



711 SE Grand Ave.
Portland, OR 97214
(503) 230-9862
www.altaplanning.com

MEMORANDUM

To: Stephanie Millar, Oregon Department of Transportation

From: Anna Gore, Alta Planning and Design

Date: April 3, 2019

Re: Capitol Mall Survey Analysis

Capitol Mall Survey Analysis: ODOT

Evaluation Summary

Overview

To better understand the current travel behavior and opinions of State employees working at and around Salem's Capitol Mall, ODOT administered a survey measuring commuter behavior, commuter satisfaction, and willingness/ability to access sustainable transportation options.

Some key high-level trends identified include:

- 30% of surveyed employees reported a round-trip commute of 40 miles or more
- 28% of surveyed employees report feeling frequently frustrated with their commute
 - These frequently frustrated commuters are more likely to:
 - Commute longer roundtrip distances

- Approach Salem from the North and West
 - Pay higher monthly costs for parking
 - Carpool
 - Take transit
- Employees who report high levels of frustration during their morning commute were 6 times more likely to exhibit interest in trying new transportation options than employees who reported low levels of frustration

Survey Methodology

Electronic surveys were distributed via email to employee accounts linked to one or more State buildings in Salem during November of 2018. The cleaned dataset contained 1,236 responses from unique accounts across 39 agencies. There is a total of approximately 17,700 State employees who work in Salem, which means that approximately 7% of State employees who work in Salem participated in this survey.

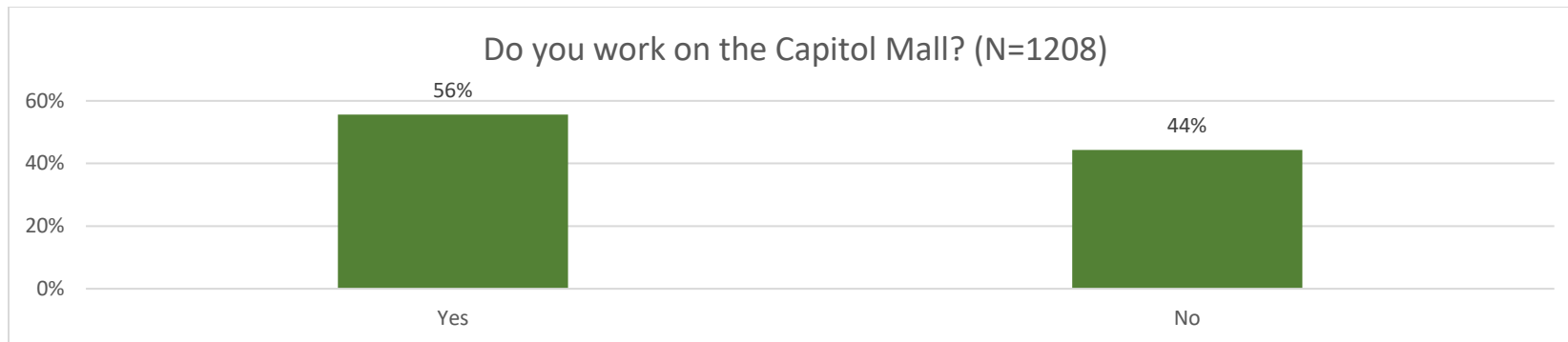
It should be noted that several items may impact the granularity and accuracy of the resulting analysis. Some of these are inherent to self-reported surveys, while others are related to the decision to keep the survey relatively short and simple, in order to increase the response and completion rate. Potential issues include:

- **Survey audience:** The e-mail distribution included State employees who do not work in Salem but occasionally attend meetings or trainings in Salem. While the dataset was cleaned to filter out responses from employees who do not routinely work in Salem, the results may include data from some workers outside of the intended target audience.
- **Survey granularity:** The survey did not allow respondents to select more than one commute mode or input a custom commute distance, arrival time, or departure time. This means the dataset only reflects approximate arrival/departure time and primary mode of commute.
- **Reporting inaccuracies:** It is likely that some respondents made errors in their replies. It is additionally possible that we experienced selection bias (e.g. perhaps people who were frustrated with their commutes were more likely to complete the survey) and/or reporting bias (e.g. if respondents felt that driving alone was the “wrong” answer due to perceived negative social, environmental, or social impacts, they may have subconsciously been more likely to “round down” on their reported driving behavior)

Employee Demographics Reached

Survey respondents included State employees who work at Capitol Mall and State employees who work at other nearby worksites in Salem. As seen in Figure 1, 56% of survey respondents work at Capitol Mall, while 44% work at other State facilities in town.

Figure 1: Respondents who work at Capitol Mall



As shown in Figure 2, survey responses also represent employees living in a wide geographic range of cities and counties. While 61% of respondents live in Salem and its surrounding cities, nearly 40% of employees surveyed commute from regions outside of the immediate Salem area. The Portland Metropolitan region was the second most prominent commute origin, making up 11% of responses. Employees traveling from cities south of Salem (such as Albany, Corvallis, or Lebanon) and cities west of Salem (including Dallas, Independence, or McMinnville) each represent 9% of the respondent pool, while commuting from the North (outside of the Portland Metro area) and East is less common amongst surveyed employees. No out-of-state residency was recorded. Figure 3 contains more in-depth descriptions of the seven summary area categories that home city responses were categorized into.

Figure 2: Respondents home city

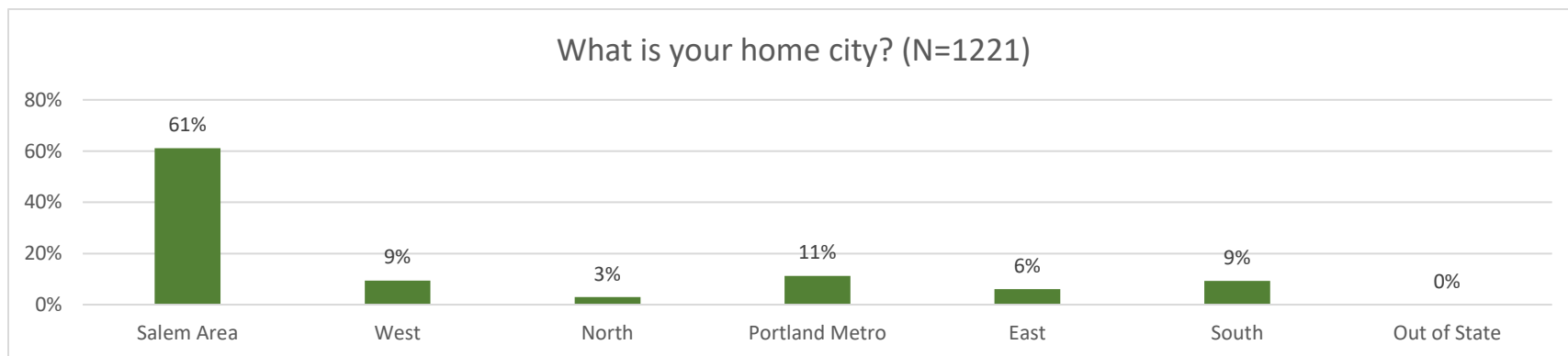
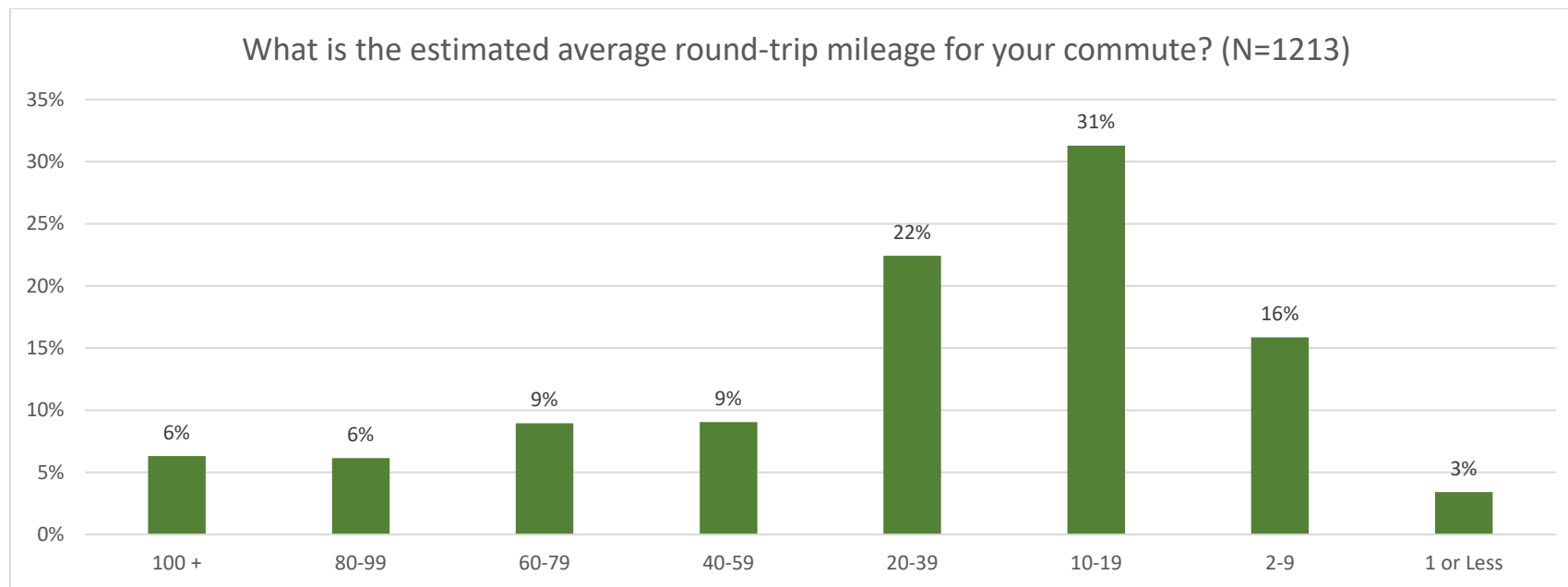


Figure 3: Summarization area descriptions

Summarization Areas	Example Cities
Salem Area	Salem, Keizer, Turner, Brooks, Eola, Four Corners, and Hayesville
West	Dallas, Independence, Monmouth, McMinnville, Oregon Coast
North	Hubbard, Gervais, Woodburn, Canby, Molalla
Portland Metro	Portland Metro area and Vancouver WA
East	Silverton, Sublimity, Stayton, Mt. Angel, central and eastern Oregon
South	Albany, Corvallis, Eugene, southern Oregon
Out of State	Outside the State of Oregon and Vancouver WA area

This wide range of origins speaks to a wide range of commute distances. As Figure 4 demonstrates, a majority of survey respondents estimated their round-trip commute distance to be under 40 miles, with 22% reporting 20-39-mile two-way commutes, 31% reporting 10-19-mile two-way commutes, and 16% reporting 2-9-mile two-way commutes. Only 3% of respondents reported a 1 mile or less round-trip commute. Approximately 30% of respondents estimate that their round-trip commute exceeds 40 miles, with 12% reporting that their round-trip commute exceeds 80 miles.

Figure 4: Average round-trip commute mileage



Travel Behavior Results

As illustrated in Figure 6, survey results indicate that a majority of commuters arrive at work by 7:30 AM or earlier, nearly 20% of whom arrive by 6:30 AM or earlier. Arrivals gradually increase from 20% at 7 AM, to 23% at 7:30 AM, before peaking at 26% around 8 AM. After 8 AM arrivals decrease dramatically.

Figure 5 highlights that departure time from work varies more than arrival time. While 20% of respondents leave the office around 5 PM, many leave earlier or later. 67% of employees surveyed leave work between the hours of 4 PM and 6 PM, while 12% leave by 3:30 or earlier and 21% leave at 6:30 PM or later.

Figure 6: Typical arrival times

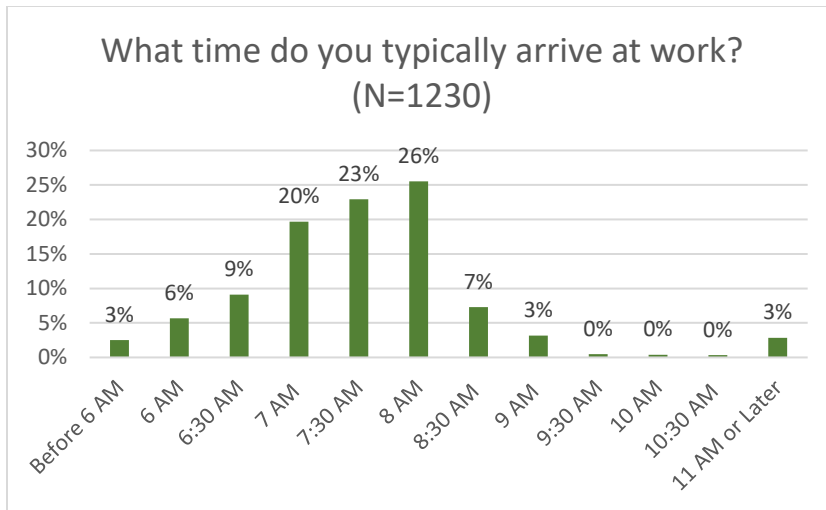
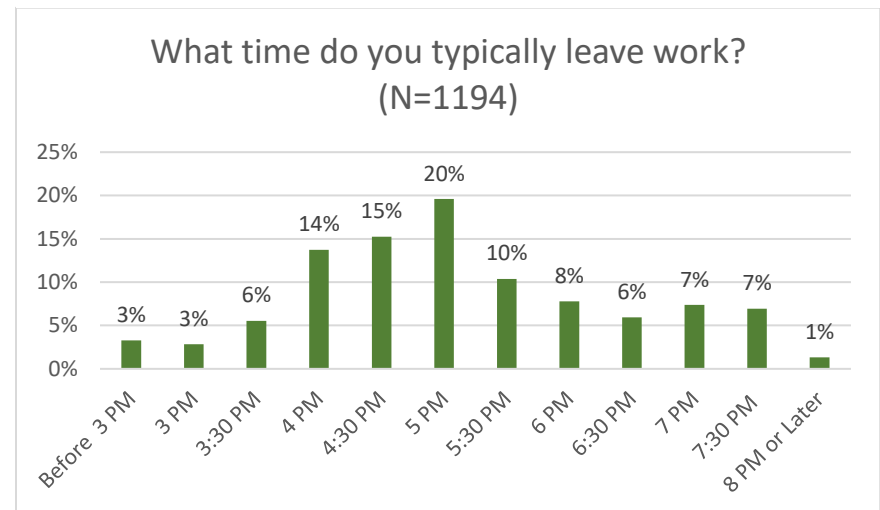


Figure 5: Typical departure times



As shown in Figure 7, 52% of surveyed employees pay for parking while 48% do not. Figure 8 demonstrates that, of survey respondents who drive, 58% use State-owned parking, 14% use privately owned parking, and 8% use on-street parking. All state-owned parking lots require a fee for use, and there is a wait list for parking spaces at some facilities. The cost and availability of parking likely influence where employees park and may have an impact on their drive-alone rate.

Figure 7: Percentage of respondents who pay for parking

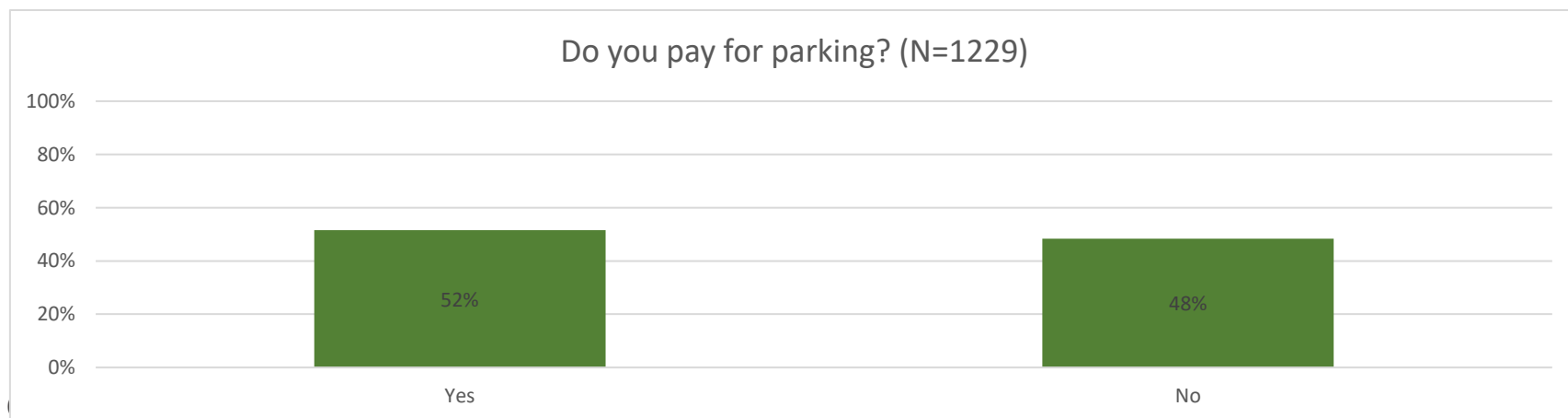


Figure 8: If and where respondents park

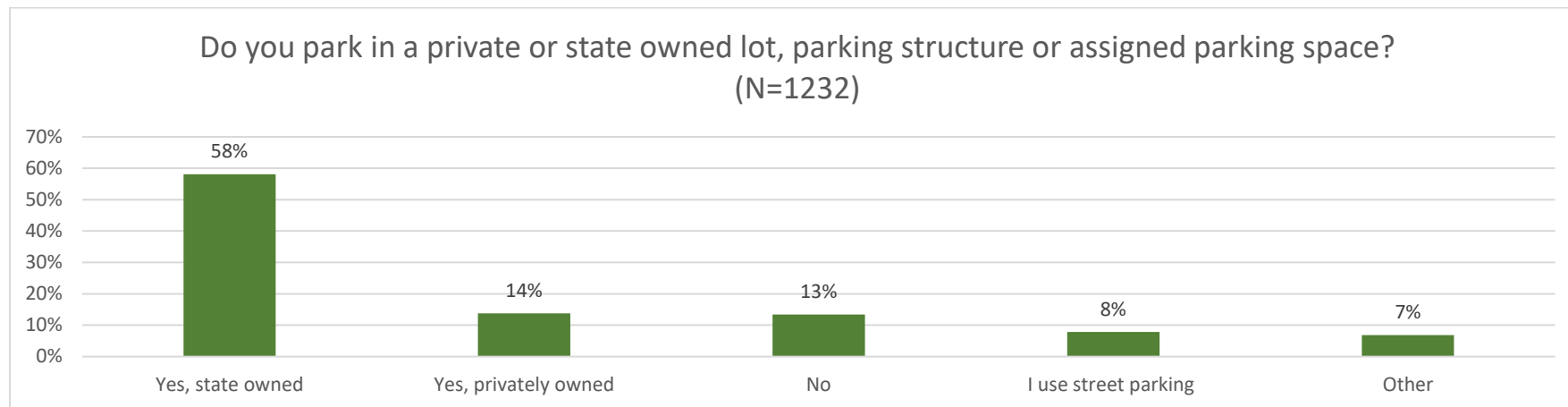
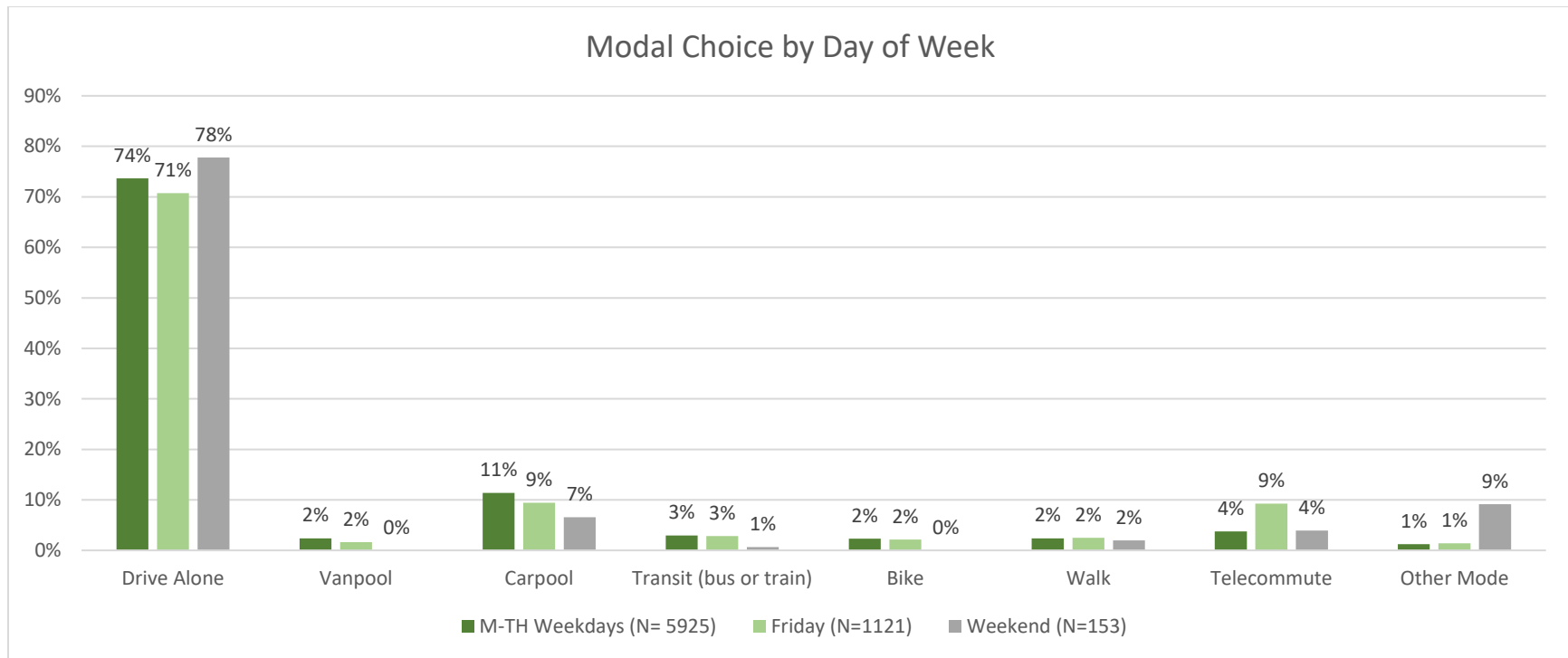


Figure 9 indicates that surveyed employees were most likely to choose commuting via single occupancy vehicles on both weekdays and weekends. 74% of surveyed employees make single occupancy vehicle commutes on Monday through Thursday weekday while drive alone commutes decrease by 3% on Fridays (likely a result of increased telecommuting on Fridays) and increases on weekends by 4% (contributing factors may include reduced availability of vanpool, carpool, and transit options on Saturdays and Sundays; job duties that require driving on the weekend; and less concern about traffic congestion).

The second most prevalent mode of commuting, is carpooling. Carpooling is most common early in the week, representing 11% of Monday through Thursday responses. Carpooling sees a 2% reduction on Fridays, as the respondent pool is more likely to telecommute. Carpooling drops to 7% on the weekends, with some respondent comments indicating it is more difficult to coordinate Saturday and Sunday carpools. Vanpool commutes represent 2% of responses Mondays through Fridays. Vanpool service is unavailable on weekends.

Active transportation modes account for 4% of trips on Mondays through Fridays (2% biking and 2% walking). Transit commutes also stay consistent on Mondays through Fridays, representing 3% of round-trips. Bus and train commuting decreases to 1% on weekends, possibly a reflection of decreased service frequency.

Figure 9: Modal choice by day of week



Attitudes and Perceptions Results

Respondents were asked to rate their agreement with the series of opinion statements related to their commute. Responses are illustrated in Figure 10. Figure 11 describes the average scores respondents noted for each opinion statement.

Figure 10: Respondent opinions

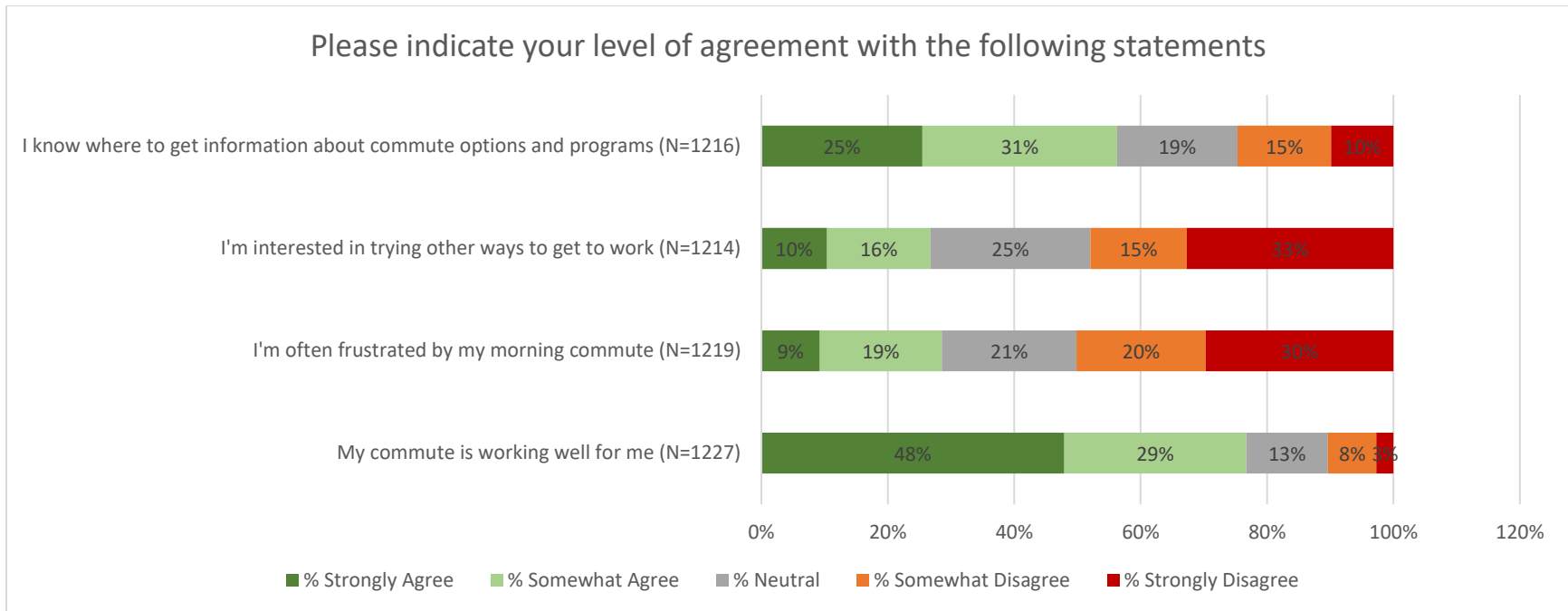
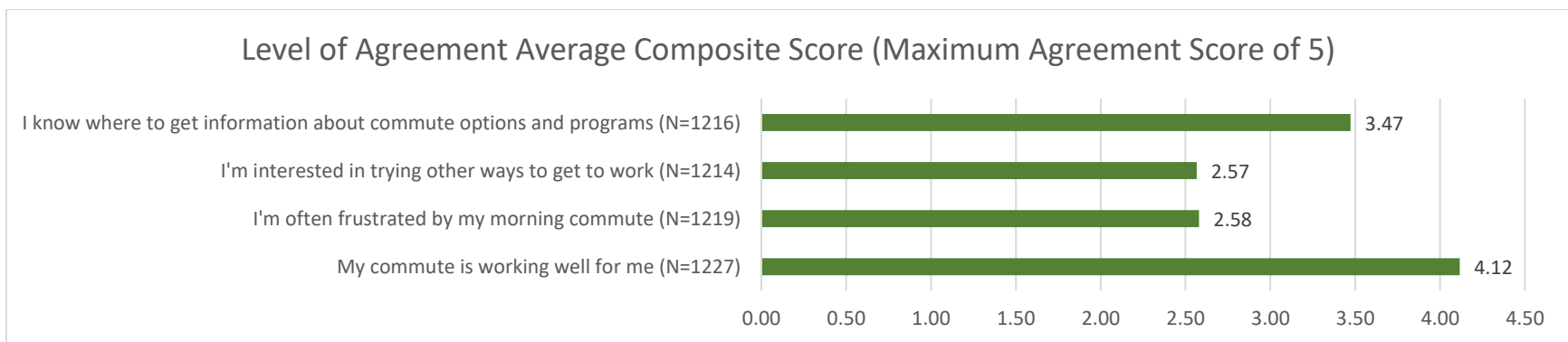


Figure 11: Respondents' opinions – average score



As shown in Figure 10, 77% of surveyed employees either strongly agreed or somewhat agreed that their overall commute is working well for them, while 11% strongly disagreed or somewhat disagreed with the statement. Survey results went on to indicate that 28% of all respondents strongly agreed or somewhat agreed that they are often frustrated by their morning commute.

Figure 12 and Figure 13 demonstrates that commuters who report frequent frustration with their commute were more likely to live farther from Salem. Each commute distance bracket saw an increase in frustration from the preceding category (see Figure 14 and Figure 15), with 28% of commuters traveling 5 miles or less strongly agreeing or somewhat agreeing that they experience frequent frustration and 63% of commuters traveling 100 miles or more strongly agreeing or somewhat agreeing that they experience frequent frustration. More specifically, respondents approaching Salem from the North and the West (as seen in Figure 12) were most likely to strongly agree or agree that they experience frequent frustration, including 62% of respondents living in the Portland Metro area, 65% of respondents living in other Northern communities, and 65% of respondents living in Western Oregon.

Figure 12: Frustration by Residence

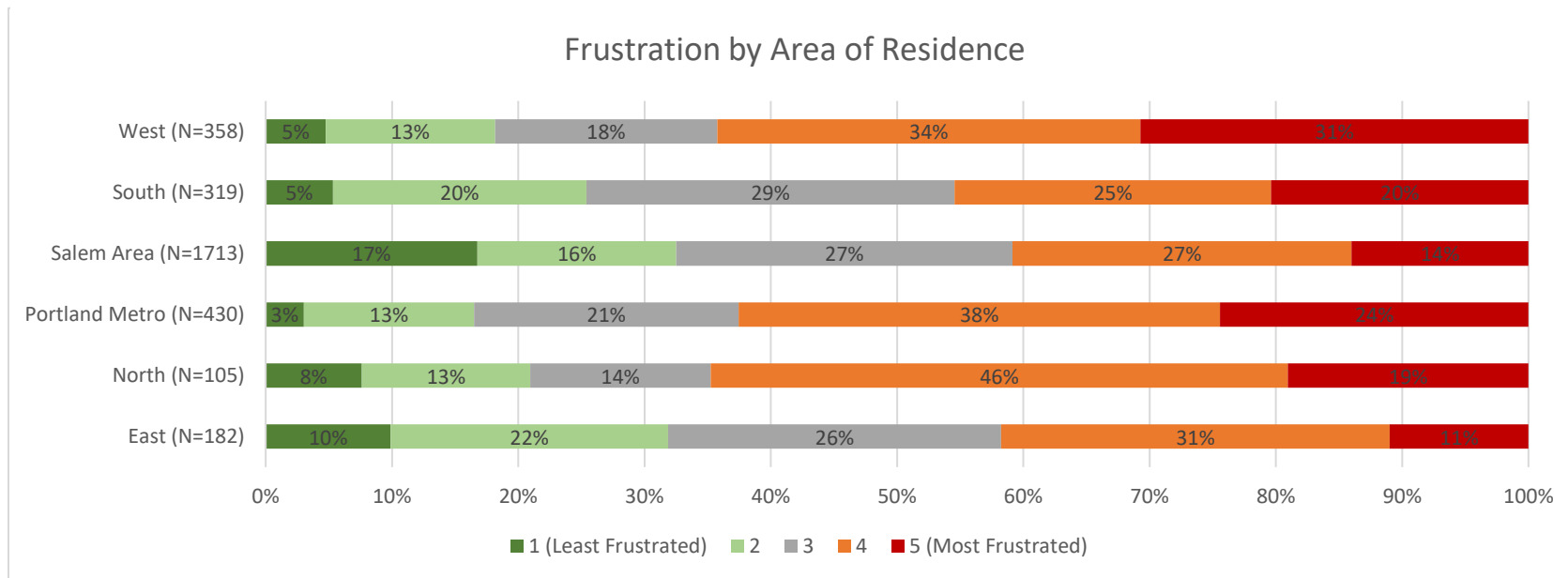


Figure 13 shows that employees commuting from the West and North average the highest levels of frustration, with Western employees reporting and average 3.72 out of 5 frustration score, Portland Metro area respondents averaging 3.67, and Northern non-Portland employees averaging 3.55.

Figure 13: Frustration by residence - average score

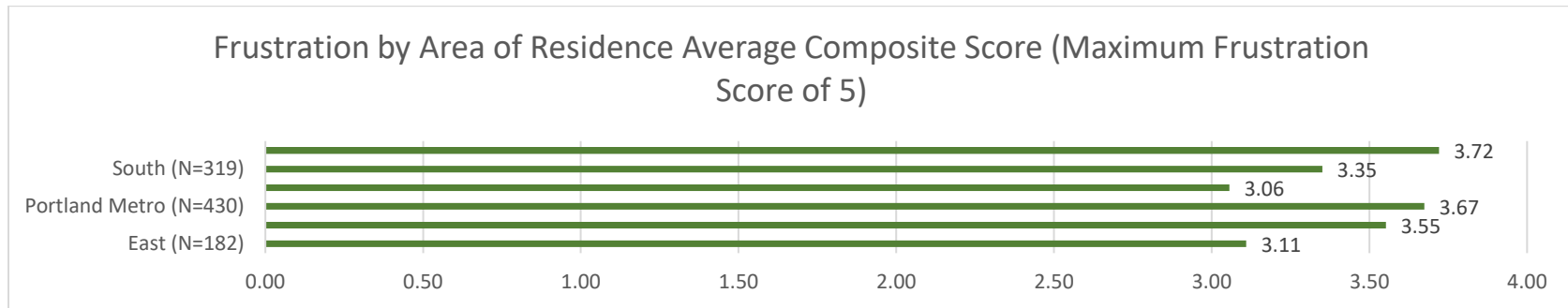


Figure 14: Frustration by round-trip commute distance

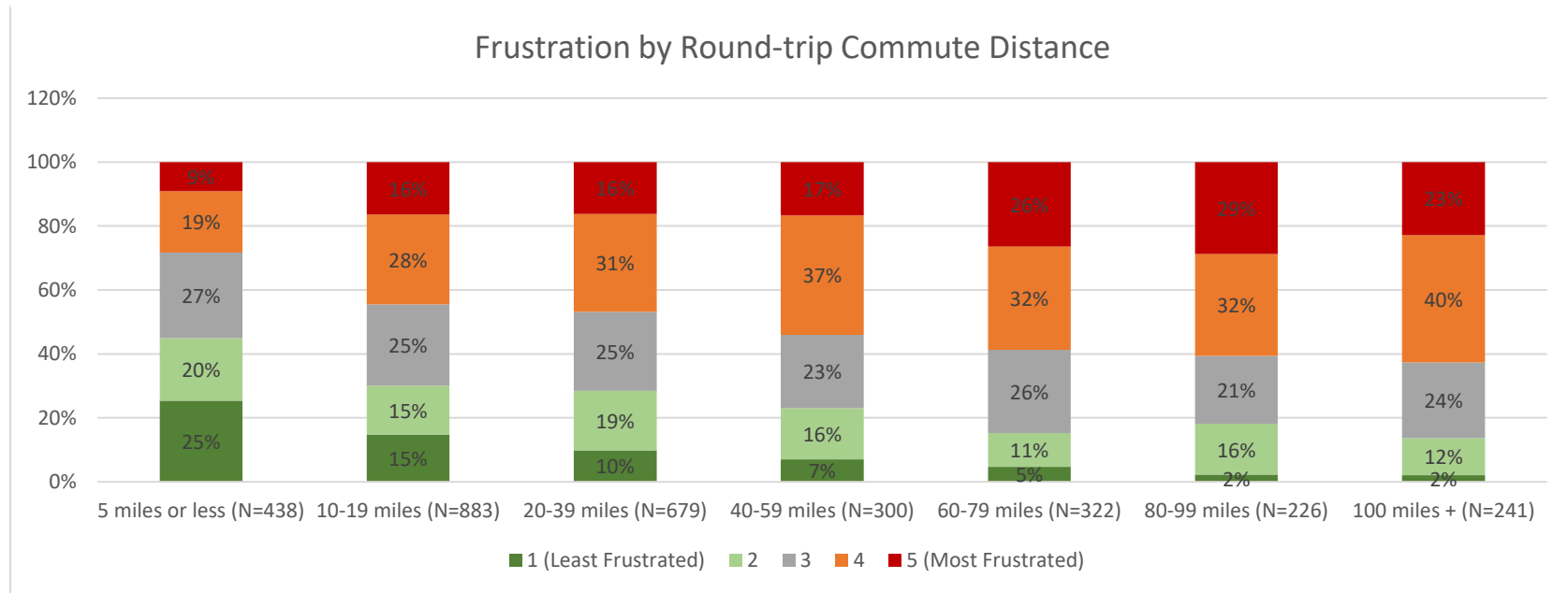
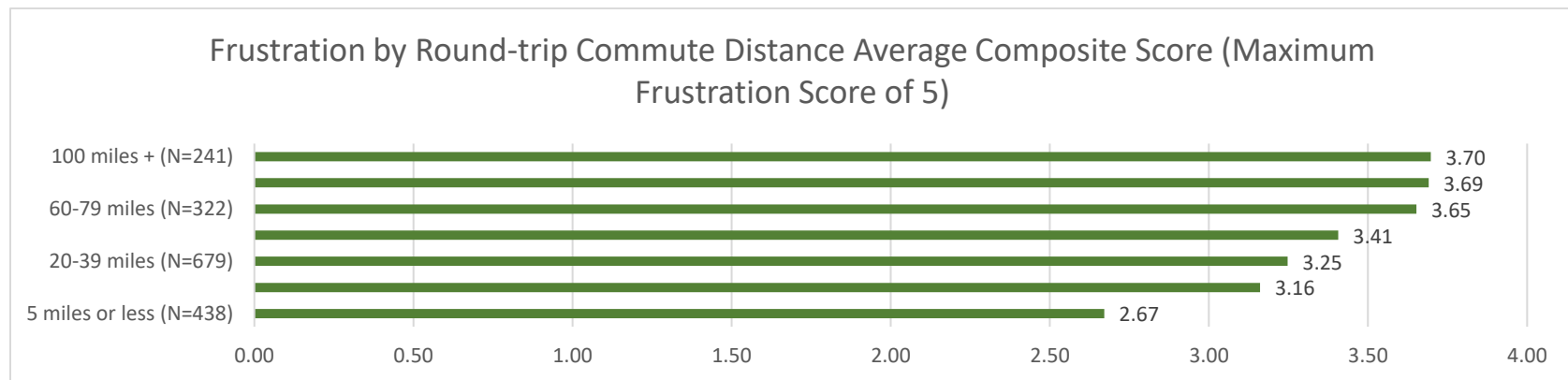


Figure 15: Frustration by round-trip commute distance - composite score



As Figure 16 and Figure 17 show, respondents who reported experiencing frequent frustration during their commute were more likely to pay higher rates for parking than those who pay less or do not pay for parking at all. It should be noted that frustration measures for respondents in parking expense brackets exceeding \$80 may be unreliable due to limited sample size. Nonetheless, surveyed motorists who spend \$71 to \$80 per month were nearly 20% more likely to report commute frustration than those spending less than \$20. This frustration may be attributable to a multitude of factors, including expense of parking, proximity of parking, or congestion associated with certain worksites or parking locations.

Figure 16: Frustration by cost of parking

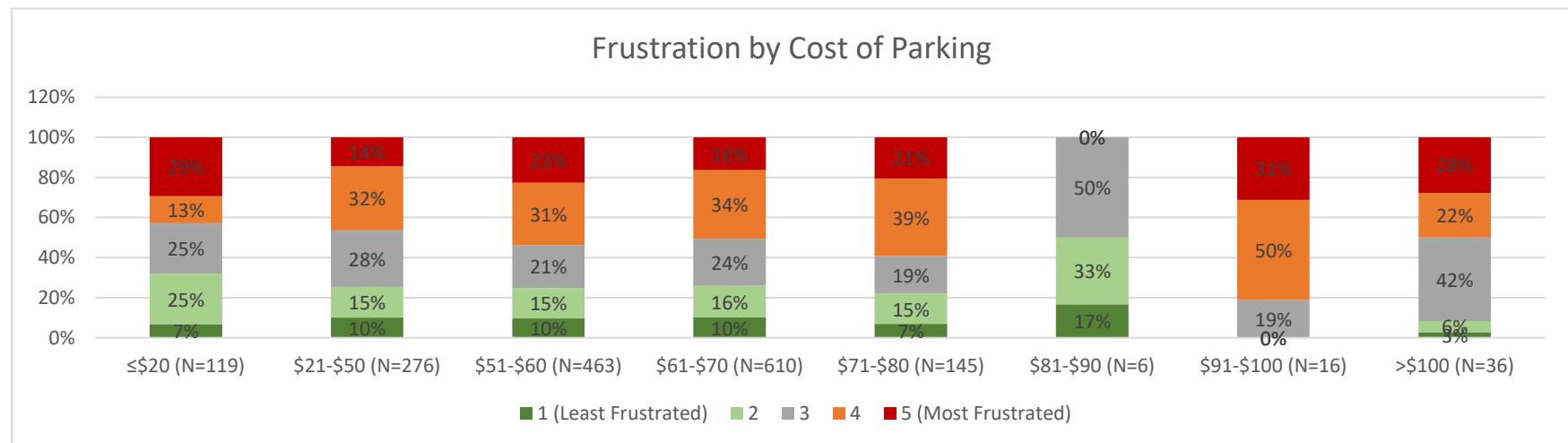


Figure 17: Frustration by cost of parking - average score

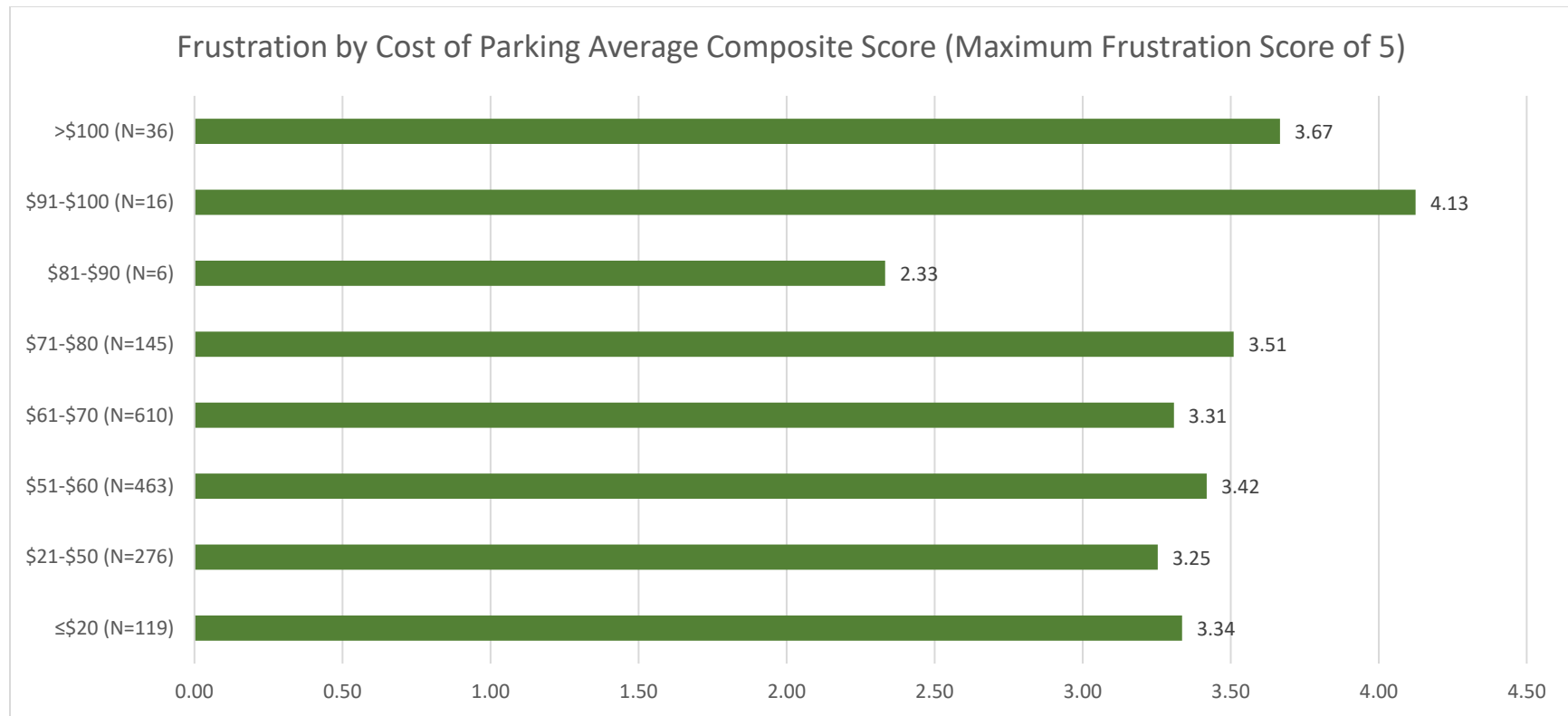


Figure 18 and Figure 19 highlight that employees who walked or biked to work were far less likely to report stress on their morning commute. 78% of bike commuters and 87% of pedestrian commuters disagreed or strongly disagreed with the notion that they often experience frustration on their trip. Transit riders, telecommuters, and carpoolers were the most likely groups to experience stress on their way to work, with 36% of transit riders, 36% of telecommuters, and 34% of carpoolers reporting frequent frustration. It is noteworthy that telecommuting may be an indication that an employee is experiencing frustration with the mode they use on days when they do travel to their worksite in Salem. 28% of those who drove alone to work experience frequent frustration, while only 22% of vanpoolers and 18% of those using other modes reported commute frustration.

Figure 18: Frustration by mode choice

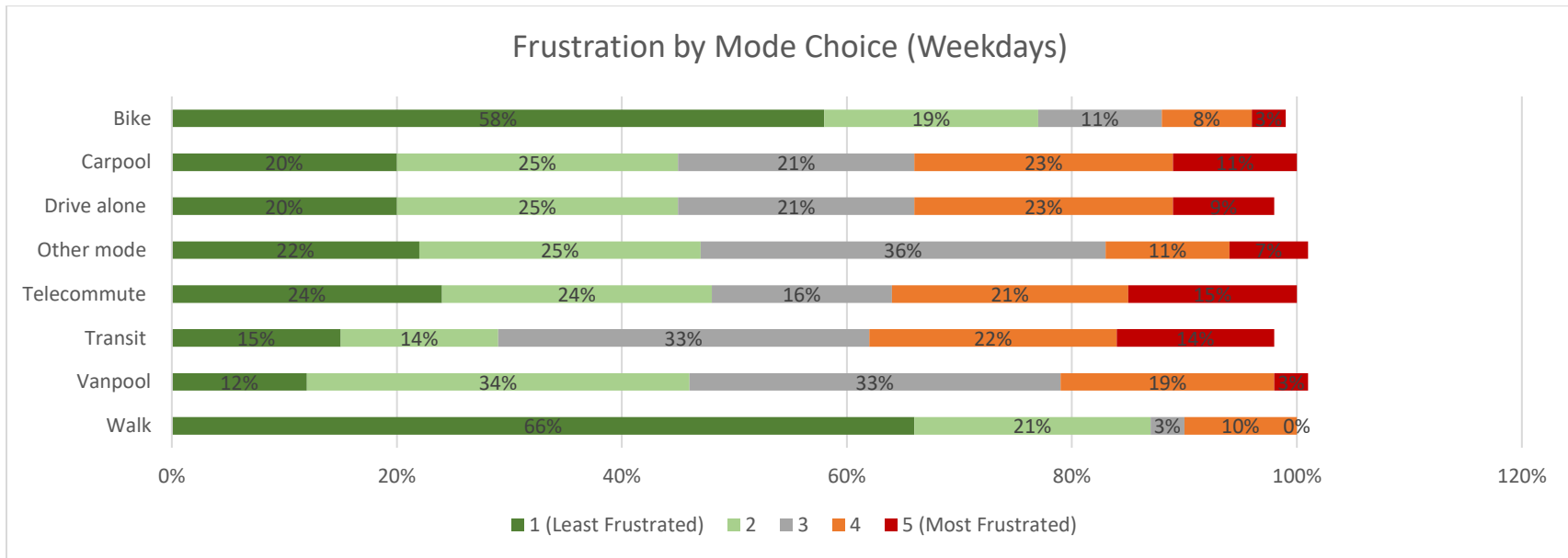
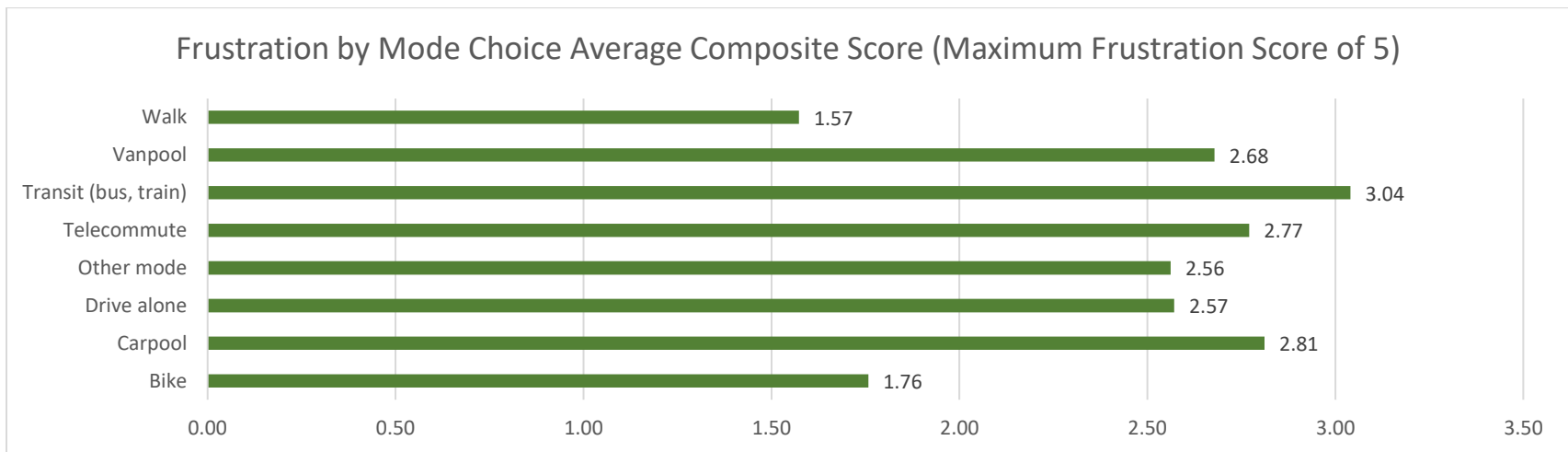


Figure 19: Frustration by mode choice - average score



Understanding the commute pattern of State employees who experience frustration on their trip to work is helpful in designing, implementing, and marketing a successful program for commuters working at or near Capitol Mall. As shown in Figure 20, respondents who strongly agreed that they frequently experience frustration on their commute were nearly 6 times more likely to express interest in trying new ways of getting to work than those who strongly disagreed that they experience frequent frustration on their commute.

Figure 20: Frustration and interest in trying new options

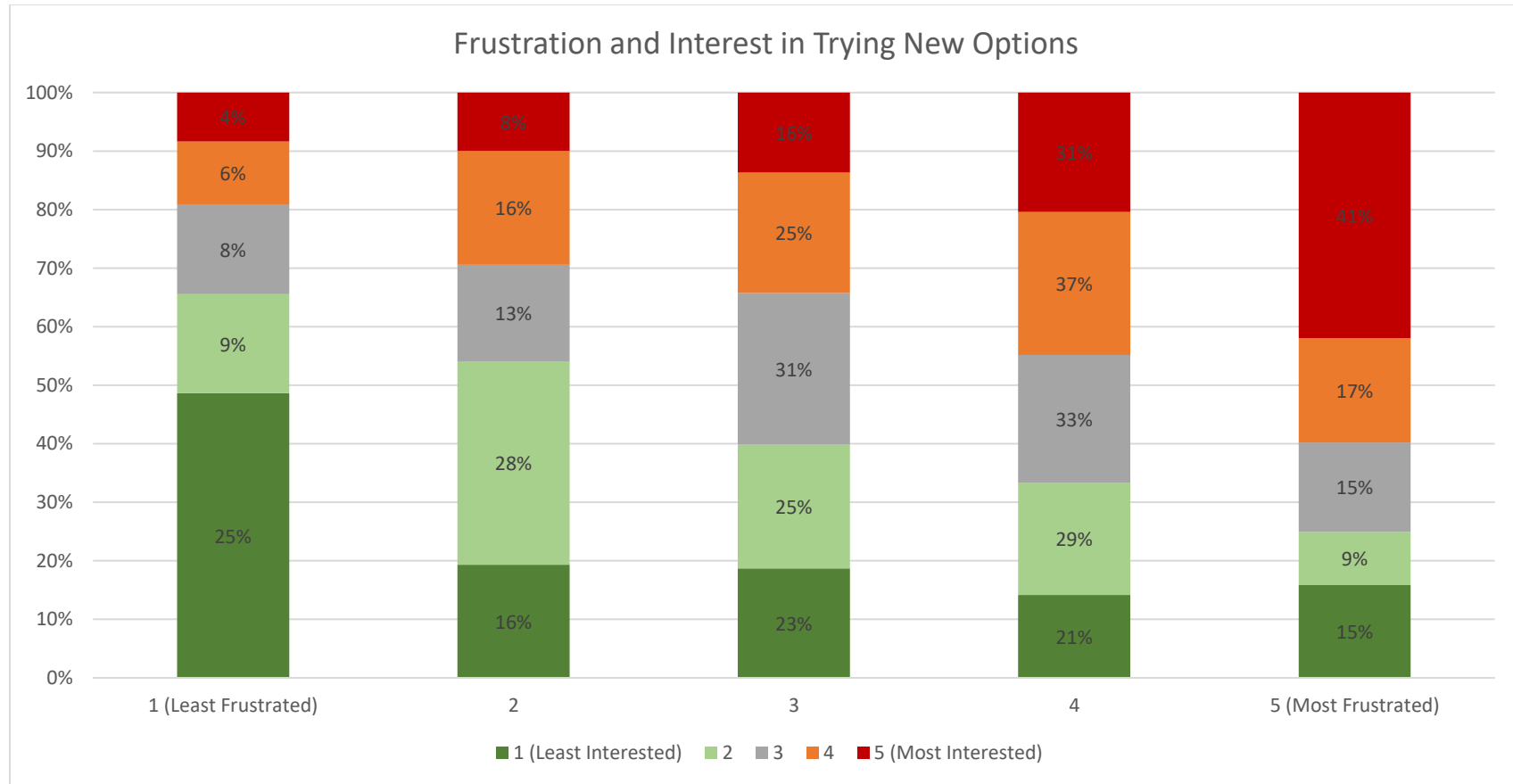
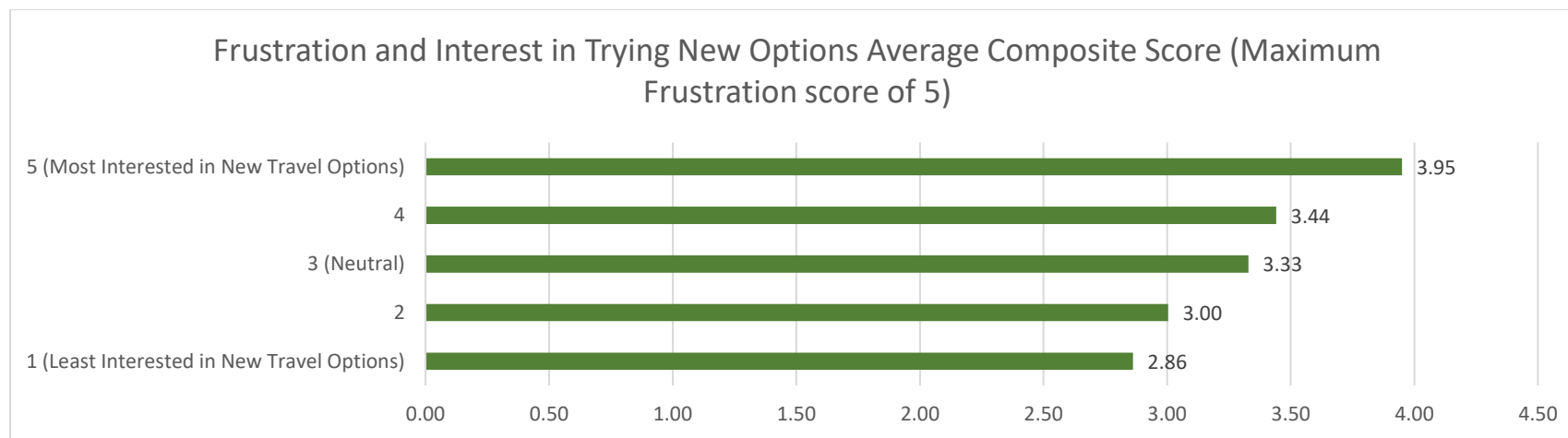


Figure 21: Frustration and interest in trying new options - average score



Knowledge of Existing Options

Survey participants were asked to report their existing knowledge of commute options available to them. As shown in Figure 22, 76% of State employees participating in the survey were aware of their ability to pay for transit passes and vanpool rides through their ASI Flex accounts, but almost a quarter of employees were unaware of the option. Figure 23 illustrates that a majority of survey respondents (73%) had heard of Valley Vanpool service, while 27% had not. Most respondents were not aware of Cherriots Trip Choice and Drive Less Connect. It is notable that some respondents may not know of Cherriots Trip Choice or have difficulty accessing the service because they live at the periphery or outside the tri-county service area. 39% of survey respondents had heard of Cherriots Trip Choice while only 31% had heard of Drive Less Connect. Approximately half of surveyed employees had heard of the Smart Commuter program while half had not.

Figure 22: Awareness of option to purchase transit/vanpool through ASI Flex accounts

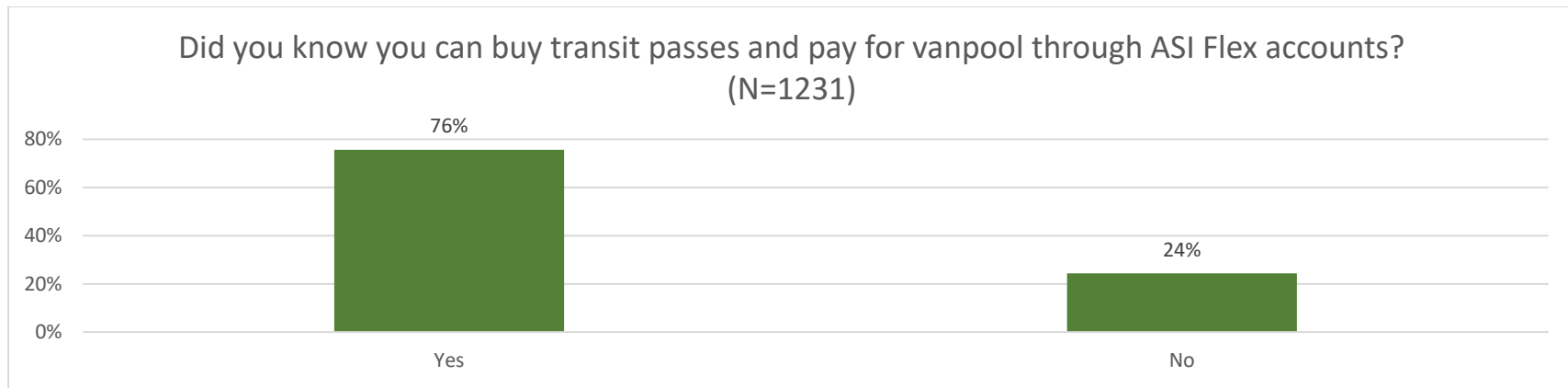
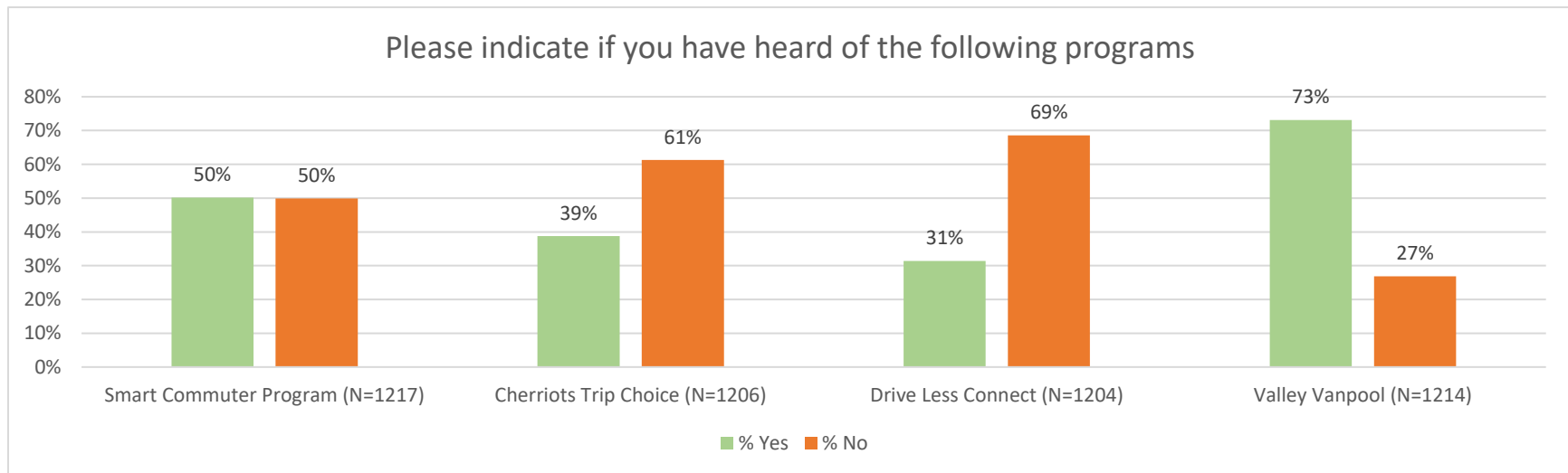


Figure 23: How respondents heard about transportation options programs



Conclusion

In conclusion, future programming could target demographics more likely to self-report frustration, as well as those who report being interested in trying new modes and commute programs. Future programs may also reach out to those who have access to good commute options (e.g. live in the Valley Vanpool service area). Based on the results of this analysis, these target groups could include:

- Employees traveling more than 40 miles round-trip to and from work
- Employees approaching Salem from the North and West, particularly along the I-5 corridor
- Employees who pay more than \$50 per month in parking expenses
- Transit riders
- Carpoolers
- Telecommuters
- Motorists who drive alone to work

An analysis of existing respondent knowledge revealed that education and marketing surrounding Valley Vanpool service and ASI Flex spending options for transportation has been more effective than marketing for Cherriots Trip Choice program, Drive Less Connect, and the Smart Commuter program. Next steps for the project team may include identifying marketing, branding, and commuter education differences between these programs to inform the development of communications strategies for future commuter programs. Telecommuting is an option that may work even for those with long commutes; it may be profitable to do more research into telecommute eligibility policies for State workers, and into whether all eligible employees are aware that it is an option.