



Construction Industry Occupational Wage Survey Results

2018

BRAD AVAKIAN
COMMISSIONER



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DEPUTY COMMISSIONER

BUREAU OF LABOR AND INDUSTRIES

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Each year, the State of Oregon Employment Department (OED), under the direction of the Bureau of Labor and Industries (BOLI), conducts a comprehensive geographical wage survey of the construction industry.

This publication summarizes the data collected by the Employment Department from the survey conducted in 2018. This is the data that provided the basis for the Bureau's determinations for the January 2019 Prevailing Wage Rate publication.

While completion of the annual wage survey is mandatory under state law, individual employer survey responses are confidential. This publication protects that confidentiality by limiting the published data to occupations and geographic areas where there were a minimum of three reporting employers and no single firm made up 80 percent or more of the reported hours.

The results of the 2018 survey reflect almost three million hours of work performed by Oregon construction workers in over 50 craft occupations during four preselected weeks of construction activity in the previous twelve months. Data was collected in fourteen geographical regions specified in state law.

This is the twenty second annual survey that has been conducted by OED/BOLI. A funding mechanism to conduct these surveys was established by the 1995 Legislature.

The Prevailing Wage Rate (PWR) law is designed to represent the interests of all Oregonians. For workers, it establishes the minimum wage to be paid for the particular type of construction work performed. For construction industry contractors, the law provides a more competitive opportunity to perform public construction work. And for taxpayers, the PWR law serves to assure quality workmanship at a fair price.

Brad Avakian
Commissioner

Table of Contents

Foreword	7
Summary of Survey Methods	8
Changes to Survey	9
Survey Response Summary	10
Wage Data by Occupation	12
Asbestos Worker / Insulator	13
Boilermaker	13
Bricklayer and Stonemason	14
Bridge and Highway Carpenter	14
Carpenter Group 1	15
Carpenter Group 2	15
Cement Mason	16
Diver	17
Divers' Tender	17
Dredger	17
Drywall, Lather, Acoustical Carpenter	18
Drywall Taper	18
Electrician	19
Elevator Construction, Installer and Mechanic	19
Fence Constructor (Non-Metal)	20
Fence Erector (Metal)	20
Flagger	21
Glazier	21
Hazardous Material Handler / Mechanic	22
Highway and Parking Striper	22
Ironworker	23
Laborer Group 1	23
Laborer Group 2	24
Laborer Group 3	24
Landscape Laborer / Technician	25
Limited Energy Technician	26
Line Constructor	26
Marble Setter	27
Millwright	27

Painter	28
Piledriver	28
Plasterer and Stucco Mason	29
Plumber / Pipefitter / Steamfitter	29
Power Equipment Operator Group 1	30
Power Equipment Operator Group 1A	30
Power Equipment Operator Group 1B	30
Power Equipment Operator Group 2	31
Power Equipment Operator Group 3	31
Power Equipment Operator Group 4	32
Power Equipment Operator Group 5	33
Power Equipment Operator Group 6	34
Roofer	35
Sheet Metal Worker	35
Soft Floor Layer	36
Sprinkler Fitter	36
Tender to Mason Trades (Brick, Stonemason, Mortar Mixer, Hod Carrier)	37
Tender to Plasterer and Stucco Mason	37
Testing and Balancing (TAB) Technician	37
Tile Setter / Terrazzo Worker: Hard Tile Setter	38
Tile, Terrazzo and Marble Finisher	38
Truck Driver, All	39

Appendix

Definitions	41
Map of Wage Rate Regions	42
Table of Surveyed Occupations	43
Occupation Reporting Schedule	44
Sample Survey Form	45
Example of weighted average calculation	47
Example of Aging Wages Forward	48

FOREWORD

The Oregon Prevailing Wage Rate (PWR) Law applies to public works projects involving construction, reconstruction, major renovation, or painting when the total contract price exceeds \$50,000.

In 1995, the Legislature established a fee for all state public works projects to pay for the education and enforcement of the state's Prevailing Wage Rate laws and wage surveys. The Oregon Employment Department, directed by the Bureau of Labor and Industries, conducted the first construction wage survey in 1996. In 1997, the Legislature required that the Labor Commissioner rely on the survey in making wage rate determinations. If the Commissioner determines that there is insufficient data in a locality to establish the prevailing wage rate for an occupation, the law directs the Commissioner to consider additional information such as collective bargaining agreements, other independent wage surveys, and the prevailing wage rates determined by appropriate federal agencies, or agencies of adjoining states.

This publication summarizes the data collected in the 2018 Construction Industry Occupational Wage Survey. While this data forms the basis for rate determinations, the estimates included in this publication are not the official prevailing wage rates. The Commissioner considers occupational and geographical combinations, as well as all other available information, in determining the prevailing wage rates.

The current applicable prevailing wage rates to be used on public works projects are available on the bureau's website **www.oregon.gov/boli** or upon request by contacting:

Oregon Bureau of Labor and Industries
Prevailing Wage Rate Unit
800 NE Oregon Street Suite 1045
Portland, OR 97232
971.673.0839

For more information relating to this report, contact:

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503.947.1233

Methodology

Population

The survey universe was constructed using a list of firms from the Oregon Employment Department's Quarterly Census of Employment & Wages (QCEW) database. Each firm in the database is assigned to an industry using the North American Industry Classification System (NAICS). Any firm classified within a construction related industry is included in the survey universe.

Lists of construction associations were screened to ensure association members were included, but not duplicated, in the survey population. The Construction Contractor's Board (CCB) also supplied a list of out-of-state commercial contractors registered in Oregon.

All firms in the universe were sent a preliminary postcard. The postcard was used to; inform firms that they would receive the survey, ask about recent construction activity, make address corrections, remove firms not within the scope of the survey, and to identify which establishments were no longer in business.

Data Collected

Firms report information for four pre-selected work weeks. If a firm performed work on a qualifying non-residential project, the survey will ask them to report information for the employees working on the job site. They provide the occupation, hours worked, basic hourly wage, fringe benefit, and skill of reported employees. The firm identifies the Wage Rate Region where the work took place, as well as indicate whether the employee was party to a union contract. The survey did not seek information about corporate officers, office staff, or residential project employees. A sample survey form is presented in the Appendix.

Data Presentation and Confidentiality

This report presents the data by occupation. To ensure the confidentiality of information provided by survey respondents, results are screened before release. Results for a region are released if three or more firms reported data, and no single firm made up 80 percent or more of the hours reported.

In the "Wage Data by Occupation" section, regions determined to be confidential were grouped and reported where possible. These groupings are designed to report as much detailed regional data as possible. They do not necessarily correspond to the Wage Rate Regions used by the Labor Commissioner in determining the prevailing wage rate. Similar occupations are grouped to correspond with the groupings in the Prevailing Wage Rate publication.

The hourly wage and benefit columns are all average values, weighted by hours. For instance, the wage of someone who works forty hours will have more influence on the weighted average than the wage of someone who only works ten hours. These calculations are explained in the Definitions section of the Appendix.

Changes to the Survey

In 2013, the Oregon Employment Department presented an evaluation of the survey to the BOLI Commissioner and Prevailing Wage Advisory Committee. Recommendations were made to increase the validity and relevance of the survey results. Based on those recommendations, the Commissioner approved survey changes that were then implemented in 2014 and 2015. These changes included;

Occupation-Reporting Table

All occupation-region combinations were required to be reported in 2014. In an effort to reduce the burden on contractors a new trade-based table was added to the survey in 2015. The table identified trades that were required, or not required, to be reported. The current table showing the occupation combinations that firms were required to report can be found in the Appendix.

With each year a different group of trades will be identified as “Not Required.” A copy of the Occupation Reporting Schedule can be found in the Appendix.

Trade Data Aged Forward

To account for the absence of information for trades identified as “Not Required,” the hours reported for these trades in 2017 were used to estimate wages in 2018. Wage and benefit estimates were increased based on changes to the US Bureau of Labor Statistics’ Employment Cost Index. More details on the Employment Cost Index can be found in the Appendix.

Survey Limitations

The Construction Industry Occupational Wage Survey collects information from non-residential construction projects fitting specific criteria. It does not include residential construction projects, minor renovations, or maintenance and service work on existing buildings.

Survey results are based on reported hours for journey-level workers. Results are not a measure of the activity of apprentice or entry-level workers.

The “Wage Rate Region” reflects where the work took place, rather than where the firm resides.

Results are based on all completed surveys returned to the Oregon Employment Department by October 29, 2018.

Survey Response Summary

Surveys were sent to 6,072 firms who may have performed some work, or service, on a non-residential construction project in Oregon over the past year. A total of 2,433 firms reported journey, and sub-journey data. Of those reporting data, 2,195 firms reported journey-level wage and benefit information. The other firms in the survey were either not required to report data (2,816), provided information that was incomplete or unusable (38), or did not respond (785).

2018 Response Details	
Total Firms Surveyed	6,072
Total Surveys Returned	5,287
Surveys Reporting Data	2,433
Surveys with Usable Data	2,195
Non-Responses	785
Response Rate	87.1%
Reasons for not Reporting Data	
Not Required to Report	923
Residential Projects Only	998
No Employees	176
Inactive During Survey Weeks	396
Closed	37
Out of Scope of Survey	179
Sub-Contracted All Work	107
Incomplete or Problematic	38
Total Hours Used for 2018 Report	3,047,159

In addition to the survey responses for 2018, response data from 949 surveys from 2017 were used in the process to develop estimates for occupations that were not required to be reported this year.

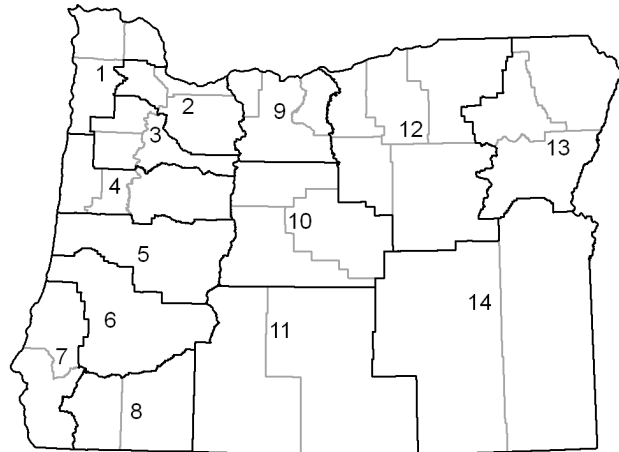
Survey Response Summary (Continued)

Statewide Summary

Over three million Journey-level hours were reported by firms. The table below shows the summary results for each Wage Rate Region collected by the survey.

About 49 percent of the hours reported were performed under a trade union contract or collective bargaining agreement. The average hourly wage for all trades was \$32.76.

In addition to an hourly wage, 80 percent of reporting firms had at least one employee receive some kind of fringe benefit. Examples of fringe benefits include health insurance, defined contributions to a retirement plan, paid leave, contributions toward training, life insurance, etc. The average fringe benefit among firms who reported benefits was \$14.40.



Region	Firms Reporting	Hours Reported	Percent Union	Hourly Rate	Fringe w/zeros	Fringe w/o zeros
1	313	78,457	38.8%	\$31.81	\$11.02	\$12.91
2	1507	1,813,659	57.9%	\$34.08	\$14.08	\$15.80
3	648	240,482	35.7%	\$30.87	\$10.36	\$11.69
4	465	130,483	39.1%	\$31.87	\$11.11	\$12.76
5	479	185,484	33.2%	\$31.02	\$11.08	\$12.22
6	200	48,552	24.9%	\$27.16	\$8.47	\$11.13
7	143	36,702	33.2%	\$28.95	\$9.75	\$11.71
8	323	118,357	29.0%	\$28.11	\$8.10	\$10.97
9	210	63,208	57.2%	\$35.36	\$14.16	\$17.02
10	317	166,193	25.3%	\$30.14	\$8.58	\$9.96
11	131	32,262	18.4%	\$27.82	\$8.87	\$11.57
12	245	99,497	60.1%	\$34.44	\$14.39	\$15.84
13	88	19,919	5.1%	\$25.74	\$6.11	\$10.28
14	111	13,905	10.3%	\$28.26	\$7.64	\$9.91
Total Statewide	2,883	3,047,159	48.7%	\$32.76	\$12.60	\$14.40

Region count of Firms Reporting does not add up to State Total. Some firms report in more than one Wage Rate Region.

Wage Data By Occupation

The following section contains wage estimates for occupations by Wage Rate Region. To see a breakout of what counties are included in specific regions, see the Wage Rate Regions table found in the Appendix.

The number of Firms Reporting found in the following section shows the count of unique firms reporting data for each listed region. The hourly wage and benefit columns are all average values weighted by hours. For instance, the wage of someone who works forty hours will have more influence on the average than the wage of someone who works ten hours. These calculations are explained in the Definitions section of the Appendix.

Balance of State

To ensure the confidentiality of information provided by survey respondents results for a region are only released if three or more firms reported data, and no single firm made up 80 or more percent of the hours reported. Regions that did not pass this threshold were combined and reported in a balance of state (BOS) grouping. These groupings are designed to report as much detailed regional data as possible. The BOS regions do not necessarily correspond to the Wage Rate Regions used by the Labor Commissioner in determining the prevailing wage rate.

Aged Estimates

Some occupations were not required to be reported in 2018. If an occupation was not required, the wage data from 2017 was aged using measures of the Employment Cost Index. An (ECI) next to the name of the occupation indicates that wage estimates from 2017 were aged forward.

Example (ECI)

Wage Rate Region	Firms Reporting	Hours Reported	Percent Union	Hourly Rate	Fringe w/zeros	Fringe w/o zeros
1	3	625	100.0%	\$34.80	\$10.43	\$10.43
2	12	18,608	95.2%	\$40.43	\$18.11	\$18.18
3	5	564	100.0%	\$41.59	\$18.26	\$18.26
5	6	1,335	85.3%	\$38.78	\$17.62	\$20.15
8	3	754	100.0%	\$36.60	\$19.28	\$19.28
10	3	194	57.7%	\$28.78	\$11.12	\$19.29
BOS*	23	4,352	89.3%	\$28.75	\$8.33	\$8.33
Total Statewide	55	26,432	94.5%	\$38.56	\$16.70	\$16.93

*Balance of State - Wage Rate Regions are grouped to maintain confidentiality.

To see the most current definitions for all occupations go to the BOLI website, https://www.oregon.gov/boli/WHD/PWR/Pages/Occ_Defs.aspx

Asbestos Worker and Insulator

Wage Rate Region	Firms Reporting	Hours Reported	Percent Union	Hourly Rate	Fringe w/zeros	Fringe w/o zeros
1	6	1,364	56.3%	\$37.62	\$13.35	\$13.35
2	14	17,099	89.6%	\$40.96	\$17.61	\$17.65
3	10	1,080	82.2%	\$40.87	\$18.55	\$18.55
4	6	1,408	76.3%	\$36.28	\$10.10	\$10.10
5	11	1,727	92.5%	\$41.43	\$18.99	\$19.60
7	3	168	100.0%	\$44.68	\$27.51	\$27.51
8	3	703	58.8%	\$31.48	\$15.96	\$15.96
9	4	265	97.3%	\$41.60	\$19.91	\$19.91
10	4	1,788	37.7%	\$27.48	\$8.90	\$8.90
11	3	189	94.6%	\$41.94	\$24.53	\$24.53
12	5	1,145	97.5%	\$43.00	\$22.92	\$22.92
14	3	215	69.4%	\$35.43	\$17.81	\$17.81
BOS*	3	281	44.1%	\$30.36	\$10.98	\$24.87
Total Statewide	25	27,432	82.9%	\$39.43	\$16.81	\$16.97

*Balance of State - Wage Rate Regions are grouped to maintain confidentiality.

Boilermaker

Wage Rate Region	Firms Reporting	Hours Reported	Percent Union	Hourly Rate	Fringe w/zeros	Fringe w/o zeros
1	3	678	100.0%	\$39.14	\$26.00	\$26.00
2	6	1,194	15.8%	\$32.18	\$9.81	\$9.81
3	3	130	0.0%	\$34.64	\$10.81	\$10.81
5	4	592	67.9%	\$37.34	\$20.55	\$20.55
BOS*	6	5,695	95.5%	\$38.22	\$24.82	\$25.63
Total Statewide	13	8,287	80.9%	\$37.31	\$22.23	\$22.73

*Balance of State - Wage Rate Regions are grouped to maintain confidentiality.

Bricklayer and Stonemason

Wage Rate Region	Firms Reporting	Hours Reported	Percent Union	Hourly Rate	Fringe w/zeros	Fringe w/o zeros
1	3	442	41.9%	\$35.12	\$12.69	\$12.69
2	24	18,936	72.9%	\$35.26	\$16.31	\$17.18
3	11	2,587	65.4%	\$36.20	\$15.72	\$20.58
4	4	571	79.9%	\$35.62	\$16.98	\$18.99
5	9	849	51.7%	\$36.31	\$16.16	\$16.44
9	3	390	0.0%	\$31.53	\$11.49	\$11.49
10	5	1,060	28.7%	\$29.82	\$7.94	\$14.05
12	3	350	92.3%	\$38.07	\$19.59	\$19.59
BOS*	6	1,168	9.6%	\$30.12	\$4.47	\$14.17
Total Statewide	36	26,351	65.7%	\$34.93	\$15.31	\$17.21

*Balance of State - Wage Rate Regions are grouped to maintain confidentiality.

Bridge and Highway Carpenter (ECI)

Wage Rate Region	Firms Reporting	Hours Reported	Percent Union	Hourly Rate	Fringe w/zeros	Fringe w/o zeros
1	5	1,536	0.0%	\$35.81	\$15.20	\$15.20
2	7	1,924	27.7%	\$36.14	\$14.82	\$14.82
5	5	1,919	49.4%	\$35.62	\$15.47	\$15.47
7	6	922	42.6%	\$36.34	\$15.08	\$15.08
8	5	1,158	39.2%	\$36.06	\$14.50	\$14.50
BOS*	13	11,857	87.4%	\$36.15	\$15.39	\$15.39
Total Statewide	21	19,314	65.7%	\$36.07	\$15.26	\$15.26

*Balance of State - Wage Rate Regions are grouped to maintain confidentiality.

Note: Wages aged using ECI. See Appendix for details.

Carpenter Group 1

Wage Rate Region	Firms Reporting	Hours Reported	Percent Union	Hourly Rate	Fringe w/zeros	Fringe w/o zeros
1	39	6,444	32.8%	\$32.46	\$10.66	\$12.21
2	305	253,995	54.0%	\$32.58	\$10.84	\$13.51
3	111	25,852	21.3%	\$30.60	\$8.58	\$10.72
4	69	14,687	51.8%	\$33.37	\$12.20	\$14.53
5	79	26,587	26.2%	\$29.48	\$8.24	\$9.86
6	26	4,065	8.2%	\$29.01	\$9.20	\$11.58
7	19	3,890	47.4%	\$32.65	\$12.47	\$13.63
8	53	17,042	24.1%	\$28.89	\$8.66	\$11.46
9	28	5,739	4.9%	\$28.36	\$4.01	\$7.51
10	51	17,363	30.1%	\$28.81	\$7.18	\$9.49
11	22	5,409	3.0%	\$26.89	\$5.53	\$8.86
12	36	9,011	47.9%	\$33.07	\$11.55	\$12.82
13	14	2,815	0.0%	\$26.21	\$4.56	\$5.48
14	15	1,979	0.0%	\$25.24	\$4.81	\$8.00
Total Statewide	599	394,878	44.5%	\$31.70	\$10.08	\$12.61

Carpenter Group 2

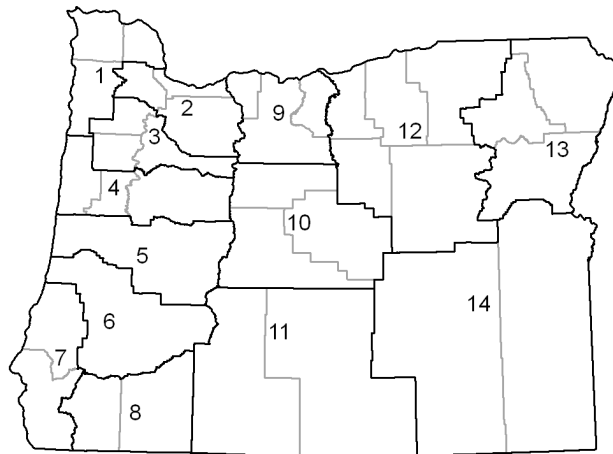
Wage Rate Region	Firms Reporting	Hours Reported	Percent Union	Hourly Rate	Fringe w/zeros	Fringe w/o zeros
2	18	7,803	37.8%	\$27.72	\$7.13	\$15.35
5	6	827	57.2%	\$32.90	\$12.14	\$12.14
8	5	511	3.1%	\$26.57	\$6.03	\$12.91
10	3	350	48.1%	\$29.17	\$7.82	\$16.26
BOS*	11	3,472	4.1%	\$19.28	\$1.54	\$6.93
Total Statewide	31	12,962	28.9%	\$25.78	\$5.93	\$13.65

*Balance of State - Wage Rate Regions are grouped to maintain confidentiality.

Cement Mason

Wage Rate Region	Firms Reporting	Hours Reported	Percent Union	Hourly Rate	Fringe w/zeros	Fringe w/o zeros
1	12	1,929	34.4%	\$29.71	\$16.79	\$17.44
2	79	41,846	41.4%	\$29.41	\$11.72	\$14.36
3	25	5,831	29.8%	\$29.50	\$12.81	\$15.10
4	23	3,861	32.0%	\$26.24	\$9.33	\$12.42
5	25	5,255	8.5%	\$27.79	\$12.55	\$13.93
6	12	1,503	2.7%	\$30.44	\$7.57	\$9.31
7	4	426	10.4%	\$28.97	\$13.65	\$18.87
8	28	7,455	5.5%	\$26.51	\$10.41	\$14.62
10	21	4,287	19.8%	\$28.14	\$9.93	\$11.54
11	8	680	0.0%	\$22.04	\$3.33	\$10.43
13	4	735	0.0%	\$25.65	\$7.78	\$10.75
14	5	501	0.0%	\$24.46	\$5.01	\$12.38
BOS*	20	2,825	40.0%	\$31.78	\$11.41	\$16.12
Total Statewide	173	77,135	31.0%	\$28.77	\$11.41	\$14.17

*Balance of State - Wage Rate Regions are grouped to maintain confidentiality.



Diver ^(ECI)

Wage rates are not published for this occupation in order to maintain confidentiality.

Diver's Tender ^(ECI)

Wage rates are not published for this occupation in order to maintain confidentiality.

Dredger ^(ECI)

Wage rates are not published for this occupation in order to maintain confidentiality.

Drywall, Lather, Acoustical Carpenter and Ceiling Installer

Wage Rate Region	Firms Reporting	Hours Reported	Percent Union	Hourly Rate	Fringe w/zeros	Fringe w/o zeros
2	43	77,993	84.1%	\$34.36	\$14.10	\$15.21
3	15	6,680	88.0%	\$35.01	\$14.94	\$16.26
4	12	3,860	96.8%	\$36.52	\$15.54	\$15.65
5	13	7,537	64.4%	\$35.16	\$15.04	\$15.69
8	7	1,459	0.0%	\$22.26	\$0.82	\$2.56
10	10	3,560	32.8%	\$33.00	\$11.03	\$15.52
12	5	2,239	56.7%	\$35.15	\$13.73	\$16.23
BOS*	10	720	8.7%	\$30.90	\$10.97	\$10.97
Total Statewide	77	104,048	79.4%	\$34.31	\$13.95	\$15.27

*Balance of State - Wage Rate Regions are grouped to maintain confidentiality.

Drywall Taper

Wage Rate Region	Firms Reporting	Hours Reported	Percent Union	Hourly Rate	Fringe w/zeros	Fringe w/o zeros
1	3	166	0.0%	\$36.12	\$14.08	\$16.46
2	37	24,928	65.3%	\$32.43	\$10.85	\$13.60
3	13	2,631	80.3%	\$34.73	\$12.85	\$15.01
4	9	1,222	83.7%	\$37.23	\$15.18	\$15.27
5	8	2,674	34.3%	\$31.13	\$10.48	\$11.99
8	5	867	0.0%	\$24.04	\$1.69	\$3.22
10	8	1,763	19.0%	\$29.88	\$7.02	\$10.40
12	3	1,301	33.8%	\$31.85	\$11.03	\$12.67
BOS*	6	836	0.0%	\$28.26	\$8.29	\$8.29
Total Statewide	62	36,386	58.0%	\$32.24	\$10.67	\$13.19

*Balance of State - Wage Rate Regions are grouped to maintain confidentiality.

Electrician

Region	Firms Reporting	Hours Reported	Percent Union	Hourly Rate	Fringe w/zeros	Fringe w/o zeros
1	32	8,109	69.0%	\$41.37	\$19.65	\$19.78
2	194	272,105	77.2%	\$41.94	\$19.42	\$19.68
3	73	29,824	71.2%	\$40.46	\$15.36	\$16.31
4	58	23,253	63.6%	\$39.90	\$14.22	\$14.50
5	66	24,931	35.9%	\$38.55	\$11.26	\$11.40
6	26	3,757	53.5%	\$34.25	\$11.67	\$14.26
7	14	3,760	59.0%	\$36.73	\$13.49	\$14.95
8	48	14,030	61.6%	\$34.38	\$12.10	\$13.63
9	22	24,289	89.3%	\$42.37	\$21.44	\$21.49
10	40	36,166	48.7%	\$37.91	\$10.25	\$10.33
11	18	4,531	62.4%	\$32.33	\$12.59	\$13.92
12	34	24,801	73.9%	\$40.70	\$17.52	\$17.97
13	16	1,142	34.8%	\$34.64	\$11.42	\$19.23
14	11	1,293	0.0%	\$31.65	\$6.16	\$6.26
Total Statewide	393	471,991	70.9%	\$40.74	\$17.34	\$17.74

Elevator Constructor, Installer and Mechanic

Wage rates are not published for this occupation in order to maintain confidentiality.

Fence Constructor (Non-Metal)

Wage Rate Region	Firms Reporting	Hours Reported	Percent Union	Hourly Rate	Fringe w/zeros	Fringe w/o zeros
Wage rate regions are not published for this occupation in order to maintain confidentiality.						
Total Statewide	6	688	0.0%	\$19.19	\$3.54	\$5.30

Fence Erector (Metal)

Wage Rate Region	Firms Reporting	Hours Reported	Percent Union	Hourly Rate	Fringe w/zeros	Fringe w/o zeros
2	9	3,773	0.0%	\$21.56	\$2.06	\$4.52
3	6	1,015	0.0%	\$18.11	\$2.50	\$2.98
10	3	527	0.0%	\$20.95	\$2.56	\$5.09
11	3	96	0.0%	\$15.33	\$0.34	\$0.59
BOS*	9	766	0.0%	\$18.18	\$2.85	\$2.94
Total Statewide	21	6,176	0.0%	\$20.42	\$2.25	\$3.82

*Balance of State - Wage Rate Regions are grouped to maintain confidentiality.

Flagger (ECI)

Wage Rate Region	Firms Reporting	Hours Reported	Percent Union	Hourly Rate	Fringe w/zeros	Fringe w/o zeros
1	10	1,754	10.8%	\$20.54	\$6.16	\$6.62
2	18	16,072	38.0%	\$18.08	\$5.87	\$8.27
4	5	1,311	0.0%	\$19.50	\$4.01	\$4.96
5	3	871	0.0%	\$15.51	\$6.12	\$6.12
6	5	655	10.9%	\$21.53	\$11.78	\$11.78
8	6	1,327	8.4%	\$15.69	\$5.92	\$5.95
10	3	3,247	0.0%	\$16.55	\$3.43	\$8.95
BOS*	12	5,870	0.1%	\$13.93	\$4.27	\$4.32
Total Statewide	34	31,106	20.8%	\$17.23	\$5.38	\$6.98

*Balance of State - Wage Rate Regions are grouped to maintain confidentiality.
 Note: Wages aged using ECI. See Appendix for details.

Glazier

Region	Firms Reporting	Hours Reported	Percent Union	Hourly Rate	Fringe w/zeros	Fringe w/o zeros
1	4	1,547	93.6%	\$38.08	\$17.34	\$17.34
2	23	32,433	77.8%	\$36.35	\$16.93	\$18.54
3	7	4,020	91.1%	\$37.97	\$18.97	\$18.97
4	6	1,438	70.0%	\$33.08	\$15.44	\$15.44
5	8	2,332	90.5%	\$36.63	\$19.68	\$19.93
6	4	216	81.6%	\$33.32	\$16.63	\$19.82
9	3	36	0.0%	\$21.83	\$4.04	\$4.04
12	7	437	0.0%	\$28.43	\$2.93	\$5.07
14	3	34	0.0%	\$30.75	\$4.49	\$4.49
BOS*	11	3,871	7.8%	\$27.79	\$4.60	\$5.33
Total Statewide	46	46,364	73.2%	\$35.65	\$16.03	\$17.38

*Balance of State - Wage Rate Regions are grouped to maintain confidentiality.

Hazardous Material Handler / Mechanic

Region	Firms Reporting	Hours Reported	Percent Union	Hourly Rate	Fringe w/zeros	Fringe w/o zeros
2	4	246	0.0%	\$20.95	\$7.04	\$8.43
5	3	183	0.0%	\$23.10	\$8.92	\$12.18
BOS*	6	878	0.0%	\$18.66	\$3.31	\$8.34
Total Statewide	6	1,307	0.0%	\$19.71	\$4.80	\$9.12

*Balance of State - Wage Rate Regions are grouped to maintain confidentiality.

Highway and Parking Striper (ECI)

Wage Rate Region	Firms Reporting	Hours Reported	Percent Union	Hourly Rate	Fringe w/zeros	Fringe w/o zeros
2	5	1,328	0.0%	\$18.52	\$1.63	\$8.45
4	3	91	0.0%	\$30.81	\$8.27	\$11.42
BOS*	9	2,615	1.5%	\$25.87	\$5.89	\$9.34
Total Statewide	11	4,033	0.9%	\$23.56	\$4.54	\$9.29

*Balance of State - Wage Rate Regions are grouped to maintain confidentiality.

Note: Wages aged using ECI. See Appendix for details.

Ironworker

Region	Firms Reporting	Hours Reported	Percent Union	Hourly Rate	Fringe w/zeros	Fringe w/o zeros
1	15	1,529	41.6%	\$31.52	\$14.35	\$18.28
2	77	73,175	73.6%	\$34.20	\$19.34	\$20.57
3	36	5,302	10.8%	\$28.41	\$7.93	\$11.05
4	21	2,552	37.6%	\$31.88	\$11.94	\$16.96
5	29	8,533	27.1%	\$30.76	\$13.51	\$15.11
6	8	961	30.4%	\$30.95	\$15.50	\$17.22
7	6	908	51.8%	\$33.88	\$15.82	\$22.59
8	16	2,396	28.5%	\$29.37	\$11.38	\$11.95
9	11	1,211	63.8%	\$32.78	\$16.58	\$17.49
10	11	1,821	63.0%	\$32.96	\$14.10	\$14.68
11	8	1,059	19.0%	\$33.78	\$11.60	\$12.85
12	18	8,181	60.8%	\$30.80	\$15.67	\$22.24
13	8	769	9.1%	\$28.07	\$4.73	\$12.24
14	6	851	2.0%	\$23.98	\$1.19	\$8.38
Total Statewide	178	109,244	61.3%	\$33.00	\$17.14	\$19.29

Laborer Groups

Laborer Group 1 (ECI)

Region	Firms Reporting	Hours Reported	Percent Union	Hourly Rate	Fringe w/zeros	Fringe w/o zeros
1	60	8,377	12.6%	\$24.67	\$7.30	\$9.94
2	274	105,270	31.1%	\$25.09	\$7.91	\$9.58
3	109	21,748	15.7%	\$24.12	\$7.19	\$8.45
4	73	6,640	20.6%	\$24.19	\$7.31	\$9.21
5	66	15,184	14.1%	\$24.76	\$10.05	\$10.60
6	39	7,675	20.8%	\$23.73	\$8.06	\$12.23
7	33	4,937	5.3%	\$25.45	\$8.81	\$11.75
8	47	11,770	15.9%	\$21.71	\$5.38	\$7.60
9	26	2,273	47.2%	\$26.12	\$9.20	\$10.16
10	54	16,866	11.8%	\$22.65	\$5.86	\$6.74
11	21	1,807	8.7%	\$24.88	\$9.77	\$10.66
12	50	13,669	54.5%	\$26.17	\$10.17	\$11.36
13	16	1,414	4.9%	\$23.64	\$9.17	\$13.65
14	7	444	13.3%	\$24.68	\$5.71	\$10.44
Total Statewide	512	218,073	25.3%	\$24.58	\$7.85	\$9.50

Note: Wages aged using ECI. See Appendix for details.

Laborer Groups (Continued)

Laborer Group 2 ^(ECI)

Region	Firms Reporting	Hours Reported	Percent Union	Hourly Rate	Fringe w/zeros	Fringe w/o zeros
1	34	5,728	31.8%	\$26.74	\$9.68	\$10.45
2	145	65,861	51.7%	\$27.70	\$10.49	\$12.20
3	56	9,679	38.9%	\$25.02	\$8.16	\$8.74
4	42	3,689	16.7%	\$26.09	\$8.29	\$10.04
5	34	7,696	41.5%	\$26.37	\$11.09	\$11.77
6	16	1,793	47.6%	\$27.00	\$11.71	\$12.78
7	16	1,654	36.3%	\$26.54	\$9.85	\$12.21
8	28	5,698	24.2%	\$23.27	\$7.52	\$11.29
9	18	3,696	24.4%	\$21.73	\$5.40	\$13.93
10	23	4,516	7.9%	\$25.27	\$7.47	\$7.98
11	10	1,477	6.0%	\$24.30	\$8.79	\$11.32
12	18	1,753	27.2%	\$25.08	\$6.99	\$7.93
13	15	3,425	0.6%	\$23.76	\$5.50	\$12.20
14	12	475	7.2%	\$24.80	\$8.27	\$10.86
Total Statewide	281	117,140	41.1%	\$26.56	\$9.59	\$11.43

Note: Wages aged using ECI. See Appendix for details.

Laborer Group 3 ^(ECI)

Region	Firms Reporting	Hours Reported	Percent Union	Hourly Rate	Fringe w/zeros	Fringe w/o zeros
1	4	266	36.7%	\$26.72	\$14.09	\$14.09
2	34	13,811	17.0%	\$21.43	\$8.07	\$12.40
3	11	1,361	2.8%	\$23.36	\$12.42	\$13.62
4	10	997	10.6%	\$20.59	\$9.29	\$13.52
5	11	2,360	1.8%	\$23.73	\$10.03	\$13.46
6	9	1,308	0.0%	\$23.45	\$9.39	\$13.23
7	5	710	0.0%	\$22.86	\$4.96	\$16.32
8	5	514	18.7%	\$24.04	\$13.76	\$13.76
11	4	713	0.0%	\$24.17	\$14.01	\$14.01
12	5	772	23.5%	\$21.37	\$6.73	\$7.03
BOS*	6	1,193	13.5%	\$24.44	\$13.72	\$13.72
Total Statewide	72	24,001	12.8%	\$22.22	\$9.14	\$12.73

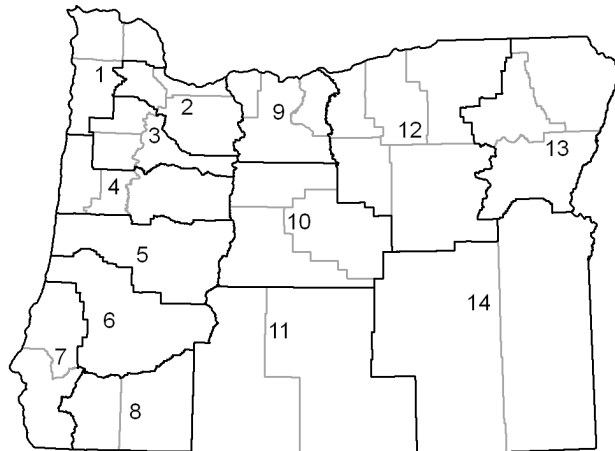
*Balance of State - Wage Rate Regions are grouped to maintain confidentiality.

Note: Wages aged using ECI. See Appendix for details.

Landscape Laborer / Technician ^(ECI)

Wage Rate Region	Firms Reporting	Hours Reported	Percent Union	Hourly Rate	Fringe w/zeros	Fringe w/o zeros
1	3	255	0.0%	\$21.33	\$2.86	\$4.21
2	32	30,898	3.4%	\$18.39	\$3.34	\$4.40
3	9	1,112	0.0%	\$17.97	\$3.31	\$4.40
4	7	1,423	0.0%	\$17.35	\$1.98	\$4.92
5	8	1,845	0.0%	\$18.82	\$6.39	\$8.74
8	7	1,199	0.0%	\$20.03	\$5.80	\$6.23
10	7	2,284	0.0%	\$20.29	\$3.95	\$7.47
BOS*	6	933	0.0%	\$18.38	\$2.73	\$5.28
Total Statewide	59	39,948	2.6%	\$18.54	\$3.52	\$4.82

*Balance of State - Wage Rate Regions are grouped to maintain confidentiality.
Note: Wages aged using ECI. See Appendix for details.



Limited Energy Electrician

Region	Firms Reporting	Hours Reported	Percent Union	Hourly Rate	Fringe w/zeros	Fringe w/o zeros
1	24	921	10.0%	\$28.92	\$7.13	\$8.20
2	97	61,608	33.2%	\$31.56	\$10.58	\$11.12
3	58	8,249	12.4%	\$30.18	\$6.10	\$6.61
4	36	3,485	20.0%	\$28.61	\$5.65	\$6.82
5	39	5,957	21.3%	\$28.70	\$6.73	\$7.47
6	15	1,581	0.7%	\$25.60	\$3.54	\$3.60
7	11	498	75.3%	\$30.30	\$6.13	\$8.75
8	27	3,167	10.1%	\$26.48	\$4.40	\$4.63
9	19	1,615	31.2%	\$30.24	\$10.89	\$11.34
10	25	3,000	3.1%	\$28.63	\$4.88	\$5.10
11	10	915	9.0%	\$24.85	\$2.54	\$4.06
12	21	2,248	19.1%	\$30.24	\$5.96	\$5.99
13	4	56	0.0%	\$30.68	\$0.75	\$4.17
14	7	203	14.7%	\$22.18	\$4.22	\$4.22
Total Statewide	161	93,504	27.1%	\$30.60	\$8.99	\$9.59

Line Constructor

Region	Firms Reporting	Hours Reported	Percent Union	Hourly Rate	Fringe w/zeros	Fringe w/o zeros
1	5	1,120	100.0%	\$48.82	\$16.22	\$16.22
2	17	29,011	95.4%	\$45.38	\$15.48	\$15.64
3	7	4,454	98.6%	\$43.57	\$15.42	\$15.42
4	6	1,557	32.4%	\$38.14	\$22.73	\$22.73
7	4	1,798	35.5%	\$30.91	\$5.53	\$9.22
8	3	3,030	100.0%	\$56.60	\$14.69	\$14.69
9	6	3,411	100.0%	\$54.22	\$19.26	\$19.26
10	4	515	100.0%	\$55.23	\$14.41	\$14.41
12	5	4,082	100.0%	\$49.97	\$22.14	\$22.14
BOS*	5	2,023	32.4%	\$30.87	\$11.19	\$11.19
Total Statewide	26	50,998	90.3%	\$45.72	\$15.92	\$16.24

*Balance of State - Wage Rate Regions are grouped to maintain confidentiality.

Marble Setter ^(ECI)

Wage rates are not published for this occupation in order to maintain confidentiality.

Millwright

Wage Rate Region	Firms Reporting	Hours Reported	Percent Union	Hourly Rate	Fringe w/zeros	Fringe w/o zeros
1	13	2,380	23.1%	\$28.09	\$5.79	\$7.57
2	27	6,549	16.9%	\$27.76	\$7.54	\$8.20
3	16	1,322	0.9%	\$25.46	\$2.80	\$4.04
4	17	6,468	0.0%	\$23.40	\$3.03	\$3.06
5	15	1,841	3.1%	\$26.12	\$4.21	\$4.58
6	4	2,165	0.0%	\$21.70	\$0.14	\$3.60
7	3	957	0.0%	\$19.94	\$2.74	\$2.88
8	6	915	0.0%	\$24.91	\$6.58	\$8.04
12	8	1,495	29.9%	\$30.28	\$10.55	\$10.55
14	4	323	37.8%	\$29.29	\$6.74	\$13.38
BOS*	9	2,464	54.6%	\$30.73	\$9.07	\$9.43
Total Statewide	66	26,877	13.6%	\$26.08	\$5.34	\$6.34

*Balance of State - Wage Rate Regions are grouped to maintain confidentiality.

Painter

Region	Firms Reporting	Hours Reported	Percent Union	Hourly Rate	Fringe w/zeros	Fringe w/o zeros
1	12	3,299	79.9%	\$26.38	\$10.69	\$11.90
2	89	66,145	27.2%	\$23.01	\$5.89	\$7.73
3	21	4,366	3.0%	\$22.25	\$2.02	\$4.73
4	23	2,118	19.0%	\$22.60	\$4.93	\$7.70
5	20	4,612	10.0%	\$20.02	\$4.10	\$4.74
6	9	550	7.8%	\$19.60	\$3.40	\$5.24
7	6	2,007	9.3%	\$24.71	\$9.76	\$9.93
8	12	1,767	3.9%	\$18.38	\$1.28	\$9.23
9	8	537	8.8%	\$23.18	\$4.80	\$6.41
10	11	1,839	16.4%	\$21.64	\$4.29	\$5.45
11	6	1,045	0.0%	\$22.53	\$1.13	\$4.63
12	5	993	11.8%	\$20.79	\$2.32	\$4.16
13	3	414	0.0%	\$20.81	\$4.13	\$7.23
14	5	288	0.0%	\$24.07	\$1.74	\$7.16
Total Statewide	168	89,979	24.9%	\$22.80	\$5.59	\$7.61

Piledriver (ECI)

Wage Rate Region	Firms Reporting	Hours Reported	Percent Union	Hourly Rate	Fringe w/zeros	Fringe w/o zeros
2	12	3,550	96.1%	\$36.76	\$16.17	\$16.17
3	3	157	95.2%	\$35.01	\$15.44	\$15.44
4	3	181	45.9%	\$36.12	\$16.42	\$16.42
5	3	350	70.4%	\$36.77	\$15.30	\$15.30
7	3	333	49.2%	\$36.58	\$15.68	\$15.68
8	3	311	29.0%	\$36.03	\$14.91	\$14.91
BOS*	10	1,769	29.1%	\$34.10	\$13.59	\$14.04
Total Statewide	21	6,650	70.1%	\$35.95	\$15.34	\$15.48

*Balance of State - Wage Rate Regions are grouped to maintain confidentiality.

Note: Wages aged using ECI. See Appendix for details.

Plasterer and Stucco Mason

Region	Firms Reporting	Hours Reported	Percent Union	Hourly Rate	Fringe w/zeros	Fringe w/o zeros
2	15	8,433	29.9%	\$24.57	\$5.62	\$17.67
3	5	270	44.0%	\$26.58	\$8.69	\$19.76
5	3	176	59.1%	\$35.35	\$16.41	\$17.39
8	3	285	0.0%	\$19.98	\$0.00	\$0.00
10	4	435	29.0%	\$28.26	\$7.80	\$8.77
BOS*	8	624	11.5%	\$31.11	\$7.40	\$10.45
Total Statewide	26	10,225	28.8%	\$25.24	\$5.93	\$15.98

*Balance of State - Wage Rate Regions are grouped to maintain confidentiality.

Plumber / Pipefitter / Steamfitter

Region	Firms Reporting	Hours Reported	Percent Union	Hourly Rate	Fringe w/zeros	Fringe w/o zeros
1	27	2,096	63.1%	\$38.51	\$17.85	\$21.57
2	124	190,327	78.1%	\$43.63	\$25.00	\$25.36
3	47	11,895	58.6%	\$42.25	\$20.83	\$21.36
4	37	9,950	54.5%	\$39.07	\$19.08	\$19.44
5	46	14,322	62.1%	\$41.19	\$21.09	\$21.54
6	9	1,218	24.5%	\$31.70	\$7.93	\$10.11
7	8	478	94.1%	\$46.79	\$27.38	\$28.69
8	24	4,441	40.5%	\$36.57	\$14.55	\$16.04
9	19	1,876	82.4%	\$43.69	\$25.81	\$27.78
10	37	10,707	53.0%	\$40.88	\$17.88	\$19.66
11	11	568	21.2%	\$36.69	\$12.73	\$16.93
12	19	6,984	82.8%	\$41.31	\$24.58	\$25.37
13	3	229	0.0%	\$39.72	\$5.31	\$13.63
14	12	1,613	5.0%	\$32.21	\$9.34	\$11.34
Total Statewide	246	256,701	72.8%	\$42.77	\$23.60	\$24.20

Power Equipment Operator Groups

Power Equipment Operator Group 1 ^(ECI)

Region	Firms Reporting	Hours Reported	Percent Union	Hourly Rate	Fringe w/zeros	Fringe w/o zeros
1	4	191	47.1%	\$41.06	\$15.23	\$15.23
2	19	3,920	88.7%	\$39.48	\$14.43	\$14.74
3	4	96	19.8%	\$38.44	\$10.24	\$10.24
4	4	148	74.0%	\$40.74	\$14.55	\$14.55
5	3	111	32.4%	\$39.22	\$16.06	\$16.06
12	5	520	100.0%	\$41.63	\$14.80	\$14.80
BOS*	9	693	36.8%	\$29.32	\$6.26	\$9.58
Total Statewide	32	5,679	79.3%	\$38.50	\$13.46	\$14.27

*Balance of State - Wage Rate Regions are grouped to maintain confidentiality.

Note: Wages aged using ECI. See Appendix for details.

Power Equipment Operator Group 1A ^(ECI)

Wage Rate Region	Firms Reporting	Hours Reported	Percent Union	Hourly Rate	Fringe w/zeros	Fringe w/o zeros
Wage rate regions are not published for this occupation in order to maintain confidentiality.						
Total Statewide	6	4,577	100.0%	\$42.96	\$14.67	\$14.67

Note: Wages aged using ECI. See Appendix for details.

Power Equipment Operator Group 1B ^(ECI)

Wage Rate Region	Firms Reporting	Hours Reported	Percent Union	Hourly Rate	Fringe w/zeros	Fringe w/o zeros
Wage rate regions are not published for this occupation in order to maintain confidentiality.						
Total Statewide	3	1,162	99.4%	\$47.13	\$14.21	\$14.21

Note: Wages aged using ECI. See Appendix for details.

Power Equipment Operator Groups (Continued)

Power Equipment Operator Group 2 ^(ECI)

Region	Firms Reporting	Hours Reported	Percent Union	Hourly Rate	Fringe w/zeros	Fringe w/o zeros
1	8	564	66.9%	\$34.59	\$10.35	\$11.52
2	36	10,876	25.0%	\$34.45	\$10.23	\$11.28
3	12	3,630	50.5%	\$28.61	\$9.49	\$9.60
4	11	1,471	20.3%	\$26.37	\$5.05	\$7.80
5	6	670	17.3%	\$25.01	\$3.96	\$15.64
7	3	64	100.0%	\$39.17	\$14.48	\$14.48
8	6	439	33.6%	\$32.91	\$13.39	\$13.39
9	4	409	100.0%	\$36.82	\$13.91	\$13.91
10	5	1,030	22.3%	\$25.81	\$4.29	\$5.52
11	3	97	17.1%	\$37.94	\$14.32	\$14.32
12	11	1,059	76.5%	\$35.16	\$11.46	\$11.86
13	3	149	12.8%	\$24.61	\$9.32	\$9.32
BOS*	4	333	7.8%	\$31.10	\$11.64	\$11.64
Total Statewide	67	20,787	34.0%	\$32.09	\$9.49	\$10.73

*Balance of State - Wage Rate Regions are grouped to maintain confidentiality.

Note: Wages aged using ECI. See Appendix for details.

Power Equipment Operator Group 3 ^(ECI)

Region	Firms Reporting	Hours Reported	Percent Union	Hourly Rate	Fringe w/zeros	Fringe w/o zeros
1	11	1,282	19.7%	\$37.69	\$11.58	\$11.58
2	34	4,347	38.7%	\$34.97	\$11.50	\$13.64
3	11	725	19.0%	\$30.14	\$7.50	\$7.50
4	13	1,068	22.7%	\$29.03	\$6.51	\$10.85
5	11	1,153	14.5%	\$25.79	\$5.58	\$8.65
6	11	2,284	4.8%	\$27.67	\$4.38	\$7.52
7	5	1,018	13.4%	\$25.98	\$4.79	\$4.79
8	9	438	12.3%	\$34.93	\$13.79	\$13.79
9	3	101	82.1%	\$37.35	\$14.54	\$14.54
10	7	1,439	1.3%	\$33.53	\$12.45	\$12.45
11	3	155	0.0%	\$34.29	\$7.90	\$14.53
12	11	665	19.9%	\$35.46	\$9.24	\$14.49
13	6	568	0.0%	\$29.01	\$3.95	\$9.41
Total Statewide	85	15,240	19.8%	\$31.83	\$8.76	\$11.01

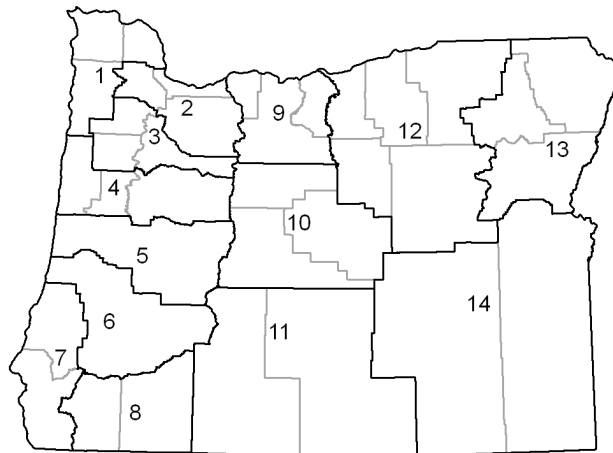
Note: Wages aged using ECI. See Appendix for details.

Power Equipment Operator Groups (Continued)

Power Equipment Operator Group 4 ^(ECI)

Region	Firms Reporting	Hours Reported	Percent Union	Hourly Rate	Fringe w/zeros	Fringe w/o zeros
1	35	7,696	33.9%	\$34.22	\$6.54	\$8.68
2	142	63,021	41.1%	\$33.99	\$11.08	\$12.22
3	55	23,233	6.6%	\$28.91	\$7.52	\$7.77
4	45	9,446	8.9%	\$29.70	\$6.89	\$8.97
5	49	13,141	50.9%	\$32.35	\$12.16	\$12.71
6	30	5,819	42.0%	\$30.00	\$9.32	\$10.49
7	21	4,040	49.9%	\$30.12	\$7.90	\$9.58
8	37	11,262	50.6%	\$29.93	\$9.41	\$12.97
9	23	5,111	24.6%	\$29.41	\$6.29	\$13.69
10	47	15,522	3.4%	\$29.95	\$9.31	\$10.12
11	9	2,796	0.0%	\$32.81	\$11.89	\$11.93
12	36	4,708	44.7%	\$32.52	\$9.68	\$10.87
13	13	1,696	8.5%	\$32.00	\$11.10	\$13.05
14	14	1,062	14.4%	\$30.70	\$9.22	\$10.80
Total Statewide	344	168,552	30.8%	\$31.82	\$9.64	\$10.98

Note: Wages aged using ECI. See Appendix for details.



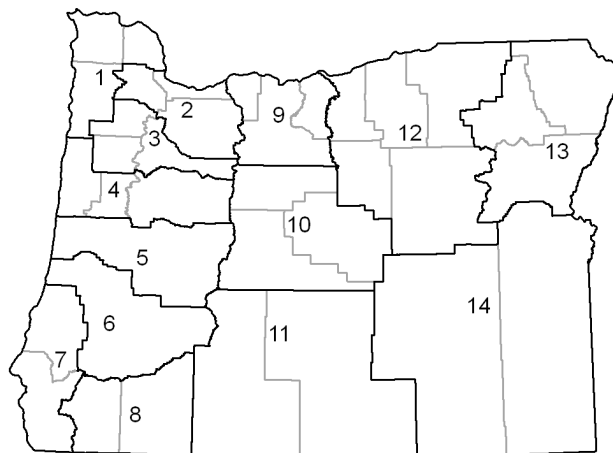
Power Equipment Operator Groups (Continued)

Power Equipment Operator Group 5 ^(ECI)

Region	Firms Reporting	Hours Reported	Percent Union	Hourly Rate	Fringe w/zeros	Fringe w/o zeros
1	29	2,097	31.2%	\$30.85	\$8.97	\$9.69
2	103	35,561	48.9%	\$32.94	\$10.82	\$11.23
3	43	5,671	27.1%	\$28.76	\$8.50	\$9.11
4	33	2,806	22.1%	\$30.32	\$7.90	\$8.94
5	36	5,820	36.8%	\$30.66	\$10.27	\$10.56
6	18	1,834	56.3%	\$28.38	\$11.75	\$11.92
7	10	517	55.8%	\$33.42	\$14.01	\$14.01
8	27	4,260	26.5%	\$27.08	\$7.22	\$9.63
9	7	1,177	29.3%	\$26.17	\$8.70	\$8.70
10	24	6,176	0.0%	\$27.10	\$7.47	\$7.80
11	9	1,045	5.4%	\$25.57	\$9.80	\$10.35
12	21	1,367	41.8%	\$30.32	\$10.69	\$11.91
BOS*	9	703	0.0%	\$30.74	\$12.03	\$12.46
Total Statewide	226	69,034	37.3%	\$30.93	\$9.89	\$10.49

*Balance of State - Wage Rate Regions are grouped to maintain confidentiality.

Note: Wages aged using ECI. See Appendix for details.



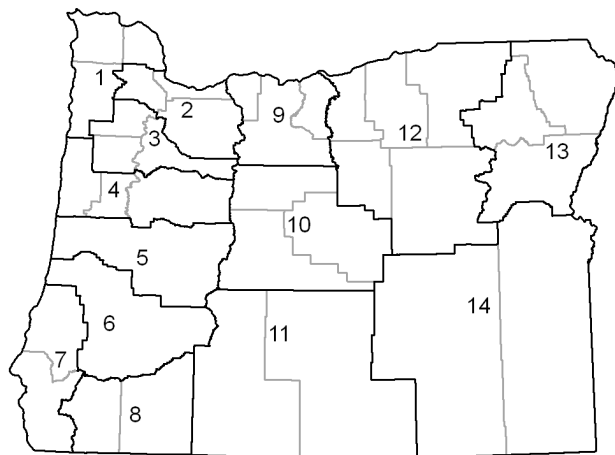
Power Equipment Operator Groups (Continued)

Power Equipment Operator Group 6 ^(ECI)

Wage Rate Region	Firms Reporting	Hours Reported	Percent Union	Hourly Rate	Fringe w/zeros	Fringe w/o zeros
1	15	716	34.1%	\$31.02	\$8.27	\$9.48
2	64	14,889	65.2%	\$29.64	\$11.90	\$12.41
3	23	2,091	10.7%	\$27.39	\$7.73	\$8.10
4	21	1,141	32.7%	\$29.77	\$10.00	\$12.61
5	21	1,498	14.3%	\$26.37	\$9.77	\$9.78
6	10	888	53.6%	\$31.11	\$10.66	\$11.87
7	13	405	64.2%	\$28.71	\$11.68	\$12.28
8	16	565	5.9%	\$29.13	\$8.13	\$13.96
9	7	447	86.4%	\$30.46	\$13.31	\$13.31
10	20	2,077	11.0%	\$24.50	\$6.11	\$7.06
12	18	1,851	45.3%	\$27.27	\$9.19	\$11.20
BOS*	14	3,061	0.6%	\$18.29	\$1.90	\$10.71
Total Statewide	156	29,628	43.9%	\$27.71	\$9.64	\$11.37

*Balance of State - Wage Rate Regions are grouped to maintain confidentiality.

Note: Wages aged using ECI. See Appendix for details.



Roofer

Region	Firms Reporting	Hours Reported	Percent Union	Hourly Rate	Fringe w/zeros	Fringe w/o zeros
1	11	1,671	23.2%	\$28.72	\$5.72	\$9.85
2	48	31,678	34.8%	\$27.02	\$9.21	\$12.03
3	22	5,701	32.8%	\$27.12	\$11.05	\$12.94
4	16	4,301	23.1%	\$27.25	\$10.50	\$12.80
5	11	3,939	16.1%	\$21.71	\$3.24	\$6.34
6	5	372	12.2%	\$22.39	\$2.15	\$10.36
7	5	473	25.7%	\$23.05	\$5.75	\$9.86
8	8	1,493	0.0%	\$20.75	\$2.65	\$8.60
9	7	739	0.9%	\$27.74	\$2.59	\$8.76
10	8	2,604	0.0%	\$24.30	\$2.19	\$3.71
12	8	925	12.1%	\$20.45	\$6.52	\$7.90
BOS*	6	2,017	0.0%	\$24.52	\$6.99	\$7.13
Total Statewide	94	55,910	27.2%	\$26.17	\$8.18	\$11.17

*Balance of State - Wage Rate Regions are grouped to maintain confidentiality.

Sheet Metal Worker

Region	Firms Reporting	Hours Reported	Percent Union	Hourly Rate	Fringe w/zeros	Fringe w/o zeros
1	15	4,621	29.7%	\$31.11	\$9.75	\$12.00
2	85	133,828	62.8%	\$36.17	\$15.05	\$15.57
3	46	13,224	36.7%	\$32.00	\$10.11	\$10.47
4	29	6,049	35.0%	\$33.72	\$11.59	\$11.81
5	38	10,737	32.6%	\$29.78	\$10.01	\$10.71
6	10	1,200	45.1%	\$28.24	\$11.16	\$11.16
7	7	1,377	60.0%	\$32.35	\$16.06	\$16.06
8	19	7,747	4.5%	\$27.36	\$4.96	\$5.35
9	15	798	34.4%	\$32.25	\$11.57	\$11.57
10	16	10,301	33.2%	\$29.56	\$8.56	\$11.31
11	7	1,056	11.0%	\$29.62	\$7.07	\$9.43
12	17	2,221	81.7%	\$33.96	\$18.69	\$18.89
13	4	225	72.7%	\$29.20	\$14.62	\$18.91
14	9	830	46.6%	\$29.28	\$17.63	\$19.14
Total Statewide	183	194,214	53.4%	\$34.44	\$13.43	\$14.17

Soft Floor Layer

Region	Firms Reporting	Hours Reported	Percent Union	Hourly Rate	Fringe w/zeros	Fringe w/o zeros
2	31	12,574	39.5%	\$24.88	\$8.23	\$10.71
3	9	1,312	17.8%	\$22.48	\$5.70	\$8.93
5	3	359	0.0%	\$25.97	\$8.72	\$12.28
6	6	482	0.0%	\$19.35	\$4.79	\$12.43
8	6	456	0.0%	\$21.56	\$2.48	\$14.67
9	4	221	7.2%	\$25.29	\$8.73	\$8.73
12	4	380	0.0%	\$23.91	\$10.27	\$10.60
BOS*	9	494	2.0%	\$23.88	\$6.33	\$8.03
Total Statewide	50	16,278	32.1%	\$24.40	\$7.77	\$10.55

*Balance of State - Wage Rate Regions are grouped to maintain confidentiality.

Sprinkler Fitter

Region	Firms Reporting	Hours Reported	Percent Union	Hourly Rate	Fringe w/zeros	Fringe w/o zeros
2	20	15,558	63.7%	\$36.79	\$16.40	\$17.04
3	7	505	83.3%	\$39.95	\$19.29	\$19.29
4	7	1,344	31.4%	\$33.13	\$11.03	\$11.03
5	5	1,397	23.7%	\$32.40	\$7.79	\$7.79
8	6	950	67.5%	\$35.82	\$1.74	\$7.48
9	3	176	10.2%	\$29.01	\$5.83	\$5.83
10	5	1,716	27.7%	\$29.08	\$6.67	\$13.87
BOS*	10	3,235	80.1%	\$38.09	\$19.78	\$19.78
Total Statewide	34	24,879	59.5%	\$35.96	\$14.82	\$16.26

*Balance of State - Wage Rate Regions are grouped to maintain confidentiality.

Tender to Mason Trades (Brick, Stonemason, Mortar Mixer, Hod Carrier)

Region	Firms Reporting	Hours Reported	Percent Union	Hourly Rate	Fringe w/zeros	Fringe w/o zeros
2	11	5,085	36.0%	\$28.44	\$7.10	\$13.01
3	4	461	73.7%	\$29.85	\$10.77	\$13.00
5	3	355	39.5%	\$29.38	\$7.40	\$7.40
12	3	230	92.8%	\$31.24	\$12.88	\$13.44
BOS*	4	343	45.7%	\$26.08	\$7.86	\$13.49
Total Statewide	14	6,472	41.4%	\$28.57	\$7.62	\$12.55

*Balance of State - Wage Rate Regions are grouped to maintain confidentiality.

Tender to Plasterer and Stucco Mason

Wage Rate Region	Firms Reporting	Hours Reported	Percent Union	Hourly Rate	Fringe w/zeros	Fringe w/o zeros
Wage rate regions are not published for this occupation in order to maintain confidentiality.						
Total Statewide	5	896	41.1%	\$23.04	\$5.27	\$10.71

Testing, Adjusting, and Balancing (TAB) Technician

Region	Firms Reporting	Hours Reported	Percent Union	Hourly Rate	Fringe w/zeros	Fringe w/o zeros
2	9	2,556	37.0%	\$32.77	\$12.50	\$13.04
4	4	425	6.6%	\$36.90	\$6.94	\$6.94
5	6	424	9.0%	\$32.58	\$10.67	\$10.98
10	5	123	16.3%	\$33.19	\$13.31	\$13.76
BOS*	7	590	25.4%	\$35.22	\$11.78	\$11.89
Total Statewide	11	4,118	28.7%	\$33.54	\$11.66	\$12.03

*Balance of State - Wage Rate Regions are grouped to maintain confidentiality.

Tile Setter / Terrazzo Worker: Hard Tile Setter

Region	Firms Reporting	Hours Reported	Percent Union	Hourly Rate	Fringe w/zeros	Fringe w/o zeros
2	13	5,623	73.0%	\$30.64	\$15.11	\$18.01
3	5	1,112	21.3%	\$30.18	\$11.88	\$18.88
5	7	988	12.6%	\$28.07	\$6.58	\$19.11
BOS*	10	946	16.9%	\$26.68	\$4.67	\$10.40
Total Statewide	24	8,668	53.4%	\$29.85	\$12.58	\$17.65

*Balance of State - Wage Rate Regions are grouped to maintain confidentiality.

Tile, Terrazzo and Marble Finisher

Region	Firms Reporting	Hours Reported	Percent Union	Hourly Rate	Fringe w/zeros	Fringe w/o zeros
2	12	4,615	63.3%	\$22.04	\$9.15	\$14.06
3	3	374	27.3%	\$33.24	\$5.20	\$14.51
4	4	367	55.9%	\$22.85	\$8.02	\$13.56
BOS*	6	391	78.2%	\$24.63	\$12.19	\$13.58
Total Statewide	18	5,746	61.5%	\$22.99	\$9.02	\$14.00

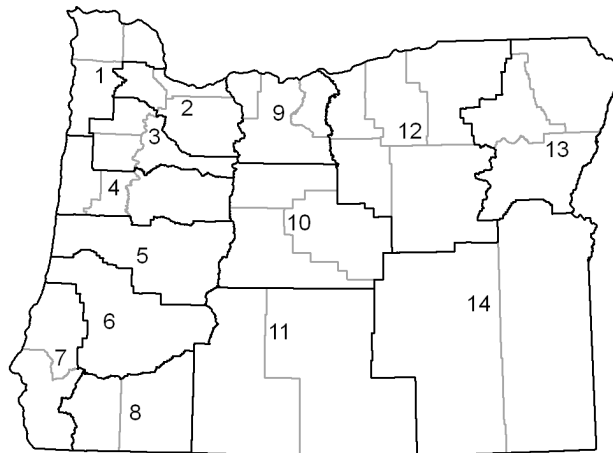
*Balance of State - Wage Rate Regions are grouped to maintain confidentiality.

Truck Driver, All (ECI)

Wage Rate Region	Firms Reporting	Hours Reported	Percent Union	Hourly Rate	Fringe w/zeros	Fringe w/o zeros
1	29	5,249	12.4%	\$24.13	\$2.74	\$4.51
2	107	34,345	15.4%	\$23.09	\$6.43	\$7.85
3	45	14,115	0.8%	\$23.34	\$5.66	\$6.34
4	36	6,745	1.0%	\$22.83	\$4.16	\$6.45
5	33	4,686	1.2%	\$20.83	\$4.41	\$6.45
6	22	4,079	11.0%	\$21.15	\$4.53	\$6.35
7	16	3,263	9.3%	\$19.25	\$2.89	\$3.77
8	29	7,997	30.4%	\$19.88	\$2.82	\$6.07
9	12	4,156	4.6%	\$21.82	\$4.93	\$7.17
10	32	7,663	1.8%	\$21.51	\$5.07	\$5.88
11	9	2,534	0.0%	\$20.82	\$4.62	\$5.29
12	20	1,210	10.5%	\$20.20	\$5.44	\$6.26
BOS*	21	2,004	0.0%	\$20.06	\$3.74	\$9.44
Total Statewide	286	98,048	10.0%	\$22.25	\$5.10	\$6.74

*Balance of State - Wage Rate Regions are grouped to maintain confidentiality.

Note: Wages aged using ECI. See Appendix for details.



Appendix

Definitions

Map of Wage Rate Regions

Table of Surveyed Occupations

Occupation Reporting Schedule

Sample Survey Form

Example of How Wages are Calculated

Example of How Wages are Aged

Definitions

FIRMS

The total number of respondent firms that provided usable wage data for the designated occupation.

HOURLY FRINGE (ALL)

The weighted hourly average fringe with zeros is obtained by multiplying the total hours worked by the amount of each benefit, and summing the products. The sum is then divided by the total number of hours worked. Calculations include hours worked where no benefits were reported for the employee.

HOURLY FRINGE (W/O ZERO)

The weighted hourly average fringe without zero is obtained by multiplying the total hours worked by the amount of each benefit, and totaling the products. The total sum is then divided by the number of hours worked only where benefits have been reported. Calculations do not include hours worked with no benefits included.

HOURLY WAGE PAID

The weighted average hourly wage is reported for each occupation in each wage rate region when not suppressed to maintain confidentiality. This figure is obtained by multiplying the hours worked by the corresponding wage, and totaling the products. The total sum is then divided by the total number of hours worked.

HOURS WORKED

The total number of hours worked by journey level workers, or skilled craftsmen, in each occupation and region during the survey period. All weighted figures in this report are by number of hours worked not number of workers.

OCCUPATION

The occupation for which contractors provided wage data. To ensure reporting accuracy, the occupational definitions are sent to the contractors as part of the survey book. A description of each occupation is within the Wage Data Tables by Occupation.

PERCENT UNION

The union percent column is the percentage of hours worked under a union contract for each occupation in each wage rate region. This figure is obtained by dividing the number of union hours worked in each occupation and region by the total number of hours worked in each occupation and region.

WAGE AND BENEFIT REPORTING

Wage and benefit data are collected for commercial construction jobs in the state of Oregon. Overtime hours are counted, but only the base wage rate is included; overtime differentials are not included. Data on apprentices and sub-journey level employees are not included in this report.

WAGE RATE REGION

The Wage Rate Region is the area in which the employee worked during the survey period. Regions are defined as districts per ORS 279C.800. Employees who worked in more than one region were reported by the number of hours worked within each region.

WORKERS

Journey-level workers or skilled craftsmen with wages in a particular occupation and region during the peak employment week for respondent firms. Data is not collected for exempt supervisors, owners, or office staff. Workers who received more than one hourly wage are reported according to the number of hours worked at each wage.

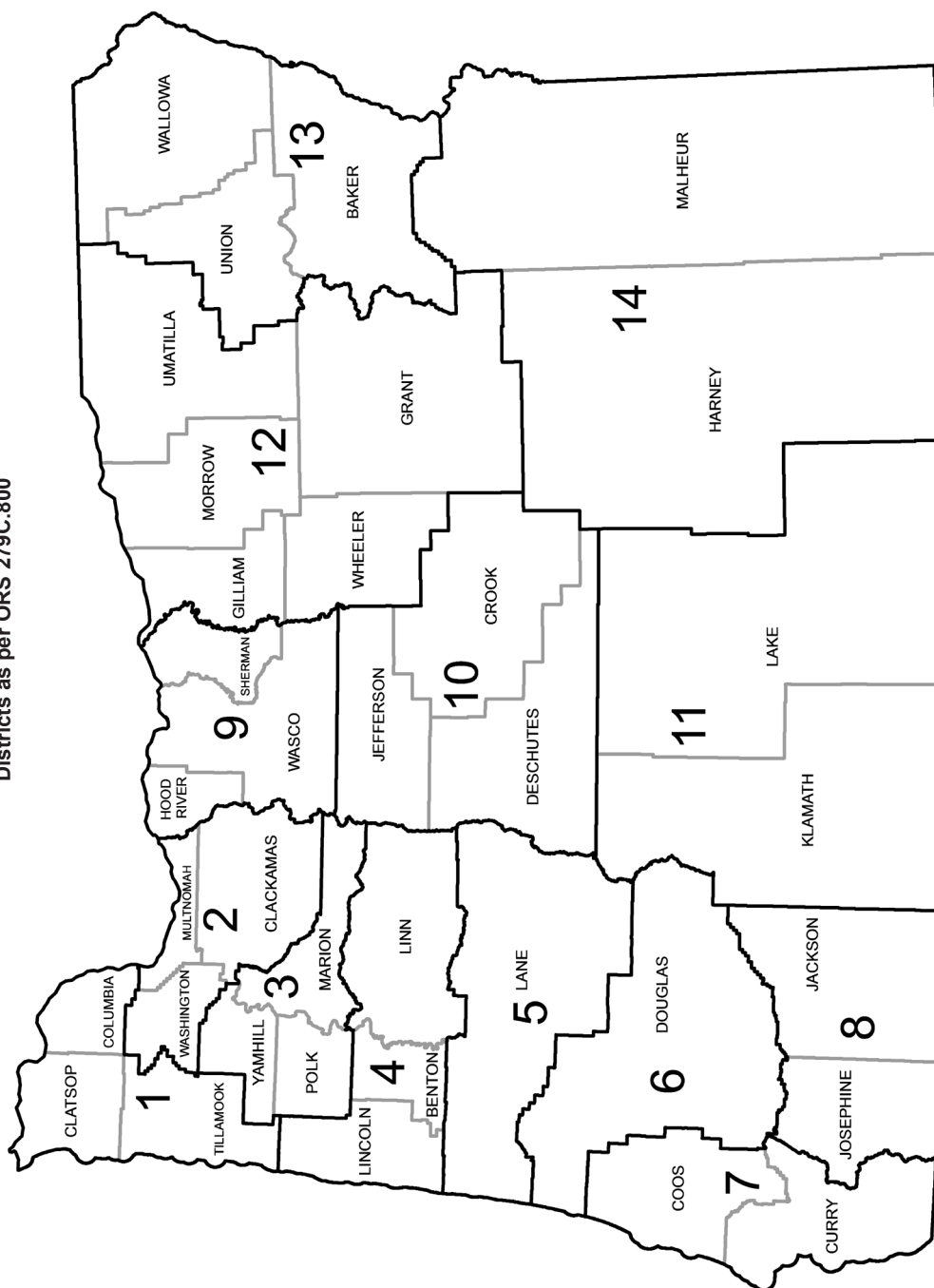
Wage Rate Regions

Districts as per ORS 279C.800

COUNTY	REGION
BAKER	13
BENTON	4
CLACKAMAS	2
CLATSOP	1
COLUMBIA.....	1
COOS	7
CROOK	10
CURRY.....	7
DESCHUTES	10
DOUGLAS	6
GILLIAM.....	12
GRANT.....	12
HARNEY	14
HOOD RIVER.....	9
JACKSON	8
JEFFERSON	10
JOSEPHINE.....	8
KLAMATH	11
LAKE	11
LANE	5
LINCOLN	4
LINN	4
MALHEUR	14
MARION.....	3
MORROW.....	12
MULTNOMAH.....	2
POLK	3
SHERMAN	9
TILLAMOOK	1
UMATILLA.....	12
UNION.....	13
WALLOWA.....	13
WASCO	9
WASHINGTON	2
WHEELER	12
YAMHILL	3

Wage Rate Regions

Districts as per ORS 279C.800



2018 Occupation Reporting Table

Use the table below to determine whether you need to report data for a particular Occupation. If all of the information you have to report is “Not Required”, please write the occupations on the Wage Data Form, complete the contact information on the other side of the form, and submit it in the postage-paid envelope.

Occupation	Reporting Status	Occupation	Reporting Status
Asbestos Worker / Insulator	Report Information	Laborer Group (1-3)*	Not Required
Boilermaker	Report Information	Landscape Laborer / Technician	Not Required
Bricklayer/Stonemason	Report Information	Limited Energy Electrician	Report Information
Bridge and Highway Carpenter	Not Required	Line Constructor	Report Information
Carpenter Group 1	Report Information	Marble Setter	Not Required
Carpenter Group 2	Report Information	Millwright	Report Information
Cement Mason	Report Information	Painter	Report Information
Diver	Not Required	Piledriver	Not Required
Divers' Tender	Not Required	Plasterer and Stucco Mason	Report Information
Dredger	Not Required	Plumber/Pipefitter/Steamfitter	Report Information
Drywall, Lather, Acoustical Carpenter and Ceiling Installer	Report Information	Power Equipment Operator Group (1-6)*	Not Required
Drywall Taper	Report Information	Roofer	Report Information
Electrician	Report Information	Sheet Metal Worker	Report Information
Elevator Constructor, Installer and Mechanic	Report Information	Soft Floor Layer	Report Information
Fence Constructor (Non-Metal)	Report Information	Sprinkler Fitter	Report Information
Fence Erector (Metal)	Report Information	Tender to Mason Trades (Brick and Stonemason, Mortar Mixer, Hod Carrier)	Report Information
Flagger	Not Required	Tender to Plasterer and Stucco Mason	Report Information
Glazier	Report Information	Testing, Adjusting, and Balancing (TAB) Technician	Report Information
Hazardous Materials Handler / Mechanic	Report Information	Tile Setter / Terrazzo Worker: Hard Tile Setter	Report Information
Highway and Parking Striper	Not Required	Tile, Terrazzo, and Marble Finisher	Report Information
Ironworker	Report Information	Truck Driver, All	Not Required

*Report Laborer and Power Equipment Groups Separately.

Occupation-Reporting Schedule

Trade	2017	2018	2019
Asbestos Worker / Insulator	Not Required	Required	Required
Boilermaker	Required	Required	Not Required
Bricklayer/Stonemason	Not Required	Required	Required
Bridge and Highway Carpenter	Required	Not Required	Required
Carpenters Group 1 & 2	Not Required	Required	Required
Cement Mason	Not Required	Required	Required
Diver	Required	Not Required	Required
Divers' Tender	Required	Not Required	Required
Dredger	Required	Not Required	Required
Drywall, Lather, Acoustical Carpenter and Ceiling Installer	Not Required	Required	Required
Drywall Taper	Not Required	Required	Required
Electrician	Required	Required	Not Required
Elevator Constructor, Installer and Mechanic	Required	Required	Not Required
Fence Constructor (Non-Metal)	Not Required	Required	Required
Fence Erector (Metal)	Not Required	Required	Required
Flagger	Required	Not Required	Required
Glazier	Required	Required	Not Required
Hazardous Materials Handler / Mechanic	Not Required	Required	Required
Highway and Parking Striper	Required	Not Required	Required
Ironworker	Not Required	Required	Required
Laborers All	Required	Not Required	Required
Landscape Laborer / Technician	Required	Not Required	Required
Limited Energy Electrician	Required	Required	Not Required
Line Constructor	Required	Required	Not Required
Marble Setter	Required	Not Required	Required
Millwright	Required	Required	Not Required
Painter	Not Required	Required	Required
Piledriver	Required	Not Required	Required
Plasterer and Stucco Mason	Not Required	Required	Required
Plumber/Pipefitter/Steamfitter	Required	Required	Not Required
Power Equipment Operators All	Required	Not Required	Required
Roofer	Required	Required	Not Required
Sheet Metal Worker	Required	Required	Not Required
Soft Floor Layer	Not Required	Required	Required
Sprinkler Fitter	Required	Required	Not Required
Tender to Mason Trades (Brick and Stonemason, Mortar Mixer, Hod Carrier)	Not Required	Required	Required
Tender to Plasterer and Stucco Mason	Not Required	Required	Required
Testing, Adjusting, and Balancing (TAB) Technician	Required	Required	Not Required
Tile Setter / Terrazzo Worker: Hard Tile Setter	Not Required	Required	Required
Tile, Terrazzo, and Marble Finisher	Not Required	Required	Required
Truck Driver All	Required	Not Required	Required

Non-residential construction includes initial construction, reconstruction, and major renovation. Labor performed on-site in connection with material deliveries is also considered construction work. Routine maintenance work (as described below) is not included except as noted.

Construction (Report):

Construction means the initial construction of buildings and other structures, or additions thereto, and of highways and roads. Construction does not include the transportation of material or supplies to or from a construction project by employees of a construction contractor. However, labor performed on the job-site in connection with the delivery of materials is considered construction work.

Major Renovation (Report):

Major renovation means the remodeling or alteration of buildings and other structures within the framework of an existing building or structure and the alteration of existing highways and roads.

Reconstruction (Report):

Means highway and road resurfacing and rebuilding, the restoration of existing highways and roads, and the restoration of buildings and other structures.

Demolition (Report as noted):

Demolition is included only if it is to prepare for planned construction or renovation. If no construction is planned to replace the demolished property, then do not include the hours in this survey.

Maintenance (Exclude except as noted):

General maintenance work such as sweeping, cleaning, and landscaping, is not covered unless it is done as part of a construction, reconstruction, major renovation, or painting project. Maintenance work such as repairing or replacing a roof or recapping part of a building is considered to be reconstruction work.

Residential (Exclude):

Residential construction projects are projects for construction, reconstruction, major renovation, or painting of a single family house or apartment building of no more than four stories in height. The residential project includes all incidental items associated with the project, such as site work, parking areas, utilities, streets and sidewalks.

Examples of Residential Construction:

Apartment buildings (4 stories or less)	All work incidental to residential projects:
Married student housing	Residential stewart
Town or row houses	Residential parking areas
Mobile home developments	Residential utilities
Single family houses	Residential streets
Multi-family houses	Residential sidewalks

How do I Submit my Information?

Retain a copy of your completed survey for your records

RESPOND BY MAIL: You may return your survey form in the postage-paid envelope provided.

RESPONDING BY ELECTRONIC FILE: (Recommended for reporting 10 or more employees)

- Go to our website: <https://www.qualityinfo.org/bolisurvey>
- Download the Survey Spreadsheet for Electronic Filing. Save a copy with the information you have to report.
- Complete section **1**, and sign the front page of the survey form. This portion of the survey must be returned either by mail, faxed or emailed as an attached document.
- Email your spreadsheet to Boli.Survey@Oregon.gov. Please write in the subject line: WAGE DATA FROM SURVEY ID _____. (Your survey ID number is on the back cover of the survey booklet.)

COMPLETE ONLINE SURVEY: (Recommended for fewer than 10 employees, or no wage data)

- Go to our website at: <https://www.qualityinfo.org/bolisurvey>
- Click on the link next to "Report Online."
- Follow the instructions to report information. Once complete, be sure to finish and submit your response.
- If you need a copy of what you submitted online please contact our staff.

RESPONDING BY FAX: Fax copies of the Wage Data Form and Signature Page to (503) 947-1210.

IF YOU NEED ASSISTANCE PLEASE CONTACT US

Phone: (503) 947-1282

Email: Boli.Survey@Oregon.gov

Toll Free: (800) 262-3912 extension 71282

Website: www.QualityInfo.org/bolisurvey

BOLI Construction Industry Occupational Wage Survey

For Staff Use Only
Date Received: _____ ID: _____
Entered By: _____ Initial Status: _____
Followed Up: Yes No Edited: ☐
Final Status: _____

Administered by the Oregon Employment Department for the Oregon Bureau of Labor & Industries

****COLORED SURVEY FORM SHOULD BE REMOVED, REVIEWED, COMPLETED, AND RETURNED****

You are required by Oregon law (ORS 279C.815) to provide this information. The full text of the law is available at www.boli.state.or.us. The data that you provide will be aggregated with similar information collected from other sources and will be published in a manner that will guarantee the confidentiality of your information. Failure to return this survey or filing fraudulent or incomplete information may result in penalties. Please retain a copy of your form for your records.

1 SURVEY/ID NUMBER (FOUND ON THE BACK COVER): _____

FIRM: _____

PHONE: () _____ CCB NUMBER: _____

COMPLETED BY (PLEASE PRINT NAME): _____

TITLE: _____ E-MAIL: _____

I certify that the information provided on this form is correct and verifiable. (Required)

SIGNATURE: _____ DATE: _____

2 Did your firm do any non-residential construction work in Oregon for the work weeks including the dates specified below (see relevant definitions on the back of this form):

November 12, 2017 February 12, 2018 May 12, 2018 August 12, 2018

YES, the firm did non-residential construction work during one or more of these weeks.

NO, the firm did not do any non-residential construction during any of these weeks.

Review the instructions and move to step **3** on the Wage Data Form.

Which of the following best describes why your firm answered no?

☐ THE FIRM DID ONLY RESIDENTIAL WORK DURING THESE SELECTED DATES.

☐ THE FIRM IS CLOSED.

☐ THE FIRM HAD NO EMPLOYEES OTHER THAN OWNERS OR CORPORATE OFFICERS.

☐ THE FIRM HAD NO REPORTABLE WORK IN OREGON DURING THESE SELECTED DATES.

☐ THE FIRM IS SUBCONTRACTED OUT ALL WORK.

☐ THE FIRM DOES NOT DO CONSTRUCTION WORK.

(PLEASE WRITE ON THE WAGE DATA FORM A BRIEF DESCRIPTION OF THE TYPE OF WORK THE FIRM DOES.)

Thank you for participating in this survey. Once you have completed the Wage Data Form, or checked the appropriate box(es) above, you may return the form in the provided pre-paid envelope. Please see the back of this form for more details.

WAGE DATA FORM - Construction Survey 2018

You may report online at: <https://QualityInfo.org/bolisurvey>

Filing Due: September 6, 2018

Please keep a copy of this form for your records.

3 Please report non-owner labor and non-residential construction hours performed on the construction site for the work weeks including the dates specified below. Work week means any seven (7) consecutive twenty-four (24) hour period as determined by your firm.

November 12, 2017 February 12, 2018 May 12, 2018 August 12, 2018

Provide the information requested for these four weeks only.

Exclude:

- Owners
- Exempt supervisors who spend 20% or less time performing duties that are manual or physical as opposed to managerial
- Maintenance work
- Shop work

-Labor NOI performed on the job site

- Administrative staff
- Residential labor hours
- Overtime labor hours
- Overtime wages paid (include hours worked at their regular rate)
- Lead worker differentials (Include hours at the basic worker rate)

4 Review the Occupation Reporting Table to determine if your information is required. You must respond to this survey even if your occupation(s) are not required.

5 Number of Workers*	6 Wage Rate Region** per line	7 Occupation of Employee Report only one occupation per line	8 Skill Level Journeyman or Skilled Craftsman	9 Was the contractor party to a Union Agreement under which workers were paid?		10 Hours Number of hours (including over- time) worked by the employee in the occupation	11 Basic Hourly Rate ³ Report only one wage rate per line	12 Health & Welfare Monthly premium for employees or adjusted hourly rate	Pension	Holiday & Vacation Number of paid days off employee receives each year. If included in the Hourly Rate, do not include here	Apprentice Training	Other Benefits Do not include Drug Testing, Industry Funds, Life Insurance, Workers Safety training, Workers comp
				YES	NO							
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												

* You may report more than one employee per line if the employees worked in the same region, have the same pay rate, skill level, and all of the same fringe benefits.

** Region numbers are provided on the inside cover of the survey booklet.

³ Please do not include production bonuses, safety awards, zone pay, per diem, or overtime differentials. Report cash received in lieu of fringe benefits in the Other Benefits column.

⁴ Fringe Benefits: Report only the contributions made or costs incurred by the employer (not the contributions or amounts paid by employees) for any of the types of fringe benefits noted above. Do not report any payments required by either Federal, State, or local law, such as worker's compensation or unemployment insurance.

So how are wages calculated?

So how are wages estimated for the Construction Industry Occupational Wage Survey Report? The construction industry occupational wage survey is designed to collect a census, or a complete list, of all contractors performing non-residential construction work during a set of pre-determined reference weeks. Wage data from skilled employees are then combined with total hours reported for that occupation to create a weighted average for that trade-region combination.

The wage for a particular trade-region combination W_{tr} is a function of the wage (W) and hour (H) information reported for each record i .

$$W_{tr} = \frac{W_1H_1 + W_2H_2 + \cdots + W_nH_n}{H_1 + H_2 + \cdots + H_n} = \frac{\sum_i^n W_iH_i}{\sum_i^n H_i}$$

Example

Three contractors report journey-level Carpenter Group 1 work on non-residential projects in region 2. The contractors provide the following information:

Contractor	Trade	Basic Hourly Wage	Hours Worked
Contractor 1	Carpenter Group 1	\$22.00	80
Contractor 2	Carpenter Group 1	\$33.30	120
Contractor 3	Carpenter Group 1	\$25.00	40

The estimated average wage for Carpenter Group 1 in region 2 would then be,

$$W_{Carp1,Reg2} = \frac{\sum_i^n W_iH_i}{\sum_i^n H_i} = \frac{W_1H_1 + W_2H_2 + W_3H_3}{H_1 + H_2 + H_3}$$
$$W_{Carp1,Reg2} = \frac{(22.00)(80) + (33.30)(120) + (25.00)(40)}{80 + 120 + 40} = \frac{6,756}{240}$$
$$W_{Carp1,Reg2} = 28.15$$

The estimated average wage for Carpenter Group 1 in region 2 would be \$28.15.

Example of Aging Wages Forward

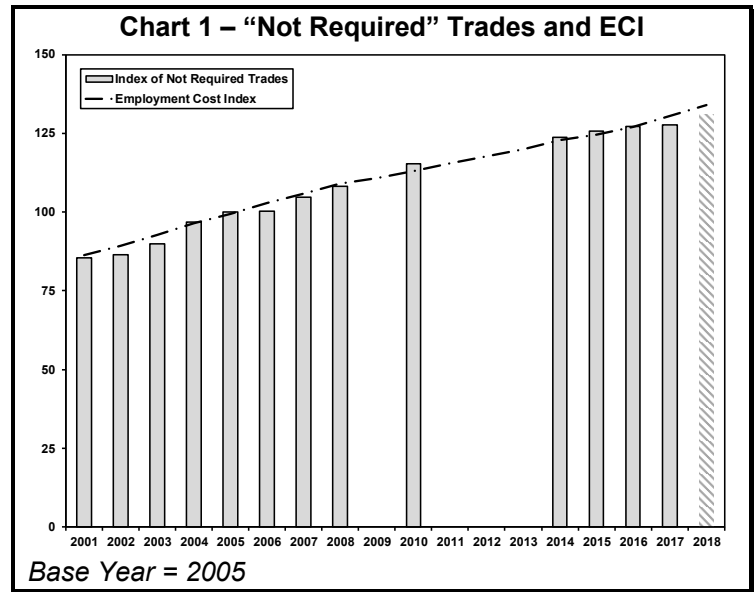
For any trade not required to be reported in 2018, wage and benefit estimates from 2017 were aged forward. This was done by looking at annual changes in the US Bureau of Labor Statistics' Employment Cost Index (ECI).

Aging data forward assumes that wages and benefits for the trades we did not collect information for increased at the same rate as ECI. For 2018, aged estimates saw an increase in wages of 2.2 percent, and an increase in benefits of 3.1 percent.¹

What is the Employment Cost Index?

The Employment Cost Index measures how wages and benefits change over time. It is an example of a price index, a tool that simplifies the measurement of prices over a period of time.

ECI holds constant a quantity, while including changes in price over time. It compares price values to a base period, given a value of 100.² If a given year has an index value greater than 100, the prices were greater than the base period. For example, Chart 1 shows the average total compensation for trades that were not required to report.



Example of aging estimate forward

Painter was not required to be reported in 2018. To age the wage estimate forward for painter we need to know the last average wage estimate for painter. We also need the Employment Cost Index for wages in 2017 and 2018.

In 2017, the average bridge carpenter wage was estimated to be \$35.29.³ According to the US Bureau of Labor Statistics the Employment Cost Index for wages and salaries rose from 129.8 in 2017 to 132.6 in 2018. The estimated wage for bridge carpenter in 2018 would then be:

$$Wage_{2018} = Wage_{2017} \times (1 + \% \Delta ECI)$$

$$Wage_{2018} = Wage_{2017} \times \left(1 + \frac{ECI_{w,2018} - ECI_{w,2017}}{ECI_{w,2017}} \right)$$

$$Wage_{2018} = \$35.29 \times \left(1 + \frac{132.6 - 129.8}{129.8} \right) = \$35.29 \times 1.022$$

$$Wage_{2018} = \$36.07$$

Based on the Employment Cost Index, the average painter wage increased 2.2 percent to \$36.07.

¹ Source: US Bureau of Labor Statistics, Employment Cost Index, Series: CIU2020000400000I, CIU2030000400000I.

² US Bureau of Labor Statistics – Glossary. <http://www.bls.gov/bls/glossary.htm>

³ Source: 2017 Construction Industry Occupational Wage Survey

2018