bureau of Labor Statistics (BLS) raw data analyzed by Continuum..

Interpretive Note: Technician positions are not broken out in BLS data. Data collected during the research and survey process covered a subset of states and is not presented separately in these materials. n/c = not calculated, incomplete, or unanalyzed data set;

WI - Special Broadband Financing Programs Available

Program*	In progress or anticipated spending	
BEAD	\$1,319,779,467***	
Digital Equity	\$952,198	
Middle Mile	\$30,387,914	
Tribal (Round 1 & 2)	\$37,027,118 & \$19,438,517 (Estimated)	
Broadband Infrastructure	\$0	
Capital Project Fund	\$42,000,000	
RDOF	\$373,686,203	
CAF II	\$4,709,505	
RUS (2019-2023)	\$31,095,922	
Other (Estimated)	\$700,000,000	
Total (Estimated)	Total = \$2.6 Billion	Annual = \$375 Million

- ▶ Wisconsin Construction Workforce Special Funding Need (Estimated)**
 - 900 field trades (helper, laborer, lineman, field crew splicer, operator, foreman, etc.)
 - Plus project management, design, locator, owner representative, inspection, etc.
- ▶ Wisconsin Technician Workforce Special Funding Need (Estimated)**
 - 2000 technicians (tower, troubleshooter, testing, premises, underground / overhead drop, etc.)

Source: Continuum analysis and presentation of public data from multiple sources.

Interpretive Note: * Not all special programs and state sponsored programs are listed. In addition, normal and routine spending on Broadband infrastructure is also not described in full detail.

Interpretive Note: ** Forecasted labor need does not incorporate retirements, attrition, or additional workforce needed for ongoing and routine, broadband construction activity.

Interpretive Note: ***. BEAD legislative funding amount grossed up by 25% to account for anticipated matching amounts.

WI – Broadband Workforce Size & Need

Construction & Technician Position	Workforce Estimate	2025-2032 Need	10 Yr Ret. & Attr. Need
Superintendent/General Foreman	100	54	40
Foreman	200	108	70
Lineman	500	270	170
Apprentice*	500	270	170
Field Crew Fiber Splicer	50	27	20
Groundman / Helper / Laborer	200	135	70
Operator / HDD Operator	100	54	40
Construction Field Total	1,650	918	580
Tower Equipment Installers and Repairers	300	140	80
Telecom Technician (Non-Specific)**	300	190	90
Telecom System Troubleshooter**	200	90	120
Telecom System Testing**	200	90	120
Premises Installation Tech**	1,600	930	310
Underground Fiber Drop Technician**	300	190	90
Aerial Drop Technician**	700	370	120
Technician Total	3,600	2,000	930

Source: Continuum led 2024 national and proprietary study of broadband industry workforce size and need on the behalf of PCCA and FBA.
 Interpretive Note: * Apprentice position captures entry level, lower experience, and lower skill field trades performing lineman, splicer, helper, and operator functions.
 Interpretive Note: ** Interior and other fiber splicing skills and need are incorporated into technician positions.

2024 Broadband Industry Wages - Midwest vs. Wisconsin

Position	Midwest Low End	Midwest Median	Midwest High End	WI Survey Median	WI BLS Median	National Median
119021 – Construction Manager (Project Manager)	\$50,000	\$84,000	\$158,660	\$122,258	\$108,480	\$104,900
131051 – Estimator	\$54,120	\$70,102	\$104,000	\$66,125	\$67,940	\$74,740
151141.1 – Contract Administrator	\$52,500	\$72,068	\$91,097	\$45,000	nc	nc
172051.2 – Engineer Cost & Schedule	\$38,000	\$57,260	\$89,540	\$57,000	nc	nc
299011 – Safety Specialist / Representative	\$98,780	\$101,380	\$103,980	\$57,600	\$78,790	\$81,140
471011 – Supervisor (Superintendent, Foreman)	\$61,600	\$76,190	\$123,077	\$64,000	\$78,870	\$76,760
472061 – Laborer	\$33,600	\$48,000	\$73,600	\$37,000	\$49,330	\$45,300
472073 – Operator Light & Heavy Equipment	\$47,757	\$65,052	\$75,845	\$70,000	\$66,310	\$56,160
472111 – Electrician / Fiber Splicer	\$48,000	\$63,000	\$83,200	\$64,000	\$74,660	\$61,590
474010 – Inspector / Quality Assurance/Quality Control	\$50,400	\$66,000	\$96,000	nc	\$65,720	\$67,700
475031 – Operator HDD	\$36,000	\$58,000	\$115,260	\$58,000	\$65,690	\$56,660
493042 – Operator Mechanic	nc	\$53,750	nc	\$52,000	\$63,100	\$61,900
499051 & 499052 – Lineman Electrical & Telecom	\$46,200	\$94,420	\$101,883	\$80,000	\$58,830	\$64,640
514121 – Welder	nc	\$49,000	nc	\$56,000	\$50,600	\$48,940
533032 – Operator CDL Truck Driver only	\$52,000	\$54,500	\$76,800	\$52,000	\$55,680	\$54,320

Source: Continuum led 2024 national and proprietary study of broadband industry wages on the behalf of PCCA and FBA.

Interpretive Note: Data does not include overtime (typically 15-30% of annual wage for most positions and as high as 60-100% for critical positions) or monetary/non-monetary benefits; n/c = not calculated, incomplete, or unanalyzed data set

2024 Broadband Industry Wages - National vs. Wisconsin

Position	WI BLS Median	National Median
Telecom/Broadband System Design	\$97,880	\$106,950
Telecom Technician	\$79,065	\$61,290
Telecom System Troubleshooter	See Telecom Tech	See Telecom Tech
Telecom System Testing	See Telecom Tech	See Telecom Tech
492021 - Radio, Cellular, and Tower Equipment Installers and Repairers	\$97,350	\$61,310
492022 - Telecommunications Equipment Installers and Repairers, Except Line Installers (Can include Fiber Optic Technicians/Broadband Technicians, Premises Installation Tech)	\$60,780	\$61,270
Premises Installation Tech	See 492022	See 492022
Underground Fiber Drop Technician	See 492022	See 492022
Aerial Drop Technician	See 492022	See 492022

Source: Bureau of Labor Statistics (BLS) raw data analyzed by Continuum..

Interpretive Note: Technician positions are not broken out in BLS data. Data collected during the research and survey process covered a subset of states and is not presented separately in these materials. n/c = not calculated, incomplete, or unanalyzed data set;

WY - Special Broadband Financing Programs Available

Program*	In progress or anticipated spending	
BEAD	\$434,847,402***	
Digital Equity	\$530,006	
Middle Mile	\$2,293,038	
Tribal (Round 1 & 2)	\$0 & \$0 (Estimated)	
Broadband Infrastructure	\$0	
Capital Project Fund	\$70,500,000	
RDOF	\$57,500,391	
CAF II	\$30,652,957	
RUS (2019-2023)	\$28,343,292	
Other (Estimated)	\$200,000,000	
Total (Estimated)	Total = \$850 Million	Annual = \$125 Million

- ▶ Wyoming Construction Workforce Special Funding Need (Estimated)**
 - 300 field trades (helper, laborer, lineman, field crew splicer, operator, foreman, etc.)
 - Plus project management, design, locator, owner representative, inspection, etc.
- ▶ Wyoming Technician Workforce Special Funding Need (Estimated)**
 - 400 technicians (tower, troubleshooter, testing, premises, underground / overhead drop, etc.)

Source: Continuum analysis and presentation of public data from multiple sources.

Interpretive Note: * Not all special programs and state sponsored programs are listed. In addition, normal and routine spending on Broadband infrastructure is also not described in full detail.

Interpretive Note: ** Forecasted labor need does not incorporate retirements, attrition, or additional workforce needed for ongoing and routine, broadband construction activity.

Interpretive Note: ***. BEAD legislative funding amount grossed up by 25% to account for anticipated matching amounts.

WY – Broadband Workforce Size & Need

Construction & Technician Position	Workforce Estimate	2025-2032 Need	10 Yr Ret. & Attr. Need
Superintendent/General Foreman	20	18	0
Foreman	50	36	20
Lineman	100	90	40
Apprentice*	100	90	40
Field Crew Fiber Splicer	10	9	0
Groundman / Helper / Laborer	60	45	20
Operator / HDD Operator	20	18	0
Construction Field Total	360	306	120
Tower Equipment Installers and Repairers	30	30	10
Telecom Technician (Non-Specific)**	40	40	20
Telecom System Troubleshooter**	20	20	20
Telecom System Testing**	20	20	20
Premises Installation Tech**	200	190	40
Underground Fiber Drop Technician**	40	40	20
Aerial Drop Technician**	80	70	20
Technician Total	430	410	150

Source: Continuum led 2024 national and proprietary study of broadband industry workforce size and need on the behalf of PCCA and FBA.
 Interpretive Note: * Apprentice position captures entry level, lower experience, and lower skill field trades performing lineman, splicer, helper, and operator functions.
 Interpretive Note: ** Interior and other fiber splicing skills and need are incorporated into technician positions.

2024 Broadband Industry Wages - West vs. Wyoming

Position	West Low End	West Median	West High End	WY Survey Median*	WY BLS Median	National Median
119021 – Construction Manager (Project Manager)	\$58,000	\$100,680	\$158,660	\$97,163	\$85,400	\$104,900
131051 – Estimator	\$54,240	\$91,560	\$196,560	nc	\$69,990	\$74,740
151141.1 – Contract Administrator	\$46,000	\$57,000	\$86,100	nc	nc	nc
172051.2 – Engineer Cost & Schedule	nc	\$67,700	\$89,540	\$89,500	nc	nc
299011 – Safety Specialist / Representative	\$58,000	\$76,502	\$159,994	\$125,000	\$85,570	\$81,140
471011 – Supervisor (Superintendent, Foreman)	\$50,000	\$66,000	\$126,200	\$75,500	\$75,120	\$76,760
472061 – Laborer	\$29,000	\$45,000	\$80,000	\$44,000	\$41,510	\$45,300
472073 – Operator Light & Heavy Equipment	\$40,000	\$56,000	\$90,000	\$60,000	\$61,780	\$56,160
472111 – Electrician / Fiber Splicer	\$40,000	\$56,000	\$82,000	\$54,000	\$64,440	\$61,590
474010 – Inspector / Quality Assurance / Quality Control	\$53,000	\$65,500	\$66,170	\$69,635	\$63,230	\$67,700
475031 – Operator HDD	\$41,500	\$56,000	\$80,100	\$56,000	\$60,070	\$56,660
493042 – Operator Mechanic	\$36,000	\$62,000	\$98,000	\$82,000	\$74,820	\$61,900
499051 & 499052 – Lineman Electrical & Telecom	\$47,260	\$54,000	\$60,000	\$80,450	\$55,250	\$64,640
514121 – Welder	\$48,000	\$52,000	\$91,000	nc	\$62,510	\$48,940
533032 – Operator CDL Truck Driver only	\$36,000	\$52,000	\$95,000	\$57,000*	\$56,560	\$54,320

Source: Continuum led 2024 national and proprietary study of broadband industry wages on the behalf of PCCA and FBA.

Interpretive Note: Data does not include overtime (typically 15-30% of annual wage for most positions and as high as 60-100% for critical positions) or monetary/non-monetary benefits; n/c = not calculated, incomplete, or unanalyzed data set;

*=Wyoming region including CO, ID, MT, ND, NE, SD, UT and WY.

2024 Broadband Industry Wages - National vs. Wyoming

Position	WY BLS Median	National Median
Telecom/Broadband System Design	\$102,960	\$106,950
Telecom Technician	\$62,580	\$61,290
Telecom System Troubleshooter	See Telecom Tech	See Telecom Tech
Telecom System Testing	See Telecom Tech	See Telecom Tech
492021 - Radio, Cellular, and Tower Equipment Installers and Repairers	nc	\$61,310
492022 - Telecommunications Equipment Installers and Repairers, Except Line Installers (Can include Fiber Optic Technicians/Broadband Technicians, Premises Installation Tech)	\$62,580	\$61,270
Premises Installation Tech	See 492022	See 492022
Underground Fiber Drop Technician	See 492022	See 492022
Aerial Drop Technician	See 492022	See 492022

Source: Bureau of Labor Statistics (BLS) raw data analyzed by Continuum..

Interpretive Note: Technician positions are not broken out in BLS data. Data collected during the research and survey process covered a subset of states and is not presented separately in these materials. n/c = not calculated, incomplete, or unanalyzed data set;

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Broadband Market Research Methodology

- ▶ Developed a standard, open-ended question interview template, and a standard data collection template.
- ▶ Identified 1000+ candidates for interviews or survey participation via phone and e-mail.
 - Individual candidates were specifically selected from each of the 50 states and were selected for their perceived knowledge and experience in the Broadband market. They were not selected randomly. The following structure was used to identify candidates:
 - Federal legislators identified as supporting federal funding for broadband infrastructure.
 - State regulators or state broadband office employees identified as supporting or implementing federal or state broadband funding of various types.
 - Broadband, telecom, cable system operators.
 - Rural electric or Co-op electric utilities operating a broadband system either directly, via subsidiary, or via investment.
 - Engineers designing broadband systems.
 - Contractors of various types constructing broadband systems.
 - Other parties knowledgeable about the regulation, funding, design, construction, or operation of broadband systems.
- ▶ Completed 350 interviews of 15 min. to 2+ hours in length conducted in every state with representatives from the 7 stakeholder groups defined above
- ▶ Collected nearly 10,000 lines of anonymous raw data on staffing and wage rates from firms headquartered or operating in each of the 50 states and for employees responsible for operating, designing, constructing or maintaining broadband systems.
- ▶ Analyzed and presented of interview and raw data collected.

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Thank You



MARK BRIDGERS

shipping:
405 Forsyth Street
Raleigh, NC 27609

mailing:
PO Box 31026
Raleigh, NC 27622

www.ContinuumCapital.net

919.345.0403

MBridgers@ContinuumCapital.net

Twitter: [@MarkBridgers](https://twitter.com/MarkBridgers)

Skype: [mark.bridgers.continuum](https://www.skype.com/people/mark.bridgers.continuum)

LinkedIn: www.linkedin.com/pub/mark-bridgers/12/9b4/81



About PCCA



The Power & Communication Contractors Association (PCCA) is the national trade association for companies constructing electric power facilities, including transmission and distribution lines and substations and telephone, fiber optic, and cable television systems. Other areas of members' business activities include directional drilling, local area and premises wiring, water and sewer utilities, gas and oil pipelines. Since its founding in 1945, membership has grown to include hundreds of companies located throughout the United States, Canada, and Mexico. These companies are the leading construction, manufacturing, supply, and service firms within the power and communication construction industry. They frequently serve as prime sources of information, news and background on the design and construction of power and communications infrastructure. If you are interested in obtaining more information about the Power & Communication Contractors Association (PCCA), please contact Tim Wagner, Executive Director via phone at (800) 542-7222, by e-mail at twagner@pccaweb.org, or visit the website at www.pccaweb.org.

PCCA serves its members by actively providing resources to support profitable growth and staff development within the member firms. As part of this support, PCCA led the way in helping to develop the PCCA Utility Construction Index.

About FBA



The Fiber Broadband Association’s mission is to accelerate the deployment of fiber broadband networks to ensure digital equity and enable every community to leverage economic and societal benefits that only fiber can deliver.

Modern American history is marked by inflection points that changed the course of how we live — from the electrification of rural America to the creation of a national highway system. Today, connecting every home and business across the US with fiber broadband will create that kind of seismic change.

The Fiber Broadband Association is the voice of fiber. As the premier association that focuses solely on fiber, we are relentless in our work to connect every American with fiber. Because only fiber can close the digital divide, and unleash economic development that will raise the quality of life for every single one of us — providing education and job opportunities; eliminating poverty; creating sustainability and enabling innovations we haven’t even thought of yet. Fiber ensures no one gets left behind.

The moment is now for fiber. So we ask you to join us. This is our call to action. Because the future not only belongs to fiber; fiber will enable the future. Fiber Broadband Association. When fiber leads, the future follows.



When fiber leads,
the future follows.



Mark Bridgers

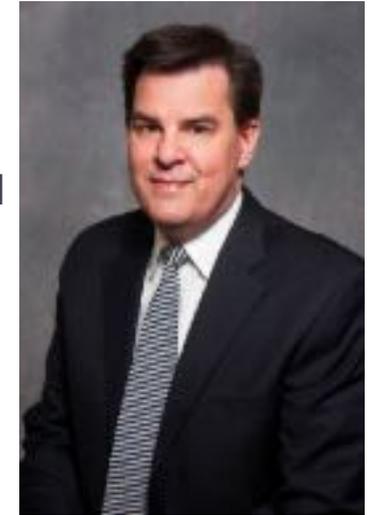


Mark founded and leads a Utility Vertical Market team team at Continuum Capital. He works with gas/electric utilities, power generators, pipeline companies, and energy companies. As a recognized expert in capital construction and operational challenges, Mark was recently honored with membership in the Society of Gas Operators (SOGO) and the Guild of Ancient Suppliers.

Mark helps firms prepare for and successfully navigate “strategic transitions.” His passion is helping organizations achieve breakthrough innovations through collaborative or integrated relationships. He is the architect of an approach for integrated service provider management referred to as the “Extended Enterprise” among construction industry participants.

Mark is an avid educator, trainer, and writer with more than 20 years of industry expertise including financial performance analysis; development and implementation of tools to reduce construction cost, life-cycle cost, and operational friction; restructuring of processes and procedures - often times using LEAN Construction techniques; and leader development.. He is a recognized expert in capital construction and operational challenges . Mark is also author of over 150 articles and research papers published internationally in industry journals, including ENR, PE – The Magazine for Professional Engineers, Pipeline & Gas Journal, Utility Contractor (NUCA), Underground Contractor, Electric Energy (RMEL) and Electric Perspectives (EEI).

Mark holds a master’s degree in business administration from the University of Virginia’s Darden school of Business and a bachelor’s degree in financial management from Clemson University. In addition, he earned the designation of Chartered Property and Casualty Underwriter (CPCU) and Associate in Reinsurance (ARe).



Wayne Gould

Wayne is a highly accomplished, second-generation utility engineer and energy industry consultant. His impressive career within the energy and utility industry spans more than four decades in every operational area service at all management levels. Wayne's senior executive positions include Puget Sound Energy (PSE), the Sunlaw Energy Corporation, the El Paso Merchant Energy Company, and the Southern California Edison Company. His career includes navigating unprecedented challenges; Wayne led an independent power company through the California Energy Crisis; Managed over 400 (5,000 MW) of third-party power producer contracts (\$2-3 Billion/year); and Negotiated multi-year major agreements for Canadian natural gas supply and transportation, domestic coal supply, nuclear project ownership, and inter-utility power purchase agreements.



Immediately prior to establishing his consulting practice, Wayne managed PSE's Service Provider, Thermal Generation, Natural Gas Resources, Supply Chain Management, Corporate Contracting, Contractor Management, Facilities, Fleet, Internal Audit, Privacy, and Ethics & Compliance organizations.

In his current role at Continuum Capital, Wayne is responsible for providing practical advice and guidance to clients on a wide range of strategic initiatives. His specialty is helping clients navigate complex strategy and organizational issues with a focus on achieving their strategic objectives.

Wayne's experience include multiple instances of industry service and support including Board leadership with the Northwest Gas Association (NWGA), the Solar Energy Industries Association (SEIA), the American Wind Energy Association (AWEA), Electric Power Research Institute's (EPRI) Technology Transfer, and National Renewable Energy Laboratory's (NREL) Enterprise Growth Forum.

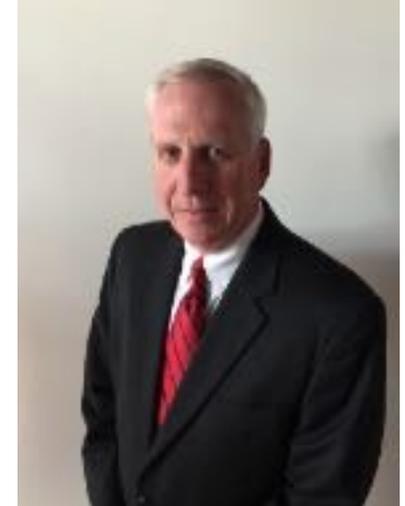
Wayne earned concurrent Master's and Bachelor's degrees in Mechanical Engineering from Brigham Young University and is a professionally registered engineer.

Jay Rendos

Jay Rendos is a consultant in the energy industry and Director within Continuum's Utility Vertical Market team. He works primarily with gas/electric utilities, power generators, pipeline companies, and energy companies to support the planning, design, construction, and operation of capital assets. He also works with the service providers and material/equipment suppliers that support these firms including mechanical contractors, engineering firms, overhead/underground utility contractors, and high value-added material and equipment suppliers. Jay is a recognized expert in both natural gas utility construction, operations, and maintenance along with power generation facility construction and operations including very specialized experience in reduced and no carbon emission facilities powered by natural gas, nuclear, or renewable sources.

Jay brings 30 years of energy industry experience and his experiences include senior management positions in the energy industry, nuclear and non-nuclear power generation, and LDC facility construction and operations. His career highlights include transformative roles with NICOR Gas, PCI Energy Services, Westinghouse Electric Company, Williams Industrial Services, and Holtec International. Jay's broad energy industry experience and participation in industry associations includes leadership roles with the American Gas Association (AGA) where he served as Vice-Chairman of the Distribution, Construction and Maintenance Committee; Midwest Energy Association (MEA) as an active member; Nuclear Energy Institute (NEI), American Welding Society (AWS), American Nuclear Society (ANS) and Electric Power Research Institute (EPRI).

Jay holds a Master of Business Administration degree in Finance & Marketing from Lewis University and a Bachelor of Science degree in Civil Engineering from Purdue University. He is a certified Six Sigma Green Belt for Development and Improvement. He earned and was recognized with the George Westinghouse Signature Award of Excellence for Spent Fuel Canister Welding Technology.



About Continuum



Continuum Capital is a boutique management consulting, training, investment banking, and capital services firm providing services to the worldwide construction industry. We provide services in the areas of strategic market information, acquisition integration, ownership transition, private equity financing, project delivery improvement, management and field-level training, strategic planning, strategic sourcing, and productivity improvement.

Mission Statement	Transform capital asset construction worldwide.
Founded	2011
Office Locations	Raleigh, NC; Birmingham, AL; Denver, CO; Dallas, TX; Chicago, IL; Baltimore, MD
Number of Employees	9
Geographic Market	United States, Canada, Latin America, Europe, and Pacific Rim
Continuum Capital's Clients	Contractors; engineers; architects; government agencies; utility companies; manufacturers and distributors of construction materials and construction equipment
Consulting Clients	15 per year (90% of whom are repeat customers)
International Speaking Locations	Brazil, Canada, France, Mexico, South Korea, United Arab Emirates
Professional Lecture & Speaking	20 per year
Knowledge & Database Access	Proprietary database tools for benefit of clients: <ul style="list-style-type: none"> a) Utility construction index from 2009 to present; b) Utility construction field productivity improvement techniques from 1700 surveys; c) Utility contractor financial performance comparison of 50+ publicly traded and privately held firms; d) National and regional utility construction spending history and forecast e) Gas utility "Best Practice" database and knowledge defining superior performance from 2000 to present d) 35,000 contact database to support acquisition, research, and industry knowledge
Corporate Web Site	www.ContinuumCapital.net
Energy & Utility Team Leader	Mark Bridgers – President & Founder Continuum Capital; Director Utility Vertical Market

About Continuum

Founded in 2011, Continuum Capital provides boutique management consulting, capital services, and training, to the energy, utility, pipeline, and industrial markets supporting the successful and efficient planning, design, construction, and operations of capital assets.

Continuum utilizes a proprietary “SMART Advisory” methodology to deliver innovative and customized solutions to energy, utility, or pipeline owners/operators who want to transform their capital asset construction processes. Service providers to these firms, including underground and overhead contractors and engineers, are integrated into the transformation process, frequently forming what Continuum refers to as an “Extended Enterprise.”

Continuum’s experienced consultants can assist your business with Capital Construction/O&M Unit Effectiveness, Program Management Office Transformation, Risk Management/Mitigation for Capital Asset Construction, Project Management/Controls Installation, Process Analysis & Improvement, Management of RFI / RFQ / RFP / Procurement, Extended Enterprise/Alliance Formation, and Field Productivity Assessment & Improvement.

Additional and specialized services include: M&A or Due Diligence Support, Market Strategy, Market Research, Cost Analysis & Savings, Cost to Complete Analysis, Cost to Convert to Best Purpose, and Cost to Restore Asset.

Let Continuum transform your business!

