Summary of observations and findings of current construction labor pool

Approximately 45,000 people work in construction occupations in the greater Portland metropolitan area (2016). Four percent are women compared to 48 percent women across all occupations. Twenty percent are minorities; about the same as across all occupations (21 percent). Minority employment is largely driven by Hispanics, who make up 14 percent of construction employment compared to 9 percent across all occupations. Blacks and Asians are underrepresented in the trades.

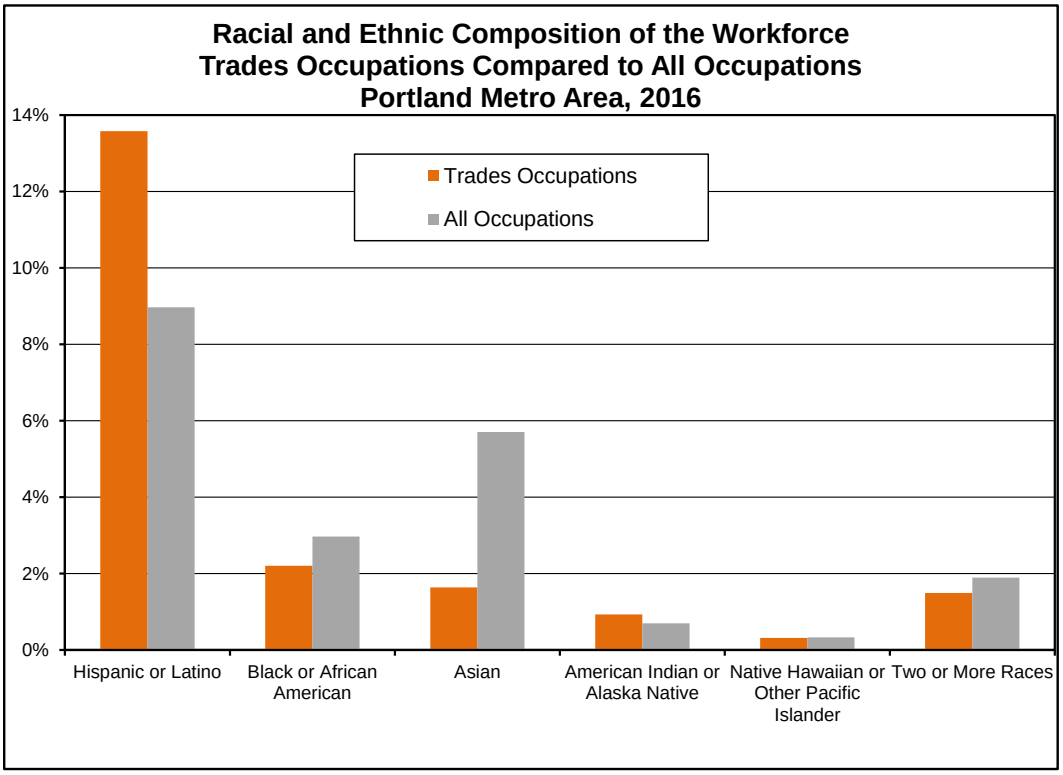

Figure 1. *Demographics of construction workforce in 2016*

Demographics vary widely by occupation. While women make up four percent of the total construction workforce, they comprise between 10 and 15 percent of painters, building inspectors, and hazardous waste removal workers. At the other end of the spectrum, they comprise roughly two percent of plumbers, electricians, and masons.

While minorities make up 20 percent of the trades, they represent more than one-third of all plasterers, drywall installers, flooring installers, and roofers. They are under-represented in the supervisor, equipment operator, and electrician occupations; comprising roughly 10 percent each.

By Wage

Compared to their white counterparts, women and minorities are more likely to work in lower paying trades. Of 29 construction occupations, 18 pay below the average wage across all construction occupations and employ 28,300 people. Minorities comprise 20 percent of the construction workforce yet hold 25 percent of these jobs. Hispanics (a subset of minorities) comprise 14 percent of the workforce yet hold 18 percent of these jobs. Women, at four percent of

the workforce, hold three percent of the jobs. In comparison, whites are 80 percent of the workforce yet hold 75 percent of all lower paying jobs.

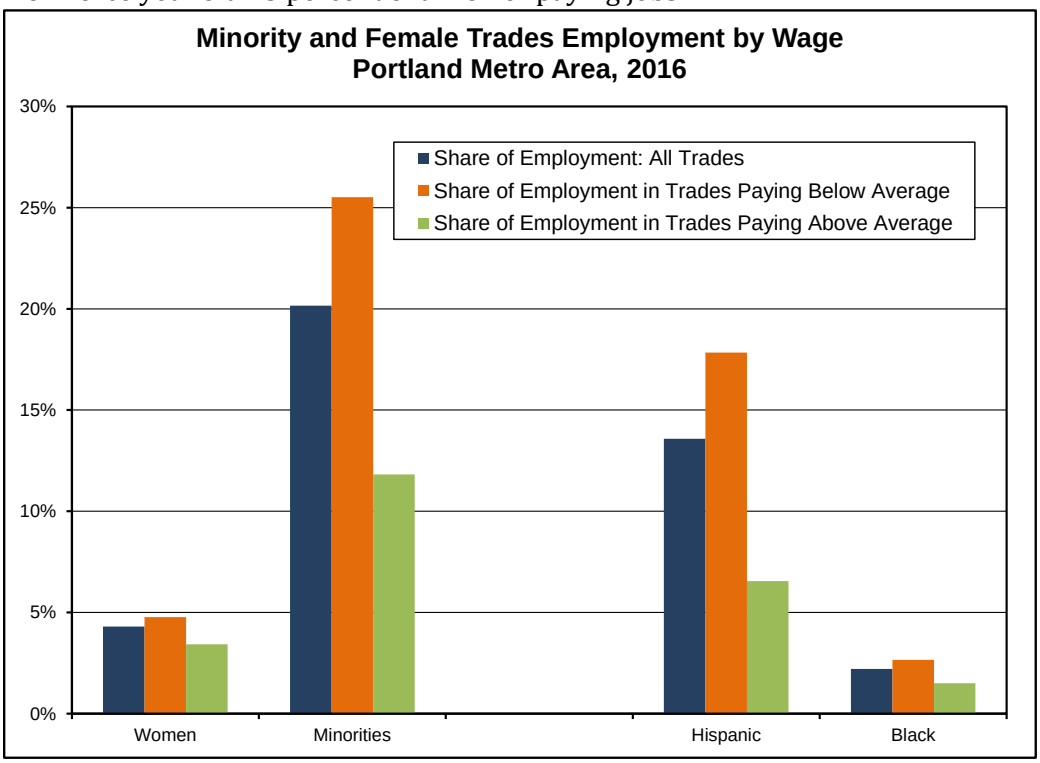

Figure 2. *Share of employment by wage for select demographics in 2016*

Figure 3. *Share of employment by wage for select demographics in 2016*

Registered apprentices

The following data were collected from the Oregon State Bureau of Labor and Industries (BOLI). They are the state agency that regulate and oversee the State Registered Apprenticeship programs. They collect data from all State Registered Apprenticeship programs and update that data regularly. These data include the demographic information of all State registered apprentices, the enrollment rates, the exit rates, completion rates, as well as oversight on the performance of all programs.

The growing enrollment of registered apprentices in the Portland metropolitan area reflects the surge in construction workforce demand. Since 2009, annual apprenticeship enrollments in the Portland metropolitan area has nearly tripled, from less than 600 to most recently 2,350 in 2016. As a result, the number of registered apprentices has increased from 5,150 in 2014 to 6,550 in 2016, a 27 percent rise. Despite the substantial gain, the demographic makeup of registered apprentices has seen limited change. For example, in the 2009 enrollment cohort women represented 9 percent of apprenticeships, minorities 26 percent, and combined women and minorities 31 percent. Meanwhile, in 2016 these percentages were 8 percent, 24 percent, and 29 percent, respectively. Trends in new enrollments are important to note if the industry is interested in increasing racial and gender diversity in the trades: enrollment must be more diverse than the current apprentice pool to have the total makeup shift over time.

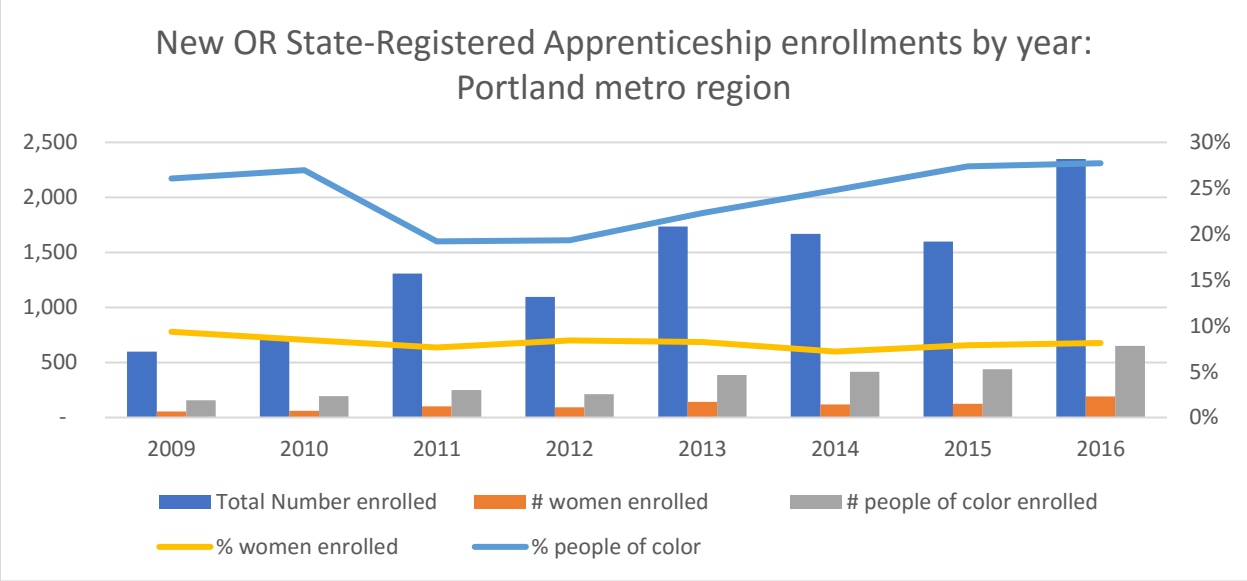

Figure 4. *Share of women and people of color in construction State-Registered Apprenticeship in the Portland metro region*

Between 2009 and 2016, union programs represented a seventy percent share of all registered apprentices in the Portland metropolitan region, on average. Consequently, union programs hold a greater numeric count of total apprentices across all categories of race and gender compared to nonunion programs. Additionally, union programs are significantly more diverse than their nonunion counterparts. In 2016, nearly 34 percent of registered apprentices in union apprenticeship programs identified as a woman and/or minority. In contrast, just 22 percent of nonunion apprentices were women and/or minorities—a twelve percentage point difference.

Regardless, all trades continue to struggle with apprenticeship diversity. The following figure demonstrates the overall lack of diversity in registered apprenticeships, by type of program.

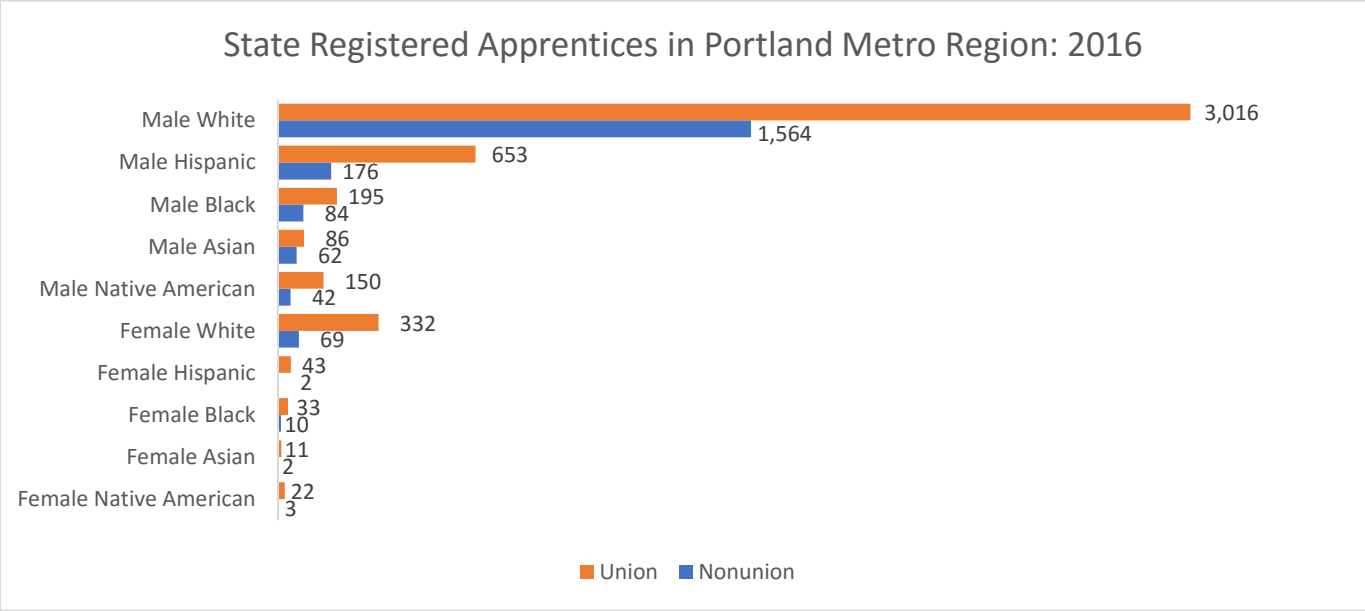

Figure 5. *Share of apprentices by Apprentice type by race/ethnicity and gender*

Journey level construction workers

Since 2008, more than 2,400 people have earned their journey card through BOLI. Women and minorities represent a 21 percent share of these workers. Breaking this down a bit further, five percent are female, one percent are women of color, and about sixteen percent are males of color. When disaggregated by race and ethnicity, ten percent of journey workers are Hispanic, three percent are African American, and Asians and Native Americans make up roughly two percent each.

Although this dataset provides some valuable information about the current supply of those who've received a journey card in the last nine years, it does not capture the whole pool of journey level construction workers in the region. This is because other journey level workers may have moved here who received their journey level credential from another state, or those who received their journey card in Oregon may also have moved away. It is very challenging to understand exactly how many journey level workers are here locally, however looking at the construction employment data in the above section can provides valuable information on the journey level supply because it includes all employed construction workers, which includes those at the journey level.

Percent apprentice to journey rates

The 2009 apprenticeship cohort had a five-year completion rate of 37 percent. Overall, the completion rate for the 2011 cohort increased by nine percentage points, to 46 percent. Men consistently have higher completion rates than their women counterparts. In the 2009 cohort, less than one in five women successfully completed to journey level. However, the female completion rate did increase substantially for the 2011 cohort, up to 38 percent.

A similar trend exists for minorities, but can vary by race and gender. For example, 60 percent of Hispanic women in the 2011 cohort completed their apprenticeship in five years, yet black men had just a 16 percent completion rate for the same cohort.

The figures below demonstrate how women and minorities are less likely to graduate to journey level relative to all apprenticeships.

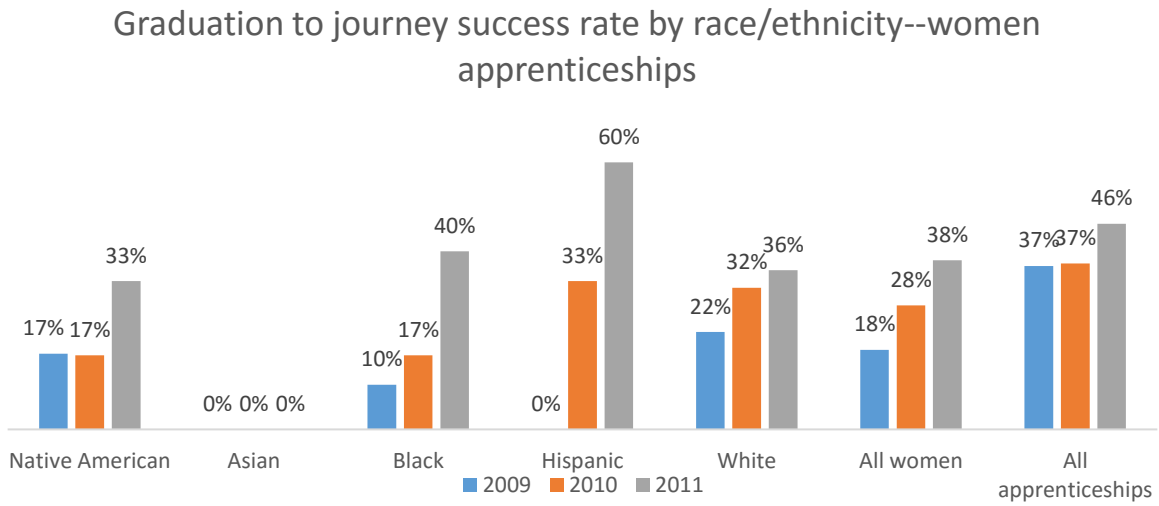

Figure 6. *Five-year graduation rates for women apprenticeships cohorts 2009-2011*

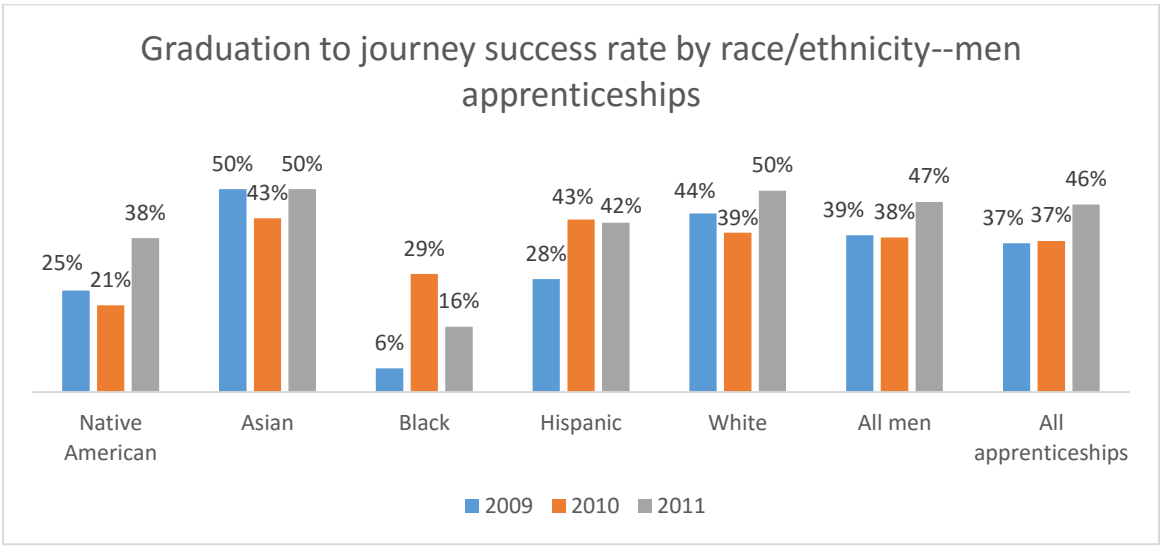

Figure 6. *Five-year graduation rates for men apprenticeships cohorts 2009-2011*

Union and nonunion completion rates are similar but can have different implications when looking at the number of completers. For example, of those who graduated that started in 2011, 154 people completed a nonunion apprenticeship and 450 completed in a union program. Of those in the nonunion programs, 13 percent of the completers were women and people of color. For the union programs, 23 percent of the completers were women and people of color.

It is important to further analyze the number of apprentices behind these rates to fully understand how these percentages equate into actual graduates. For example, a fifty percent success rate of 100

apprentices versus a fifty percent success rate of 2 can have very different policy implications and should be considered when looking at these figures.

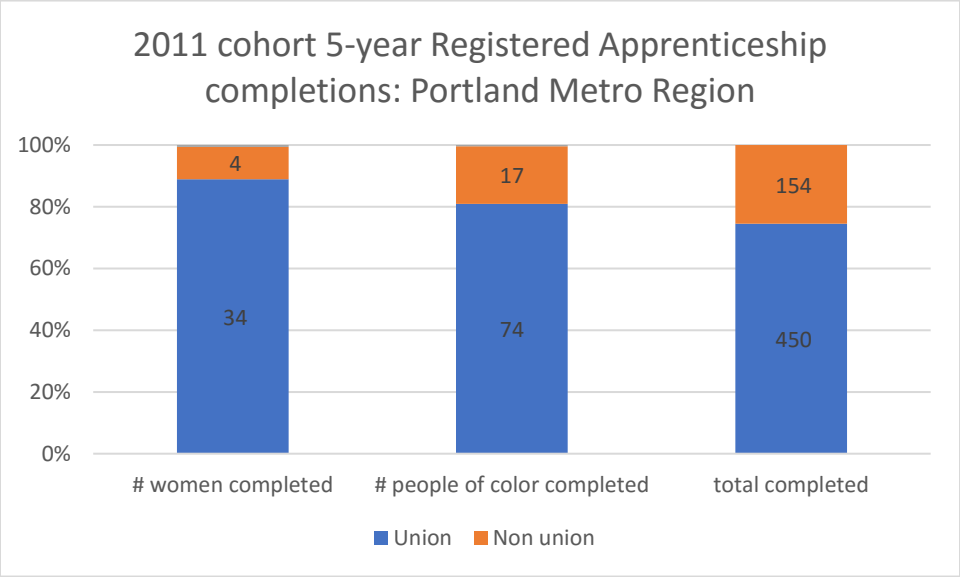

Figure 7. *Demographics of 2011 Apprentice 5-year completers by type*

Job Seekers

Nearly 1,700 job seekers registered with the Oregon Employment Department listed a construction-related occupation as their primary job experience (June 2017). Five percent are female, 16 percent are racial minorities, and 14 percent identify as Hispanic.

At the time of writing, construction was the fastest growing broad industry in the Portland metro area and employers were expressing difficulties finding workers. Job vacancy surveys reported between 6,000 and 8,500 unfilled jobs in the construction industry statewide; about 12 percent of vacancies across all industries.

Other notes

Due to the nature of the data and data sources, there is overlap between apprenticeship data and employment/job seeker data. Most apprentices are captured in the employment data. In other words, BOLI data should be treated as a subset (conceptually) of the overall occupational employment data.

These data are from multiple data sources that all track people for different reasons and in different systems, such as the registered apprenticeship programs that BOLI manages, the Oregon Employment Department, and regional economic data pulled from payroll records, among other sources. Given that, it is possible that a journeyworker that earned their journey card from BOLI is also registered with the Oregon Employment Department or may be currently employed and captured on payroll data. These are robust data sources that can inform important insights and a snapshot on the regional construction workforce supply, but do need to be interpreted with this potential and likely level of overlap in mind.