



# Urbanization or Gentrification? Unpacking the Benefits and Challenges of Link Light Rail

Palmer Holt\*, Program on the Environment, University of Washington

Site Supervisor: Keith Kyle, Seattle Subway Foundation

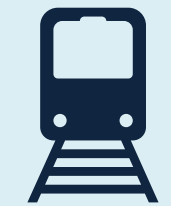
Faculty Advisor: Manish Chalana, College of the Built Environment, University of Washington



## BACKGROUND



Cars are noisy, dangerous, and emit greenhouse gases that contribute to climate change.



Public transit systems like Link Light Rail are popular in Seattle, but expansion has been slow.



Commercial and residential displacement have been associated with Light Rail Development.



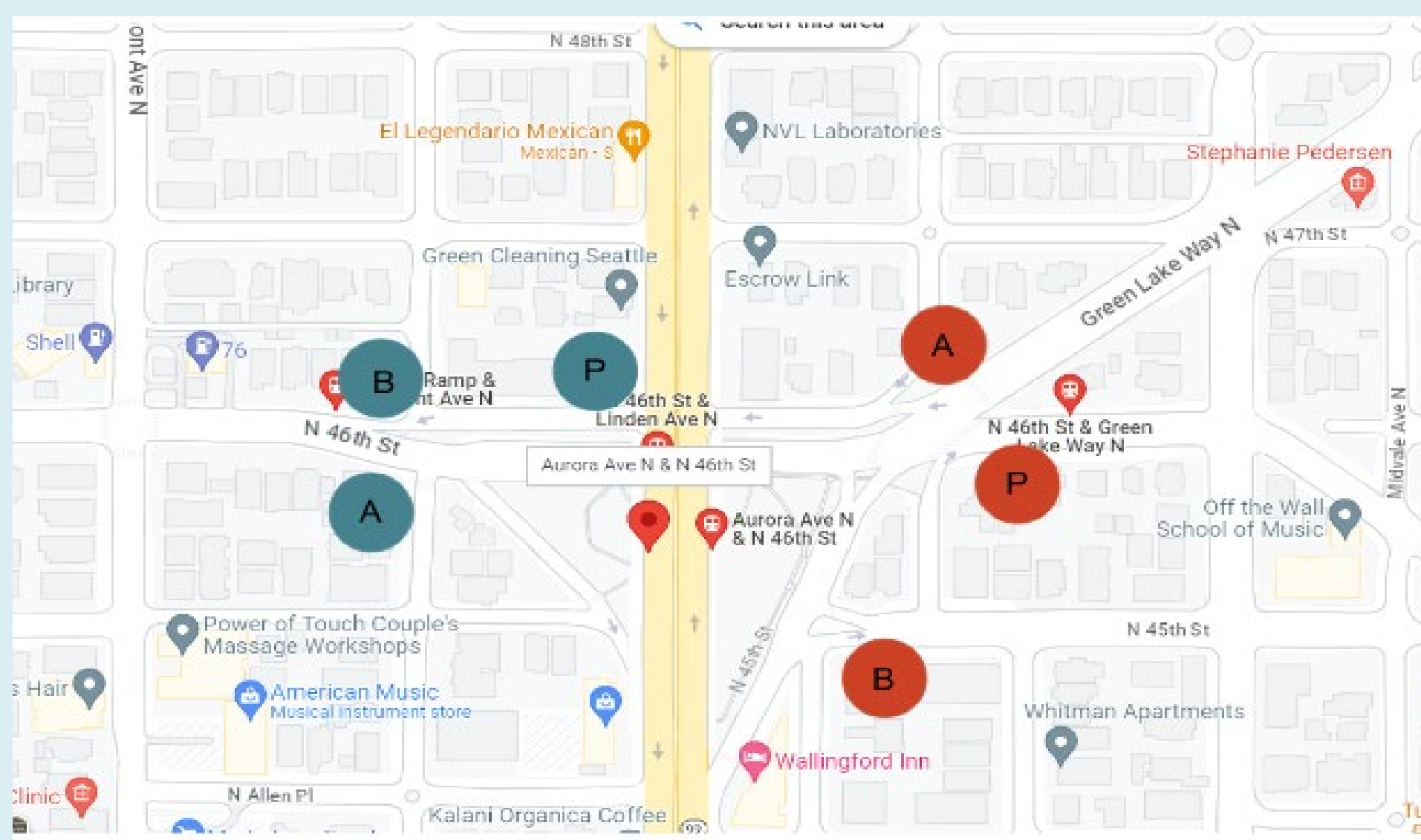
Seattle Subway advocates for Link Light Rail projects. Understanding the impacts of Light Rail development is important to responsible and equitable expansion.

## RESEARCH QUESTION

*What are the benefits and challenges of expanding Link Light Rail in Seattle?*

## INTERNSHIP/METHODS

- Summer 2023 I partnered with Seattle Subway, a transit advocacy group that promotes Light Rail development.
- A student-led Environmental Impact Study was drafted on the Ballard to University District corridor with focus on the underground Phinney Station noted on Seattle Subway's Vision Map- see **fig. 1**.
- A Literature Review was also conducted, and the benefits and challenges of building Link Light Rail were assessed.

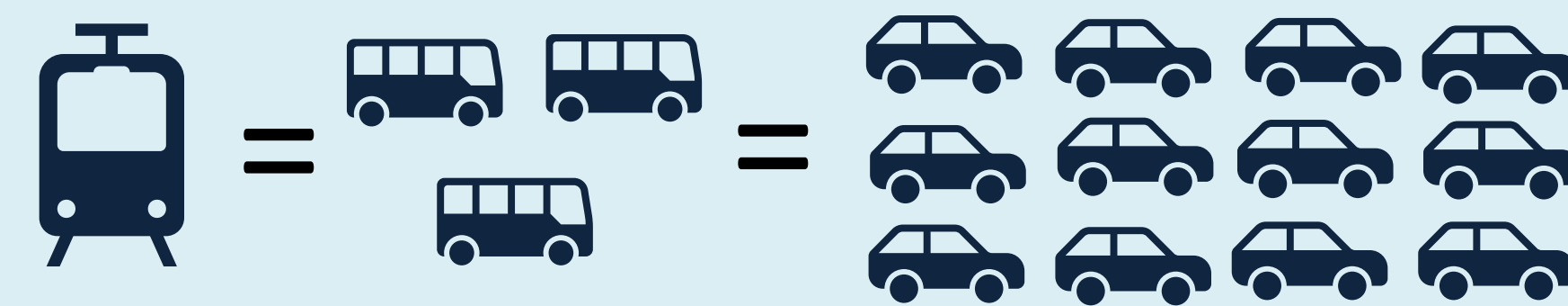


**Figure 1:** Phinney Station Map. Colored circles note potential station entrances along Aurora Avenue. Preferred alternatives are labeled with P, with second preferred alternatives labeled A, and third choices labeled B (Google Maps).

## RESULTS

### Benefits:

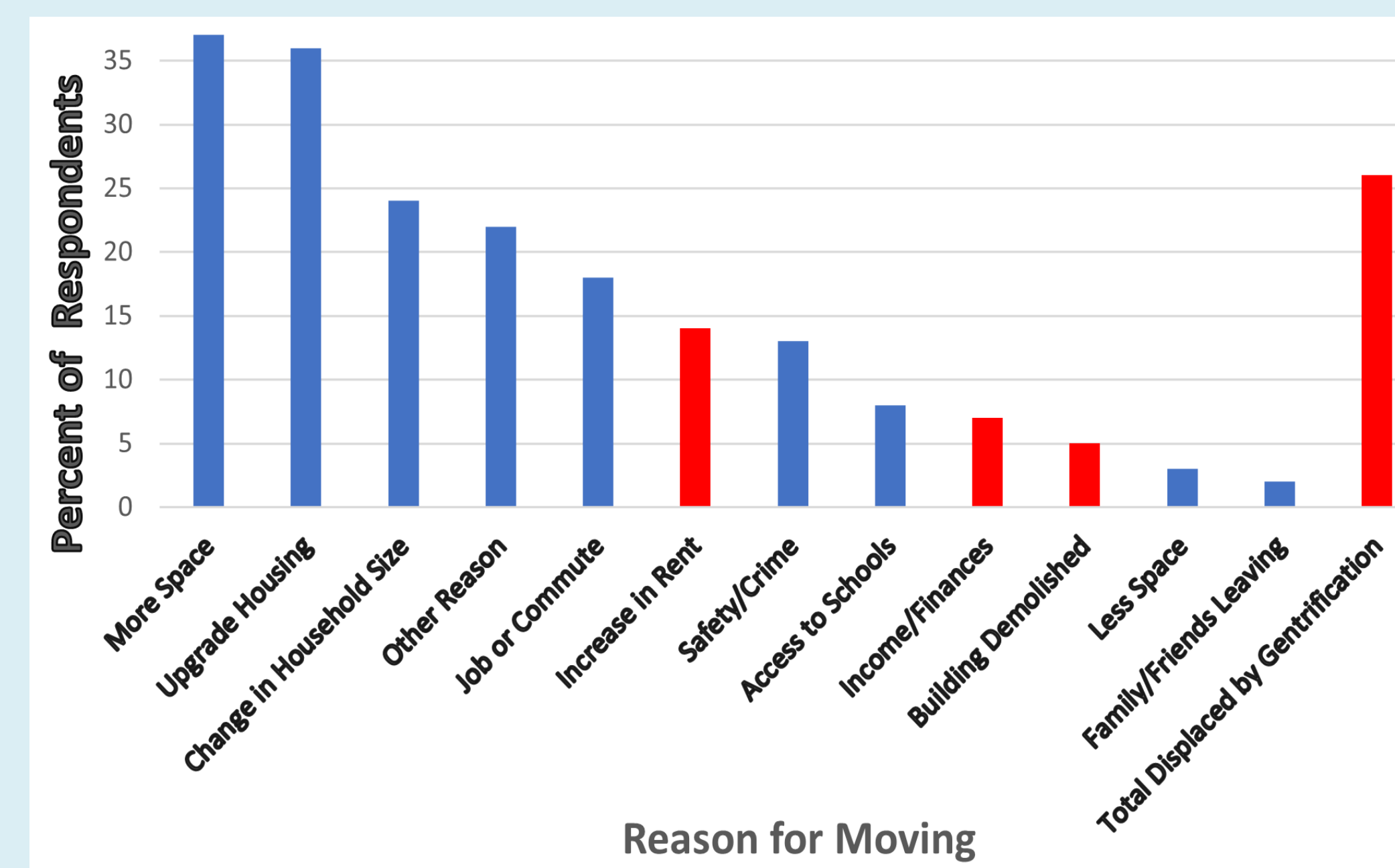
- Link Light Rail reduces traffic, greenhouse gas emissions, and air/noise pollution-see **fig. 2** below.
- Fewer traffic related deaths and more active travel translates to better health.
- Pedestrian activity has been shown to increase community safety and cohesion.
- Compared to cars, public transit emits 95% less carbon monoxide, 45% less carbon dioxide, and 45% less nitrous oxide.



**Figure 2:** ONE Light Rail train can move as many passengers as FIFTEEN buses and over SIX HUNDRED cars!

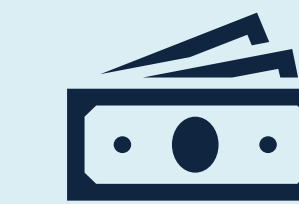
### Challenges:

- Light Rail can put gentrification pressures on historically underserved populations like those in ID/Chinatown, Rainier Beach, and other BIPOC communities. Rising costs can result in displacement-see **fig. 3**.
- Light Rail station construction limits accessibility for residents and businesses along planned routes and engineering challenges make construction periods long and prone to delays.
- Stakeholders also delay or change voter approved plans for Light Rail through private deals or organized resistance.



**Figure 3:** In 2019, 25% of Seattle movers were forced out by rising costs, or other reasons outside of their control (in red). Light Rail can have gentrifying effects along new transit routes. These cost increases could result in displacement for many economically struggling residents (Puget Sound Regional Council).

## IMPLICATIONS



New revenue streams are needed to expand Link Light Rail. **Fig. 4** shows the current service map for the Light Rail alongside Seattle Subway's Vision Map for future development.



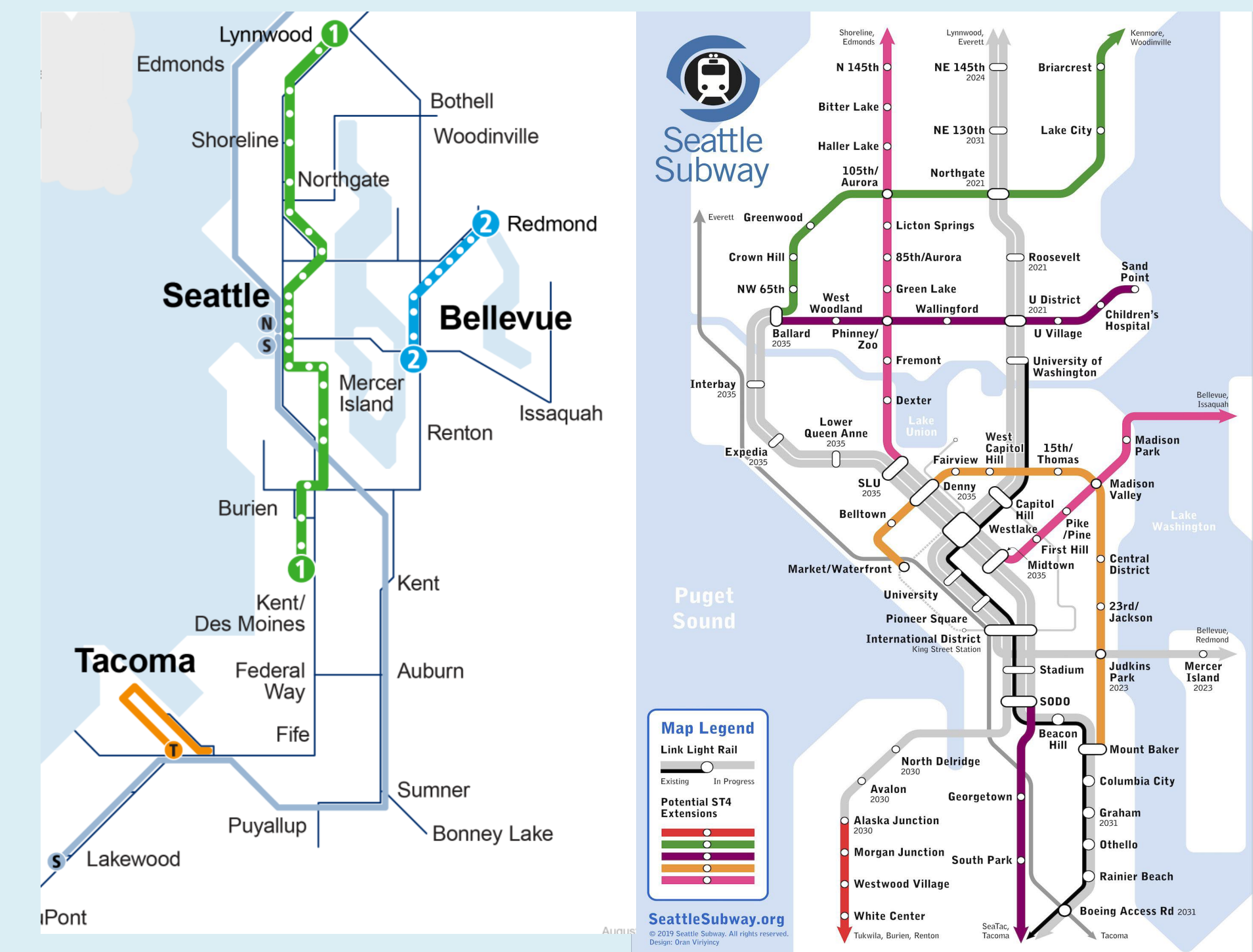
New signage and contractor regulations could improve accessibility for businesses during construction periods-reducing commercial stakeholder displacement/resistance.



Fare equity initiatives, forgivable loans, and housing assistance may help reduce residential displacement along Link Routes.



Further research on best practices for advocacy/outreach could help organizations like Seattle Subway push for responsible Light Rail expansion.

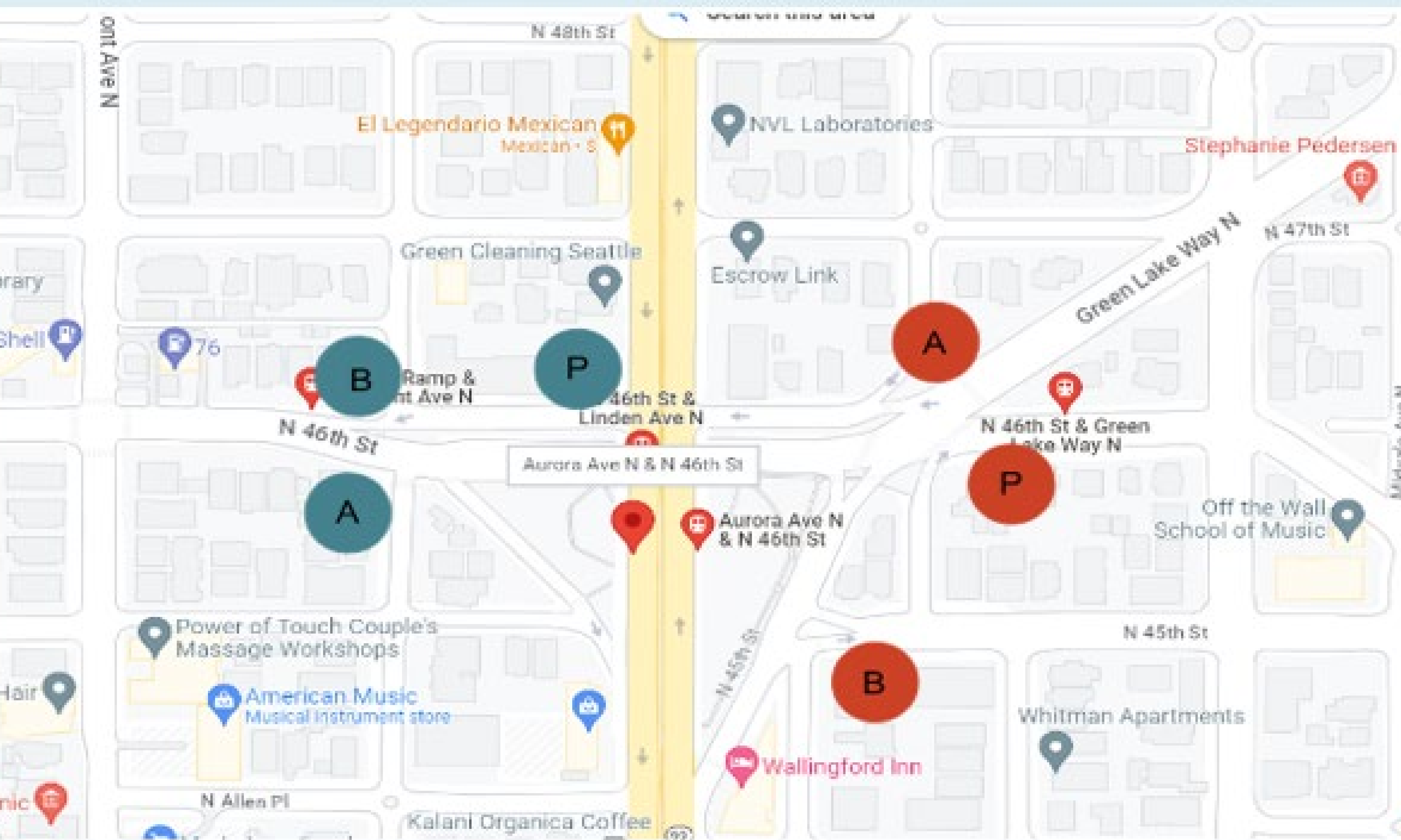


**Figure 4:** Left: Sound transit's current service map for the Link Light Rail and other transit systems. The current Light Rail is noted in green and runs for a modest 30 miles, North-South. Right: Seattle Subway Foundations ambitious Vision Map for the expansion of the Link Light Rail to include many more East-West lines and new routes connecting many diverse neighborhoods.

## ACKNOWLEDGMENTS:

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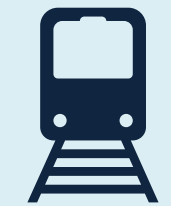
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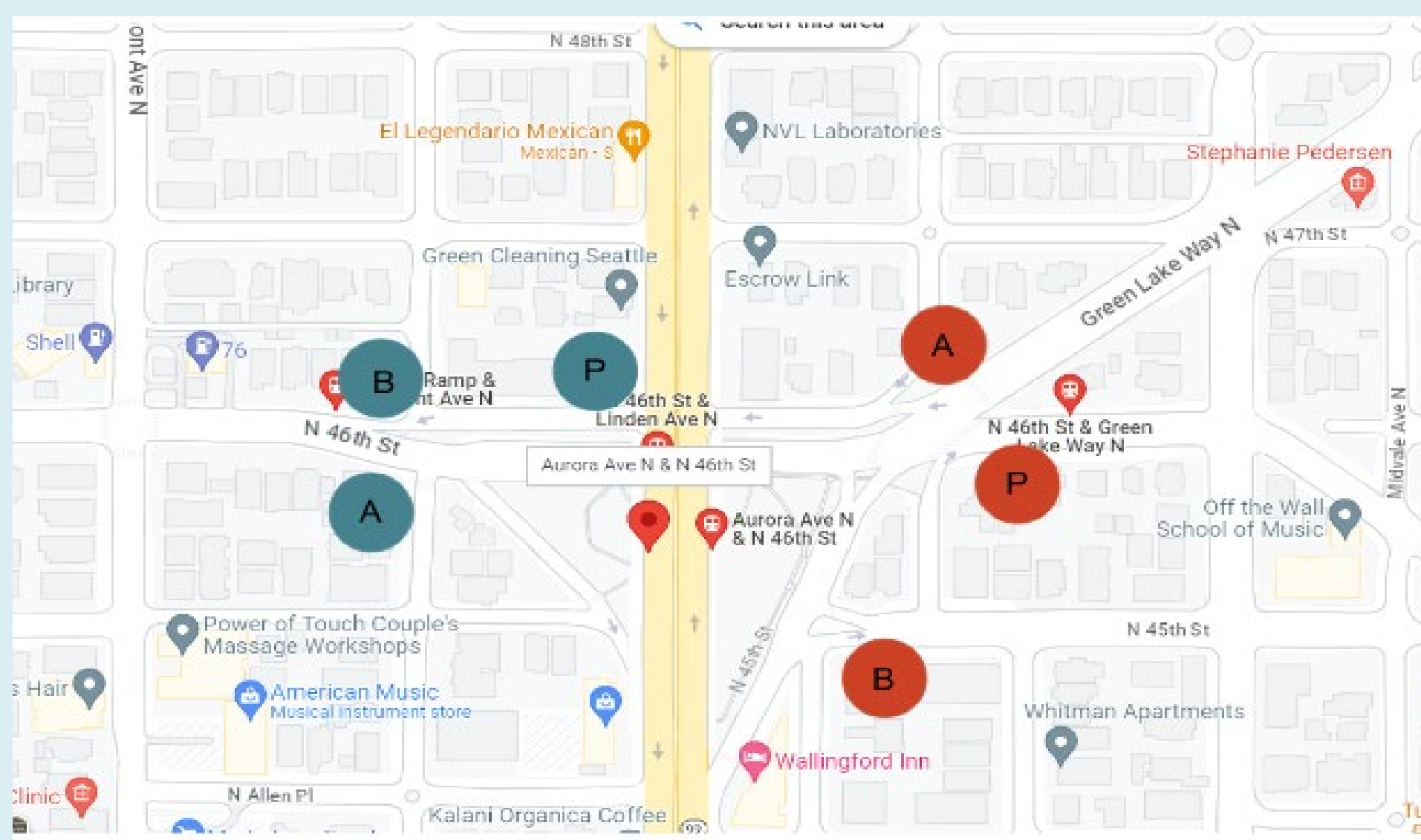
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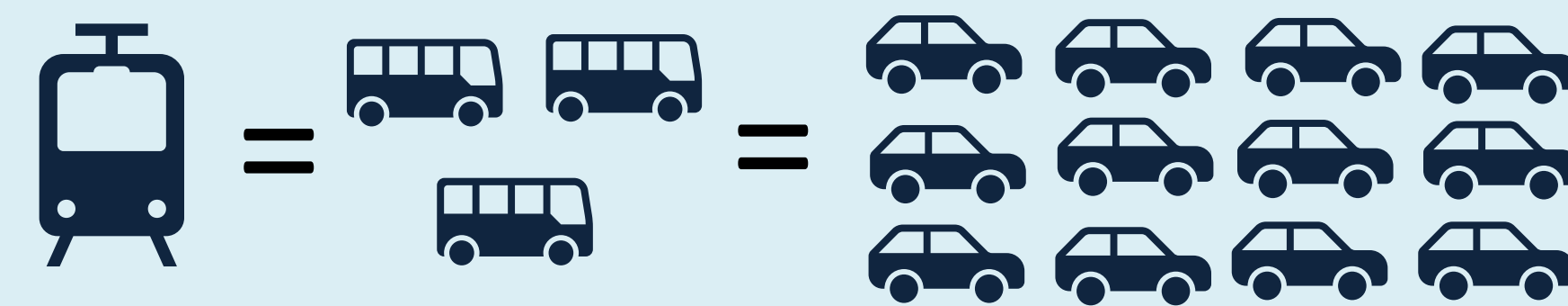


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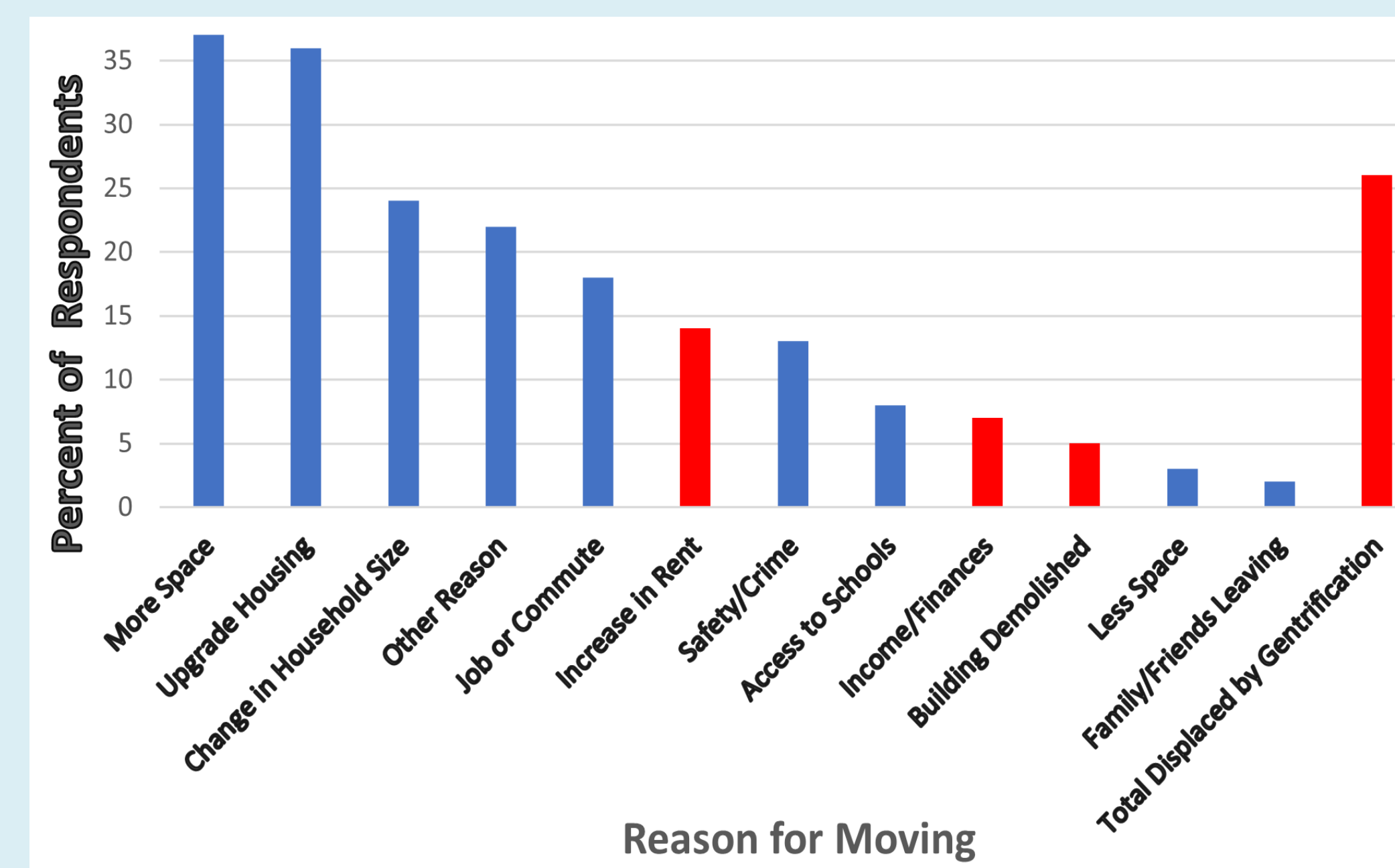
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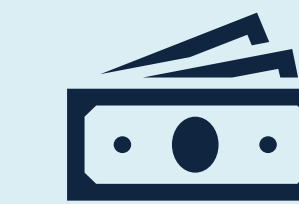
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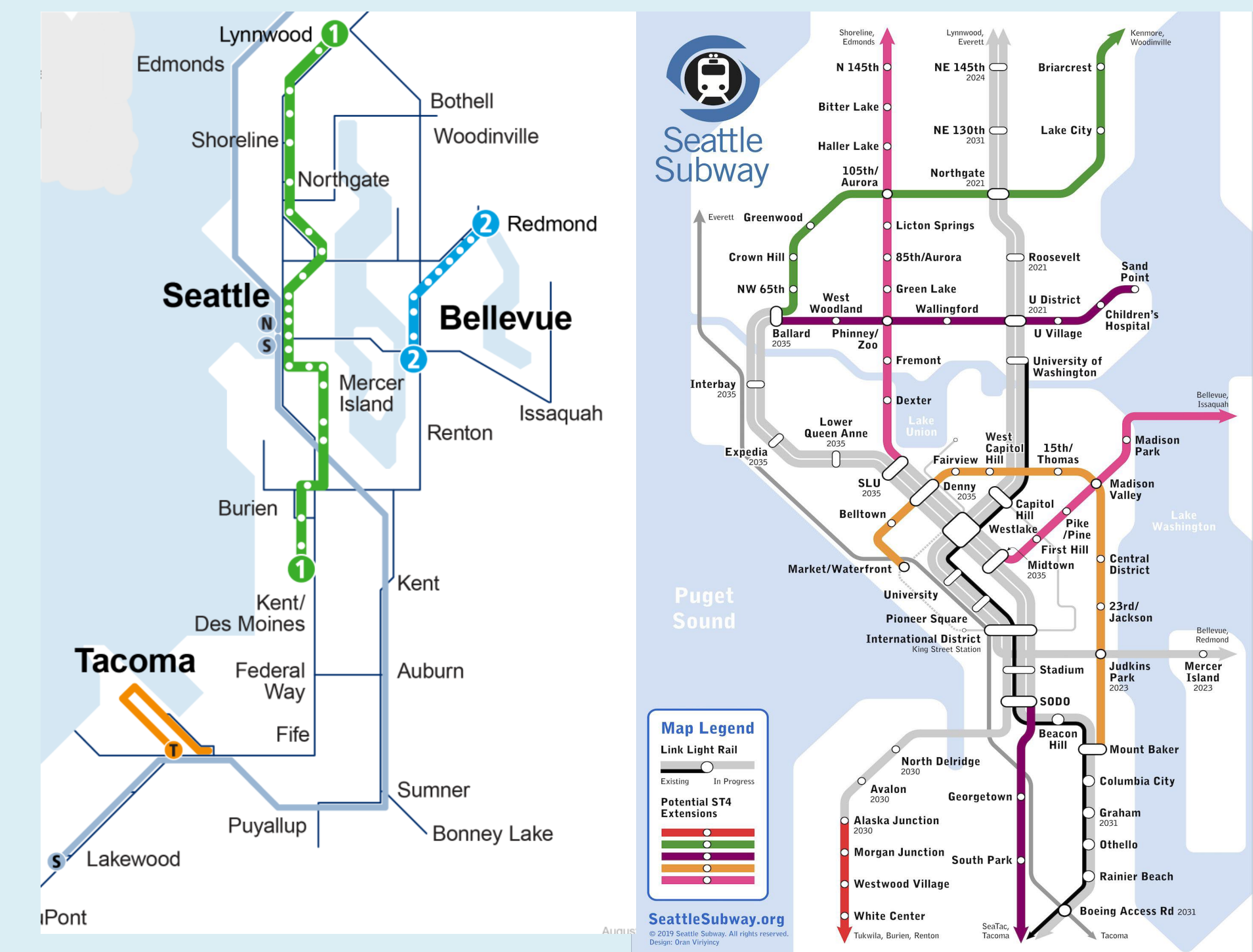
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