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The Geography of the Commute

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Periodic Atlas of the Metro scape

The Geography of the Commute

by Steve Howland, maps by Randy Morris

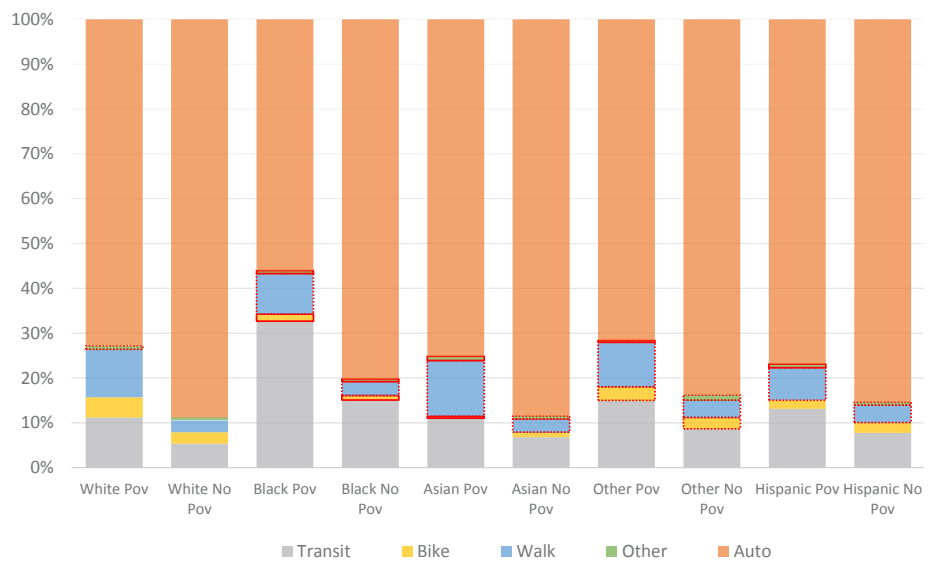
Transit use is fraught with perils . . . one delay of a connection can cause a worker to be . . . fired.

It is a common misperception that low-income populations are transit-dependent or typically do without a car because it is too expensive. While much larger proportions of low-income populations use a mode of transportation other than a personal automobile to commute to work, a majority of them still use a personal automobile. In this edition of the Periodic Atlas, we looked at commuting as it relates to people of color and low-wage workers using the most recent reliable Census data as well as data from the Longitudinal Employer-Household Dynamics Origin-Destination Employment Statistics (LEHD-LODES).

Commute Mode by Race, Ethnicity, and Income

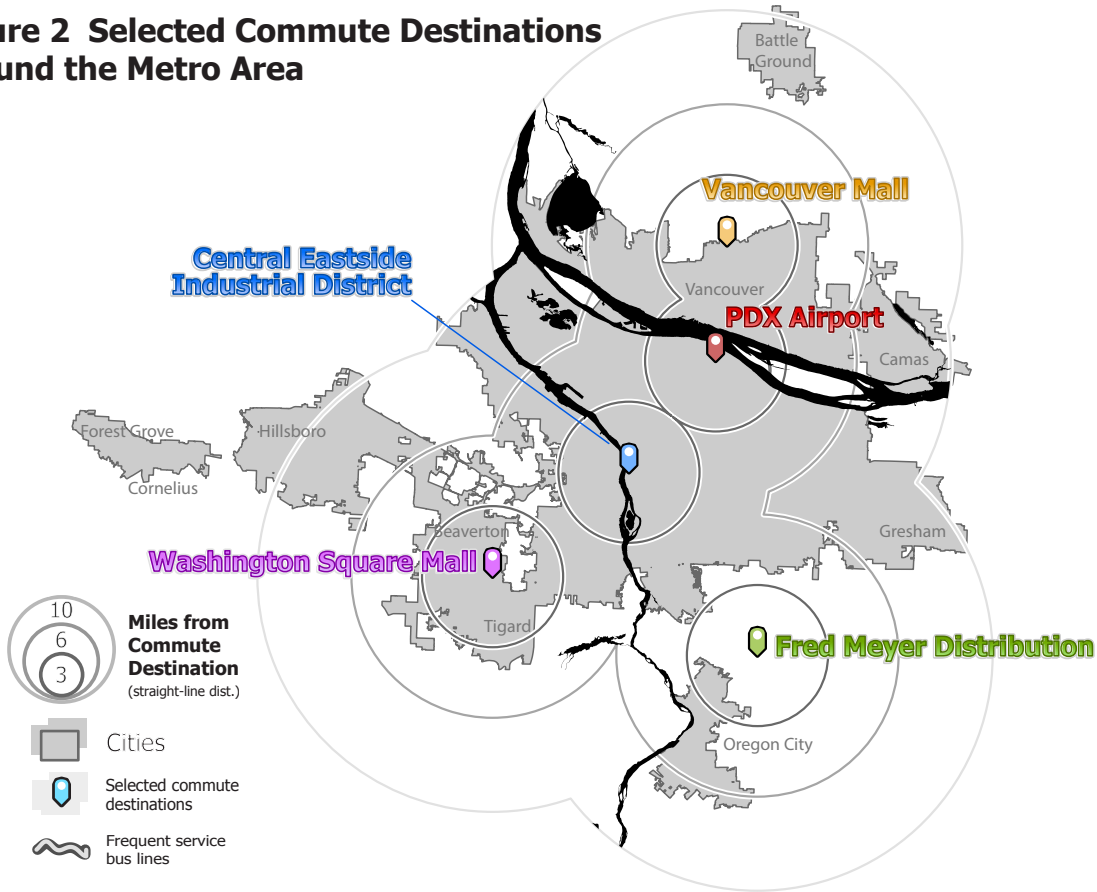
Generally, commute mode shares in the Portland metropolitan area are similar to most other regions in the United States where commuting by automobile (driving alone or carpooling) forms the dominant share of commuting. Across all races and ethnicities, populations in poverty commute by transit and walking to a greater extent than their peers not in poverty. White populations not in poverty have the lowest share of commuting by transit. Meanwhile, African-American populations have the highest share using transit (19%) with African-American populations in poverty using transit to get to work at a rate (33%) twice that of any other population group. The differences in commute mode by race/ethnicity and poverty status are important for understanding commute patterns considering the level of racial/ethnic and class segregation in the Portland region.

Figure 1 Commute mode by race, Hispanic origin and poverty level, Portland-Vancouver-Hillsboro MSA



Source: IPUMS-USA, University of Minnesota, www.ipums.org: American Community Survey 2015 5-year estimate: Clackamas, Multnomah, and Washington Counties, workers 16 and older, and employed outside of the home. "Pov" = Personally-owned vehicle. Notes: Dashed line = moderate reliability. Solid line = low reliability. Poverty defined by 150% of poverty level.

Figure 2 Selected Commute Destinations Around the Metro Area



Employment and Commuting

Commuting is also impacted by where employers locate. Employers make location decisions for many reasons. Some employers prioritize their location for their employees while others put the priority on transportation access for freight or customers. Inevitably though, employees will commute to a job from all over the region regardless of the transportation amenities available.

To examine this effect, we used LODES data to identify the Census tracts with the highest density of employment with high proportions of low-wage workers employed there. To have comparison cases, we selected employment tracts based on their dominance for a particular kind of work. The following analysis focuses on the Census tracts that contain the airport, the Central Eastside Industrial District (CEID), the Fred Meyer Distribution Center (FMDC) in Milwaukie, Washington Square Mall (WSM), and Vancouver Mall (VM). For each location, we analyzed the proportion of low-wage (earning less than \$1250/month) workers located within three, six and ten miles (straight-line distance) of the Census tract as well as the various transportation options leading to and from these locations.

Table 1 Proportion of Low-wage Workers by Distance

Tract	% of total jobs considered low-wage	% of low-wage workers (% of all Workers)		
		3 miles	6 miles	10 miles
Airport	13%	22.4 (21.6)	45.9 (46.4)	61.2 (63.5)
CEID	14%	38.5 (31)	58.1 (51.8)	76.1 (73.2)
Fred Meyer Distribution	15%	16.5 (18.2)	30.2 (33.3)	52 (55.4)
Washington Square Mall	29%	18.5 (19.1)	30.6 (34.4)	53 (58.6)
Vancouver Mall	28%	32.1 (30.3)	48.9 (48.9)	59.6 (59.9)

Source: U.S. Census Bureau. 2016. LODES Data. Longitudinal-Employer Household Dynamics Program. <http://lehd.ces.census.gov/data/lodes/>

Washington Square Mall (WSM) and Vancouver Mall (VM)

WSM's tract contains nearly 12,000 employees while VM's tract contains around 6,700. The tract's retail focus was reflected in nearly 30% of employees being classified as low-wage. Nearly half of low-wage WSM workers live farther than ten miles away compared to 40% of VM workers. However, a much larger proportion of low-wage workers live close to VM. This is likely an effect of the Columbia River presenting a barrier to workers in Oregon seeking employment in Washington. Both malls act as transit hubs presenting employees with relatively easy access to jobs from nearly any direction. However, for WSM, transit options diminish precipitously south and west of the mall while the same is true north and east of VM.

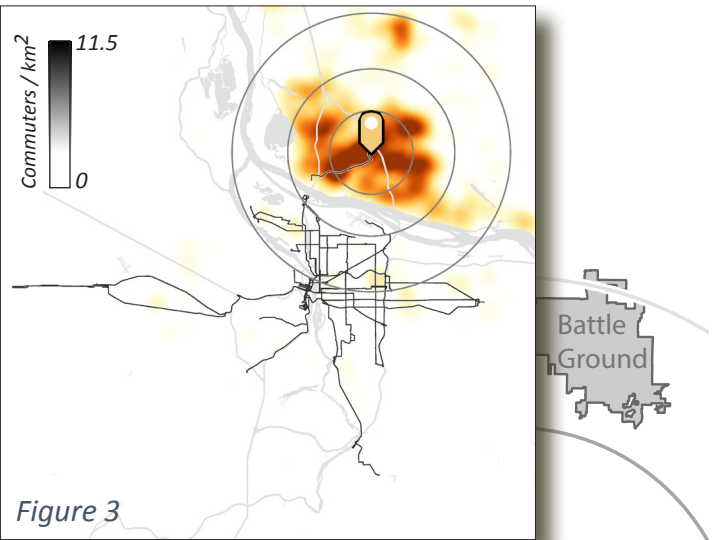


Figure 3

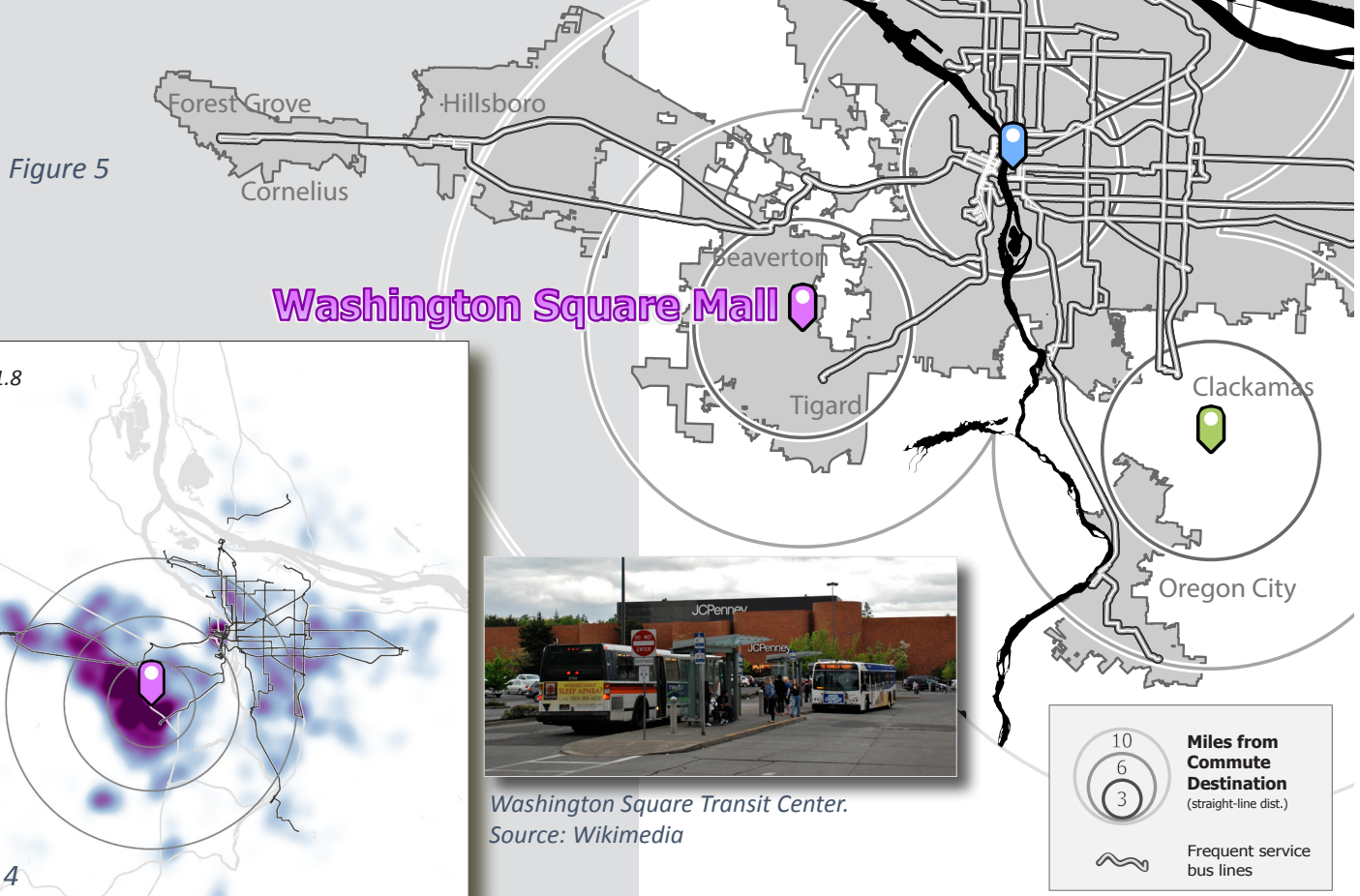


Figure 5

Washington Square Mall

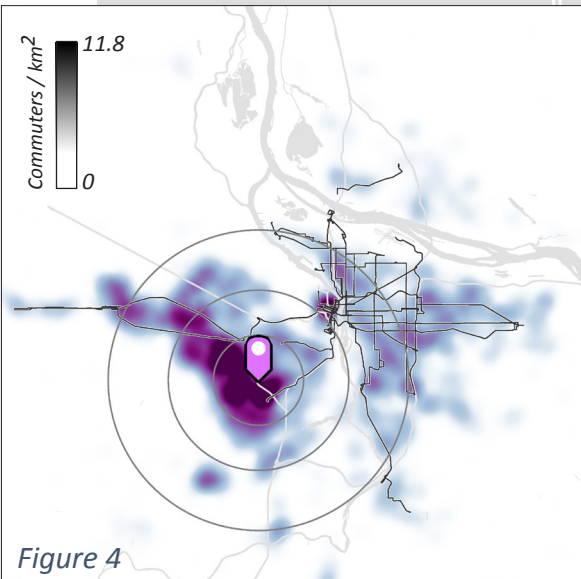


Figure 4



Washington Square Transit Center.
Source: Wikimedia



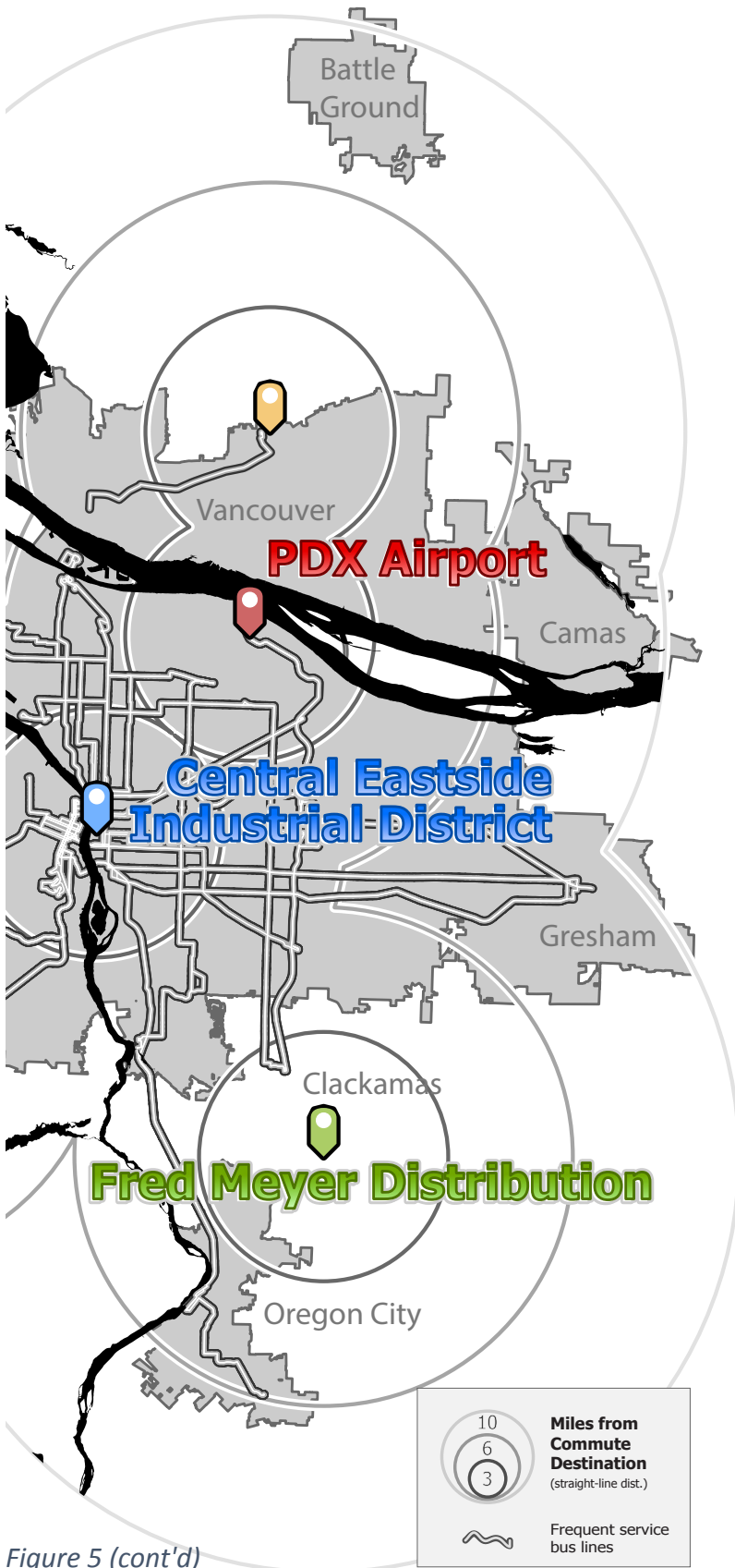


Figure 5 (cont'd)

Airport (PDX)

Thirteen percent of the nearly 30,000 jobs in the airport tract were classified as low-wage. Table 1 shows that, generally, low-wage workers live about the same distance from work as all other workers with only a slightly higher proportion living beyond ten miles.

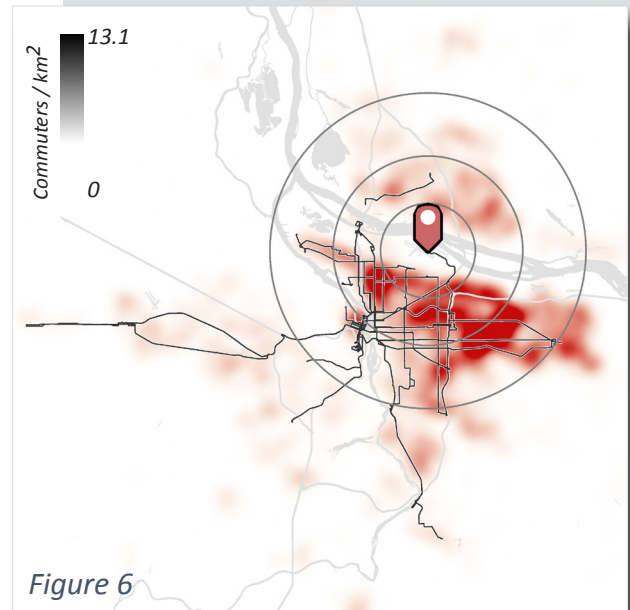


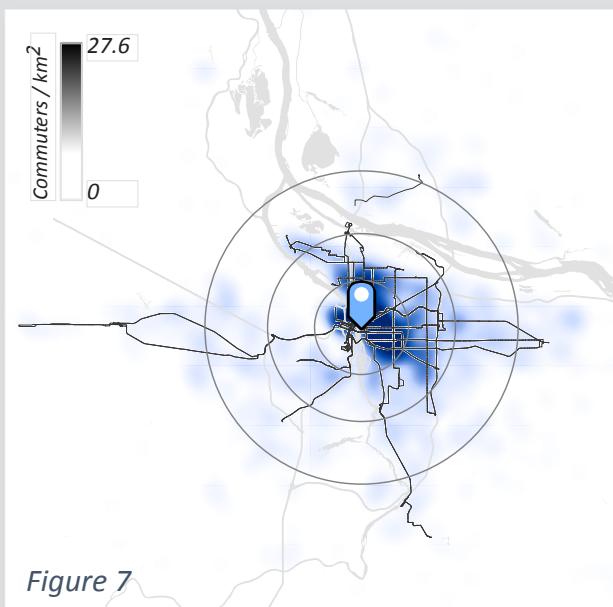
Figure 6

Transportation to and from this tract is extremely limited. Only the MAX Red Line goes to the airport and the closest bus lines are along NE Killingsworth Street west of NE Eighty-Second Avenue and on Columbia Boulevard west of NE Forty-Seventh Avenue. This leaves many of the businesses in the tract completely inaccessible by transit, and walking from transit to any of the employers requires traversing streets laden with freight traffic and often lacking sidewalks.

Central Eastside

Industrial District (CEID)

The CEID contains nearly 17,000 jobs. This tract is a highly exceptional case in that over three-quarters of low-wage workers employed in this tract live within ten miles of work. This is likely due to its centralized location in the region even when considering housing costs in nearby neighborhoods would make it very difficult for such workers to live nearby. A third of the workers employed in the CEID live within three miles, the most expensive housing locations in the city.

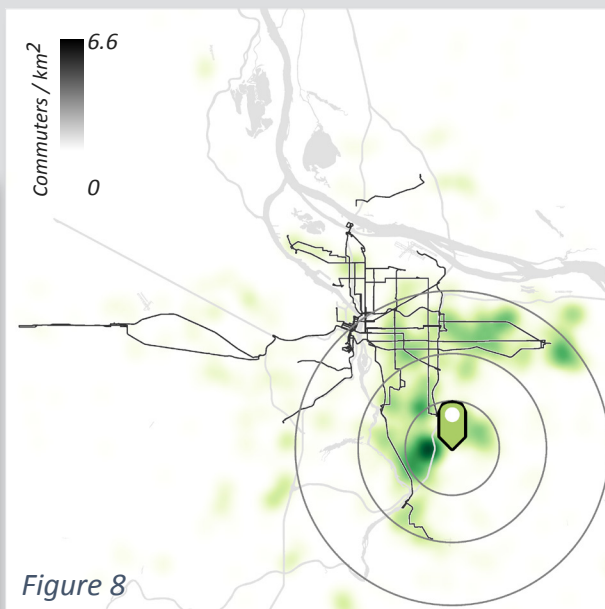


Transportation to the CEID is convenient for most travel modes. Most cross-town bus lines in the city go through the tract or at least stop in downtown leaving riders a relatively easy walk from work. Parking, however, is in very short supply here.

Fred Meyer

Distribution Center (FMDC)

The FMDC is another industry-heavy tract with around 10,000 jobs. This tract had the highest proportion of low-wage workers living more than ten miles away. Like the airport tract, transit options to this location are sparse with one bus line going through.



However, this bus line has half-hour waits between buses during peak morning hours heading toward downtown and then changes to one-hour waits. Headed away from downtown, the shorter waits occur in the evening. Workers south and west of the tract have virtually no transit connections to work. Walking is also difficult as the tract is surrounded by highways and the Clackamas River.

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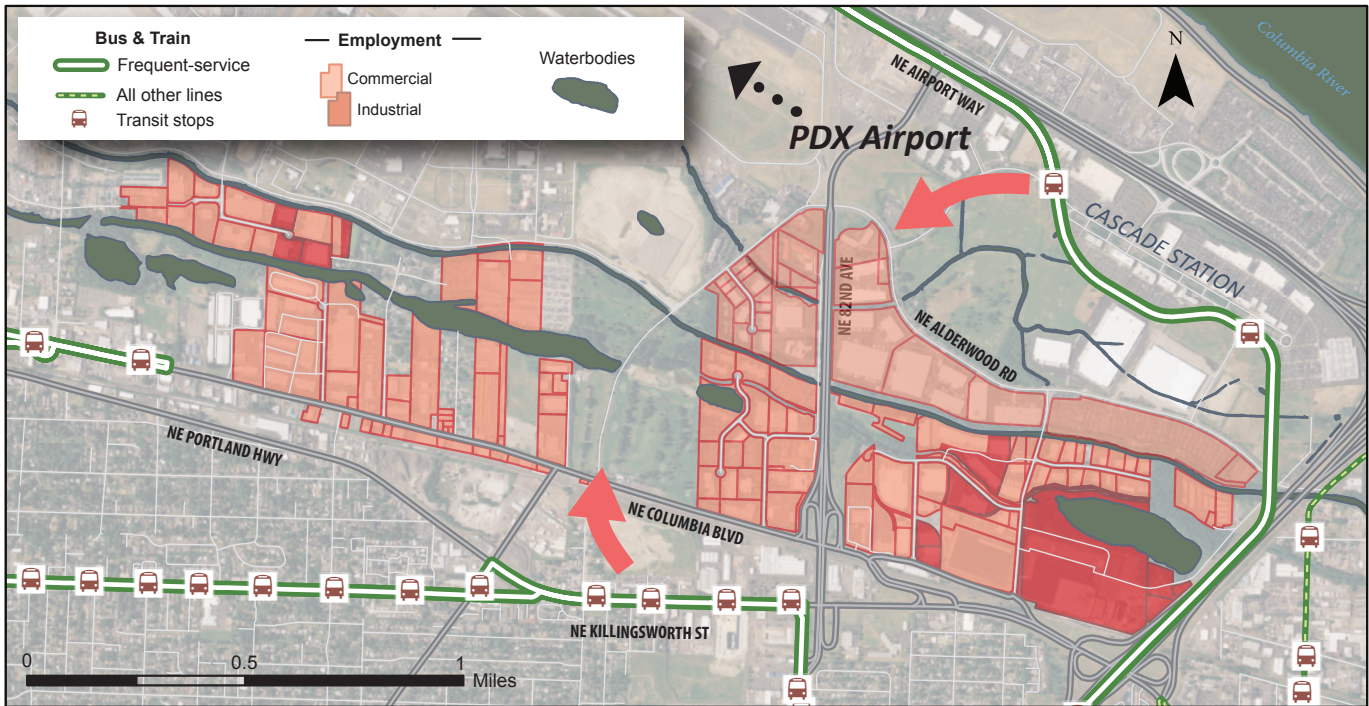


Figure 10 Commuters to many of the commercial and industrial jobs in the PDX tract face heavy-traffic streets and long walks wherever they disembark.

miss a transfer, they have a fifteen-minute wait for the next train. This trip is similar if done at 8:00 a.m. or 8:00 p.m. While this area is near the airport, it is not well served by the Airport Max line.

Workers starting their commute to the FMDC at 8:00 a.m. also face a trip that will take over ninety minutes and two transfers. Unlike their airport tract peers, nearly half of their travel time is spent waiting for buses (forty-five minutes). If they tried to get there at 8:00 p.m., though, the bus from Clackamas Town Center would no longer be running.

Understanding the Cases

Transit use is fraught with perils. As workers live farther from work, their chances of having to transfer buses or trains increases. One delay of a connection can cause a worker to be late to work. This can lead to them being fired since low-wage industries are often less amenable to tardiness among their employees. Transit also takes time. A low-wage worker living close to work may not experience much time difference between transit and driving but living ten miles or more from work creates considerable time differences. Low-wage industries also tend to use night-shift labor more than other industries. Transit schedules often do not coincide with night-shift schedules leaving workers to either find a different mode or wait hours for a bus.

Walking to work or walking from a transit stop can present many difficulties. Many locations around Portland lack sidewalks or convenient and safe places to cross busy streets. This presents a higher possibility of a person walking to work getting injured or killed by a driver.

Driving can severely strain a low-wage worker's budget, but it also provides them a quicker and more convenient way to get to and from work and any other obligations they need to get to. As we see from the cases we presented here, driving may be the only reasonable way for low-wage workers to get to work.

Race and ethnicity also matter. Many populations of color and low-income populations are concentrating east of NE Eighty-Second Avenue, but low-income African-American's dependence on transit presents a much larger problem when they move east of NE Eighty-Second Avenue. In this area of the region, their high rates of transit usage will be difficult to maintain, but so will their budgets if they switch to driving. Racial discrimination in the labor market may also mean they face a greater likelihood of being fired over tardiness related to missing a bus, and a more difficult time finding a job after such an instance. We must always remember there is an intimate linkage between housing, jobs, and transportation and we must always consider what that linkage means as economic and racial segregation still exist in the region.