

Park & Ride/Commute Survey
SUMMARY REPORT

PREPARED FOR
SANDAG



JULY 2018



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Disclaimer: Please note the percentages reflected throughout the report are of the survey respondents (San Diego intraregional commuters, Riverside intraregional commuters, and San Diego and Riverside interregional commuters). While the results presented here are a valid and reliable reflection of commuters in San Diego and Riverside counties, these data may not generalize to other commuters and as such, broader conclusions from these data should not be made.



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INTRODUCTION

The San Diego Association of Governments (SANDAG) and the Riverside County Transportation Commission (RCTC) are the transportation planning agencies for San Diego County and Riverside County, respectively. The agencies' primary function is to plan and invest in the transportation system so that it best meets the mobility needs of their region—now and in the future. By better integrating the regions' freeway, transit, and road networks, linking land-use and transportation planning, and strategically investing in infrastructure improvements where they are most needed, SANDAG and RCTC help to promote a sustainable, high quality of life.

MOTIVATION FOR STUDY To successfully fulfill their planning roles, both SANDAG and RCTC must have up-to-date information regarding the travel behaviors of residents and others who place demands on the transportation infrastructure and transit systems in their respective regions. Although the need for travel-related information applies to residents in general, it is especially true for *employees* who commute for their jobs, as this subgroup accounts for a large percentage of the trips and vehicle miles traveled (VMT) in both regions. By profiling employees' commute characteristics (frequency, mode, distance, destination, and timing) and estimating the prevalence of teleworking and use of alternative modes, the study described in this report will help SANDAG and RCTC better plan and manage the regions' transportation and transit systems.

In addition to the general goal of profiling employee commute behavior, this study was also designed to help inform the agencies' Transportation Demand Management (TDM) and Park & Ride programs.¹ Understanding employees' interest and willingness to use alternative modes, the conditions/factors that would make them more likely to use alternative modes in the future, and the amenities and improvements that they desire for Park & Ride lots is key to estimating the latent market/potential growth for alternative modes in general, and rideshare in particular. It will also help SANDAG and RCTC better manage existing Park & Ride lots and locate new lots where they will be most effective.

Finally, although the study gathered the aforementioned information for commuters in general, both SANDAG and RCTC were particularly interested in the subgroup of commuters that live and work in different counties. Known as *interregional commuters*, these employees typically endure longer commutes with respect to both distance and time, often travel congested corridors, and are thus thought to be prime candidates for alternative modes including transit and rideshare. For the purposes of this study, the interregional commuters of interest included San Diego residents who travel outside of the county for their employment, as well as Western Riverside County residents who commute to San Diego or other counties for their jobs.

OVERVIEW OF METHODOLOGY For a full discussion of the research methods and techniques used in this study, turn to *Methodology* on page 97. In brief, the survey was administered in two phases to a random sample of 4,337 employees who reside in San Diego County or Western Riverside County. During Phase 1, all qualified employees were eligible to participate in the survey regardless of their commute destination. Phase 2 involved screening to identify and oversample for interregional commuters. The survey followed a mixed-method design that employed multiple recruiting methods (telephone and email) and multiple data collection meth-

1. Park & Ride lots serve carpools, vanpools, and transit.

ods (telephone and online). Administered in English and Spanish between February 23 and May 3, 2018, the average interview lasted 18 minutes.

To accommodate SANDAG's and RCTC's interest in obtaining reliable parameter estimates for the regions as a whole, as well as within the various subregions identified in Figures 1 and 2, the study employed a strategic oversample by subregion to balance the statistical margins of error associated with estimates at the subregion level. Oversampling was also used to increase the number of interregional commuters in the sample, as the incidence rate for this type of commuter is generally quite low. To adjust for the oversampling, the raw data were weighted according to *American Community Survey* (ACS) estimates of the number of employed persons in each subregion (by age) prior to analyses and presentation. Interregional commuters were also weighted down to match their natural proportions by subregion based on the findings of the Phase 1 data collection effort. The results presented in this report are the weighted results, which are representative for the San Diego and Riverside regions combined, by county, as well as within each subregion.

FIGURE 1 SAN DIEGO SUBREGIONS MAP

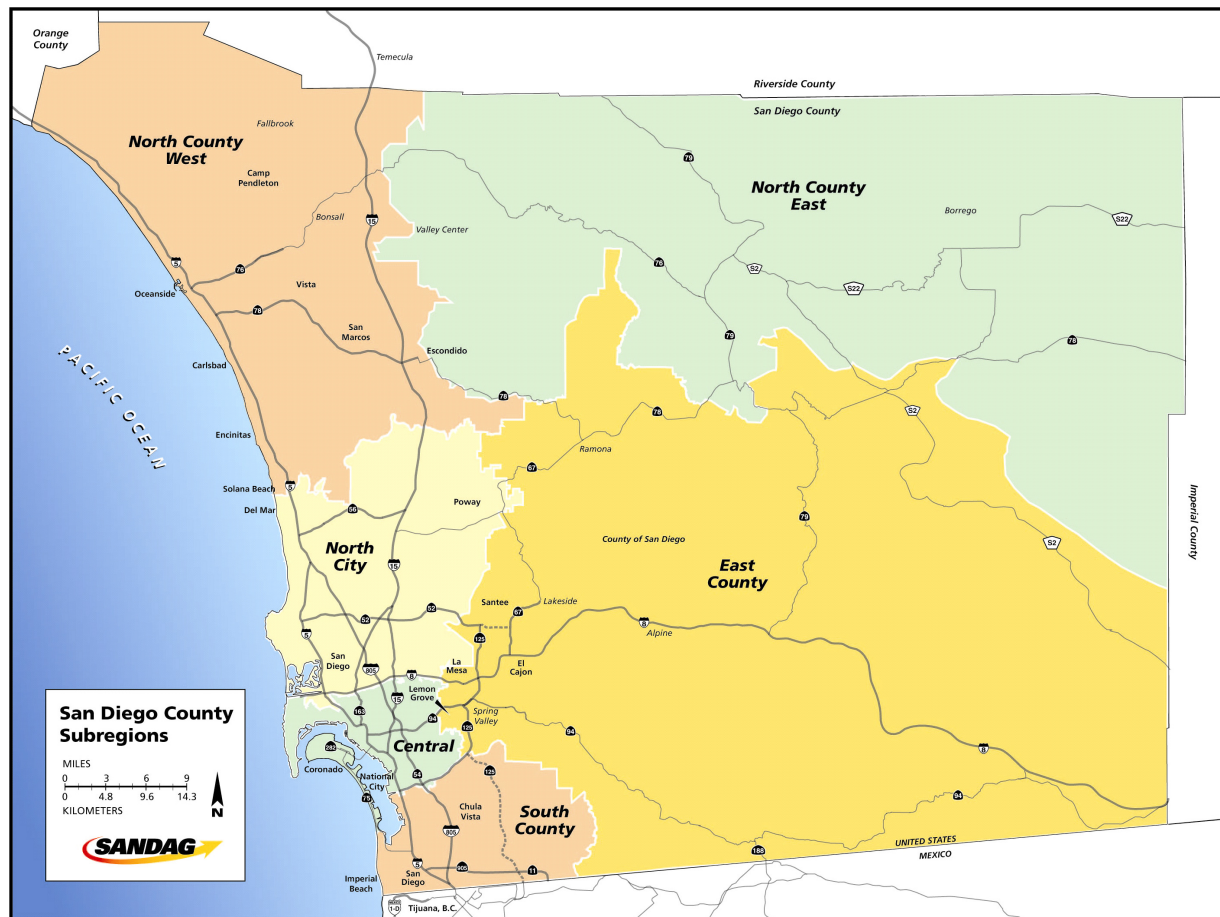
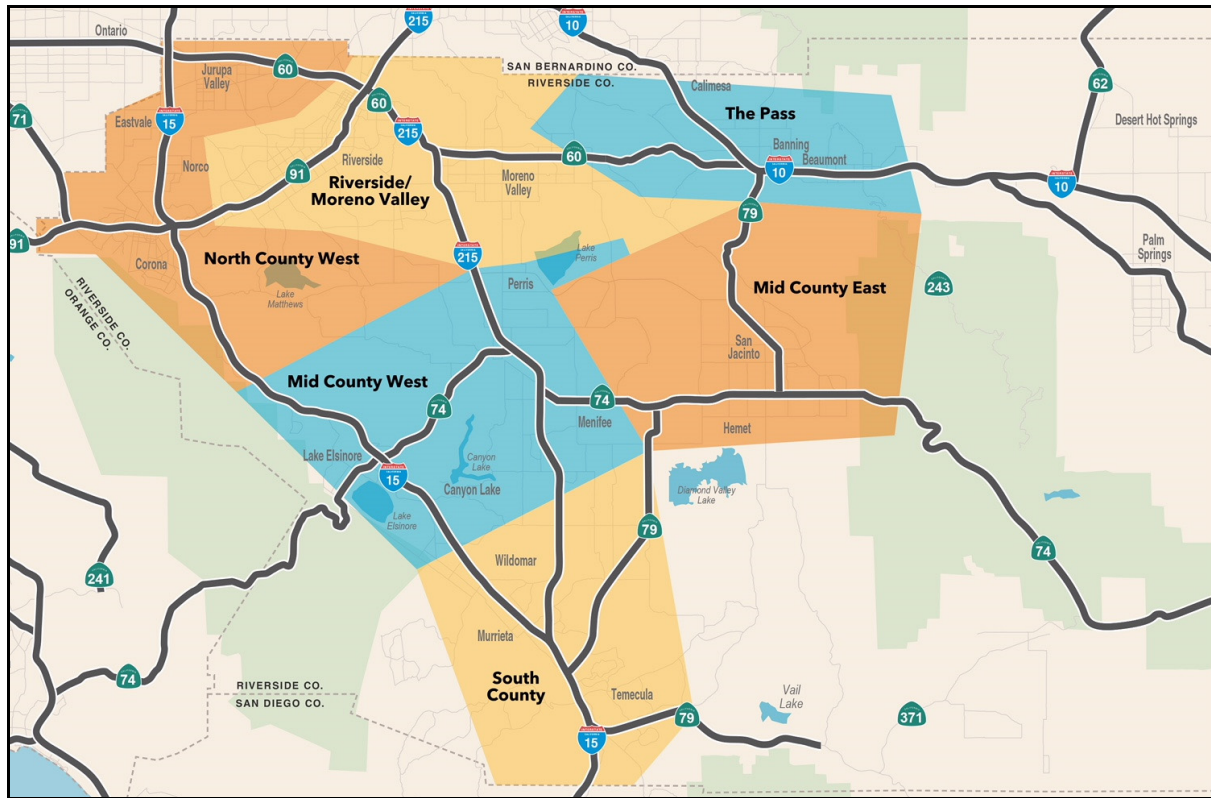


FIGURE 2 RIVERSIDE SUBREGIONS MAP



ORGANIZATION OF REPORT This report is designed to meet the needs of readers who prefer a summary of the findings as well as those who are interested in the details of the results. For those who seek an overview of the findings, the section titled *Key Findings* is for you. It provides a summary of the most important factual findings of the survey and a discussion of their implications. For the interested reader, this section is followed by a more detailed question-by-question discussion of the results from the survey by topic area (see *Table of Contents*), as well as a description of the methodology employed for collecting and analyzing the data. And, for the truly ambitious reader, the questionnaire used for the interviews is contained at the back of this report (see *Questionnaire* on page 104) and a complete set of crosstabulations for the survey results is contained in Appendix A.

ACKNOWLEDGMENTS True North thanks SANDAG and RCTC for the opportunity to assist the agencies in this important study. The collective expertise, local knowledge, and insight provided by SANDAG and RCTC staff improved the overall quality of the research presented here.

DISCLAIMER The statements and conclusions in this report are those of the authors (Dr. Timothy McLarney and Richard Sarles) at True North Research, Inc. and not necessarily those of SANDAG or RCTC. Any errors and omissions are the responsibility of the authors.

ABOUT TRUE NORTH True North is a full-service survey research firm that is dedicated to providing public agencies with a clear understanding of the values, opinions, priorities and behaviors of their residents and customers. Through designing and implementing scientific sur-

veys, as well as expert interpretation of the findings, True North helps its clients to move with confidence when making strategic decisions in a variety of areas—such as planning, policy evaluation, performance management, organizational development, establishing fiscal priorities, and developing effective public information campaigns. During their careers, Dr. McLarney (President) and Mr. Sarles (Principal Researcher) have designed and conducted over 1,000 survey research studies for public agencies, including more than 500 studies for councils of government, transportation planning agencies, municipalities, and special districts.

KEY FINDINGS

As noted in the *Introduction*, this study was designed to provide up-to-date and reliable information to SANDAG and RCTC regarding the commute behaviors of employees, their interest and willingness to use alternative modes for their commute, the conditions/factors that would make them more likely to use alternative modes in the future, and the amenities and improvements that they desire for Park & Ride lots to help inform the agencies' Transportation Demand Management (TDM) and Park & Ride programs. Whereas subsequent sections of this report are devoted to conveying the detailed results of the survey, in this section we attempt to "see the forest through the trees" by noting how the collective results of the survey answer some of the key questions that motivated the research.

What are the commute characteristics of employees in the study region? Across the study region (San Diego County and Western Riverside County), nearly nine-in-ten employees (88%) commute to a work destination outside of their home, with the average one-way commute to work being 19.77 miles and taking 33.57 minutes to complete. Among these commuters and as shown in Table 1, by far the most common *primary* mode² for their commute was driving alone in a car, truck, SUV or van (84%). Ridesharing via carpool (5%), vanpool (<1%), and on-demand rideshare services such as Uber, Lyft, or Waze Carpool (<1%) accounted for approximately 6% of commutes, while a similar percentage was represented by transit services including a local bus (2%), express bus (<1%), train (2%), and the San Diego Trolley (1%). Active transportation modes (biking, walking, jogging, running) were mentioned by just over 2% of employees as their primary method of commuting to work. All other modes were mentioned by less than 2% of respondents, collectively.

TABLE 1 PRIMARY COMMUTE MODE BY OVERALL, REGION & INTERREGIONAL COMMUTE STATUS³

	Overall	Region		Interregional Commute Status			
		San Diego County	Western Riverside County	Not Interregional Commuter	Out of San Diego County	Out of Riverside County Southbound	Out of Riverside County Other
Drive alone in a car, truck, SUV, or van	83.9	84.4	82.9	84.9	82.3	77.4	78.7
Motorcycle	0.9	1.0	0.5	0.9	0.2	1.4	0.3
Carpool (ride together 2 to 4 people)	5.1	4.6	6.1	4.6	0.6	11.0	7.9
Vanpool (ride together with 5 to 15 people)	0.7	0.5	1.1	0.3	3.5	5.9	1.4
On-demand rideshare service like Uber, Lyft, or Waze Carpool	0.6	0.7	0.4	0.7	0.2	0.9	-
Pooled rideshare service (Uber Pool, Lyft Line)	0.2	0.4	-	0.3	0.2	-	-
Zipcar	-	-	-	-	-	-	-
Taxi	0.0	0.0	-	0.0	0.6	-	-
Employer-provided shuttle/bus	0.2	0.2	0.2	0.3	0.2	-	-
Local bus	2.4	2.2	2.8	2.7	-	-	1.4
Express bus/premium bus/ Rapid/CommuterLink	0.6	0.6	0.5	0.5	-	1.6	0.9
Train: Metrolink/Metro Rail/ COASTER/Amtrak/	1.8	1.2	3.3	0.9	5.0	-	9.1
San Diego Trolley	1.2	1.8	0.0	1.4	-	0.5	-
SPRINTER	-	-	-	-	-	-	-
Other public transit	0.0	-	0.0	-	-	0.5	-
Bike	1.4	1.6	1.0	1.7	-	0.1	-
Walk/jog/run	0.8	0.6	1.2	0.9	-	-	0.2
Other	0.2	0.3	0.1	0.1	5.9	0.7	0.1
Prefer not to answer	0.1	0.1	-	0.1	1.4	-	-

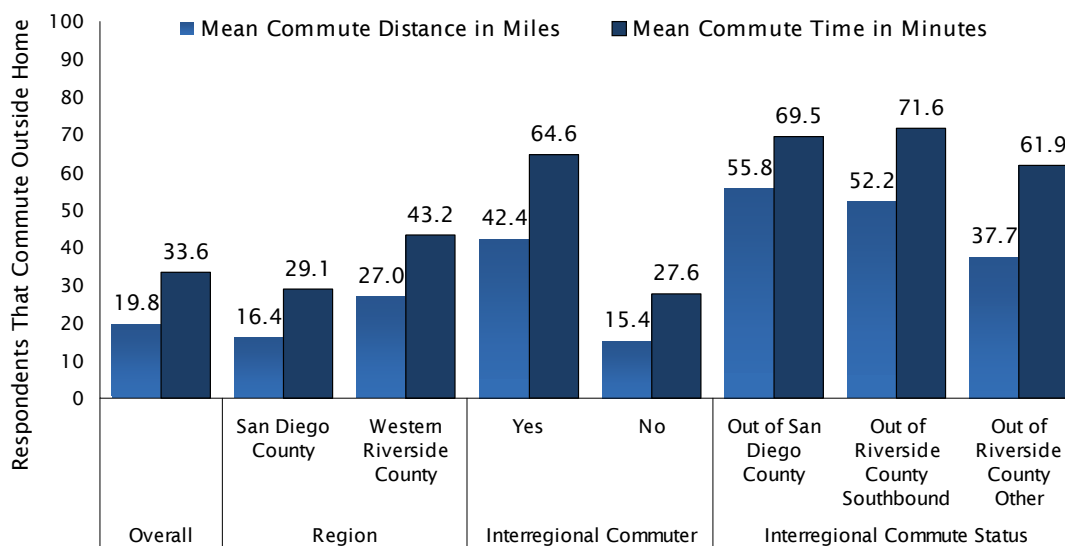
2. These percentages reflect the mode respondents indicated they use most often when commuting to work. For respondents who used multiple modes, they were asked to report on the mode they use for the longest portion of their commute.
3. *Other* responses primarily consisted of flying via airplane or helicopter. Additional responses included being an Uber or Lyft driver or citing multiple commute modes instead of the one used most often.

With respect to work *destination*, nearly all employees who reside in San Diego County (97%) reported that they also work in San Diego County. Less than 1% of employees commute to a work destination in Los Angeles County, Orange County, Riverside County, or other location, respectively.

The patterns are much different among employees who reside in Western Riverside County. Being an area that is rich in affordable housing (comparatively speaking) but lacking the job markets found in neighboring counties, Riverside County exports a sizeable percentage of its workforce on a daily basis to work outside of the County. Overall, just six-in-ten employees (61%) who reside in Western Riverside County commute to a work destination within the County. The remainder commute to Orange County (12%), San Bernardino County (11%), San Diego County (8%), Los Angeles County (7%), or other destinations (2%) for their work.⁴

Do employees' commute characteristics vary substantially by destination? Commute distance, duration, and primary mode choice all varied by commute destination (intraregional or interregional), as well as by *type*⁵ of interregional commuter. With respect to distance and duration, interregional travelers reported an average one-way commute distance nearly three times as long as their intraregional counterparts (42.4 miles vs. 15.4 miles), and more than twice as long in terms of average duration (64.6 minutes vs. 27.6 minutes). Among interregional commuters, those traveling into/out of San Diego County reported the longest average trip lengths and durations (see Figure 3).

FIGURE 3 MEAN COMMUTE DISTANCE & TIME



4. It is also worth noting that the percentages reported in this section for interregional commuters include teleworkers, which means that—among those who commute outside of the home—the prevalence of interregional commuting is somewhat higher.

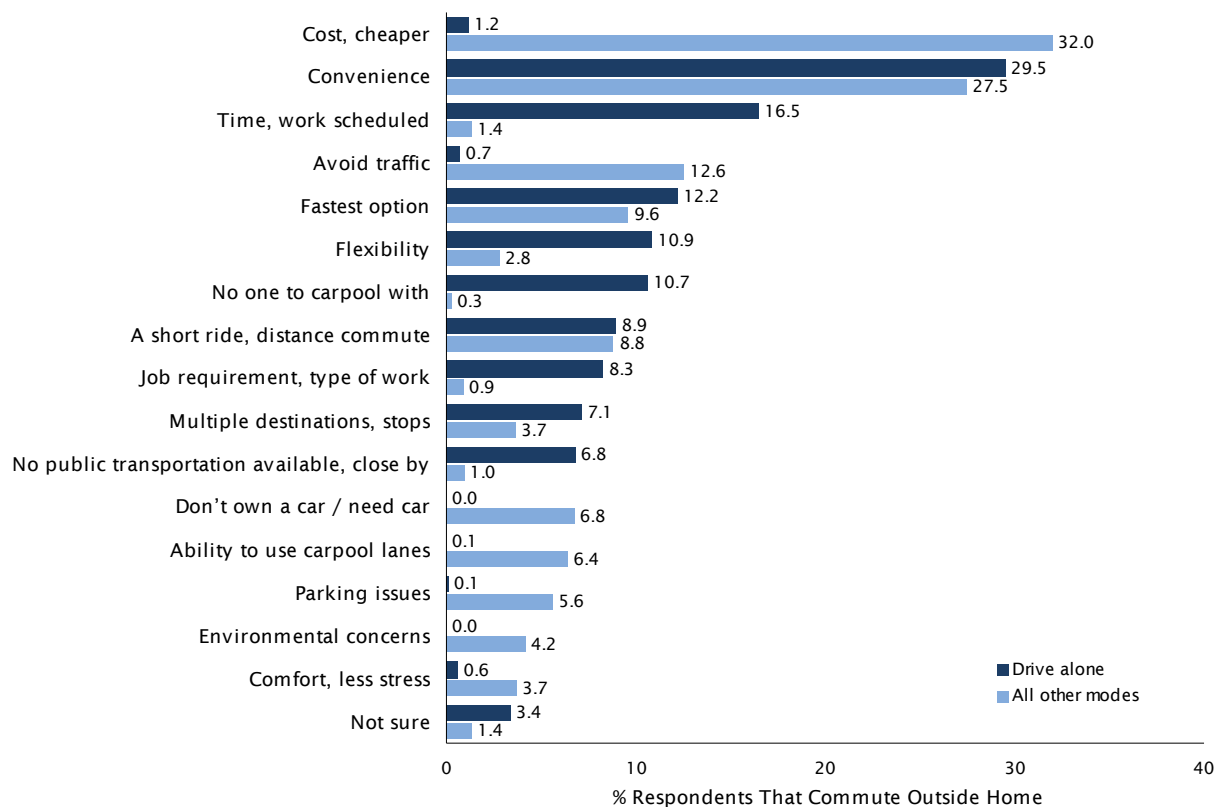
5. For this study, three types of interregional commuters were of interest: those who reside in San Diego County and commute out of the County for their employment, those who reside in Western Riverside County and commute southbound out of the County for their employment, and those who live in Western Riverside County and commute out of the County in a direction 'other' than southbound.

In addition to enduring longer commutes in terms of both time and distance, interregional commuters were also more likely than intraregional commuters to report using alternative modes as their primary method of traveling to/from work. As previously shown in Table 1, interregional commuters who reside in Western Riverside County and commute south into/through San Diego County were the most likely to report carpooling (11%), vanpooling (6%), and using an express bus (2%) for their commute. Their counterparts who commute out of Western Riverside County west or north were the most likely to report using a train (9%) for their commute, and also exhibited comparatively high rates of carpooling (8%). San Diego-based interregional commuters, on the other hand, reported moderately high rates for vanpooling (4%), using a train (5%), and ‘other’ modes not represented (6%) for their commute.

For more details on the commute characteristics of those who live and work in the study region, see *Commute Status* on page 21.

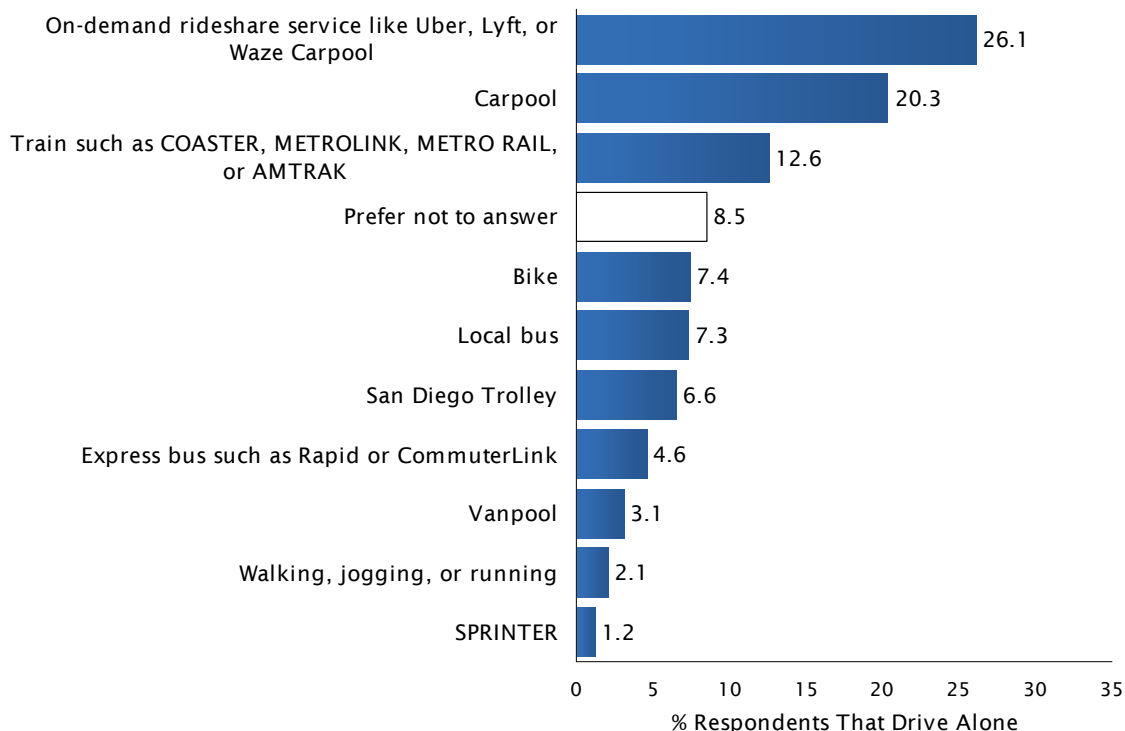
Why do commuters select a particular primary mode for their commute? Among those who drive alone to work in the study region, convenience was the most common reason mentioned for why they select their primary commute mode (30%), followed by timing/scheduling for their work (17%), it is the fastest option (12%), and it provides flexibility (11%). The reasons offered by those who use alternative modes were generally quite different, with 32% mentioning cost/being cheaper as the primary reason they use an alternative mode for their commute. Other top reasons mentioned for using an alternative mode for their commute included convenience (28%), avoiding traffic (13%), and that it is the fastest option (10%).

FIGURE 4 MOST IMPORTANT FACTORS IN CHOOSING PRIMARY COMMUTE MODE BY DRIVE ALONE VS. ALL OTHERS



Which alternative modes would work best for drive-alone commuters? When employees who currently drive alone to work were asked to choose an alternative mode that would work *best* for their commute, one-quarter (26%) preferred an on-demand rideshare service like Uber, Lyft or Waze Carpool, one-in-five (20%) preferred a traditional carpool, and 3% selected vanpool. Nearly one-third of respondents selected a form of public transit including a train (13%), local bus (7%), San Diego Trolley (7%), express bus such as Rapid or CommuterLink (5%), and SPRINTER (1%). Active transportation modes including a bike (7%) and walking, jogging or running (2%) were preferred by nearly one-in-ten solo drivers as their preferred alternative commute method.

FIGURE 5 PREFERRED ALTERNATIVE COMMUTE MODE AMONG THOSE WHO DRIVE ALONE⁶



Here again, however, we see important differences between intraregional and interregional commuters (see Table 2 on the next page). At a general level, interregional commuters were much more likely than intraregional commuters to prefer using a train, carpooling, and vanpooling for their commute. This general pattern, however, does not hold across all types of interregional commuters. Western Riverside County residents who commute into San Diego County for their work showed a distinct preference for carpooling and vanpooling, whereas residents of Western Riverside County who commute to other areas (typically Orange, San Bernardino, and Los Angeles counties) were most likely to prefer using a train. San Diego County residents who commute out of the County for their jobs, meanwhile, preferred using a train or on-demand rideshare services.

6. Pooled vs. non-pooled on-demand rideshare services were not differentiated at Question 10.

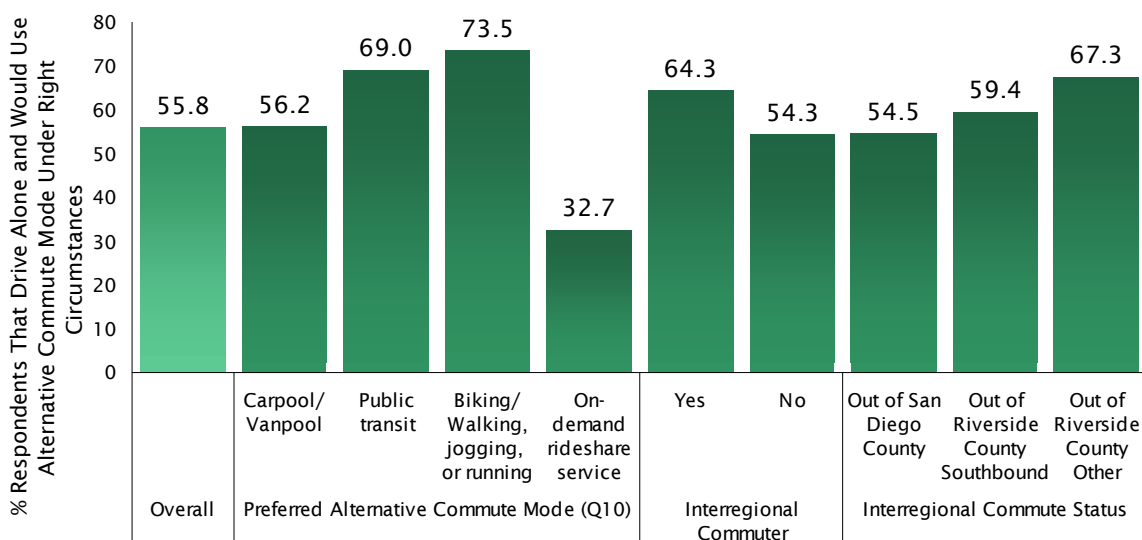
TABLE 2 PREFERRED ALTERNATIVE COMMUTE MODE AMONG THOSE WHO DRIVE ALONE BY REGION, INTERREGIONAL COMMUTER & INTERREGIONAL COMMUTE STATUS

	Region		Interregional Commuter		Interregional Commute Status		
	San Diego County	Western Riverside County	Yes	No	Out of San Diego County	Out of Riverside County Southbound	Out of Riverside County Other
On-demand rideshare service like Uber, Lyft, or Waze Carpool	28.8	20.3	14.7	28.2	24.3	10.4	14.0
Carpool	18.8	23.7	23.1	19.8	11.2	32.0	23.2
Train such as COASTER, METROLINK, METRO RAIL, or AMTRAK	8.2	22.2	37.1	8.2	33.9	19.1	42.2
Prefer not to answer	7.4	10.9	11.7	7.9	13.9	11.7	11.3
Bike	8.7	4.7	0.9	8.6	0.7	0.4	1.0
Local bus	7.3	7.4	0.6	8.6	1.7	0.2	0.4
San Diego Trolley	9.4	0.4	0.8	7.6	2.6	1.7	0.2
Express bus such as Rapid or CommuterLink	4.8	4.1	3.5	4.8	5.5	4.7	2.8
Vanpool	2.7	4.0	6.0	2.6	1.3	17.1	4.2
Walking, jogging, or running	2.2	1.9	0.9	2.3	5.0	0.3	0.3
SPRINTER	1.6	0.4	0.7	1.3	-	2.4	0.4

What percentage of drive-alone commuters are willing to consider an alternative mode?

Employees who currently drive alone to work were asked to choose which statement best matches their overall attitude about using their preferred alternative mode at least once per week to commute to work: *I would only do it if I had no other options*, or *I would do it under the right circumstances*. Because the second statement allows the respondent to define what they consider the *right circumstances*, this question is a useful litmus test for identifying employees who are not in the potential market for their preferred alternative mode because they are unwilling to use it at least once per week for their work commute even under the right circumstances.

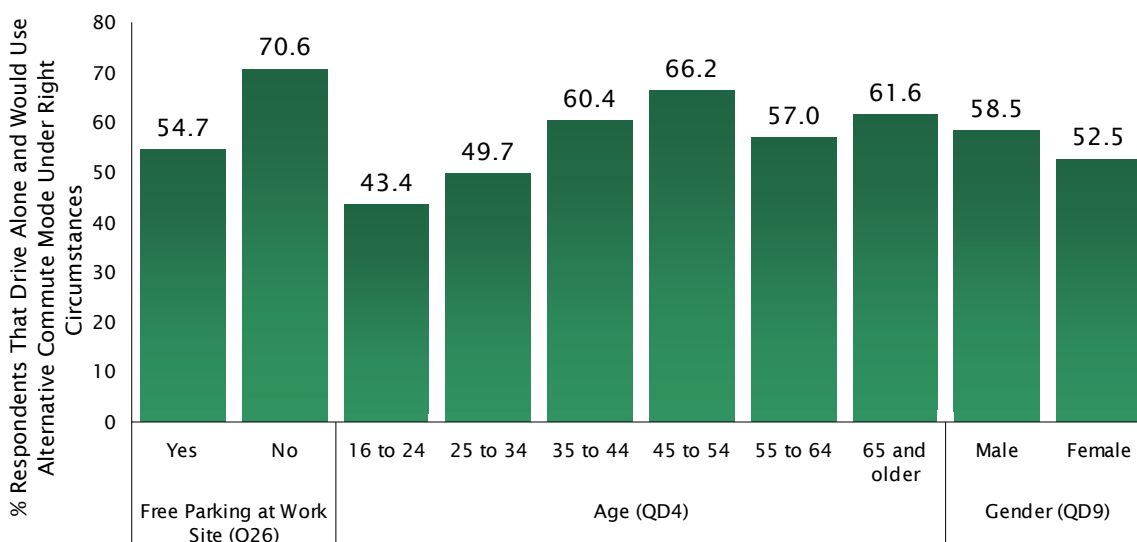
FIGURE 6 WOULD USE ALTERNATIVE MODE AT LEAST ONCE PER WEEK UNDER RIGHT CIRCUMSTANCES BY OVERALL, PREFERRED ALTERNATIVE COMMUTE MODE, INTERREGIONAL COMMUTER & INTERREGIONAL COMMUTE STATUS AMONG THOSE THAT DRIVE ALONE



Overall, 56% of employees who reside in the study region and currently drive alone to work indicated that they would commute to work at least once per week using their preferred alternative mode under the right circumstances, whereas 44% were unwilling to do so unless they had no other options. In general, a willingness to use an alternative mode for their work commute at least once per week was highest for those who preferred active transportation and public transit, interregional commuters, those who reside in Western Riverside County and commute out of the

County for their work in a direction other than southbound, those who work at a location that does not have free parking available, employees over the age of 34, and males (see Figures 6 & 7).

FIGURE 7 WOULD USE ALTERNATIVE MODE AT LEAST ONCE PER WEEK UNDER RIGHT CIRCUMSTANCES BY FREE PARKING AT WORK SITE, AGE & GENDER



What factors would make drive alone commuters more likely to use alternative modes? In terms of what would incentivize drive-alone commuters to make the switch to an alternative mode for their work commute at least one day per week, the answers varied depending on their preferred mode.

Among those who indicated **carpooling** or **vanpooling** was their preferred alternative mode, the most impactful factors were: finding people to travel with that have the same schedule/having people they know to carpool with, a guaranteed ride home in case of emergencies or unscheduled overtime, a \$50 per month incentive for not driving to and parking at your work site, and being able to get to work in about the same amount of time as driving alone were viewed as the conditions most likely to increase their use of carpooling/vanpooling for their work commute (see Figure 8).

When compared to commuters in general, those who were identified as having the highest potential for conversion to carpooling or vanpooling for their work commute at least once per week (Top Targets) were at least 5% *more* likely to reside in Western Riverside County, have three or more vehicles in their household, have five or more individuals in their household, be female, and work for a government agency (see Table 3).⁷

7. Only those variables for which there was a difference of 5% or more in the subgroup results when comparing all commuters with Top Targets are presented in Tables 3-7. Industry and occupation are not shown due to small samples sizes within each industry or occupation group.

FIGURE 8 FACTORS INFLUENCING USE OF CARPOOL/VANPOOL TO WORK AT LEAST ONCE PER WEEK AMONG THOSE THAT DRIVE ALONE

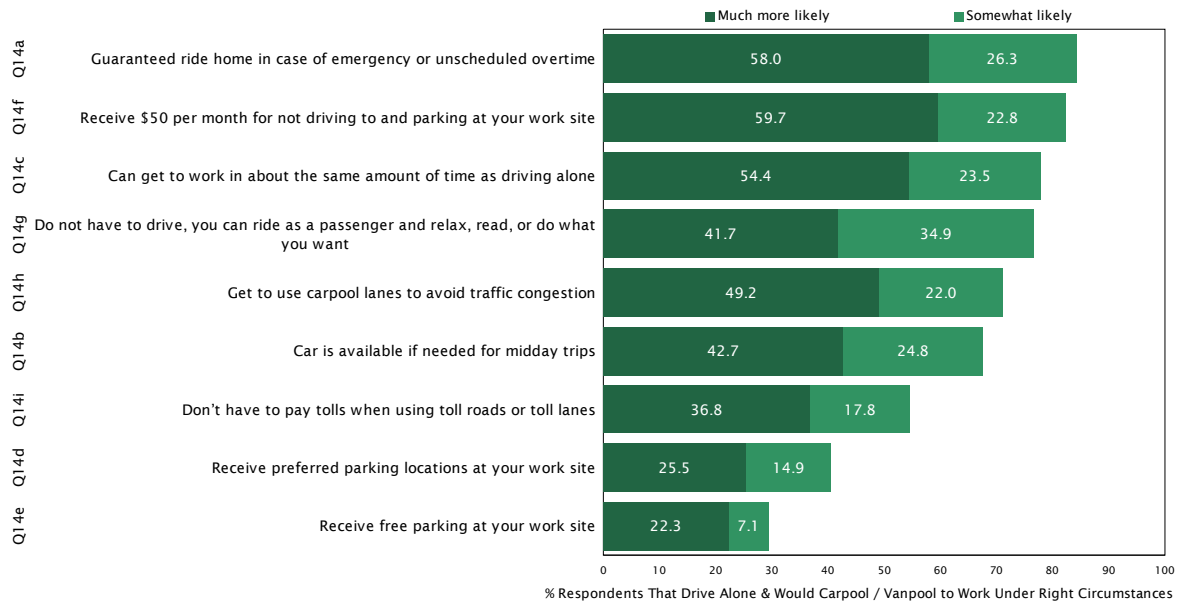


TABLE 3 DEMOGRAPHIC COMPARISON OF COMMUTERS AND CARPOOL / VANPOOL ALTERNATIVE MODE TARGETS

	All Commuters	Carpool/ Vanpool Top Targets
Region		
San Diego County	67.9	59.9
Western Riverside County	32.1	40.1
Working Vehicles in Hsld (QD1)		
One	16.7	11.2
Two	38.9	39.7
Three or more	41.0	47.4
Number of People in Hsld (QD2)		
One	11.7	6.9
Two	30.0	24.4
Three	19.1	22.3
Four	19.4	20.4
Five or more	16.8	23.2
Number of People 16+ in Hsld (QD3)		
One	14.2	9.1
Two	47.0	45.6
Three	18.3	23.3
Four	10.5	7.4
Five or more	6.5	11.8
Gender (QD9)		
Male	50.6	42.4
Female	46.9	56.1
Business Type (QD8)		
Private sector	53.5	42.7
Gov agency	22.1	32.8
Not-for-profit org	14.0	13.1

Drive-alone commuters who preferred **public transit** as their alternative mode rated having stations/stops closer to their work and/or home, more frequent transit service, being able to get to work in about the same amount of time as driving alone, and having a convenient way to get from a transit station to their work and home as being the changes most likely to increase their use of public transit for their work commute (see Figure 9).

FIGURE 9 FACTORS INFLUENCING USE OF PUBLIC TRANSIT TO WORK AT LEAST ONCE PER WEEK AMONG THOSE THAT DRIVE ALONE

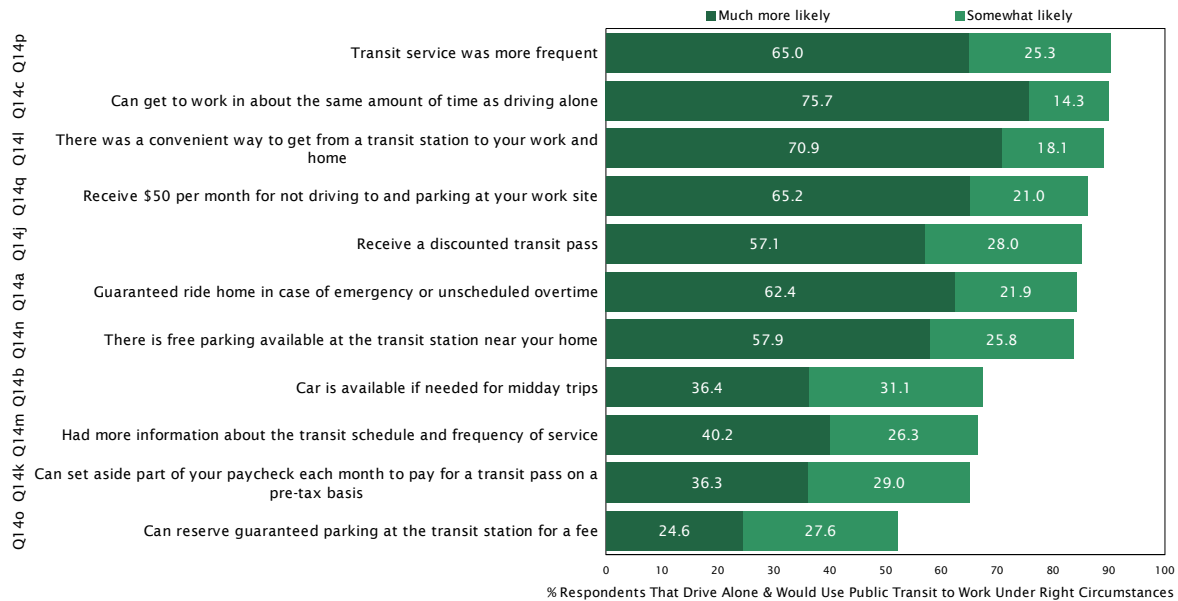


TABLE 4 DEMOGRAPHIC COMPARISON OF COMMUTERS AND PUBLIC TRANSIT ALTERNATIVE MODE TARGETS

	All Commuters	Public Transit Top Targets
Region		
San Diego County	67.9	59.4
Western Riverside County	32.1	40.6
Interregional Commuter		
Yes	16.3	27.4
No	83.7	72.6
Interregional Commute Status		
Out of San Diego County	2.1	2.9
Out of Riverside County Southbound	2.9	4.0
Out of Riverside County Other	11.3	20.6
Commute Duration in Minutes (Q7)		
Less than 10	6.4	1.5
10 to 19	23.8	15.9
20 to 29	21.1	18.5
30 to 44	20.2	22.7
45 to 60	17.7	24.7
More than 60	10.2	16.4
Working Vehicles in Hsld (QD1)		
One	16.7	16.9
Two	38.9	45.8
Three or more	41.0	36.3
Age (QD4)		
16 to 24	14.7	7.4
25 to 34	25.4	26.1
35 to 44	21.0	22.6
45 to 54	19.7	25.6
55 to 64	13.2	12.7
65 and older	3.1	3.2
Business Type (QD8)		
Private sector	53.5	55.3
Gov agency	22.1	20.1
Not-for-profit org	14.0	19.4

When compared to commuters in general, those who were identified as having the highest potential for conversion to public transit for their work commute at least once per week (Top Targets) were at least 5% *more* likely to reside in Western Riverside County, be an interregional commuter, commute out of Riverside County for the work in a direction other than southbound, have commute durations in excess of 44 minutes, have two working vehicles in the home, be between 45 and 54 years of age, and work for a not-for-profit organization (see Table 4).

Solo drivers who indicated that their preferred alternative mode for their work commute was an **on-demand rideshare** service like Uber, Lyft, or Waze Carpool were cost sensitive, citing cheaper prices/discounts for service and a \$50 per month incentive for not driving to and parking at their work site as being the changes most likely to increase their use of an on-demand

rideshare service for their work commute, followed by a guaranteed ride home in case of emergencies or unscheduled overtime, and being able to get to work in about the same amount of time as driving alone (see Figure 10).

FIGURE 10 FACTORS INFLUENCING USE OF ON-DEMAND RIDESHARE SERVICE TO WORK AT LEAST ONCE PER WEEK AMONG THOSE THAT DRIVE ALONE

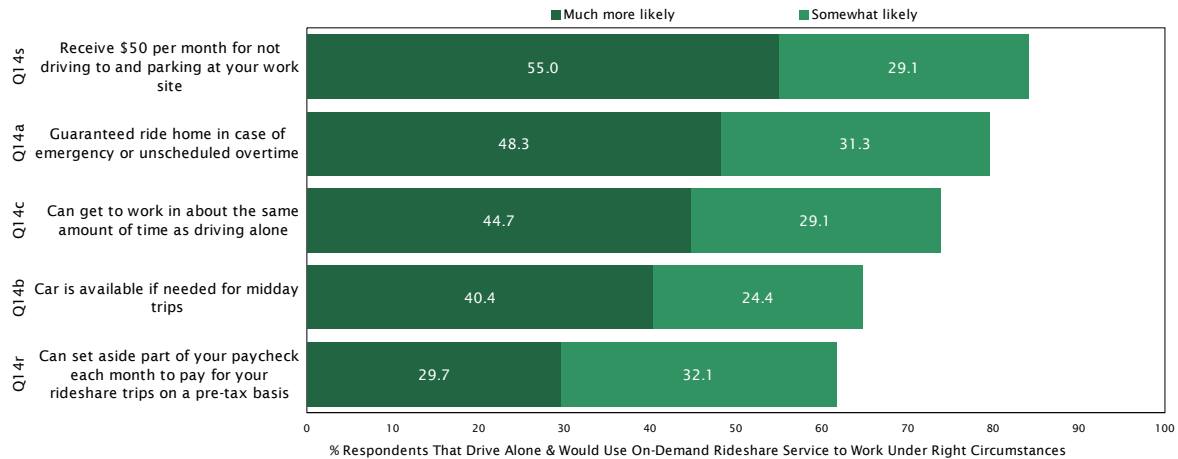


TABLE 5 DEMOGRAPHIC COMPARISON OF COMMUTERS AND RIDESHARE ALTERNATIVE MODE TARGETS

	All Commuters	Rideshare Top Targets
Region		
San Diego County	67.9	78.8
Western Riverside County	32.1	21.2
Interregional Commuter		
Yes	16.3	10.1
No	83.7	89.9
Commute Duration in Minutes (Q7)		
Less than 10	6.4	4.1
10 to 19	23.8	22.4
20 to 29	21.1	28.6
30 to 44	20.2	24.3
45 to 60	17.7	10.3
More than 60	10.2	9.4
Working Vehicles in Hsld (QD1)		
One	16.7	18.0
Two	38.9	45.2
Three or more	41.0	36.3
Number of People 16+ in Hsld (QD3)		
One	14.2	12.8
Two	47.0	58.2
Three	18.3	18.6
Four	10.5	4.2
Five or more	6.5	2.5
Age (QD4)		
16 to 24	14.7	0.8
25 to 34	25.4	28.1
35 to 44	21.0	34.5
45 to 54	19.7	15.2
55 to 64	13.2	13.9
65 and older	3.1	3.3

When compared to commuters in general, those who were identified as having the highest potential for conversion to an on-demand rideshare service for their work commute at least once per week (Top Targets) were at least 5% *more* likely to reside in San Diego County, not be an interregional commuter, have a commute duration of 20 to 29 minutes, have two working vehicles and two individuals of driving age in the household, and be between 35 and 44 years of age (see Table 5).

With respect to *active transportation*, those who considered **biking** to work as their preferred alternative mode were most apt to cite a \$50 per month incentive for not driving to and parking at their work site, better/safer roads and dedicated bike lines for most of their route to work, and a guaranteed ride home in case of emergencies or unscheduled overtime to be the conditions most likely to get them to use that alternative mode for their work commute (see Figure 11). Those who preferred to **walk, jog, or run** to work as their alternative commute mode found a \$50 per month incentive for not driving to and parking at their work site to be the condition most likely to get them to use that alternative mode for their work commute, followed by a guaranteed ride home in case of emergencies or unscheduled overtime, and being able to get to work in about the same amount of time as driving alone (see Figure 12).

FIGURE 11 FACTORS INFLUENCING BIKING TO WORK AT LEAST ONCE PER WEEK AMONG THOSE THAT DRIVE ALONE

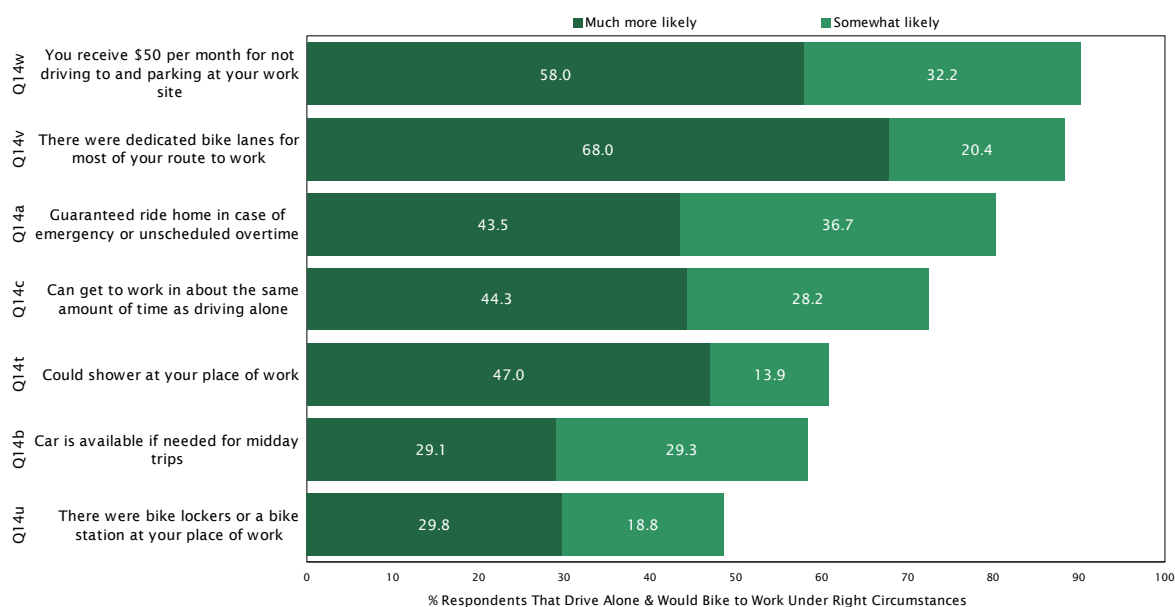


FIGURE 12 FACTORS INFLUENCING WALKING, JOGGING, OR RUNNING TO WORK AT LEAST ONCE PER WEEK AMONG THOSE THAT DRIVE ALONE

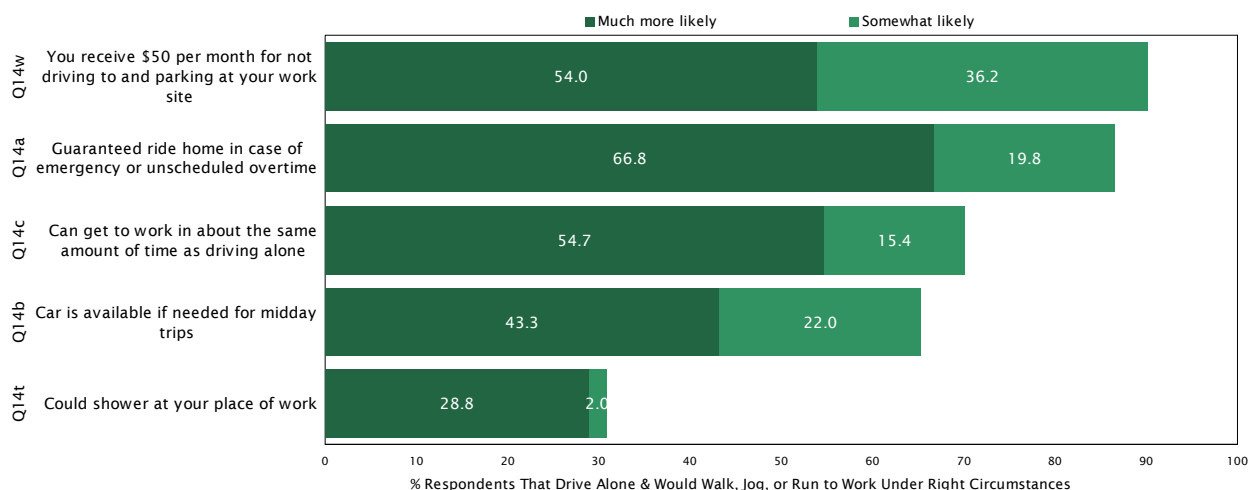


TABLE 6 DEMOGRAPHIC COMPARISON OF COMMUTERS AND ACTIVE TRANSPORTATION ALTERNATIVE MODE TARGETS

	All Commuters	Active Top Targets
Region		
San Diego County	67.9	80.9
Western Riverside County	32.1	19.1
Interregional Commuter		
Yes	16.3	2.0
No	83.7	98.0
Commute Distance in Miles (Q6)		
Less than 5	16.9	64.4
5 or more	82.5	35.6
Commute Duration in Minutes (Q7)		
Less than 10	6.4	38.5
10 to 19	23.8	42.3
20 to 29	21.1	9.3
30 to 44	20.2	7.3
45 to 60	17.7	2.5
More than 60	10.2	0.1
Working Vehicles in Hsld (QD1)		
One	16.7	14.1
Two	38.9	32.6
Three or more	41.0	53.3
Number of People in Hsld (QD2)		
One	11.7	13.8
Two	30.0	26.5
Three	19.1	14.8
Four	19.4	17.2
Five or more	16.8	23.4
Age (QD4)		
16 to 24	14.7	25.8
25 to 34	25.4	19.4
35 to 44	21.0	23.6
45 to 54	19.7	20.8
55 to 64	13.2	8.3
65 and older	3.1	0.9
Gender (QD9)		
Male	50.6	63.7
Female	46.9	35.2
Employees at Primary Workplace (QD7)		
1 to 4	7.5	6.4
5 to 9	7.5	8.6
10 to 19	11.3	23.7
20 to 49	14.8	21.5
50 to 99	12.2	10.5
100 or more	40.5	27.4
Business Type (QD8)		
Private sector	53.5	61.6
Gov agency	22.1	19.8
Not-for-profit org	14.0	11.4

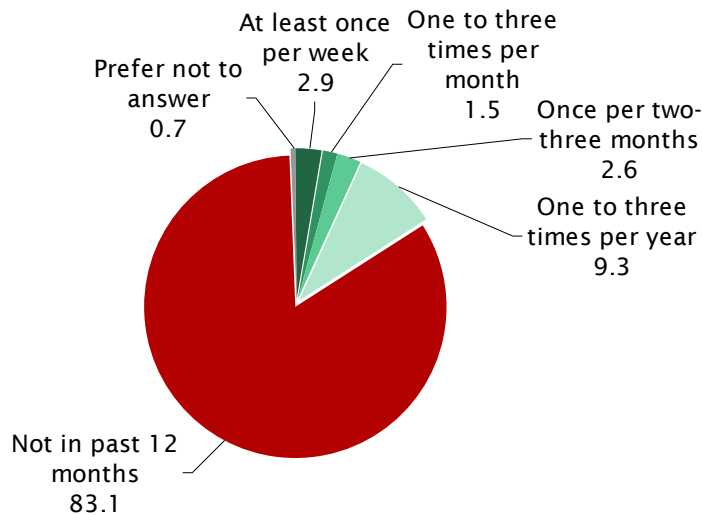
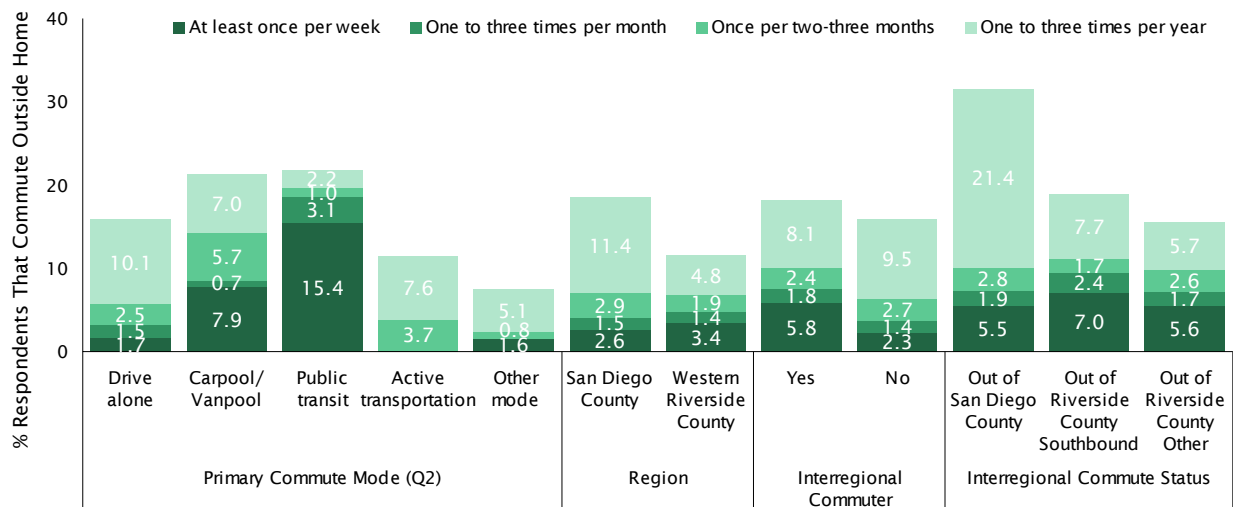
When compared to commuters in general, those who were identified as having the highest potential for conversion to active transportation⁸ for their work commute at least once per week (Top Targets) were at least 5% *more* likely to reside in San Diego County, not be an interregional commuter, have commute distances of less than 5 miles and durations of less than 20 minutes, have at least three working vehicles in their household, have at least five members of their household, be under the age of 25, male, work at mid-sized companies (20 to 99 employees), and work in the private sector.

For more on the size and demographic make-up of the potential markets for alternative modes among commuters who currently drive solo, see *Market Target Summary* on page 60 and *Demographic Comparison of Commuters and Market Targets* on page 63.

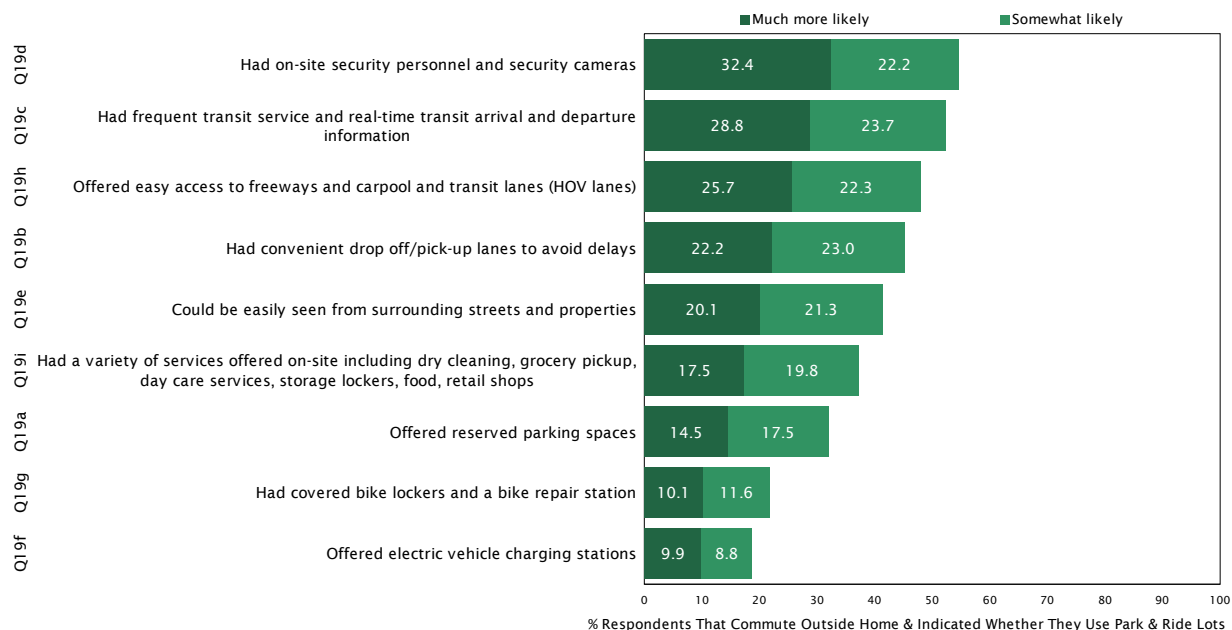
How frequently are commuters using Park & Ride lots? Although 16% of commuters in the study area primarily use an alternative mode for their work commute, it appears that comparatively few are making regular use of Park & Ride lots for their commute.

Among all commuters, approximately 3% indicated they used a local Park & Ride lot weekly during the preceding 12 month period, 2% one to three times per month, 3% once every two to three months, and 9% estimated they used a local Park & Ride lot one to three times during the preceding year. The remainder (83%) offered that they did not use a local Park & Ride lot during the period of interest (see Figure 13). Even among those subgroups that expressed the highest frequency of using Park & Ride lots (those who use carpool and public transit, and interregional commuters), fewer than one-in-five reported that they use a local Park & Ride lot on a weekly basis (see Figure 14).

8. Due to the comparatively small percentage of commuters who preferred a form of active transportation for their work commute, all forms of active transportation were combined when identifying market targets.

FIGURE 13 USE OF LOCAL PARK & RIDE LOT IN PAST YEAR AMONG THOSE WHO COMMUTE OUTSIDE HOME**FIGURE 14 USE OF LOCAL PARK & RIDE LOT IN PAST YEAR AMONG THOSE WHO COMMUTE OUTSIDE HOME BY PRIMARY COMMUTE MODE, REGION, INTERREGIONAL COMMUTER & INTERREGIONAL COMMUTE STATUS**

What conditions would increase commuters' use of Park & Ride lots? Although the most common reasons cited for not using a Park & Ride lot were no need (30%) and no particular reason (26%), the study found that offering amenities and improvements at Park & Ride lots was attractive to some commuters. Having on-site security personnel and security cameras, frequent transit service and real-time transit arrival and departure information, and easy access to free-ways and carpool/transit lanes were the features that respondents indicated were most likely to positively influence their use of Park & Ride lots for their work commute (see Figure 15). At least one-third of respondents also indicated that having convenient drop-off/pick-up lanes to avoid delays, that the lot can be easily seen from surrounding streets and properties, and offering a variety of on-site services including dry cleaning, grocery pick-up, day care services, storage lockers, and food and retail shops would make them at least somewhat more likely to use a Park & Ride lot in the future for their commute.

FIGURE 15 INFLUENCE OF FACTORS IN LIKELIHOOD OF USING LOCAL PARK & RIDE LOT FOR WORK COMMUTE

At the other end of the spectrum, fewer respondents found the presence of electric vehicle charging stations, covered bike lockers and a repair station, and the ability to reserve parking as amenities that would make them more likely to use a Park & Ride lot for their work commute.

Are there any distinguishing characteristics of those most likely to use Park & Ride lots for their commute? Based on how drive-alone commuters responded to potential amenities and improvements that could be incorporated into Park & Ride lots, as well as their own suggested improvements, the most promising candidates for using Park & Ride lots were most often found among interregional commuters, those who reside in Western Riverside County and commute to a destination outside of the County in a direction other than southbound, commuters who have one-way commutes exceeding 60 minutes, those living in larger households (4+ people) with three or more vehicles, younger employees (under the age of 35), and individuals who work for a private or not-for-profit organization (see Table 7).

For more on the size and demographic make-up of the potential market for Park & Ride lots, see *Market Target Summary* on page 74 and *Demographic Comparison of Commuters and Market Targets* on page 75.

TABLE 7 DEMOGRAPHIC COMPARISON OF COMMUTERS AND PARK & RIDE TOP TARGETS

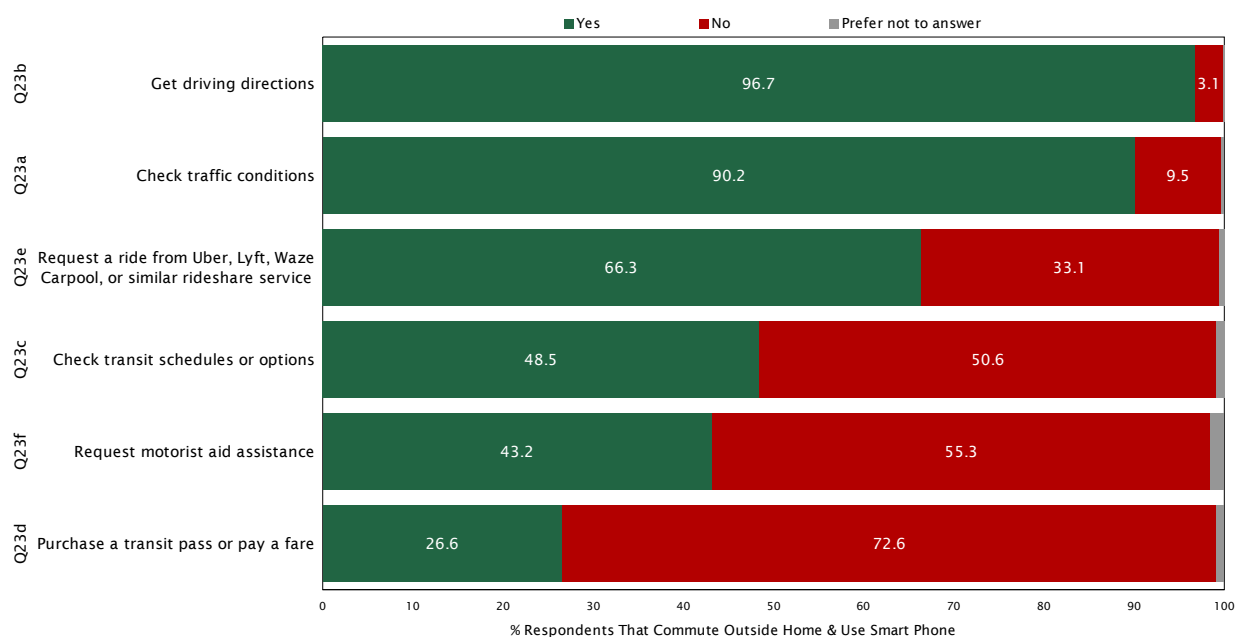
	All Commuters	Top Targets
Interregional Commuter		
Yes	16.3	21.9
No	83.7	78.1
Interregional Commute Status		
Out of San Diego County	2.1	2.5
Out of Riverside County Southbound	2.9	2.0
Out of Riverside County Other	11.3	17.4
Commute Duration in Minutes (Q7)		
Less than 10	6.4	5.9
10 to 19	23.8	26.6
20 to 29	21.1	17.1
30 to 44	20.2	19.1
45 to 60	17.7	15.5
More than 60	10.2	15.9
Working Vehicles in Hsld (QD1)		
None	1.5	1.2
One	16.7	16.2
Two	38.9	30.5
Three or more	41.0	51.5
Number of People in Hsld (QD2)		
One	11.7	6.3
Two	30.0	21.9
Three	19.1	19.3
Four	19.4	29.3
Five or more	16.8	20.5
Number of People 16+ in Hsld (QD3)		
One	14.2	11.0
Two	47.0	33.4
Three	18.3	21.3
Four	10.5	19.7
Five or more	6.5	12.0
Age (QD4)		
16 to 24	14.7	21.1
25 to 34	25.4	29.9
35 to 44	21.0	20.3
45 to 54	19.7	18.0
55 to 64	13.2	7.8
65 and older	3.1	1.4
Business Type (QD8)		
Private sector	53.5	58.7
Gov agency	22.1	18.3
Not-for-profit org	14.0	21.6

How are commuters using their smart phones for travel-related purposes? The advent of the smart phone and mobility apps has had a substantial impact on travel choices and travel behaviors in recent years. Although Uber and Lyft are perhaps the most prominent examples of how a smart phone app can transform how people travel, there are dozens of widely-used mobility apps, vehicle connectivity apps, smart parking apps, and courier network services apps that have fundamentally changed the way people plan for trips, get real-time transportation information, and connect with on-demand vehicle services. Moreover, as impactful as these apps have been to date, the potential for change is arguably even greater over the next decade with contin-

ued advances in technology, real-time data sharing, multimodal aggregators, and public-private partnerships.⁹

The smart phone is nearly ubiquitous among commuters in the study region, with 98% reporting that they currently utilize a smart phone.¹⁰ At least nine-in-ten commuters indicated that they use their smart phone to get driving directions (97%) and check traffic conditions (90%), and nearly two-thirds (66%) reported that they occasionally use their phone to request a ride from Uber, Lyft, Waze Carpool, or a similar rideshare service (see Figure 16). Although less common, many commuters also reported using their smart phone to check transit schedules or options (49%), request motorist aid assistance (43%), and purchase a transit pass or pay a fare (27%).

FIGURE 16 SPECIFIC USES FOR SMART PHONE



Given that many commuters are already using their smart phone to enhance their travel experience, it is not surprising that the vast majority also expressed interest in a user-friendly smart phone app that would allow them to plan a trip, book the trip, and pay for the trip on *any* transportation mode or service. Overall, 41% of commuters stated that they would be very interested in this full-featured transportation app, 44% were somewhat interested, whereas just 14% expressed no interest in the app. Interest in the user-friendly smart phone app was widespread, with at least two-thirds of respondents in every identified commuter subgroup expressing interest in the app. For more details, see *Transportation Information & Smart Phone Apps* on page 78.

9. For a detailed review of this topic, see *Smartphone Applications to Influence Travel Choices: Practices and Policies*, U.S. Department of Transportation Publication # FHWA-HOP-16-023: April 2016.

10. Even among the subgroup with the lowest rate of smart phone usage (seniors), approximately 9-in-10 commuters indicated they currently use a smart phone.

To what extent are employers offering commute benefits? Employer-offered commute benefit programs encourage the use of alternative modes by offering monetary and other types of incentives. For the employer, such programs can help boost employee morale, job satisfaction, and retention by reducing the burden of the work commute for employees. Employer-offered commute benefits can also be influential in decreasing motor vehicle travel and traffic congestion, reducing emissions of greenhouse gases and other pollutants, and ultimately help protect the climate and public health.

Given the above, it was of interest to develop an up-to-date understanding of the extent to which employers are offering commute benefits, as well as the type of benefits being offered. Unfortunately, the dominant response for every commute benefit tested in the survey was that it is *not* offered by their employer (see Figure 17).

FIGURE 17 EMPLOYER BENEFITS OFFERED



Among the most commonly offered benefits were on-site facilities for employees who bike or walk to work, such as showers and lockers (29%), priority parking locations for carpools and vanpools (18%), and free or discounted transit passes (14%). Approximately one-in-ten commuters reported that their employer offers the opportunity for employees to purchase transit passes or pay for vanpool services pre-tax (11%), cash or other incentives for not driving alone to work (10%), free employee shuttles (9%), and a guaranteed ride home in case of emergencies or unscheduled overtime (8%).

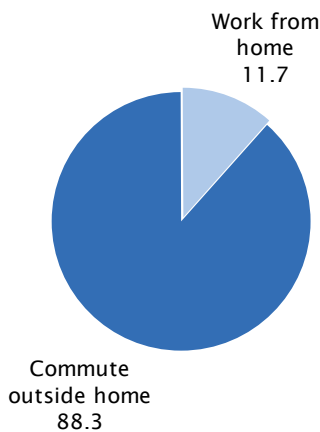
COMMUTE STATUS

The opening series of questions in the survey were designed to identify employees' primary work locations and gather specific information about their commute—including primary mode, reasons for selecting a particular mode, as well as commute distance and duration.

WORK FROM HOME OR COMMUTE The opening question in the survey asked employees whether they typically work from home, or typically commute to a work location outside of their home. As shown in Figure 18, nearly nine-in-ten respondents (88%) offered that they typically commute to a destination outside of their home for work, whereas the remainder (12%) reported that they typically telecommute (work from home).

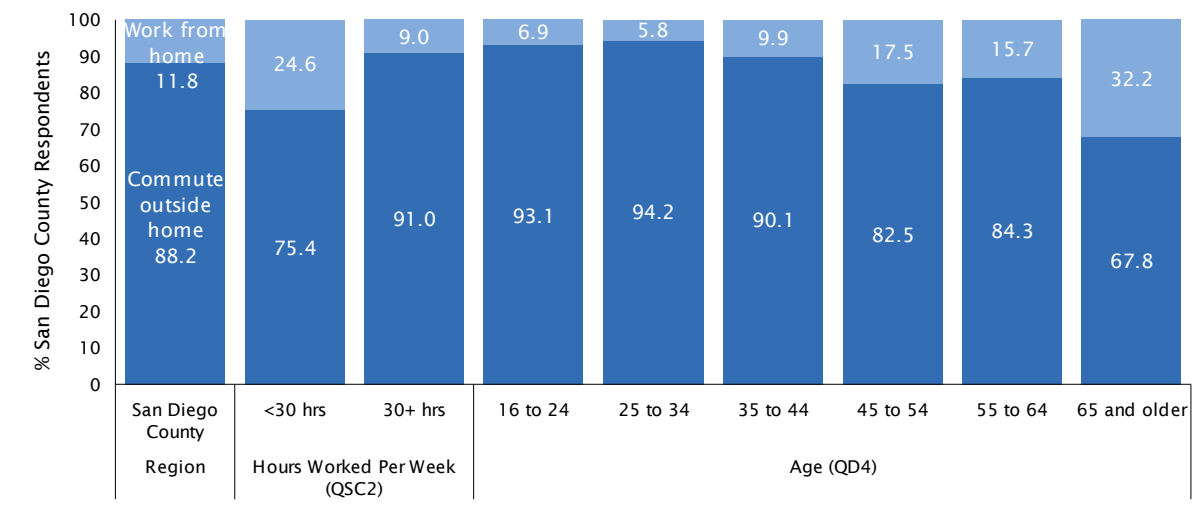
Question 1 *Do you typically work from home, or do you typically commute to a work location outside of your home?*

FIGURE 18 WORK LOCATION¹¹



Figures 19-22 show how commuting to a destination outside of the home and teleworking varied by region, hours worked per week, age, number of employees at their primary work location, and subregion. Figures 19 and 20 present the results among employees who reside in San Diego County, whereas Figures 21 and 22 present the information among those who reside in Western Riverside County. For both regions, the percentage of employees who reported that they telework was most common among those who work less than 30 hours per week, older employees (65+), and those working at locations with four or fewer employees.

FIGURE 19 WORK LOCATION BY REGION OVERALL, HOURS WORKED PER WEEK & AGE AMONG SAN DIEGO COUNTY RESIDENTS



11. Throughout this report, figure and table titles that do not mention San Diego County or Western Riverside County present the overall study findings.

FIGURE 20 WORK LOCATION BY EMPLOYEES AT PRIMARY WORKPLACE & SUBREGION AMONG SAN DIEGO COUNTY RESIDENTS

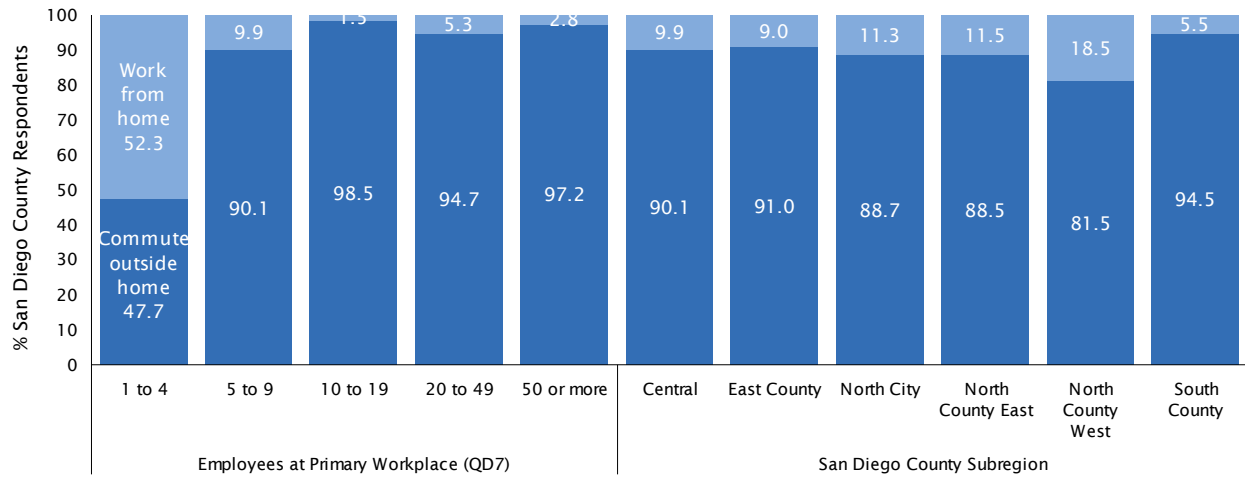


FIGURE 21 WORK LOCATION BY REGION OVERALL, HOURS WORKED PER WEEK & AGE AMONG WESTERN RIVERSIDE COUNTY RESIDENTS

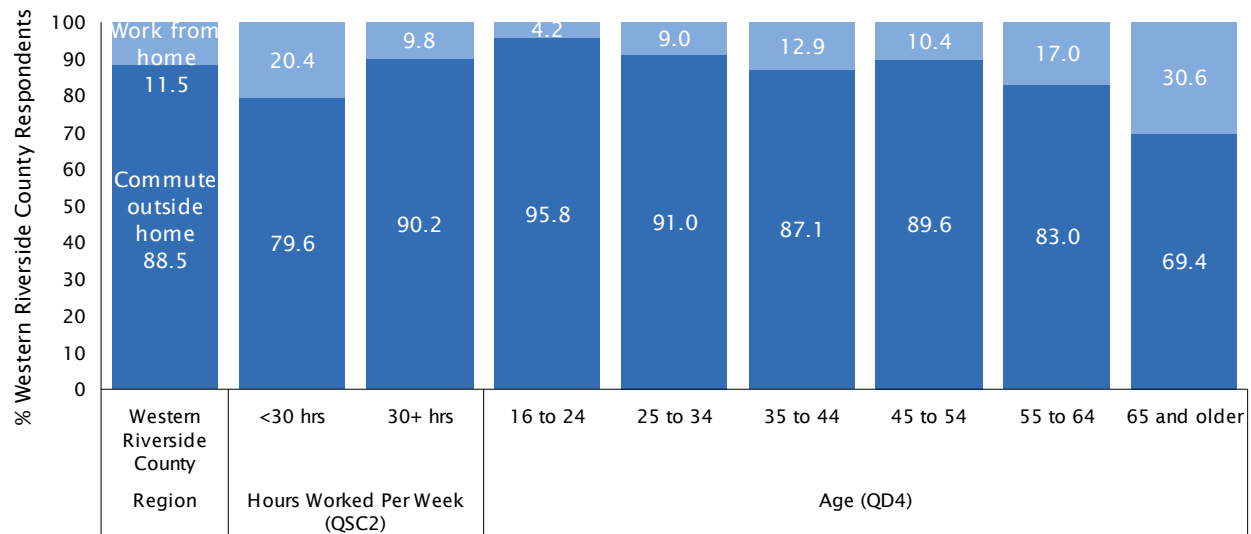
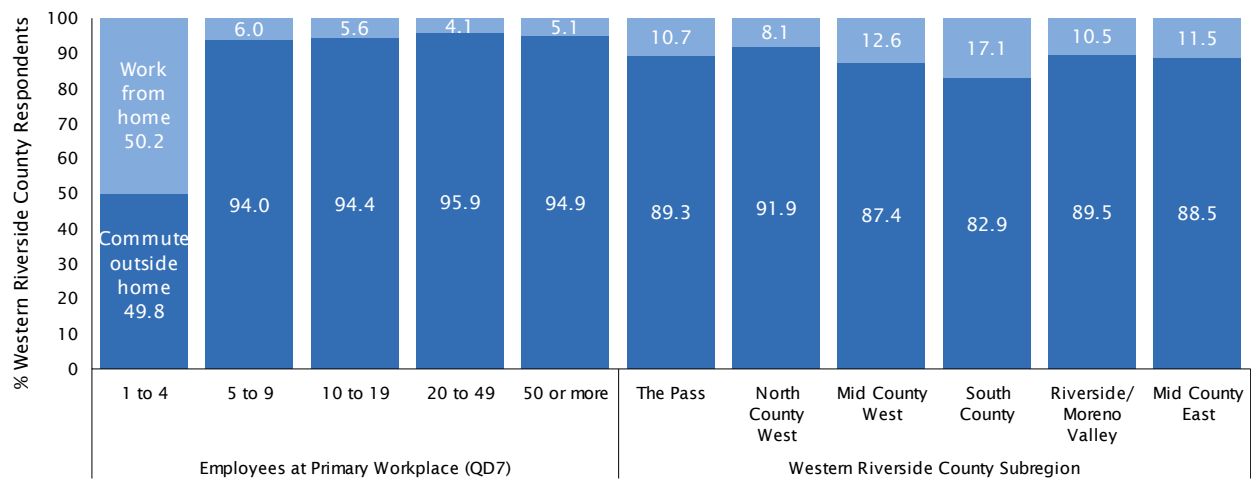


FIGURE 22 WORK LOCATION BY EMPLOYEES AT PRIMARY WORKPLACE & SUBREGION AMONG WESTERN RIVERSIDE COUNTY RESIDENTS



COMMUTE MODE Respondents who indicated they typically commute to a work destination outside of their home where subsequently asked to identify the method of transportation they use most often when commuting to their work place. Those who reported that they use a rideshare service for their work commute were also asked if they typically use a *pooled* rideshare service. The responses to Questions 2 and Question 3 are captured in Table 8 below.

Question 2 *What method of transportation do you use most of the time when commuting to your work place?*

Question 3 *Do you typically use a pooled rideshare service where you share your ride with strangers who are headed in the same direction?*

TABLE 8 PRIMARY COMMUTE MODE BY OVERALL, REGION & INTERREGIONAL COMMUTE STATUS¹²

	Overall	Region		Interregional Commute Status			
		San Diego County	Western Riverside County	Not Interregional Commuter	Out of San Diego County	Out of Riverside County Southbound	Out of Riverside County Other
Drive alone in a car, truck, SUV, or van	83.9	84.4	82.9	84.9	82.3	77.4	78.7
Motorcycle	0.9	1.0	0.5	0.9	0.2	1.4	0.3
Carpool (ride together 2 to 4 people)	5.1	4.6	6.1	4.6	0.6	11.0	7.9
Vanpool (ride together with 5 to 15 people)	0.7	0.5	1.1	0.3	3.5	5.9	1.4
On-demand rideshare service like Uber, Lyft, or Waze Carpool	0.6	0.7	0.4	0.7	0.2	0.9	-
Pooled rideshare service (Uber Pool, Lyft Line)	0.2	0.4	-	0.3	0.2	-	-
Zipcar	-	-	-	-	-	-	-
Taxi	0.0	0.0	-	0.0	0.6	-	-
Employer-provided shuttle/bus	0.2	0.2	0.2	0.3	0.2	-	-
Local bus	2.4	2.2	2.8	2.7	-	-	1.4
Express bus/premium bus/ Rapid/CommuterLink	0.6	0.6	0.5	0.5	-	1.6	0.9
Train: Metrolink/Metro Rail/ COASTER/Amtrak/	1.8	1.2	3.3	0.9	5.0	-	9.1
San Diego Trolley	1.2	1.8	0.0	1.4	-	0.5	-
SPRINTER	-	-	-	-	-	-	-
Other public transit	0.0	-	0.0	-	-	0.5	-
Bike	1.4	1.6	1.0	1.7	-	0.1	-
Walk/jog/run	0.8	0.6	1.2	0.9	-	-	0.2
Other	0.2	0.3	0.1	0.1	5.9	0.7	0.1
Prefer not to answer	0.1	0.1	-	0.1	1.4	-	-

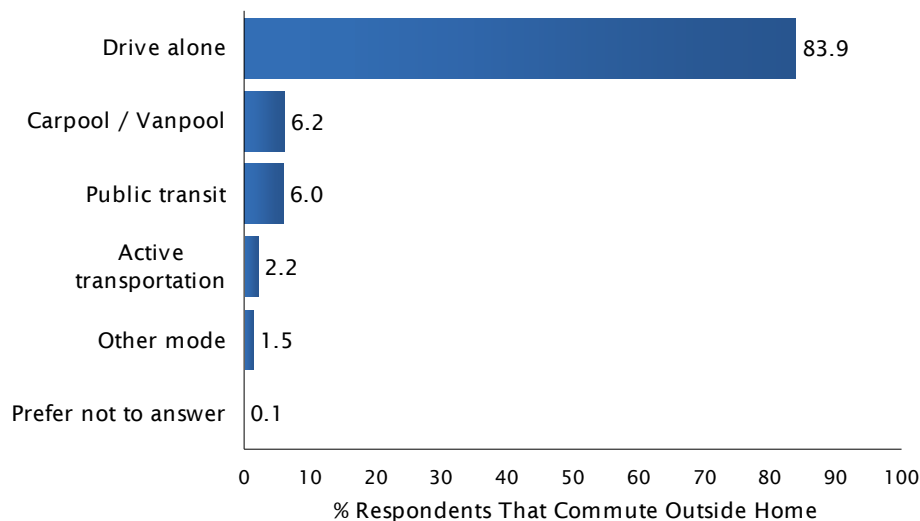
12. *Other* responses to Question 2 primarily consisted of flying via airplane or helicopter. Additional responses included being an Uber or Lyft driver or citing multiple commute modes instead of the one used most often.

Overall, the most common method of commuting was driving alone to work in a car, truck, SUV or van (84%). Ridesharing via carpool (5%), vanpool (<1%), and on-demand rideshare services such as Uber, Uber Pool¹³, Lyft, Lyft Line, or Waze Carpool (<1%) accounted for approximately 6% of commutes, while a similar percentage was represented by transit services including a local bus (2%), express bus (<1%), train (2%), and the San Diego Trolley (1%). Active transportation modes (biking, walking, jogging, running) were mentioned by just over 2% of employees as their primary method of commuting to work. All other modes were mentioned by less than 2% of respondents, collectively.

Table 8 also presents the distribution of primary commute mode according to interregional commuter status, as well as type of interregional commuter in terms of residence and commute direction. When compared to those who do not commute outside of their county of residence for their work (i.e., intraregional commuters), interregional commuters who reside in Western Riverside County and commute south into/through San Diego County were the most likely to report carpooling (11%), vanpooling (6%), and using an express bus (2%) for their commute. Their counterparts who commute out of Western Riverside County west or north were the most likely to report using a train (9%) for their commute, and also exhibited comparatively high rates of carpooling (8%). San Diego-based interregional commuters, on the other hand, reported moderately high rates for vanpooling (4%), using a train (5%), and ‘other’ modes not represented (6%).

Figure 23 summarizes the findings of Questions 2 and 3 by collapsing modes into their appropriate categories. Overall, 84% of employees who commuted to a destination outside of their home reported that they primarily drive alone, 6% primarily carpool, vanpool, or use a pooled on-demand rideshare service, 6% most often use a form of public transit, and 2% typically utilize active transportation modes (biking, walking, jogging, running).

FIGURE 23 PRIMARY COMMUTE MODE¹⁴



13. The 0.2% of commuters who indicated at Question 3 that they use a pooled rideshare service were asked *Question 4 Which pooled rideshare service do you typically use?* Among this very small subset of commuters, all indicated either Uber Pool or Lyft Line (approximately 50-50 split).

For the interested reader, Figures 24-27 illustrate how primary commute mode varied across a host of employee subgroups among residents of San Diego County. Figures 28-31 present similar information for employees who reside in Western Riverside County.

FIGURE 24 PRIMARY COMMUTE MODE BY REGION OVERALL & AGE AMONG SAN DIEGO COUNTY RESIDENTS WHO COMMUTE OUTSIDE HOME

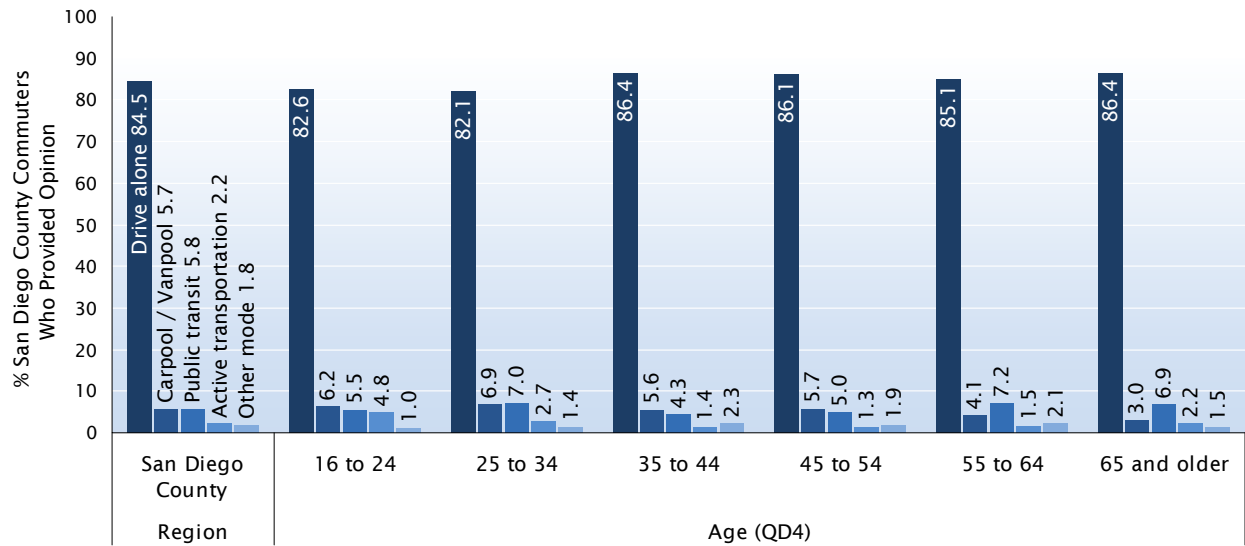
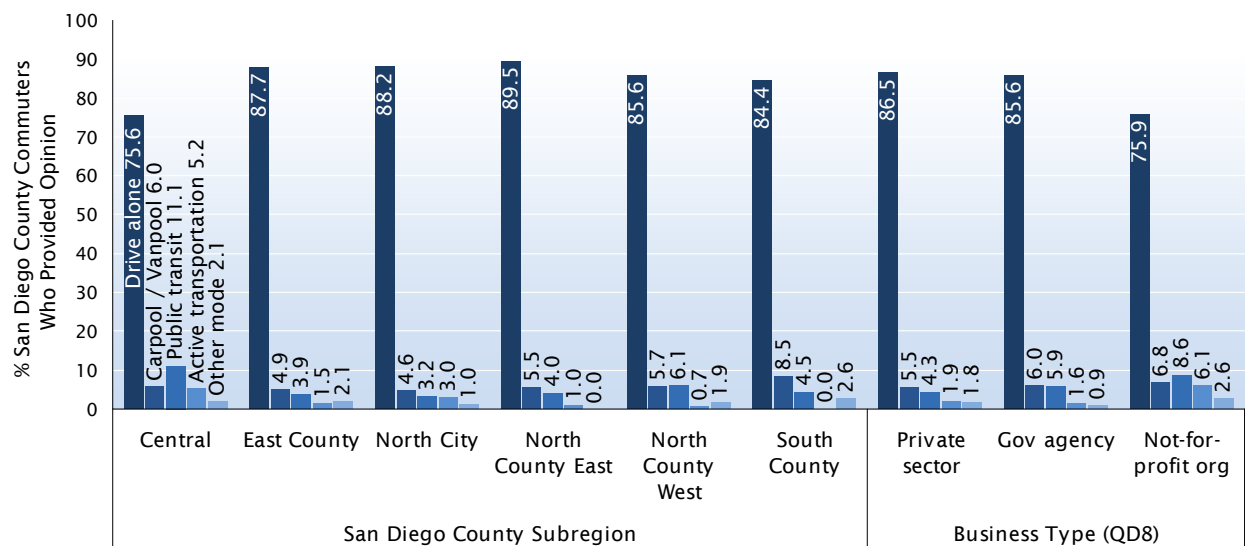


FIGURE 25 PRIMARY COMMUTE MODE BY SUBREGION & BUSINESS TYPE AMONG SAN DIEGO COUNTY RESIDENTS WHO COMMUTE OUTSIDE HOME



14. Other mode includes non-pooled on-demand rideshare service, motorcycle, Zipcar, taxi, and 'other' responses at Question 2.

FIGURE 26 PRIMARY COMMUTE MODE BY GENDER, INTERREGIONAL COMMUTER & INTERREGIONAL COMMUTE DESTINATION AMONG SAN DIEGO COUNTY RESIDENTS WHO COMMUTE OUTSIDE HOME

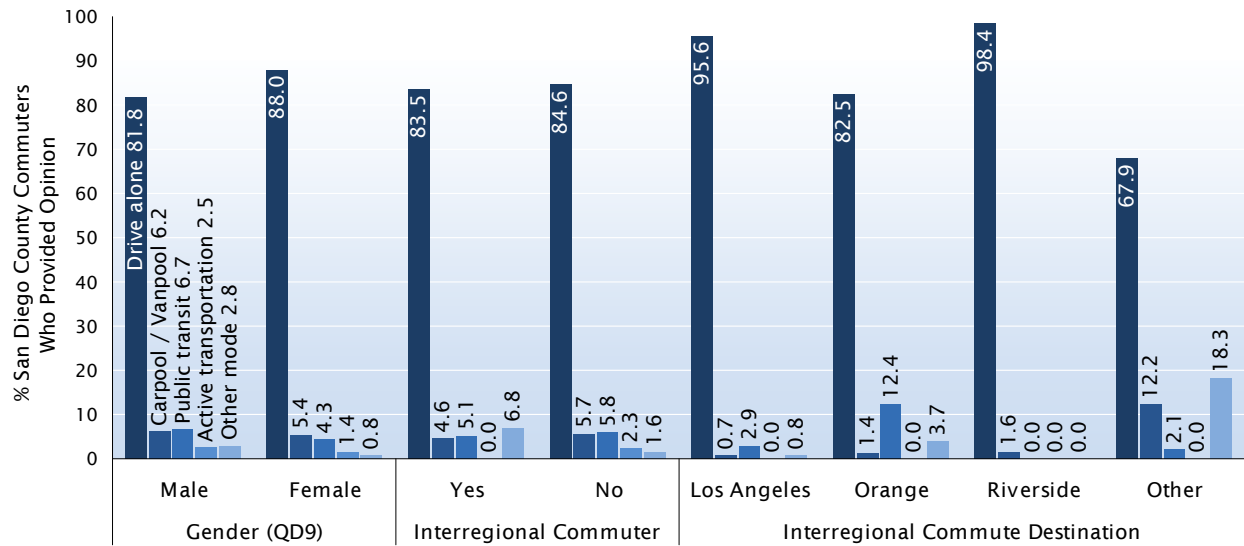


FIGURE 27 PRIMARY COMMUTE MODE BY COMMUTE DISTANCE AMONG SAN DIEGO COUNTY RESIDENTS WHO COMMUTE OUTSIDE HOME

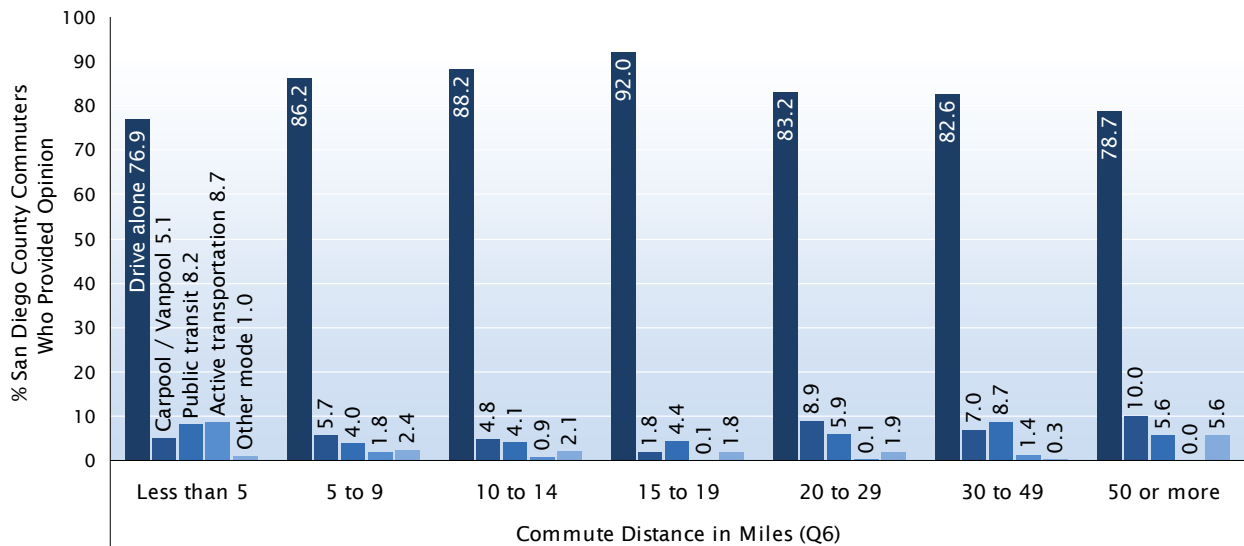


FIGURE 28 PRIMARY COMMUTE MODE BY REGION OVERALL & AGE AMONG WESTERN RIVERSIDE COUNTY RESIDENTS WHO COMMUTE OUTSIDE HOME

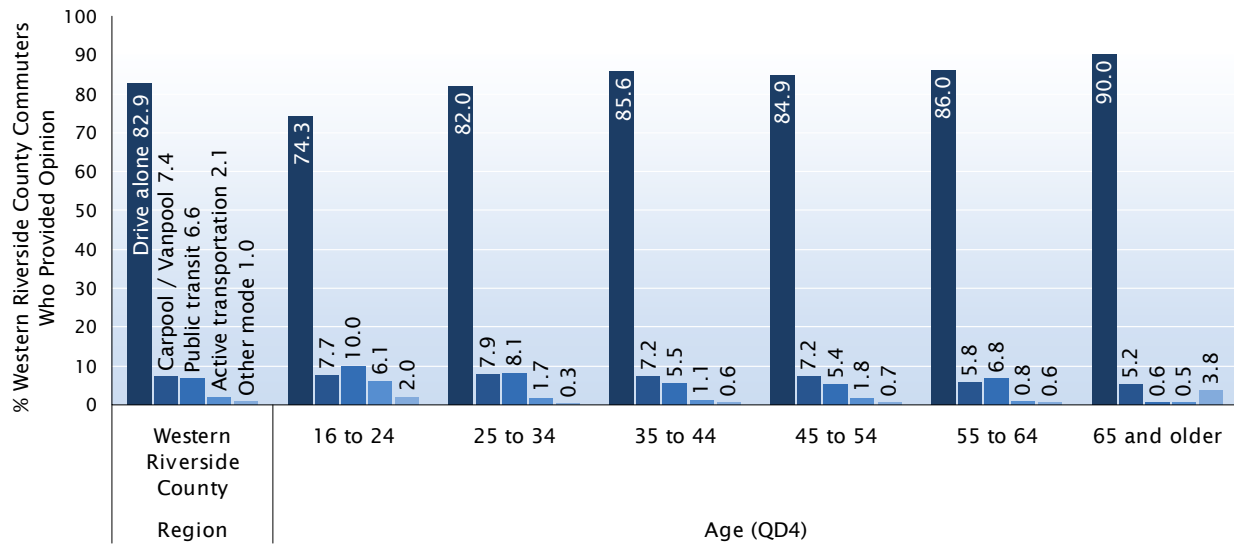


FIGURE 29 PRIMARY COMMUTE MODE BY SUBREGION & BUSINESS TYPE AMONG WESTERN RIVERSIDE COUNTY RESIDENTS WHO COMMUTE OUTSIDE HOME

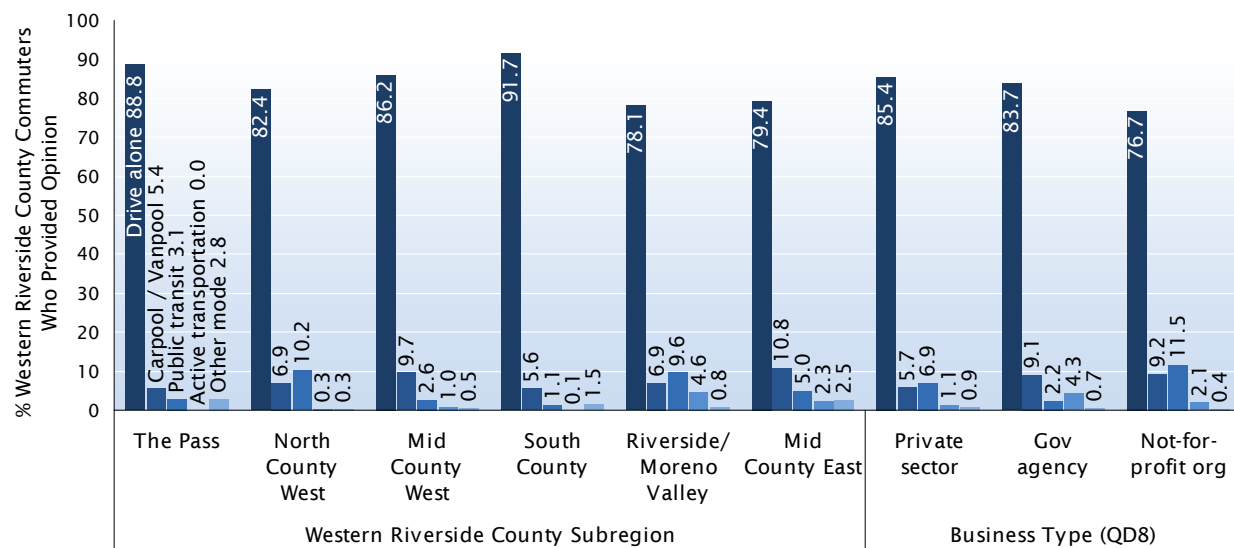


FIGURE 30 PRIMARY COMMUTE MODE BY INTERREGIONAL COMMUTE STATUS & INTERREGIONAL COMMUTE DESTINATION AMONG WESTERN RIVERSIDE COUNTY RESIDENTS WHO COMMUTE OUTSIDE HOME

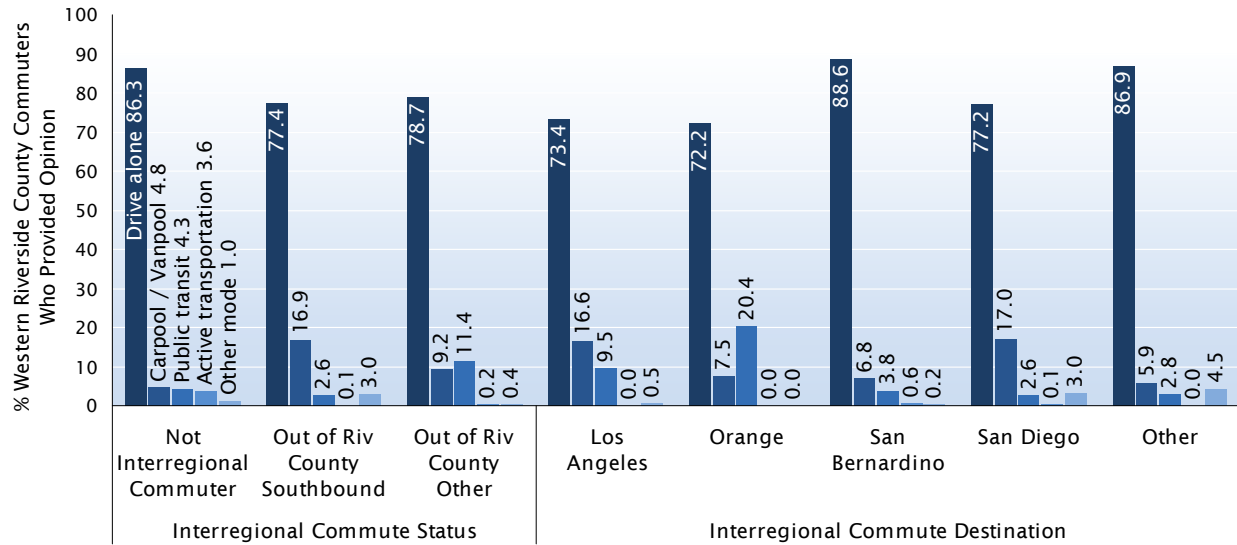
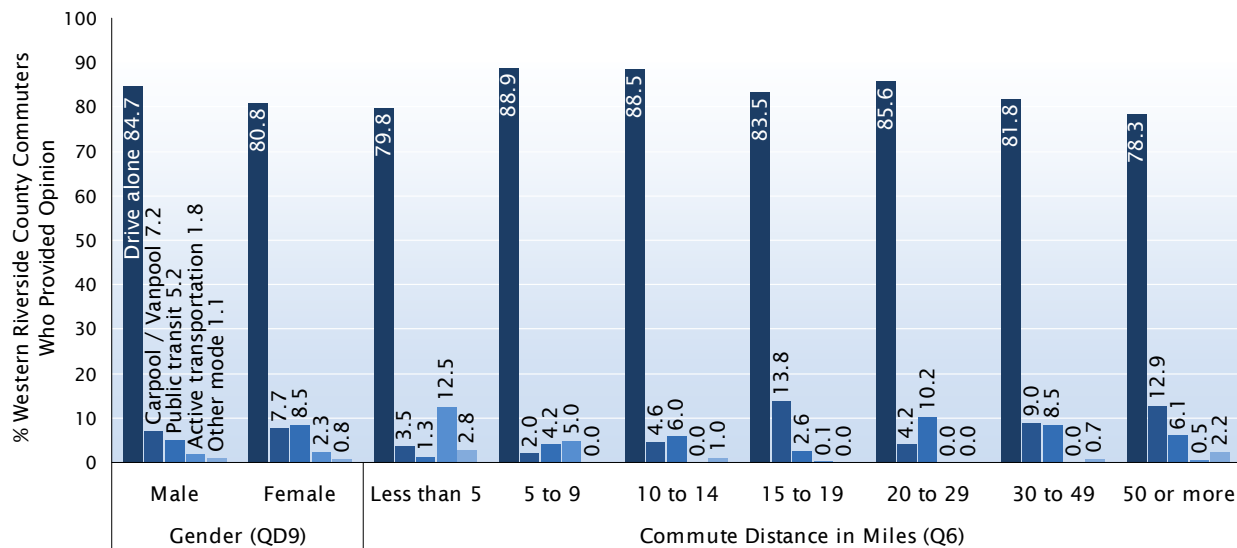


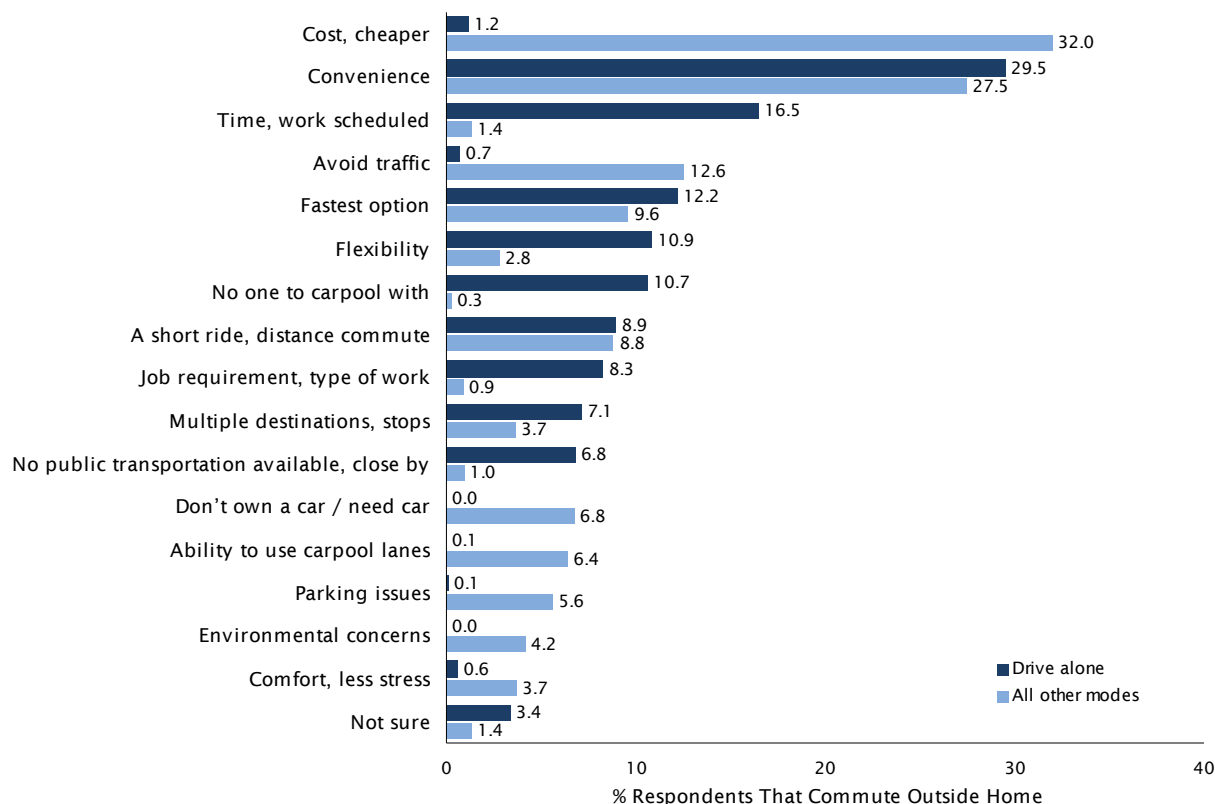
FIGURE 31 PRIMARY COMMUTE MODE BY GENDER & COMMUTE DISTANCE AMONG WESTERN RIVERSIDE COUNTY RESIDENTS WHO COMMUTE OUTSIDE HOME



REASONS FOR SELECTING MODE FOR COMMUTE Having identified employees' primary method of commuting to work, Question 5 followed-up by asking them to state the most important factor or reason for *why* they choose that particular mode for their commute. Question 5 was administered in an open-ended manner, which allowed respondents to mention any reason or factor that came to mind without being prompted by (or restricted to) a particular list of options. True North later reviewed the responses to Question 5 and grouped them into the categories shown in Figure 32 on the next page.

Question 5 What would you say is the most important factor or reason why you choose <<insert mode from Q2>> when commuting to work?

FIGURE 32 MOST IMPORTANT FACTORS IN CHOOSING PRIMARY COMMUTE MODE BY DRIVE ALONE VS. ALL OTHERS



The responses to Question 5 are shown separately in Figure 32 according to whether the individual drives alone for their commute or takes an alternative mode. Among those who drive alone to work, convenience was the most common reason mentioned for why they select their primary commute mode (30%), followed by timing/scheduling for their work (17%), it is the fastest option (12%), and it provides flexibility (11%). The reasons offered by those who use alternative modes were generally quite different, with 32% mentioning cost/being cheaper as the primary reason they use an alternative mode for their commute. Other top reasons mentioned for using an alternative mode for their commute included convenience (28%), avoiding traffic (13%), and that it is the fastest option (10%).

For the interested reader, Table 9 lists the top five reasons for choosing a particular mode for their commute by mode, whereas Table 10 lists the top five reasons for selecting their primary mode by region and interregional commute status.

TABLE 9 TOP 5 FACTORS BY PRIMARY COMMUTE MODE

Primary Commute Mode (Q2)				
Drive alone	Carpool / Vanpool	Public transit	Active Transportation	Other mode
Convenience	Cost, cheaper	Cost, cheaper	Convenience	Convenience
Time, work scheduled	Convenience	Convenience	A short ride, distance commute	Cost, cheaper
Fastest option	Ability to use carpool lanes	Avoid traffic	Cost, cheaper	Fastest option
Flexibility	Fastest option	Don't own a car / need car	Exercise, healthy option	Avoid traffic
No one to carpool with	Multiple destinations, stops	Fastest option	Parking issues	Ability to use carpool lanes

TABLE 10 TOP 5 FACTORS IN CHOOSING PRIMARY COMMUTE MODE BY REGION & INTERREGIONAL COMMUTE STATUS

Region		Interregional Commute Status			
San Diego County	Western Riverside County	Not Interregional Commuter	Out of San Diego County	Out of Riverside County Southbound	Out of Riverside County Other
Convenience	Convenience	Convenience	Convenience	Convenience	Time, work scheduled
Fastest option	Time, work scheduled	Time, work scheduled	Time, work scheduled	Time, work scheduled	Convenience
Time, work scheduled	No one to carpool with	Fastest option	Job requirement, type of work	Cost, cheaper	No one to carpool with
Flexibility	A short ride, distance commute	Flexibility	No one to carpool with	No one to carpool with	Job requirement, type of work
A short ride, distance commute	Fastest option	A short ride, distance commute	Fastest option	No public transportation available, close by	Flexibility

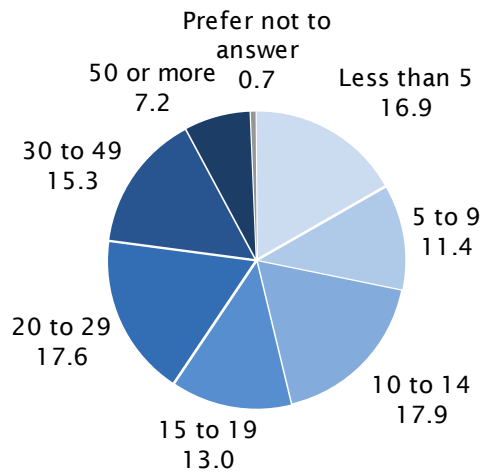
LENGTH OF COMMUTE Length of commute was measured both in terms of *distance* traveled one-way between an employee's home and their primary work place (Question 6), as well as the *time* it typically takes to commute between home and work if they drive directly without stops (Question 7).

In terms of commute *distance* (see Figure 33), nearly one-in-three respondents were represented in commute length categories of less than 10 miles (28%), one-third reported traveling 10 to 19 miles (31%), 18% commute 20 to 29 miles, 15% commute 30 to 49 miles, whereas 7% indicated they commute 50 miles or more between work and home, one-way. The average commute length among all commuters was 19.77 miles, one-way.¹⁵

15. Eight (8) respondents reported commute distances of over 150 miles in Question 6. These respondents were considered outliers and excluded from the mean calculation noted in the text. Including them in the analysis would have the effect of increasing the average commute distance to 20.65 miles.

Question 6 *In miles, what is the approximate distance between your home and your work place?*

FIGURE 33 COMMUTE DISTANCE IN MILES AMONG THOSE WHO COMMUTE OUTSIDE HOME



The following figures show how average commute distances varied by region and interregional commuter status (Figure 34), across subgroups of employees who reside in San Diego County (Figures 35-38), and across subgroups of employees who reside in Western Riverside County (Figures 39-42). In general, the longest average commute distances were reported by those living in Western Riverside County, interregional commuters, interregional commuters who commute into/out of San Diego County, those who primarily carpool, and males.

FIGURE 34 MEAN COMMUTE DISTANCE IN MILES BY REGION, INTERREGIONAL COMMUTER & INTERREGIONAL COMMUTE STATUS AMONG THOSE WHO COMMUTE OUTSIDE HOME

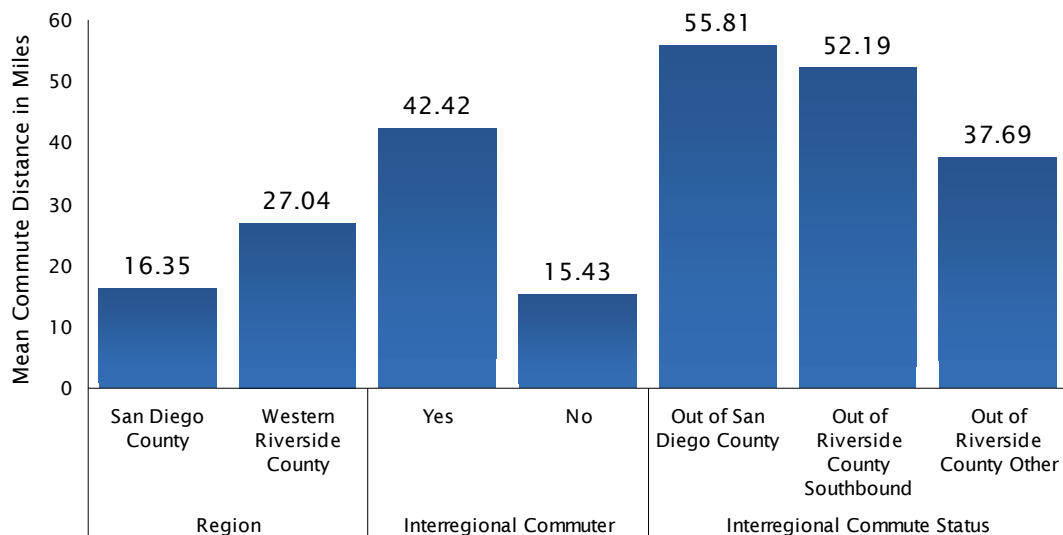


FIGURE 35 MEAN COMMUTE DISTANCE IN MILES BY HOURS WORKED PER WEEK & PRIMARY COMMUTE MODE AMONG SAN DIEGO COUNTY RESIDENTS WHO COMMUTE OUTSIDE HOME¹⁶

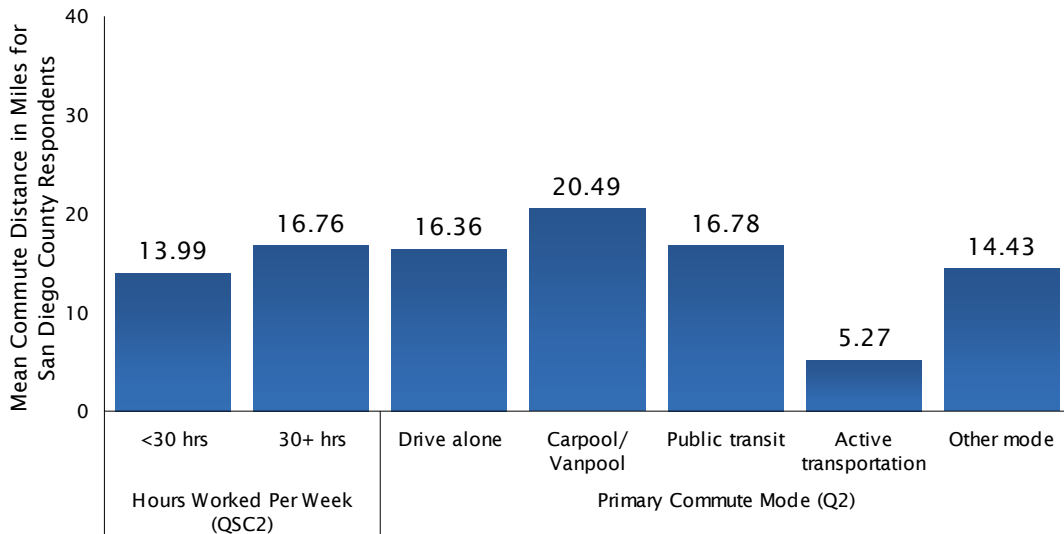
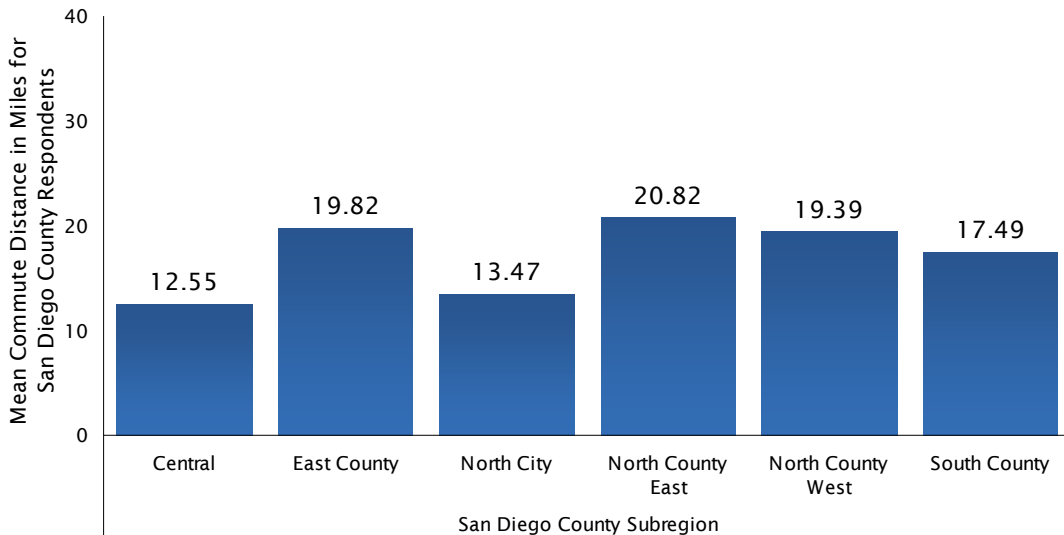


FIGURE 36 MEAN COMMUTE DISTANCE IN MILES BY SUBREGION AMONG SAN DIEGO COUNTY RESIDENTS WHO COMMUTE OUTSIDE HOME



16. *Active transportation* includes bike and walk/jog/run. *Other mode* includes non-pooled on-demand ride-share service, motorcycle, Zipcar, taxi, and 'other' responses at Question 2, which primarily consisted of commuting via airplane or helicopter although additional responses included being an Uber or Lyft driver and citing multiple commute modes instead of their primary mode.

FIGURE 37 MEAN COMMUTE DISTANCE IN MILES BY INTERREGIONAL COMMUTER & INTERREGIONAL COMMUTE DESTINATION AMONG SAN DIEGO COUNTY RESIDENTS WHO COMMUTE OUTSIDE HOME

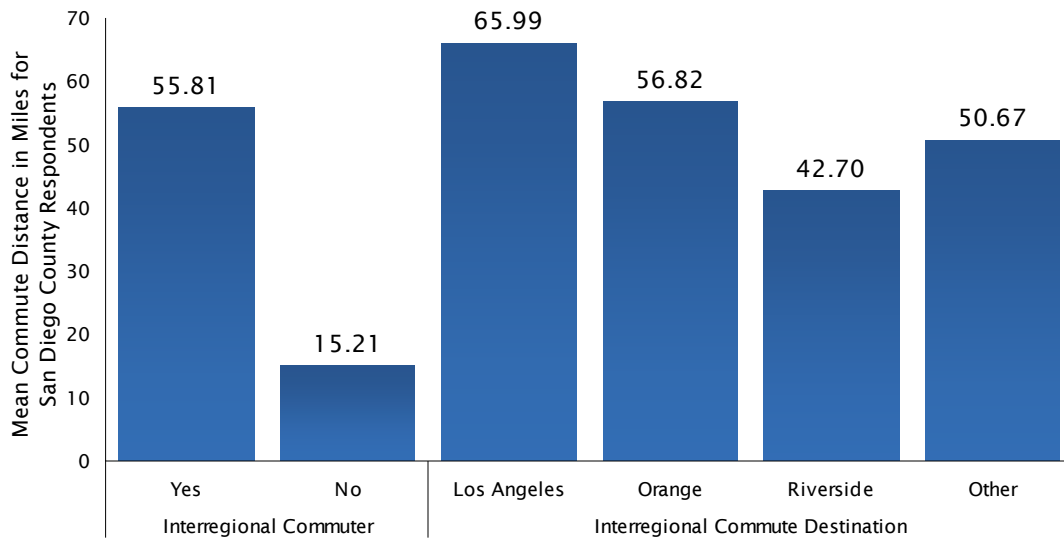


FIGURE 38 MEAN COMMUTE DISTANCE IN MILES BY AGE & GENDER AMONG SAN DIEGO COUNTY RESIDENTS WHO COMMUTE OUTSIDE HOME

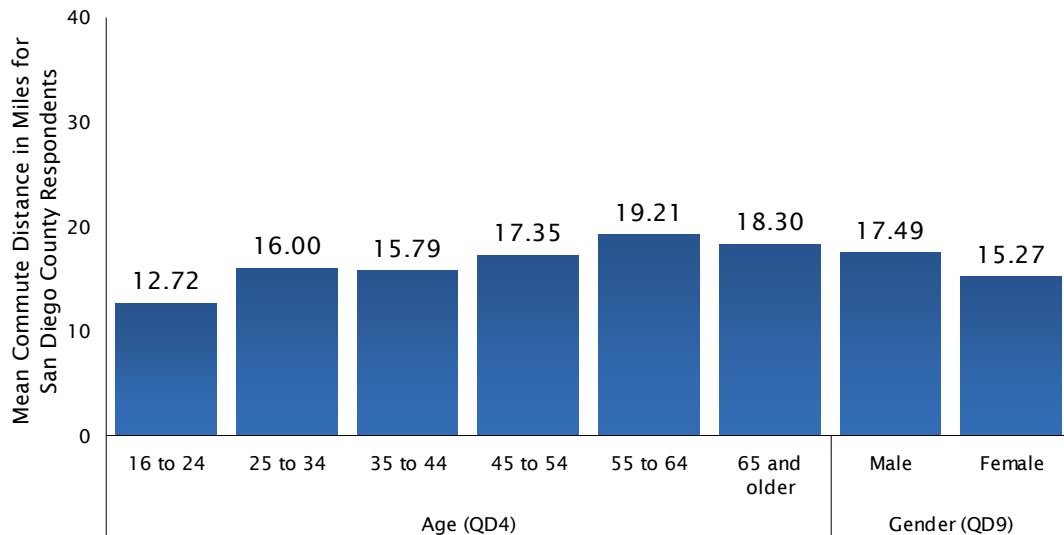


FIGURE 39 MEAN COMMUTE DISTANCE IN MILES BY HOURS WORKED PER WEEK & PRIMARY COMMUTE MODE AMONG WESTERN RIVERSIDE COUNTY RESIDENTS WHO COMMUTE OUTSIDE HOME

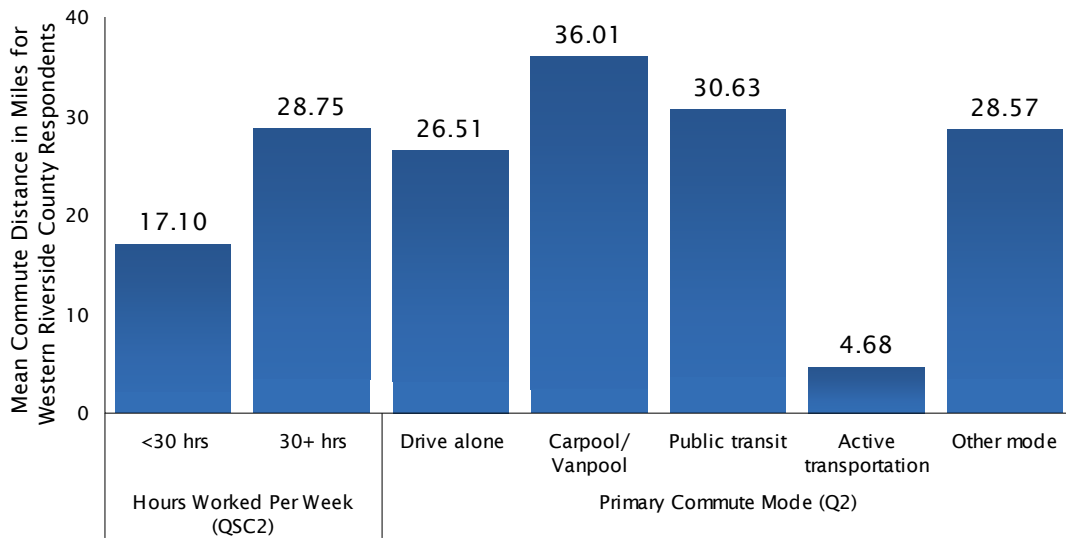


FIGURE 40 MEAN COMMUTE DISTANCE IN MILES BY SUBREGION AMONG WESTERN RIVERSIDE COUNTY RESIDENTS WHO COMMUTE OUTSIDE HOME

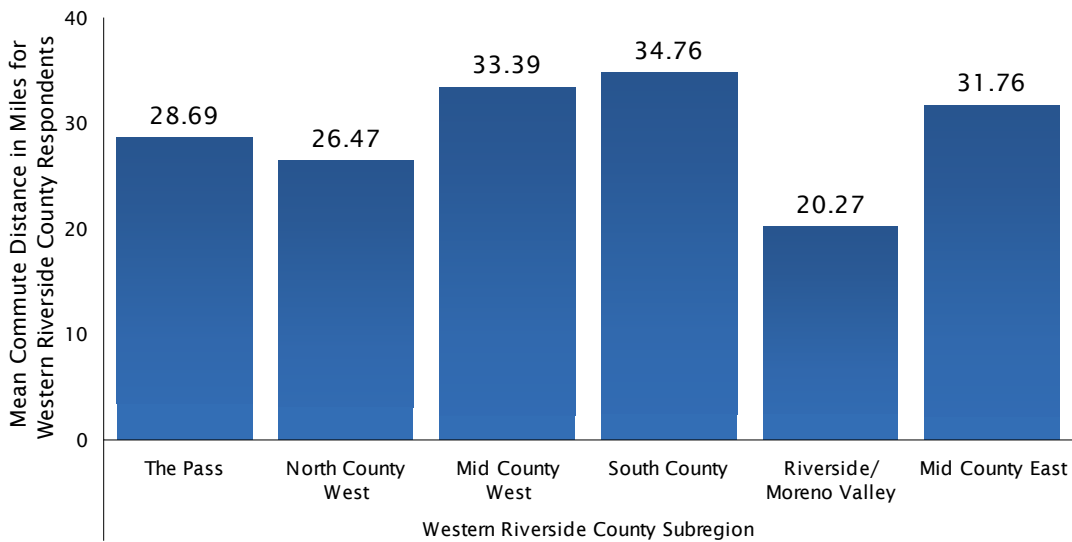


FIGURE 41 MEAN COMMUTE DISTANCE IN MILES BY INTERREGIONAL COMMUTER & INTERREGIONAL COMMUTE DESTINATION AMONG WESTERN RIVERSIDE COUNTY RESIDENTS WHO COMMUTE OUTSIDE HOME

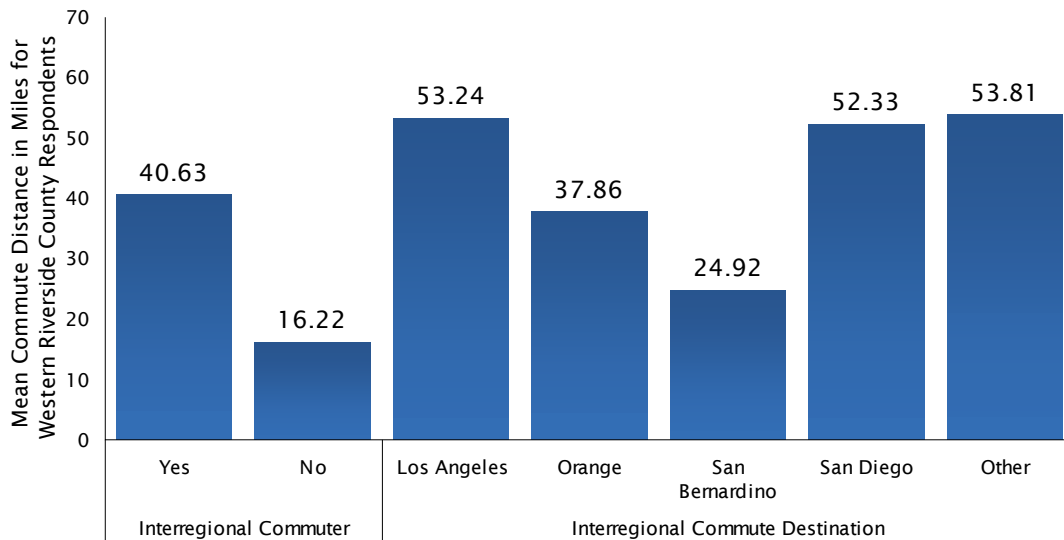
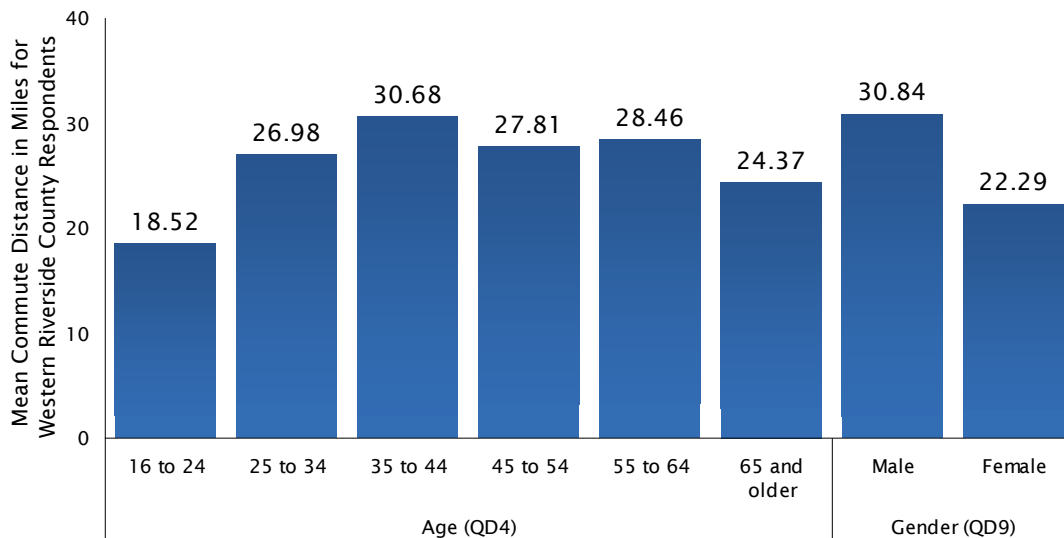


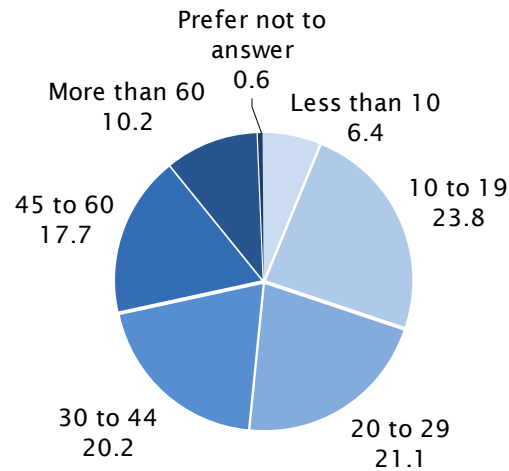
FIGURE 42 MEAN COMMUTE DISTANCE IN MILES BY AGE & GENDER AMONG WESTERN RIVERSIDE COUNTY RESIDENTS WHO COMMUTE OUTSIDE HOME



DURATION OF COMMUTE As for the *time* it typically takes an employee to commute to work one-way without stops, approximately one-in-three commuters (30%) indicated it takes less than 20 minutes, one-in-five (21%) indicated it takes between 20 and 29 minutes, a similar percentage (20%) reported their commute typically takes between 30 to 44 minutes, 19% stated that their one-way commute lasts between 45 to 60 minutes, and one-in-ten employees (10%) offered that their commute lasts more than one hour. The average commute duration among all commuters was 33.57 minutes, one-way.¹⁷

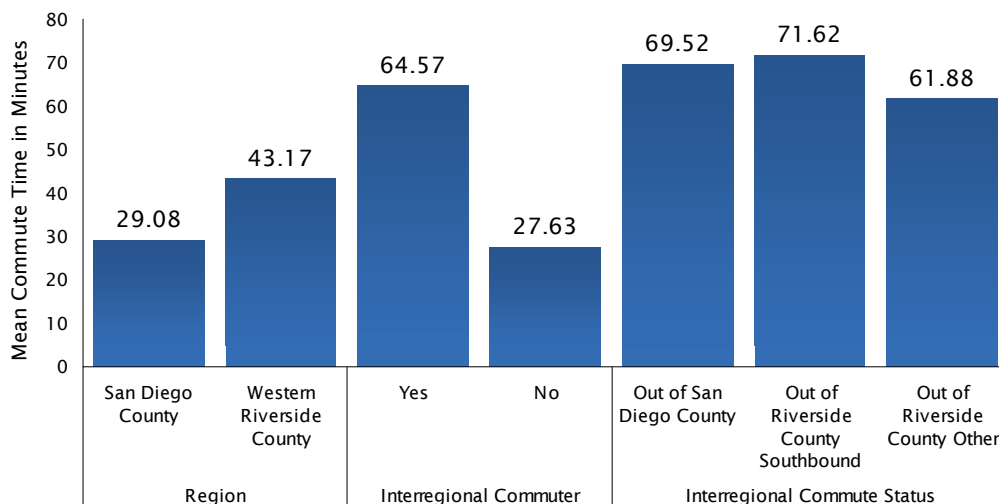
Question 7 *In minutes, how long does it typically take you to commute to work one-way if you travel there directly without stops?*

FIGURE 43 COMMUTE TIME IN MINUTES AMONG THOSE WHO COMMUTE OUTSIDE HOME



The following figures show how average one-way commute durations varied by region and inter-regional commuter status (Figure 44), across subgroups of employees who reside in San Diego County (Figures 45-48), and across subgroups of employees who reside in Western Riverside County (Figures 49-52). In general, the longest average commute durations were reported by those living in Western Riverside County, interregional commuters, interregional commuters who commute into/out of San Diego County, employees who work at least 30 hours per week, and those who typically commute via public transit. Naturally, there was also a strong, positive relationship between commute distance and commute duration.

FIGURE 44 MEAN COMMUTE TIME IN MINUTES BY REGION, INTERREGIONAL COMMUTER & INTERREGIONAL COMMUTE STATUS AMONG THOSE WHO COMMUTE OUTSIDE HOME



17.Six (6) respondents reported one-way commute durations over 180 minutes in Question 7. These respondents were considered outliers and excluded from the mean calculation noted in the text. Including them in the analysis would have the effect of increasing the average commute duration to 34.10 minutes.

FIGURE 45 MEAN COMMUTE TIME IN MINUTES BY COMMUTE DISTANCE IN MILES AMONG SAN DIEGO COUNTY RESIDENTS WHO COMMUTE OUTSIDE HOME

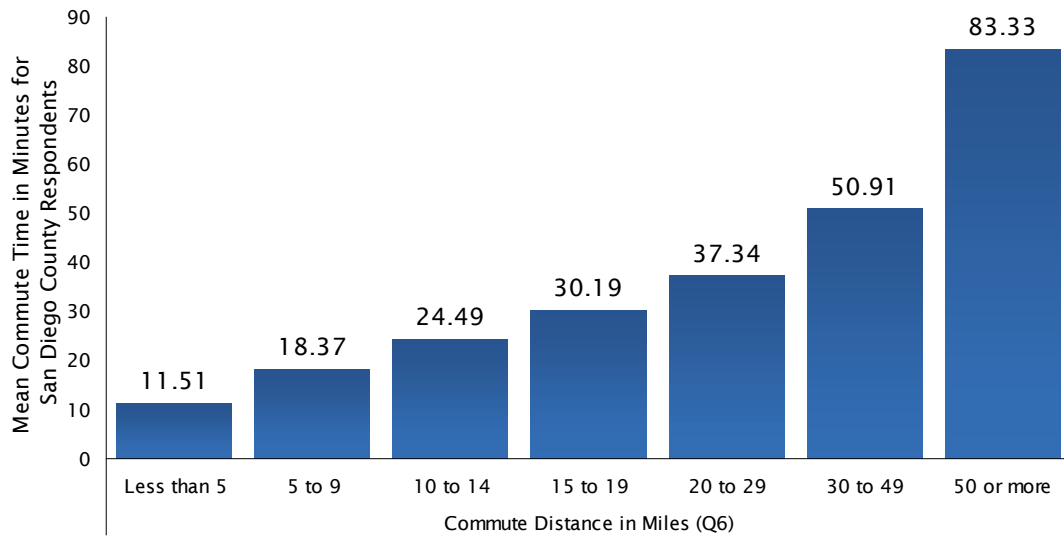


FIGURE 46 MEAN COMMUTE TIME IN MINUTES BY HOURS WORKED PER WEEK & PRIMARY COMMUTE MODE AMONG SAN DIEGO COUNTY RESIDENTS WHO COMMUTE OUTSIDE HOME

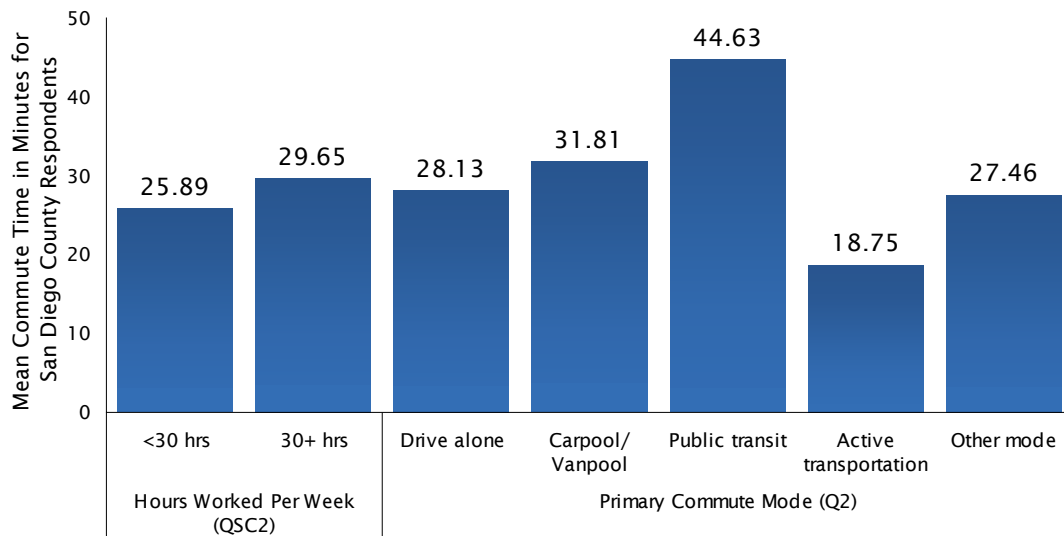


FIGURE 47 MEAN COMMUTE TIME IN MINUTES BY SUBREGION AMONG SAN DIEGO COUNTY RESIDENTS WHO COMMUTE OUTSIDE HOME

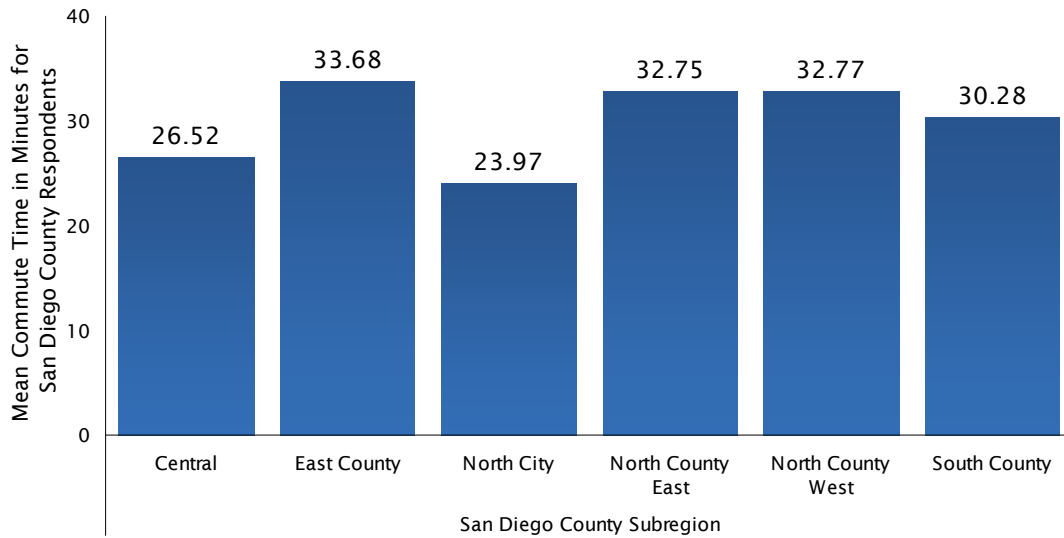


FIGURE 48 MEAN COMMUTE TIME IN MINUTES BY INTERREGIONAL COMMUTER & INTERREGIONAL COMMUTE DESTINATION AMONG SAN DIEGO COUNTY RESIDENTS WHO COMMUTE OUTSIDE HOME

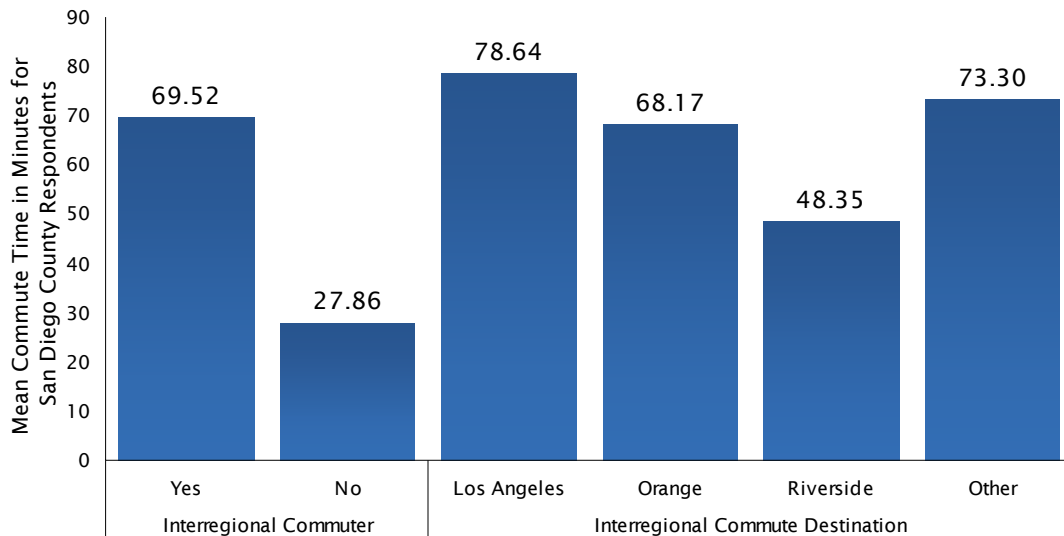


FIGURE 49 MEAN COMMUTE TIME IN MINUTES BY COMMUTE DISTANCE IN MILES AMONG WESTERN RIVERSIDE COUNTY RESIDENTS WHO COMMUTE OUTSIDE HOME

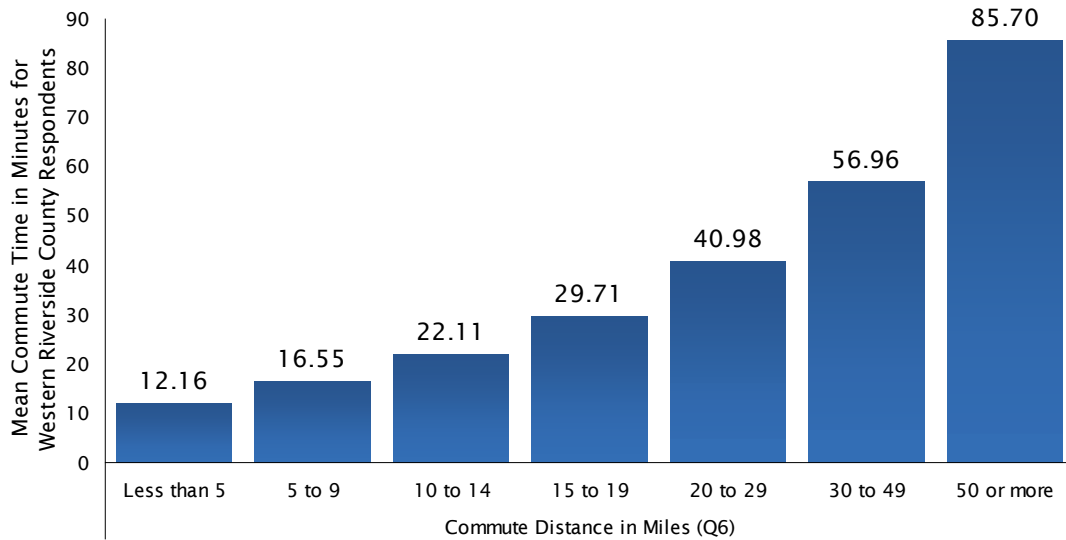


FIGURE 50 MEAN COMMUTE TIME IN MINUTES BY HOURS WORKED PER WEEK & PRIMARY COMMUTE MODE AMONG WESTERN RIVERSIDE COUNTY RESIDENTS WHO COMMUTE OUTSIDE HOME

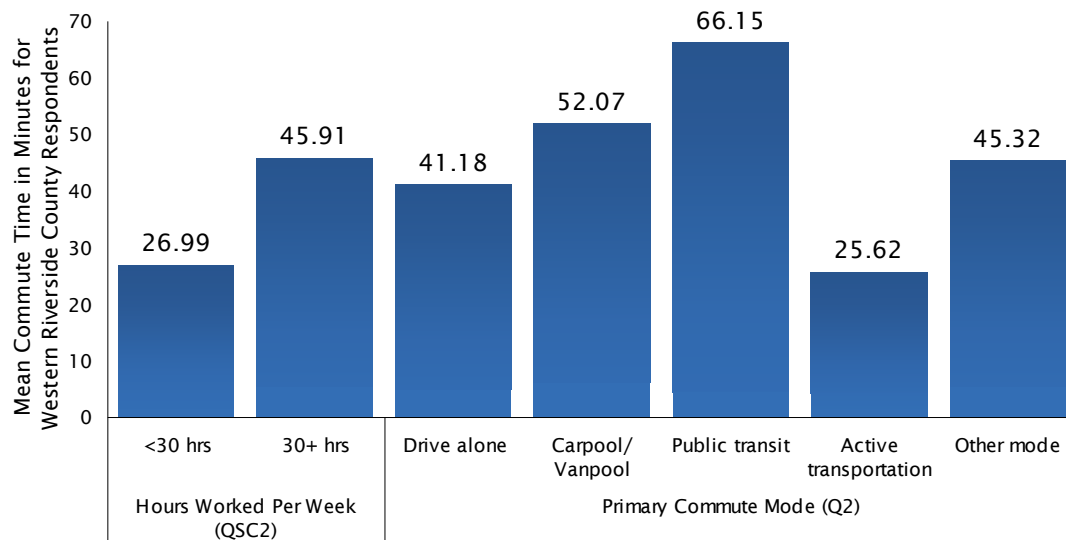


FIGURE 51 MEAN COMMUTE TIME IN MINUTES BY SUBREGION AMONG WESTERN RIVERSIDE COUNTY RESIDENTS WHO COMMUTE OUTSIDE HOME

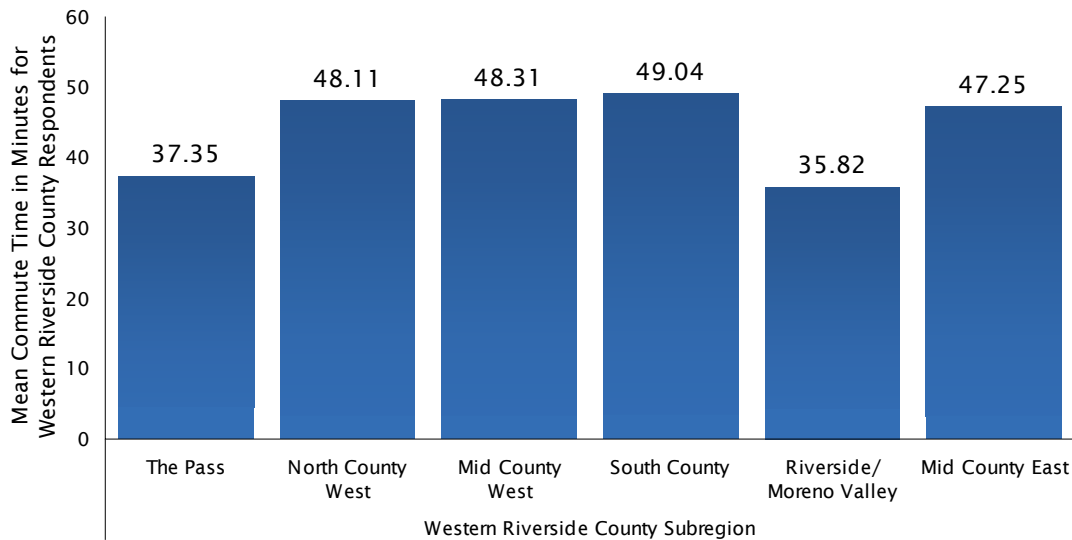
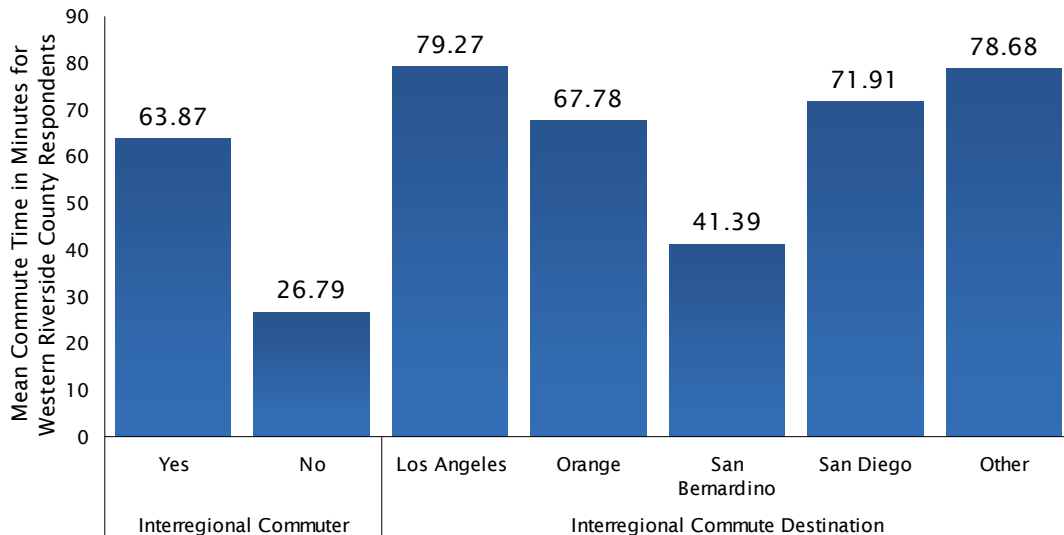


FIGURE 52 MEAN COMMUTE TIME IN MINUTES BY INTERREGIONAL COMMUTER & INTERREGIONAL COMMUTE DESTINATION AMONG WESTERN RIVERSIDE COUNTY RESIDENTS WHO COMMUTE OUTSIDE HOME



COMMUTE ORIGIN & DESTINATION SUMMARY The final questions in the commute series asked respondents to indicate the county and city where their place of work is located. Tables 11-13 crosstabulate work location by subregion of residence for respondents who reside in San Diego County overall (Table 11), those who live in San Diego County and work outside their home (Table 12), and among San Diego County residents who commute outside the County for their work (Table 13). Tables 14-16 provide the same information for employees who reside in Western Riverside County.

Question 8 *In what county is your place of work located?*

Question 9 *And what is the name of the city where your place of work is located?*

TABLE 11 ORIGIN & DESTINATION: ALL SAN DIEGO COUNTY RESPONDENTS

			County of Work Location (Q8)				
		Overall	Los Angeles	Orange	Riverside	San Diego	Other
Overall		100.0%	0.7%	0.8%	0.4%	97.3%	0.8%
San Diego County Subregion: Home	Central	19.8%	0.3%	0.0%	0.1%	19.3%	0.1%
	East County	15.4%	0.1%	0.0%	0.1%	15.1%	0.1%
	North City	25.5%	0.1%	0.1%	0.0%	25.1%	0.3%
	North County East	2.5%	0.0%	0.0%	0.1%	2.4%	0.1%
	North County West	25.0%	0.2%	0.7%	0.1%	23.8%	0.1%
	South County	11.7%	0.0%	0.0%	0.0%	11.5%	0.1%

TABLE 12 ORIGIN & DESTINATION: SAN DIEGO COUNTY RESPONDENTS WHO COMMUTE OUTSIDE HOME

			County of Work Location (Q8)				
		Overall	Los Angeles	Orange	Riverside	San Diego	Other
Overall		100.0%	0.8%	0.9%	0.4%	96.9%	0.9%
San Diego County Subregion: Home	Central	20.3%	0.4%	0.0%	0.1%	19.7%	0.1%
	East County	15.9%	0.1%	0.0%	0.1%	15.5%	0.1%
	North City	25.6%	0.1%	0.1%	0.0%	25.2%	0.3%
	North County East	2.5%	0.0%	0.0%	0.1%	2.4%	0.1%
	North County West	23.1%	0.2%	0.7%	0.1%	21.8%	0.2%
	South County	12.5%	0.0%	0.0%	0.0%	12.4%	0.2%

TABLE 13 ORIGIN & DESTINATION: SAN DIEGO COUNTY INTERREGIONAL COMMUTERS

			County of Work Location (Q8)			
		Overall	Los Angeles	Orange	Riverside	Other
Overall		100.0%	26.3%	29.3%	13.9%	30.4%
San Diego County Subregion: Home	Central	18.4%	11.4%	1.3%	2.4%	3.3%
	East County	13.2%	4.6%	0.6%	3.7%	4.2%
	North City	15.4%	2.4%	2.2%	1.2%	9.6%
	North County East	5.6%	0.0%	0.5%	2.5%	2.6%
	North County West	41.7%	7.8%	24.2%	4.2%	5.5%
	South County	5.7%	0.0%	0.4%	0.0%	5.3%

TABLE 14 ORIGIN & DESTINATION: ALL WESTERN RIVERSIDE COUNTY RESPONDENTS

			County of Work Location (Q8)					
		Overall	Los Angeles	Orange	Riverside	San Bernardino	San Diego	Other
Overall		100.0%	7.1%	12.0%	60.9%	10.6%	7.7%	1.7%
Western Riverside County Subregion: Home	The Pass	5.3%	0.3%	0.1%	3.2%	1.6%	0.0%	0.2%
	North County West	18.5%	2.3%	6.4%	6.9%	2.1%	0.2%	0.4%
	Mid County West	17.2%	0.8%	1.7%	11.2%	0.8%	2.3%	0.4%
	South County	14.9%	0.3%	0.6%	9.0%	0.2%	4.5%	0.3%
	Riverside / Moreno Valley	36.5%	3.0%	3.0%	24.7%	5.4%	0.2%	0.3%
	Mid County East	7.7%	0.5%	0.2%	5.9%	0.6%	0.4%	0.1%

TABLE 15 ORIGIN & DESTINATION: ALL WESTERN RIVERSIDE COUNTY RESPONDENTS WHO COMMUTE OUTSIDE HOME

			County of Work Location (Q8)					
		Overall	Los Angeles	Orange	Riverside	San Bernardino	San Diego	Other
Overall		100.0%	8.1%	13.5%	55.8%	12.0%	8.7%	1.9%
Western Riverside County Subregion: Home	The Pass	5.4%	0.3%	0.1%	3.0%	1.8%	0.0%	0.2%
	North County West	19.2%	2.6%	7.2%	6.2%	2.4%	0.3%	0.5%
	Mid County West	17.0%	0.9%	1.9%	10.2%	0.9%	2.6%	0.4%
	South County	13.9%	0.3%	0.7%	7.2%	0.2%	5.1%	0.3%
	Riverside / Moreno Valley	36.9%	3.4%	3.4%	23.6%	6.1%	0.2%	0.3%
	Mid County East	7.7%	0.6%	0.2%	5.6%	0.6%	0.5%	0.1%

TABLE 16 ORIGIN & DESTINATION: ALL WESTERN RIVERSIDE COUNTY INTERREGIONAL COMMUTERS

			County of Work Location (Q8)				
			Overall	Los Angeles	Orange	San Bernardino	San Diego
Overall		100.0%	18.2%	30.6%	27.1%	19.7%	4.3%
Western Riverside County Subregion: Home	The Pass	5.5%	0.7%	0.2%	4.0%	0.1%	0.4%
	North County West	29.4%	6.0%	16.4%	5.4%	0.6%	1.1%
	Mid County West	15.2%	2.0%	4.4%	2.0%	5.9%	0.9%
	South County	15.1%	0.7%	1.5%	0.5%	11.6%	0.7%
	Riverside / Moreno Valley	30.1%	7.6%	7.6%	13.7%	0.5%	0.8%
	Mid County East	4.6%	1.3%	0.6%	1.4%	1.0%	0.3%

ALTERNATIVE MODES

As noted in the *Introduction*, one of the primary goals of this study was to help inform SANDAG's and RCTC's Transportation Demand Management (TDM) programs and marketing strategies. Having profiled employees' current commute behavior in the prior section, the survey transitioned to gauging their interest and willingness to use an alternative mode for their commute to work, as well as the conditions or factors that would make it easier for them to use their preferred alternative mode. The questions presented in this section were administered only to employees who primarily drive alone to work (i.e., aren't already using an alternative mode for their commute).

PREFERRED ALTERNATIVE COMMUTE MODE If they were to use a form of transportation other than driving alone for their work commute, Question 10 asked respondents to choose the alternative mode that would work best for their commute. As shown in Figure 53, one-quarter (26%) of employees preferred an on-demand rideshare service like Uber, Lyft or Waze Carpool, one-in-five (20%) preferred a traditional carpool, and 3% selected vanpool. Nearly one-third of respondents selected a form of public transit including a train (13%), local bus (7%), San Diego Trolley (7%), express bus such as Rapid or CommuterLink (5%), and SPRINTER (1%). Active transportation including a bike (7%) and walking, jogging or running (2%) were preferred by nearly one-in-ten solo drivers as their preferred alternative commute method. An additional 9% of respondents preferred to not answer the question.

Question 10 *If you were to use a form of transportation other than driving alone for your work commute, which of the following would work best for you?*

FIGURE 53 PREFERRED ALTERNATIVE COMMUTE MODE AMONG THOSE WHO DRIVE ALONE¹⁸

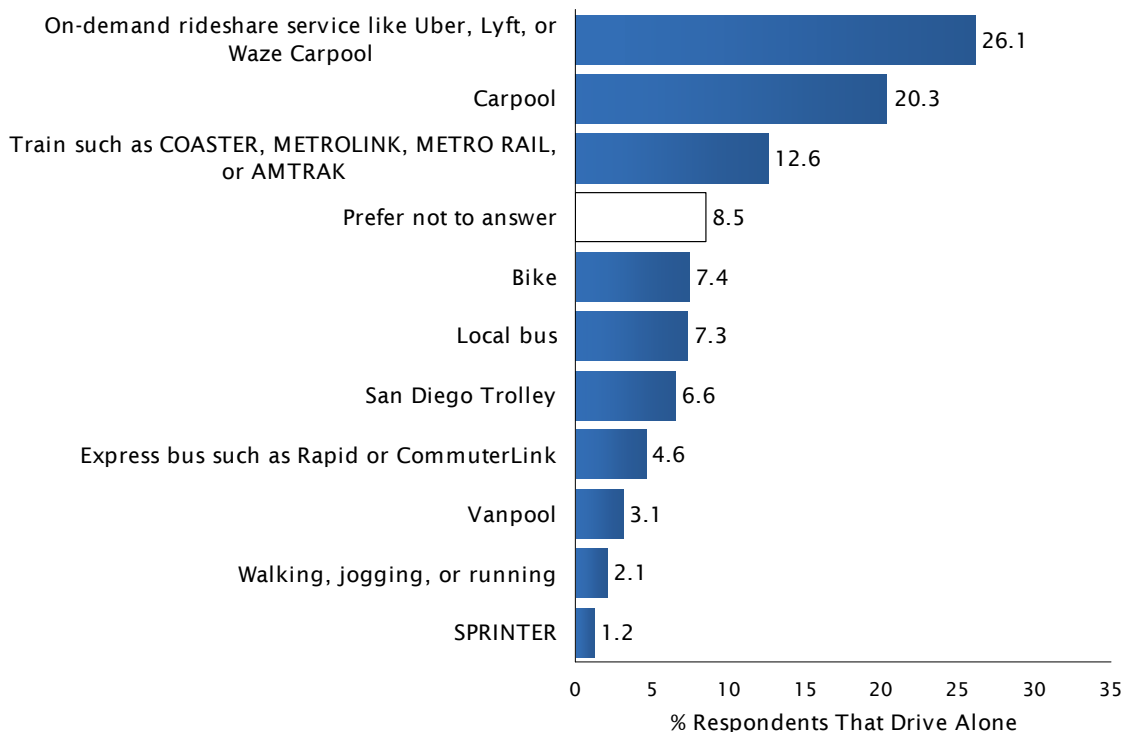


Table 17 shows how preferred alternative modes varied by region of residence and interregional commuter status. When compared to their counterparts, San Diego County residents exhibited a distinct preference for on-demand rideshare services, the San Diego Trolley, and active transportation, whereas residents of Western Riverside County expressed comparatively high interest in carpooling and using a train for their commute.

At a general level, interregional commuters were much more likely than intraregional commuters to prefer using a train, carpooling, and vanpooling for their commute. This general pattern, however, does not hold across all types of interregional commuters. Western Riverside County residents who commute into San Diego County for their work showed a distinct preference for carpooling and vanpooling, whereas residents of Western Riverside County who commute to other areas (typically Orange, San Bernardino, and Los Angeles counties) were most likely to prefer using a train. San Diego County residents who commute out of the county for their jobs, meanwhile, preferred using a train or on-demand rideshare services.

TABLE 17 PREFERRED ALTERNATIVE COMMUTE MODE AMONG THOSE WHO DRIVE ALONE BY REGION, INTERREGIONAL COMMUTER & INTERREGIONAL COMMUTE STATUS

	Region		Interregional Commuter		Interregional Commute Status		
	San Diego County	Western Riverside County	Yes	No	Out of San Diego County	Out of Riverside County Southbound	Out of Riverside County Other
On-demand rideshare service like Uber, Lyft, or Waze Carpool	28.8	20.3	14.7	28.2	24.3	10.4	14.0
Carpool	18.8	23.7	23.1	19.8	11.2	32.0	23.2
Train such as COASTER, METROLINK, METRO RAIL, or AMTRAK	8.2	22.2	37.1	8.2	33.9	19.1	42.2
Prefer not to answer	7.4	10.9	11.7	7.9	13.9	11.7	11.3
Bike	8.7	4.7	0.9	8.6	0.7	0.4	1.0
Local bus	7.3	7.4	0.6	8.6	1.7	0.2	0.4
San Diego Trolley	9.4	0.4	0.8	7.6	2.6	1.7	0.2
Express bus such as Rapid or CommuterLink	4.8	4.1	3.5	4.8	5.5	4.7	2.8
Vanpool	2.7	4.0	6.0	2.6	1.3	17.1	4.2
Walking, jogging, or running	2.2	1.9	0.9	2.3	5.0	0.3	0.3
SPRINTER	1.6	0.4	0.7	1.3	-	2.4	0.4

For the interested reader, Tables 18 and 19 on the next page display alternative commute mode preference within each region by age. Among San Diego County commuters who drive alone, carpool as the preferred alternative generally decreased as age of commuter increased, with those 18 to 24 years of age the most likely to prefer it and those 65 years and older the least likely. Although Western Riverside County commuters 65 years and older were also the least likely to select carpool as their preferred alternative mode, interest was relatively consistent among commuters 18 to 64 years of age.

18. Pooled vs. non-pooled on-demand rideshare services were not differentiated at Question 10.

TABLE 18 PREFERRED ALTERNATIVE COMMUTE MODE AMONG SAN DIEGO COUNTY RESIDENTS WHO DRIVE ALONE BY AGE

	Age (QD4)					
	16 to 24	25 to 34	35 to 44	45 to 54	55 to 64	65 and older
On-demand rideshare service like Uber, Lyft, or Waze Carpool	31.7	31.8	31.7	21.6	26.4	28.0
Carpool	26.5	21.7	16.1	17.2	14.1	9.6
San Diego Trolley	6.8	10.5	9.3	12.0	8.8	9.4
Bike	8.6	8.5	9.2	9.4	8.1	4.9
Train such as COASTER, METROLINK, METRO RAIL, or AMTRAK	6.1	8.0	7.1	10.5	9.5	8.2
Prefer not to answer	4.8	2.5	6.5	9.7	12.4	16.5
Local bus	9.7	7.2	6.8	5.3	7.8	11.3
Express bus such as Rapid or CommuterLink	-	2.5	8.4	6.5	6.1	8.1
Vanpool	-	2.4	2.6	4.1	4.0	1.1
Walking, jogging, or running	5.5	1.5	1.0	2.6	1.3	1.6
SPRINTER	0.2	3.4	1.2	1.1	1.5	1.3

TABLE 19 PREFERRED ALTERNATIVE COMMUTE MODE AMONG WESTERN RIVERSIDE COUNTY RESIDENTS WHO DRIVE ALONE BY AGE

	Age (QD4)					
	16 to 24	25 to 34	35 to 44	45 to 54	55 to 64	65 and older
Carpool	26.6	24.5	22.3	24.9	22.8	14.6
Train such as COASTER, METROLINK, METRO RAIL, or AMTRAK	18.5	24.8	24.5	20.7	22.1	13.5
On-demand rideshare service like Uber, Lyft, or Waze Carpool	24.3	27.2	19.9	15.4	14.4	12.6
Prefer not to answer	2.0	8.6	8.9	13.0	18.3	30.3
Local bus	14.3	5.4	9.0	4.3	6.6	10.0
Bike	7.9	1.9	4.7	6.4	3.8	2.9
Express bus such as Rapid or CommuterLink	2.5	4.8	2.4	6.9	2.6	5.4
Vanpool	3.2	1.2	5.4	4.8	6.8	4.4
Walking, jogging, or running	0.7	1.6	1.2	2.6	1.5	6.3
SPRINTER	-	-	1.1	0.6	0.2	-
San Diego Trolley	-	-	0.7	0.5	0.9	-

WHY DOES A PARTICULAR ALTERNATIVE MODE WORK BEST? Having identified the alternative mode that works best for a respondent's commute, the survey next asked the respondent to explain *why* that mode works best. Question 11 was presented in an open-ended manner, thereby allowing respondents to explain their reasoning in their own words without being prompted by (or constrained to) a particular list of options. True North later reviewed the verbatim responses and grouped them into the categories shown in Figure 54 on the next page.¹⁹

Among solo drivers who indicated a particular alternative mode would work best for their commute, the most common reasons for their selection included convenience (19%) and that it is the fastest option (17%), followed by there is a transit station or carpool stop close by (8%), and cost/that mode is less expensive (8%).²⁰ Table 20 lists the top 5 reasons mentioned for selecting a

19.Only response categories cited by at least 2% of respondents who drive alone are shown in Figure 54.

20.A small percentage of respondents did not choose an alternative mode in response to Question 10. For these respondents, Question 11 asked "Is there a particular reason why none of those options would work best for you?". Among this group, top responses were type of work (28%), not convenient (15%), no other options fit commute/work demands (10%), no particular reason (10%), and prefer to drive/flexibility (7%). The following subgroups were the most likely to indicate that their type of work prohibited them from choosing an alternative commute mode: respondents who work fewer than 30 hours per week, commute more than 60 minutes one way, work in the private sector, have fewer than 10 employees at their primary workplace, respondents who listed their occupation as craft and repair or protective services, and those in the construction or energy and natural resources industries.

particular alternative mode according to the mode category selected and Table 21 displays the top five reasons by region.

Question 11 *Is there a particular reason why <<insert option selected in Q10>> would work best for you? If Q10 = 99, ask: Is there a particular reason why none of those options would work best for you?*

FIGURE 54 REASON FOR CHOOSING ALTERNATIVE COMMUTE MODE

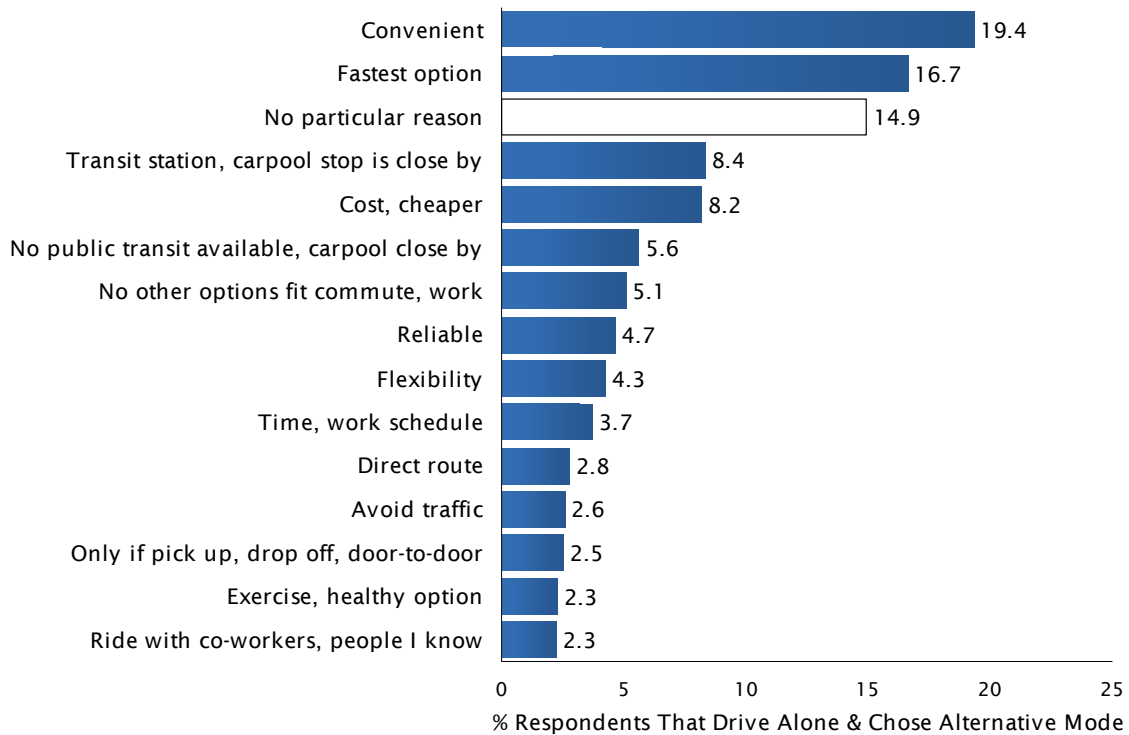


TABLE 20 TOP 5 REASONS FOR CHOOSING ALTERNATIVE MODE BY PREFERRED ALTERNATIVE COMMUTE MODE

Preferred Alternative Commute Mode (Q10)				
Carpool / Vanpool	Public Transit	Biking / Walking, Jogging, or Running	On-Demand Rideshare Service	No Mode Chosen (Prefer Not to Answer)
No particular reason	Transit station, carpool stop is close by	Convenient	Convenient	Type of work
Fastest option	Fastest option	Exercise, healthy option	Fastest option	Not convenient
Cost, cheaper	No particular reason	No particular reason	Reliable	No other options fit commute, work
Convenient	Convenient	Fastest option	Flexibility	No particular reason
No public transit available, carpool close by	Cost, cheaper	Flexibility	Only if pick up, drop off, door-to-door	Prefer to drive, flexibility

TABLE 21 TOP 5 REASONS FOR CHOOSING ALTERNATIVE MODE BY REGION

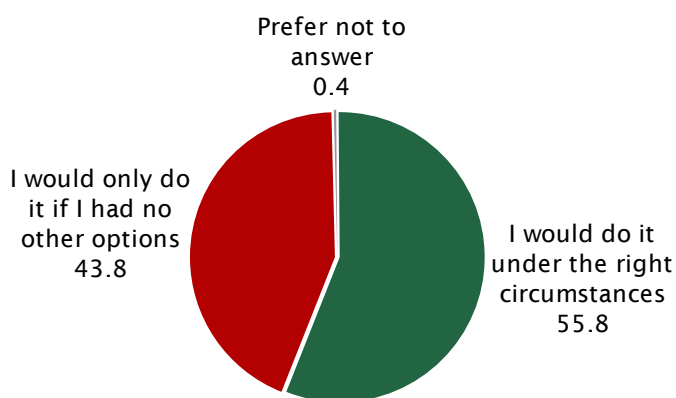
Region	
San Diego County	Western Riverside County
Convenient	No particular reason
Fastest option	Convenient
No particular reason	Fastest option
Transit station, carpool stop is close by	Cost, cheaper
Cost, cheaper	Transit station, carpool stop is close by

LITMUS TEST FOR ALTERNATIVE MODE The next question in this series asked those who currently drive alone to work to choose which statement best matches their overall attitude about using their preferred alternative mode at least once per week to commute to work: *I would only do it if I had no other options*, or *I would do it under the right circumstances*. Because the second statement allows the respondent to define what they consider the *right circumstances*, Question 12 is a useful litmus test for identifying employees who are not in the potential market for their preferred alternative mode because they are unwilling to use it at least once per week for their work commute even under the right circumstances.

Overall, 56% of employees who currently drive alone to work indicated that they would commute to work at least once per week using their preferred alternative mode under the right circumstances, whereas 44% were unwilling to do so unless they had no other options (Figure 55).

Question 12 Which of the following statements best matches your attitude about using <insert option selected in Q10> to commute to work at least once per week?

FIGURE 55 ATTITUDE TOWARD USING ALTERNATIVE COMMUTE MODE AT LEAST ONCE PER WEEK AMONG THOSE THAT DRIVE ALONE AND PROVIDED ALTERNATIVE COMMUTE MODE



The following figures illustrate how a willingness to use an alternative mode at least once per week for their work commute varied by the preferred mode, region, and interregional commuter status (see Figure 56), among subgroups of San Diego County residents (see Figures 57 & 58), and among subgroups of Western Riverside County residents (see Figures 59 & 60). In general, a willingness to use an alternative mode for their work commute at least once per week was highest for those who preferred active

transportation and public transit, interregional commuters, those who work at a location that does not have free parking available, employees over the age of 34, and males.

FIGURE 56 WOULD USE ALTERNATIVE MODE AT LEAST ONCE PER WEEK UNDER RIGHT CIRCUMSTANCES BY PREFERRED ALTERNATIVE COMMUTE MODE, REGION, INTERREGIONAL COMMUTER & INTERREGIONAL COMMUTE STATUS AMONG THOSE THAT DRIVE ALONE

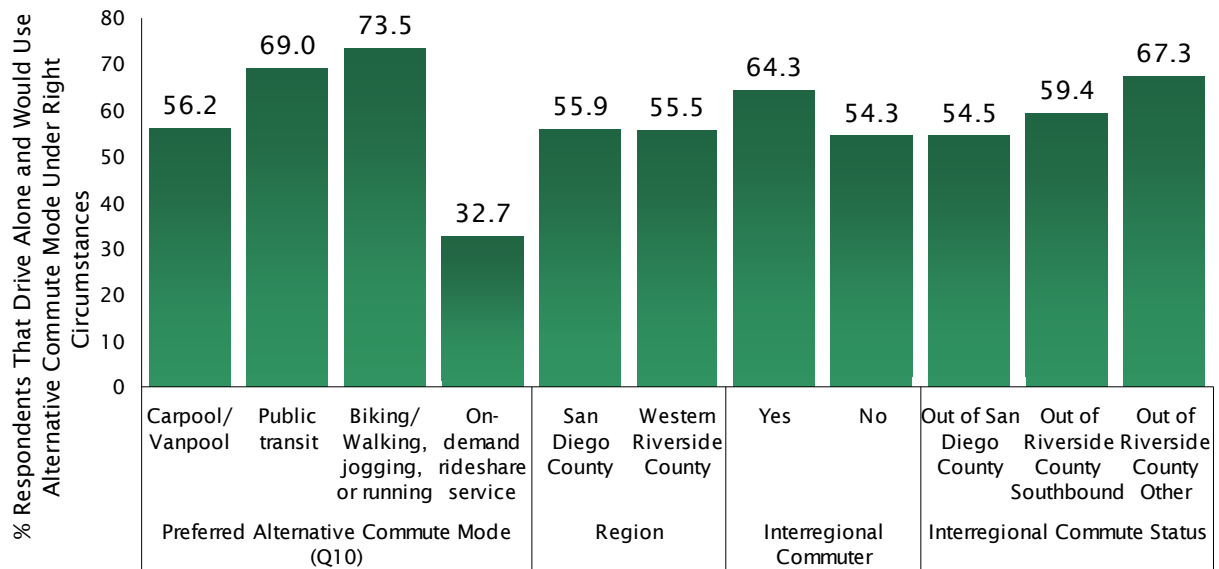


FIGURE 57 WOULD USE ALTERNATIVE MODE AT LEAST ONCE PER WEEK UNDER RIGHT CIRCUMSTANCES BY HOURS WORKED PER WEEK, BUSINESS TYPE, FREE PARKING AT WORK SITE, AGE & GENDER AMONG SAN DIEGO COUNTY RESIDENTS THAT DRIVE ALONE

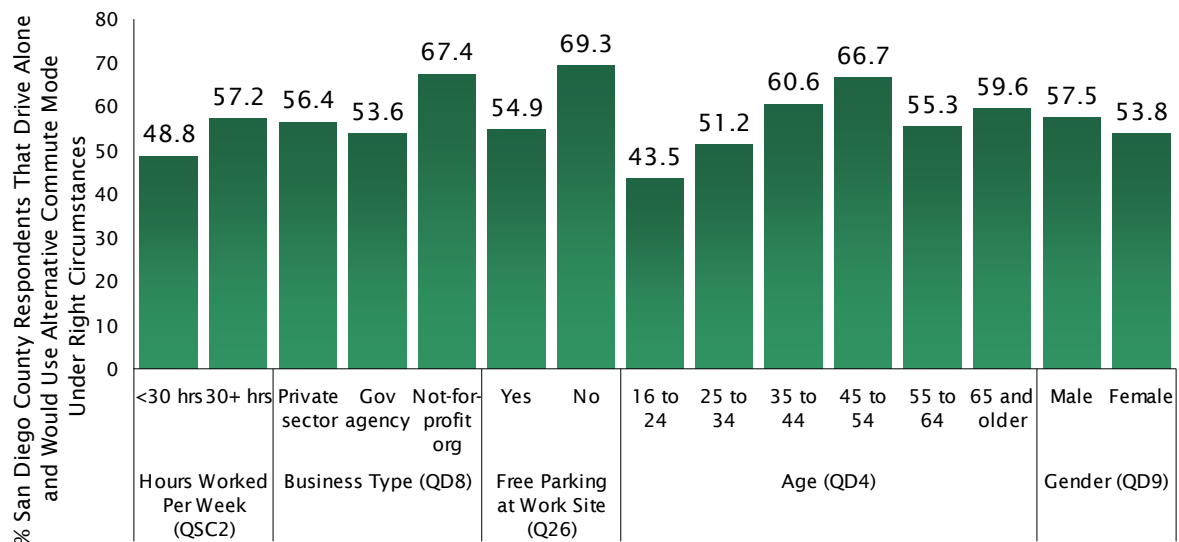


FIGURE 58 WOULD USE ALTERNATIVE MODE AT LEAST ONCE PER WEEK UNDER RIGHT CIRCUMSTANCES BY SUBREGION, INTERREGIONAL COMMUTER & INTERREGIONAL COMMUTE DESTINATION AMONG SAN DIEGO COUNTY RESIDENTS THAT DRIVE ALONE

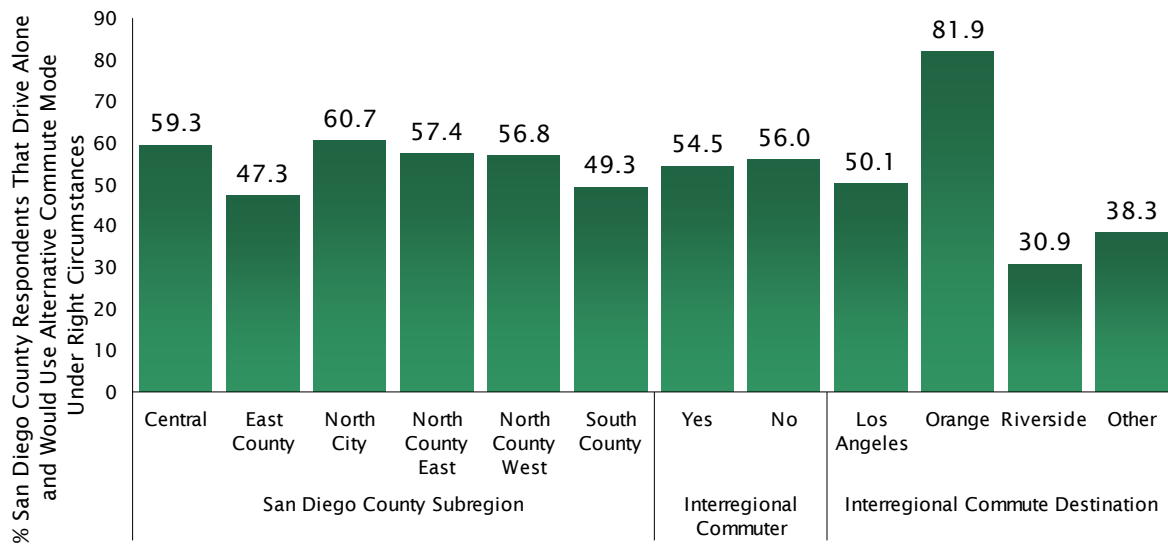


FIGURE 59 WOULD USE ALTERNATIVE MODE AT LEAST ONCE PER WEEK UNDER RIGHT CIRCUMSTANCES BY HOURS WORKED PER WEEK, BUSINESS TYPE, FREE PARKING AT WORK SITE, AGE & GENDER AMONG WESTERN RIVERSIDE COUNTY RESIDENTS THAT DRIVE ALONE

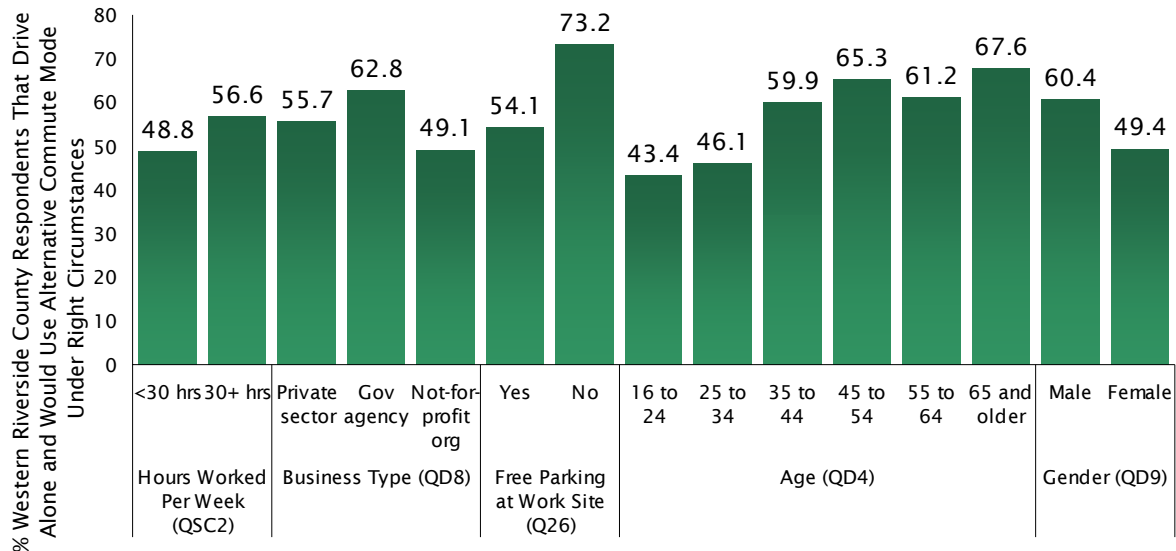
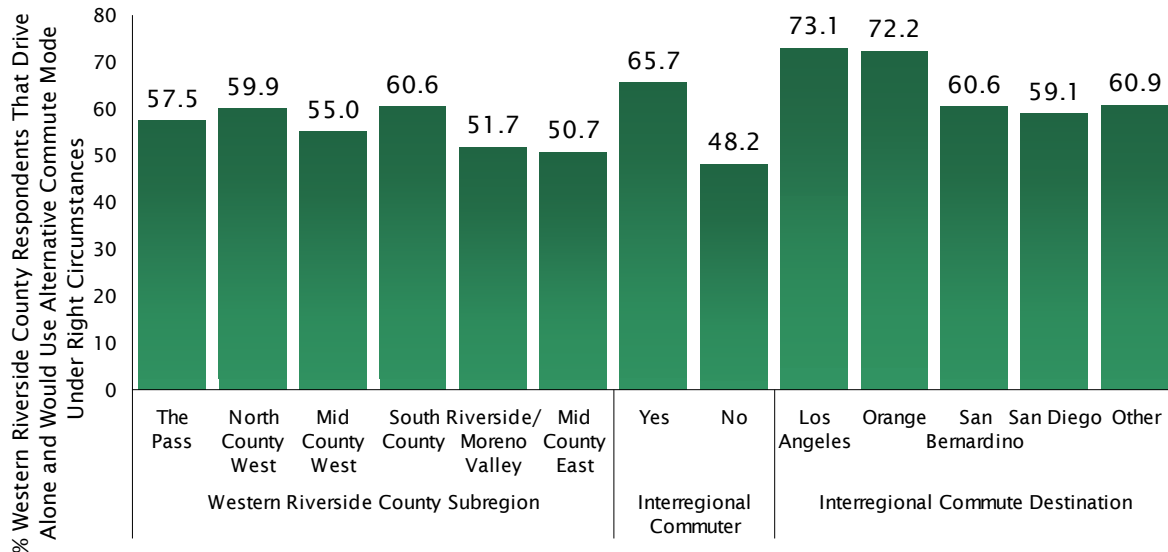


FIGURE 60 WOULD USE ALTERNATIVE MODE AT LEAST ONCE PER WEEK UNDER RIGHT CIRCUMSTANCES BY SUBREGION, INTERREGIONAL COMMUTER & INTERREGIONAL COMMUTE DESTINATION AMONG WESTERN RIVERSIDE COUNTY RESIDENTS THAT DRIVE ALONE



WHAT WOULD MAKE IT EASIER TO USE ALTERNATIVE MODE? Employees who indicated they would use an alternative mode for their work commute at least once per week under the right circumstances were subsequently asked to indicate what would make it easier for them to do so. In other words, what constitutes the *right circumstances*?

Question 13 was presented in an open-ended manner to allow respondents to mention any condition that came to mind without being prompted by or constrained to a particular list of options. True North later reviewed the verbatim responses and grouped them into the categories shown in Figure 61. Among the most common conditions mentioned were cheaper/better prices or discounts (14%), finding people to commute with that share the same schedule/people they know (11%), having a station/stop closer to their work and/or home (10%), and better times/increased frequency/convenient schedules (10%). Table 22 shows how the conditions respondents mentioned that would make it easier for them to use an alternative mode for their commute varied by the *type* of alternative mode they preferred to use.

Question 13 What would make it easier for you to use <<insert option selected in Q10>> for your work commute at least once per week?

FIGURE 61 CONDITIONS THAT WOULD MAKE IT EASIER TO USE ALTERNATIVE COMMUTE MODE AMONG THOSE THAT DRIVE ALONE & WOULD USE ALTERNATIVE UNDER RIGHT CIRCUMSTANCES ²¹

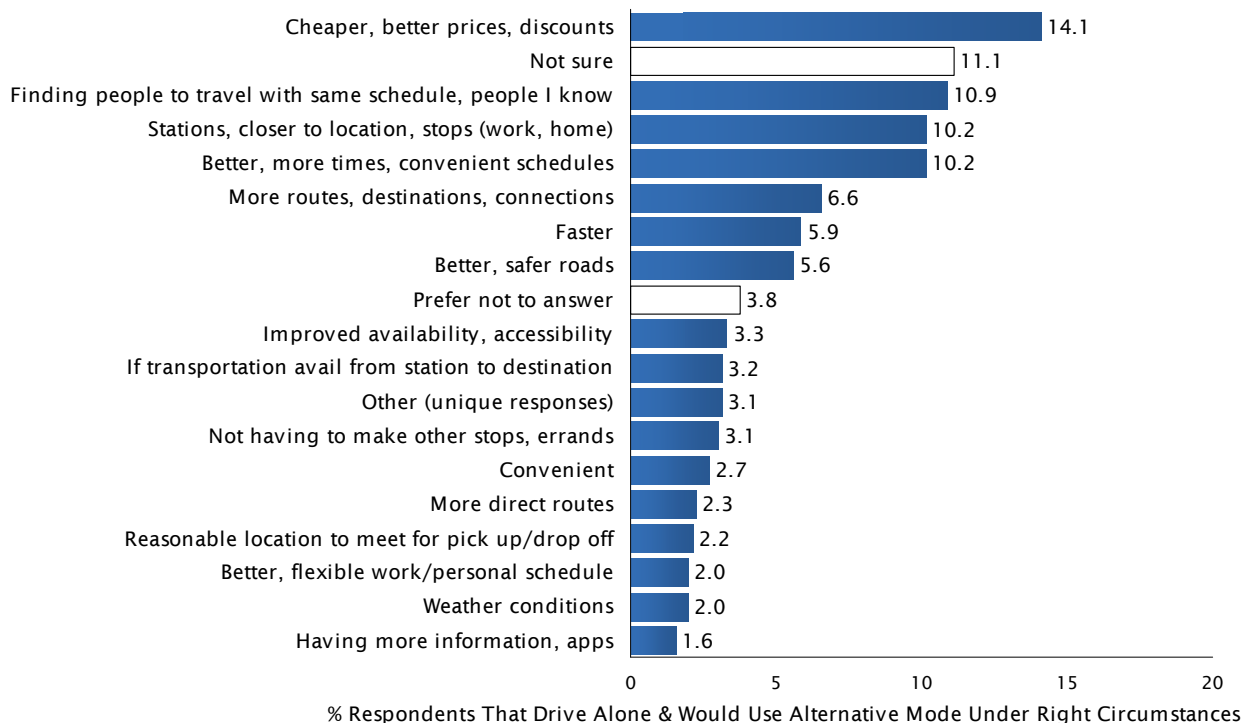


TABLE 22 TOP 5 CONDITIONS THAT WOULD MAKE IT EASIER TO USE ALTERNATIVE COMMUTE MODE AMONG THOSE THAT DRIVE ALONE & WOULD USE ALTERNATIVE UNDER RIGHT CIRCUMSTANCES BY PREFERRED ALTERNATIVE

Preferred Alternative Commute Mode (Q10)			
Carpool / Vanpool	Public Transit	Biking / Walking, Jogging, or Running	On-Demand Rideshare Service
Finding people to travel with same schedule, people I know	Stations, closer to location, stops (work, home)	Better, safer roads	Cheaper, better prices, discounts
Not sure	Better, more times, convenient schedules	Weather conditions	Not sure
Not having to make other stops, errands	More routes, destinations, connections	Not sure	Prefer not to answer
Cheaper, better prices, discounts	Faster	Showers provided at work	Not having access to own car
Other (unique responses)	Cheaper, better prices, discounts	Safer	Convenient

21. Only response categories cited by at least 1.5% of respondents who drive alone and would use alternative mode under right circumstances are shown in Figure 61.

Whereas Question 13 prompted respondents in an open-ended way to identify the conditions that would make it easier for them to use an alternative mode, Question 14 presented a list of specific conditions and asked respondents to indicate, for each condition, whether it would make them more likely to use their preferred alternative mode for their work commute at least once per week. The list of conditions tested was tailored to the respondent's preferred mode, and are thus presented separately for carpool and vanpool (see Figure 62), transit (see Figure 63), on-demand rideshare services (see Figure 64), biking (see Figure 65), and walking, jogging or running (see Figure 66).

Among those who indicated carpooling or vanpooling was their preferred alternative mode (see Figure 62), a guaranteed ride home in case of emergencies or unscheduled overtime (84% much or somewhat more likely), a \$50 per month incentive for not driving to and parking at your work site (83%), and being able to get to work in about the same amount of time as driving alone (78%) were viewed as the conditions most likely to increase their use of carpooling/vanpooling for their work commute.

Employees who preferred public transit (see Figure 63) found a more frequent transit schedule (90%), being able to get to work in about the same amount of time as driving alone (90%), and having a convenient way to get from a transit station to their work and home (89%) as being the changes most likely to increase their use of public transit for their work commute.

Solo drivers who indicated that their preferred alternative mode for their work commute was an on-demand rideshare service like Uber, Lyft, or Waze Carpool (see Figure 64) indicated that a \$50 per month incentive for not driving to and parking at your work site (84%), a guaranteed ride home in case of emergencies or unscheduled overtime (80%), and being able to get to work in about the same amount of time as driving alone (74%) were the changes most likely to increase their use of an on-demand rideshare service for their work commute.

Question 14 As I read the following items, I'd like to know whether it would make you more likely to use << insert option selected in Q10>> for your work commute at least once per week. Here is the (first/next) one: _____. Realistically, would this make you more likely to use << insert option selected in Q10>> for your work commute at least once per week, or would have no impact? If says 'more likely', ask: Would that be much more likely, or somewhat more likely?

FIGURE 62 FACTORS INFLUENCING USE OF CARPOOL/VANPOOL TO WORK AT LEAST ONCE PER WEEK AMONG THOSE THAT DRIVE ALONE

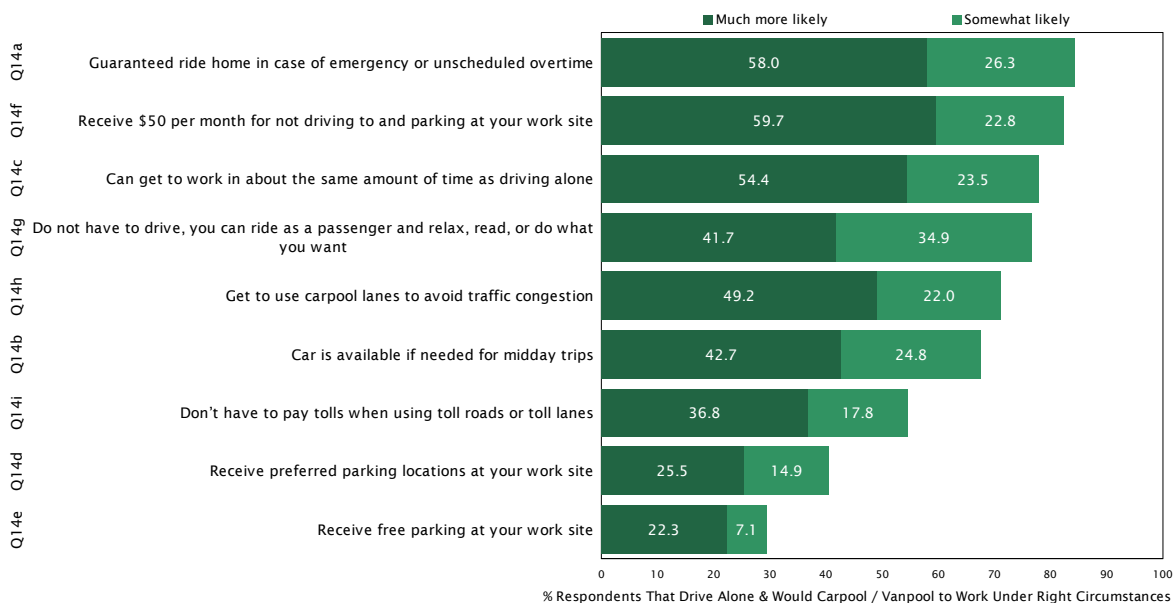


FIGURE 63 FACTORS INFLUENCING USE OF PUBLIC TRANSIT TO WORK AT LEAST ONCE PER WEEK AMONG THOSE THAT DRIVE ALONE²²

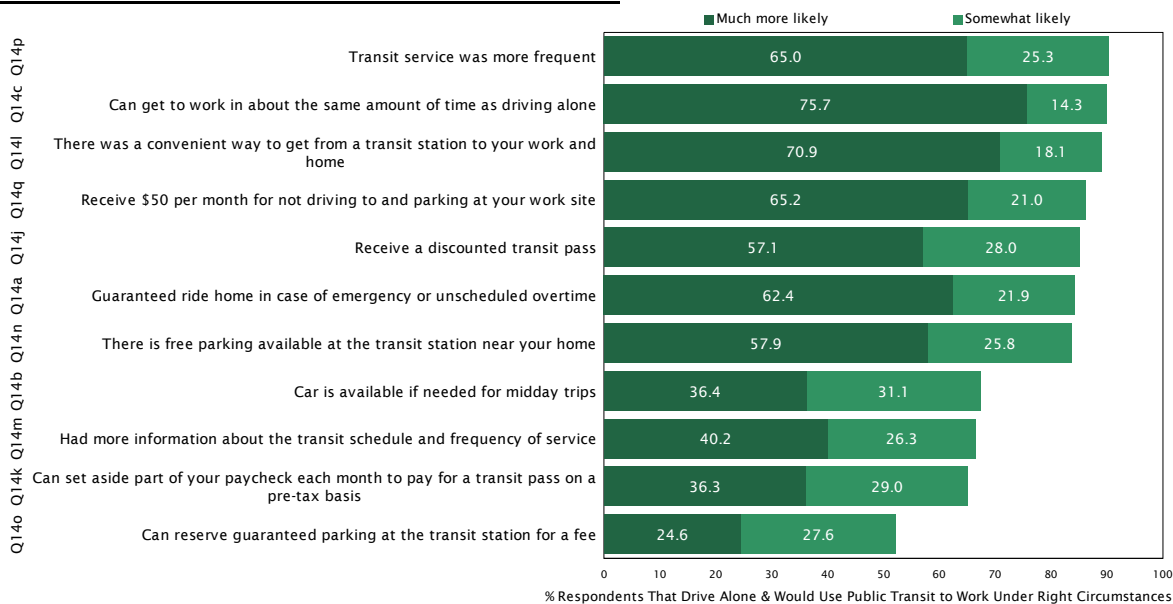
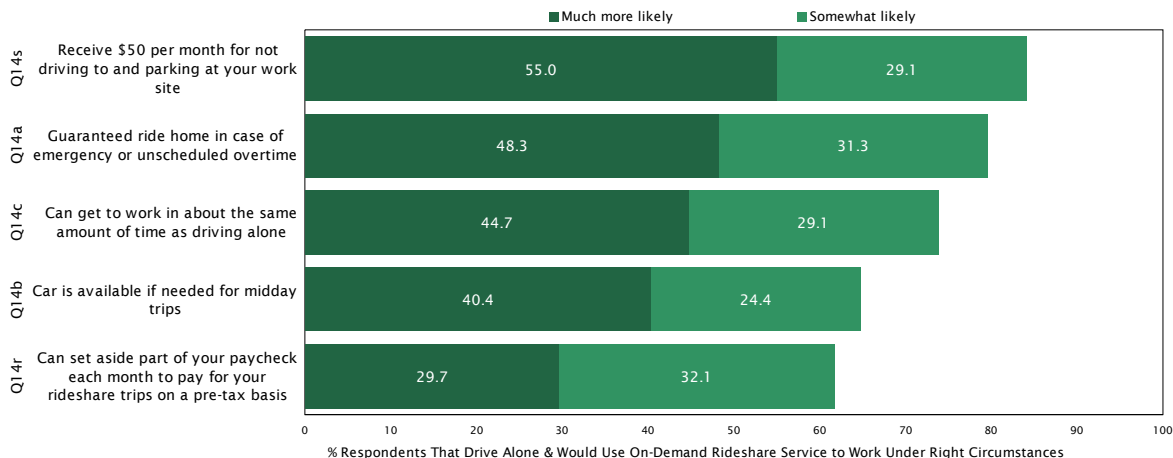
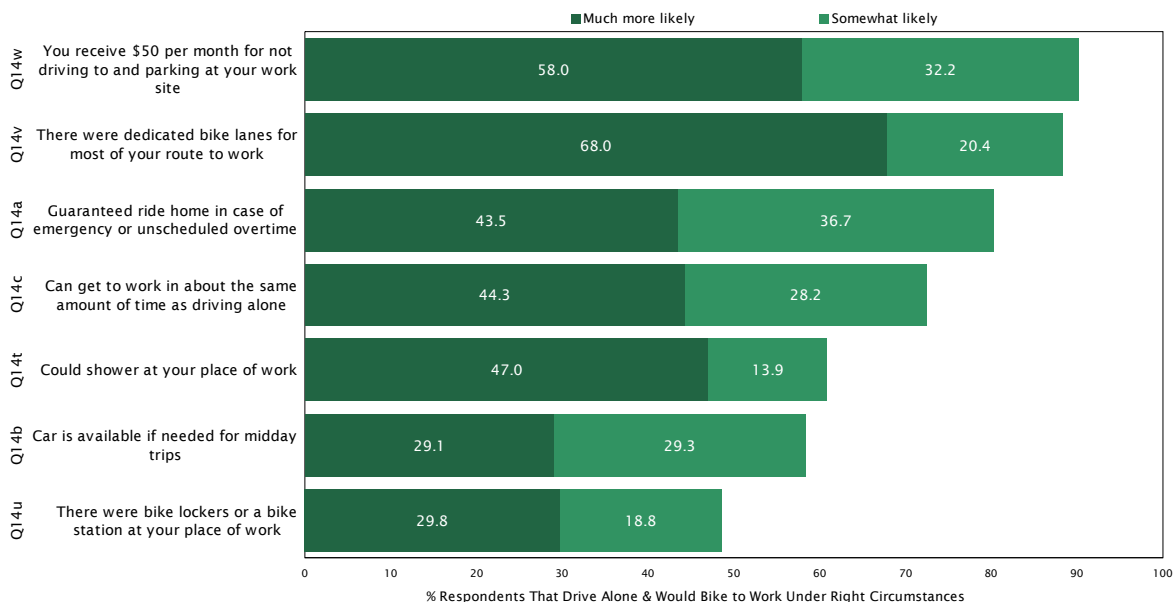


FIGURE 64 FACTORS INFLUENCING USE OF ON-DEMAND RIDESHARE SERVICE TO WORK AT LEAST ONCE PER WEEK AMONG THOSE THAT DRIVE ALONE



Commuters who considered biking to work as their preferred alternative mode (Figure 65) found a \$50 per month incentive for not driving to and parking at their work site to be the condition most likely to get them to use that alternative mode for their work commute (90%), followed by the presence of dedicated bike lanes for most of their route to work (88%), and a guaranteed ride home in case of emergencies or unscheduled overtime (80%).

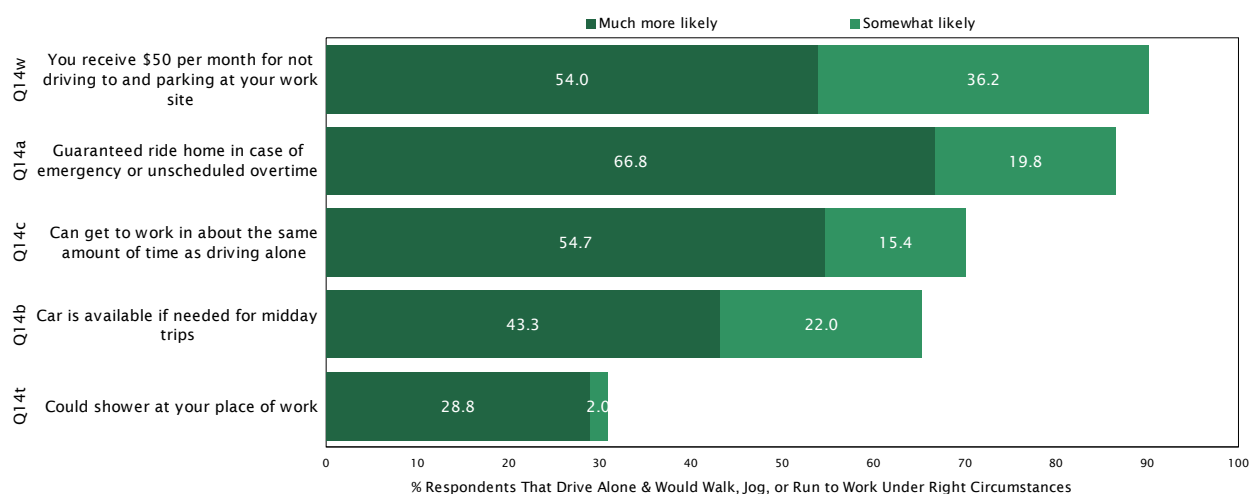
FIGURE 65 FACTORS INFLUENCING BIKING TO WORK AT LEAST ONCE PER WEEK AMONG THOSE THAT DRIVE ALONE



22. Respondents who currently drive alone to work, preferred transit as their alternative mode, *and* indicated that having free parking available at the transit station and/or the ability to reserve guaranteed parking at the transit station for a fee would make them much more likely to use transit for their commute were asked in Question 15 whether they would consider using on-demand rideshare for the first/last mile portion of their commute. Approximately half (52%) indicated they would consider using on-demand rideshare for this purpose.

Those who preferred to walk, jog, or run to work as their alternative commute mode (Figure 66) likewise found a \$50 per month incentive for not driving to and parking at their work site to be the condition most likely to get them to use that alternative mode for their work commute (90%), followed by a guaranteed ride home in case of emergencies or unscheduled overtime (87%), and being able to get to work in about the same amount of time as driving alone (70%).

FIGURE 66 FACTORS INFLUENCING WALKING, JOGGING, OR RUNNING TO WORK AT LEAST ONCE PER WEEK AMONG THOSE THAT DRIVE ALONE



Figures 67-71 display the influence of factors on San Diego County respondents' likelihood of using their preferred alternative mode for their work commute at least once per week.

FIGURE 67 FACTORS INFLUENCING USE OF CARPOOL/VANPOOL TO WORK AT LEAST ONCE PER WEEK AMONG SAN DIEGO COUNTY RESIDENTS THAT DRIVE ALONE

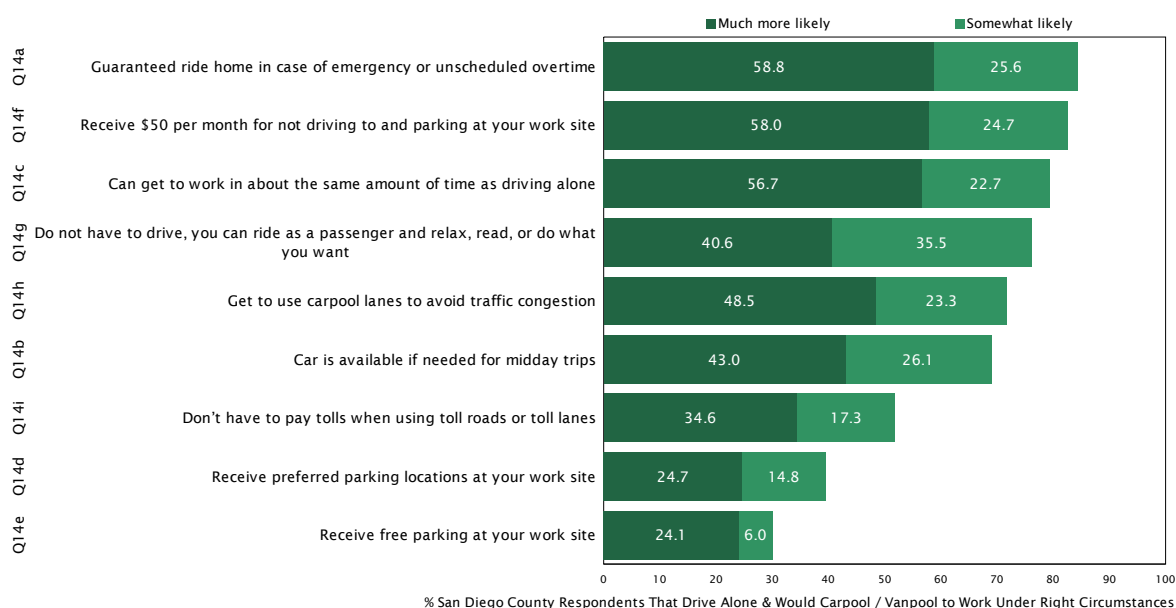


FIGURE 68 FACTORS INFLUENCING USE OF PUBLIC TRANSIT TO WORK AT LEAST ONCE PER WEEK AMONG SAN DIEGO COUNTY RESIDENTS THAT DRIVE ALONE²³

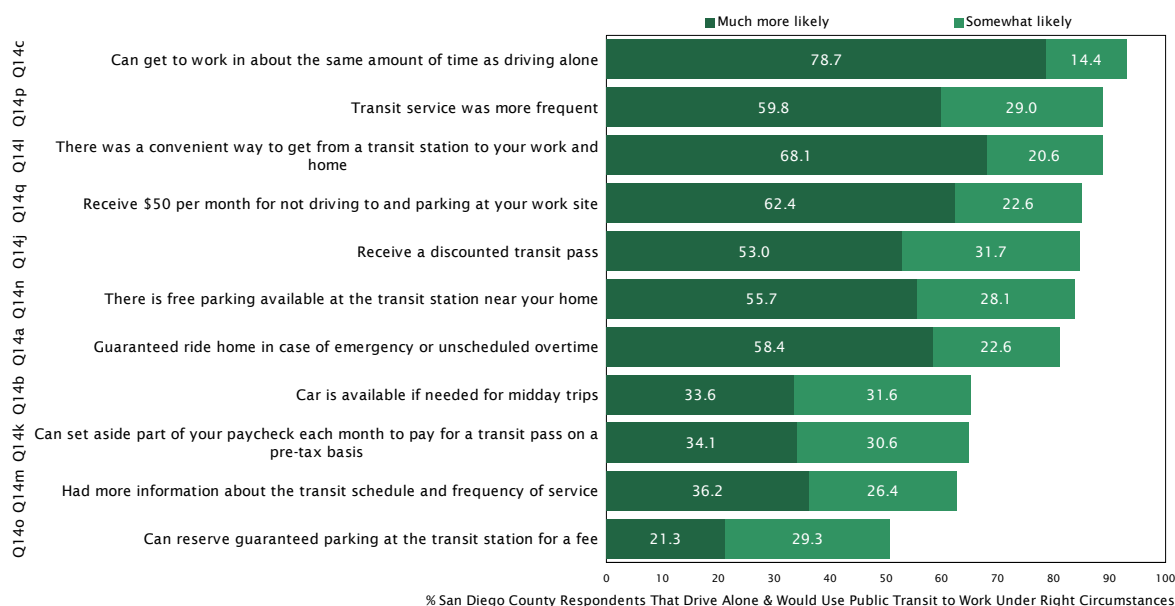
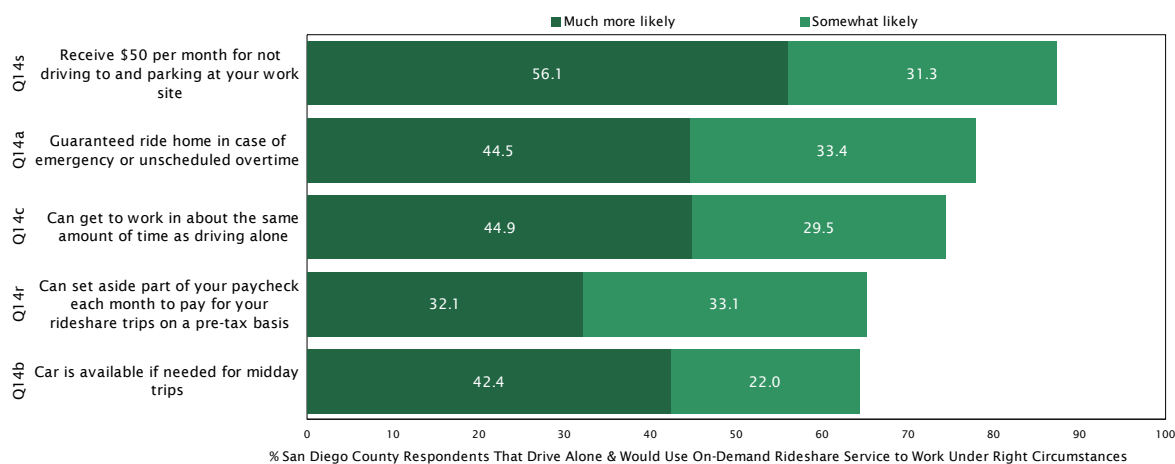


FIGURE 69 FACTORS INFLUENCING USE OF ON-DEMAND RIDESHARE SERVICE TO WORK AT LEAST ONCE PER WEEK AMONG SAN DIEGO COUNTY RESIDENTS THAT DRIVE ALONE



23. San Diego County respondents who currently drive alone to work, preferred transit as their alternative mode, and indicated that having free parking available at the transit station and/or the ability to reserve guaranteed parking at the transit station for a fee would make them much more likely to use transit for their commute were asked in Question 15 whether they would consider using on-demand rideshare for the first/last mile portion of their commute. Approximately half (53%) indicated they would consider using on-demand rideshare for this purpose.

FIGURE 70 FACTORS INFLUENCING BIKING TO WORK AT LEAST ONCE PER WEEK AMONG SAN DIEGO COUNTY RESIDENTS THAT DRIVE ALONE

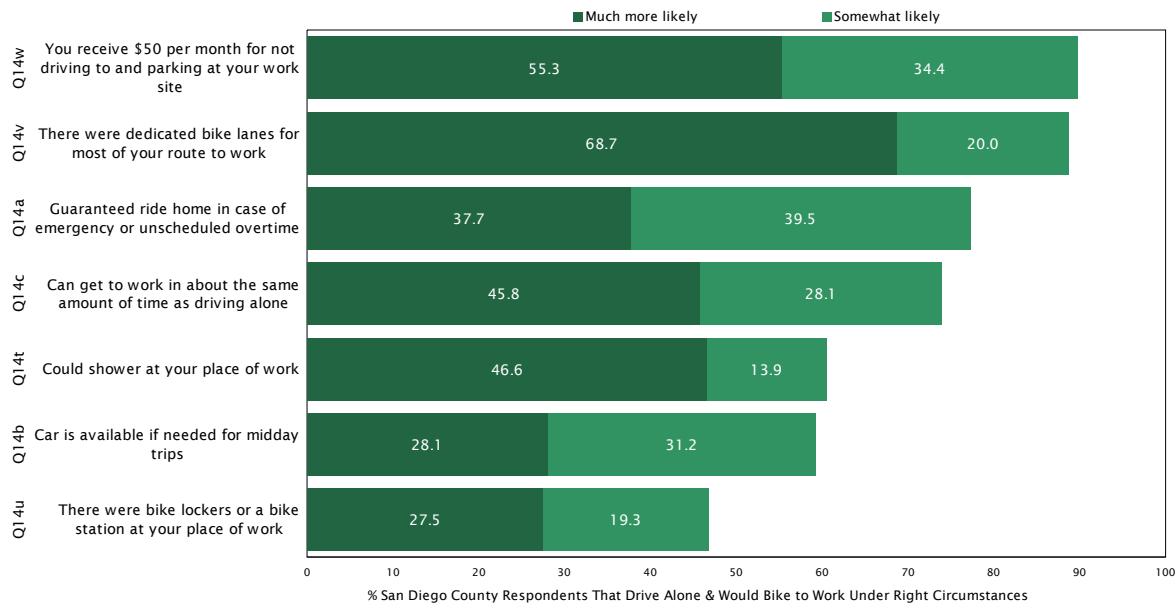
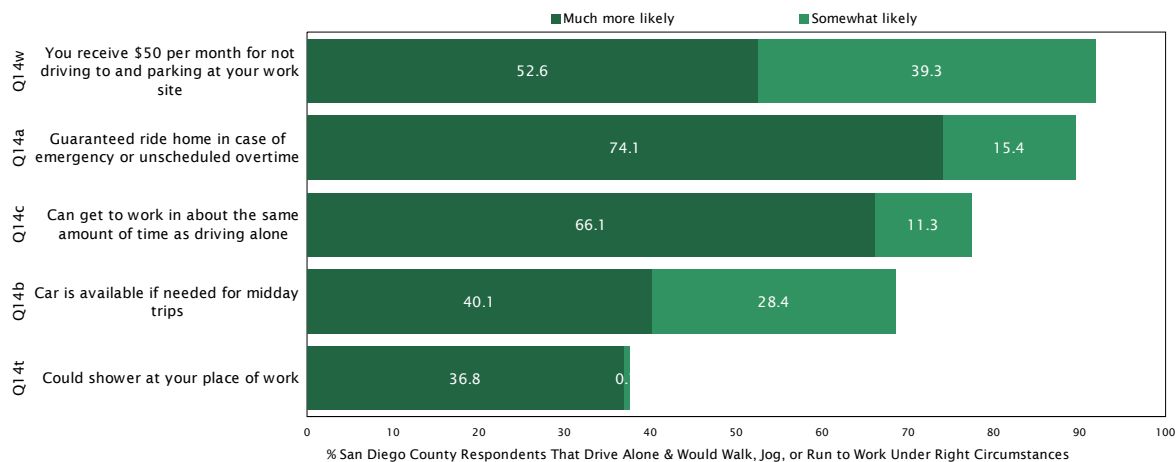


FIGURE 71 FACTORS INFLUENCING WALKING, JOGGING, OR RUNNING TO WORK AT LEAST ONCE PER WEEK AMONG SAN DIEGO COUNTY RESIDENTS THAT DRIVE ALONE



Figures 72-76 display the influence of factors on Western Riverside County respondents' likelihood of using their preferred alternative mode for their work commute at least once per week.

FIGURE 72 FACTORS INFLUENCING USE OF CARPOOL/VANPOOL TO WORK AT LEAST ONCE PER WEEK AMONG WESTERN RIVERSIDE COUNTY RESIDENTS THAT DRIVE ALONE

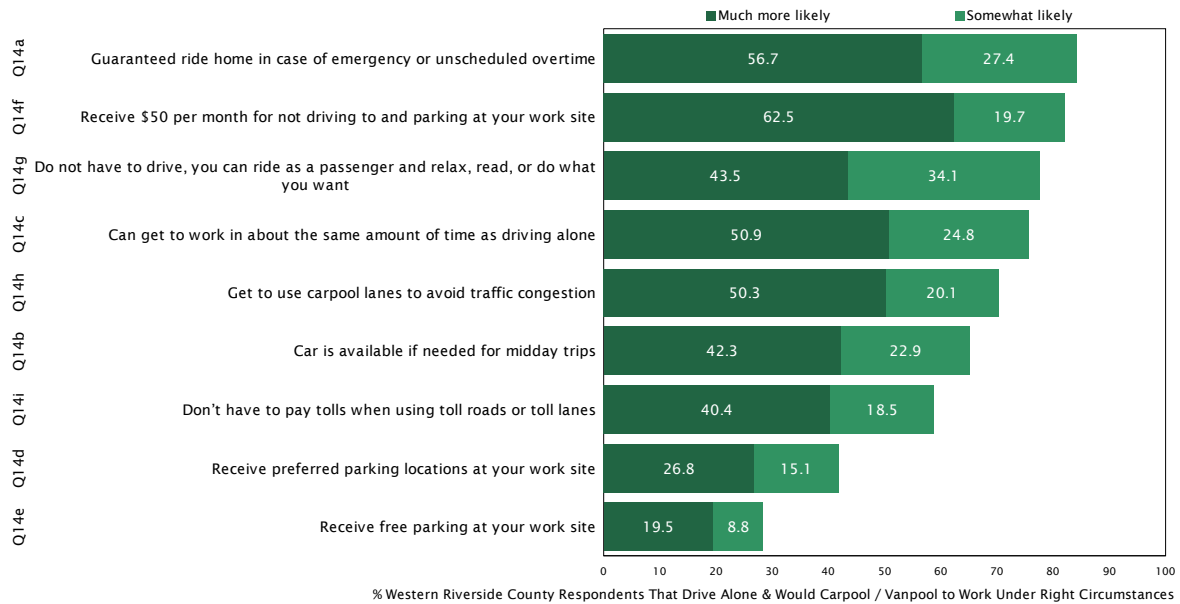


FIGURE 73 FACTORS INFLUENCING USE OF PUBLIC TRANSIT TO WORK AT LEAST ONCE PER WEEK AMONG WESTERN RIVERSIDE COUNTY RESIDENTS THAT DRIVE ALONE²⁴

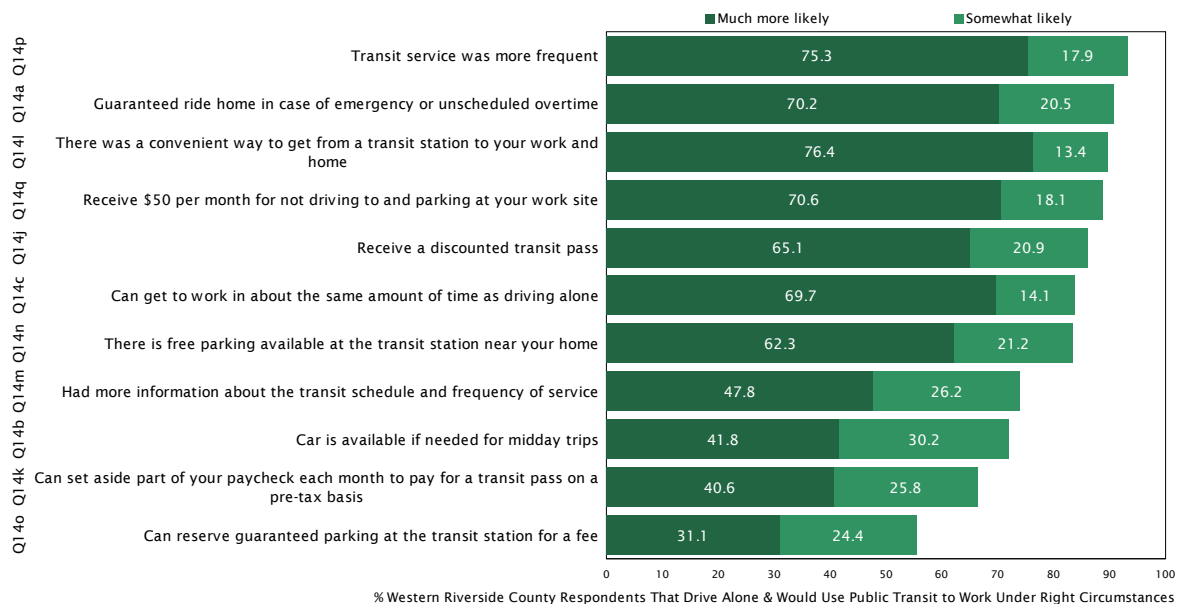


FIGURE 74 FACTORS INFLUENCING USE OF ON-DEMAND RIDESHARE SERVICE TO WORK AT LEAST ONCE PER WEEK AMONG WESTERN RIVERSIDE COUNTY RESIDENTS THAT DRIVE ALONE

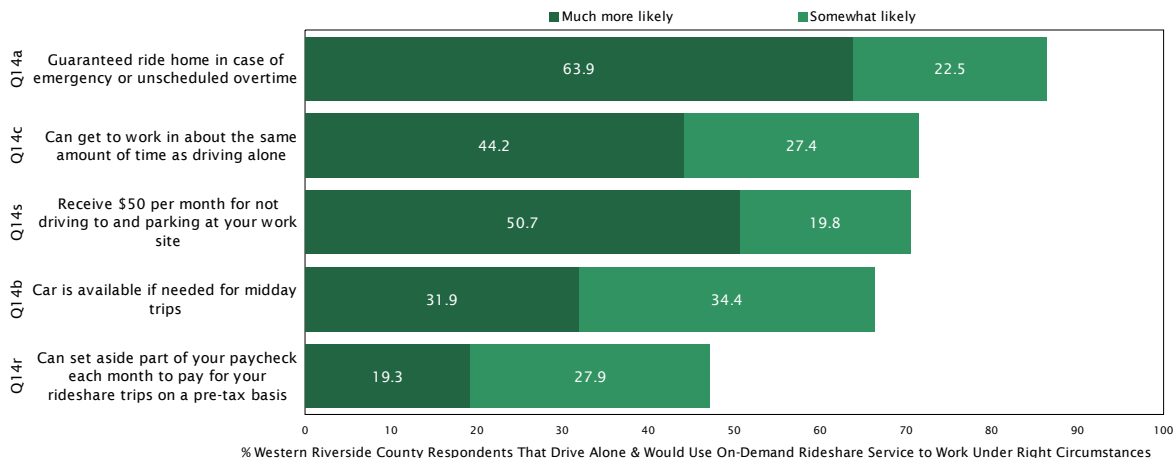
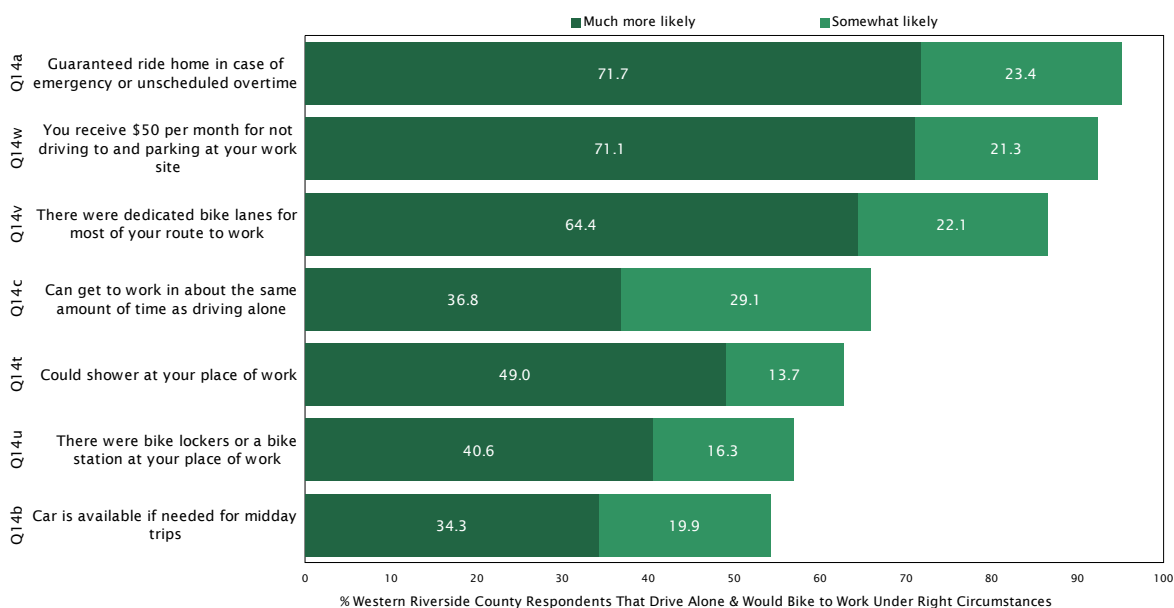
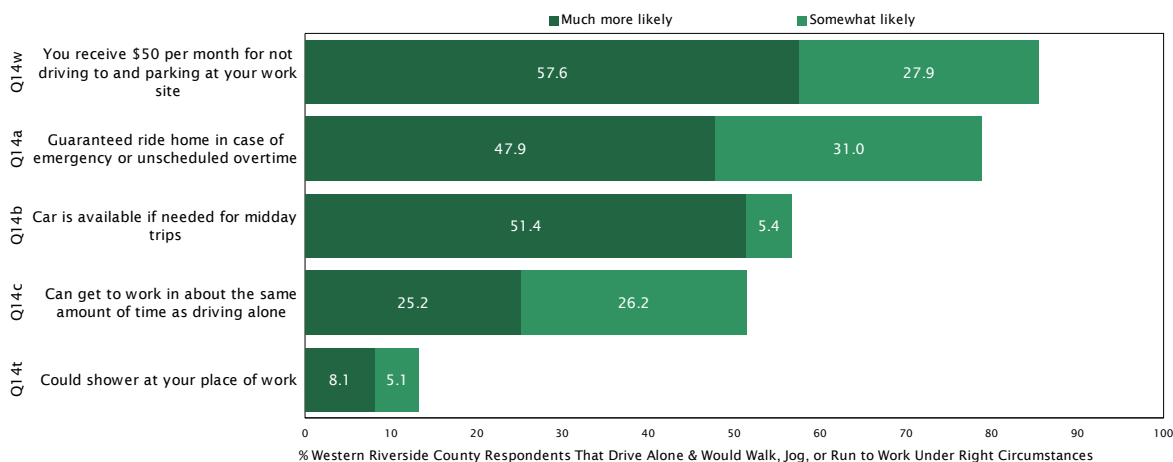


FIGURE 75 FACTORS INFLUENCING BIKING TO WORK AT LEAST ONCE PER WEEK AMONG WESTERN RIVERSIDE COUNTY RESIDENTS THAT DRIVE ALONE



24. Western Riverside County respondents who currently drive alone to work, preferred transit as their alternative mode, *and* indicated that having free parking available at the transit station and/or the ability to reserve guaranteed parking at the transit station for a fee would make them much more likely to use transit for their commute. When asked in Question 15 whether they would consider using on-demand rideshare for the first/last mile portion of their commute, approximately half (51%) indicated they would consider using on-demand rideshare for this purpose.

FIGURE 76 FACTORS INFLUENCING WALKING, JOGGING, OR RUNNING TO WORK AT LEAST ONCE PER WEEK AMONG WESTERN RIVERSIDE COUNTY RESIDENTS THAT DRIVE ALONE²⁵



MARKET TARGET SUMMARY One of the primary goals of this study was to profile the potential market for alternative modes among commuters who current drive alone. Rather than assume that *all* employees who commute to work are in the market for using an alternative mode, we operated from the premise that the market is comprised of tiers—with some employees sharing criteria that make them very good targets, others sharing criteria that make them moderately good targets, some having a profile that places them at the margins of the market, and still others that are not within the potential market for using an alternative mode.

A respondent's position in the market was based on several criteria, including whether the mode was their preferred alternative for their commute, their willingness to use it under the right conditions, and the impact that various conditions would have on their likelihood of using the mode for their commute in the future. These criteria were combined to establish the following tiers.

Top Targets The most promising potential users of alternative modes for their commute indicated that they would use their preferred alternative mode under the right conditions *and* that at least half of the conditions tested in Question 14 would make them much more likely to use their preferred alternative mode in the future for their work commute.

Mid-Level Targets Respondents in this group indicated that they would use their preferred alternative mode for their commute under the right conditions, but also indicated that less than half of the conditions tested in Question 14 would make them much more likely to use their preferred alternative mode in the future for their work commute.

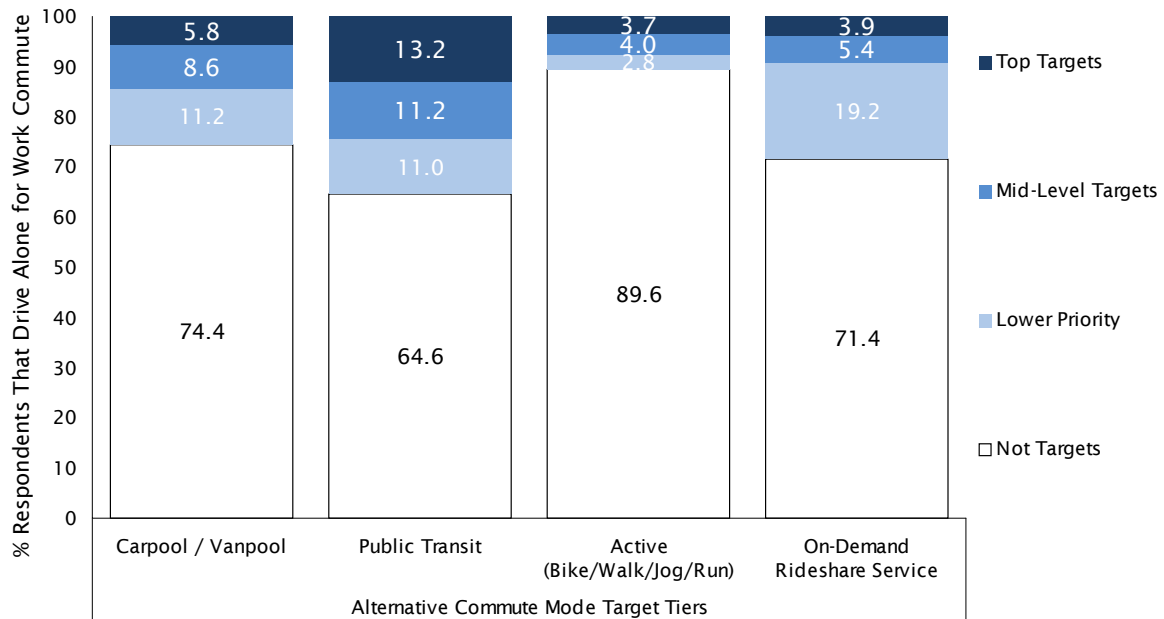
Lower Priority Individuals in this group indicated that a particular alternative mode was their preferred alternative for their commute, but also indicated that they would only use the mode if there were no other options (or declined to answer that question).

25. Given the small number of Western Riverside County commuters who drive alone and would walk, jog, or run to work as their preferred alternative (14 respondents), caution should be utilized when generalizing the results.

Not Targets Individuals in this group did not choose a particular alternative mode as their preferred alternative for their commute.

Figure 77 summarizes the market tiers within the four broad categories of alternative modes defined in this study. For carpooling and vanpooling, approximately 6% of commuters qualified as Top Targets, 9% Mid-Level Targets, and 11% as Lower Priority Targets. Approximately three-quarters (74%) of commuters were classified as not being a target for carpooling or vanpooling.

FIGURE 77 ALTERNATIVE COMMUTE MODE TARGET TIERS



Public Transit had the largest potential market among commuters, with 13% of respondents qualifying as Top Targets, 11% Mid-Level Targets, and 11% Lower Priority Targets. Approximately 65% of commuters were classified as not being a target for public transit.

As one might expect, active transportation (biking/walking/jogging/running) had the most limited potential market among alternative modes tested for work commutes. Overall, 4% of commuters qualified as Top Targets, 4% Mid-Level Targets, and 3% as Lower Priority Targets. Approximately nine-in-ten commuters (90%) were classified as not being a target for biking, walking, jogging or running to/from their work location.

Finally, nearly three-in-ten commuters qualified as a potential target for on-demand rideshare services, with 4% being Top Targets, 5% Mid-Level Targets, and 19% Lower Priority Targets. Seventy-one percent (71%) of commuters were classified as not being a target for on-demand rideshare services for their work commute.

Figure 78 presents the market tier analysis for San Diego County residents, whereas Figure 79 presents the same analysis among Western Riverside County residents. It is worth noting that the potential markets for active transportation and on-demand rideshare services among commuters are somewhat larger among San Diego County residents, whereas the potential markets for car-pooling/vanpooling and public transit are larger among Western Riverside County residents.

FIGURE 78 ALTERNATIVE COMMUTE MODE TARGET TIERS AMONG SAN DIEGO COUNTY COMMUTERS

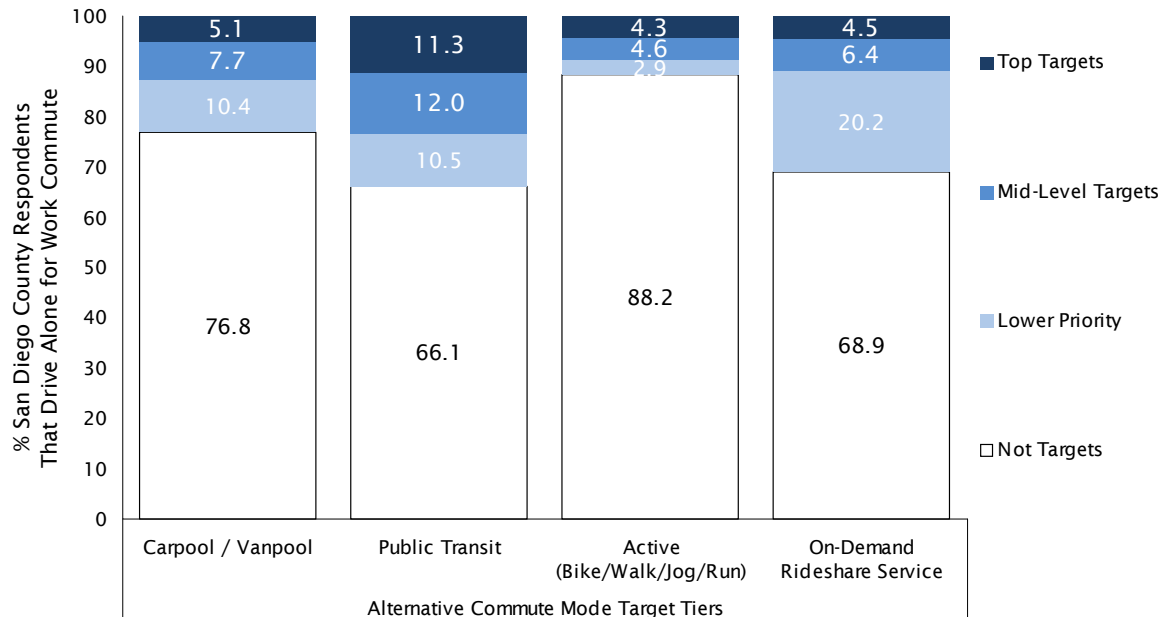
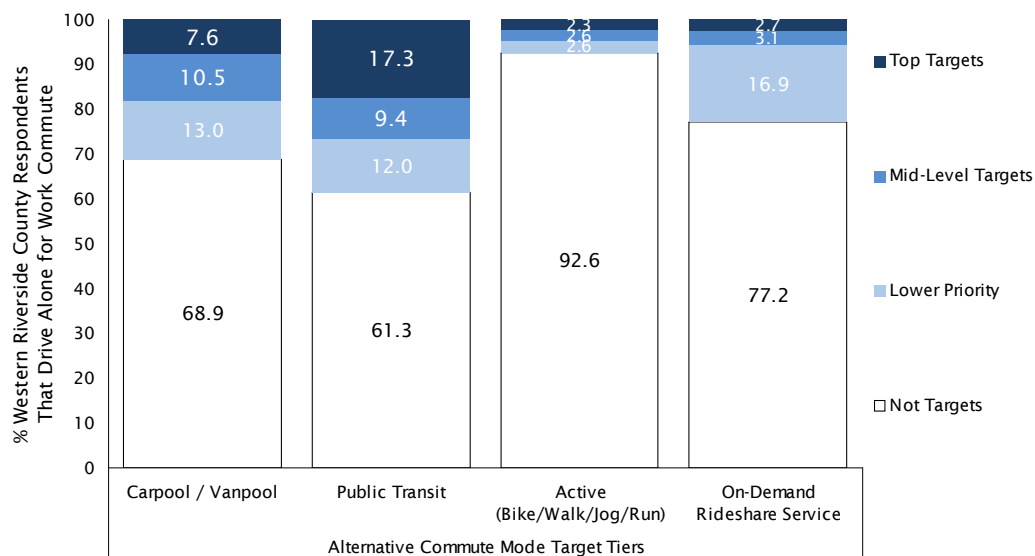


FIGURE 79 ALTERNATIVE COMMUTE MODE TARGET TIERS AMONG WESTERN RIVERSIDE COUNTY COMMUTERS



DEMOGRAPHIC COMPARISON OF COMMUTERS AND MARKET TARGETS For the interested reader, Tables 23 and 24 present individual, household, and workplace information for all commuters, as well as Top and Mid-Level Targets by alternative mode categories. Within the tables, differences of at least five percent between an individual target group and all commuters are highlighted in grey.

TABLE 23 DEMOGRAPHIC BREAKDOWN OF ALL COMMUTERS, TOP & MID-LEVEL ALTERNATIVE COMMUTE MODE TIERS

	All Commuters	Carpool/Vanpool Top Targets	Carpool/Vanpool Mid-Level Targets	Public Transit Top Targets	Public Transit Mid-Level Targets	Rideshare Top Targets	Rideshare Mid-Level Targets	Active Top Targets	Active Mid-Level Targets
Region									
San Diego County	67.9	59.9	62.0	59.4	74.2	78.8	82.1	80.9	80.2
Western Riverside County	32.1	40.1	38.0	40.6	25.8	21.2	17.9	19.1	19.8
Interregional Commuter									
Yes	16.3	21.0	19.5	27.4	18.4	10.1	7.1	2.0	1.5
No	83.7	79.0	80.5	72.6	81.6	89.9	92.9	98.0	98.5
Interregional Commute Status									
Out of San Diego County	2.1	0.8	1.0	2.9	3.3	2.2	1.6	0.1	-
Out of Riverside County Southbound	2.9	4.3	5.2	4.0	1.4	1.2	1.2	0.3	0.2
Out of Riverside County Other	11.3	15.9	13.4	20.6	13.8	6.7	4.3	1.5	1.3
Commute Distance in Miles (Q6)									
Less than 5	16.9	11.9	4.2	10.0	10.4	15.8	12.4	64.4	59.7
5 to 9	11.4	4.4	8.6	9.6	16.4	15.2	14.1	11.5	11.6
10 to 14	17.9	13.5	17.8	14.2	14.8	14.6	39.8	11.9	15.3
15 to 19	13.0	21.9	13.6	13.6	16.0	16.3	13.2	7.2	8.3
20 to 29	17.6	19.9	26.3	21.4	17.3	22.8	13.6	4.2	2.9
30 to 49	15.3	19.1	20.8	18.0	17.4	10.3	3.0	-	2.0
50 or more	7.2	8.8	8.8	12.7	7.2	4.2	3.9	0.8	0.2
Commute Duration in Minutes (Q7)									
Less than 10	6.4	5.1	1.4	1.5	2.0	4.1	1.1	38.5	24.7
10 to 19	23.8	22.1	15.4	15.9	22.6	22.4	34.8	42.3	49.8
20 to 29	21.1	17.0	19.9	18.5	19.0	28.6	31.8	9.3	15.8
30 to 44	20.2	24.9	29.4	22.7	22.8	24.3	21.9	7.3	5.4
45 to 60	17.7	21.0	23.2	24.7	22.5	10.3	7.2	2.5	3.9
More than 60	10.2	9.9	10.6	16.4	10.9	9.4	3.3	0.1	0.5
Working Vehicles in Hsld (QD1)									
None	1.5	-	-	-	-	-	-	-	-
One	16.7	11.2	12.6	16.9	12.6	18.0	14.4	14.1	21.2
Two	38.9	39.7	42.9	45.8	42.4	45.2	38.4	32.6	44.5
Three or more	41.0	47.4	43.4	36.3	43.9	36.3	46.5	53.3	33.4
Number of People in Hsld (QD2)									
One	11.7	6.9	10.9	10.6	12.6	9.4	11.9	13.8	14.7
Two	30.0	24.4	33.2	33.0	30.2	31.1	34.9	26.5	41.3
Three	19.1	22.3	18.8	17.7	22.6	22.7	21.9	14.8	13.6
Four	19.4	20.4	17.0	20.5	21.4	23.5	18.1	17.2	19.5
Five or more	16.8	23.2	18.8	14.3	10.8	9.6	12.5	23.4	9.9
Number of People 16+ in Hsld (QD3)									
One	14.2	9.1	12.5	14.3	13.8	12.8	13.5	16.0	16.8
Two	47.0	45.6	52.0	46.8	48.5	58.2	49.6	33.2	63.6
Three	18.3	23.3	16.2	15.7	17.9	18.6	19.4	19.9	14.0
Four	10.5	7.4	10.4	12.3	13.5	4.2	8.6	22.9	3.7
Five or more	6.5	11.8	6.6	6.5	3.0	2.5	7.5	3.3	1.0
Age (QD4)									
16 to 24	14.7	10.5	10.0	7.4	12.7	0.8	19.1	25.8	12.5
25 to 34	25.4	30.2	20.8	26.1	16.7	28.1	25.8	19.4	19.8
35 to 44	21.0	19.3	23.6	22.6	25.6	34.5	23.0	23.6	18.2
45 to 54	19.7	24.6	26.7	25.6	23.9	15.2	14.6	20.8	25.8
55 to 64	13.2	11.7	13.0	12.7	15.7	13.9	10.8	8.3	13.2
65 and older	3.1	2.0	2.5	3.2	4.1	3.3	4.4	0.9	2.4
Gender (QD9)									
Male	50.6	42.4	53.1	44.6	54.0	48.1	51.3	63.7	58.5
Female	46.9	56.1	43.7	50.9	43.5	48.0	47.3	35.2	39.9

**TABLE 24 DEMOGRAPHIC BREAKDOWN OF ALL COMMUTERS, TOP & MID-LEVEL ALTERNATIVE COMMUTE MODE TIERS
CONTINUED**

	All Commuters	Carpool/ Vanpool Top Targets	Carpool/ Vanpool Mid-Level Targets	Public Transit Top Targets	Public Transit Mid-Level Targets	Rideshare Top Targets	Rideshare Mid-Level Targets	Active Top Targets	Active Mid- Level Targets
Employees at Primary Workplace (QD7)									
1 to 4	7.5	4.6	3.6	3.4	5.9	7.3	8.9	6.4	8.4
5 to 9	7.5	5.5	6.1	6.0	4.7	5.7	9.2	8.6	11.5
10 to 19	11.3	7.6	6.2	8.9	7.8	11.4	12.1	23.7	21.9
20 to 49	14.8	17.9	17.0	14.7	13.9	17.1	13.6	21.5	11.3
50 to 99	12.2	13.1	12.1	18.6	13.4	19.2	10.9	10.5	7.0
100 or more	40.5	46.6	50.0	42.7	50.4	36.7	41.0	27.4	36.6
Business Type (QD8)									
Private sector	53.5	42.7	52.4	55.3	55.2	49.9	75.2	61.6	56.8
Gov agency	22.1	32.8	21.5	20.1	27.3	21.4	15.5	19.8	21.1
Not-for-profit org	14.0	13.1	13.7	19.4	11.0	17.3	8.1	11.4	13.8
Occupation (QD5)									
Operator / Fabricator / Laborer	4.9	7.0	7.7	5.2	4.0	1.7	4.4	8.0	3.8
Craft and repair	3.8	5.8	4.7	2.4	1.2	-	3.3	2.0	3.3
Food preparation, serving	2.1	1.1	-	2.4	2.8	-	9.2	0.3	9.7
Protective services	3.4	2.1	3.8	3.0	2.6	3.5	1.5	0.6	1.1
Physician	1.1	1.3	0.7	0.9	0.8	2.1	2.5	1.8	0.6
Nurse	3.1	5.8	6.7	4.1	2.8	4.4	0.8	3.2	0.8
Medical assistant	2.5	5.7	1.3	1.8	0.5	5.5	1.1	2.7	-
Sales	5.5	5.1	4.0	4.4	4.0	4.6	12.1	1.9	8.2
Customer service / Telemarketer	2.9	0.9	1.4	2.0	3.9	3.2	-	8.7	3.5
Professional specialty (not IT)	24.2	18.7	23.0	28.7	24.3	25.0	22.3	30.6	29.3
Professional specialty (IT)	1.5	0.3	3.0	1.7	2.8	-	1.4	0.6	3.1
Administrative / Office worker	7.5	8.5	7.1	5.4	7.4	12.4	12.4	9.1	4.4
Supervisor / Manager	1.3	3.8	1.9	0.4	1.8	-	0.3	-	1.9
Executive	14.0	10.9	18.4	17.3	13.2	21.6	14.2	15.9	8.5
Teacher	7.3	9.0	7.6	7.1	7.0	5.4	9.5	6.8	8.9
Other	4.4	5.9	0.8	2.2	8.9	1.0	0.5	2.6	4.4
Industry (QD6)									
Agriculture	0.4	0.5	0.2	-	0.4	0.7	2.2	-	-
Construction	2.5	2.0	4.9	0.7	2.5	0.4	0.3	1.5	2.1
IT-Manufacturing services	7.9	6.8	12.5	6.8	6.2	1.8	10.6	19.4	13.2
Retail	5.8	3.5	5.0	3.7	5.9	7.6	8.0	1.4	11.0
Transportation	3.8	2.2	2.8	4.7	2.4	4.6	4.2	0.9	5.6
Energy / Natural Resources	1.7	2.4	1.3	2.4	2.6	1.9	0.3	2.8	2.5
Business services	14.1	9.9	8.2	17.0	11.3	20.6	21.7	21.1	10.8
Hospitality, visitor, entertainment services	9.5	5.5	7.4	10.9	13.1	7.2	16.1	11.1	9.6
Financial services	5.0	3.5	8.3	5.5	5.7	4.4	7.9	1.1	2.2
Education	13.5	15.6	12.4	11.5	11.9	10.6	10.8	20.5	14.8
Medical, social services	13.3	20.3	12.8	16.0	10.3	17.7	7.8	7.5	12.7
Government / Public Administration	9.5	11.0	11.0	8.5	12.8	10.1	5.8	5.2	4.2
Biosciences / Pharmaceuticals	1.7	0.7	3.1	3.0	4.3	-	1.4	-	0.5
Religious / Non-profit	1.5	3.3	1.1	2.4	0.2	3.1	0.7	2.5	3.3
Other	0.5	1.6	0.8	0.4	1.1	-	-	-	-

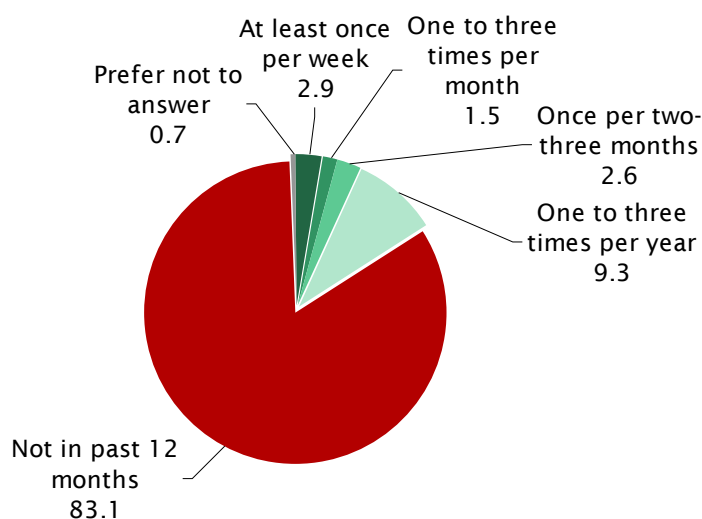
PARK & RIDE

Having profiled commuters' willingness to use alternative modes for their work commute, the survey transitioned to the topic of Park & Ride lots. Specifically, commuters were asked to describe their recent experiences using a local Park & Ride lot, their reasons for not using a Park & Ride lot (if applicable), and the amenities or improvements that could be made to Park & Ride lots that would increase their likelihood of use.

USE OF LOCAL PARK & RIDE LOT The first question in this series simply asked respondents to describe the frequency with which they have used a local Park & Ride lot in the 12 months preceding the interview. As shown in Figure 80, more than eight-in-ten respondents (83%) indicated they had not used a Park & Ride lot during the period of interest. Approximately 3% indicated they used a local Park & Ride lot weekly, 2% one to three times per month, 3% once every two to three months, and 9% estimated they used a local Park & Ride lot one to three times during the past 12 months.

Question 16 *Have you used a local Park & Ride lot in the past 12 months? If yes, ask: How often have you used a local Park & Ride lot during this period?*

FIGURE 80 USE OF LOCAL PARK & RIDE LOT IN PAST YEAR AMONG THOSE WHO COMMUTE OUTSIDE HOME



The following figures show how frequency of using a local Park & Ride lot varied among subgroups of commuters in the study region overall (Figure 81), among San Diego County residents who commute to work (Figures 82 & 83), and among commuters who reside in Western Riverside County (Figures 84 & 85). Among all commuters in the study, it is worth noting that those who primarily commute to work by carpool/vanpool or public transit, as well as interregional commuters, were the most likely to report using a Park & Ride lot on a weekly basis.

FIGURE 81 USE OF LOCAL PARK & RIDE LOT IN PAST YEAR AMONG THOSE WHO COMMUTE OUTSIDE HOME BY PRIMARY COMMUTE MODE, REGION, INTERREGIONAL COMMUTER & INTERREGIONAL COMMUTE STATUS

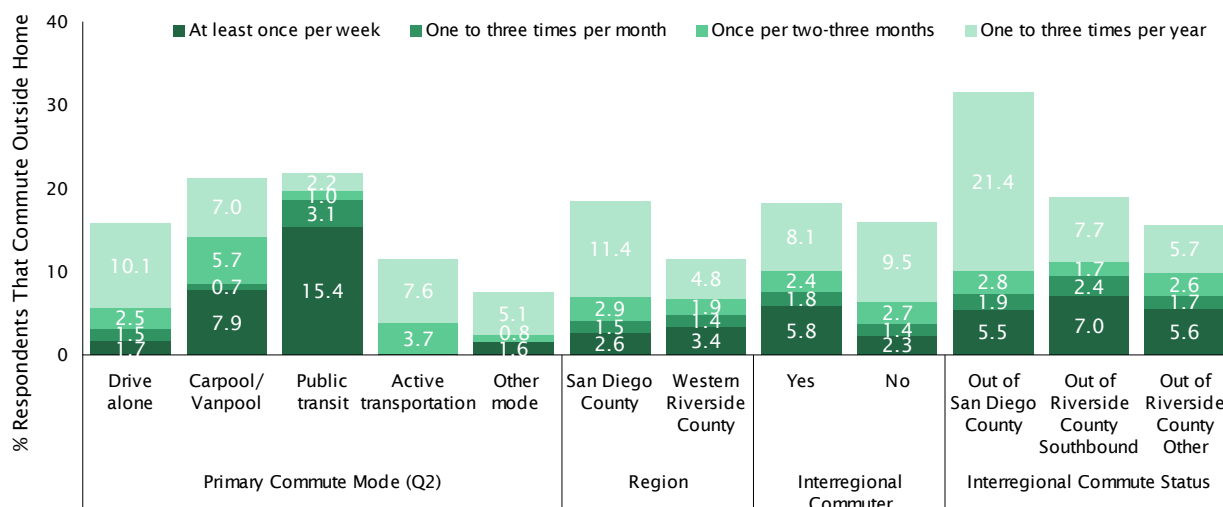


FIGURE 82 USE OF LOCAL PARK & RIDE LOT IN PAST YEAR BY SUBREGION, INTERREGIONAL COMMUTER & INTERREGIONAL COMMUTE DESTINATION AMONG SAN DIEGO COUNTY RESIDENTS WHO COMMUTE OUTSIDE HOME

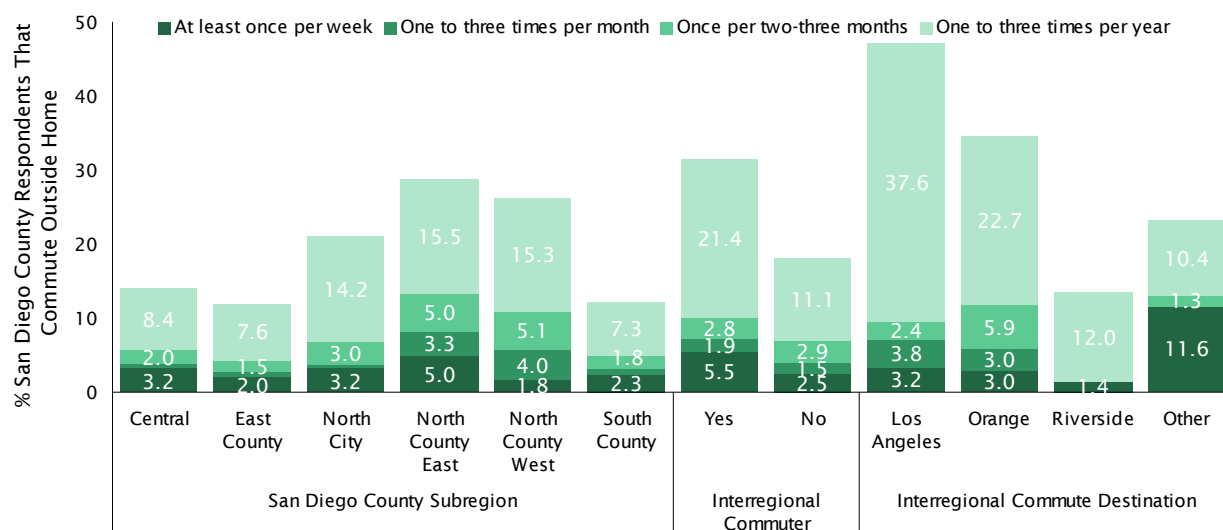


FIGURE 83 USE OF LOCAL PARK & RIDE LOT IN PAST YEAR BY AGE, GENDER & WORKING VEHICLES IN HOUSEHOLD AMONG SAN DIEGO COUNTY RESIDENTS WHO COMMUTE OUTSIDE HOME

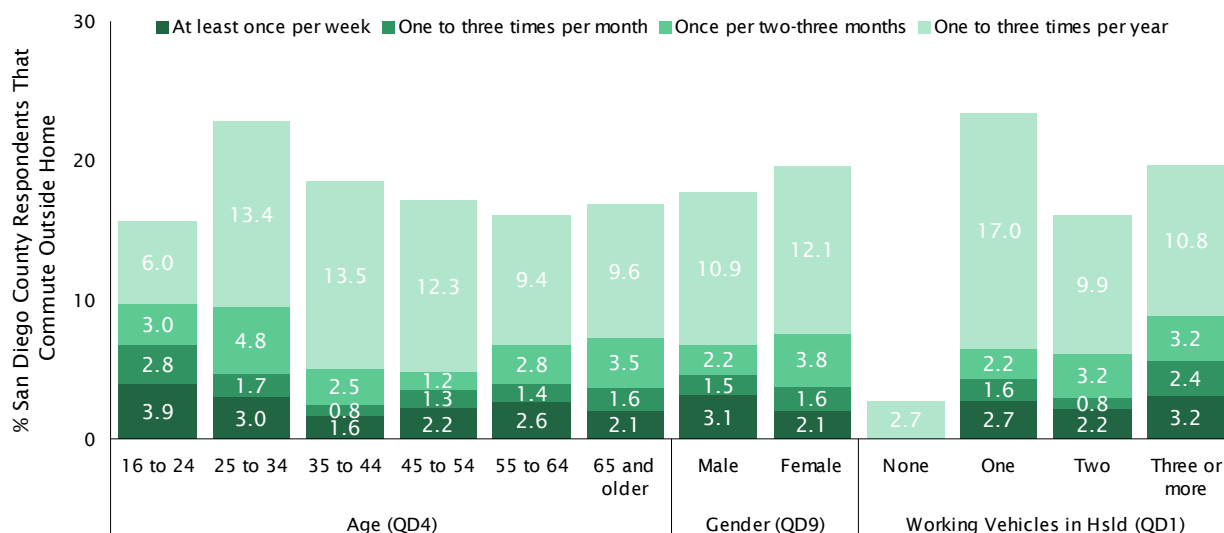
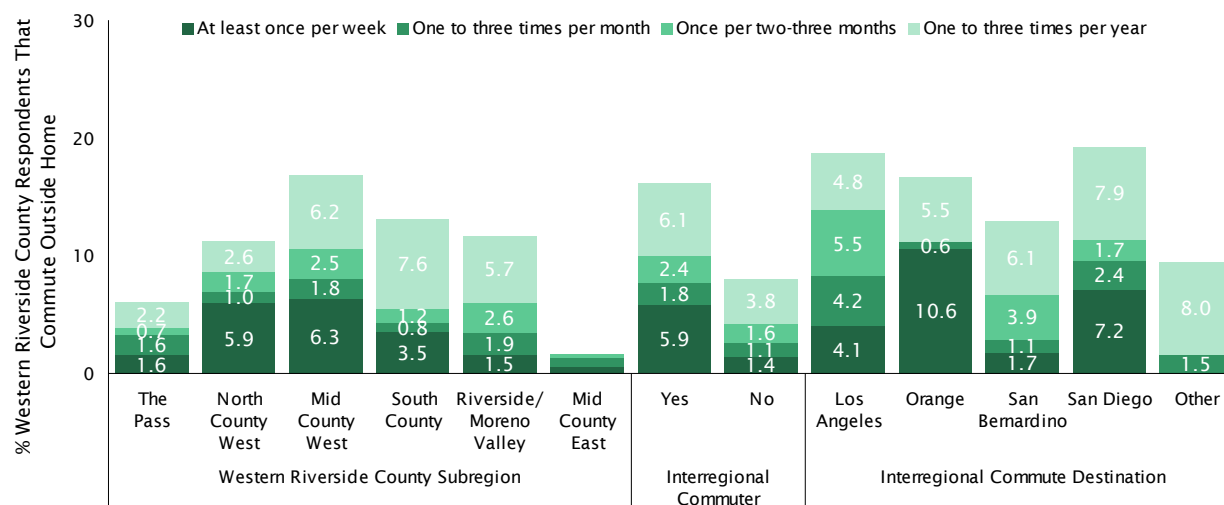
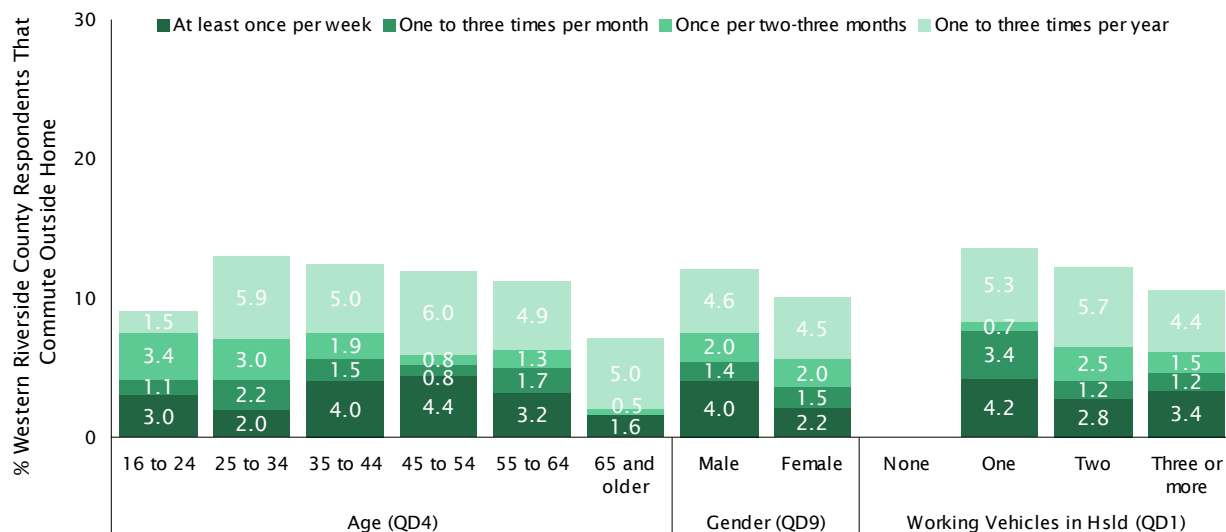


FIGURE 84 USE OF LOCAL PARK & RIDE LOT IN PAST YEAR BY SUBREGION, INTERREGIONAL COMMUTER & INTERREGIONAL COMMUTE DESTINATION AMONG WESTERN RIVERSIDE COUNTY RESIDENTS WHO COMMUTE OUTSIDE HOME²⁶



26. Given the small number of Mid County East commuters who have used a Local Park & Ride Lot in the past year, this subgroup is not shown on Figure 89 displaying responses to the follow-up question about using Park & Ride Lots for reasons other than commuting to work.

FIGURE 85 USE OF LOCAL PARK & RIDE LOT IN PAST YEAR BY AGE, GENDER & WORKING VEHICLES IN HOUSEHOLD AMONG WESTERN RIVERSIDE COUNTY RESIDENTS WHO COMMUTE OUTSIDE HOME

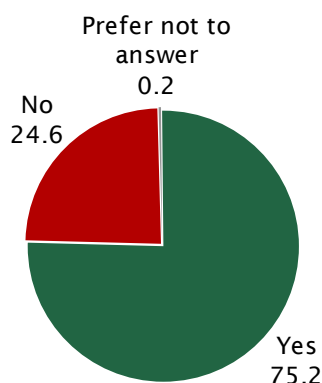


USE OF PARK & RIDE LOT FOR PURPOSE OTHER THAN COMMUTING TO WORK

Respondents who indicated they had used a local Park & Ride lot in the 12 months preceding the interview were subsequently asked if they had ever used a local Park & Ride lot for something other than commuting to work—such as going to a sporting event, a concert, or jury duty. Among this subgroup of commuters, three-quarters (75%) offered that they had used a Park & Ride lot for purposes other than commuting to work (Figure 86).

Question 17 *Have you ever used a local Park & Ride lot for something other than commuting to work - such as when going to a sporting event, a concert, or jury duty?*

FIGURE 86 USE OF LOCAL PARK & RIDE LOT IN PAST YEAR FOR REASON OTHER THAN COMMUTING TO WORK



Figures 87-89 illustrate how the answers to Question 17 varied across subgroups of commuters who had used a Park & Ride lot in the 12 months preceding the interview. When comparing the patterns of responses to Question 16 and Question 17, an interesting pattern emerges. Although high frequency users of Park & Ride lots are most common among those who use carpool/vanpool and public transit for their commute, and interregional commuters, when isolating those who have used a Park & Ride lot in the past 12 months these groups are generally *less* likely than their counterparts to have ever used a Park & Ride lot for *non-work* purposes. This pattern suggests that those who are using a Park & Ride lot frequently for work purposes are also more likely to be one-dimensional in their use of the lots (work trips only).

FIGURE 87 USE OF LOCAL PARK & RIDE LOT IN PAST YEAR FOR REASON OTHER THAN COMMUTING TO WORK BY REGION, INTERREGIONAL COMMUTER, INTERREGIONAL COMMUTE STATUS & COMMUTE DISTANCE IN MILES

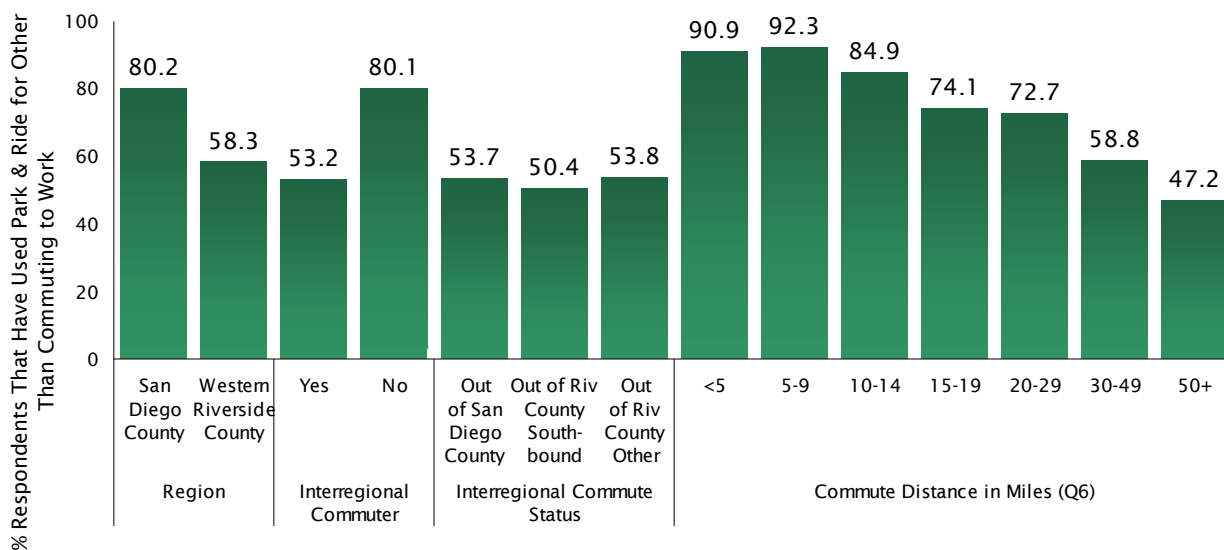


FIGURE 88 USE OF LOCAL PARK & RIDE LOT IN PAST YEAR FOR REASON OTHER THAN COMMUTING TO BY PRIMARY COMMUTE MODE, FREQUENCY OF PARK & RIDE USE, SUBREGION & INTERREGIONAL COMMUTER AMONG SAN DIEGO COUNTY RESIDENTS THAT HAVE USED PARK & RIDE

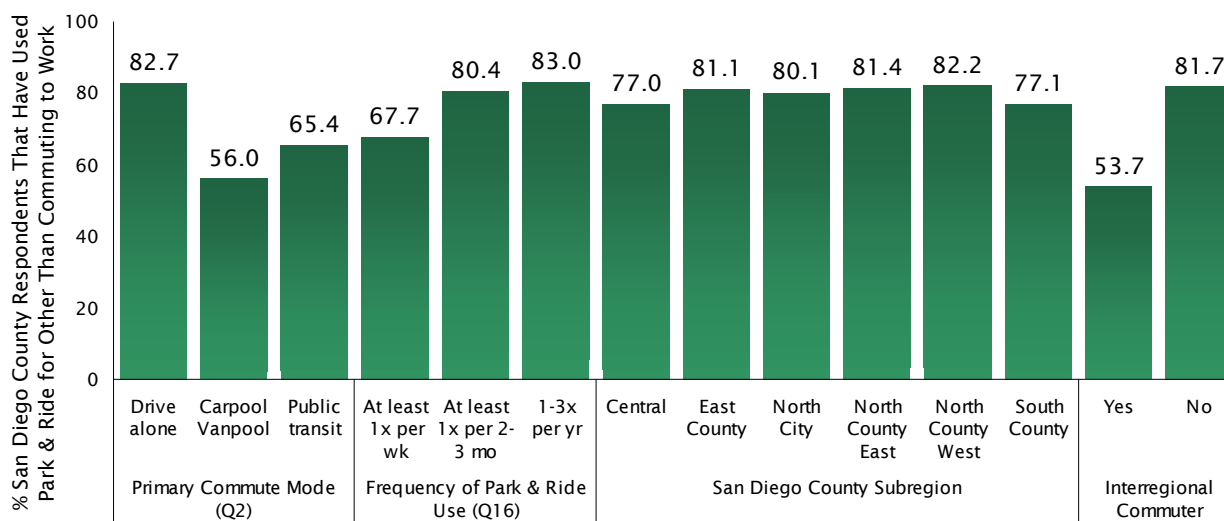
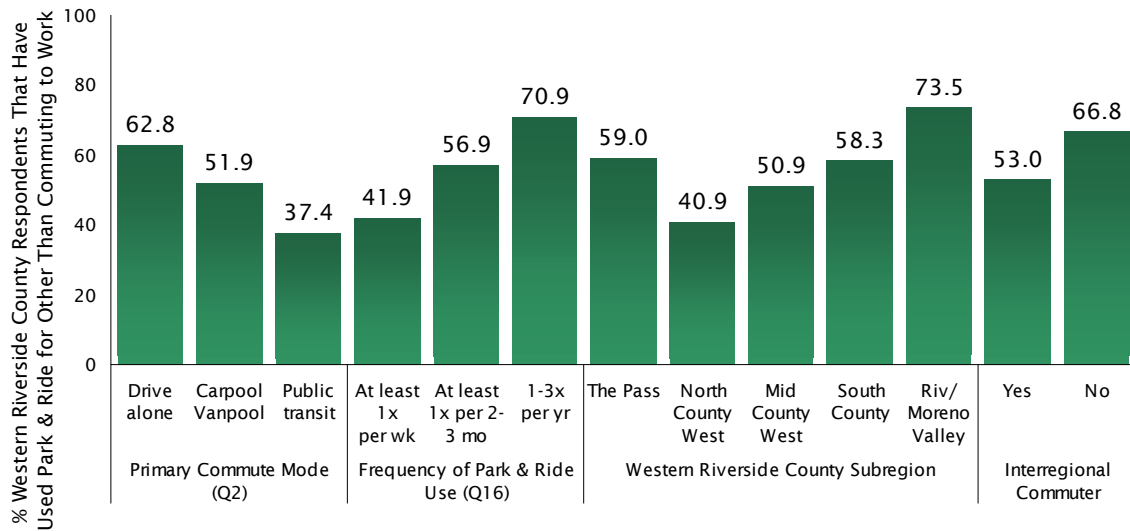


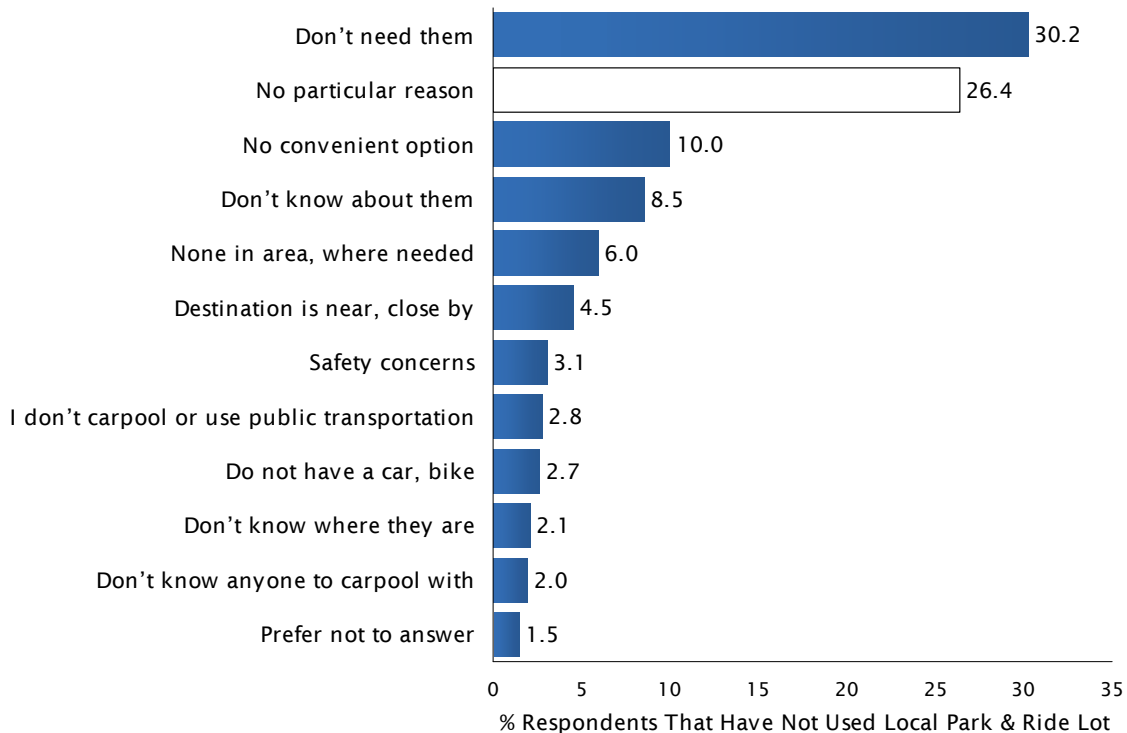
FIGURE 89 USE OF LOCAL PARK & RIDE LOT IN PAST YEAR FOR REASON OTHER THAN COMMUTING TO WORK BY PRIMARY COMMUTE MODE, FREQUENCY OF PARK & RIDE USE, SUBREGION & INTERREGIONAL COMMUTER AMONG WESTERN RIVERSIDE COUNTY RESIDENTS THAT HAVE USED PARK & RIDE



REASONS FOR NOT USING A PARK & RIDE LOT Commuters who indicated they hadn't used a Park & Ride lot were subsequently asked in an open-ended manner to describe their reasons. The verbatim answers were categorized and are presented below in Figure 90.

Question 18 *Is there a particular reason why you haven't used a local Park & Ride lot in the past 12 months?*

FIGURE 90 MAIN REASON FOR NOT USING LOCAL PARK & RIDE LOT IN PAST YEAR²⁷



Overall, the most common reasons reported for not using a local Park & Ride lot in the 12 months preceding the interview were no need (30%), no particular reason (26%), not having a convenient option locally (10%), not knowing about them (9%), and a perception that there are none in the area/where needed (6%). Aside from 3% mentioning safety concerns, no respondents mentioned an operational aspect or lack of amenities as their reason for not using a Park & Ride lot.

The following tables list the top five reasons offered for not using a local Park & Ride lot according to region of residence, interregional commute status, and primary commute mode.

TABLE 25 TOP 5 REASONS FOR NOT USING LOCAL PARK & RIDE LOT IN PAST YEAR BY REGION & INTERREGIONAL COMMUTE STATUS

Region		Interregional Commute Status			
San Diego County	Western Riverside County	Not Interregional Commuter	Out of San Diego County	Out of Riverside County Southbound	Out of Riverside County Other
Don't need them	Don't need them	Don't need them	Don't need them	Don't need them	Don't need them
No particular reason	No particular reason	No particular reason	No particular reason	No particular reason	No particular reason
No convenient option	Don't know about them	No convenient option	Don't know about them	Safety concerns	No convenient option
Don't know about them	No convenient option	Don't know about them	No convenient option	None in area, where needed	Don't know about them
None in area, where needed	None in area, where needed	None in area, where needed	I don't carpool or use public transportation	No convenient option	None in area, where needed

TABLE 26 TOP 5 REASONS FOR NOT USING LOCAL PARK & RIDE LOT IN PAST YEAR BY PRIMARY COMMUTE MODE

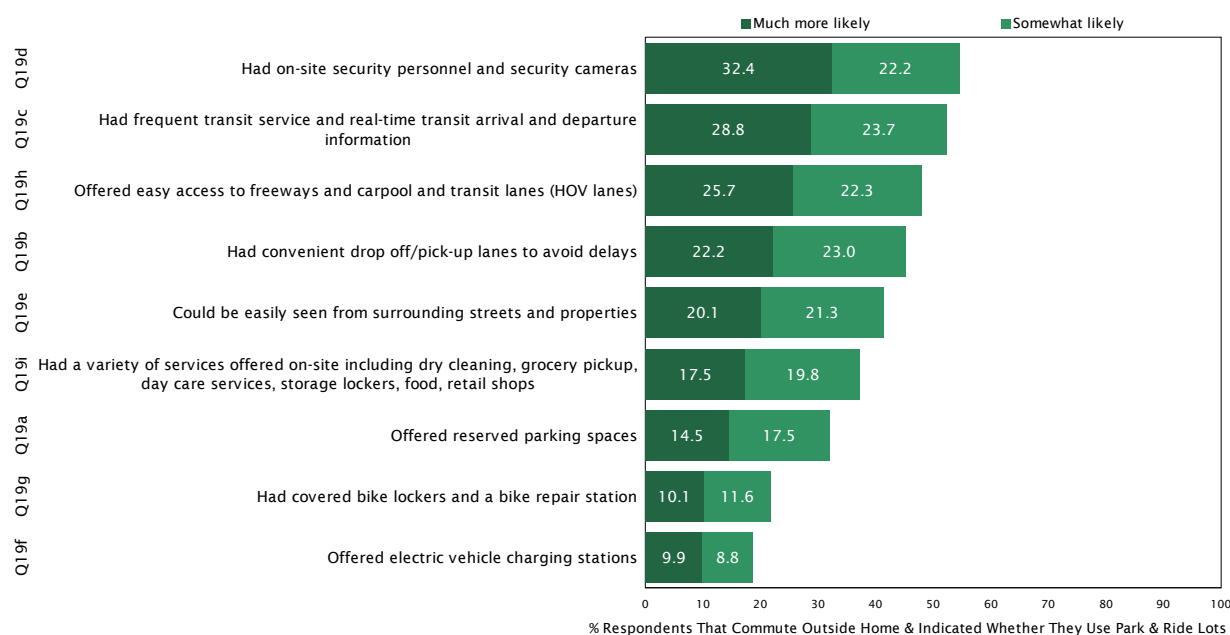
Primary Commute Mode (Q2)				
Drive alone	Carpool / Vanpool	Public transit	Active transportation	Other mode
Don't need them	Don't need them	No particular reason	Don't need them	Don't need them
No particular reason	No particular reason	Do not have a car, bike	Do not have a car, bike	No particular reason
No convenient option	No convenient option	Don't need them	No particular reason	No convenient option
Don't know about them	Don't know about them	Don't know about them	No convenient option	Prefer not to answer
None in area, where needed	Carpool partners live close by	Have own parking spot, park in other places	Don't know about them	Do not have a car, bike

27. Only responses cited by at least 1.5% of respondents who had not used a local Park & Ride lot in the past 12 months are displayed in Figure 90.

CONDITIONS THAT WOULD INCREASE USE OF PARK & RIDE LOT Similar to the method used previously to identify conditions that would increase a respondent's likelihood of using alternative modes for their commute, Question 19 presented a list of specific conditions and asked respondents to indicate, for each condition, whether it would make them more likely to use a Park & Ride lot for their work commute, or if it would have no impact. The list of conditions, and respondents' answers, are shown in Figure 91.

Question 19 *If a local Park & Ride lot: _____, would you be more likely to use it for your work commute, or would it have no impact? If says 'yes, more likely', ask: Would that be much more likely, or somewhat more likely?*

FIGURE 91 INFLUENCE OF FACTORS IN LIKELIHOOD OF USING LOCAL PARK & RIDE LOT FOR WORK COMMUTE



Having on-site security personnel and security cameras (55%), frequent transit service and real-time transit arrival and departure information (53%), and easy access to freeways and carpool/transit lanes (48%) were the features that respondents indicated were most likely to positively influence their use of Park & Ride lots for their work commute. At least one-third of respondents also indicated that having convenient drop-off/pick-up lanes to avoid delays (45%), that the lot can be easily seen from surrounding streets and properties (41%), and offering a variety of on-site services including dry cleaning, grocery pick-up, day care services, storage lockers, and food and retail shops (37%) would make them at least somewhat more likely to use a Park & Ride lot in the future for their commute.

At the other end of the spectrum, fewer respondents found the presence of electric vehicle charging stations (19%), covered bike lockers and repair station (22%), and the ability to reserve parking (32%) as amenities that would make them more likely to use a Park & Ride lot for their work commute.

Table 27 shows how the percentage who listed a condition as making them much more likely to use a Park & Ride lot for their commute differed by region of residence. Although the percentages varied somewhat, the general ranking of conditions was similar.

TABLE 27 INFLUENCE OF FACTORS IN LIKELIHOOD OF USING LOCAL PARK & RIDE LOT FOR WORK COMMUTE BY REGION SHOWING % MUCH MORE LIKELY

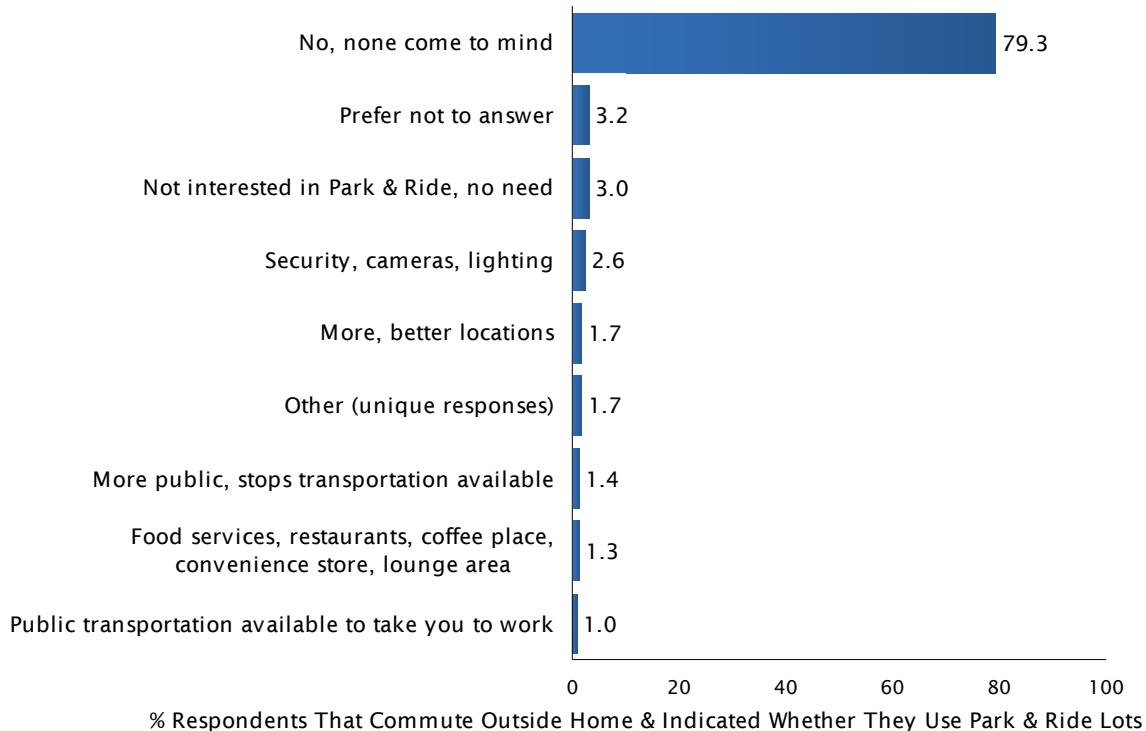
	Region	
	San Diego County	Western Riverside County
Q19d Had on-site security personnel and security cameras	31.3	34.7
Q19c Had frequent transit service and real-time transit arrival and departure information	28.4	29.6
Q19h Offered easy access to freeways and carpool and transit lanes (HOV lanes)	24.8	27.4
Q19b Had convenient drop off/pick-up lanes to avoid delays	21.6	23.5
Q19e Could be easily seen from surrounding streets and properties	19.7	21.0
Q19i Had a variety of services offered on-site including dry cleaning, grocery pickup, day care services, storage lockers, food, retail shops	17.8	16.8
Q19a Offered reserved parking spaces	13.4	16.8
Q19g Had covered bike lockers and a bike repair station	9.9	10.6
Q19f Offered electric vehicle charging stations	9.7	10.4

Recognizing that the list of conditions tested in Question 19 was not exhaustive, the survey followed-up by asking respondents to describe any amenity or improvement not already mentioned that would make them more likely to use a Park & Ride lot for their work commute. Question 20 was administered in an open-ended manner, which allowed respondents to mention any amenity or improvement that came to mind, without prompting or constraint. True North later reviewed the verbatim responses and grouped them into the categories shown in Figure 92 on the next page.

Nearly eight-in-ten respondents (79%) indicated that no additional amenities or improvements come to mind that would make them more likely to use a Park & Ride lot for their work commute, and 6% declined to answer the question or stated flatly that they are not interested in using a Park & Ride lot. Among the specific amenities and/or improvements that were mentioned in response to Question 20, improved security/security cameras/security lighting was most common (3%), followed by more/better lot locations (2%).

Question 20 *Is there an amenity or improvement that I didn't mention that would make you more likely to use a local Park & Ride lot for your work commute? If yes, ask: Please describe it to me.*

FIGURE 92 AMENITY OR IMPROVEMENT TO INCREASE LIKELIHOOD OF USING LOCAL PARK & RIDE LOT FOR WORK COMMUTE²⁸



MARKET TARGET SUMMARY Recognizing that not every commuter is in the potential market for Park & Ride lots, we developed a tiered-market profile for Park & Ride lots using an approach similar to that described previously for alternative modes (see *Market Target Summary* on page 60). A respondent's position in the market for Park & Ride lots was based on how they responded to the amenities and improvements tested in Question 19 and their suggestions in response to Question 20. The four tiers are described below.

Top Targets The most promising potential users of Park & Ride lots for their work commute indicated that at least half of the amenities/improvements tested in Question 19 would cause them to be much more likely to use a Park & Ride lot for their work commute, *and* they offered a meaningful suggestion in Question 20 when asked to describe additional improvements that would positively influence their use of Park & Ride lots.

Mid-Level Targets Individuals qualified as Mid-Level Targets if they found at least half of the amenities/improvements tested in Question 19 would cause them to be much more likely to use a Park & Ride lot for their work commute, *but* they did not offer a meaningful suggestion in

28. Only responses cited by at least 1% of commuters who indicated whether or not they use Park & Ride lots for their work commute are shown in Figure 92.

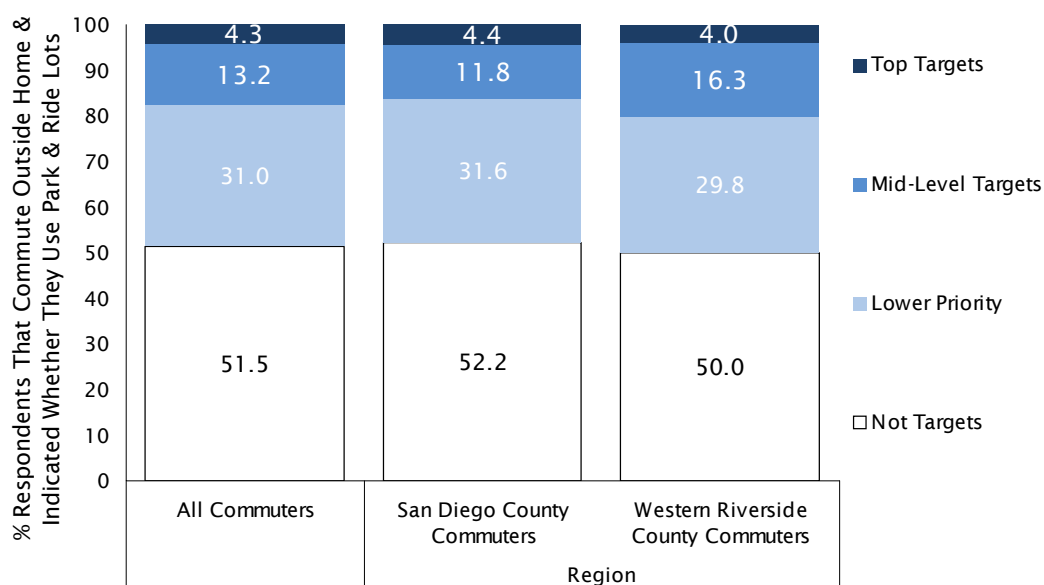
response to Question 20 when asked to describe additional improvements that would positively influence their use of Park & Ride lots.

Lower Priority Individuals in this group indicated that one to four of the amenities tested in Question 19 would cause them to be much more likely to use a Park & Ride lot for their work commute *or* don't meet this condition, but have used a Park & Ride lot for their work commute at least one time in the past year.

Not Targets Individuals in this group did not find any of the amenities or improvements tested in Question 19 to be compelling reasons (much more likely) to use a Park & Ride lot for their work commute.

Figure 93 presents the market tiers for Park & Ride lots among all commuters in the study, as well as by region. Among all commuters, 4% qualified as Top Targets for Park & Ride lots, 13% as Mid-Level Targets, and 31% as Lower Priority Targets. Just over half (52%) were classified as not being a target for Park & Ride lots for their work commute. The distribution of market tiers was generally similar when comparing San Diego County residents to those in Western Riverside County.

FIGURE 93 PARK & RIDE FOR WORK COMMUTE TARGET TIERS



DEMOGRAPHIC COMPARISON OF COMMUTERS AND MARKET TARGETS For the interested reader, Tables 28 and 29 present individual, household, and workplace information for all commuters, as well as each market tier for Park & Ride lots. Within the tables, differences of at least five percent between an individual target group and all commuters are highlighted in grey. When compared to commuters in general, Top Targets were somewhat more likely to be interregional commuters, reside in Western Riverside County and commute to a destination outside of the County (but not San Diego County), have one-way commutes exceeding 60 minutes, live in larger households (4+ people) with three or more vehicles, be under the age of 35, and work for a private or not-for-profit organization.

TABLE 28 DEMOGRAPHIC BREAKDOWN OF ALL COMMUTERS AND PARK & RIDE TARGET TIERS

	All Commuters	Top Targets	Mid-Level Targets	Lower Priority	Not Targets
Region					
San Diego County	67.9	70.4	60.6	69.2	68.9
Western Riverside County	32.1	29.6	39.4	30.8	31.1
Interregional Commuter					
Yes	16.3	21.9	20.9	15.1	15.3
No	83.7	78.1	79.1	84.9	84.7
Interregional Commute Status					
Out of San Diego County	2.1	2.5	2.5	1.9	2.1
Out of Riverside County Southbound	2.9	2.0	3.0	3.3	2.6
Out of Riverside County Other	11.3	17.4	15.5	9.9	10.6
Commute Distance in Miles (Q6)					
Less than 5	16.9	18.4	15.6	14.0	18.9
5 to 9	11.4	10.3	4.8	10.7	13.6
10 to 14	17.9	17.7	15.5	19.0	18.0
15 to 19	13.0	10.5	15.9	13.0	12.6
20 to 29	17.6	16.9	21.4	18.0	16.6
30 to 49	15.3	16.5	18.9	17.0	13.0
50 or more	7.2	8.9	7.9	7.7	6.7
Commute Duration in Minutes (Q7)					
Less than 10	6.4	5.9	3.9	5.3	7.8
10 to 19	23.8	26.6	25.5	20.7	25.0
20 to 29	21.1	17.1	18.7	23.1	21.0
30 to 44	20.2	19.1	18.8	19.7	20.9
45 to 60	17.7	15.5	20.5	20.2	15.5
More than 60	10.2	15.9	12.4	10.1	9.2
Working Vehicles in Hsld (QD1)					
None	1.5	1.2	1.1	0.9	1.9
One	16.7	16.2	16.3	19.0	15.7
Two	38.9	30.5	42.3	41.0	37.6
Three or more	41.0	51.5	38.9	37.7	42.4
Number of People in Hsld (QD2)					
One	11.7	6.3	8.2	12.6	12.4
Two	30.0	21.9	27.7	30.9	31.0
Three	19.1	19.3	18.3	19.4	19.0
Four	19.4	29.3	17.7	17.9	20.0
Five or more	16.8	20.5	23.8	16.6	14.9
Number of People 16+ in Hsld (QD3)					
One	14.2	11.0	13.2	14.9	14.2
Two	47.0	33.4	40.3	47.7	49.7
Three	18.3	21.3	19.1	17.9	17.9
Four	10.5	19.7	9.8	11.0	9.8
Five or more	6.5	12.0	11.7	5.7	5.1
Age (QD4)					
16 to 24	14.7	21.1	16.9	15.3	13.3
25 to 34	25.4	29.9	30.0	30.3	21.0
35 to 44	21.0	20.3	20.8	22.6	20.2
45 to 54	19.7	18.0	17.7	16.4	22.2
55 to 64	13.2	7.8	10.1	11.0	15.6
65 and older	3.1	1.4	1.8	2.4	3.9
Gender (QD9)					
Male	50.6	51.0	44.8	51.0	51.6
Female	46.9	46.6	50.3	46.6	46.3

TABLE 29 DEMOGRAPHIC BREAKDOWN OF ALL COMMUTERS AND PARK & RIDE TARGET TIERS CONTINUED

	All Commuters	Top Targets	Mid-Level Targets	Lower Priority	Not Targets
Employees at Primary Workplace (QD7)					
1 to 4	7.5	10.1	3.0	6.8	8.8
5 to 9	7.5	9.2	7.5	8.5	6.9
10 to 19	11.3	9.4	14.4	11.0	10.8
20 to 49	14.8	17.1	16.7	12.8	15.5
50 to 99	12.2	14.1	10.5	13.5	11.5
100 or more	40.5	35.8	40.3	42.9	39.7
Business Type (QD8)					
Private sector	53.5	58.7	46.0	52.7	55.6
Gov agency	22.1	18.3	24.4	23.7	20.9
Not-for-profit org	14.0	21.6	14.7	12.6	13.9
Occupation (QD5)					
Operator / Fabricator / Laborer	4.9	2.9	4.5	5.5	4.9
Craft and repair	3.8	0.7	2.1	4.0	4.3
Food preparation, serving	2.1	2.1	1.8	1.3	2.6
Protective services	3.4	2.0	3.3	3.4	3.5
Physician	1.1	0.7	1.3	1.4	1.0
Nurse	3.1	4.1	4.8	2.5	3.0
Medical assistant	2.5	4.2	4.7	1.9	2.2
Sales	5.5	3.1	6.8	5.5	5.4
Customer service / Telemarketer	2.9	8.2	2.4	2.2	3.1
Professional specialty (not IT)	24.2	33.0	26.0	25.4	22.5
Professional specialty (IT)	1.5	0.4	1.0	2.1	1.3
Administrative / Office worker	7.5	7.6	6.2	8.0	7.5
Supervisor / Manager	1.3	0.6	1.3	1.3	1.3
Executive	14.0	10.5	13.3	12.4	15.6
Teacher	7.3	6.0	6.9	7.7	7.4
Other	4.4	10.1	3.5	5.1	3.8
Industry (QD6)					
Agriculture	0.4	-	-	0.4	0.6
Construction	2.5	0.8	1.9	1.8	3.2
IT-Manufacturing services	7.9	3.9	4.1	9.2	8.4
Retail	5.8	8.6	6.4	5.7	5.6
Transportation	3.8	7.2	4.2	2.7	4.1
Energy / Natural Resources	1.7	1.5	1.9	1.8	1.6
Business services	14.1	20.1	15.9	14.6	12.8
Hospitality, visitor, entertainment services	9.5	14.9	7.8	7.7	10.3
Financial services	5.0	3.2	3.9	4.7	5.7
Education	13.5	12.4	14.9	13.7	13.2
Medical, social services	13.3	16.6	17.1	11.6	13.3
Government / Public Administration	9.5	5.5	8.0	10.7	9.6
Biosciences / Pharmaceuticals	1.7	-	1.4	2.6	1.4
Religious / Non-profit	1.5	1.1	1.4	2.0	1.3
Other	0.5	0.2	0.7	0.6	0.5

TRANSPORTATION INFORMATION & SMART PHONE APPS

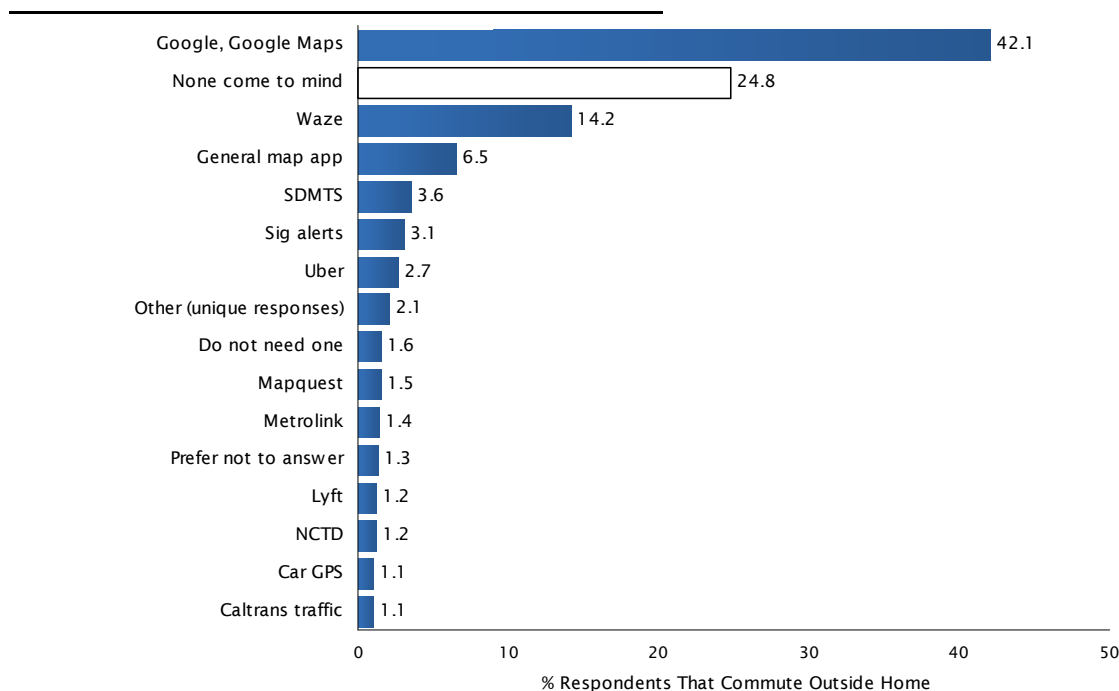
The advent of the smart phone and mobility apps has had a substantial impact on travel choices and travel behaviors in recent years. Although Uber is perhaps the most well-known example of how a smart phone app can transform how people travel, there are dozens of widely-used mobility apps, vehicle connectivity apps, smart parking apps, and courier network services apps that have fundamentally changed the way people plan for trips, get real-time transportation information, and connect with on-demand vehicle services. Moreover, as impactful as these apps have been to date, the potential for change is arguably even greater over the next decade with continued advances in technology, real-time data sharing, multimodal aggregators, and public-private partnerships.²⁹

Recognizing the above, the survey included several questions related to transportation information sources, smart phones, and how commuters currently utilize their smart phones to plan and take trips.

PRIMARY INFORMATION SOURCE The first question in this series asked respondents to identify the website, app, or other information source they use most often to obtain transportation-related information or plan a trip. Figure 94 presents the responses among those who currently commute outside of their home for their job.

Question 21 *What website, app, or other information source do you use most often to obtain transportation-related information or plan a trip?*

FIGURE 94 SOURCE FOR TRANSPORTATION-RELATION INFORMATION AMONG THOSE WHO COMMUTE OUTSIDE HOME³⁰



29. For a detailed review of this topic, see *Smartphone Applications to Influence Travel Choices: Practices and Policies*, U.S. Department of Transportation Publication # FHWA-HOP-16-023: April 2016.

Among those who commute to work, 42% mentioned Google/Google Maps as their primary source for transportation-related information, followed by Waze (14%), a general or unspecified mapping application (7%), the SDMTS website (4%), and Sig Alerts (3%).

SMART PHONE USAGE When asked whether they use a smart phone, nearly all commuters (98%) answered in the affirmative (Figure 95). Although the reported use of a smart phone did decline somewhat with age, the relationship was slight. Even among seniors who commute the rate of using a smart phone exceeded 87% in both San Diego County and Western Riverside County.

Question 22 *Do you use a smart phone?*

FIGURE 95 SMART PHONE USE AMONG THOSE WHO COMMUTE OUTSIDE HOME

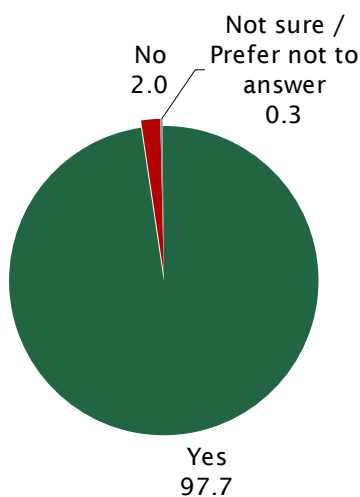
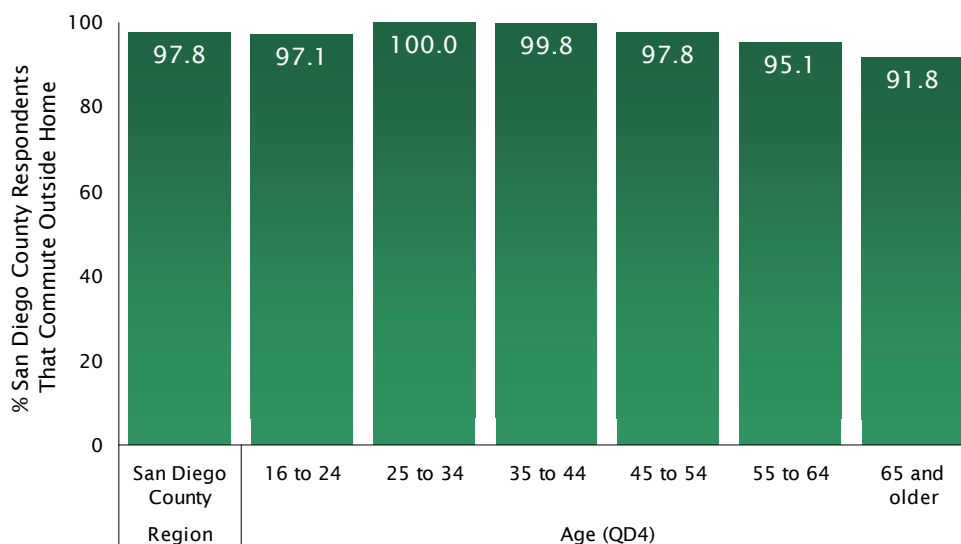
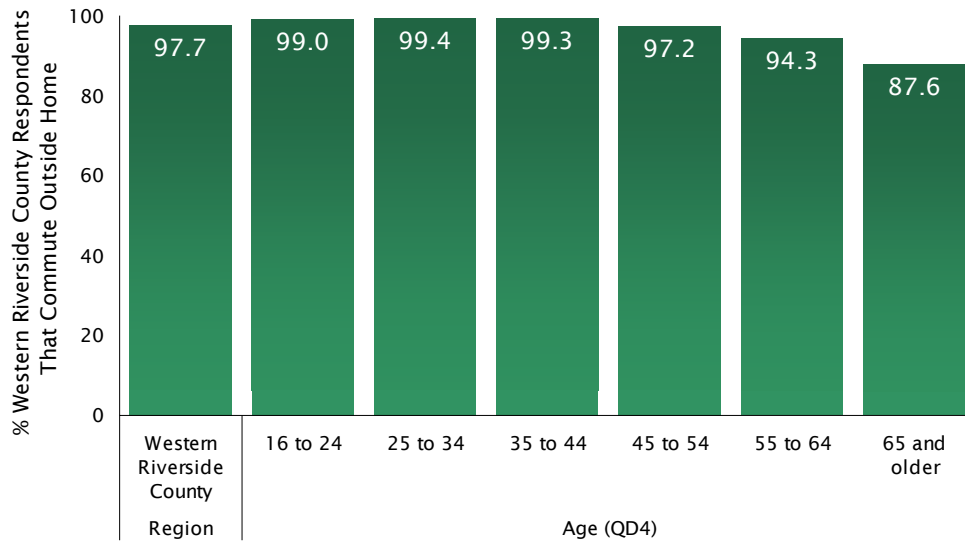


FIGURE 96 SMART PHONE USE BY REGION OVERALL & AGE AMONG SAN DIEGO COUNTY COMMUTERS



30.Only response categories cited by at least 1% of commuters are shown in Figure 94.

FIGURE 97 SMART PHONE USE BY REGION OVERALL & AGE AMONG WESTERN RIVERSIDE COUNTY COMMUTERS



SMART PHONE & TRANSPORTATION USES Commuters who reported that they use a smart phone were next asked if they occasionally use their phone for each of the actions shown on the left of Figure 98. At least nine-in-ten commuters indicated that they use their smart phone to get driving directions (97%) and check traffic conditions (90%), and nearly two-thirds (66%) reported that they occasionally use their phone to request a ride from Uber, Lyft, Waze Carpool, or a similar rideshare service. Less common was the use of a smart phone to check transit schedules or options (49%), request motorist aid assistance (43%), and purchase a transit pass or pay a fare (27%). Table 30 shows how use of smart phone for each purpose varied by region.

Question 23 Do you occasionally use your smart phone to: _____?

FIGURE 98 SPECIFIC USES FOR SMART PHONE

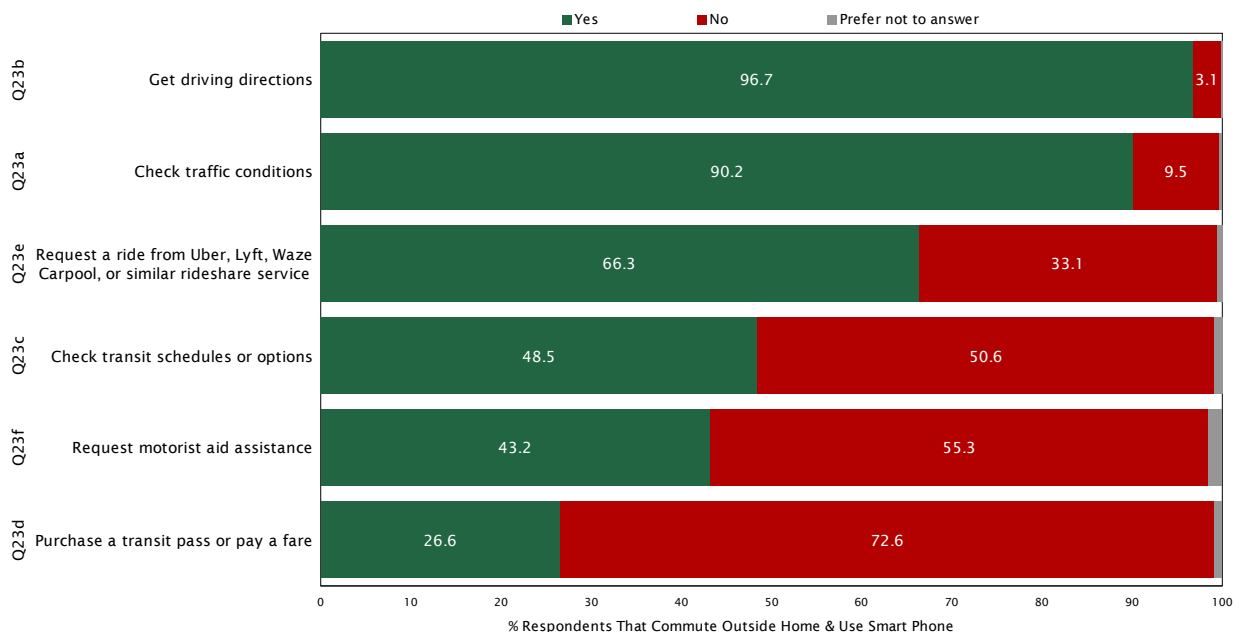


TABLE 30 SPECIFIC USES FOR SMART PHONE BY REGION AMONG SMART PHONE USERS WHO COMMUTE OUTSIDE HOME

	Region	
	San Diego County	Western Riverside County
Q23b Get driving directions	97.0	100.0
Q23a Check traffic conditions	89.7	88.4
Q23e Request a ride from Uber, Lyft, Waze Carpool, or similar rideshare service	71.3	70.4
Q23c Check transit schedules or options	51.1	53.2
Q23f Request motorist aid assistance	43.7	35.6
Q23d Purchase a transit pass or pay a fare	27.3	28.7

FULL-FEATURED SMART PHONE APP The final question in this series asked commuters whether they would be interested using a user-friendly smart phone app that would allow them to plan a trip, book the trip, and pay for the trip on *any* transportation mode or service. Overall, 41% of commuters stated that they would be very interested in this full-featured transportation app, 44% were somewhat interested, whereas 14% expressed no interest in the app (Figure 99). Although interest in the app could be found among at least two-thirds of respondents in all identified subgroups, the percentage who reported being very interested was somewhat higher among interregional commuters and those under the age of 45 (see Figures 100-104).

Question 24 *If there were a user-friendly smart phone app that would allow you to plan your trip, book your trip, and pay for your trip on any transportation mode or service, would you be interested in using this app? If yes, ask: Would that be very interested or somewhat interested?*

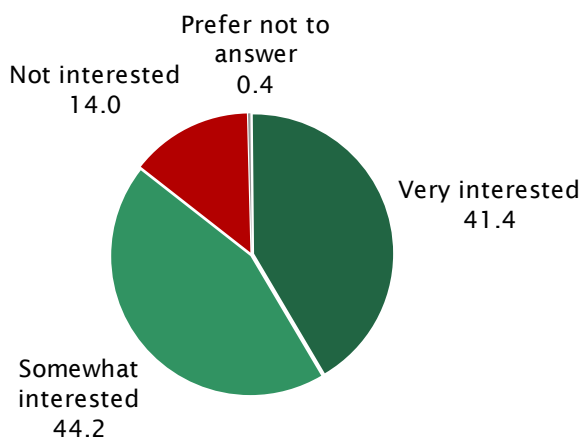
FIGURE 99 INTEREST IN SMART PHONE APP


FIGURE 100 INTEREST IN SMART PHONE APP BY REGION, INTERREGIONAL COMMUTER & INTERREGIONAL COMMUTE STATUS AMONG THOSE THAT COMMUTE OUTSIDE HOME & USE SMART PHONE

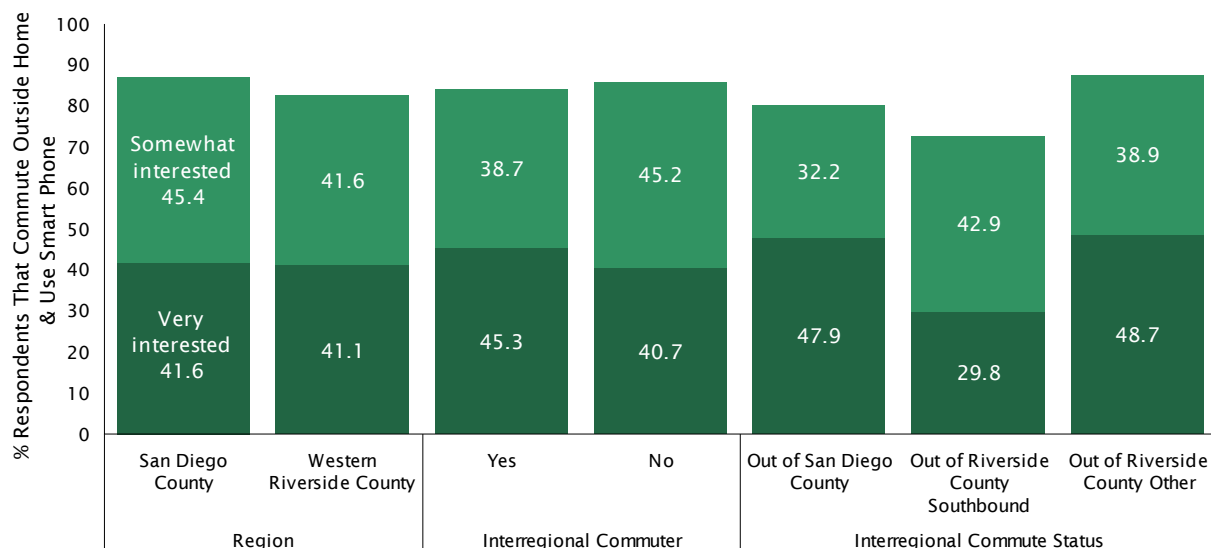


FIGURE 101 INTEREST IN SMART PHONE APP BY AGE & GENDER AMONG SAN DIEGO COUNTY COMMUTERS THAT USE A SMART PHONE

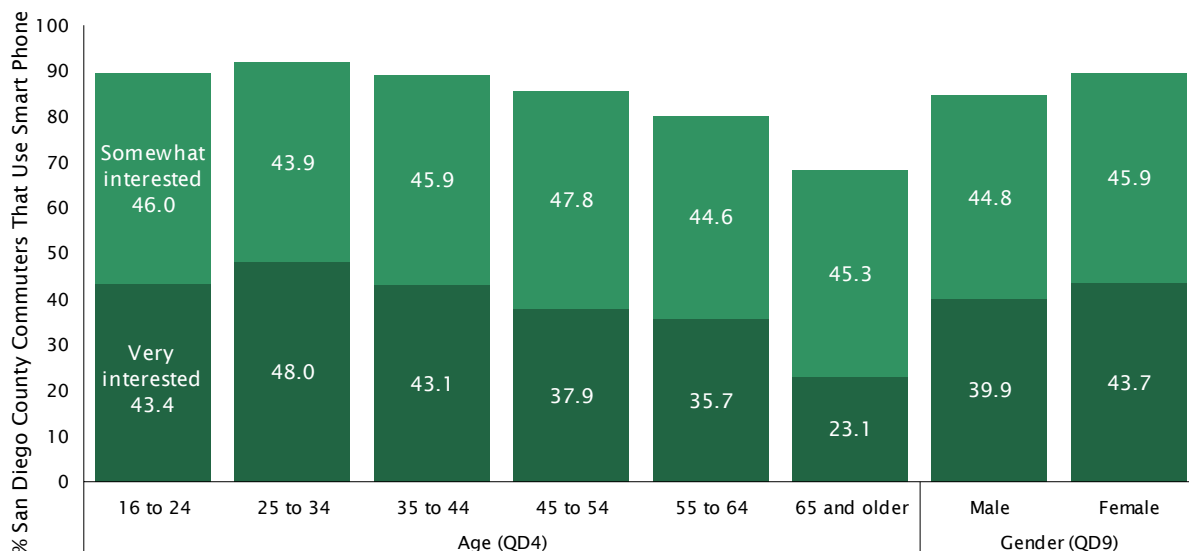


FIGURE 102 INTEREST IN SMART PHONE APP BY INTERREGIONAL COMMUTER & SUBREGION AMONG SAN DIEGO COUNTY COMMUTERS THAT USE A SMART PHONE

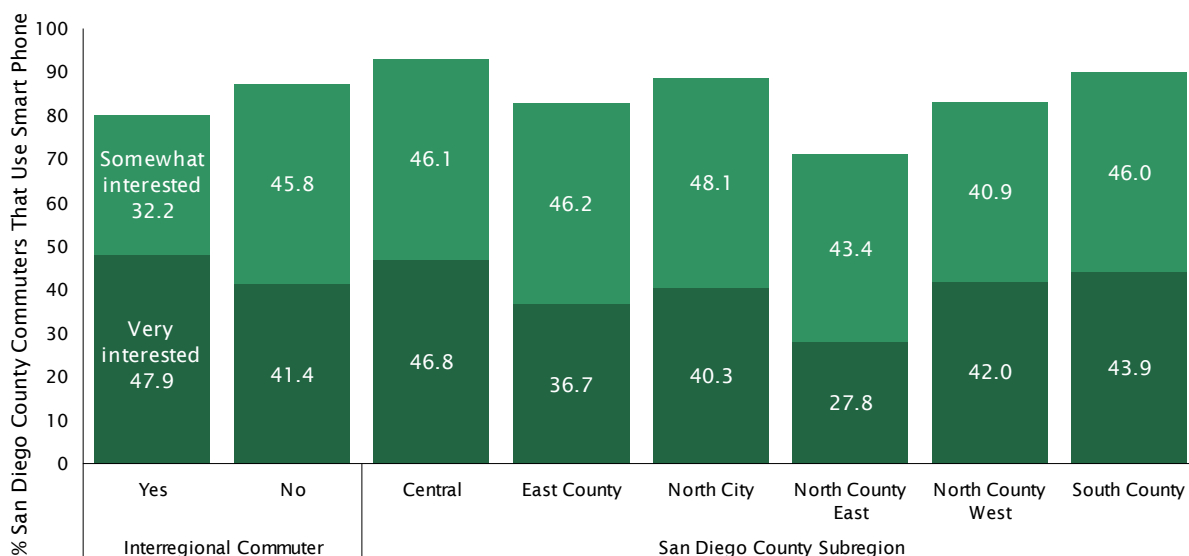


FIGURE 103 INTEREST IN SMART PHONE APP BY AGE & GENDER AMONG WESTERN RIVERSIDE COUNTY COMMUTERS THAT USE A SMART PHONE

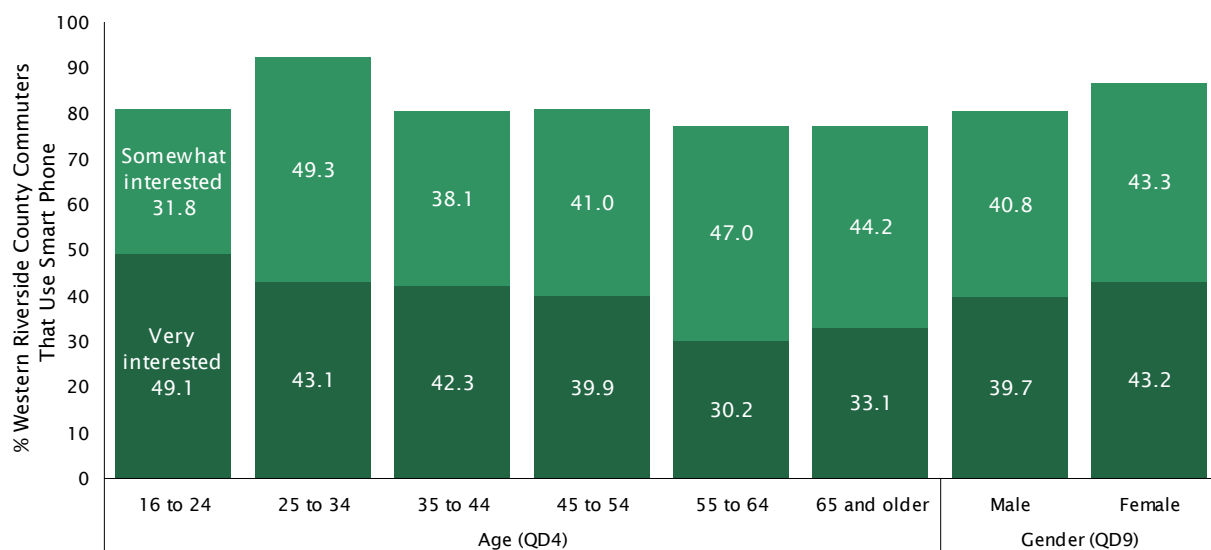
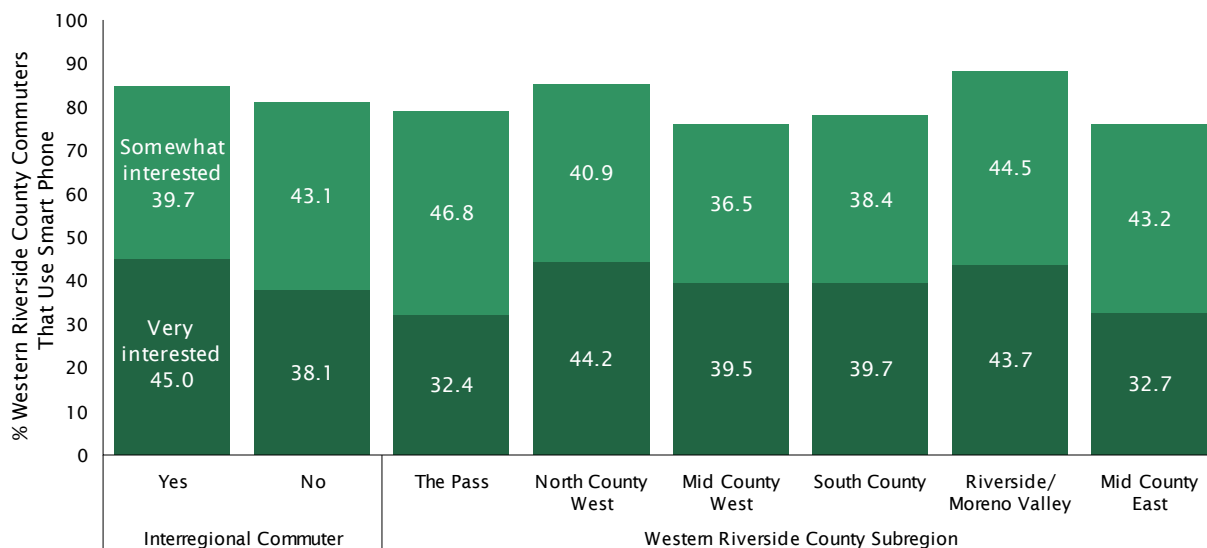


FIGURE 104 INTEREST IN SMART PHONE APP BY INTERREGIONAL COMMUTER & SUBREGION AMONG WESTERN RIVERSIDE COUNTY COMMUTERS THAT USE A SMART PHONE



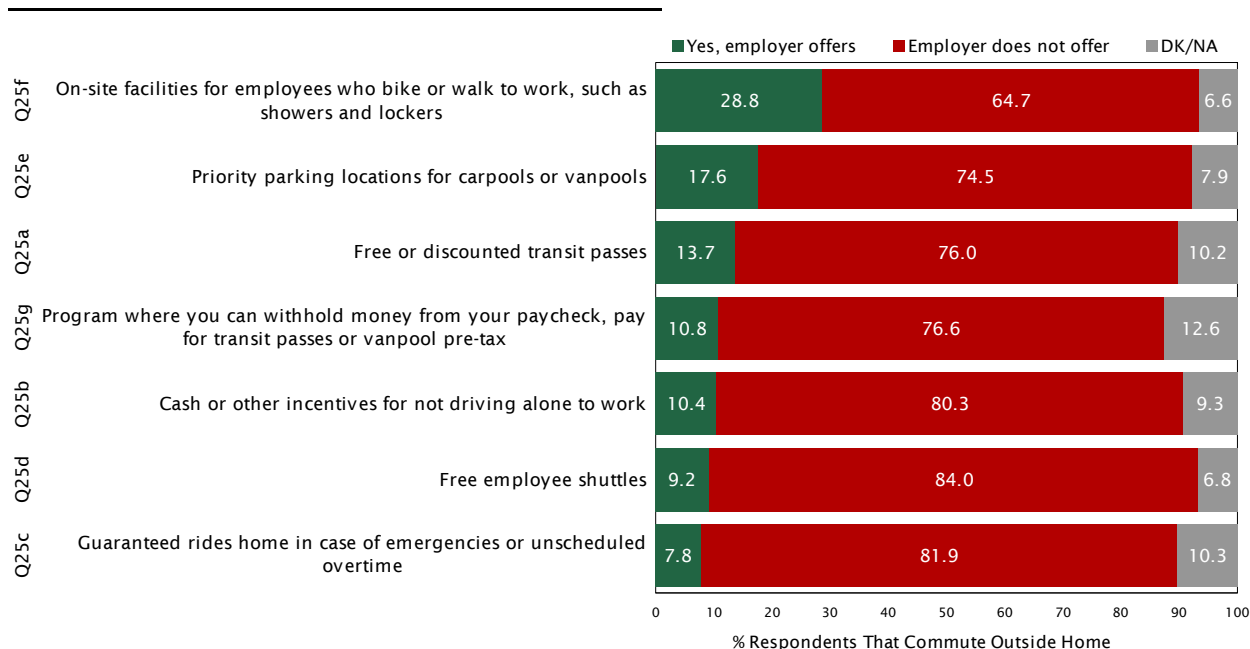
EMPLOYER BENEFITS

Employer-offered commute benefit programs encourage the use of alternative modes by offering monetary and other incentives. For the employer, such programs can help boost employee morale, job satisfaction, and retention by reducing the burden of the work commute for employees. Employer-offered commute benefits can be influential in decreasing motor vehicle travel and traffic congestion, reducing emissions of greenhouse gases and other pollutants, and ultimately protect the climate and public health. The final substantive questions in this survey were devoted to assessing the extent to which employers in the region are offering various types of commute benefits to their employees.

COMMUTE BENEFITS OFFERED BY EMPLOYER To begin, all employees who currently commute to a work destination outside their home were asked whether their employer offers each of the benefit programs listed in Figure 105. As shown in the figure, the dominant response for every program tested was that it is not offered by their employer. Among the most commonly offered benefits were on-site facilities for employees who bike or walk to work, such as showers and lockers (29%), priority parking locations for carpools and vanpools (18%), and free or discounted transit passes (14%). Approximately one-in-ten commuters reported that their employer offers the opportunity for employees to purchase transit passes or pay for vanpool services pre-tax (11%), cash or other incentives for not driving alone to work (10%), free employee shuttles (9%), and a guaranteed ride home in case of emergencies or unscheduled overtime (8%).

Question 25 Next, let me ask about services that your employer may or may not offer. Does your employer offer: _____?

FIGURE 105 EMPLOYER BENEFITS OFFERED



For the interested reader, the following tables show how the prevalence of commuter benefit programs offered by employers varied according to the employee's region of residence and work location (Table 31), number of employees at their primary work location, and interregional commuter status (Table 32). The patterns indicate that employers in Los Angeles County and those with a larger number of employees (50+) are the most consistent in offering commute benefits.

TABLE 31 EMPLOYER BENEFITS OFFERED BY REGION & COUNTY OF WORK LOCATION

	Region		County of Work Location					
	San Diego County	Western Riverside County	Los Angeles	Orange	Riverside	San Bernardino	San Diego	Other
Q25f On-site facilities for employees who bike or walk to work, such as showers and lockers	33.0	19.8	29.7	19.8	17.4	17.8	33.1	23.0
Q25e Priority parking locations for carpools or vanpools	17.0	19.1	31.0	20.5	18.3	19.4	16.7	14.1
Q25a Free or discounted transit passes	14.4	12.4	22.9	14.6	10.3	7.9	14.5	14.5
Q25g A program where you can withhold money from your paycheck and pay for transit passes or vanpool pre-tax	11.4	9.6	18.3	16.9	7.5	7.2	11.1	13.5
Q25b Cash or other incentives for not driving alone to work	8.9	13.7	21.9	14.8	12.6	16.2	8.5	15.3
Q25d Free employee shuttles	9.5	8.5	21.2	8.0	7.3	10.4	9.0	18.7
Q25c Guaranteed rides home in case of emergencies or unscheduled overtime for employees that don't drive to work	6.5	10.7	14.9	9.2	10.1	10.4	6.5	17.5

TABLE 32 EMPLOYER BENEFITS OFFERED BY EMPLOYEES AT PRIMARY WORKPLACE & INTERREGIONAL COMMUTE STATUS

	Employees at Primary Workplace (QD7)					Interregional Commute Status			
	1 to 4	5 to 9	10 to 19	20 to 49	50 or more	Not Inter-regional Commuter	Out of San Diego County	Out of Riverside County Southbound	Out of Riverside County Other
Q25f On-site facilities for employees who bike or walk to work, such as showers and lockers	8.4	10.0	18.2	18.6	40.2	29.9	26.0	30.1	20.5
Q25e Priority parking locations for carpools or vanpools	5.6	7.1	8.6	8.3	25.0	17.2	19.5	11.9	21.9
Q25a Free or discounted transit passes	2.7	5.2	10.0	5.8	19.7	13.5	13.0	15.5	14.8
Q25g A program where you can withhold money from your paycheck and pay for transit passes or vanpool pre-tax	1.3	7.4	9.9	7.0	14.5	10.3	21.4	11.6	12.3
Q25b Cash or other incentives for not driving alone to work	1.0	2.4	8.2	5.4	15.0	9.4	20.3	8.8	16.1
Q25d Free employee shuttles	4.1	2.6	4.6	4.5	12.9	8.7	25.6	7.8	10.3
Q25c Guaranteed rides home in case of emergencies or unscheduled overtime for employees that don't drive to work	7.3	7.8	7.2	5.8	8.4	7.2	12.5	9.8	11.3

PARKING The next questions in this series pertained to work site parking. Specifically, does the respondent pay for parking at their work site? If yes, how much do they pay on a daily basis and what—if any—subsidy do they receive from their employer?

Overall, 88% of employees surveyed indicated that they have free parking at their work site (see Figure 106), although this general pattern varied substantially according to employees' primary commute mode (see Figure 108). It is striking that employees who choose to commute to work using public transit, an 'other' alternative mode, and other modes were far less likely than those who drive alone or carpool/vanpool to work to report that parking is free at their work location.

Question 26 *Is parking free at your work site?*

FIGURE 106 FREE PARKING AT WORK SITE

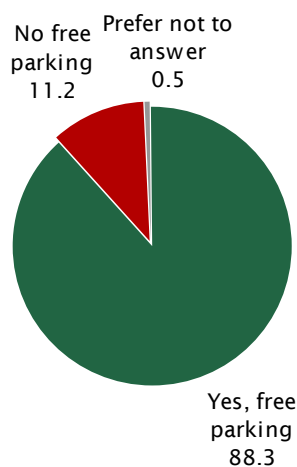


FIGURE 107 FREE PARKING AT WORK SITE BY REGION, COUNTY OF WORK LOCATION & INTERREGIONAL COMMUTE STATUS

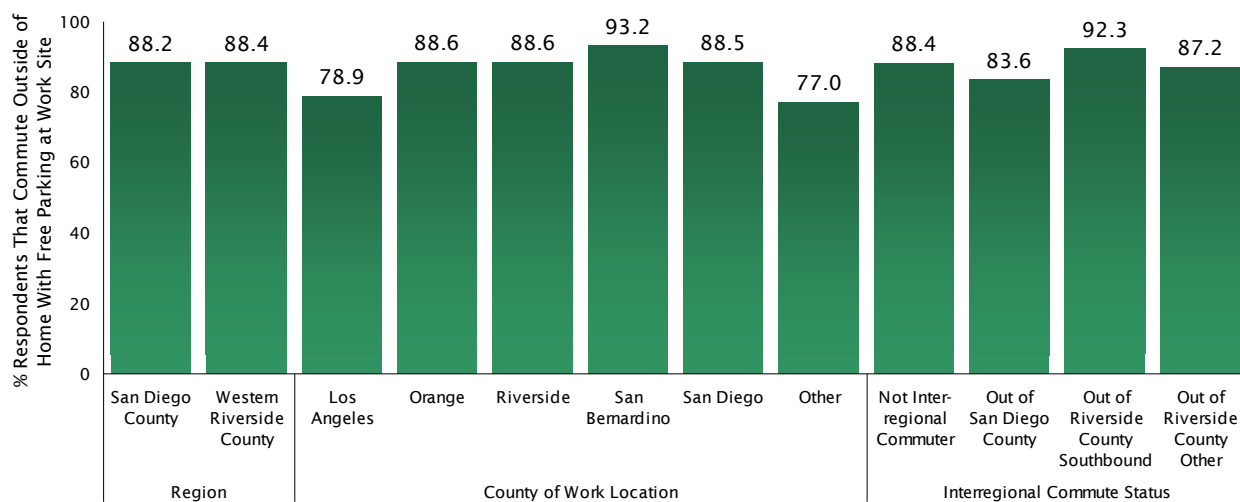


FIGURE 108 FREE PARKING AT WORK SITE BY USED LOCAL PARK & RIDE IN PAST 12 MONTHS & PRIMARY COMMUTE MODE

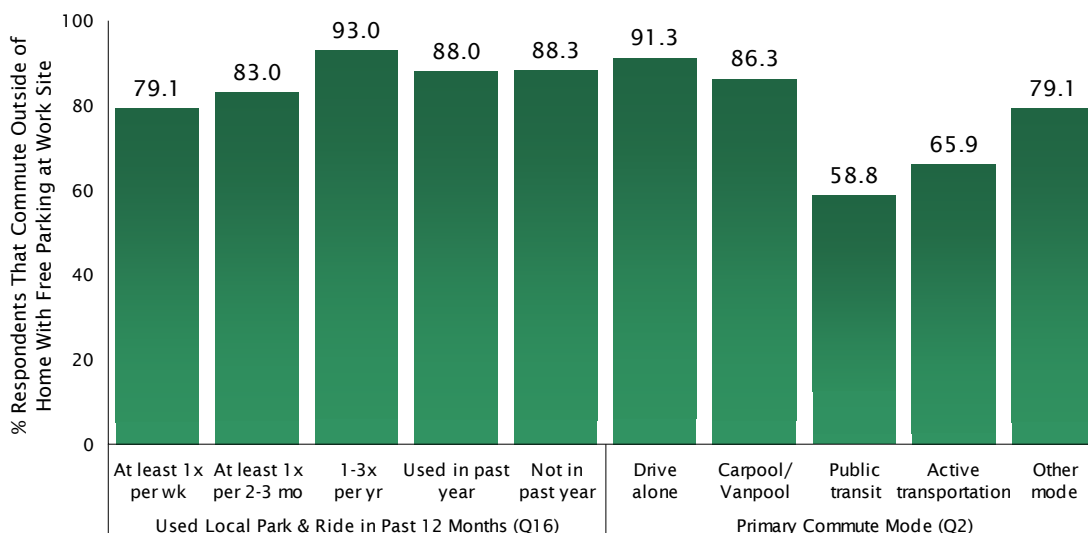
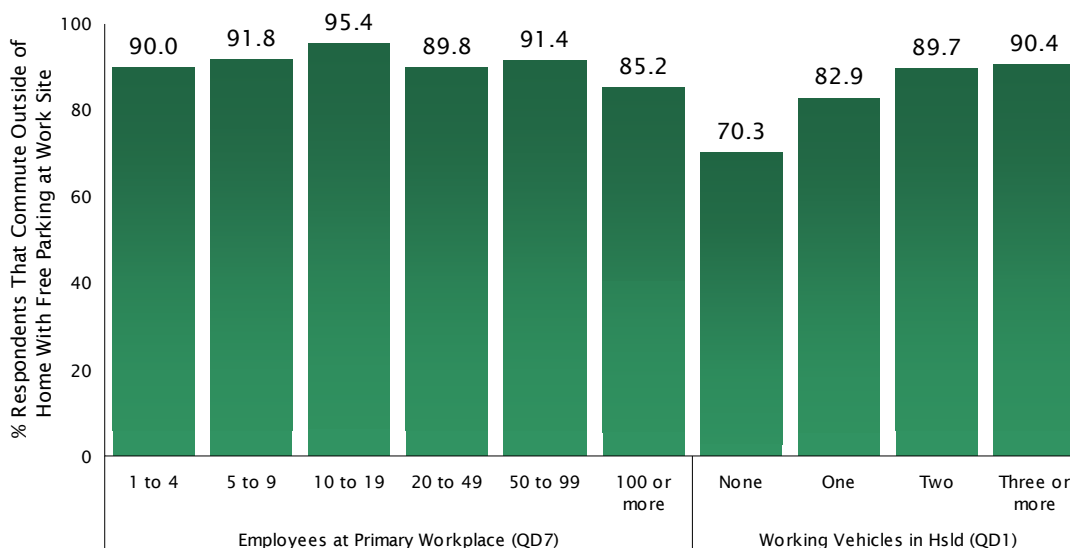


FIGURE 109 FREE PARKING AT WORK SITE BY EMPLOYEES AT PRIMARY WORKPLACE & WORKING VEHICLES IN HSLD



Among the small percentage (11%) of employees who indicated that there is no free parking at their work site, the daily cost of parking varied widely (see Figure 110). Approximately one-in-four employees (26%) indicated that parking cost less than \$3 per day, 30% reported that parking cost \$3 to less than \$6 per day, 12% stated that they pay \$6 to less than \$10 per day, whereas 15% indicated they pay more than \$10 per day to park at their work site. An additional 18% were unsure or preferred not to answer the question. The average cost for parking was \$5.89 per day for the entire study region, although it was somewhat more expensive for San Diego-based commuters (\$6.51) than their Western Riverside County counterparts (\$4.47). Figure 111 presents the distribution of responses to Question 27 according to region, work location, and interregional commuter status.

Question 27 *How much does it cost to park when you drive to work? You can answer in a daily amount or monthly amount.*

FIGURE 110 PER-DAY PARKING COST

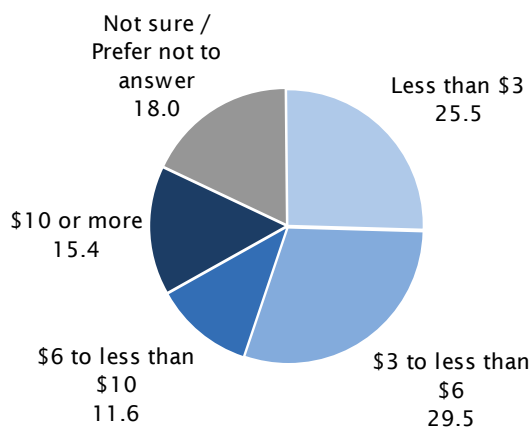
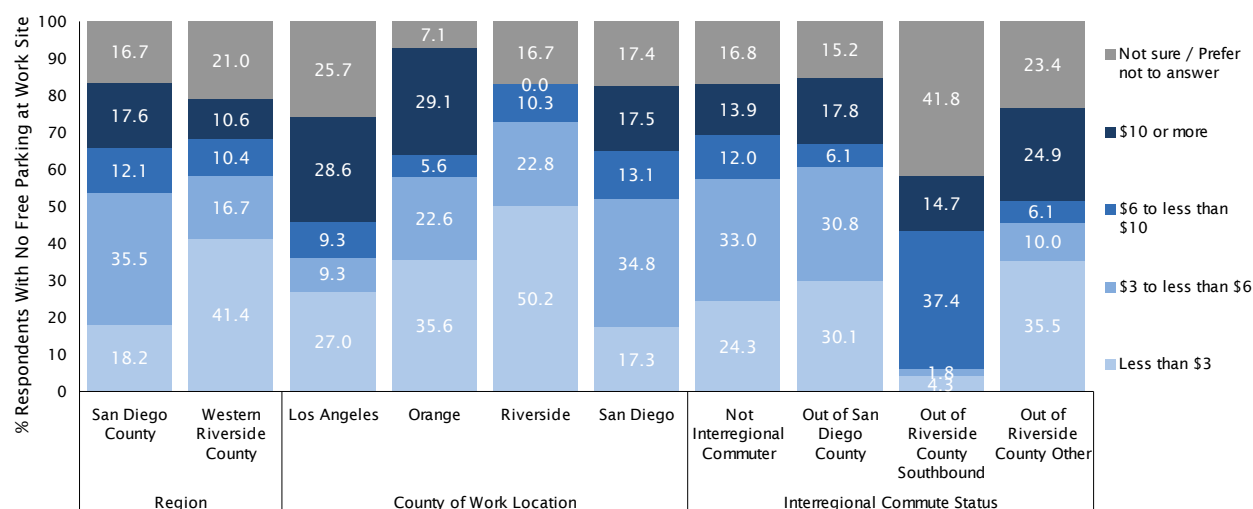


FIGURE 111 PER-DAY PARKING COST BY REGION, COUNTY OF WORK LOCATION & INTERREGIONAL COMMUTE STATUS



PARKING REIMBURSEMENT Commuters who indicated that they must pay for parking at their workplace were subsequently asked to indicate how much of their parking costs are reimbursed by their employer, if any. The vast majority (84%) of employees who pay for parking reported that their employer does *not* reimburse them for parking. Approximately 7% indicated that their employer pays for the entire cost, whereas 4% are reimbursed a portion of the cost for parking (see Figure 112). Interregional commuters who commute into/out of San Diego County were the most likely to report that their employer reimburses all or some of their parking costs (see Figure 113).

Question 28 How much of the <<insert Q27 amount>> you pay for parking does your employer reimburse you, if any?

FIGURE 112 EMPLOYER PARKING REIMBURSEMENT

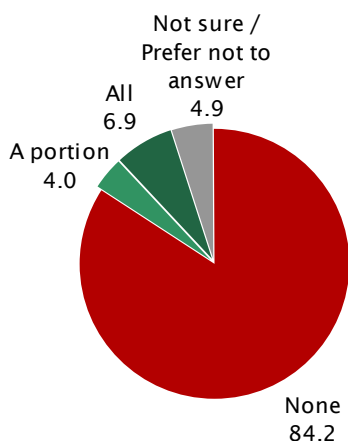
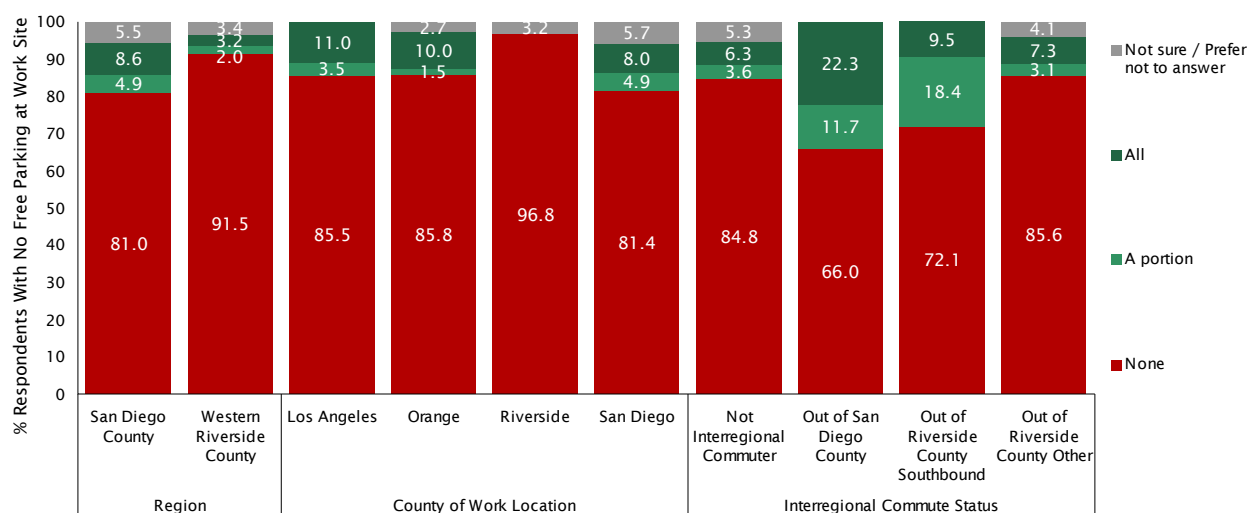


FIGURE 113 EMPLOYER PARKING REIMBURSEMENT BY REGION, COUNTY OF WORK LOCATION & INTERREGIONAL COMMUTER



TRANSIT PASS REIMBURSEMENT In a manner similar to that described above, employees who indicated that their employer offers free or discounted transit passes were asked to identify the level of reimbursement they receive for a pass. Figure 114 presents the results to this question in the context of *all* respondents, including those who indicated their employer does not offer free or discounted transit passes. Overall, 76% of commuters reported that their employer does not provide free or discounted transit passes, and an additional 17% were unsure about whether discounts are offered and/or the amount of the discount. Just 1% of commuters indicated that the entire cost of their transit pass is reimbursed by their employer, and 6% reported that some portion is reimbursed.³¹ Figures 115-118 show how the responses to Question 29 varied across commuter subgroups.

Question 29 *What percentage of a monthly transit pass is paid for by your employer?*

FIGURE 114 EMPLOYER MONTHLY TRANSIT PASS REIMBURSEMENT

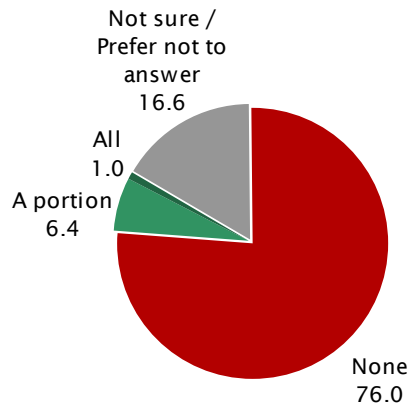
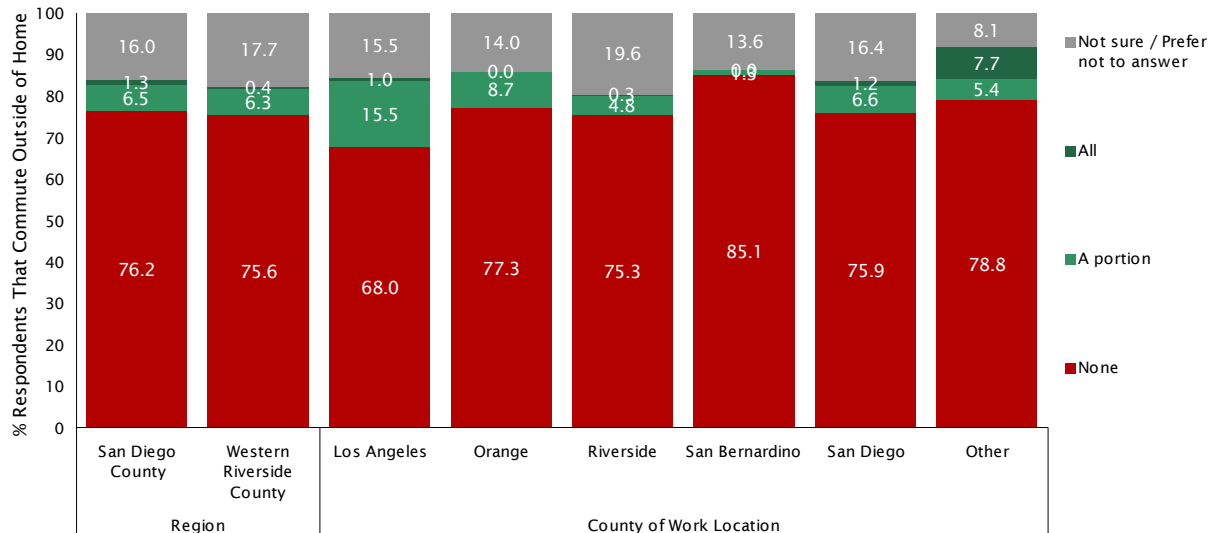


FIGURE 115 EMPLOYER MONTHLY TRANSIT PASS REIMBURSEMENT BY REGION & COUNTY OF WORK LOCATION



31. The responses to Question 29 suggest that some respondents had difficulty describing the incentive offered by their employer in terms of a 'percentage' of a monthly transit pass. In cases where an employer offered a flat amount, or several free/discounted tickets but not an entire pass, for example, it is hard to know how this amount translates to the percentage of a monthly transit pass. Most respondents selected less than 5%.

FIGURE 116 EMPLOYER MONTHLY TRANSIT PASS REIMBURSEMENT BY INTERREGIONAL COMMUTE STATUS & USED LOCAL PARK AND RIDE IN PAST 12 MONTHS

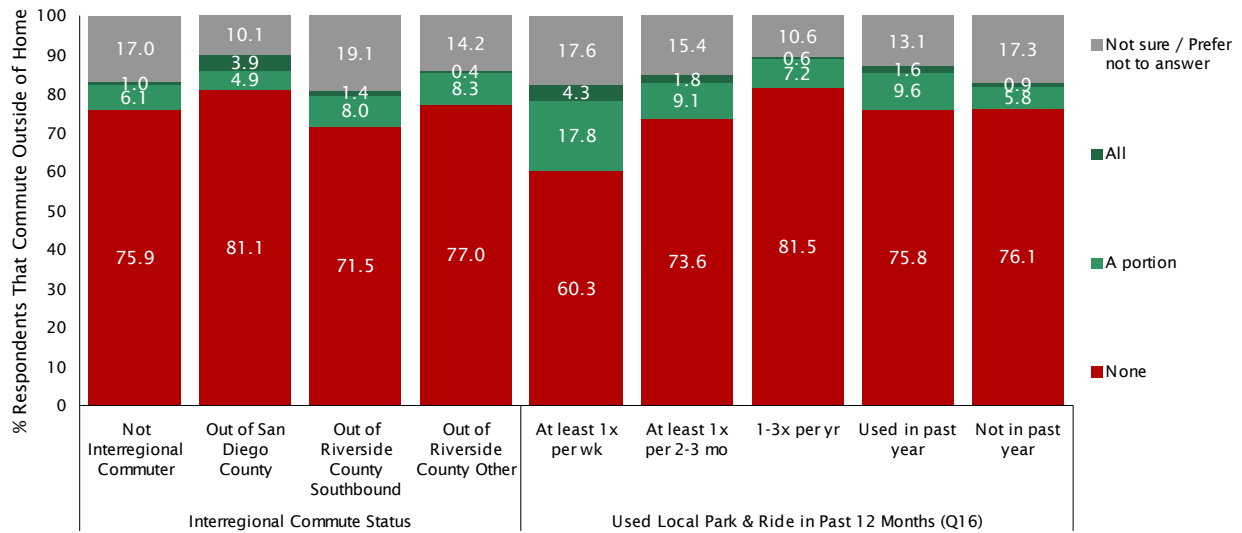


FIGURE 117 EMPLOYER MONTHLY TRANSIT PASS REIMBURSEMENT BY PRIMARY COMMUTE MODE

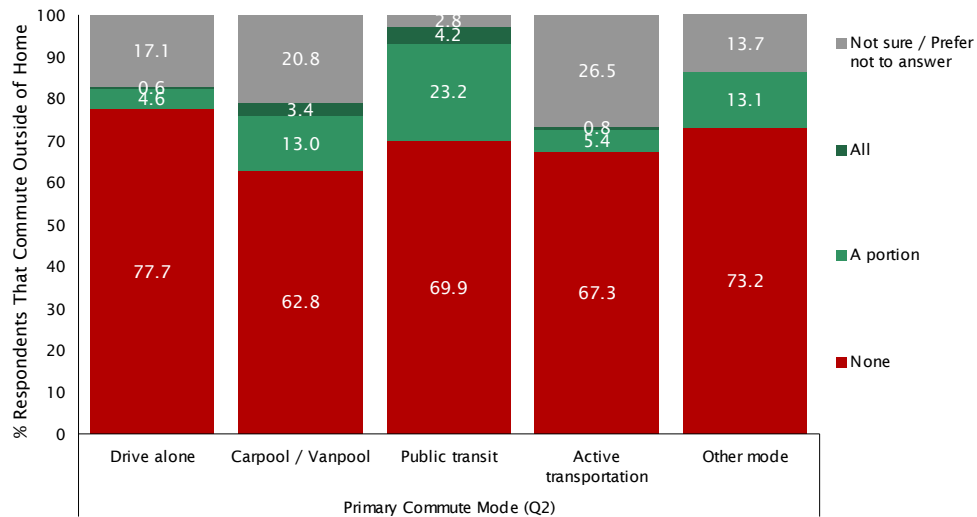
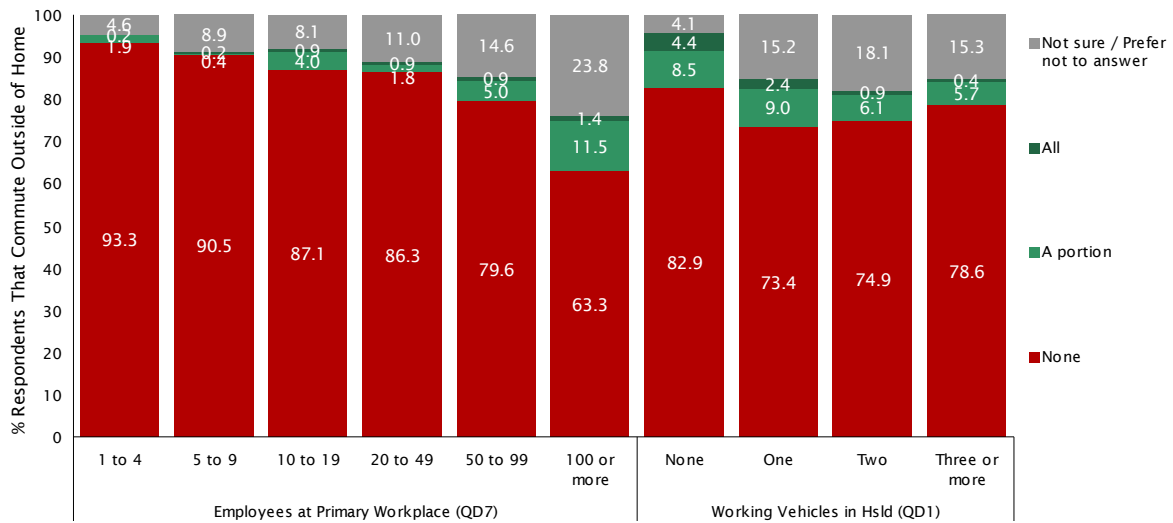


FIGURE 118 EMPLOYER MONTHLY TRANSIT PASS REIMBURSEMENT BY EMPLOYEES AT PRIMARY WORKPLACE & WORKING VEHICLES IN HSLD

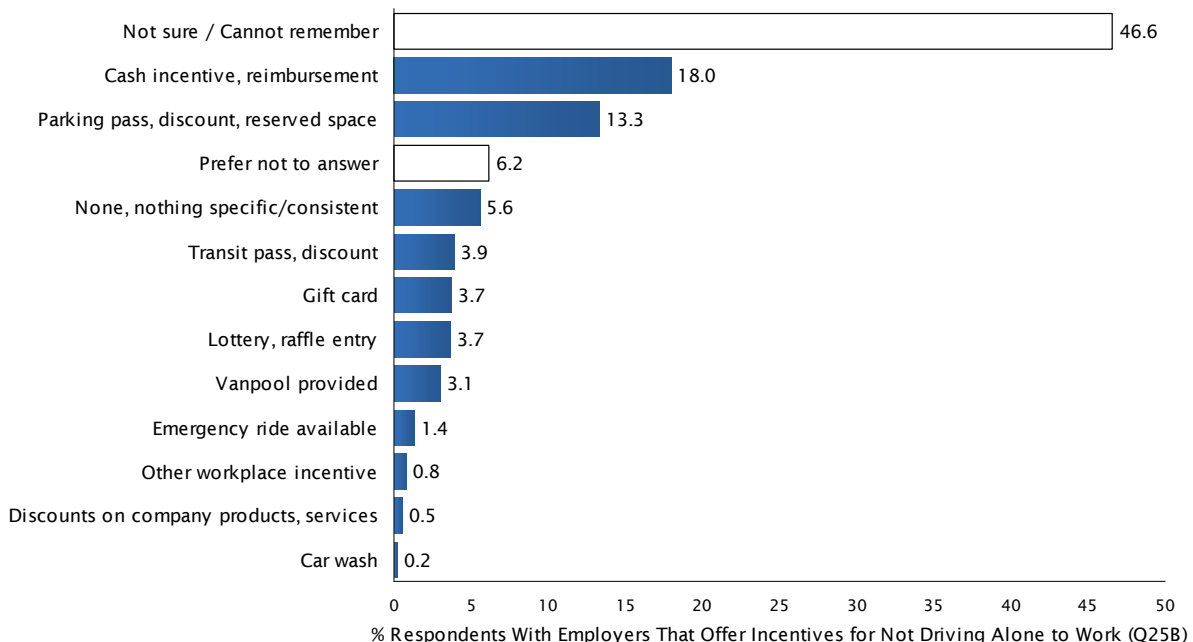


INCENTIVES OFFERED FOR CARPOOL, VANPOOL, AND/OR ACTIVE TRANSPORTATION

The final substantive question in the survey asked those who reported that their employer offers cash or other incentives for not driving alone to work to describe the amount of cash or type of incentives offered. Given the wide range of potential responses, Question 30 was administered in an open-ended manner to allow respondents to describe the incentives in their own words. True North later reviewed the responses and grouped them into the categories shown in Figure 119.

Question 30 *How much cash or what type of incentive is offered by your employer for carpooling, vanpooling, walking, or biking to work?*

FIGURE 119 INCENTIVES OFFERED FOR NOT DRIVING ALONE TO WORK



Nearly half (47%) of those who reported their employer offers cash or other incentives to not drive alone to work were unable to describe the amount of cash or incentive specifics. Approximately 18% described a cash incentive/reimbursement of some value, and 13% mentioned their employer offers parking-related benefits such as a pass, discounted parking or reserved space.

BACKGROUND & DEMOGRAPHICS

Tables 33 and 34 display the primary demographic and background information collected during the survey. The demographic and background information was used to monitor the sample during data collection, as well as provide insight into how the results of the substantive questions of the survey vary across important subgroups of employed adults.

TABLE 33 DEMOGRAPHICS OF SAMPLE BY OVERALL, REGION & INTERREGIONAL COMMUTE STATUS

	Overall	Region		Interregional Commute Status			
		San Diego County	Western Riverside County	Not Interregional Commuter	Out of San Diego County	Out of Riverside County Southbound	Out of Riverside County Other
<i>Unweighted Respondents</i>	4,337	2,749	1,588	3,350	193	263	531
<i>Weighted Percentage of Overall</i>	100.0	68.0	32.0	85.6	1.8	2.5	10.0
Subregion							
San Diego County: Central	13.5	19.8	-	15.3	18.4	-	-
San Diego County: East County	10.5	15.4	-	12.0	13.2	-	-
San Diego County: North City	17.4	25.5	-	19.9	15.4	-	-
San Diego County: North County East	1.7	2.6	-	1.9	5.6	-	-
San Diego County: North County West	17.0	24.9	-	18.9	41.7	-	-
San Diego County: South County	7.9	11.7	-	9.2	5.7	-	-
Western Riverside County: The Pass	1.7	-	5.4	1.2	-	0.5	6.7
Western Riverside County: North County West	5.9	-	18.4	2.6	-	2.9	36.1
Western Riverside County: Mid County West	5.5	-	17.1	4.2	-	29.5	11.7
Western Riverside County: South County	4.8	-	14.9	3.4	-	59.6	3.9
Western Riverside County: Riverside / Moreno Valley	11.7	-	36.4	9.2	-	2.3	37.1
Western Riverside County: Mid County East	2.5	-	7.8	2.2	-	5.2	4.5
QD1 Working vehicles in household							
None	1.6	1.6	1.6	1.7	-	0.5	0.5
One	17.3	19.3	13.0	18.3	27.8	6.1	9.8
Two	38.9	42.0	32.2	39.5	33.1	35.8	35.0
Three or more	40.4	35.9	50.1	38.6	37.5	55.7	52.8
Prefer not to answer	1.9	1.2	3.2	1.9	1.5	1.9	1.9
QD2 Number of people in household							
One	11.7	13.5	7.7	12.4	15.3	3.5	6.3
Two	30.7	34.9	21.9	31.7	39.9	20.6	22.8
Three	18.8	18.8	18.7	18.6	17.4	18.0	20.3
Four	19.5	18.1	22.6	19.0	12.3	29.4	22.8
Five or more	16.5	12.8	24.4	15.4	13.6	26.1	24.5
Prefer not to answer	2.8	1.9	4.8	2.8	1.5	2.4	3.4
QD3 Number of people 16+ in household							
One	14.2	15.8	10.7	15.0	16.3	6.5	8.2
Two	48.1	52.3	39.1	48.8	50.5	46.1	41.8
Three	17.8	16.3	21.1	17.4	13.0	21.1	21.8
Four	10.3	8.6	14.0	9.6	7.1	14.1	15.9
Five or more	6.1	4.5	9.5	5.6	11.6	8.6	8.6
Prefer not to answer	3.5	2.5	5.5	3.5	1.5	3.6	3.7
QD4 Age							
16 to 24	13.8	13.9	13.6	14.8	10.7	10.8	6.9
25 to 34	24.0	24.7	22.6	24.1	26.8	20.9	23.7
35 to 44	20.8	20.3	22.0	20.3	16.7	26.7	24.5
45 to 54	20.5	19.8	21.9	20.0	17.6	21.1	25.1
55 to 64	13.9	14.2	13.1	13.7	18.5	11.2	15.4
65 and older	4.0	4.2	3.4	4.1	6.8	2.8	2.2
Prefer not to answer	3.0	2.8	3.5	3.0	3.0	6.6	2.2
QD9 Gender							
Male	50.0	49.5	51.2	47.9	56.9	64.5	63.7
Female	47.6	48.1	46.6	49.7	41.6	33.4	34.5
Other	0.4	0.6	0.0	0.5	0.6	-	0.2
Prefer not to answer	1.9	1.7	2.2	1.9	1.0	2.1	1.7

TABLE 34 DEMOGRAPHICS OF SAMPLE BY OVERALL, REGION & INTERREGIONAL COMMUTE STATUS CONTINUED

	Overall	Region		Interregional Commute Status			
		San Diego County	Western Riverside County	Not Interregional Commuter	Out of San Diego County	Out of Riverside County Southbound	Out of Riverside County Other
<i>Unweighted Respondents</i>	4,337	2,749	1,588	3,350	193	263	531
<i>Weighted Percentage of Overall</i>	100.0	68.0	32.0	85.6	1.8	2.5	10.0
QD7 Number of employees at primary location							
1 to 4	13.8	14.8	11.6	15.1	7.9	4.2	6.2
5 to 9	7.3	7.5	6.9	7.4	5.6	7.8	6.5
10 to 19	10.3	11.3	8.1	10.6	13.9	10.7	6.6
20 to 49	13.8	13.4	14.6	13.7	19.8	16.6	12.6
50 to 99	11.0	11.1	10.8	10.6	12.3	9.3	14.6
100 to 499	18.4	17.4	20.7	17.6	18.6	18.1	25.8
500 or more	18.8	18.8	18.7	18.2	19.3	25.4	21.7
Not sure	4.6	4.0	5.9	4.8	2.0	3.1	4.0
Prefer not to answer	2.1	1.8	2.6	2.0	0.5	4.9	2.0
QD8 Business type							
Private sector	56.2	58.5	51.4	55.9	69.5	55.7	57.0
Government agency	20.1	18.4	23.5	19.8	17.2	24.2	21.3
Not-for-profit organization	13.4	13.1	14.0	13.5	10.2	7.5	13.8
Prefer not to answer	10.4	10.0	11.2	10.7	3.1	12.6	7.8
QD5 Occupation							
Operator / Fabricator / Laborer	4.7	3.8	6.7	4.4	3.6	6.6	6.8
Precision production, assembly	0.4	0.4	0.5	0.4	0.5	1.7	0.4
Craft and repair	3.7	3.2	4.7	3.4	1.9	12.3	4.6
Janitorial	0.3	0.2	0.6	0.4	-	-	0.3
Food preparation, serving	1.9	2.2	1.4	2.0	0.2	1.0	2.0
Protective services	3.0	3.0	3.0	2.8	1.6	5.7	4.2
Physician	1.1	1.4	0.6	1.2	1.4	0.9	0.9
Nurse	2.8	2.9	2.5	2.9	0.4	2.2	2.9
Medical assistant	2.6	2.6	2.4	2.6	1.0	1.8	2.4
Sales	6.1	5.6	7.3	6.1	7.9	3.3	7.0
Customer service / Telemarketer	2.7	2.0	4.2	2.6	1.0	1.3	3.8
Professional specialty (not IT)	25.6	28.1	20.3	26.0	40.2	24.2	20.3
Professional specialty (IT)	1.7	2.0	1.1	1.7	-	1.3	1.8
Administrative / Office worker	7.2	7.2	6.9	7.6	2.0	3.1	5.4
Supervisor / Manager	1.1	1.0	1.4	1.1	2.5	1.1	1.3
Executive	14.2	14.7	13.1	13.8	18.1	14.1	16.5
Teacher	6.7	6.7	6.7	6.9	5.8	2.8	6.2
Church / Religious duties	0.2	0.1	0.4	0.2	-	-	-
Other	3.7	4.0	3.2	4.1	4.9	3.1	0.9
Prefer not to answer	10.3	9.0	12.9	10.0	7.0	13.6	12.3
QD6 Industry							
Agriculture	0.5	0.6	0.4	0.6	0.8	0.7	0.1
Construction	2.4	1.9	3.4	2.1	1.5	6.3	4.4
IT-Manufacturing services	7.4	7.7	6.8	7.3	12.3	8.7	7.6
Non IT-Manufacturing	0.2	0.2	0.2	0.2	-	0.8	0.1
Retail	5.6	5.1	6.7	5.9	7.2	1.7	3.8
Transportation	3.5	2.4	6.0	2.8	9.4	4.7	8.3
Energy / Natural Resources	1.7	1.4	2.4	1.7	0.9	2.3	2.0
Business services	15.1	16.4	12.5	15.1	24.2	18.4	12.8
Hospitality, visitor, entertainment services	10.0	10.8	8.5	10.0	15.1	9.6	9.7
Financial services	6.0	6.1	5.7	5.9	3.6	4.1	7.3
Education	12.5	11.4	14.8	12.9	7.3	7.6	10.8
Medical, social services	12.8	13.7	11.1	13.1	7.3	9.7	12.6
Government / Public Administration	9.1	9.3	8.6	9.0	6.0	14.0	8.9
Biosciences / Pharmaceuticals	1.8	2.4	0.4	2.0	0.2	1.1	0.5
Religious / Non-profit	1.5	1.7	1.1	1.7	-	-	1.1
Other	0.4	0.3	0.5	0.4	-	-	0.6
Not sure / Prefer not to answer	9.3	8.5	10.9	9.4	4.2	10.2	9.5
QD11 Survey language							
English	98.2	98.6	97.3	98.5	99.2	97.0	95.7
Spanish	1.8	1.4	2.7	1.5	0.8	3.0	4.3



METHODOLOGY

The following sections outline the methodology used in the study, as well as the motivation for using certain techniques.

QUESTIONNAIRE DEVELOPMENT Dr. McLarney of True North Research worked closely with SANDAG and RCTC to develop a questionnaire that covered the topics of interest and avoided the many possible sources of systematic measurement error, including position-order effects, wording effects, response-category effects, scaling effects, and priming. The final questionnaire used in the study can be found near the back of this report (see *Questionnaire* on page 104). The reader should note that in order to avoid a systematic position bias, battery-style questions that included multiple individual items employed randomization to ensure that the items were asked in a random order for each respondent.

Some of the questions asked in this study were presented only to a subset of respondents. For example, only individuals who indicated that they had used a Park & Ride lot in the 12 months prior to the interview (Question 16) were asked if they have ever used a Park & Ride lot for something *other* than commuting to work (Question 17). The questionnaire included with this report identifies the skip patterns that were used during the interview to ensure that each respondent received the appropriate questions.

PROGRAMMING, PRE-TEST & TRANSLATION Prior to fielding the survey, the questionnaire was CATI (Computer Assisted Telephone Interviewing) programmed to assist interviewers when conducting the telephone interviews. The CATI program automatically navigates the skip patterns, randomizes the appropriate question items, and alerts the interviewer to certain types of keypunching mistakes should they happen during the interview. The survey was also programmed into a passcode-protected online survey application to allow online participation for sampled voters. The integrity of the questionnaire was pre-tested internally by True North and by dialing into 20 households prior to formally beginning the survey. The final version was professionally translated into Spanish to allow for data collection in English and Spanish languages for both telephone and online data collection.

SAMPLING METHODOLOGY & PHASED DATA COLLECTION The sampling design for this study was in many respects the most important stage of the survey research project. Only through carefully designing the sample to meet the many theoretical and logistical challenges associated with conducting commute surveys would the results of the interviews be representative of intra- and interregional commuters in San Diego County and Western Riverside County.

Telephone-based sampling techniques (such as random digit dial) that in past years worked well for generating representative samples of commuters are no longer nearly as effective. Note only do they fail to account for the growing number of households—especially younger households—that have given up their land lines in favor of mobile phones, the prevalence of caller ID and other similar technologies has led to a substantial rise in call screening behaviors. In combination, these factors create a situation in which a substantial percentage of households are simply unreachable if one relies solely on telephone-based sampling and recruiting techniques.

Rather than choose *phone numbers* at random, our solution was to generate a comprehensive list of households in the study region, randomly select households based on their physical address/location within the regions of interest, and append contact information (telephone and/or email address) to the records. In addition to allowing us to efficiently stratify households by subregion of interest and oversample as needed to meet SANDAG's and RCTC's interview goals within subareas, this approach allowed us to use an effective combination of email *and* telephone calls for recruiting purposes, which counteracts the impacts of call-screening.

SANDAG and RCTC identified a goal of completing surveys with at least 4,000 commuters, ideally distributed as follows: 1,800 intraregional commuters in San Diego County (300 per geographic subregion), 1,200 intraregional commuters in Western Riverside County (200 per geographic subregion), 250 interregional commuters who reside in San Diego County, and 750 interregional commuters who reside in Western Riverside County (with 500 who commute to San Diego County). At the outset of the study, the current patterns of interregional commuting were not known, although based on our past research for SANDAG and WRCOG the incidence of interregional commuters was expected to be *low* and *concentrated* in certain subregions. Interregional commuters who travel to San Diego for their jobs, for example, could be expected to be concentrated in southwest portions of Riverside County (Temecula and Murrieta), but be relatively scarce in the northwest portion of the County. For this reason, the sampling and data collection efforts proceed in two phases.

In **Phase 1**, all qualified employees were eligible to participate in the survey regardless of their commute destination. To accommodate SANDAG's and RCTC's interest in balancing the surveys by subregion, the sample was stratified by subregion prior to random selection. Table 35 summarizes the sampling plan for Phase 1, showing the number of total households per subregion based on the American Community Survey (ACS) 2016 Five Year Estimate, the number of households with a matched telephone number and/or email, the match percentage, the number of completed surveys desired per subregion, and the number of sample records to be ordered per subregion.

TABLE 35 SAMPLE PLAN & MATCH FOR PHASE 1

Region	Subregion	Total Hslds	Total Hslds With at Least 1 Phone or Email	% Match	Wave 1 Completed Surveys Desired	Wave 1 Records Ordered - Unique Hslds
San Diego County	Central	219,522	136,961	62%	300	12,000
San Diego County	East County	176,222	122,277	69%	300	12,000
San Diego County	North City	291,014	192,947	66%	300	12,000
San Diego County	North County East	26,688	19,496	73%	300	12,000
San Diego County	North County West	284,443	200,137	70%	300	12,000
San Diego County	South County	120,631	85,156	71%	300	12,000
Riverside County	The Pass	30,666	22,452	73%	200	8,000
Riverside County	North County West	88,262	65,318	74%	200	8,000
Riverside County	Mid County West	100,285	77,016	77%	200	8,000
Riverside County	South County	74,767	57,576	77%	200	8,000
Riverside County	Riverside/Moreno Valley	175,643	131,001	75%	200	8,000
Riverside County	Mid County East	53,408	37,729	71%	200	8,000

The match rate for contact information (email and/or phone) ranged from a low of 62% to a high of 77% by subregion.³² Common reasons for not achieving a match include variations in street name spelling or type, inconsistencies in unit numbers, or simply not having land line, mobile phone, or email information that matches to a particular household.

Table 36 provides a summary of the surveys collected at the conclusion of the Phase 1 data collection period, which spanned February 23 to April 1, 2018. A total of 6,650 individuals were surveyed in Phase 1. Approximately 41% of respondents (2,705) who were contacted and agreed to participate in the survey were subsequently screened-out (terminated) because they were not employed at the time of the survey. The remaining respondents (3,945) were qualified employees and completed the survey, the vast majority of whom (2,749) were intraregional commuters.

TABLE 36 SUMMARY OF DATA COLLECTION AT CONCLUSION OF PHASE 1 - RAW COUNTS

Area	Not employed / Terminate	Work from home	Interregional commuter	Riverside into/through San Diego Commuter	Intraregional commuter	Total Surveys (Completes + Terms)	Total Employed (Completes)
Central	273	65	8	-	376	722	449
East County	413	68	13	-	459	953	540
North City	361	82	8	-	444	895	534
North County East	142	24	10	-	138	314	172
North County West	366	116	33	-	377	892	526
South County	199	29	6	-	350	584	385
The Pass	186	22	85	2	91	384	198
North County West	122	26	159	1	66	373	251
Mid County West	132	36	77	18	106	351	219
South County	149	44	92	67	75	360	211
Riverside/ Moreno Valley	145	33	93	1	148	419	274
Mid County East	217	25	42	9	119	403	186
San Diego County	1,754	384	78	0	2,144	4,360	2,606
Western Riverside County	951	186	548	98	605	2,290	1,339
TOTAL	2,705	570	626	98	2,749	6,650	3,945

With respect to *interregional* commuters, the incidence rates in Riverside County ranged from a low of 10% (Mid County East) to a high of 43% (North County West), although most of these individuals reported commuting to Orange County or Los Angeles County for their work. Of the 548 interregional commuters interviewed in Phase 1 who reside in Riverside County, 98 commuted into or through San Diego County for their job.

The incidence rate for San Diego County residents who commute out of the County for their job was much lower than their Riverside counterparts. Of the 4,360 interviews completed with San Diego County residents (commuters & not employed/terminates), just 78 (2%) reported commuting out of the County for their work.

After completing Phase 1 and making necessary programming adjustments, **Phase 2** of data collection began April 10. Phase 2 focused on finding and interviewing interregional commuters, with an emphasis on San Diego County residents who commute out of the County for their work, as well as Riverside County residents who commute into San Diego County for their job. Whereas Phase 1 collected data regionwide for both Western Riverside County and San Diego County, the Phase 2 effort focused on those geographic subareas that have comparatively high concentrations of interregional travelers who commute into/out of San Diego County based on the Phase 1 findings—namely the North County West and North County East subareas within San Diego

32.The overall match rate for phone numbers was 63%, whereas the overall match rate for email was 48%. Because there was overlap between the phone and email match, the combined match rate was 70%.

County and the South County and Mid County West subareas within Western Riverside County. The low incidence rate for those who commute into/out of San Diego County for their employment made the Phase 2 data collection a time-consuming and sample-intense exercise.

TABLE 37 SUMMARY OF DATA COLLECTION AT CONCLUSION OF PHASE 2 - RAW COUNTS

Area	Work from home	Interregional commuter	Riverside into/through San Diego Commuter	Intraregional commuter	Total Employed (Completes)
Central	65	12	-	377	454
East County	68	16	-	464	548
North City	82	11	-	450	543
North County East	24	10	-	138	172
North County West	116	136	-	392	644
South County	29	8	-	351	388
The Pass	22	85	2	91	198
North County West	26	163	2	66	255
Mid County West	36	153	50	107	296
South County	44	253	198	76	373
Riverside/ Moreno Valley	33	98	2	149	280
Mid County East	25	42	9	119	186
San Diego County	384	193	0	2,172	2,749
Western Riverside County	186	794	263	608	1,588
TOTAL	570	987	263	2,780	4,337

Table 37 summarizes the raw survey counts at the conclusion of data collection (Phases 1 & 2). A total of 4,337 qualified employees completed the survey, with the number of interregional commuters totaling 987.

Approximately two-thirds (64%) completed the survey online, whereas the remainder (36%) completed the survey by telephone. The overall response rate (# interviews & screen-outs/# total records in sample) for the survey was 4.8% in Phase 1, before screening for interregional commuters.

WEIGHTING As noted above, to accommodate SANDAG's and RCTC's interest in obtaining reliable parameter estimates for the regions as a whole—as well as within various subregions—the study employed a strategic oversample by subregion to balance the statistical margins of error associated with estimates at the subregion level. Oversampling was also used to increase the number of interregional commuters in the sample, as the incidence rate for this type of commuter is generally quite low.

To adjust for the oversampling, the raw data were weighted according to *American Community Survey* (ACS) estimates of the number of employed persons in each subregion (by age) prior to analyses and presentation. Interregional commuters were also weighted down to match their natural proportions by subregion based on the findings of the Phase 1 data collection effort. The results presented in this report are the weighted results, which are representative for the San Diego and Western Riverside County regions combined, by county, as well as within each subregion. The following tables demonstrate how the final weighted data distributions in the survey closely match ACS estimates.

TABLE 38 SAMPLE DISTRIBUTIONS AFTER WEIGHTING: EMPLOYED INDIVIDUALS BY SUBREGION

	Census Estimate*		Weighted Survey			
	Employed 16+		Employed 16+		Interregional Commuter Incidence	
	<i>n</i>	%	<i>n</i>	%	Any	RCTC South
San Diego County						
Central	320,678	20%	585	20%	2.5%	-
East County	240,851	15%	455	15%	2.3%	-
North City	407,889	26%	753	26%	1.6%	-
North County East	37,783	2%	75	3%	5.9%	-
North County West	396,911	25%	735	25%	4.5%	-
South County	183,043	12%	345	12%	1.3%	-
Total	1,587,155	100%	2,948	100%	2.7%	-
Western Riverside County						
The Pass	33,218	4%	74	5%	39.9%	0.8%
North County West	138,894	19%	256	18%	62.4%	1.3%
Mid County West	130,247	18%	238	17%	34.8%	13.5%
South County	109,120	15%	207	15%	39.5%	31.4%
Riverside/ Moreno Valley	277,512	37%	506	36%	32.3%	0.5%
Mid County East	53,699	7%	108	8%	23.4%	5.3%
Total	742,690	100%	1,389	100%	39.1%	7.9%
Overall Region						
San Diego County	1,587,155	68%	2,948	68%	2.7%	-
Western Riverside County	742,690	32%	1,389	32%	39.1%	7.9%
Total	2,329,845	100%	4,337	100%	14.4%	-

* Source: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates

TABLE 39 SAMPLE DISTRIBUTIONS AFTER WEIGHTING: EMPLOYED INDIVIDUALS BY AGE BY SUBREGION

	Census Estimate*		Weighted Survey	
	<i>n</i>	%	<i>n</i>	%
San Diego County				
16-24	226,956	14%	411	14%
25-34	403,398	25%	729	25%
35-44	331,393	21%	598	21%
45-54	323,620	20%	584	20%
55-64	232,605	15%	420	15%
65+	69,183	4%	125	4%
Western Riverside County				
16-24	103,862	14%	189	14%
25-34	173,706	23%	313	23%
35-44	169,585	23%	306	23%
45-54	168,569	23%	304	23%
55-64	100,963	14%	182	14%
65+	26,005	4%	47	3%
Overall Region				
16-24	330,818	14%	599	14%
25-34	577,104	25%	1042	25%
35-44	500,978	22%	904	21%
45-54	492,189	21%	888	21%
55-64	333,568	14%	602	14%
65+	95,188	4%	172	4%

* Source: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates

MARGIN OF ERROR DUE TO SAMPLING By using the probability-based sampling design described above, True North ensured that the final Phase 1 sample was representative of employees in the study region. Because not all employees participated in the survey, however, the results have what is known as a statistical margin of error due to sampling. The margin of error refers to the difference between what was found in the sample Among Phase 1 survey respondents for a particular question and what would have been found if all of the employed adults in the particular region or subregion had been interviewed. The estimated margins of error for the two counties, respective subregions, and the overall combined study region are shown in Table 40. The margins of error reflect a 95% confidence interval (+/-).

Because Phase 2 oversampled for low-incidence interregional commuters and was focused on specific subregions, the interviews collected in Phase 2 are *not* included in the margin of error estimates shown below so as not to overstate the reliability of the survey results. Although the additional interregional commuter interviews would slightly improve the reliability of the survey data within affected subregions, the benefit is marginal and we prefer to be conservative in the reliability estimates.

TABLE 40 ESTIMATED MARGINS OF ERROR DUE TO SAMPLING

	# Employees	Phase 1 Sample	Margin of Error
San Diego County	1,587,155	2,606	1.92%
Central	320,678	449	4.63%
East County	240,851	540	4.22%
North City	407,889	534	4.24%
North County East	37,783	172	7.48%
North County West	396,911	526	4.27%
South County	183,043	385	5.00%
Western Riverside County	742,690	1339	2.68%
The Pass	33,218	198	6.96%
North County West	138,894	251	6.19%
Mid County West	130,247	219	6.63%
South County	109,120	211	6.76%
Riverside/ Moreno Valley	277,512	274	5.93%
Mid County East	53,699	186	7.19%
Combined Region	2,329,845	3,945	1.56%

RECRUITING & DATA COLLECTION The survey followed a mixed-method design that employed multiple recruiting methods (telephone and email) and multiple data collection methods (telephone and online). Telephone interviews averaged 18 minutes in length and were conducted during weekday evenings (5:30PM to 9PM) and on weekends (10AM to 5PM). It is standard practice not to call during the day on weekdays because most working adults are unavailable and thus calling during those hours would likely bias the sample.

Employees recruited via email were assigned a unique passcode to ensure that only those who received an invitation could access the online survey site, and that each individual could complete the survey only one time. During the data collection period, two email reminder notices were also sent to encourage participation among those who had yet to take the survey.

DATA PROCESSING Data processing consisted of checking the data for errors or inconsistencies, coding and recoding responses, weighting, and preparing frequency analyses and cross-tabulations.

ROUNDING Numbers that end in 0.5 or higher are rounded up to the nearest whole number, whereas numbers that end in 0.4 or lower are rounded down to the nearest whole number. These same rounding rules are also applied, when needed, to arrive at numbers that include a decimal place in constructing figures and charts. Occasionally, these rounding rules lead to small discrepancies in the first decimal place when comparing tables and pie charts for a given question.



QUESTIONNAIRE



SANDAG & RCTC
Park & Ride/Commute Survey
Phone Version Final

Section 1: Introduction to Study

Intro when dialing into San Diego County:

Hi, may I please speak to: _____? (Use if name on file. Otherwise skip)

Hi, my name is _____ and I'm calling on behalf of TNR, an independent public opinion research company. We're conducting a survey about important issues in **San Diego County** and we would like to get your opinions. I'm not selling anything and I won't ask for a donation. If you qualify and participate in this survey, you will be entered into a sweepstakes to win one of five \$100 Amazon gift cards.

Intro when dialing into Riverside County:

Hi, may I please speak to: _____? (Use if name on file. Otherwise skip)

Hi, my name is _____ and I'm calling on behalf of TNR, an independent public opinion research company. We're conducting a survey about important issues in **Riverside County** and we would like to get your opinions. I'm not selling anything and I won't ask for a donation. If you qualify and participate in this survey, you will be entered into a sweepstakes to win one of five \$100 Amazon gift cards.

If needed: This is a survey about how people work and travel in the region. Your answers will be completely confidential.

If needed: The survey should take about 15 minutes to complete.

If needed: If now is not a convenient time, can you let me know a better time so I can call back?

Section 2: Screening Questions

The purpose of this survey is to understand how people work and commute in the region. To begin, let me ask about the location of your residence and your employment status.

SC1 What is the ZIP code at your residence?

Record five-digit ZIP

99 Prefer not to answer

SC2 Are you currently employed 30 hours or more per week, less than 30 hours per week, or are you not currently employed?

1 Employed 30+ hours per week Skip to intro preceding Q1

2 Employed less than 30 hours per week Skip to intro preceding Q1

3 Not employed (retired, homemaker, student, in-between jobs, disabled) Go to SC3

99 Prefer not to answer Terminate

SC3	Is there a person in your household that is currently employed? <i>If yes, ask: Can I speak to that person?</i>	
1	Switched to employed person	<i>Go back to intro preceding SC1 with new person and repeat</i>
2	Person not currently available	<i>Ask for first name of person and a callback time</i>
3	No – No employed person in household	<i>Terminate</i>
99	Prefer not to answer	<i>Terminate</i>

Section 3: Commute Status & Mode

If you have more than one job, please answer the following questions for your **primary** job.

Q1	Do you typically work from home, or do you typically commute to a work location <u>outside</u> of your home? <i>If hesitates, ask: Where do you spend the most time working on your job – at your home, or at a location outside of your home?</i>	
1	Work from home	<i>Skip to intro preceding D1</i>
2	Commute to work destination outside of my home	<i>Ask Q2</i>
99	Prefer not to answer	<i>Terminate</i>
Q2	What method of transportation do you use <u>most</u> of the time when commuting to your work place? <i>If says drive, ask: Do you drive alone or carpool with others?</i> <i>If respondent says uses more than one transportation method each day, record the method they use for the longest portion of their commute.</i>	
1	Drive alone in a car, truck, SUV, or van	
2	Motorcycle	
3	Carpool (ride together 2 to 4 people)	
4	Vanpool (ride together with 5 to 15 people)	
5	On-demand rideshare service like Uber, Lyft, or Waze Carpool	
6	Zipcar	
7	Taxi	
8	Employer-provided shuttle/bus	
Public Transit		
9	Local bus	
10	Express bus/premium bus/ <i>Rapid/CommuterLink</i>	
11	Train: Metrolink/Metro Rail/ COASTER/Amtrak/	
12	San Diego Trolley	
13	SPRINTER	

Park & Ride/Commute Survey

5/31/2018

	14	Other public transit	
	15	Bike	
	16	Walk/jog/run	
	17	Other	<i>specify</i>
	99	Prefer not to answer	
<i>If Q2=5 ask Q3</i>			
Q3	Do you typically use a <i>pooled</i> rideshare service where you share your ride with strangers who are headed in the same direction?		
	1	Yes, pooled	Ask Q4
	2	No	Skip to Q5
	99	Prefer not to answer	Skip to Q5
Q4	Which pooled rideshare service do you typically use?		
	1	Uber Pool	
	2	Lyft Line	
	3	Waze Carpool	
	4	Other	
	99	Prefer not to answer	
Q5	What would you say is the most important factor or reason why you choose <<insert mode from Q2>> when commuting to work? Please be as specific as you can in your response.		
		Record Verbatim Response.	
	98	Not Sure	
	99	Prefer not to answer	
Q6	In miles, what is the approximate distance between your home and your work place? <i>If respondent not sure, ask them to estimate.</i>		
Record miles		Range:1-999	
	99	Prefer not to answer	
Q7	In minutes, how long does it typically take you to commute to work one-way if you travel there directly without stops? <i>If respondent says it depends or not sure, ask them to estimate their average time in minutes.</i>		
Record minutes		Range:1-999	
	99	Prefer not to answer	

Q8	In what county is your place of work located?		
	1	Los Angeles (L.A.)	
	2	Orange	
	3	Riverside	
	4	San Bernardino	
	5	San Diego	
	6	Ventura	
	7	Imperial	
	8	Commutes to Mexico/Baja	
	9	Other <i>specify</i>	
	99	Prefer not to answer	
Q9	And what is the name of the city where your place of work is located?		
Pulldown Menu for Q8 County		Pulldown Menus provided in County City Pulldown Lists.xls	

Section 4: Willingness to Try Alternative Modes

Ask Q10 if Q2=1. Otherwise skip to intro preceding Q16

Q10	If you <i>were</i> to use a form of transportation <i>other</i> than driving alone for your work commute, which of the following would work best for you? <i>Read list of options in random order.</i>		
	1	A local bus	
	2	An Express bus such as <i>Rapid</i> or <i>CommuterLink</i>	
	3	A Train such as COASTER, METROLINK, METRO RAIL, or AMTRAK	
	4	The San Diego Trolley	
	5	SPRINTER	
	6	A Carpool	
	7	A Vanpool	
	8	On-demand rideshare service like Uber, Lyft, or Waze Carpool	
	9	A bike	
	10	Walking, jogging, or running	
	99	Prefer not to answer	

Q11	Is there a particular reason why <<insert option selected in Q10>> would work best for you? Please be as specific as you can in your response.				
	If Q10 = 99, ask: Is there a particular reason why none of those options would work best for you? Please be as specific as you can in your response. Then skip to intro preceding Q16.				
	Record Verbatim Response. Up to two responses.				
	2	No particular reason			
	99	Prefer not to answer			
Q12	Which of the following statements best matches your attitude about using <insert option selected in Q10> to commute to work at least once per week? _____ OR _____?				
	If Q10 = 10, ask: Which of the following statements best matches your attitude about walking, jogging, or running to commute to work at least once per week? _____ OR _____?				
Randomize options 1 & 2					
	1	I would only do it if I had no other options	Skip to intro preceding Q16		
	2	I would do it under the right circumstances	Ask Q13		
	99	Prefer not to answer	Skip to intro preceding Q16		
Q13	What would make it easier for you to use <<insert option selected in Q10>> for your work commute at least once per week? Please be as specific as you can in your response.				
	If Q10 = 10, ask: What would make it easier for you to walk, jog, or run for your work commute at least once per week? Please be as specific as you can in your response.				
	Record Verbatim Response. Up to two responses.				
	98	Not sure			
	99	Prefer not to answer			
Q14	As I read the following items, I'd like to know whether it would make you more likely to use <<insert option selected in Q10>> for your work commute at least once per week.				
	Here is the (first/next) one: _____. Realistically, would this make you more likely to use <<insert option selected in Q10>> for your work commute at least once per week, or would have no impact? If says 'more likely', ask: Would that be much more likely, or somewhat more likely?				
	If Q10 = 10, ask: As I read the following items, I'd like to know whether it would make you more likely to walk, jog, or run for your work commute at least once per week.				
	Here is the (first/next) one: _____. Realistically, would this make you more likely to walk, jog, or run for your work commute at least once per week, or would have no impact? If says 'more likely', ask: Would that be much more likely, or somewhat more likely?				
	Randomize	Much More likely	Somewhat More Likely	No Impact	Prefer not to answer
A	You have a guaranteed ride home in case of emergencies or unscheduled overtime	1	2	3	99

B	A car is available if needed for midday trips	1	2	3	99
C	You can get to work in about the same amount of time as driving alone	1	2	3	99
<i>Only ask items D-I if Q10=(6,7)</i>					
D	You receive <i>preferred</i> parking locations at your work site	1	2	3	99
E	You receive <i>free</i> parking at your work site	1	2	3	99
F	You receive \$50 per month for not driving to and parking at your work site	1	2	3	99
G	You do not have to drive. You can ride as a passenger and relax, read, or do what you want	1	2	3	99
H	You get to use carpool lanes to avoid traffic congestion	1	2	3	99
I	You don't have to pay tolls when using toll roads or toll lanes	1	2	3	99
<i>Only ask items J-Q if Q10=(1,2,3,4,5)</i>					
J	You receive a <i>discounted</i> transit pass	1	2	3	99
K	You can set aside part of your paycheck each month to pay for a transit pass on a pre-tax basis	1	2	3	99
L	There was a convenient way to get from a transit station to your work and home	1	2	3	99
M	You had more information about the transit schedule and frequency of service	1	2	3	99
N	There is free parking available at the transit station near your home	1	2	3	99
O	You can reserve guaranteed parking at the transit station for a fee	1	2	3	99
P	Transit service was more frequent	1	2	3	99
Q	You receive \$50 per month for not driving to and parking at your work site	1	2	3	99
<i>Only ask items R-S if Q10=(8)</i>					
R	You can set aside part of your paycheck each month to pay for your rideshare trips on a pre-tax basis	1	2	3	99
S	You receive \$50 per month for not driving to and parking at your work site	1	2	3	99
<i>Only ask items T-W if Q10=(9). Only ask items T and W if Q10=(10).</i>					
T	You could shower at your place of work	1	2	3	99
U	There were bike lockers or a bike station at your place of work	1	2	3	99
V	There were dedicated bike lanes for most of your route to work	1	2	3	99
W	You receive \$50 per month for not driving to and parking at your work site	1	2	3	99

<i>If Q14N=1 or Q14O=1, ask Q15.</i>		
Q15	Would you consider using an on-demand rideshare service such as Uber, Lyft, or Waze Carpool to get from your home to the transit station, or the transit station to your work location?	
	1	Yes
	2	No
	99	Prefer not to answer

Section 5: Park & Ride

Next, I'd like to ask you about **Park & Ride lots** – which are places where you can park a vehicle or bicycle to ride transit or join a carpool or vanpool

Q16	Have you used a local Park & Ride lot in the past 12 months? <i>If yes, ask: How often have you used a local Park & Ride lot during this period?</i>				
	1	At least once per week	Ask Q17		
	2	One to three times per month	Ask Q17		
	3	Once every two or three months	Ask Q17		
	4	Once to three times per year	Ask Q17		
	5	No – I haven't used a Park & Ride during past 12 months	Skip to instruction preceding Q18		
	99	Prefer not to answer	Skip to Q21		
Q17	Have you ever used a local Park & Ride lot for something <i>other</i> than commuting to work – such as when going to a sporting event, a concert, or jury duty?				
	1	Yes			
	2	No			
	99	Prefer not to answer			
<i>Only ask Q18 if Q16=5</i>					
Q18	Is there a particular reason why you haven't used a local Park & Ride lot in the past 12 months? Please be specific in your answer.				
		Record Verbatim Response.			
	2	No particular reason			
	99	Prefer not to answer			
Q19	If a local Park & Ride lot: _____, would you be more likely to use it for your work commute, or would it have no impact? <i>If says 'yes, more likely', ask: Would that be much more likely, or somewhat more likely?</i>				
	<i>Randomize</i>	Much More likely	Somewhat More Likely	No Impact	Prefer not to answer
A	Offered reserved parking spaces	1	2	3	99
B	Had convenient drop off/pick-up lanes to avoid delays	1	2	3	99
C	Had frequent transit service and real-time transit arrival and departure information	1	2	3	99

D	Had on-site security personnel and security cameras	1	2	3	99
E	Could be easily seen from surrounding streets and properties	1	2	3	99
F	Offered electric vehicle charging stations	1	2	3	99
G	Had covered bike lockers and a bike repair station	1	2	3	99
H	Offered easy access to freeways and carpool and transit lanes (HOV lanes)	1	2	3	99
I	Had a variety of services offered on-site including dry cleaning, grocery pickup, day care services, storage lockers, and food and retail shops	1	2	3	99
Q20	Is there an amenity or improvement that I <i>didn't</i> mention that would make you more likely to use a local Park & Ride lot for your work commute? <i>If yes, ask:</i> Please describe it to me.				
	Record Verbatim Response.				
	2	No/None come to mind			
	99	Prefer not to answer			

Section 6: Sources for Transportation Information

Q21	What website, app, or other information source do you use <i>most often</i> to obtain transportation-related information or plan a trip? Please be specific in your response.			
	Record First Verbatim Response.			
	2	None come to mind		
	99	Prefer not to answer		
Q22	Do you use a smart phone?			
	1	Yes	Ask Q23	
	2	No	Skip to instruction preceding Q25	
	3	Not sure	Skip to instruction preceding Q25	
	99	Prefer not to answer	Skip to instruction preceding Q25	
Q23	Do you occasionally use your smart phone to: _____?			
	<i>Randomize</i>		Yes	No
			Prefer not to answer	
A	Check traffic conditions		1	2
B	Get driving directions		1	2
C	Check transit schedules or options		1	2
D	Purchase a transit pass or pay a fare		1	2
E	Request a ride from Uber, Lyft, Waze Carpool, or similar rideshare service		1	2

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F	Request motorist aid assistance	1	2	99
Q24	If there were a user-friendly smart phone app that would allow you to plan your trip, book your trip, and pay for your trip on any transportation mode or service, would you be interested in using this app? <i>If yes, ask: Would that be very interested or somewhat interested?</i>			
	1	Very interested		
	2	Somewhat interested		
	3	Not interested		
	99	Prefer not to answer		

Section 8: Employer Benefits*Ask Q25 if Q1=2.*

Q25	Next, let me ask about services that your employer may or may not offer.			
	Does your employer offer: _____?			
	<i>Randomize</i>	Yes	No	Not sure / Prefer not to answer
A	Free or discounted transit passes	1	2	99
B	Cash or other incentives for not driving alone to work	1	2	99
C	Guaranteed rides home in case of emergencies or unscheduled overtime for employees that don't drive to work	1	2	99
D	Free employee shuttles	1	2	99
E	Priority parking locations for carpools or vanpools	1	2	99
F	On-site facilities for employees who bike or walk to work, such as showers and lockers	1	2	99
G	A program where you can withhold money from your paycheck and pay for transit passes or vanpool pre-tax	1	2	99
Q26	Is parking free at your work site?			
	1	Yes	<i>Skip to instruction preceding Q29</i>	
	2	No	<i>Ask Q27</i>	
	99	Prefer not to answer	<i>Skip to instruction preceding Q29</i>	
Q27	How much does it cost to park when you drive to work? You can answer in a daily amount or monthly amount.			
	<i>Record in whole \$</i>	<i>Check box for per day or per month. Range: 1-999</i>		
	99	Prefer not to answer	<i>Skip to instruction preceding Q29</i>	

Q28	How much of the <<insert Q27 amount>> you pay for parking does your employer reimburse you, if any?	
Record in whole \$		Range: \$0/None up to Q27 amount
99	Prefer not to answer	
Ask Q29 if Q25A=1.		
Q29	What percentage of a monthly transit pass is paid for by your employer?	
Drop down menu		Pulldown for 5% increments from: 5% or less, 10%, 15%...up to "100% (Free Pass)"
98	Not sure	
99	Prefer not to answer	
Ask Q30 if Q25B=1.		
Q30	How much cash or what type of incentive is offered by your employer for carpooling, vanpooling, walking, or biking to work?	
Verbatim field		
98	Not sure	
99	Prefer not to answer	

Section 9: Background & Demographics

I have just a few more background questions for statistical purposes.

D1 How many motor vehicles in working condition are owned or leased by members of your household, including cars, trucks, vans, and street-legal motorcycles or scooters.

Record # Range 0 to 20.

99 Prefer not to answer

D2 How many people live in your household?

Record # Range 1 to 20.

99 Prefer not to answer Skip to D4

If D2=1, autocode D3 as 1 and skip to D4.

D3 How many of the people in your household are 16 years or older?

Record # Range 1 to D2.

99 Prefer not to answer

D4	In what year were you born?	
Record four-digit year		Range 1900 to 2002
	99	Prefer not to answer
D5	What is your current occupation?	
		Record Verbatim Response
	99	Prefer not to answer
D6	And what industry do you work in? <i>If pauses, ask: What does your company do?</i>	
		Record Verbatim Response
	99	Prefer not to answer
D7	About how many employees work at your primary work location?	
	1	1-4
	2	5-9
	3	10-19
	4	20-49
	5	50-99
	6	100-499
	7	500 or more
	98	Not Sure
	99	Prefer not to answer
D8	Do you work in the private sector, for a government agency, or for a not-for-profit organization?	
	1	Private sector
	2	Government agency
	3	Not-for-profit organization
	99	Prefer not to answer
D9	What is your gender? <i>Record by voice if telephone interview.</i>	
	1	Male
	2	Female
	3	Other
	99	Prefer not to answer

D10	Finally – so that we know who to ask for if you are randomly selected for the sweepstakes, what is your first name?	
	Record First Name	
	99	Prefer not to answer
Those are all of the questions that I have for you! Thanks very much for participating.		

Post-Interview Items		
D11	Language of Interview	
	1	English
	2	Spanish