| UTC Project Information   |   |
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| Project Title   | Integrating Food Access with Transit Services in Urban Areas of the Pacific Northwest: The Case of Seattle, WA  |
| University  | University of Idaho   |
| Principal Investigator  | Liao, Felix H.  |
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| Funding Source(s) and<br>Amounts Provided (by each<br>agency or organization) | University of Washington PacTrans<br>\$40,00 University of Idaho \$ 40,000  |
| Total Project Cost  | \$80,000  |
| Agency ID or Contract<br>Number   | 69A3551747110   |
| Start and End Dates   | March 16, 2022-June 30, 2023  |
| Brief Description of<br>Research Project                                      | This study examines how public transportation can help improve access to emergency food resources and lower the risk of food insecurity in American cities. For a case study of Seattle, WA we used the general transit feed specification (GTFS) to measure the accessibility of food banks and food pantries at the census block group level. We found that approximately 40% of neighborhoods in the city of Seattle are within walkable distances or half a mile of network distances of the nearest food bank or pantry. However, general access to the food pantry network is highly constrained by their operation hours. We found Tuesday, Wednesday, and Thursday afternoons are popular timeslots, and food banks are rarely open during weekends. Furthermore, transit access to the citywide food pantry network is unevenly distributed in which some neighborhoods associated with larger numbers of food insecure populations are simultaneously those with low accessibility of emergency food resources. These neighborhoods are primarily located in South Seattle and near the city's northern edge. Results of regression models further indicate that convenient access to food banks or food pantries remains important for vulnerable communities. Finally, our study suggests that on-demand transit services or additional mobile food pantries would help bring free food to vulnerable communities, especially when regular public transit services are constrained by catastrophic circumstances like the onset of the COVID-19 pandemic. |

| Describe the Implementation of Research Outcomes (or why not implemented)  Place Any Photos Here | The findings derived from this research are likely to be disseminated as a research article in a peer-reviewed academic journal. The results would be used by governmental entities in future efforts related to public transit system design or other policy work on emergency planning.   |
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| Impacts/Benefits of  | Anticipated benefits: Given the importance of public transit in accessing   |
| Implementation (actual, or anticipated)  | EFS among disadvantaged populations, as shown in this study, transportation agencies would consider providing on-demand services when large-size food banks are open. In addition, charitable organizations may also consider routing mobile food pantries to those vulnerable communities with low transit access to the food-pantry network.  |
| Web Links  Reports Project Website   | <ul> <li>Report preprint link:         <ul> <li>https://www.researchgate.net/publication/372457125_Integrating_Fo</li> <li>od_Access_with_Transit_Services_in_Urban_Areas_of_the_Pacific_No</li> <li>rthwest_The_Case_of_Seattle_WA</li> </ul> </li> <li>Project website and/or data sharing:         <ul> <li>https://www.researchgate.net/publication/372457125_Integrating_Fo</li> <li>od_Access_with_Transit_Services_in_Urban_Areas_of_the_Pacific_No</li> <li>rthwest_The_Case_of_Seattle_WA</li> </ul> </li> </ul> |