4 RIDE CHECK ANALYSIS

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CHAPTER 4 – RIDE CHECK ANALYSIS

The purpose of the ride check analysis is to provide a comprehensive assessment of those transit services offered by Santa Cruz METRO in Watsonville under actual operating conditions. By analyzing ride check data, a snapshot is formed illustrating the current level of system activity and delivery performance.

This section includes two elements: the system's overall on-time performance and the route productivity (i.e., boarding and alighting activity) by stop, route, and day-part. Following a review of ride check data, we will present key findings and recommendations to address any service performance challenges revealed through this analysis.

ON-TIME PERFORMANCE ANALYSIS

On-time performance is a critical element in the customer's perception of whether a transit operator is providing a reliable service. By evaluating the service at the individual route level and day-part, we are able to pinpoint areas of success as well as areas which may need improvement. Achieving on-time performance standards is imperative, as it not only reflects a healthy transit service but benefits the ride-dependent population as well as attracts "choice riders," or those with other mobility options.

Methodology

To help identify issues potentially impacting the quality of the customer experience as well as possible scheduling issues, Moore & Associates conducted a ride check of fixed-route trips provided by Santa Cruz METRO along routes 69A, 69W, 71, 72, 74, 75, 79, and 91X. Ride checks were conducted from June 8 to June 13, 2011.

Critical to the evaluation process is data segregation by day-part. In doing so, we identified four distinct time blocks:

- 4:45 a.m. to 6:00 a.m. (A.M. Other),
- 6:01 a.m. to 9:00 p.m. (A.M. Peak),
- 9:01 a.m. to 3:30 p.m. (Midday),
- 3:31 p.m. to 7:00 p.m. (P.M. Peak), and
- 7:01 p.m. to 11:30 p.m. (P.M. Other).

The following criteria were used to evaluate on-time performance:

- **On-time,** defined as trip departure occurring up to five minutes after the published schedule time.
- **Early,** defined as any departure from an established time-point occurring in advance of the published schedule time.

- **Late,** defined as any departure from an established time-point occurring five or more minutes after the published schedule time.
- **Missed,** defined as any departure from an established time-point occurring more than 10 minutes after the published schedule time.

From a provision of service perspective, industry standards suggest on-time performance be at least 90 percent with no early departures. The evaluation revealed 61 percent of Santa Cruz METRO trips operated on-time during the evaluation period. Note, no trips were more than 10 minutes late and consequently there were no missed trips.

On-Time Performance

Exhibit 4.1 shows the on-time performance for the Santa Cruz METRO routes serving Watsonville by day-part. On-time performance fell across the service day with late arrivals as the primary cause of lower on-time performance. Despite the role late arrivals played, early departures also had a significant negative impact on on-time performance.

It is interesting to note there are minor spikes in early departures during the A.M. and P.M. peak day-parts. This is problematic given most riders during this day-part are usually attempting to either get to work or return home. Improving on-time performance during these day-parts would likely boost the perception of reliability for the service as well potentially improve access to employment opportunities.

Exhibit 4.1 Overall On-Time Performance by Day-Part

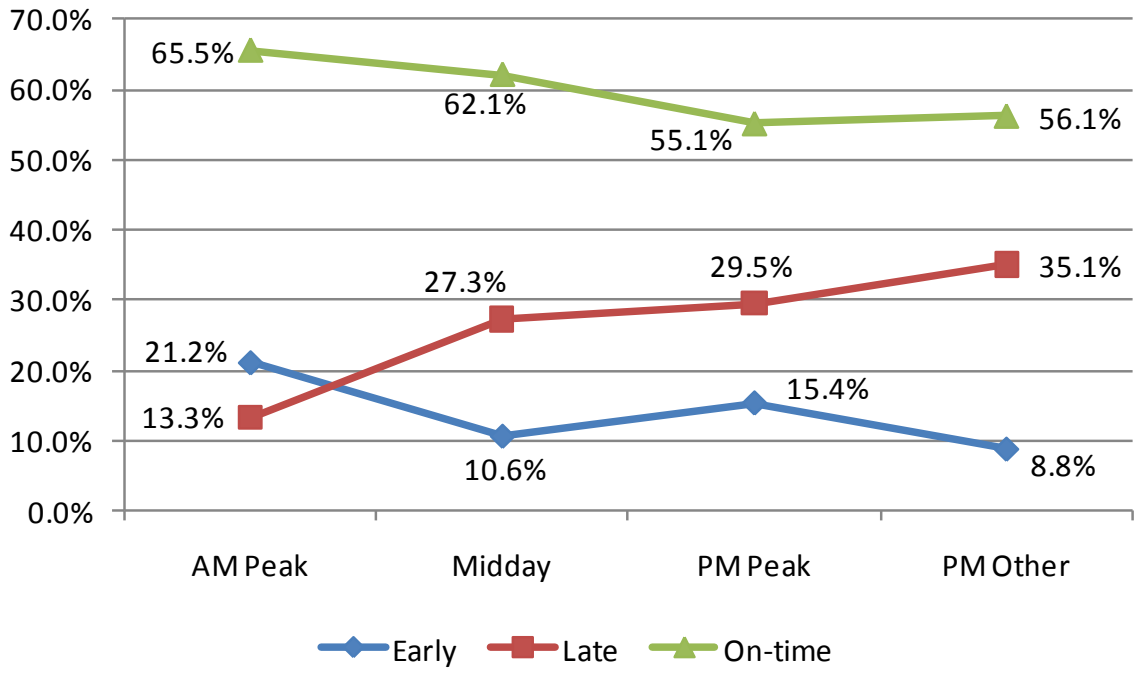


Exhibit 4.2 shows on-time performance for weekday service by day-part. As noted in Exhibit 4.1, late arrivals were typically the largest contributor to lower on-time performance. Late arrivals were particularly prevalent during the P.M. peak day-part. Improving on-time performance for routes serving Watsonville should be a priority for Santa Cruz METRO. This can be attributed in part to the significant peak-hour traffic on Highway 1 and major arterials (i.e., Soquel Drive, Freedom Boulevard) connecting Watsonville with Soquel, Aptos, and Santa Cruz. Late arrivals, particularly in the P.M. peak period, are the result of Santa Cruz METRO buses being caught in congestion related to cars leaving Santa Cruz and heading southeast to commute home, an ongoing severe traffic congestion problem in this highly traveled part of the county.

Exhibit 4.2 Weekday On-time Performance by Day-Part

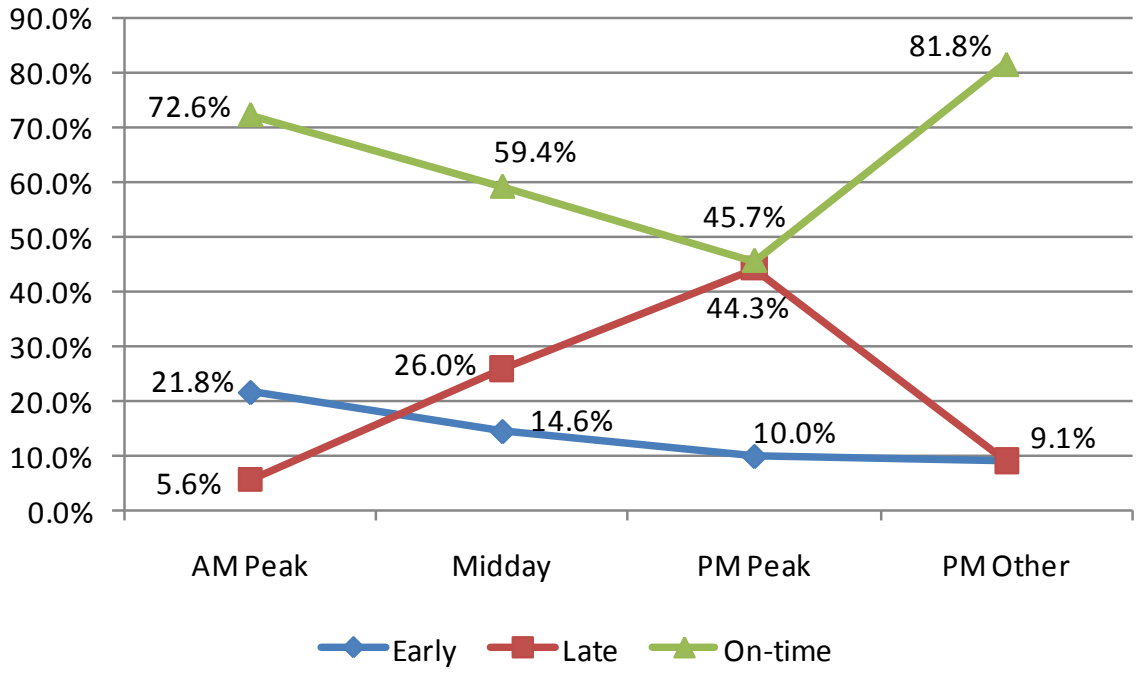


Exhibit 4.3 shows weekend on-time performance by day-part. In contrast to weekday on-time performance, weekend on-time performance remained relatively consistent throughout the ride check given the lack of peak-hour congestion on weekends. However, on-time performance was still below the 90-percent threshold for on-time performance. Of particular concern during the weekend was the high proportion of late arrivals throughout the ride check as well as the near 20 percent of departures which were early. As noted, on-time performance is critical to not only improving perceptions about the service but is also critical in helping customers in accessing destinations in a reliable and timely fashion. As such, improving on-time performance should be a primary focus with regard to better public transit service in Watsonville.

Exhibit 4.3 Weekend On-Time Performance by Day-Part

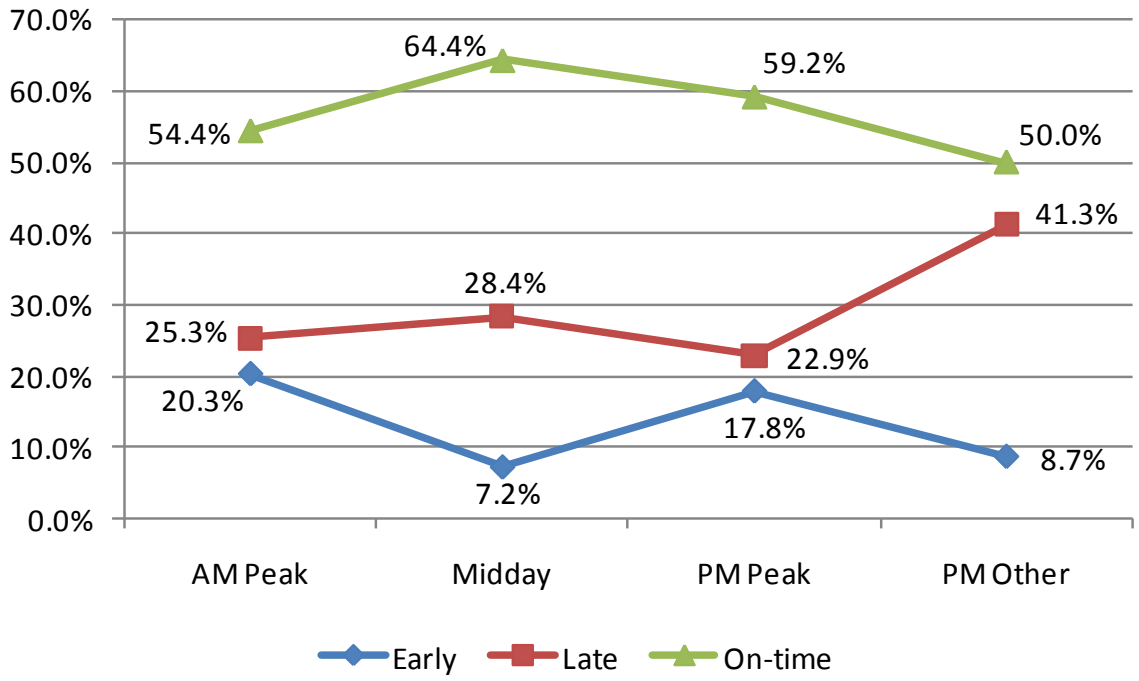


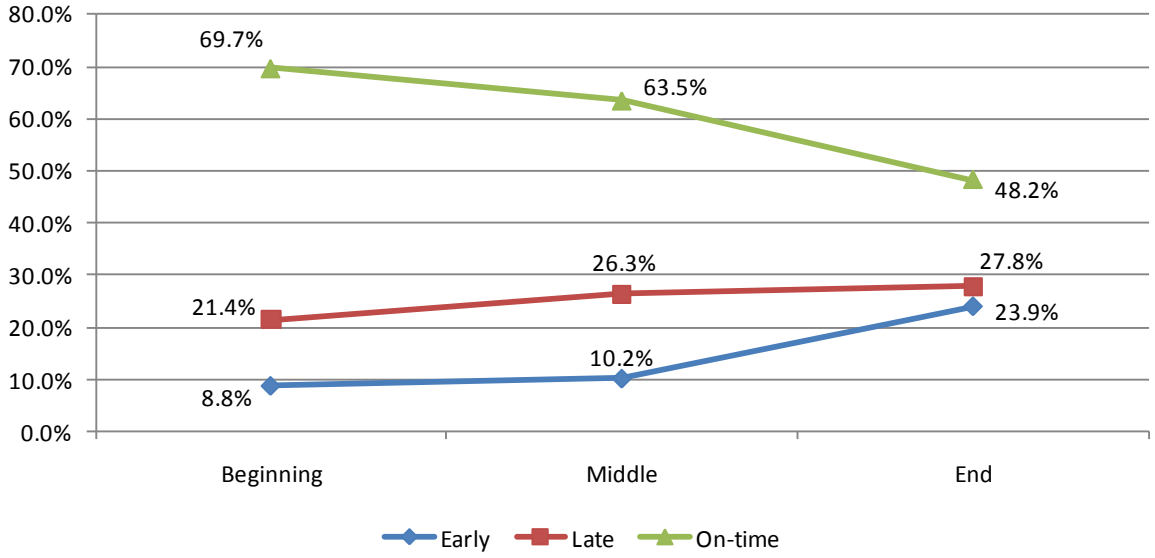
Exhibit 4.4 shows the overall (i.e., weekday and weekend) on-time performance for Santa Cruz METRO routes serving Watsonville. Overall, the on-time performance never reached the 90-percent threshold for on-time departures. On-time performance was best towards the start of the trip with a drop in performance during the middle due to a combination of more late and early departures. On-time performance continued to decline through the end of the trip partially due large increase in early departures. From the middle of the trip to the end of the trip, there was only a small increase in the percentage of late departures.

The ride check revealed an increasing number of early departures from stops. Between the start and middle-trip segments there was only a small increase in the number of early departures. However, between the middle and end-trip segments, there was a 14-percentage point increase in early departures. This is significant because it suggests two possible scenarios. One is drivers are

not readjusting their speed between time points to account for early departures. The second is some time points might have too much time allocated between the stops and thus add unnecessary time to these trips. While this extra run time is valuable during peak hours when congestions and greater passenger volume can lead to delays, Santa Cruz METRO should consider trimming run time from trips during off-peak hours.

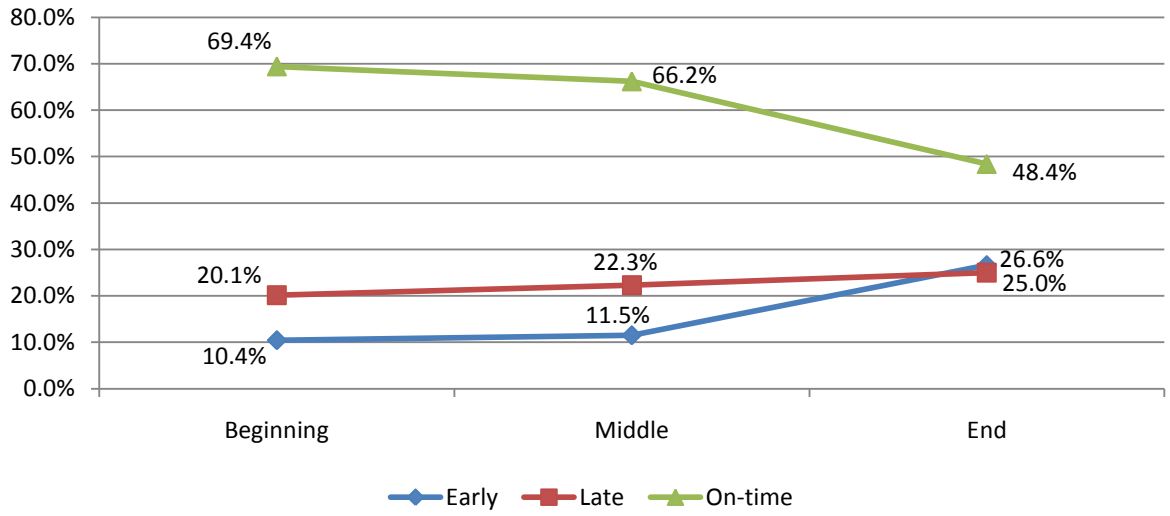
Another significant issue is the number of late departures which had a severe impact on on-time performance. More than one-fifth of departures were late in beginning trip segments. The number of late departures rose to more than one-quarter of all departure times for middle-trip and end-trip segments. In short, the late departures were the largest contributor to the poor on-time performance observed during this ride check.

Exhibit 4.4 Overall On-Time Performance by Trip Segment



The weekday on time performance largely mimics the overall trends seen system-wide, as seen in Exhibit 4.5. None of the trip segments achieve the desired 90-percent threshold for on-time departures. Late departures are still the largest contributor to the low on-time performance, with beginning and middle-trip segments having over one-fifth and end-trip segments having more than one-fourth of all trips departing late. Again with weekday trips, there is a large uptick in early departures from the middle-trip segments to the end-trip segments, again possibly reflecting the drivers not adjusting their speed between time points or having too much time allocated in the published schedule between stops. This is related to the surplus of running time built into schedules to account for peak-hour roadway congestion and passenger volumes on routes traveling along Highway 1 and Soquel Drive, so presents a bit of a Catch-22 to the district.

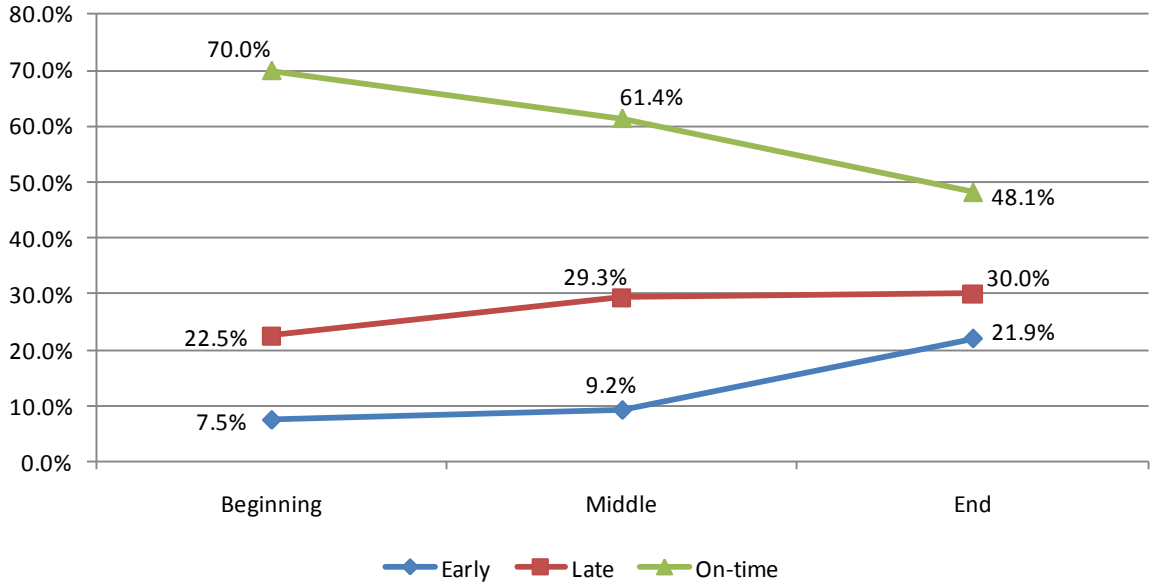
Exhibit 4.5 Weekday On-Time Performance by Trip Segment



Weekend on-time performance is largely the same is the overall on-time performance, only with a larger percentage of trips being late departures, as shown in Exhibit 4.6. Late departures at beginning trips make up over one-fifth of all trip departures, but by middle and end-trip around 30 percent of all trips are late. They are the largest cause of low on-time performance. This shows that the published schedule does not accurately account for the amount of time trips take, and this should be amended to better serve customers.

As with the overall on-time performance and the weekday, there are a large percentage of early-departures on weekend trips, though slightly less than on weekday trips. Again, early departures hold steady at just under 10 percent in beginning and middle-trips, but experience a 12-percentage point jump to almost 22 percent by end-trip. As previously stated, this could represent too much time being allocated between time points.

Exhibit 4.6 Weekend On-Time Performance by Trip Segment



Exhibits 4.7 through 4.9 show the on-time performance for each route by day-part. During the A.M. Peak, Route 72 had the best on-time performance at 87 percent. This was followed by Route 91X Outbound at 86 percent and Route 69A Outbound and Route 69W Inbound at (both at 83 percent). By contrast, Route 91X Inbound and Route 71 Inbound had the lowest on-time performance at 43 percent and 48 percent, respectively. Overall, no route reached the 90-percent threshold throughout the service day. Again this points to the importance of improving on-time performance for the routes serving Watsonville.

Exhibits 4.10 through 4.12 show the on-time performance for each route by trip segment. Generally, each route had declining on-time performance throughout the course of the observed trip. Most routes had good to excellent on-time performance during the beginning of the trip with a sharp decline in on-time performance for the balance of the trip. As shown above, late arrivals were the single largest contributor to lower on-time performance.

Additionally, early departures particularly during the end of the trip had a significant negative impact on on-time performance. Route 91X Inbound departed early from three-quarters of its time points during the ride check. Unlike late arrivals, early departures are completely preventable. We recommend a "no early departure" policy as well as a reexamination of time points along each route, especially during off-peak hours when there is less congestion and lower passenger volumes along Highway 1 and major arterials such as Freedom Boulevard and Soquel Drive.

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Exhibit 4.7 Overall On-time Performance by Route and Day-Part

Route	Day-Part																								
	AM Other					AM Peak					Midday					PM Peak					PM Other				
	Early	Late	Missed	On-time	Total	Early	Late	Missed	On-time	Total	Early	Late	Missed	On-time	Total	Early	Late	Missed	On-time	Total	Early	Late	Missed	On-time	Total
Route 69A Inbound	-	-	-	-	-	22.2%	22.2%	0.0%	55.6%	100.0%	4.2%	25.0%	0.0%	70.8%	100.0%	36.8%	10.5%	0.0%	52.6%	100.0%	-	-	-	-	-
Route 69A Outbound	-	-	-	-	-	0.0%	16.7%	0.0%	83.3%	100.0%	14.3%	21.4%	0.0%	64.3%	100.0%	16.7%	37.5%	0.0%	45.8%	100.0%	-	-	-	-	-
Route 69W Inbound	-	-	-	-	-	16.7%	0.0%	0.0%	83.3%	100.0%	13.3%	23.3%	0.0%	63.3%	100.0%	12.5%	20.8%	0.0%	66.7%	100.0%	-	-	-	-	-
Route 69W Outbound	-	-	-	-	-	-	-	-	-	-	4.8%	40.5%	0.0%	54.8%	100.0%	8.3%	33.3%	0.0%	58.3%	100.0%	50.0%	0.0%	0.0%	50.0%	100.0%
Route 71 Inbound	-	-	-	-	-	21.7%	30.0%	0.0%	48.3%	100.0%	10.9%	34.5%	0.0%	54.5%	100.0%	17.5%	47.5%	0.0%	35.0%	100.0%	0.0%	40.0%	0.0%	60.0%	100.0%
Route 71 Outbound	-	-	-	-	-	26.7%	0.0%	0.0%	73.3%	100.0%	13.0%	20.0%	0.0%	67.0%	100.0%	17.5%	30.0%	0.0%	52.5%	100.0%	3.3%	50.0%	0.0%	46.7%	100.0%
Route 72	-	-	-	-	-	4.3%	8.7%	0.0%	87.0%	100.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	62.5%	0.0%	37.5%	100.0%	-	-	-	-	-
Route 74	-	-	-	-	-	28.6%	0.0%	0.0%	71.4%	100.0%	0.0%	28.6%	0.0%	71.4%	100.0%	14.3%	14.3%	0.0%	71.4%	100.0%	-	-	-	-	-
Route 75	-	-	-	-	-	28.6%	0.0%	0.0%	71.4%	100.0%	13.5%	29.7%	0.0%	56.8%	100.0%	8.7%	0.0%	0.0%	91.3%	100.0%	9.1%	9.1%	0.0%	81.8%	100.0%
Route 79	-	-	-	-	-	0.0%	25.0%	0.0%	75.0%	100.0%	-	-	-	-	-	0.0%	100.0%	0.0%	0.0%	100.0%	-	-	-	-	-
Route 91X Inbound	-	-	-	-	-	57.1%	0.0%	0.0%	42.9%	100.0%	14.3%	14.3%	0.0%	71.4%	100.0%	-	-	-	-	-	-	-	-	-	-
Route 91X Outbound	-	-	-	-	-	0.0%	14.3%	0.0%	85.7%	100.0%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	21.2%	13.3%	0.0%	65.5%	100.0%	10.6%	27.3%	0.0%	62.1%	100.0%	15.4%	29.5%	0.0%	55.1%	100.0%	8.8%	35.1%	0.0%	56.1%	100.0%

Exhibit 4.8 Weekday On-time Performance by Route and Day-Part

Route	Weekday Day-Part																								
	AM Other					AM Peak					Midday					PM Peak					PM Other				
	Early	Late	Missed	On-time	Total	Early	Late	Missed	On-time	Total	Early	Late	Missed	On-time	Total	Early	Late	Missed	On-time	Total	Early	Late	Missed	On-time	Total
Route 69A Inbound	-	-	-	-	-	25.0%	16.7%	0.0%	58.3%	100.0%	8.3%	16.7%	0.0%	75.0%	100.0%	42.9%	28.6%	0.0%	28.6%	100.0%	-	-	-	-	-
Route 69A Outbound	-	-	-	-	-	0.0%	16.7%	0.0%	83.3%	100.0%	20.8%	16.7%	0.0%	62.5%	100.0%	0.0%	83.3%	0.0%	16.7%	100.0%	-	-	-	-	-
Route 69W Inbound	-	-	-	-	-	-	-	-	-	-	25.0%	16.7%	0.0%	58.3%	100.0%	0.0%	66.7%	0.0%	33.3%	100.0%	-	-	-	-	-
Route 69W Outbound	-	-	-	-	-	-	-	-	-	-	4.2%	45.8%	0.0%	50.0%	100.0%	0.0%	66.7%	0.0%	33.3%	100.0%	-	-	-	-	-
Route 71 Inbound	-	-	-	-	-	40.0%	0.0%	0.0%	60.0%	100.0%	14.0%	32.0%	0.0%	54.0%	100.0%	-	-	-	-	-	-	-	-	-	-
Route 71 Outbound	-	-	-	-	-	20.0%	0.0%	0.0%	80.0%	100.0%	23.3%	33.3%	0.0%	43.3%	100.0%	-	-	-	-	-	-	-	-	-	-
Route 72	-	-	-	-	-	4.3%	8.7%	0.0%	87.0%	100.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	62.5%	0.0%	37.5%	100.0%	-	-	-	-	-
Route 74	-	-	-	-	-	28.6%	0.0%	0.0%	71.4%	100.0%	0.0%	28.6%	0.0%	71.4%	100.0%	14.3%	14.3%	0.0%	71.4%	100.0%	-	-	-	-	-
Route 75	-	-	-	-	-	27.3%	0.0%	0.0%	72.7%	100.0%	27.3%	0.0%	0.0%	72.7%	100.0%	16.7%	0.0%	0.0%	83.3%	100.0%	9.1%	9.1%	0.0%	81.8%	100.0%
Route 79	-	-	-	-	-	0.0%	25.0%	0.0%	75.0%	100.0%	-	-	-	-	-	0.0%	100.0%	0.0%	0.0%	100.0%	-	-	-	-	-
Route 91X Inbound	-	-	-	-	-	57.1%	0.0%	0.0%	42.9%	100.0%	14.3%	14.3%	0.0%	71.4%	100.0%	-	-	-	-	-	-	-	-	-	-
Route 91X Outbound	-	-	-	-	-	0.0%	14.3%	0.0%	85.7%	100.0%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	21.8%	5.6%	0.0%	72.6%	100.0%	14.6%	26.0%	0.0%	59.4%	100.0%	10.0%	44.3%	0.0%	45.7%	100.0%	9.1%	9.1%	0.0%	81.8%	100.0%

Exhibit 4.9 Weekend On-time Performance by Route and Day-Part

Route	Weekday Day-Part																								
	AM Other					AM Peak					Midday					PM Peak					PM Other				
	Early	Late	Missed	On-time	Total	Early	Late	Missed	On-time	Total	Early	Late	Missed	On-time	Total	Early	Late	Missed	On-time	Total	Early	Late	Missed	On-time	Total
Route 69A Inbound	-	-	-	-	-	16.7%	33.3%	0.0%	50.0%	100.0%	0.0%	33.3%	0.0%	66.7%	100.0%	33.3%	0.0%	0.0%	66.7%	100.0%	-	-	-	-	-
Route 69A Outbound	-	-	-	-	-	-	-	-	-	-	5.6%	27.8%	0.0%	66.7%	100.0%	22.2%	22.2%	0.0%	55.6%	100.0%	-	-	-	-	-
Route 69W Inbound	-	-	-	-	-	16.7%	0.0%	0.0%	83.3%	100.0%	5.6%	27.8%	0.0%	66.7%	100.0%	16.7%	5.6%	0.0%	77.8%	100.0%	-	-	-	-	-
Route 69W Outbound	-	-	-	-	-	-	-	-	-	-	5.6%	33.3%	0.0%	61.1%	100.0%	16.7%	0.0%	0.0%	83.3%	100.0%	50.0%	0.0%	0.0%	50.0%	100.0%
Route 71 Inbound	-	-	-	-	-	12.5%	45.0%	0.0%	42.5%	100.0%	8.3%	36.7%	0.0%	55.0%	100.0%	17.5%	47.5%	0.0%	35.0%	100.0%	0.0%	40.0%	0.0%	60.0%	100.0%
Route 71 Outbound	-	-	-	-	-	40.0%	0.0%	0.0%	60.0%	100.0%	8.6%	14.3%	0.0%	77.1%	100.0%	17.5%	30.0%	0.0%	52.5%	100.0%	3.3%	50.0%	0.0%	46.7%	100.0%
Route 75	-	-	-	-	-	29.4%	0.0%	0.0%	70.6%	100.0%	7.7%	42.3%	0.0%	50.0%	100.0%	5.9%	0.0%	0.0%	94.1%	100.0%	-	-	-	-	-
Total	-	-	-	-	-	20.3%	25.3%	0.0%	54.4%	100.0%	7.2%	28.4%	0.0%	64.4%	100.0%	17.8%	22.9%	0.0%	59.2%	100.0%	8.7%	41.3%	0.0%	50.0%	100.0%

Exhibit 4.10 Overall On-time Performance by Route and Trip Segment

Route	Trip Segment														
	Beginning					Middle					End				
	Early	Late	Missed	On-time	Total	Early	Late	Missed	On-time	Total	Early	Late	Missed	On-time	Total
Route 69A Inbound	14.8%	29.6%	0.0%	55.6%	100.0%	6.3%	12.5%	0.0%	81.3%	100.0%	38.9%	11.1%	0.0%	50.0%	100.0%
Route 69A Outbound	8.3%	25.0%	0.0%	66.7%	100.0%	12.5%	16.7%	0.0%	70.8%	100.0%	20.8%	37.5%	0.0%	41.7%	100.0%
Route 69W Inbound	5.0%	25.0%	0.0%	70.0%	100.0%	15.0%	15.0%	0.0%	70.0%	100.0%	20.0%	20.0%	0.0%	60.0%	100.0%
Route 69W Outbound	0.0%	37.5%	0.0%	62.5%	100.0%	12.5%	37.5%	0.0%	50.0%	100.0%	16.7%	29.2%	0.0%	54.2%	100.0%
Route 71 Inbound	16.7%	21.2%	0.0%	62.1%	100.0%	8.0%	42.0%	0.0%	50.0%	100.0%	21.2%	42.4%	0.0%	36.4%	100.0%
Route 71 Outbound	8.3%	23.3%	0.0%	68.3%	100.0%	13.8%	23.8%	0.0%	62.5%	100.0%	21.7%	23.3%	0.0%	55.0%	100.0%
Route 72	0.0%	6.7%	0.0%	93.3%	100.0%	0.0%	20.0%	0.0%	80.0%	100.0%	7.1%	28.6%	0.0%	64.3%	100.0%
Route 74	7.1%	7.1%	0.0%	85.7%	100.0%	0.0%	4.8%	0.0%	95.2%	100.0%	42.9%	35.7%	0.0%	21.4%	100.0%
Route 75	5.6%	11.1%	0.0%	83.3%	100.0%	11.1%	11.1%	0.0%	77.8%	100.0%	30.6%	13.9%	0.0%	55.6%	100.0%
Route 79	0.0%	50.0%	0.0%	50.0%	100.0%	0.0%	75.0%	0.0%	25.0%	100.0%	0.0%	50.0%	0.0%	50.0%	100.0%
Route 91X Inbound	0.0%	0.0%	0.0%	100.0%	100.0%	33.3%	16.7%	0.0%	50.0%	100.0%	75.0%	0.0%	0.0%	25.0%	100.0%
Route 91X Outbound	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	33.3%	0.0%	66.7%	100.0%	0.0%	0.0%	0.0%	100.0%	100.0%
Total	8.8%	21.4%	0.0%	69.7%	100.0%	10.2%	26.3%	0.0%	63.5%	100.0%	23.9%	27.8%	0.0%	48.2%	100.0%

Exhibit 4.11 Weekday On-time Performance by Route and Trip Segment

Route	Weekday Trip Segment														
	Beginning					Middle					End				
	Early	Late	Missed	On-time	Total	Early	Late	Missed	On-time	Total	Early	Late	Missed	On-time	Total
Route 69A Inbound	23.5%	35.3%	0.0%	41.2%	100.0%	0.0%	0.0%	0.0%	100.0%	100.0%	37.5%	0.0%	0.0%	62.5%	100.0%
Route 69A Outbound	16.7%	16.7%	0.0%	66.7%	100.0%	16.7%	16.7%	0.0%	66.7%	100.0%	8.3%	50.0%	0.0%	41.7%	100.0%
Route 69W Inbound	16.7%	33.3%	0.0%	50.0%	100.0%	16.7%	16.7%	0.0%	66.7%	100.0%	16.7%	50.0%	0.0%	33.3%	100.0%
Route 69W Outbound	0.0%	58.3%	0.0%	41.7%	100.0%	8.3%	66.7%	0.0%	25.0%	100.0%	0.0%	33.3%	0.0%	66.7%	100.0%
Route 71 Inbound	14.3%	14.3%	0.0%	71.4%	100.0%	14.3%	28.6%	0.0%	57.1%	100.0%	38.1%	23.8%	0.0%	38.1%	100.0%
Route 71 Outbound	13.3%	20.0%	0.0%	66.7%	100.0%	15.0%	20.0%	0.0%	65.0%	100.0%	40.0%	20.0%	0.0%	40.0%	100.0%
Route 72	0.0%	6.7%	0.0%	93.3%	100.0%	0.0%	20.0%	0.0%	80.0%	100.0%	7.1%	28.6%	0.0%	64.3%	100.0%
Route 74	7.1%	7.1%	0.0%	85.7%	100.0%	0.0%	4.8%	0.0%	95.2%	100.0%	42.9%	35.7%	0.0%	21.4%	100.0%
Route 75	7.1%	7.1%	0.0%	85.7%	100.0%	27.3%	0.0%	0.0%	72.7%	100.0%	28.6%	0.0%	0.0%	71.4%	100.0%
Route 79	0.0%	50.0%	0.0%	50.0%	100.0%	0.0%	75.0%	0.0%	25.0%	100.0%	0.0%	50.0%	0.0%	50.0%	100.0%
Route 91X Inbound	0.0%	0.0%	0.0%	100.0%	100.0%	33.3%	16.7%	0.0%	50.0%	100.0%	75.0%	0.0%	0.0%	25.0%	100.0%
Route 91X Outbound	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	33.3%	0.0%	66.7%	100.0%	0.0%	0.0%	0.0%	100.0%	100.0%
Total	10.4%	20.1%	0.0%	69.4%	100.0%	11.5%	22.3%	0.0%	66.2%	100.0%	26.6%	25.0%	0.0%	48.4%	100.0%

Exhibit 4.12 Weekend On-time Performance by Route and Trip Segment

Route	Weekend Trip Segment														
	Beginning					Middle					End				
	Early	Late	Missed	On-time	Total	Early	Late	Missed	On-time	Total	Early	Late	Missed	On-time	Total
Route 69A Inbound	0.0%	20.0%	0.0%	80.0%	100.0%	10.0%	20.0%	0.0%	70.0%	100.0%	40.0%	20.0%	0.0%	40.0%	100.0%
Route 69A Outbound	0.0%	33.3%	0.0%	66.7%	100.0%	8.3%	16.7%	0.0%	75.0%	100.0%	33.3%	25.0%	0.0%	41.7%	100.0%
Route 69W Inbound	0.0%	21.4%	0.0%	78.6%	100.0%	14.3%	14.3%	0.0%	71.4%	100.0%	21.4%	7.1%	0.0%	71.4%	100.0%
Route 69W Outbound	0.0%	16.7%	0.0%	83.3%	100.0%	16.7%	8.3%	0.0%	75.0%	100.0%	33.3%	25.0%	0.0%	41.7%	100.0%
Route 71 Inbound	17.8%	24.4%	0.0%	57.8%	100.0%	5.0%	48.3%	0.0%	46.7%	100.0%	13.3%	51.1%	0.0%	35.6%	100.0%
Route 71 Outbound	6.7%	24.4%	0.0%	68.9%	100.0%	13.3%	25.0%	0.0%	61.7%	100.0%	15.6%	24.4%	0.0%	60.0%	100.0%
Route 75	4.5%	13.6%	0.0%	81.8%	100.0%	0.0%	18.8%	0.0%	81.3%	100.0%	31.8%	22.7%	0.0%	45.5%	100.0%
Total	7.5%	22.5%	0.0%	70.0%	100.0%	9.2%	29.3%	0.0%	61.4%	100.0%	21.9%	30.0%	0.0%	48.1%	100.0%

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Santa Cruz METRO must improve on-time performance. As stated earlier, the industry standard suggests on-time performance be at least 90 percent with no early departures. Santa Cruz METRO has an on-time performance of no more than 70 percent at any time based on this ride check, with on-time performance falling below 50 percent by end of the trip. Although the industry standard suggests no early departures, Santa Cruz METRO consistently has a large percentage of trips leaving early, particularly with respect to departures in the middle and end of trips.

Having poor on-time performance makes the bus less usable for both ride-dependent and "choice" riders. The Santa Cruz METRO published schedule should be reexamined and reworked to better reflect actual time it takes to complete trips. This should include the amount of time needed between published time points, differences in trip time during different times of the day, and differences in weekday and weekend trip times. Having a more accurate published schedule that reflects the actual on-time performance would improve the service to Santa Cruz METRO customers. Beginning in March 2012, Santa Cruz METRO will use the Hastus/Giro system to automate the scheduling and run-cutting process. This will assist with efforts to optimize service and achieve better on time performance by using Hastus to update the runtime network and reflect more realistic run times.

BOARDING AND ALIGHTING ANALYSIS

This section discusses overall fixed-route boarding and alighting counts observed during the ride check. Boarding and alighting data collected from the ride check were recorded on the same trip sheet as on-time performance data. Data were then imported into Microsoft Excel and segregated by route, stop, and day-part. Note, all exhibit data reflect "activity" which is defined as combined boardings and alightings for weekday, Saturday, and Sunday service.

Boarding by Day-Part

Evaluating a system by day-part is critical to assessing existing ridership trends not apparent through the use of traditional performance measures. This snapshot of productivity (i.e., boardings and alightings) provides valuable insight for potential service changes and recommendations (i.e., elimination of trip segments, addition of route segments, or stops).

Boarding and alighting data were collected across a representative sample of weekday, Saturday, and Sunday service. Bear in mind that the accuracy of data may be influenced by external factors (i.e., school schedules, weather, etc.) occurring during the ride check, potentially impacting or skewing results and trends.

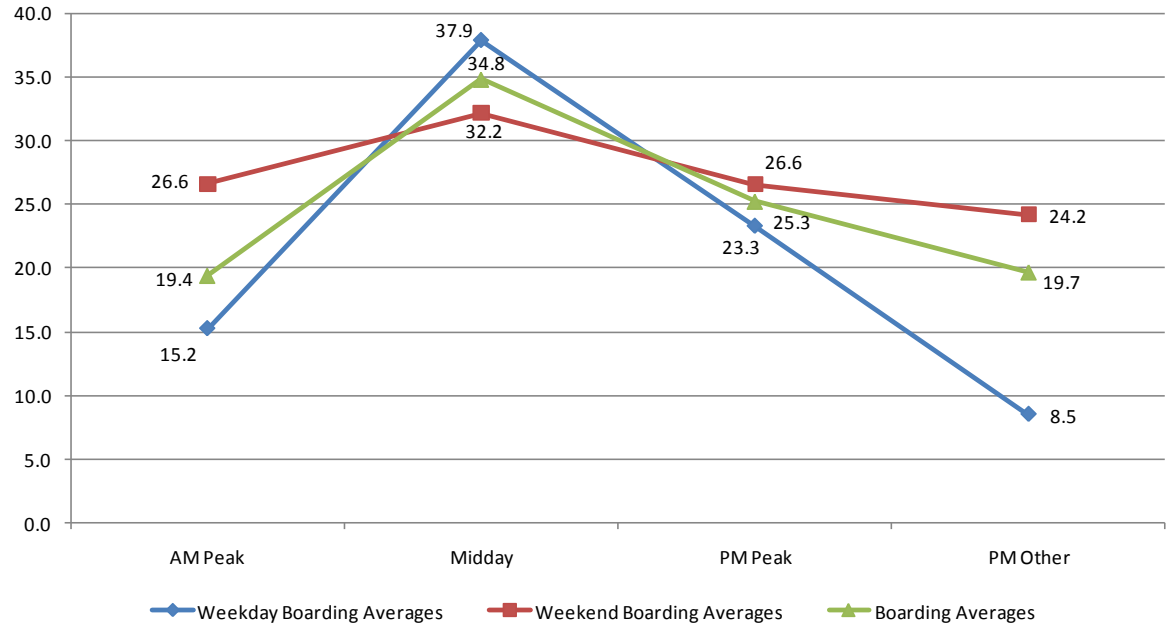
As defined in the previous section (On-Time Performance), route analysis will be divided into five separate day-parts (A.M. Other, A.M. Peak, Midday, P.M. Peak, and P.M. Other). To more accurately assess productivity by time of day, boarding averages were derived from total boardings divided by

the number of trips during the specified day-part. This approach shows the average boardings per trip per day-part, versus to total boardings which are skewed by the number of trips offered.

Exhibit 4.13 shows the overall boarding averages by day-part for routes serving Watsonville. Comparatively, the weekend had more average boardings than the weekday with the exception of the midday day-part. Since the data do not reflect a 100-percent ride check, this is likely due to the sampling distribution of trips rather than typical boarding trends. This, however, does suggest a significant number of patrons do use the service on weekends.

Another important finding from the ride check is the spike in average boardings during the midday day-part. This is expected given the large number of students who use the service to get to school. This conclusion is further supported by the fact many of the routes offer direct service to Cabrillo College or primary education sites.

Exhibit 4.13 Boarding Averages by Day-Part



The aggregate of boarding averages by day-part is shown in Exhibit 4.14. Overall, the routes had 28 average boardings per trip. Boardings were primarily concentrated during the midday day-part with Route 71 Inbound (towards Santa Cruz) having the highest average boardings at 46 passengers per trip, which is extremely productive.

The ride check also revealed the routes providing service between Santa Cruz and Watsonville (Routes 69A, 69W, and 71) had the highest boarding averages of the surveyed routes. This suggests a strong demand for travel between Santa Cruz and Watsonville, and points in between. This finding was reinforced through extensive focus groups conducted with target populations in Watsonville, who all indicated using the bus to travel to locations beyond Watsonville, even as far as San Jose.

By contrast, the routes providing local service within the Watsonville area had much lower productivity. This may be caused by the fact these routes generally serve fewer major trip generators than the long-line routes do.

Exhibit 4.14 Overall Boarding by Route and Day-Part

Boarding Averages						
Route	AM Other	AM Peak	Midday	PM Peak	PM Other	Route Average
Route 69A Inbound	-	32.7	37.8	29.8	-	32.9
Route 69A Outbound	-	22.0	30.0	39.3	-	32.2
Route 69W Inbound	-	24.0	39.6	24.0	-	31.8
Route 69W Outbound	-	-	43.7	29.3	20.0	36.9
Route 71 Inbound	-	32.5	46.3	20.3	22.0	36.7
Route 71 Outbound	-	19.3	33.5	31.8	26.3	30.0
Route 72	-	10.0	11.0	15.0	-	11.2
Route 74	-	5.0	15.0	10.7	-	10.3
Route 75	-	14.6	23.3	17.8	8.5	18.0
Route 79	-	2.0	-	9.0	-	5.5
Route 91X Inbound	-	6.0	7.0	-	-	6.5
Route 91X Outbound	-	7.0	-	-	-	7.0
Total	**-**	**19.4**	**34.8**	**25.3**	**19.7**	**28.0**

Alighting by Day-Part

As shown in Exhibit 4.15, alighting averages closely mirrored the boarding averages shown in Exhibit 4.13. The weekend tended to average more alightings than the weekday with the exception of the midday day-part. Again this is likely due to the sampling distribution. However, it should be noted there appears to be significant passenger activity during the weekend. For example, all routes operating during the weekend averaged at least 20 passengers per trip.

Alighting averages also peaked during the midday day-part which is likely due to the number of students who use the service. Based on this finding, Santa Cruz METRO may want to concentrate service during this time to either reduce potential overcrowding on vehicles or to attract additional riders. The public outreach efforts revealed a strong demand for increased frequency. The midday day-part seems to be the most likely day-part to support increased service frequency.

Exhibit 4.15 Alighting Averages by Day-Part

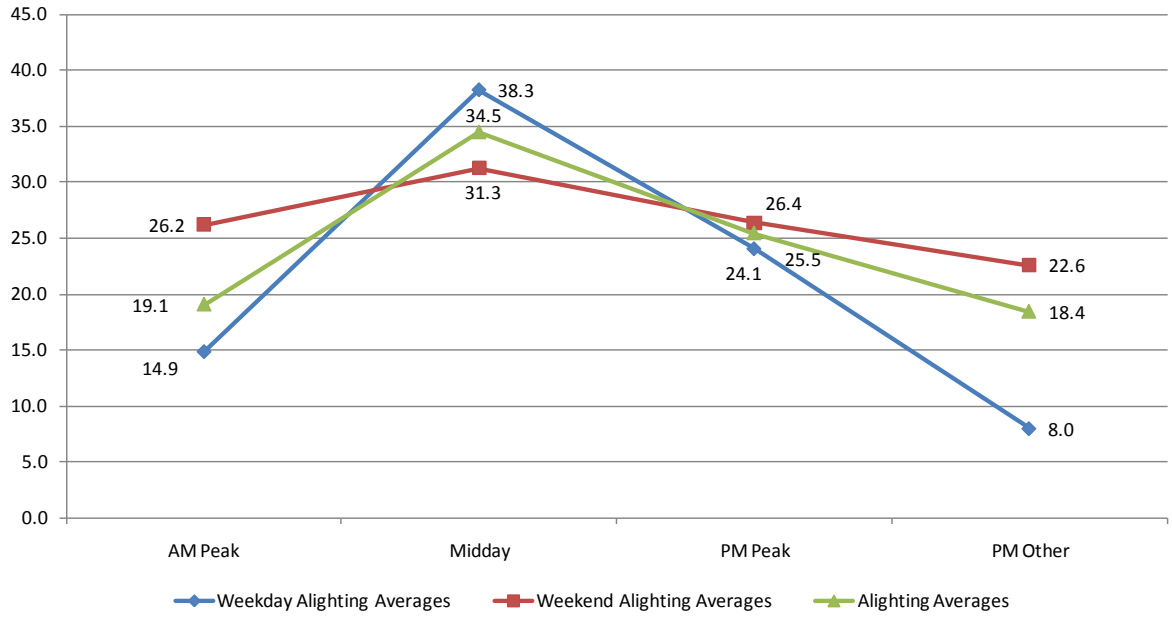


Exhibit 4.16 shows the alighting averages by day-part. As with the alighting averages, Route 71 Inbound had the highest number of alightings per trip at 46. As with the average boardings, the routes providing service between Santa Cruz and Watsonville had much higher average alightings than routes providing service in and around Watsonville.

Exhibit 4.16 Overall Alighting by Route and Day-Part

Alighting Averages						
Route	AM Other	AM Peak	Midday	PM Peak	PM Other	Route Average
Route 69A Inbound	-	29.7	35.3	29.7	-	31.4
Route 69A Outbound	-	22.0	30.6	40.3	-	32.9
Route 69W Inbound	-	24.0	39.6	23.8	-	31.7
Route 69W Outbound	-	-	43.1	32.8	20.0	37.8
Route 71 Inbound	-	32.3	45.9	18.8	17.0	36.0
Route 71 Outbound	-	19.3	33.4	31.0	25.3	29.6
Route 72	-	9.3	11.0	15.0	-	10.8
Route 74	-	5.0	14.0	10.7	-	10.0
Route 75	-	14.6	23.1	17.8	8.0	17.9
Route 79	-	2.0	-	9.0	-	5.5
Route 91X Inbound	-	6.0	7.0	-	-	6.5
Route 91X Outbound	-	9.0	-	-	-	9.0
Total	**-**	**19.1**	**34.5**	**25.5**	**18.4**	**27.7**

Boarding and Alighting by Trip Segment

Exhibit 4.17 shows the average boarding and alighting by trip segment for each route. Overall boardings were concentrated during the beginning trip segment while alightings were concentrated at the end of the trip. This suggests most patrons are riding each route from end-to-end.

In terms of a route-by-route comparison, there was some deviation from the overall boarding and alighting activity. For example, the routes which provide service between Santa Cruz and Watsonville (Routes 69A, 69W, and 71) have a large proportion of boarding occurring during the beginning and middle- trip segments while alightings are heavily concentrated at the end-trip segment. One reason for this is the Capitola Mall stop which is located near the midsection of these routes. As will be shown below, the Capitola Mall is a major passenger activity point for these routes.

Of the routes providing local service in and around Watsonville, many of these routes had a more even distribution of average boardings and alightings. This could be due to the fact many of these routes operate as loops and are possibly used to complete shorter trips. However, average boardings were the highest during the beginning-trip segment while average alightings were concentrated in the end-trip segment.

Exhibit 4.17 Boarding and Alighting by Trip Segment

Route	Boarding			Alighting		
	Beginning	Middle	End	Beginning	Middle	End
Route 69A Weekday Inbound	16.8	11.3	6.1	3.8	10.6	18.6
Route 69A Weekday Outbound	21.2	12.2	5.7	4.7	14.3	21.3
Route 69A Weekend Inbound	14.4	10.2	6.4	2.6	8.4	17.8
Route 69A Weekend Outbound	16.4	7.3	2.7	1.7	9.1	15.7
Route 69W Weekday Inbound	12.0	14.7	5.3	1.0	8.0	24.7
Route 69W Weekday Outbound	22.7	15.3	1.0	6.0	18.2	17.2
Route 69W Weekend Inbound	12.3	12.6	6.9	1.6	8.7	20.6
Route 69W Weekend Outbound	18.8	14.7	1.3	3.2	16.7	14.3
Route 71 Weekday Inbound	19.1	17.6	12.6	9.6	7.0	32.7
Route 71 Weekday Outbound	16.8	7.6	5.4	4.0	11.2	14.6
Route 71 Weekend Inbound	13.5	9.9	7.4	4.0	5.5	20.2
Route 71 Weekend Outbound	18.7	6.4	4.9	4.1	12.6	12.9
Route 72	4.4	2.0	4.8	2.6	1.0	7.2
Route 74	5.1	1.3	3.9	1.3	3.4	5.3
Route 75	6.9	4.9	2.1	3.6	3.7	6.3
Route 79	5.0	0.5	0.0	1.5	3.5	0.5
Route 91X Inbound	4.0	1.5	1.0	0.0	0.0	6.5
Route 91x Outbound	6.0	1.0	0.0	0.0	3.0	6.0
Total	**14.2**	**8.9**	**4.8**	**3.8**	**8.7**	**15.2**

Route-Segment Analysis

The goal of the route-segment analysis is to identify key bus stops and points of significant activity. Boarding and alighting data collected at each published time-point was geocoded using ESRI ArcView Geographic Information System (GIS) software. From there, maps were generated to illustrate boarding and alighting densities. All exhibit data represent the combined total stop activity of weekday, Saturday, and Sunday data.

Route 69A Boarding and Alighting Counts

Local Route 69A provides service connecting Watsonville to Santa Cruz with service running between 7:07 a.m. and 7:10 p.m. for the Santa Cruz to Watsonville (outbound) alignment and between 6:45 a.m. and 7:48 p.m. for the Watsonville to Santa Cruz (inbound) alignment during weekdays. Saturday and Holiday service span is from 8:07 a.m. to 7:10 p.m. for outbound service and from 8:50 a.m. to 7:48 p.m. for inbound service. The weekday, Saturday, and Holiday service operate on one-hour headways with a run-time of between 57 minutes and 1 hour 17 minutes.

Outbound trips: Route 69A trips originate from the Santa Cruz METRO transit Metro Center station on Pacific Avenue and terminate at the Watsonville Transit Center on Rodriguez Street. Service on the 69A travels from the Santa Cruz METRO Center at Pacific Station down Soquel Avenue to Capitola Road to 41st Avenue to Highway 1 to Airport Boulevard to Freedom Boulevard to Lincoln Street, ending up on West Lake Avenue.

Exhibits 4.18 and 4.19 show the top five boarding and alighting stops for Route 69A Inbound. The Watsonville Transit Center, which is the starting point of the trip, had the highest total number of boardings at 57, closely followed by the Capitola Mall transit center at 56. The Santa Cruz Metro Center at Pacific Avenue, the end point of the trip, had the highest number of alightings at 63, followed by Capitola Mall transit center with 50. This shows that the existing Santa Cruz METRO transit centers are heavily used. Santa Cruz Metro Center at Pacific Avenue, Watsonville Transit Center, and Capitola Mall are all located near areas of employment, services, and shopping. The transit centers also offer ample opportunities for transfer to other routes.

Exhibit 4.18 Route 69A Weekday Inbound Top Boarding Points

Route 69A Weekday Inbound		
Rank	Stop	Boardings
1	Watsonville Transit Center Lane 1	57
2	Capitola Mall Lane 1	56
3	Airport Blvd. & Freedom Centre	17
4	Neilson Blvd. & Watsonville Hospital	14
5	Freedom & Crestview (Courthouse)	12

Exhibit 4.19 Route 69A Weekday Inbound Top Alighting Points

Route 69A Weekday Inbound		
Rank	Stop	Alightings
1	Santa Cruz Metro Center	63
2	Capitola Mall Lane 1	50
3	Soquel Ave & Front (Longs)	25
4	41st & 41st Liquors	14
5	Soquel Ave & Ocean	13

Exhibits 4.20 and 4.21 show the top five boarding and alighting stops for Route 69A Outbound. The Santa Cruz METRO Center at Pacific Avenue, which is the starting point of the trip, had the highest total number of boardings at 69, followed by the Capitola Mall transit center at 46. The Capitola Mall transit Center had the highest number of alightings at 43, followed by the Watsonville Transit Center, the end point of the trip, with 39. As with the inbound trips, this shows that the existing Santa Cruz METRO transit centers are heavily used. These three transit centers are all located near employment and services.

Exhibit 4.20 Route 69A Weekday Outbound Top Boarding Points

Route 69A Weekday Outbound		
Rank	Stop	Boardings
1	Santa Cruz Metro Lane 4	69
2	Capitola Mall	46
3	Soquel Ave & Front	15
4	Soquel Ave & Hagemann	15
5	Freedom & Crestview	9

Exhibit 4.21 Route 69A Weekday Outbound Top Alighting Points

Route 69A Weekday Outbound		
Rank	Stop	Alightings
1	Capitola Mall	43
2	Watsonville Transit Center Lane 1	39
3	Lincoln St & California St	13
4	Capitola Rd & 30th	11
5	Freedom & Crestview	9

Exhibits 4.22 and 4.23 show the top five boarding and alighting stops for Route 69A Inbound on weekends. Results were very similar to that of weekday trips, with a few changes. The Capitola Mall transit center had the highest total number of boardings at 46, followed by the Watsonville Transit Center, which is the starting point of the trip, at 22. The Santa Cruz Metro Center at Pacific Avenue, the end point of the trip, had the highest number of alightings at 59, followed by Capitola Mall transit center with 30. As with the weekday trips, this shows that the existing Santa Cruz METRO transit centers are heavily used and are all located near large employment areas as well as retail and service areas.

Exhibit 4.22 Route 69A Weekend Inbound Top Boarding Points

Route 69A Weekend Inbound		
Rank	Stop	Boardings
1	Capitola Mall Lane 1	46
2	Watsonville Transit Center Lane 1	22
3	Airport Blvd. & Freedom Centre	12
4	Freedom & Crestview (Courthouse)	9
5	Lincoln st. & E. High St.	9

Exhibit 4.23 Route 69A Weekend Inbound Top Alighting Points

Route 69A Weekend Inbound		
Rank	Stop	Alightings
1	Santa Cruz Metro Transit Center Lane 4	59
2	Capitola Mall Lane 1	30
3	Soquel Ave & Front (Longs)	17
4	Soquel Ave & Ocean	10
5	Soquel Ave & Benito	6

Exhibits 4.24 and 4.25 show the top five boarding and alighting stops for Route 69A Outbound on weekends. Again, results were very similar to that of weekday trips, with a few changes. The Santa Cruz METRO Transit Center at Pacific Avenue had the highest total number of boardings at 69, followed by the Capitola Mall transit center at 35. The Watsonville Transit Center had the highest number of alightings at 38, followed by Capitola Mall transit center with 32. As with the weekday and inbound trips, this shows that the existing Santa Cruz METRO transit centers are heavily used, likely because of the wide range of employment, retail, and services surrounding them.

Exhibit 4.24 Route 69A Weekend Outbound Top Boarding Points

Route 69A Weekend Outbound		
Rank	Stop	Boardings
1	Santa Cruz Metro Transit Center Lane 4	69
2	Capitola Mall	35
3	Soquel Ave & Front	13
4	Freedom & Crestview	8
5	Soquel Ave & Ocean	7

Exhibit 4.25 Route 69A Weekend Outbound Top Alighting Points

Route 69A Weekend Outbound		
Rank	Stop	Alightings
1	Watsonville Transit Center Lane 1	38
2	Capitola Mall	32
3	E Lake & Sudden	12
4	Capitola Rd & 41st	11
5	Capitola Rd & 30th	11

Exhibit 4.26 Route 69A Inbound Passenger Boarding and Alighting by Stop (Weekday)

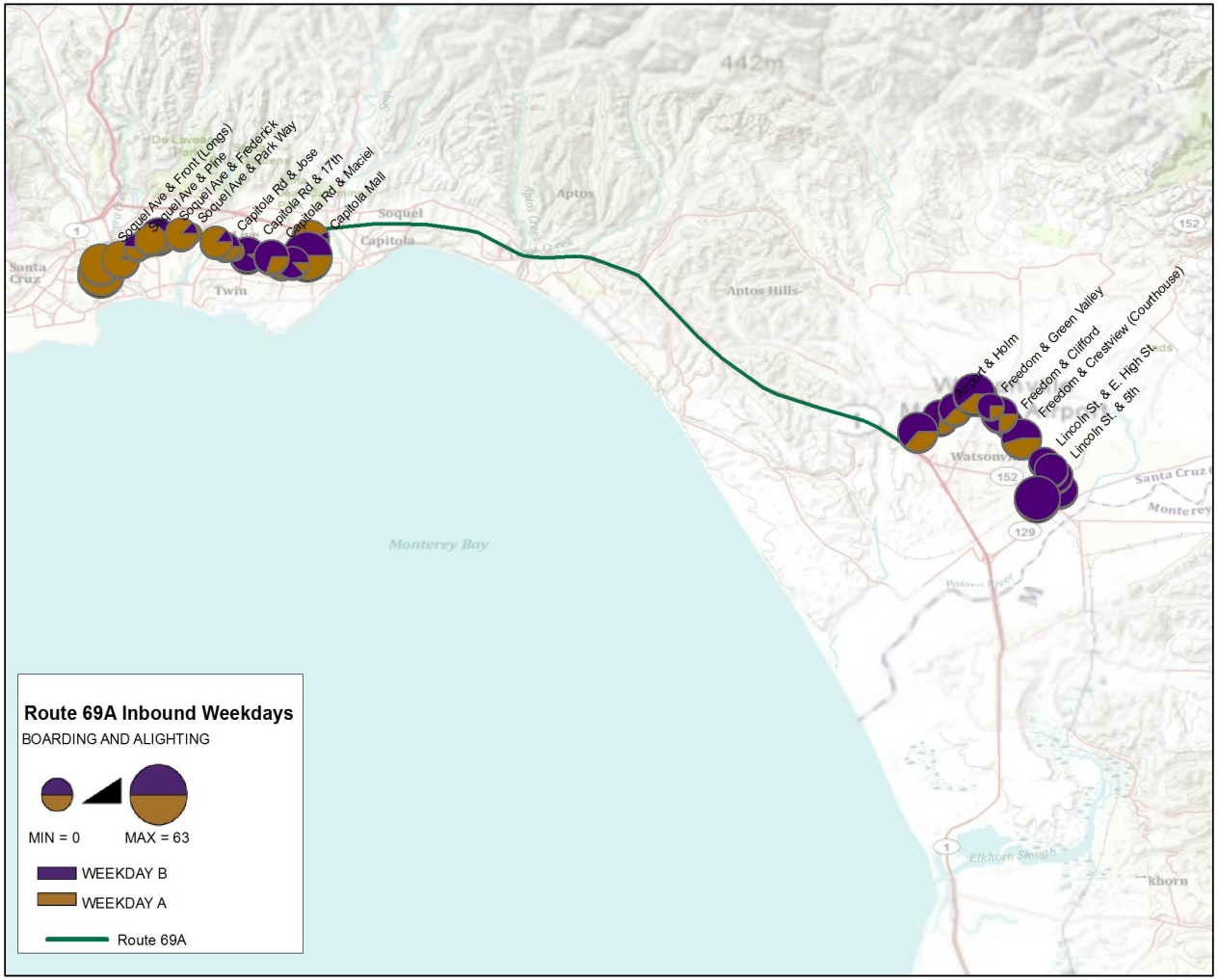


Exhibit 4.27 Route 69A Inbound Passenger Boarding and Alighting by Stop (Weekend)

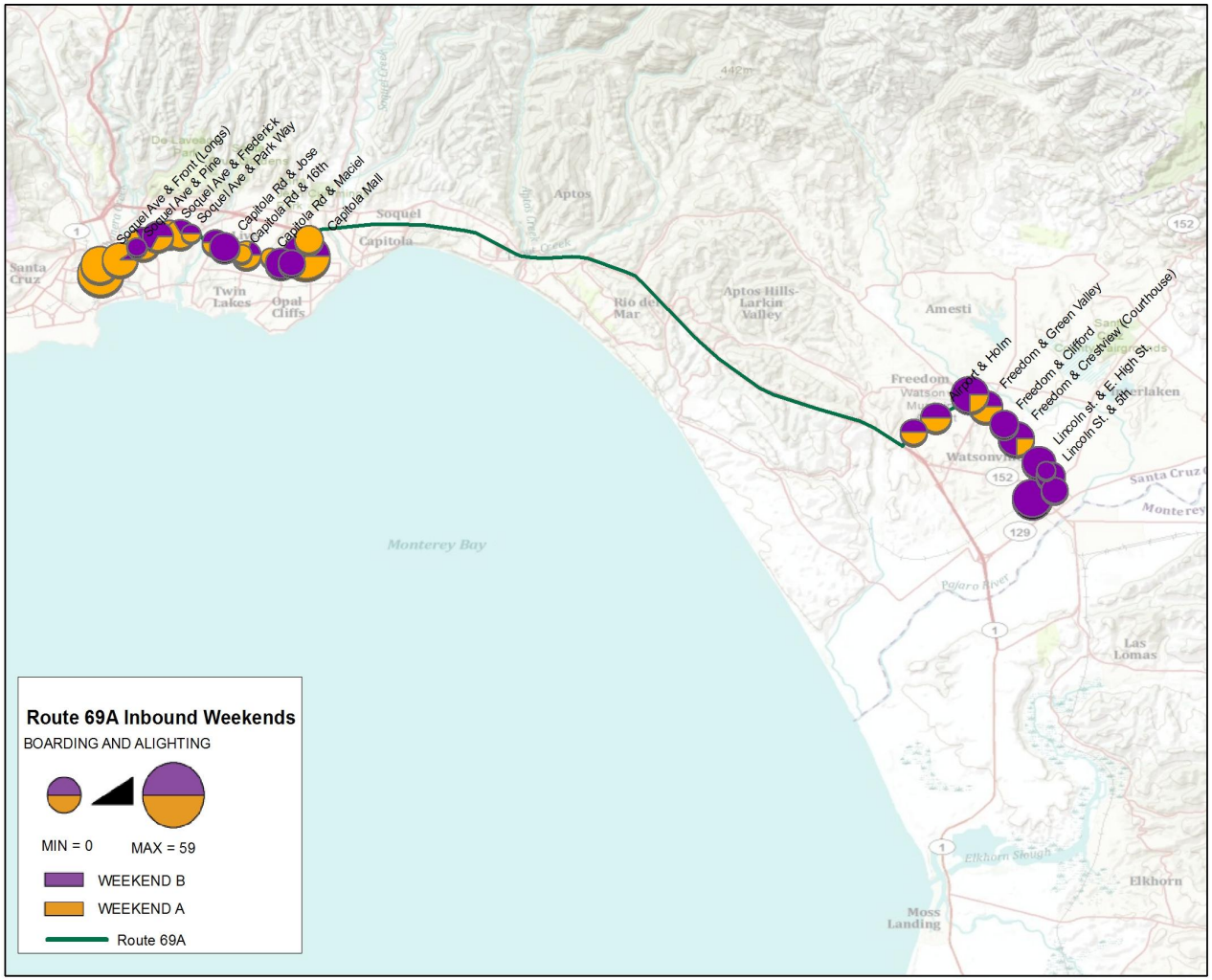


Exhibit 4.28 Route 69A Outbound Passenger Boarding and Alighting by Stop (Weekday)

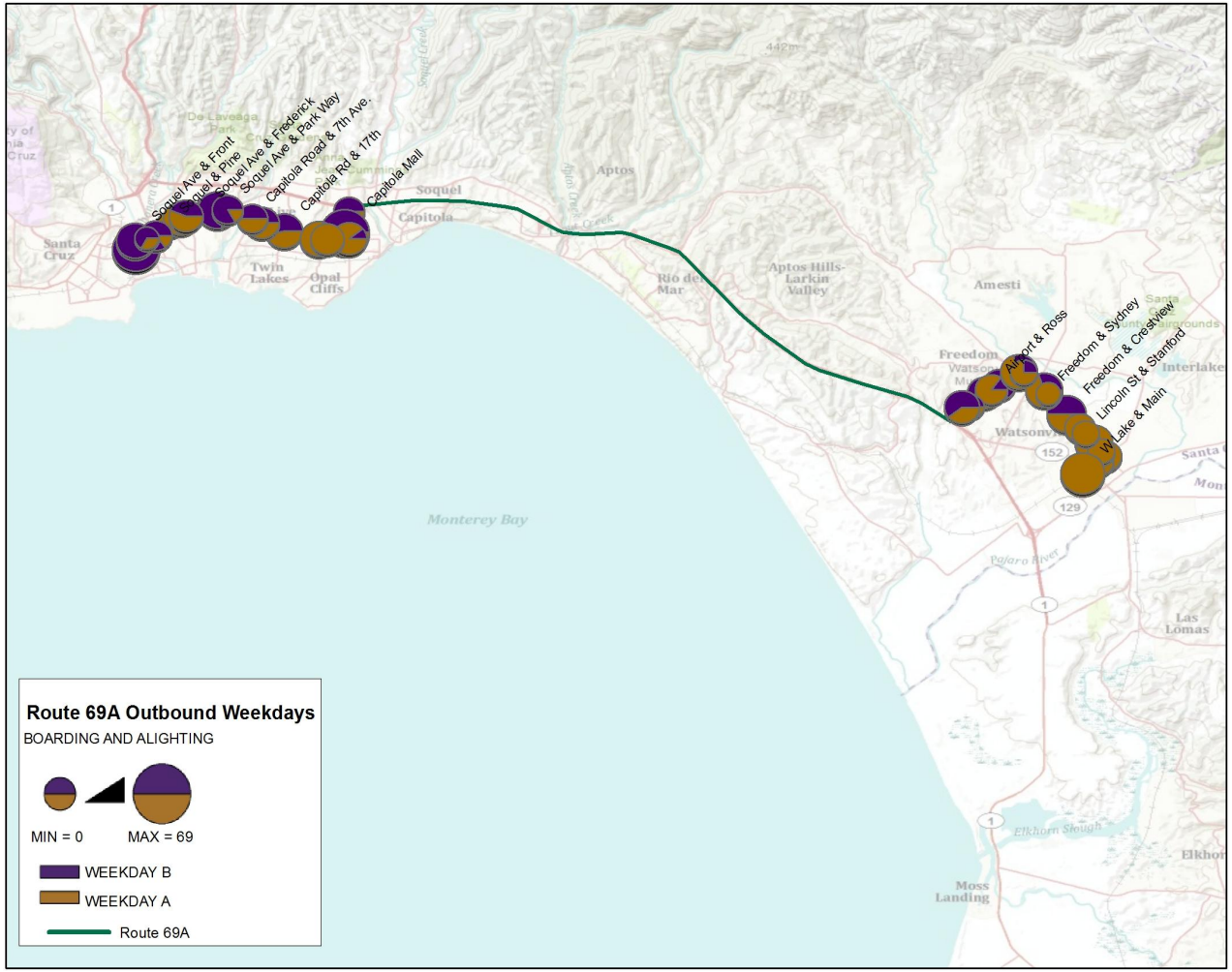
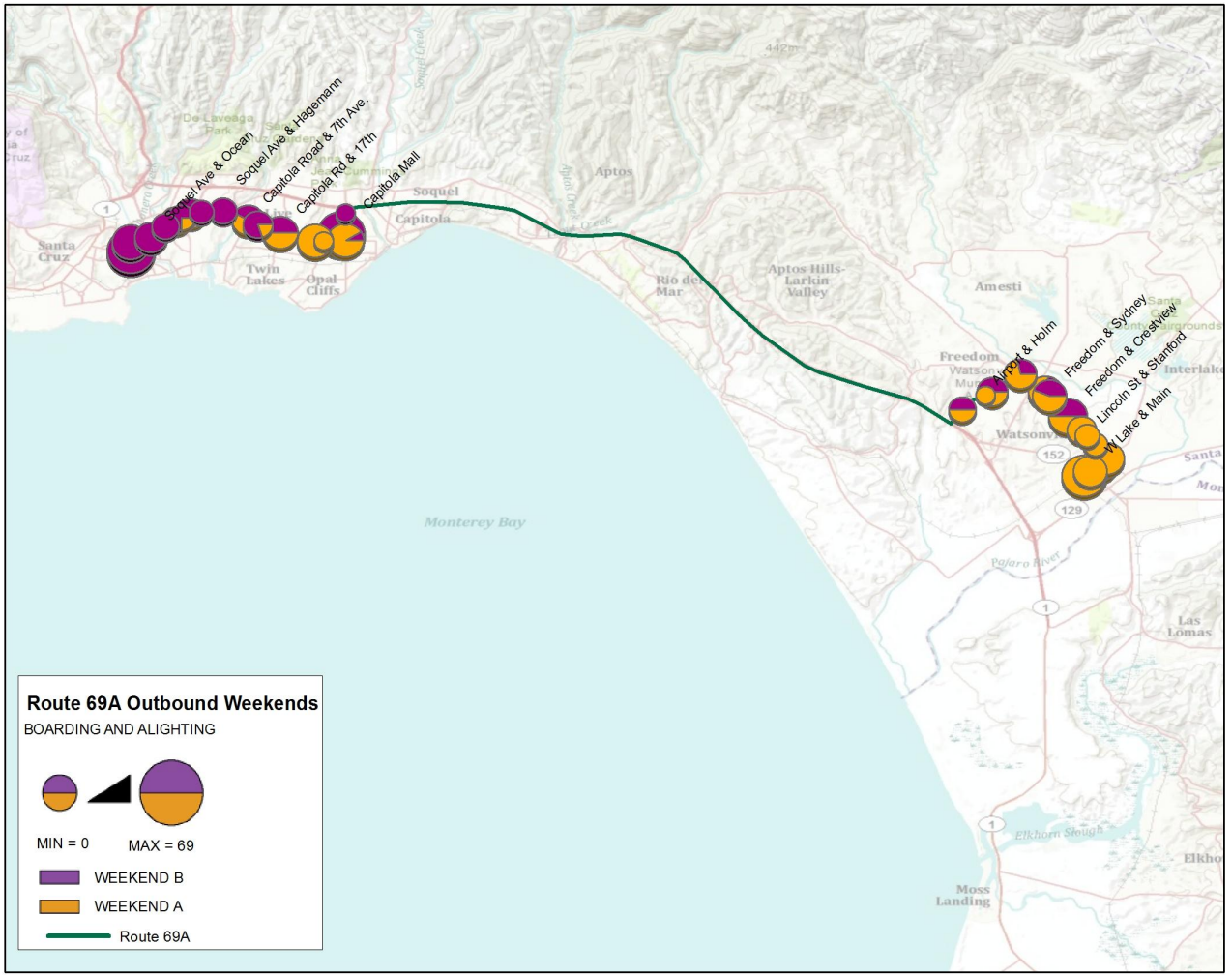


Exhibit 4.29 Route 69A Outbound Passenger Boarding and Alighting by Stop (Weekend)



Route 69W Boarding and Alighting Counts

Local Route 69W provides service connecting Watsonville to Santa Cruz with service running between 6:37 a.m. and 7:37 p.m. for the Santa Cruz to Watsonville (outbound) alignment and between 6:20 a.m. and 7:18 p.m. for the Watsonville to Santa Cruz (inbound) alignment during weekdays. Saturday and Holiday service span is from 8:37 a.m. to 9:34 p.m. for outbound service and from 7:50 a.m. to 7:18 p.m. for inbound service. The weekday, Saturday, and Holiday service operate on one-hour headways with a run-time of between 57 minutes and 1 hour 10 minutes.

Outbound trips: Route 69W trips originate from the Santa Cruz METRO transit center at Pacific Station on Pacific Avenue and terminate at the Watsonville Transit Center on Rodriguez Street. Service on the 69A travels from the Santa Cruz METRO Center at Pacific Station down Soquel Avenue to Capitola Road to 41st Avenue to Soquel Drive to Highway 1 at State Park Drive to Main Street, ending up on Rodriguez Street.

Exhibits 4.30 and 4.31 show the top five boarding and alighting stops for Route 69W Inbound. The Watsonville Transit Center, which is the starting point of the trip, had the highest total number of boardings, closely followed by the Capitola Mall transit center. The Santa Cruz Metro Center at Pacific Avenue, the end-point of the trip, had the highest number of alightings, followed by Soquel Avenue at Front Street (Longs). This shows that the existing Santa Cruz METRO transit centers are heavily used.

Exhibit 4.30 Route 69W Weekday Inbound Top Boarding Points

Route 69W Weekday Inbound		
Rank	**Stop**	**Boardings**
1	Watsonville Transit Center Lane 1	23
2	Capitola Mall Lane 1	21
3	Soquel Dr & Daubenbiss	13
4	Main & Green Valley	6
5	Main & Clifford	5

Exhibit 4.31 Route 69W Weekday Inbound Top Alighting Points

Route 69W Weekday Inbound		
Rank	Stop	Alightings
1	Santa Cruz Metro Transit Center Lane 4	36
2	Soquel Ave & Front (Longs)	18
3	Capitola Mall Lane 1	13
4	Soquel Ave & Ocean	4
5	Soquel Dr & Cabrillo College	3

Exhibits 4.32 and 4.33 show the top five boarding and alighting stops for Route 69W Outbound. The Santa Cruz METRO Center at Pacific Avenue, which is the starting point of the trip, had the highest total number of boardings at 95, followed by the Capitola Mall transit center at 43. The Watsonville Transit Center, the end point of the trip, had the highest number of alightings at 59, followed by the Capitola Mall transit center with 35. As with the inbound trips, this shows that the existing Santa Cruz METRO transit centers are heavily used, likely because of the wide range of employment, retail, and services surrounding them.

Exhibit 4.32 Route 69W Weekday Outbound Top Boarding Points

Route 69W Weekday Outbound		
Rank	Stop	Boardings
1	Santa Cruz Metro Transit Center Lane 4	95
2	Capitola Mall Lane 1	43
3	Soquel Dr & Cabrillo College	9
4	Soquel Ave & Front	7
5	Capitola Rd & 17th	6

Exhibit 4.33 Route 69W Weekday Outbound Top Alighting Points

Route 69W Weekday Outbound		
Rank	Stop	Alightings
1	Watsonville Transit Center Lane 1	59
2	Capitola Mall Lane 1	35
3	Main & Green Valley	18
4	Capitola Rd & 41st	14
5	Main & Ohlone Parkway (Clifford Ave.)	11

Exhibits 4.34 and 4.35 show the top five boarding and alighting stops for Route 69W Inbound on weekends. Results were very similar to that of weekday trips, with a few changes. The Watsonville Transit Center and the Capitola Mall transit center tied for the highest total number of boardings at 56. The Santa Cruz Metro Center at Pacific Avenue, the end point of the trip, had the highest number of alightings at 63, followed by Capitola Mall transit center with 34. As with the weekday trips, this shows that the existing Santa Cruz METRO transit centers are heavily used, again likely because of the wide range of employment, retail, and services surrounding them.

Exhibit 4.34 Route 69W Weekend Inbound Top Boarding Points

Route 69W Weekend Inbound		
Rank	Stop	Boardings
1	Capitola Mall Lane 1	56
2	Watsonville Transit Center Lane 1	56
3	Main & Green Valley	13
4	Capitola Rd & Live Oak Senior Ctr	12
5	Main & Clifford	10

Exhibit 4.35 Route 69W Weekend Inbound Top Alighting Points

Route 69W Weekend Inbound		
Rank	Stop	Alightings
1	Santa Cruz Metro Transit Center Lane 4	63
2	Capitola Mall Lane 1	34
3	Soquel Ave & Front (Longs)	26
4	Soquel Ave & Ocean	15
5	Capitola Rd & Live Oak Senior Ctr	8

Exhibits 4.36 and 4.37 show the top five boarding and alighting stops for Route 69W Outbound on weekends. Again, results were very similar to that of weekday trips, with a few changes. The Santa Cruz METRO Transit Center at Pacific Avenue had the highest total number of boardings at 69, followed by the Capitola Mall transit center at 54. The Watsonville Transit Center had the highest number of alightings at 52, followed by Capitola Mall transit center with 26. As with the weekday trips, this shows that the existing Santa Cruz METRO transit centers are heavily used, likely because of the wide range of employment, retail, and services surrounding them.

Exhibit 4.36 Route 69W Weekend Outbound Top Boarding Points

Route 69W Weekend Outbound		
Rank	**Stop**	**Boardings**
1	Santa Cruz Metro Transit Center	69
2	Capitola Mall	54
3	41st & Hwy 1	12
4	Soquel Ave & Front	10
5	Soquel Ave & Darwin	9

Exhibit 4.37 Route 69W Weekend Outbound Top Alighting Points

Route 69W Weekend Outbound		
Rank	**Stop**	**Alightings**
1	Watsonville Transit Center	52
2	Capitola Mall	26
3	Soquel Dr & Cotton (41st)	18
4	Capitola Rd & 41st	14
5	Main & Pennsylvania	12

Exhibit 4.38 Route 69W Inbound Passenger Boarding and Alighting by Stop (Weekday)

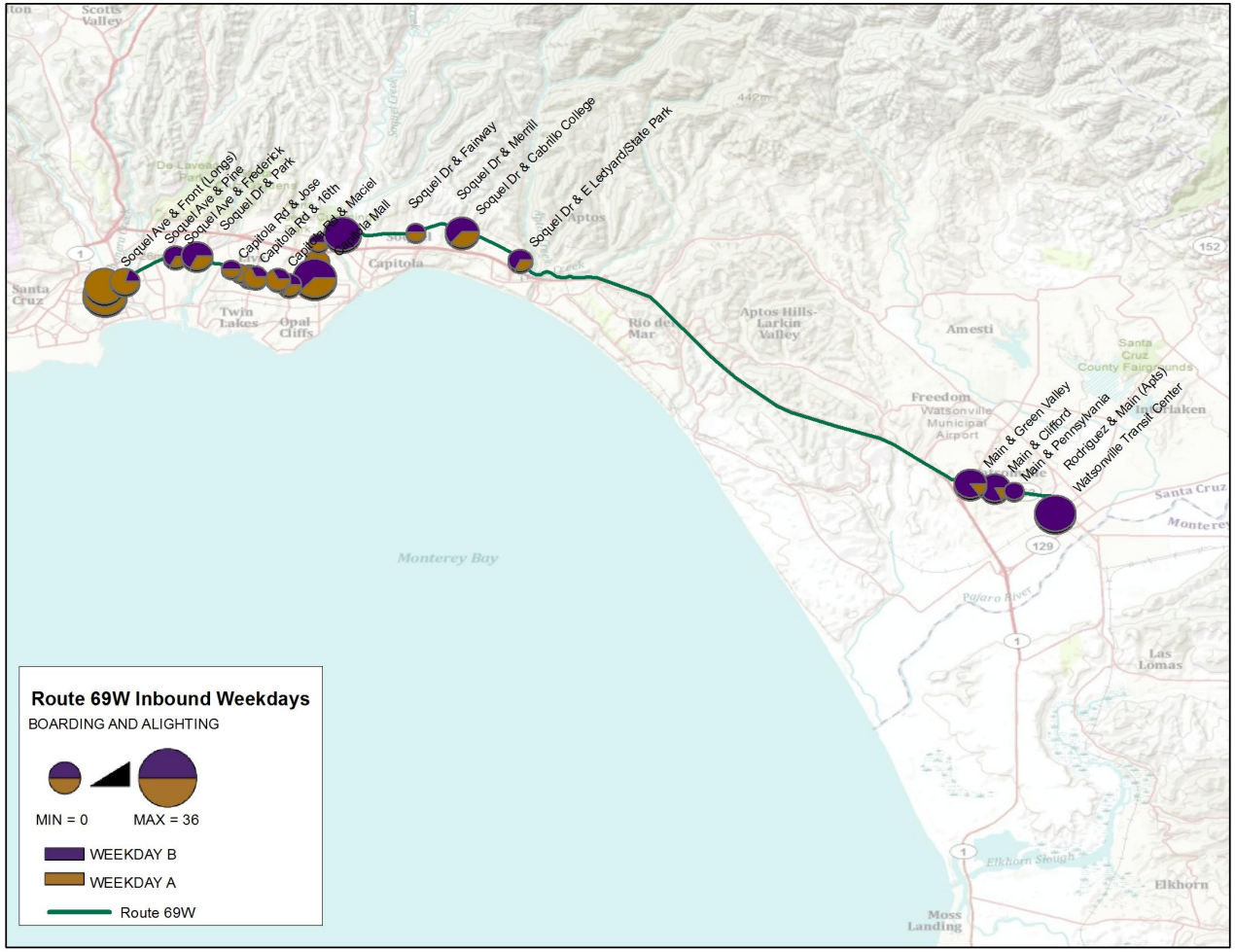


Exhibit 4.39 Route 69W Inbound Passenger Boarding and Alighting by Stop (Weekend)

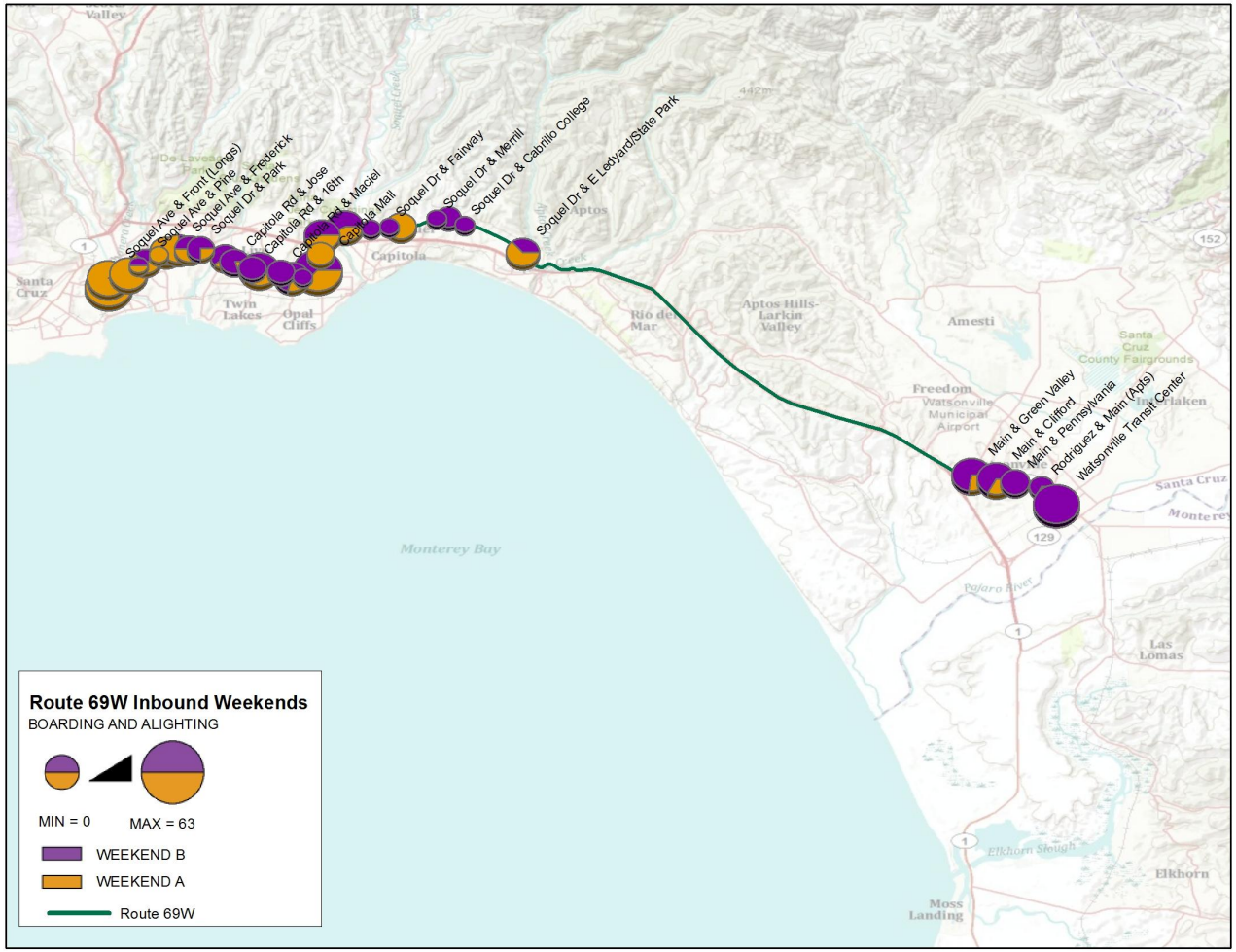


Exhibit 4.40 Route 69W Outbound Passenger Boarding and Alighting by Stop (Weekday)

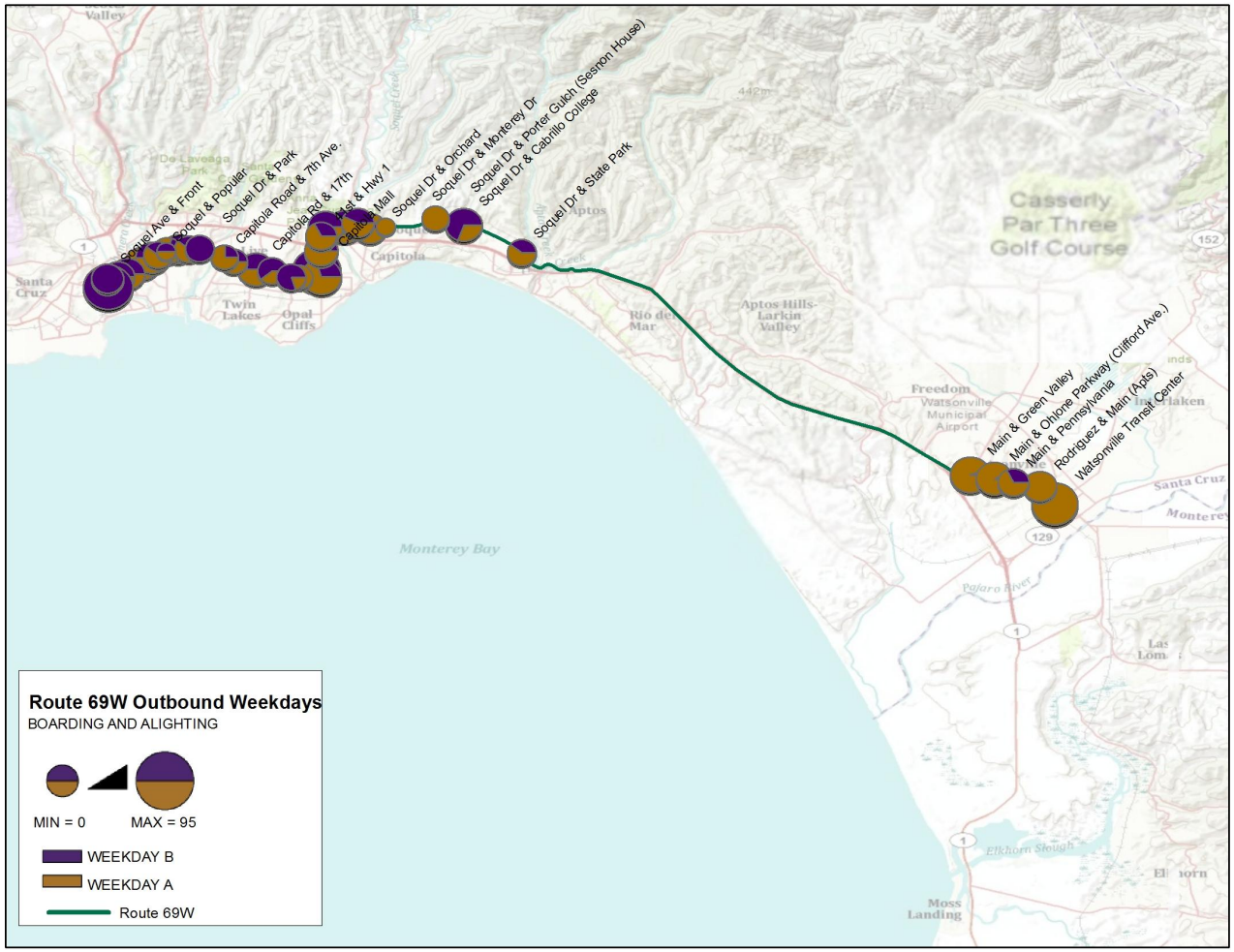
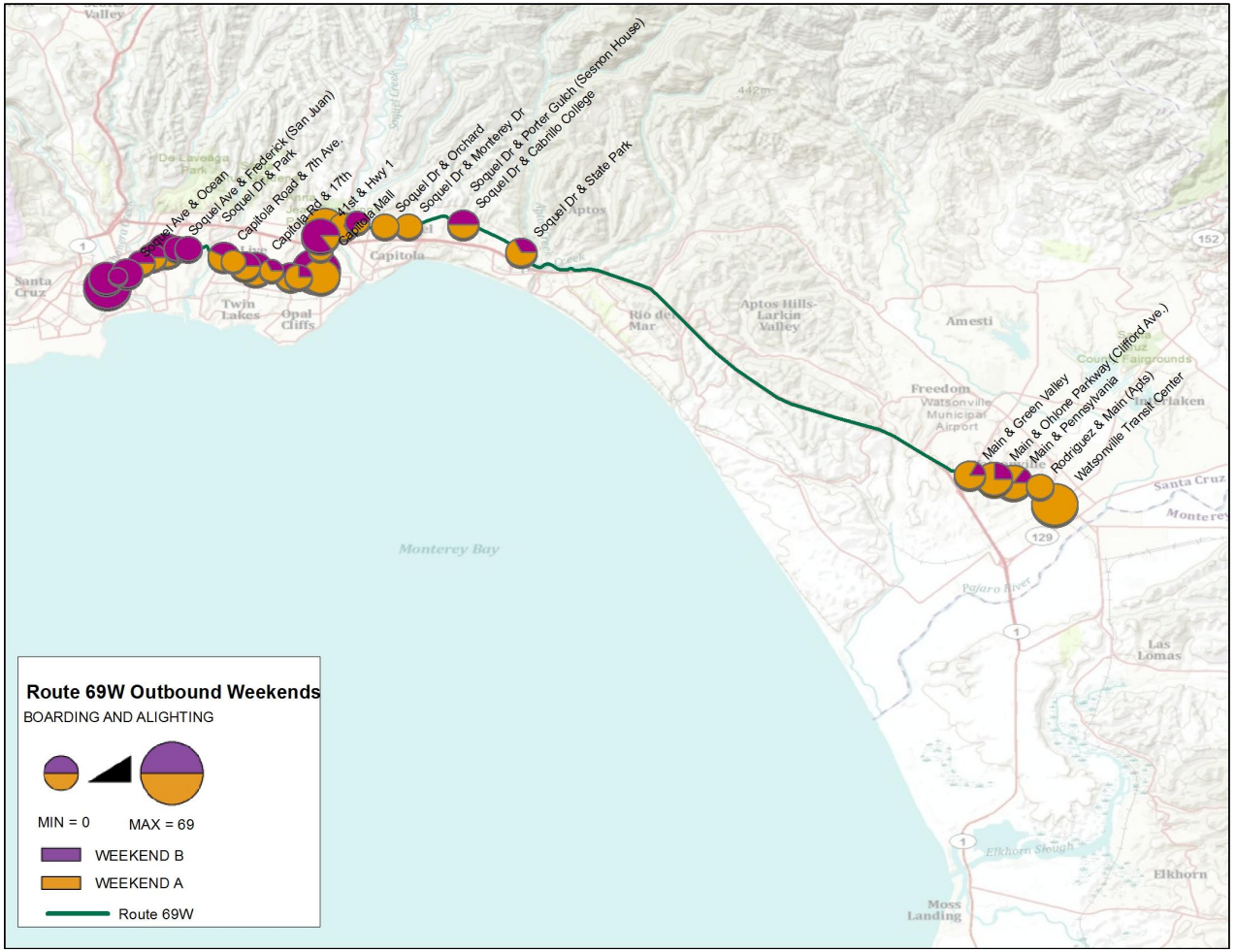


Exhibit 4.41 Route 69W Outbound Passenger Boarding and Alighting by Stop (Weekend)



Route 71 Boarding and Alighting Counts

Local Route 71 has the highest annual ridership of any Santa Cruz METRO fixed-route lines operating into Watsonville. It provides service connecting Watsonville to Santa Cruz with service running between 6:10 a.m. and 12:45 a.m. for the Santa Cruz to Watsonville (outbound) alignment and between 5:35 a.m. and 11:30 p.m. for the Watsonville to Santa Cruz (inbound) alignment during weekdays. Saturday and Holiday service span is from 7:15 a.m. to 12:45 a.m. for outbound service and from 6:05 a.m. to 10:30 p.m. for inbound service.

Outbound trips on Route 71 trips originate from the Santa Cruz METRO transit center on Pacific Avenue and terminate at the Watsonville Transit Center on Rodriguez Street. Service on Route 71 travels from the Santa Cruz METRO Center down Soquel Avenue to Freedom Boulevard and then either down Main Street, Crestview Street, Pennsylvania Street, Arthur Street, or Clifford Street terminiating at the Watsonville Transit Center.

The weekday outbound service operates on a 30-minute headway from 6:45 a.m. to 1:15 p.m., 15-minute headways from 1:15 p.m. to 6:15 p.m., 30-minute headway from 6:15 p.m. to 9:45 p.m., and one-hour headway from 9:45 p.m. to 11:45 p.m. The run time on weekday Route 71 Outbound trips ranges from 60 to 80 minutes.

The weekday inbound service operates on 15-minute headway from 6:10 a.m. to 8:10 a.m., 30-minute headway from 8:10 a.m. to 3:40 p.m., 15-minute headway from 3:40 p.m. to 5:40 p.m., 30-minute headway from 5:40 p.m. to 9:30 p.m., and one-hour headway from 9:30 p.m. to 10:30 p.m. The run time on weekday Route 71 Inbound trips range from 60 to 80 minutes.

Saturday, and Holiday service operate on a 30-minutes headway. Saturday and Holiday service run-time averages 75 minutes.

Exhibits 4.42 and 4.43 show the top five boarding and alighting stops for Route 71 Inbound. The Watsonville Transit Center, which is the starting point of the trip, had the highest total number of boardings at 72, followed by Cabrillo College at 40. The Santa Cruz Metro Center, the end point of the trip, had the highest number of alightings at 72, followed by River Street and River Street Extension with 33. This shows that the existing Santa Cruz METRO transit centers are heavily used. In addition, it is likely that many of the boardings at Cabrillo College were students who use the bus to attend classes. As with the Route 69W, it is likely that passengers alight at River Street and River Street Extension because of its proximity to the opposite end of downtown from Metro Center.

Exhibit 4.42 Route 71 Weekday Inbound Top Boarding Points

Route 71 Weekday Inbound		
Rank	**Stop**	**Boardings**
1	Watsonville Transit Center	72
2	Cabrillo College	40
3	Soquel Dr & Winkle	19
4	Soquel Dr. & Dominican Hospital	17
5	Soquel & State Park	13

Exhibit 4.43 Route 71 Weekday Inbound Top Alighting Points

Route 71 Weekday Inbound		
Rank	**Stop**	**Alightings**
1	Santa Cruz Metro Transit Center	72
2	River & River St Extension	33
3	Front & Soquel Ave	26
4	Water & Ocean	15
5	Freedom & Davis (K-Mart)	13

Exhibits 4.44 and 4.45 show the top five boarding and alighting stops for Route 71 Outbound. The Santa Cruz METRO Center at Pacific Avenue, which is the starting point of the trip, had the highest total number of boarding's at 36, followed by the Cabrillo College at 13. The Watsonville Transit Center, the end point of the trip, had the highest number of alightings at 25, followed by Airport Boulevard at Freedom Center with 16. As with the inbound trips, this shows that the existing Santa Cruz METRO transit centers are heavily used. As with the inbound Route 71 trips, it is likely that many of the boardings at Cabrillo College were students who use the bus to attend classes. The large number of alightings at Airport Boulevard at Freedom Center is likely due to the variety of shopping and services available, including a grocery store, drug store, hardware store, post office, and bank among other uses.

Exhibit 4.44 Route 71 Weekday Outbound Top Boarding Points

Route 71 Weekday Outbound		
Rank	**Stop**	**Boardings**
1	Santa Cruz Metro Transit Center	36
2	Cabrillo College	13
3	Water & Ocean	10
4	Soquel Ave & Frederick	7
5	Crestview Center	6

Exhibit 4.45 Route 71 Weekday Outbound Top Alighting Points

Route 71 Weekday Outbound		
Rank	**Stop**	**Alightings**
1	Watsonville Transit Center	25
2	Airport Blvd. & Freedom Centre	16
3	Main & W 5th	8
4	Soquel Dr & Winkle	7
5	Soquel Dr. & Domincan Hospital	6

Exhibits 4.46 and 4.47 show the top five boarding and alighting stops for Route 71 Inbound on weekends. The Watsonville Transit Center had the highest number of boardings at 105, followed by Soquel and State Park with 24. The Santa Cruz Metro Center at Pacific Avenue , the end point of the trip, had the highest number of alightings at 82, followed by Soquel Drive and 41st Avenue (Greenbrae) and Front & Soquel, each with 34. As with the weekday trips, this shows that the existing Santa Cruz METRO transit centers are heavily used. In addition, it is likely that the Soquel at State Park stop is popular for boarding because it connects to mid-County routes 54, 55, and 56 and provides access to Santa Cruz. Soquel Drive at 41st Avenue could be popular for alighting because of its proximity to various retail uses, including grocery, hardware, and electronics, at the shopping center across the street. As stated previously, it is likely that Front Street at Soquel Avenue is a popular alighting location because it is located on the opposite end of downtown from Metro Center.

Exhibit 4.46 Route 71 Weekend Inbound Top Boarding Points

Route 71 Weekend Inbound		
Rank	Stop	Boardings
1	Watsonville Transit Center	105
2	Soquel & State Park	24
3	Soquel Dr & Winkle	23
4	Soquel Dr & 41st (Greenbrae)	19
5	Airport Blvd. & Freedom Centre	17

Exhibit 4.47 Route 71 Weekend Inbound Top Alighting Points

Route 71 Weekend Inbound		
Rank	Stop	Alightings
1	Santa Cruz Metro Transit Center	82
2	Soquel Dr & 41st (Greenbrae)	34
3	Front & Soquel Ave	34
4	River & River St Extension	32
5	Soquel Dr & Winkle	29

Exhibits 4.48 and 4.49 show the top five boarding and alighting stops for Route 71 Outbound on weekends. The Santa Cruz METRO Transit Center had the highest total number of boardings at 161, followed by Front Street at Soquel Avenue and Water Street at Ocean Street, each at 25. The Watsonville Transit Center had the highest number of alightings at 41, followed by West Lake and Main Street with 33. Again, this shows that the existing Santa Cruz METRO transit centers are heavily used, and as stated previously it is likely that Front Street at Soquel Avenue is a popular stop because it is located at the opposite end of downtown from Metro Center. Water Street and Ocean Street could be a well-used location to board because of the number of routes it connects to, including routes 4, 8, 17, 30, 35, and 66. West Lake and Main Street could be a popular location to alight because it is the stop prior to the transit center and is located just off of many shopping and service uses on Main Street.

Exhibit 4.48 Route 71 Weekend Outbound Top Boarding Points

Route 71 Weekend Outbound		
Rank	**Stop**	**Boardings**
1	Santa Cruz Metro Transit Center	161
2	Front & Soquel Ave (Longs)	25
3	Water & Ocean	25
4	Soquel Dr & Winkle	23
5	Soquel Dr & Cotton (41st)	20

Exhibit 4.49 Route 71 Weekend Outbound Top Alighting Points

Route 71 Weekend Outbound		
Rank	**Stop**	**Alightings**
1	Watsonville Transit Center	41
2	W Lake & Main	33
3	Soquel Dr & Winkle	21
4	Soquel Dr & Cotton (41st)	21
5	Soquel Dr. & Daubenbiss	21

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Exhibit 4.50 Route 71 Inbound Passenger Boarding and Alighting by Stop (Weekday)

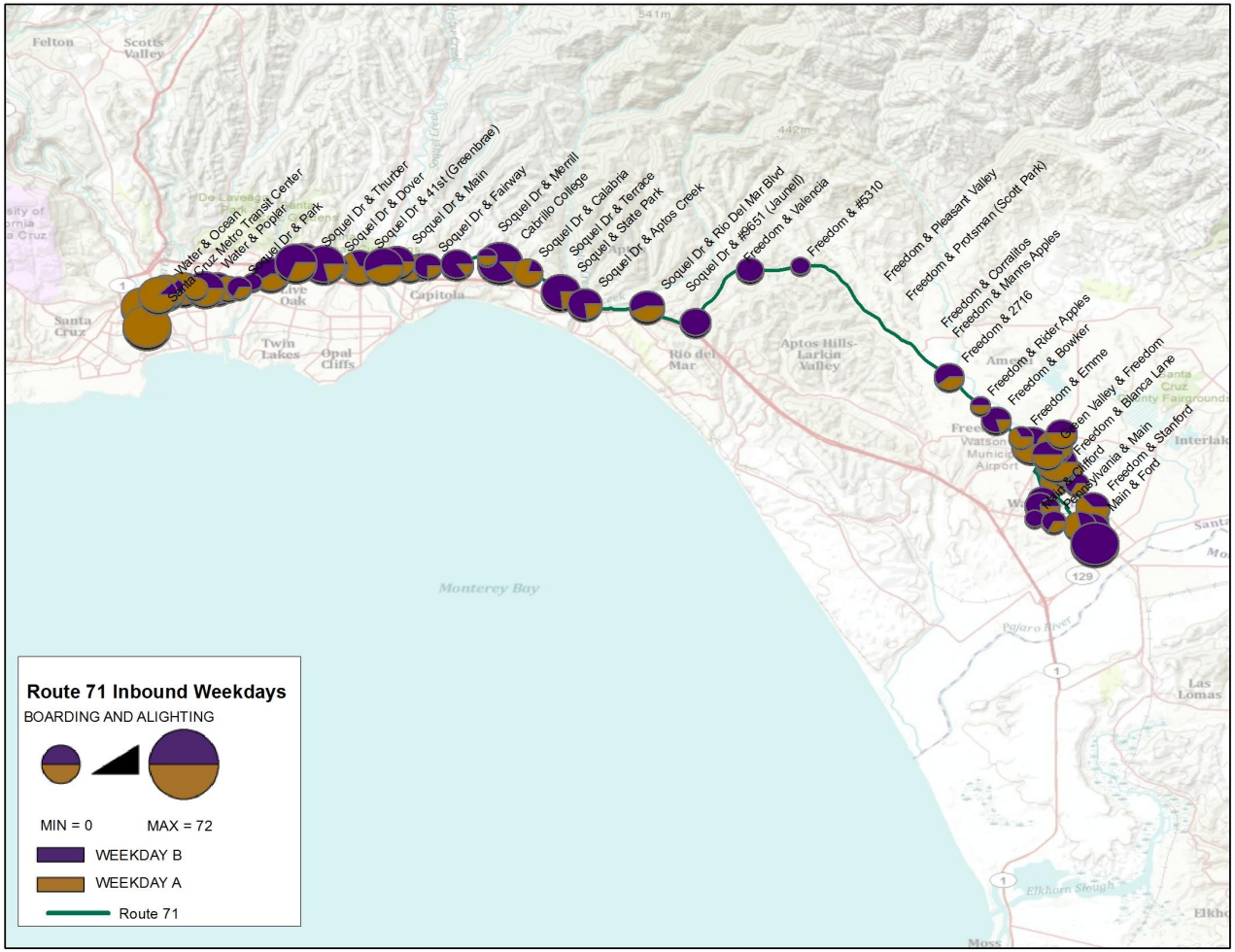


Exhibit 4.51 Route 71 Inbound Passenger Boarding and Alighting by Stop (Weekend)

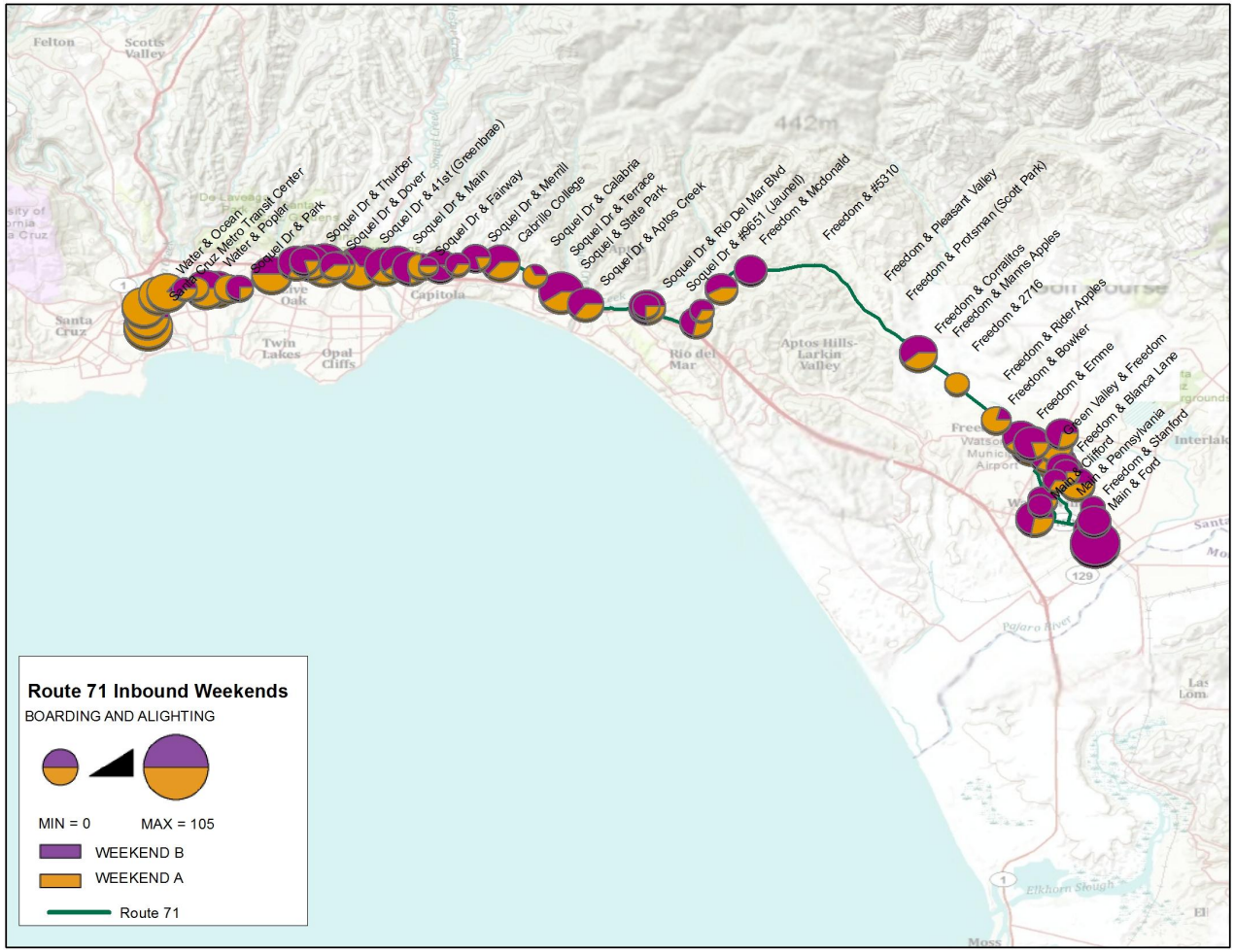


Exhibit 4.52 Route 71 Outbound Passenger Boarding and Alighting by Stop

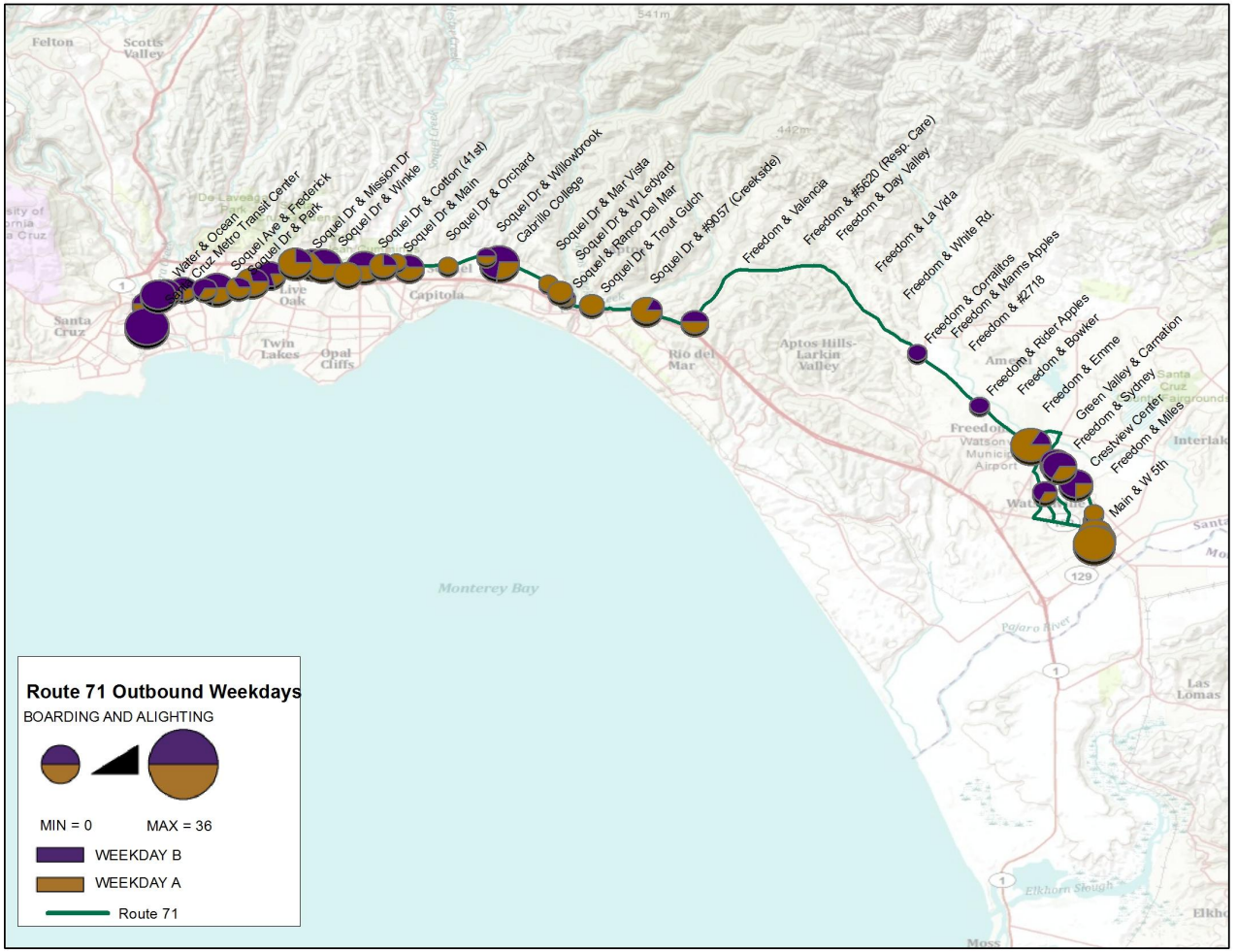
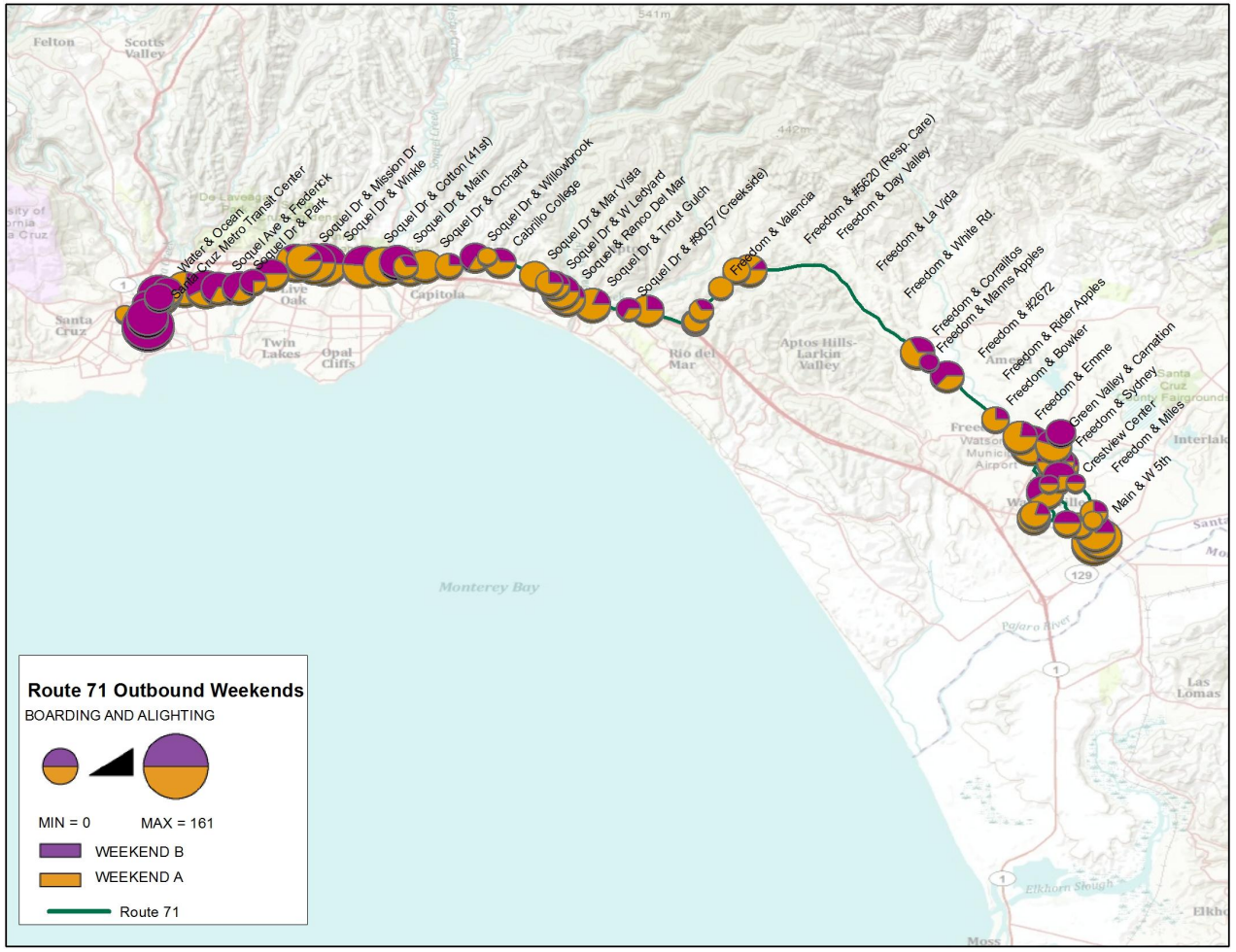


Exhibit 4.53 Route 71 Outbound Passenger Boarding and Alighting by Stop



Route 72 Boarding and Alighting Counts

Local Route 72 provides local service in Watsonville, running in a loop from the Watsonville Transit Center to Corralitos. Route 72 has service running between 5:40 a.m. and 7:38 p.m. during weekdays. There is no Saturday, Sunday or Holiday service. The weekday service operates on one-hour headways. The run time on weekday Route 72 trips is between 51 minutes and 57 minutes.

Route 72 trips originate and terminate at the Watsonville Transit Center on Rodriguez Street. Service on the Route 72 travels from the Watsonville Transit Center to Corralitos via Main Street, Green Valley Road, Airport Boulevard, Amesti Road, Varni Road, and Corralitos Road, and returns along Carralitos Road, Varni Road, Pioneer Road, Green Valley Road, Airport Boulevard, Freedom Boulevard, Green Valley Road, and Main Street before it arrives at the Watsonville Transit Center.

Exhibits 4.54 and 4.55 show the top five boarding and alighting stops for Route 72. The Watsonville Transit Center, which is the starting point of the trip, had the highest total number of boardings, followed by Main Street at Ohlone Parkway. The Watsonville Transit Center, the end-point of the trip, had the highest number of alightings, followed by Airport Boulevard and Freedom Center. It is likely that many of the boardings at Main Street at Ohlone Parkway are from people who had been shopping at the Overlook Center, which includes discount shopping, a grocery store, an office supply store, and restaurants. The alightings at Airport Boulevard and Freedom Center are likely due to the diverse array of retail and services located at Freedom Center, including a grocery store, drug store, hardware store, post office, and bank among other uses.

Exhibit 4.54 Route 72 Top Boarding Points

Route 72 Weekday		
Rank	**Stop**	**Boardings**
1	Watsonville Transit Center (Start)	10
2	Main & Ohlone Parkway	6
3	Main & Clifford	5
4	Amesti & Paraiso Drive	3
5	Amesti & Bollinger	3

Exhibit 4.55 Route 72 Top Alighting Points

Route 72 Weekday		
Rank	**Stop**	**Alightings**
1	Watsonville Transit Center (End)	16
2	Airport Blvd. & Freedom Centre	11
3	Freedom & Airport	3
4	Green Valley & Pennsylvania	3
5	Green Valley & Devon Ln (Celia)	2

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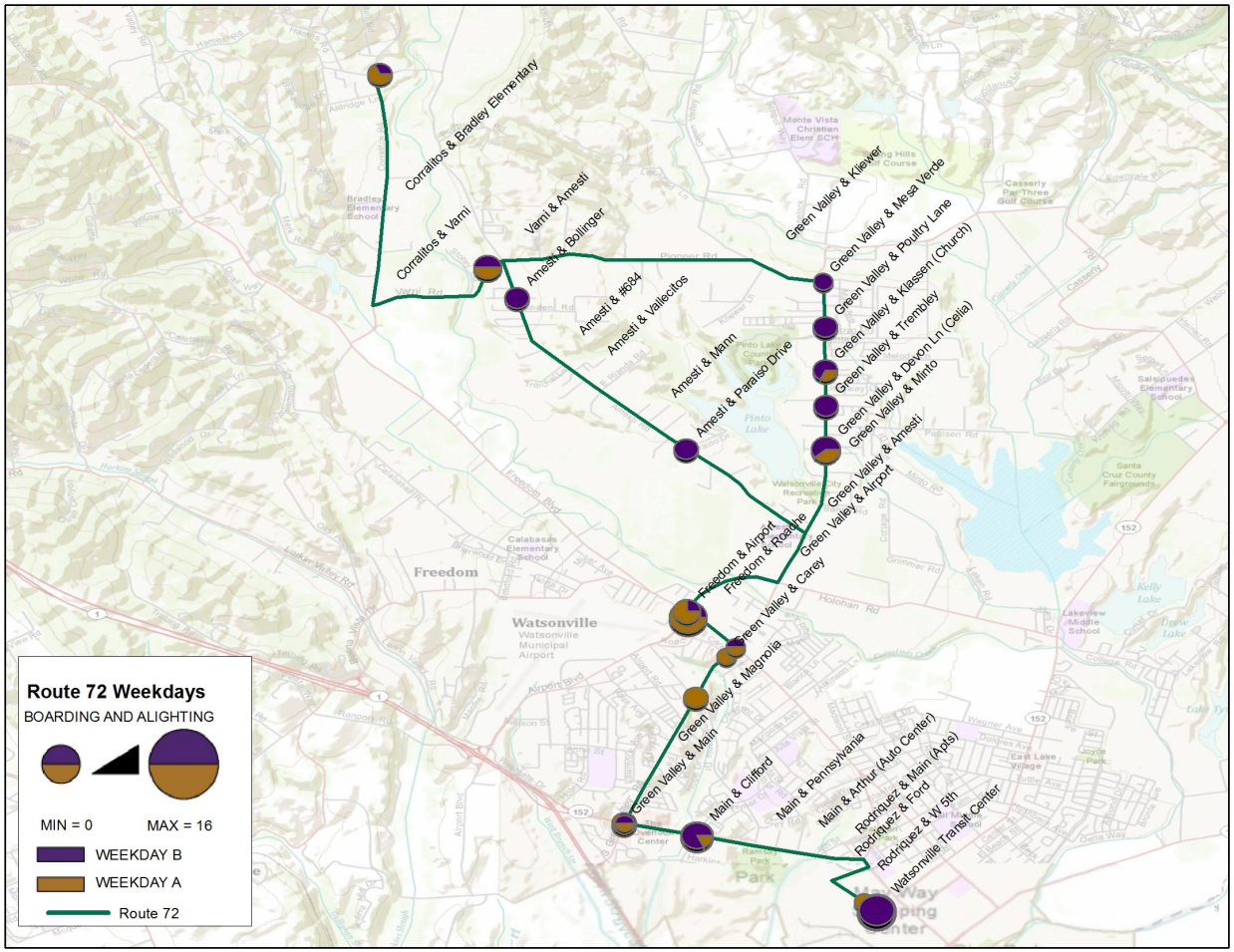
Exhibit 4.56 Route 72 Passenger Boarding and Alighting by Stop



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Route 74 Boarding and Alighting Counts

Local Route 74 provides local service in Watsonville, running in a loop from the Watsonville Transit Center. Route 74 serves Pajaro Valley High School, the Social Security Administration Office, Watsonville Hospital, and neighborhoods surrounding the Watsonville Airport. Route 74 has service running between 6:50 a.m. and 6:35 p.m. during weekdays. There is no Saturday, Sunday or Holiday service. The Route 74 service operates on one-hour headways. The run time on weekday Route 74 trips is between 45 and 50 minutes.

Route 74 trips originate and terminate at the Watsonville Transit Center on Rodriguez Street. Service on the Route 74 travels from the Watsonville Transit Center via West Beach Street, Ohlone Parkway, Harkins Slough Road, Green Valley Road, Larkin Valley Road, Technology Drive, Anna Street, Shady Oaks Drive, Holly Drive, and Green Valley Road before circling the airport along Freedom Boulevard, Buena Vista Drive, Calabasas Road, Browker Road, Manfre Road, Larkin Valley Road, Airport Boulevard, Nielson Street, Hangar Way, Airport Boulevard, and Ross Way before heading back to the Watsonville Transit Center along Shady Oaks Drive, Anna Street, Kralj Drive, Green Valley Road, Harkins Slough Road, Ohlone Parkway, and West Beach Street.

Exhibits 4.57 and 4.58 show the top five boarding and alighting stops for Route 74. The Watsonville Transit Center, which is the starting point of the trip, had the highest total number of boardings at 29, followed by Nielson at Airport (Watsonville Hospital) at 12. The Watsonville Transit Center, the end point of the trip, had the highest number of alightings at 20, followed by Green Valley Road at Main Street with seven. It is likely that many of the boardings at Nielson at Airport are from people who were at the hospital. The alightings at Green Valley and Main are likely due to the both the wide array of retail, restaurant and service uses located nearby as well as the large number of connecting routes that serve that stop.

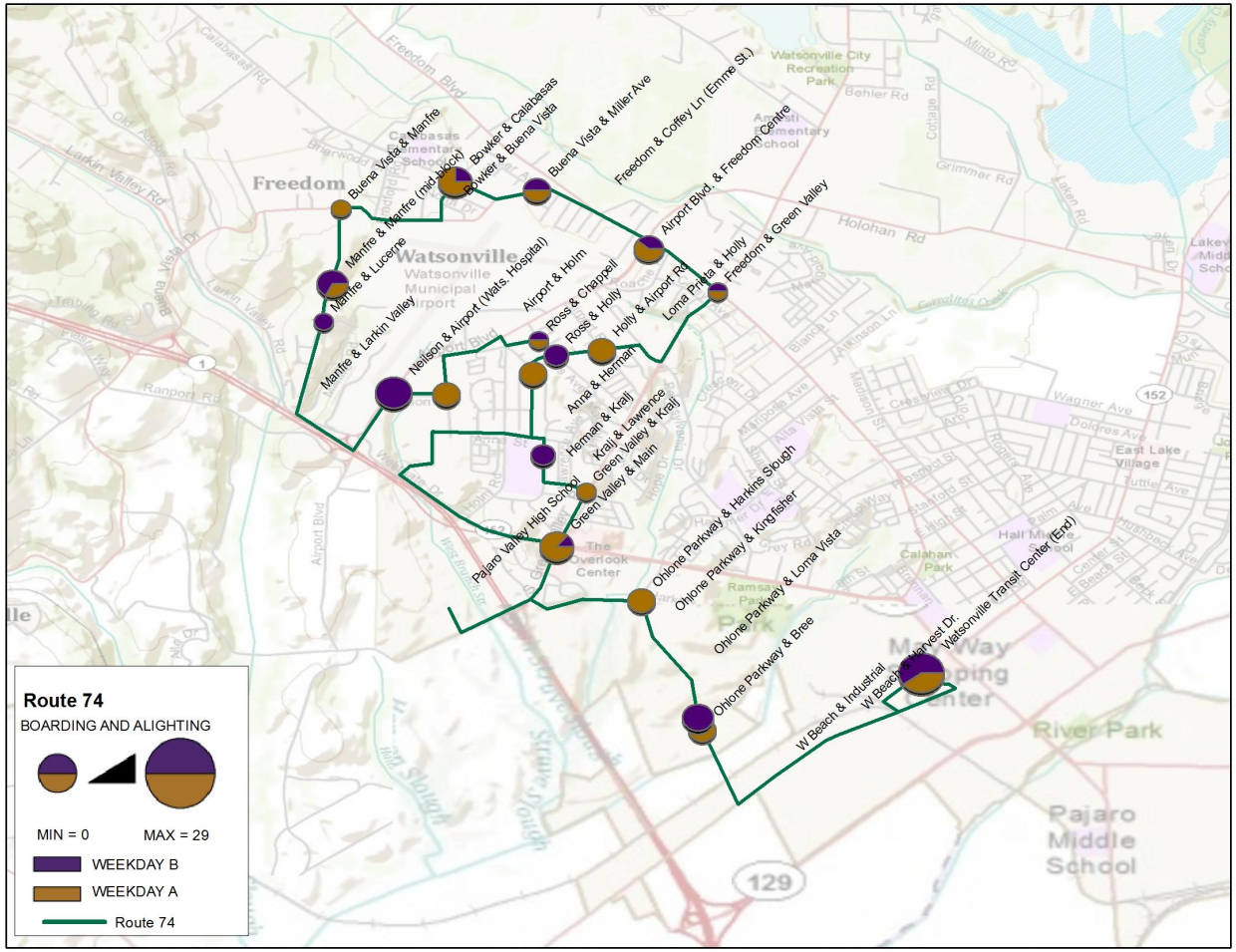
Exhibit 4.57 Route 74 Top Boarding Points

Route 74 Weekday		
Rank	**Stop**	**Boardings**
1	Watsonville Transit Center (Start)	29
2	Neilson & Airport (Wats. Hospital)	12
3	Ohlone Parkway & Lighthouse	6
4	Manfre & Manfre (mid-block)	4
5	Ross & Holly	3

Exhibit 4.58 Route 74 Top Alighting Points

Route 74 Weekday		
Rank	**Stop**	**Alightings**
1	Watsonville Transit Center (End)	20
2	Green Valley & Main	7
3	Bowker & Calabasas	6
4	Sunny Hills & Shady Oaks	4
5	Holly & Airport Rd	4

Exhibit 4.59 Route 74 Passenger Boarding and Alighting by Stop



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Route 75 Boarding and Alighting Counts

Local Route 75 provides local service in Watsonville, running in a loop from the Watsonville Transit Center up and down Green Valley Road. Route 75 has service running between 6: 09 a.m. and 9:02 p.m. during weekdays. Saturday, Sunday and Holiday service runs between 9:09 a.m. to 7:57 p.m. Route 75 operates on one-hour headways with a run time between 53 minutes and 58 minutes.

Route 75 trips originate and terminate at the Watsonville Transit Center on Rodriguez Street. Route 75 travels from the Watsonville Transit Center to West Fifth Street, Main Street, Green Valley Road, Airport Boulevard, Green Valley Road, Arroyo Drive, Mark Avenue, Casserly Road, Green Valley Road, Wheelock Road, Green Valley Road, Airport Boulevard, Loma Prieta Avenue, Green Valley Road, and back down Main Street to the Watsonville Transit Center.

Exhibits 4.60 and 4.61 show the top five boarding and alighting stops for Route 75 on weekdays. The Watsonville Transit Center, which is the starting point of the trip, had the highest total number of boardings, followed by Airport Boulevard at Freedom Center. The Watsonville Transit Center, the end point of the trip, had the highest number of alightings, followed by Airport Boulevard at Freedom Center. It is likely the heavy use of the stop at Airport Boulevard at Freedom Center is due to the variety of retail and services at Freedom Center, including a grocery store, drug store, hardware store, post office, and bank.

Exhibit 4.60 Route 75 Weekday Top Boarding Points

Route 75 Weekday		
Rank	**Stop**	**Boardings**
1	Watsonville Transit Center (Start)	22
2	Airport Blvd. & Freedom Centre	14
3	Main & Pennsylvania	8
4	Green Valley & Hope Dr	5
5	Green Valley & Minto	4

Exhibit 4.61 Route 75 Weekday Top Alighting Points

Route 75 Weekday		
Rank	**Stop**	**Alightings**
1	Watsonville Transit Center (End)	25
2	Airport Blvd. & Freedom Centre	9
3	Main & Clifford	7
4	Freedom & Airport	6
5	Main & W 5th	6

Exhibits 4.62 and 4.63 show the top five boarding and alighting stops for Route 75 on weekends. The weekend patterns on Route 75 mimic those of the weekday. The Watsonville Transit Center, which is the starting point of the trip, had the highest total number of boardings at 54, followed by Airport Boulevard at Freedom Center at 25. The Watsonville Transit Center, the end point of the trip, had the highest number of alightings at 33, followed by Airport Boulevard at Freedom Center with 20. It is likely the heavy use of the stop at Airport Boulevard at Freedom Center is due to the variety of retail and service uses at Freedom Center, including a grocery store, drug store, hardware store, post office, and bank among other uses.

Exhibit 4.62 Route 75 Weekend Top Boarding Points

Route 75 Weekend		
Rank	**Stop**	**Boardings**
1	Watsonville Transit Center (Start)	54
2	Airport Blvd. and Freedom Centre	25
3	Green Valley & Klassen (Church)	14
4	Main & Ford (NB)	11
5	Green Valley & Hope Dr (Kingdom Hall)	10

Exhibit 4.63 Route 75 Weekend Top Alighting Points

Route 75 Weekend		
Rank	**Stop**	**Alightings**
1	Watsonville Transit Center (End)	33
2	Airport Blvd. and Freedom Centre	20
3	Green Valley & Hope Dr (Kingdom Hall)	13
4	Freedom & Green Valley	13
5	Main & Clifford	11

Exhibit 4.64 Route 75 Passenger Boarding and Alighting by Stop (Weekday)

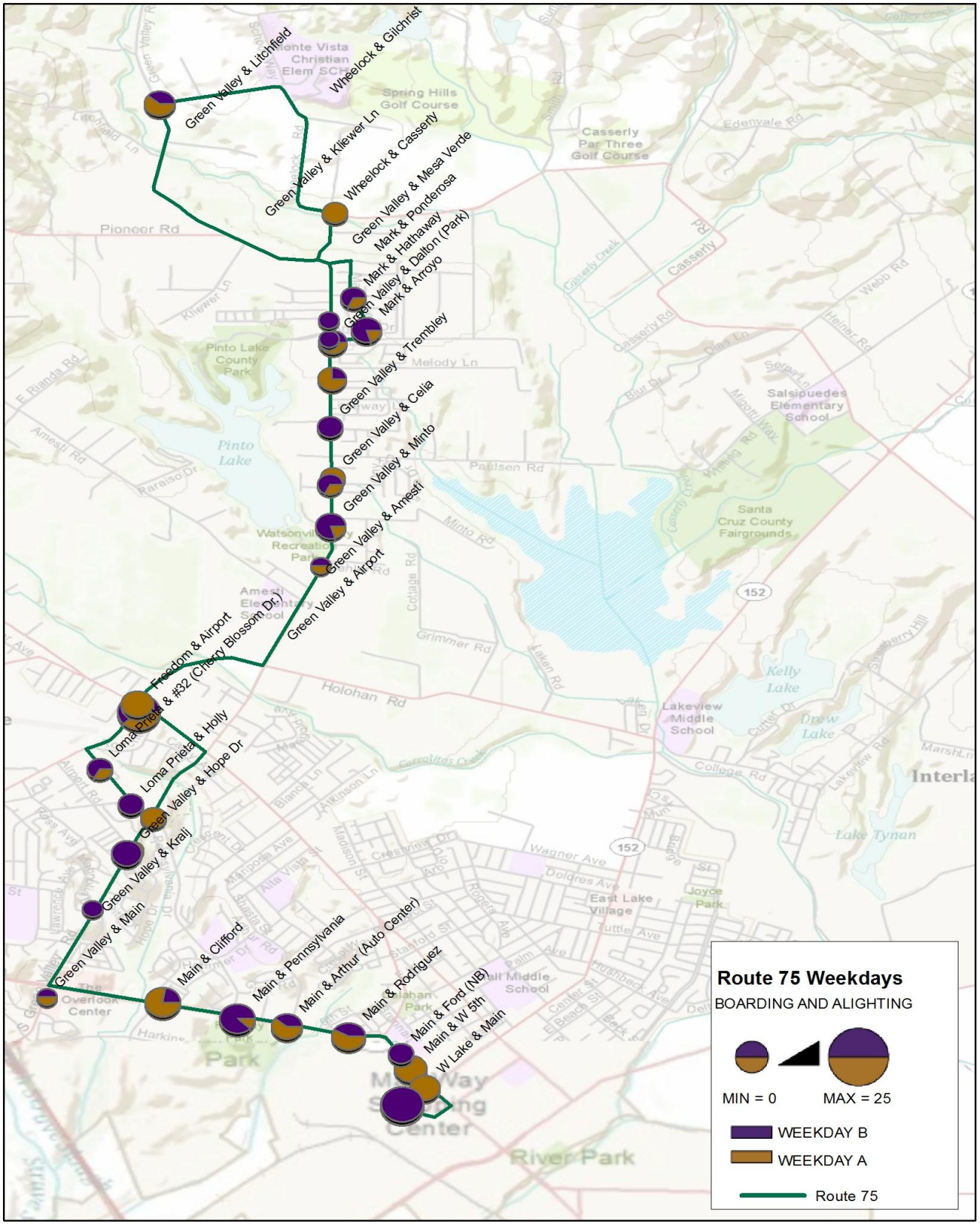
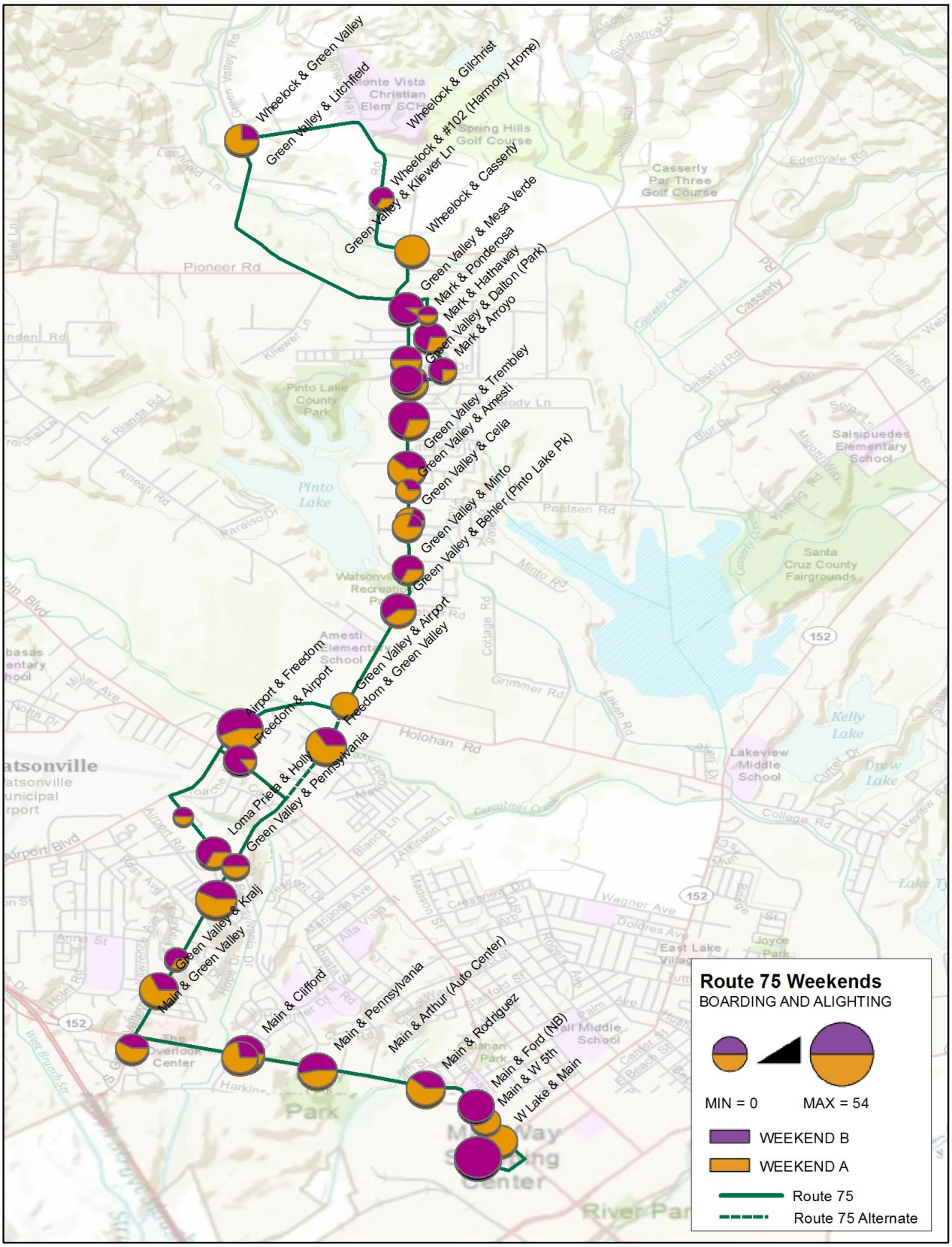


Exhibit 4.65 Route 75 Passenger Boarding and Alighting by Stop (Weekend)



Route 79 Boarding and Alighting Counts

Local Route 79 provides local service in Watsonville, running in a loop from the Watsonville Transit Center through the East Lake and East Beach areas. Route 79 has service running between 7:10 a.m. and 5:35 p.m. during weekdays. There is no Saturday, Sunday or Holiday service. Route 79 operates on one-hour headways with a run time of 45 minutes.

Route 79 trips originate and terminate at the Watsonville Transit Center on Rodriguez Street. Service on the Route 79 travels from the Watsonville Transit Center via East Beach Street, Lincoln Street, East Lake Avenue, College Road, Lakeview Road, Parkwood Drive, and returns to the Transit Center along College Road, East Lake Avenue, Tuttle Avenue, Bridge Street, Bronte Avenue, Hushbeck Avenue, East Beach Street, Lincoln Street, and East Lake Avenue before heading back to the Watsonville Transit Center.

Exhibits 4.66 and 4.67 show the top three boarding and top five alighting stops for Route 79, respectively. The Watsonville Transit Center, which is the starting point of the trip, had the highest total number of boardings at nine, followed by East Beach Street at Marchant at one. East Lake at Martinelli and College Road at East Lake Avenue tied for the highest number of alightings at one. The large number of boardings at that Watsonville Transit Center show high use of the facility to access this route. The alightings at East Lake at Martinelli could be due to the East Lake Village Shopping Center. Alightings at College Road and East Lake could be because this stop is the farthest up East Lake that you can get using Santa Cruz METRO service.

Exhibit 4.66 Route 79 Top Boarding Points

Route 79 Weekday		
Rank	Stop	Boardings
1	Watsonville Transit Center (Start)	9
2	E Beach & Marchant	1
3	Tuttle & Cedar	1

Exhibit 4.67 Route 79 Top Alighting Points

Route 79 Weekday		
Rank	Stop	Alightings
1	East Lake & Martinelli	2
2	College & E Lake	2
3	Tuttle & Cedar	1
4	East Lake & Bridge	1
5	College and Lakeview (Parkwood Dr.)	1

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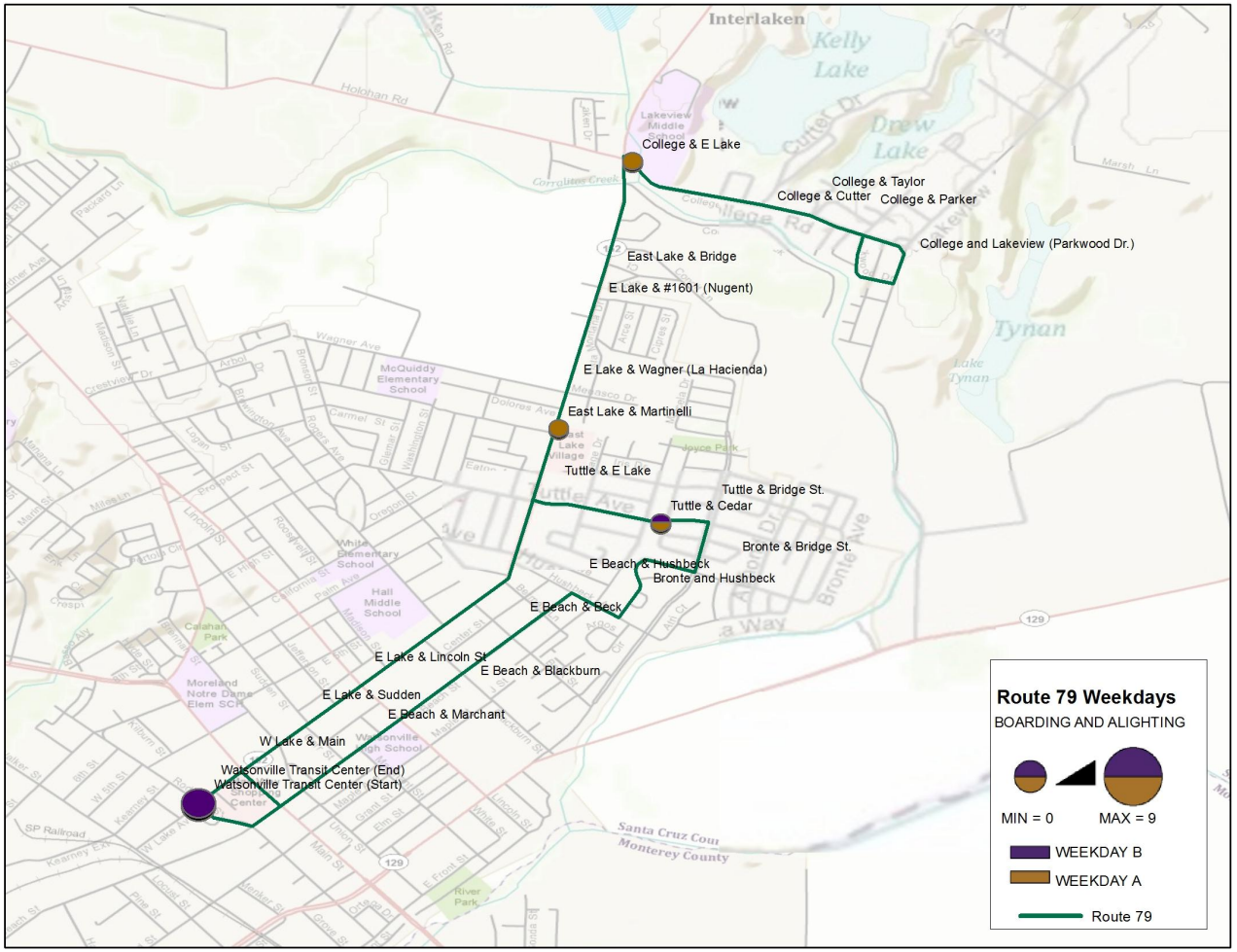
Exhibit 4.68 Route 79 Passenger Boarding and Alighting by Stop



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Route 91X Boarding and Alighting Counts

Route 91X provides express limited-stop service connecting Watsonville to Santa Cruz with service running between 6:35 a.m. and 9:12 a.m. and 3:30 p.m. to 5:25 p.m. for the Santa Cruz to Watsonville (outbound) alignment and between 5:55 a.m. and 10:19 a.m. and 4:30 p.m. to 6:19 p.m. for the Watsonville to Santa Cruz (inbound) alignment during weekdays. Saturday and Sunday service is not offered on the Route 91X.

Outbound Route 91X trips originate from the Santa Cruz METRO Center on Pacific Avenue and terminate at the Watsonville Transit Center on Rodriguez Street. Service on Route 91X travels from the Santa Cruz METRO Center at Pacific Avenue down River Street, Water Street, Morrissey Boulevard, Highway 1, exits on Park Avenue to serve Cabrillo College on Soquel, returns to Highway 1 at State Park, enters Watsonville via Main Street, and arrives at the Watsonville Transit Center via West Lake. The inbound trip is similar, but serves Dominican Hospital by exiting Highway 1 at 41st Avenue and reentering Highway 1 at Soquel Drive.

The weekday outbound service operates on one-hour headways. The run time on weekday Route 91X Outbound trips is between 36 minutes and 55 minutes, depending upon the time of day. This is largely related to congestion along Highway 1, which can result in significant delays during peak hours as commuters travel to and from work. To alleviate congestion, the Santa Cruz County Regional Transportation Commission (SCCRTC) is considering a project which would involve widening Highway 1 to accommodate an extension of the auxiliary lane, a High-Occupancy Vehicle (HOV) Lane, as well as enhanced pedestrian and bicycle infrastructure. The project would include a phased approach given uncertainty regarding the future of transportation funding at the federal and state levels.

The stage of SCCRTC's project currently under deliberation is a stretch of Highway 1 from Soquel Drive to 41st Avenue and as a bicycle/pedestrian bridge at Chanticleer Avenue. Santa Cruz METRO believes that completion of this project (as well as future stages of the overall Highway 1 improvement project) could result in improved on-time performance for Santa Cruz METRO buses traveling along Highway 1 as well as adjacent arterials. However, it is also possible the widening project could result in diminished ridership as automobile travel along an improved Highway 1 could conceivably become more attractive to "choice" riders currently riding Santa Cruz METRO buses.

The weekday inbound service operates on a 30-minute headway from 5:55 a.m. to 6:25 a.m., 25-minute headways from 6:25 a.m. to 7:15 a.m., 15-minute headway from 7:15 a.m. to 7:30 a.m., one-hour headways from 7:30 a.m. to 9:30 a.m., and one-hour headway from 4:30 p.m. to 5:30 p.m. The run time on weekday Route 91X Inbound trips is between 47 and 65 minutes.

Exhibits 4.69 and 4.70 show the top five boarding and top alighting stops for Route 91X Inbound, respectively. The Watsonville Transit Center, which is the starting point of the trip, had the highest total number of boardings at four, followed by Main at Pennsylvania and Green Valley at Main, each with two. The Santa Cruz Metro Center on Pacific Avenue, the end point of the trip, had the highest

number of alightings at five, followed by Water Street at Ocean Street with four. As this is a commuter express, it is likely that travel patterns along this route reflect those traveling to and from job centers. It is likely that many of the boardings at Main at Pennsylvania and Green Valley at Main were because those people lived in the neighborhoods surrounding those stops and use the bus to access employment. It is likely that passengers alight at the Santa Cruz Metro Center to access downtown employment or connections to other routes serving the community. In addition, many people likely alight at Water Street and Ocean Street because of its proximity to the County Governmental Center (County Building).

Exhibit 4.69 Route 91X Inbound Top Boarding Points

Route 91X Inbound		
Rank	**Stop**	**Boardings**
1	Watsonville Transit Center	4
2	Main & Pennsylvania	2
3	Green Valley and Main	2
4	Watsonville Civic Plaza	1
5	Main & Rodriguez	1

Exhibit 4.70 Route 91X Inbound Top Alighting Points

Route 91X Inbound		
Rank	**Stop**	**Alightings**
1	Santa Cruz Metro Transit Center	5
2	Water and Ocean	4
3	41st & Hwy 1 (AM only)	3
4	Soquel Dr. and Dominican Hospital (AM only)	1

Exhibits 4.71 and 4.72 show the top four boarding and top three alighting stops for Route 91X outbound, respectively. The Santa Cruz METRO Center , which is the starting point of the trip, had the highest total number of boarding's at three, followed by Water Street at the County Building at two. The Watsonville Transit Center, the end point of the trip, had the highest number of alightings at six, followed by Soquel Drive at Cabrillo College with two. As with the inbound trips, this shows that the existing Santa Cruz METRO transit centers are heavily used. The higher number of boardings at Water and the County Building could be from County workers returning to South County. The higher number of alightings at Cabrillo College shows that students use the bus to attend classes.

Exhibit 4.71 Route 91X Outbound Top Boarding Points

Route 91X Outbound		
Rank	Stop	Boardings
1	Santa Cruz Metro Transit Center	3
2	Water & (County Bldgs)	2
3	Water and Ocean	1
4	Water & Poplar (Catalpa)	1

Exhibit 4.72 Route 91X Outbound Top Alighting Points

Route 91X Outbound		
Rank	Stop	Alightings
1	Watsonville Transit Center	6
2	Soquel Dr & Cabrillo College	2
3	Soquel Dr & Porter Gulch (Sesnon House)	1

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Exhibit 4.73 Route 91X Inbound Passenger Boarding and Alighting by Stop (Weekday)

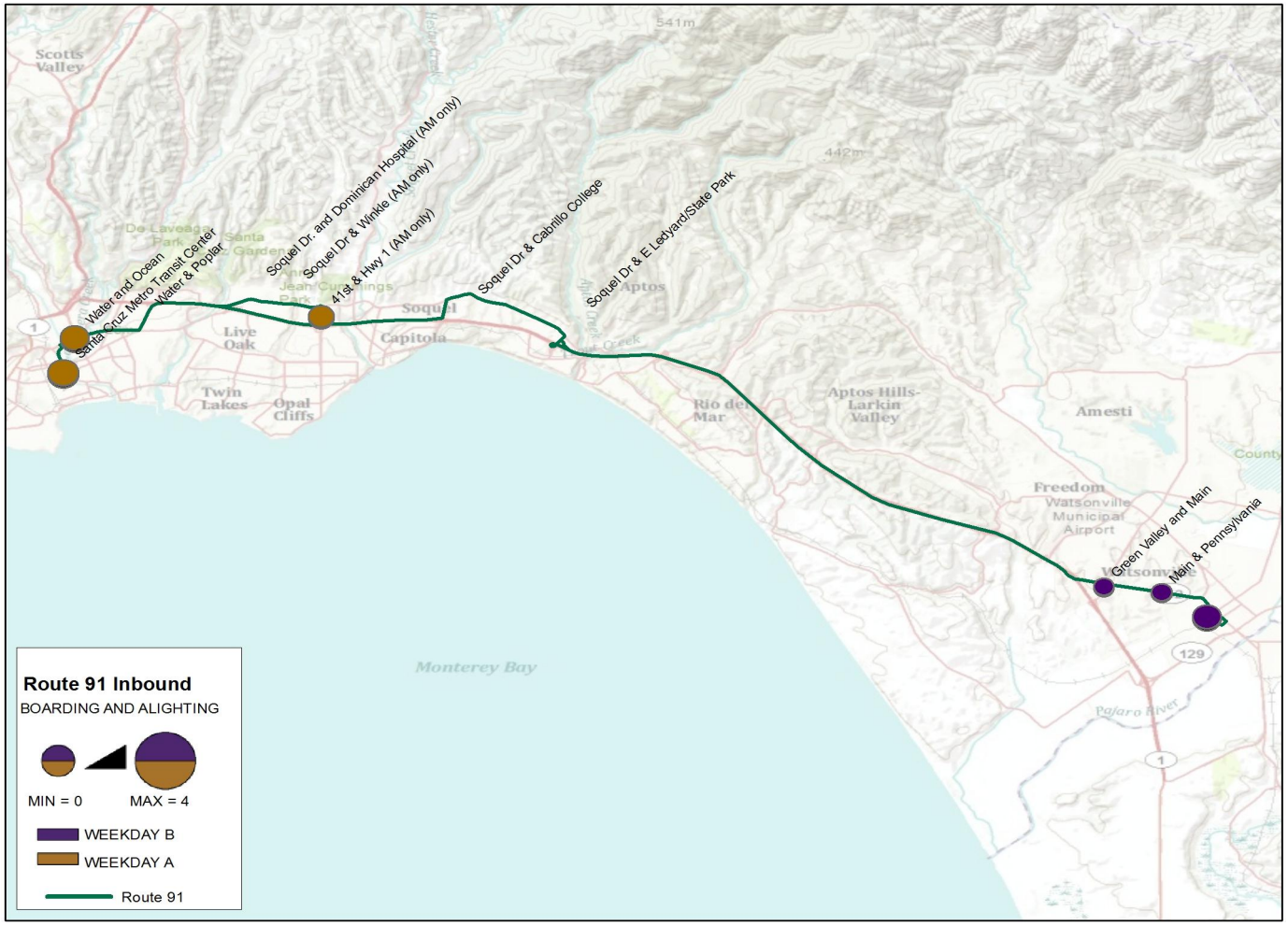
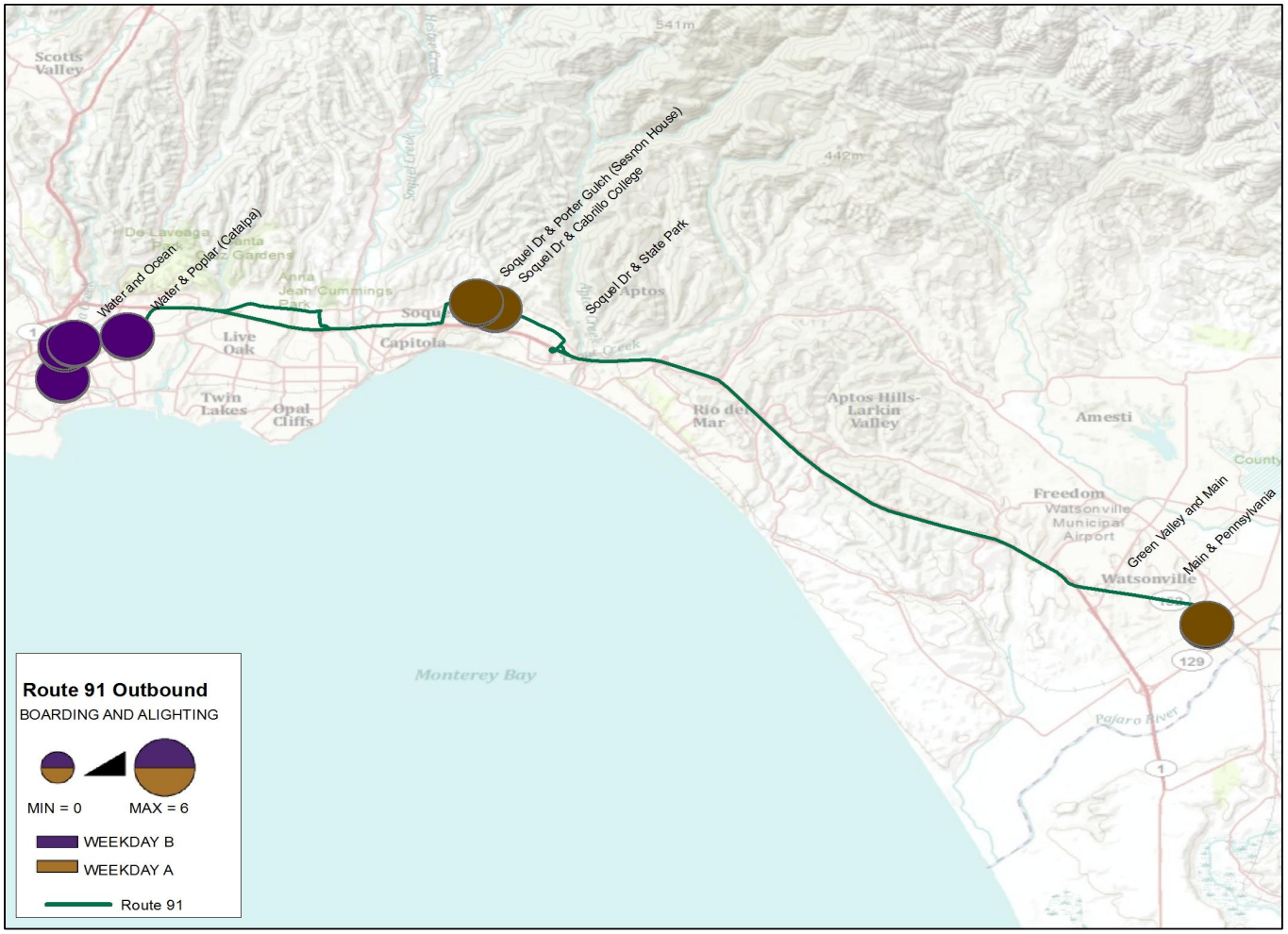


Exhibit 4.74 Route 91X Outbound Passenger Boarding and Alighting by Stop (Weekend)



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5 PUBLIC INVOLVEMENT

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CHAPTER 5 - PUBLIC INVOLVEMENT

COMMUNITY SURVEY ANALYSIS

Methodology

The Community Survey was fielded across a four-week period, from April 21, 2011 and May 21, 2011. The survey had three core objectives:

- Identify mobility needs of the community,
- Gauge the effectiveness of the existing services, and
- Identify opportunities for attracting choice riders (i.e., persons with multiple mobility options).

The survey was conducted using two distinct survey methodologies. This approach targeted the often Limited English Proficiency transit riders in Watsonville and required the project team to develop innovative approaches toward obtaining input and building support for Santa Cruz METRO's plans in the target community.

The first approach was an intercept methodology by which Moore & Associates along with Santa Cruz METRO staff visited several locations throughout Watsonville to collect surveys in-person. Locations included major shopping centers, Farmers' Market, post office, libraries, transit center, and churches.

The second approach was an onboard methodology which was conducted solely by Santa Cruz METRO staff. The methodology required the surveyors to canvas potential respondents onboard those Santa Cruz METRO lines serving Watsonville. This approach allowed for direct contact with transit-dependent populations as well as other potentially Limited English Proficiency individuals.

The project team collected 354 survey responses via the intercept and onboard methodologies. The 354 valid survey responses represent a statistically-valid sampling with a 95-percent confidence level. In other words, the data gleaned from this survey can be considered reflective of the Watsonville population at-large.

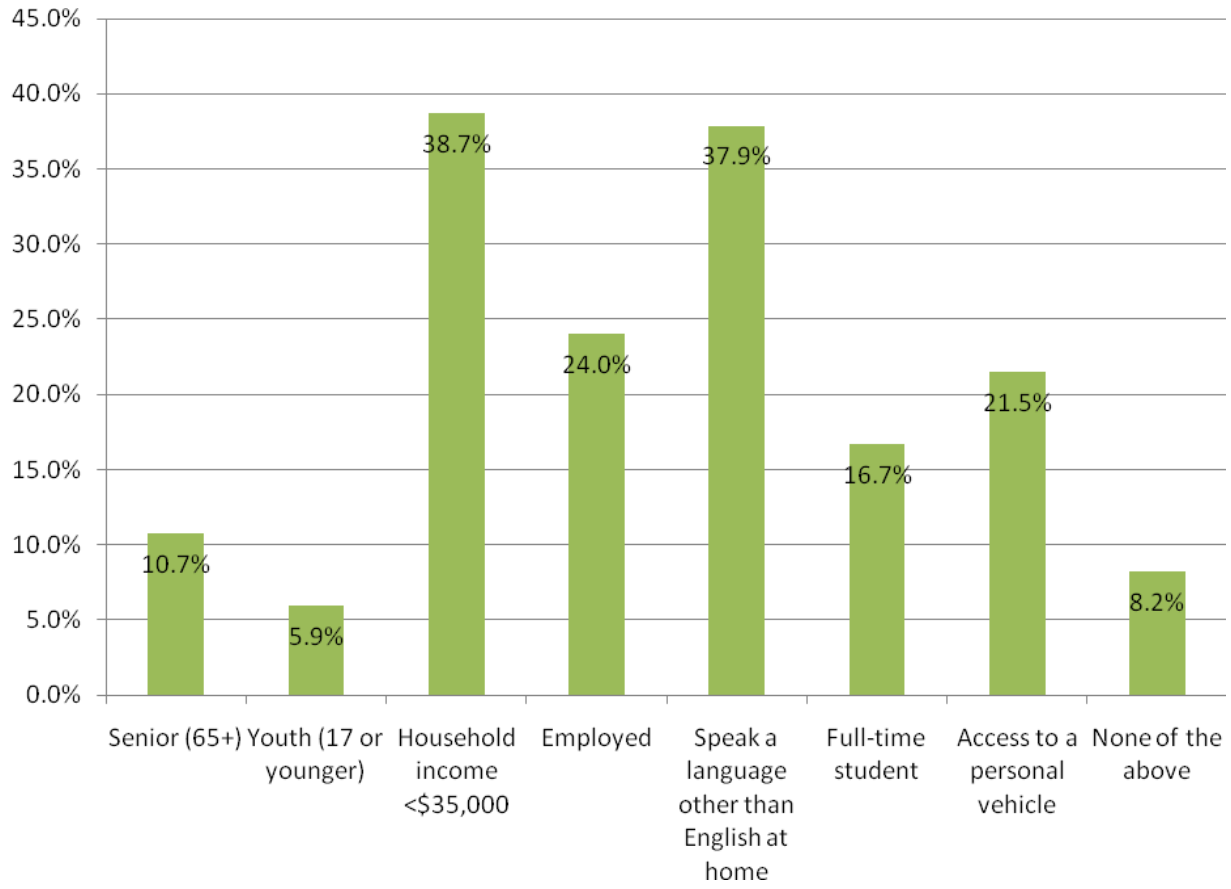
To analyze the survey responses, the consultant entered the data into Statistical Package for the Social Sciences (SPSS) software. Next, simple frequencies and cross-tabulations (potential relationships between data points) were generated. The data were then exported into Microsoft Excel to create charts and graphs.

Mobility Needs Assessment

Survey respondents were asked questions about themselves in order to create a demographic profile. These questions aimed to discover if respondents belonged to a traditionally ride-dependent populations (i.e., low-income, senior, youth, etc.) Exhibit 5.1 shows the results of these questions. Of note, 38.7 percent of respondents stated they had an annual household income of less than $35,000, which suggests this group would be particularly sensitive to changes in the Santa Cruz METRO fare structure. In addition, 37.9 percent indicated they speak a language other than English at home.

Only 21.5 percent of respondents indicated they had access to a personal vehicle. While this does not imply *ease* of using the personal vehicle, in combination with the high incidence of low-income residents observed in this survey, a higher rate of unemployment, and the tough economic climate, operating a personal vehicle could be a financial burden for many Watsonville residents with the price of gasoline approaching four dollars/gallon.

Exhibit 5.1 Ride Dependent Category



Only 24 percent of survey respondents indicated being employed, as shown in Exhibit 5.1. Of these, more than 80 percent stated working in zip code 95076, which includes Watsonville and adjacent areas. Given the large number of survey respondents who work within Watsonville, it is important to ensure adequate transit access to employment centers, especially during peak hours.

Exhibit 5.2 Employment ZIP Code

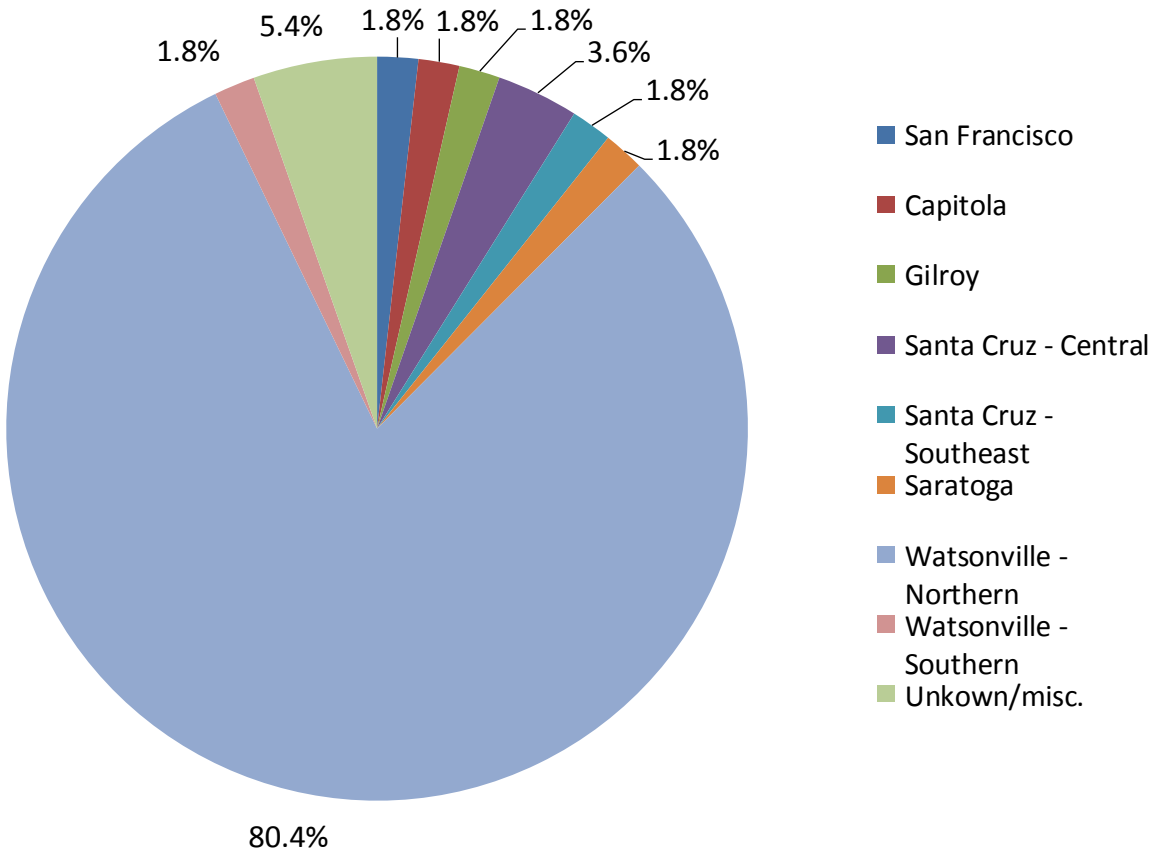


Exhibit 5.3 illustrates survey respondents' primary mode of travel. Santa Cruz METRO is the most common mode of travel, attracting nearly half of all respondents. This large percentage may be attributable to the fact many of the surveys were collected on board buses or at major bus stop locations. Nonetheless, this confirms significant reliance within the Watsonville community upon Santa Cruz METRO for basic and discretionary mobility.

Exhibit 5.3 Mode of Travel

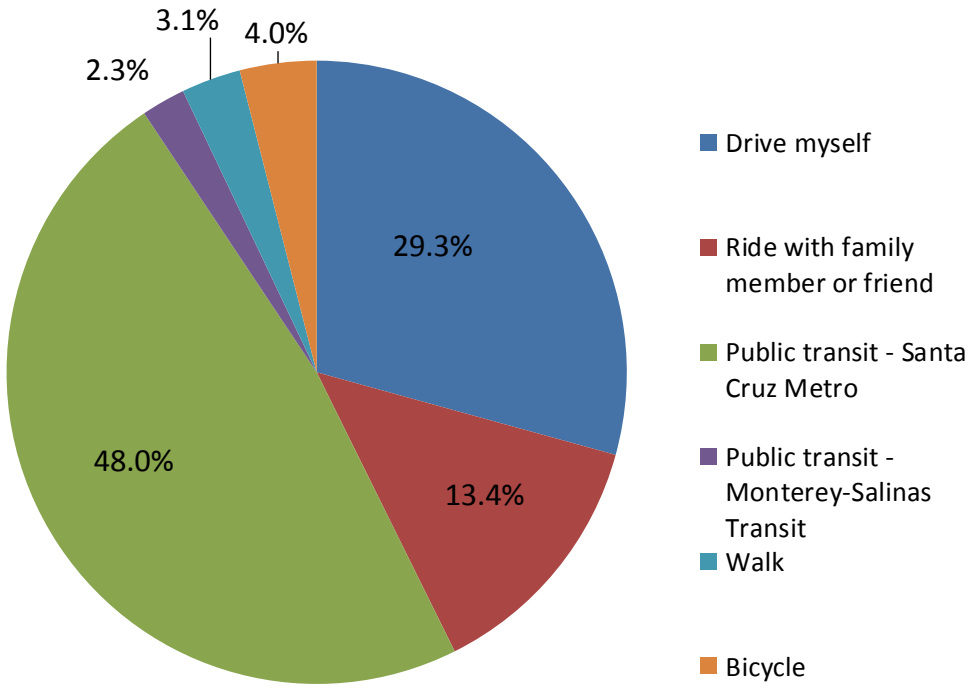
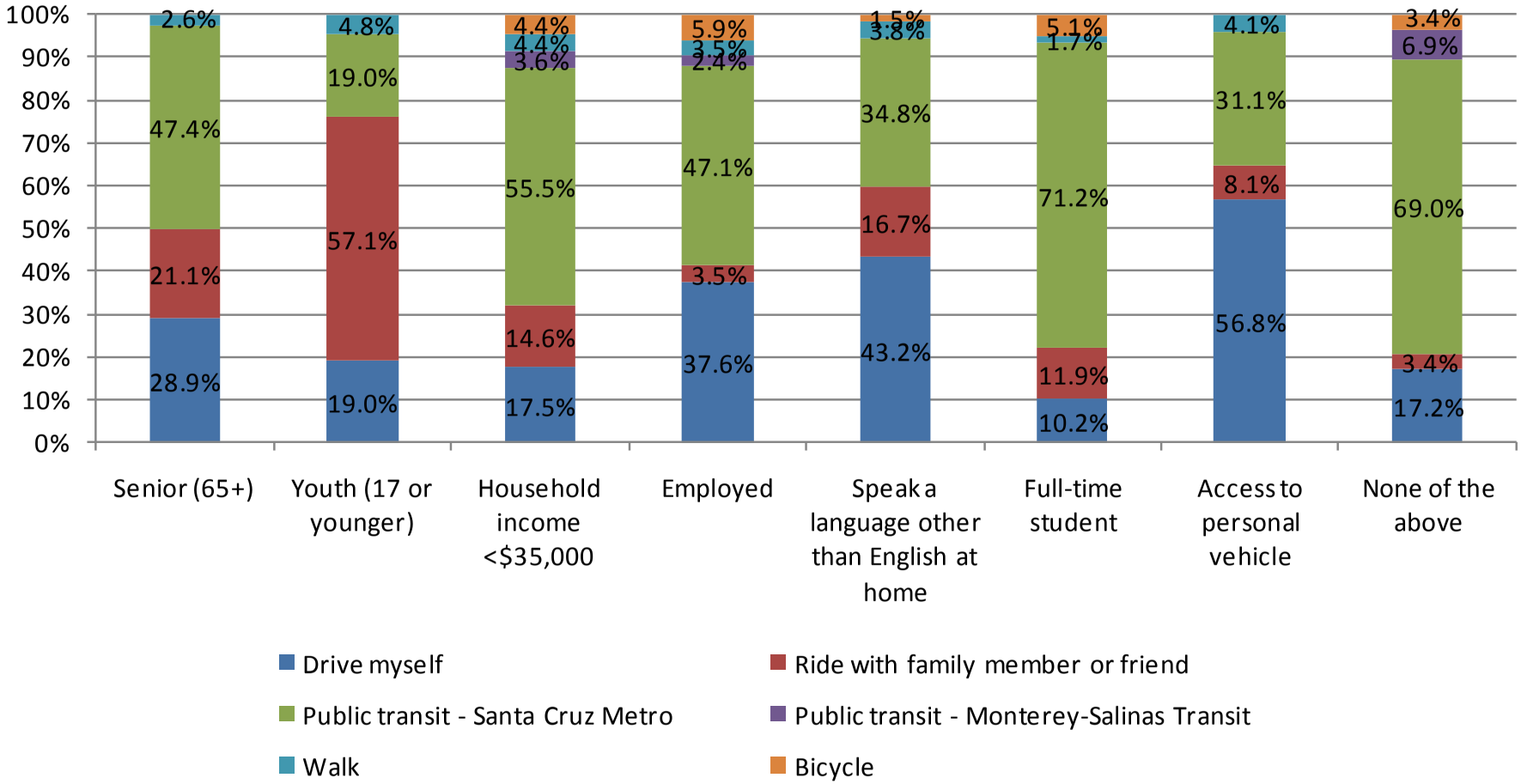


Exhibit 5.4 illustrates the typical mode of travel for each demographic group. As expected, historically transit-dependent groups like seniors, low-income individuals, and students rely heavily on public transit for basic mobility. Additionally, it is common to see a significant portion of youth using public transit, bicycling, or relying on friends and family to complete their trips, due to the lack of access to a car.

What is surprising is the proportion of respondents (31 percent) who have access to a personal vehicle yet also take public transit. This suggests the cost associated with vehicle ownership (e.g., regular commuting to work) represents a sufficient financial barrier where utilizing public transit becomes a viable or in some cases the only transportation option.

Exhibit 5.4 Demographics versus Mode of Travel



Survey respondents were asked if the absence of affordable and reliable transportation had negatively impacted their ability to access healthcare, school or vocational training, social service programs, shopping and recreation, or employment. Exhibit 5.5 shows that the majority of all residents stated they did not have a difficult time accessing same.

Nonetheless, 35 percent of respondents indicated they had a difficult time accessing healthcare. This confirms Santa Cruz METRO should focus attention on serving Watsonville Hospital, Santa Cruz County's Health Services building, Dominican Hospital, and other community health clinics such as Salud Para La Gente. In addition, trips that connect Watsonville to Santa Cruz should be timed to interline with the Routes 4 and 8 which serve the County of Santa Cruz Health Services Agency's Emeline Complex.

Additionally, just over 35 percent of respondents stated they had difficulties accessing employment. This suggests a potential for Santa Cruz METRO to target trips to employment areas within and outside Watsonville. These areas include agricultural worker camps just outside Watsonville as well as within Santa Cruz. Therefore, Santa Cruz METRO should target service enhancements to serve areas of high employment during peak periods in order to increase transit access at these locations and also to attract "choice riders". Such enhancements could include increased frequency during peak hours and service to locations not currently served.

Exhibit 5.5 Impacted Mobility

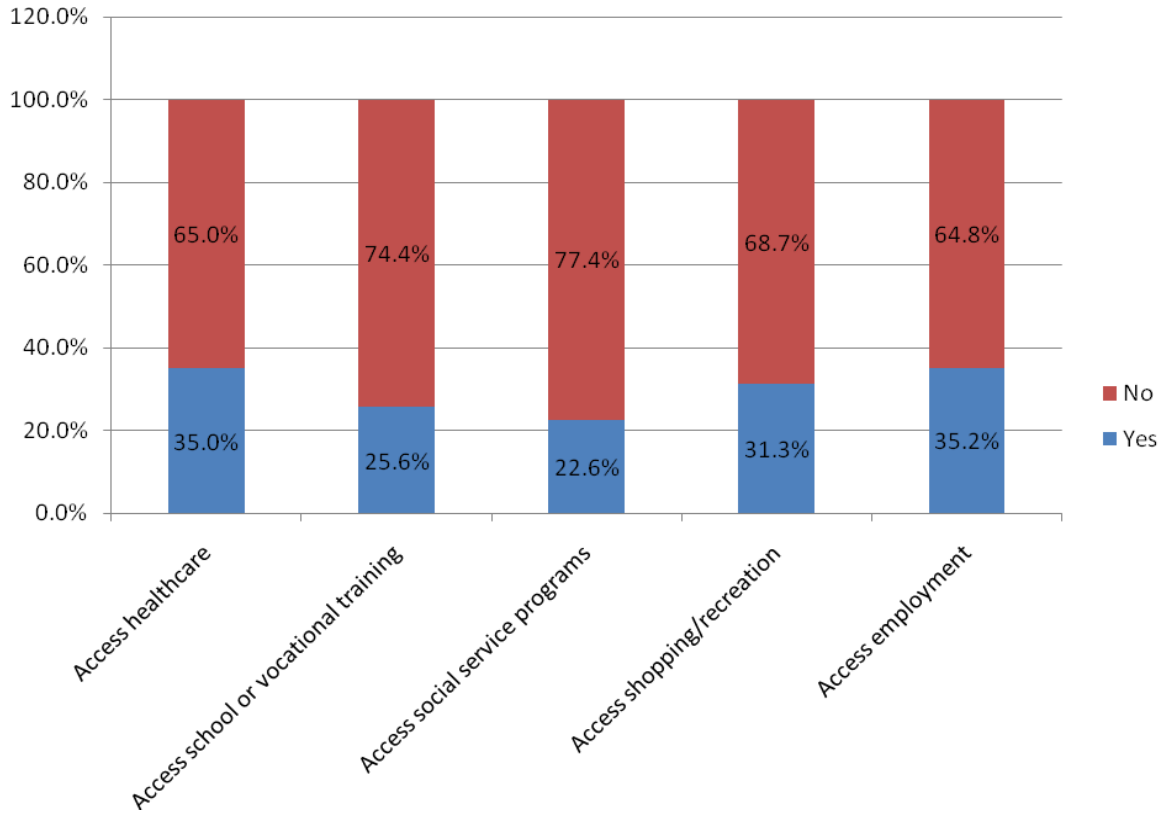
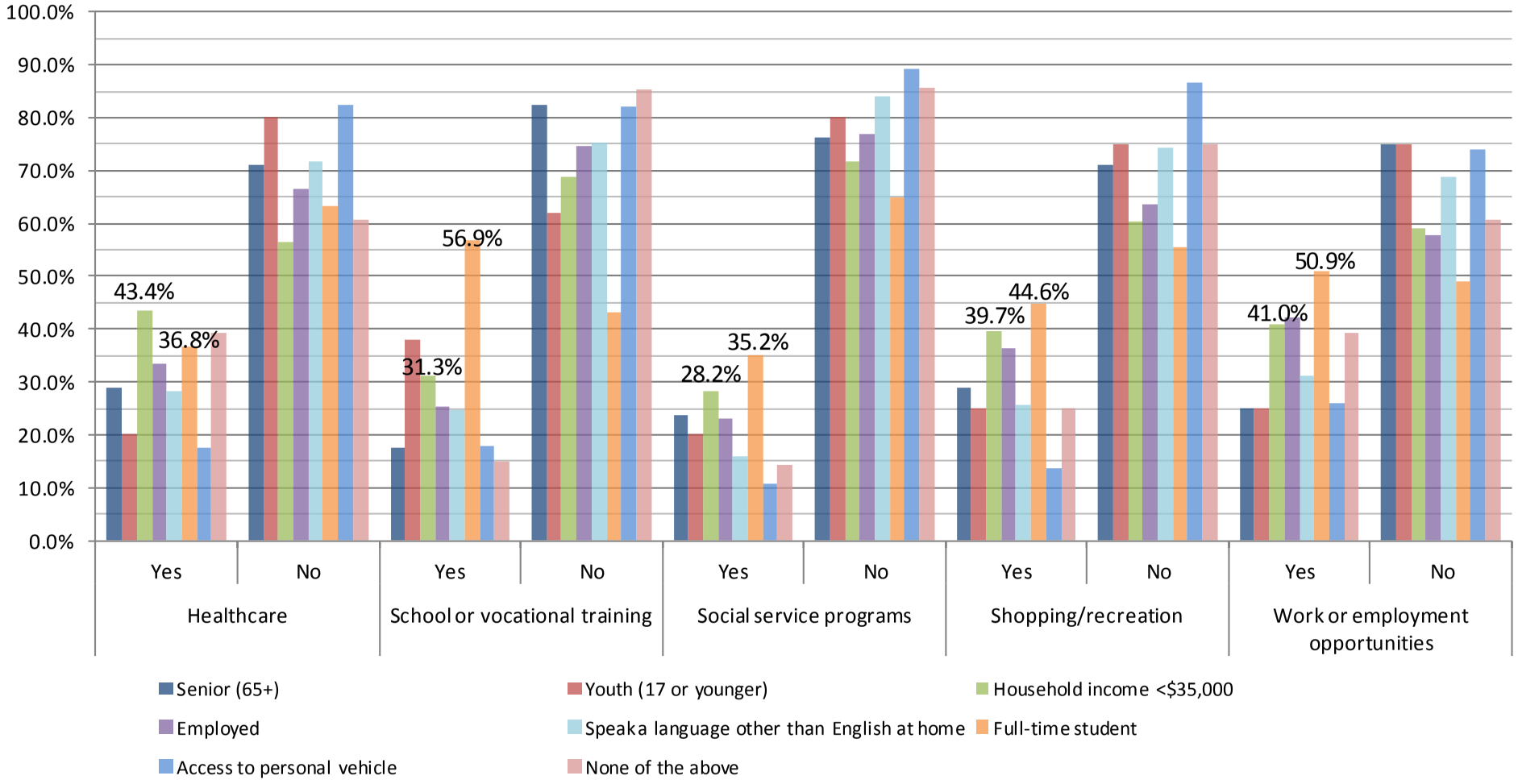


Exhibit 5.5 explores the potential relationship between the demographic characteristics of the survey respondents and any potential difficulty in accessing certain locations or services. Full-time students appeared to have the greatest difficulty accessing school or vocational training (57 percent), work or employment opportunities (51 percent), and shopping/recreational destinations (45 percent). Since this group is historically reliant on public transit (see Exhibit 5.1), Santa Cruz METRO may wish to consider making strategic enhancements to bus routes serving schools as well as areas with high proportions of youth.

In addition to full-time students, low-income families also had difficulty access healthcare (43 percent), work or employment opportunties (41 percent), and shopping/recreational destinations (40 percent). This exhibit reveals there is presently a high barrier to mobility within this group which is typically transit-dependent or has difficulty affording a personal vehicle. This may warrant a review of the existing route structure, headways, and other operational factors to ensure low-income workers can reach their destinations in a timely fashion.

Exhibit 5.6 Demographics vs. Impacted Mobility



Transit Service Assessment

Exhibit 5.7 shows the breakdown of survey respondents who had and had not used transit service in the 90 days prior to the survey contact. Approximately 74 percent of survey respondents indicated use of public transit in the prior 90 days.

Exhibit 5.7 Transit Use in Prior 90 Days

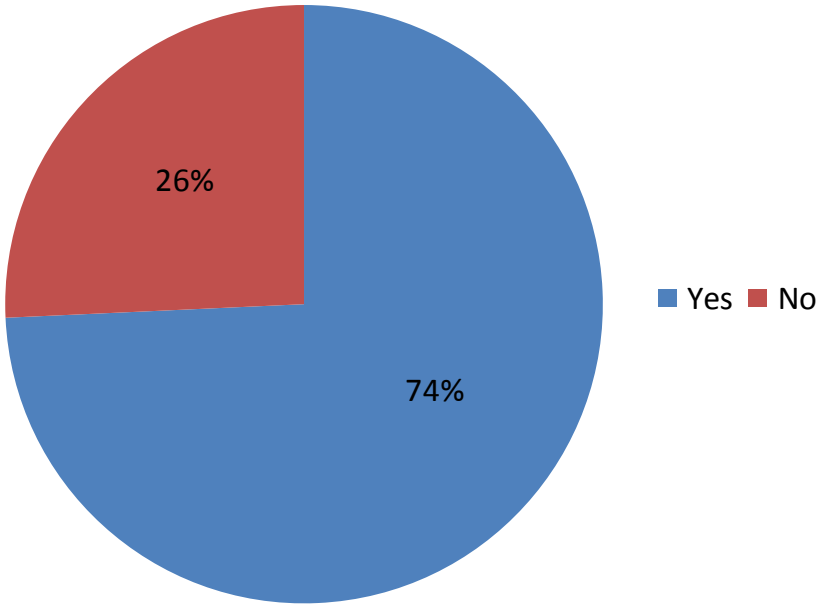


Exhibit 5.8 shows the frequency of transit use among the 74 percent of survey respondents who had used transit service in the 90 days prior to the survey contact. Most customers ride Santa Cruz METRO at least once per week. This frequency of use suggests Santa Cruz METRO serves either as the primary or frequent mode of transportation for respondents who do not own a car. The results may have been influenced by the location(s) at which the data was collected (i.e., surveys were collected on board buses and at the transit center in addition to other locations throughout the community).

Exhibit 5.8 Patronage Frequency

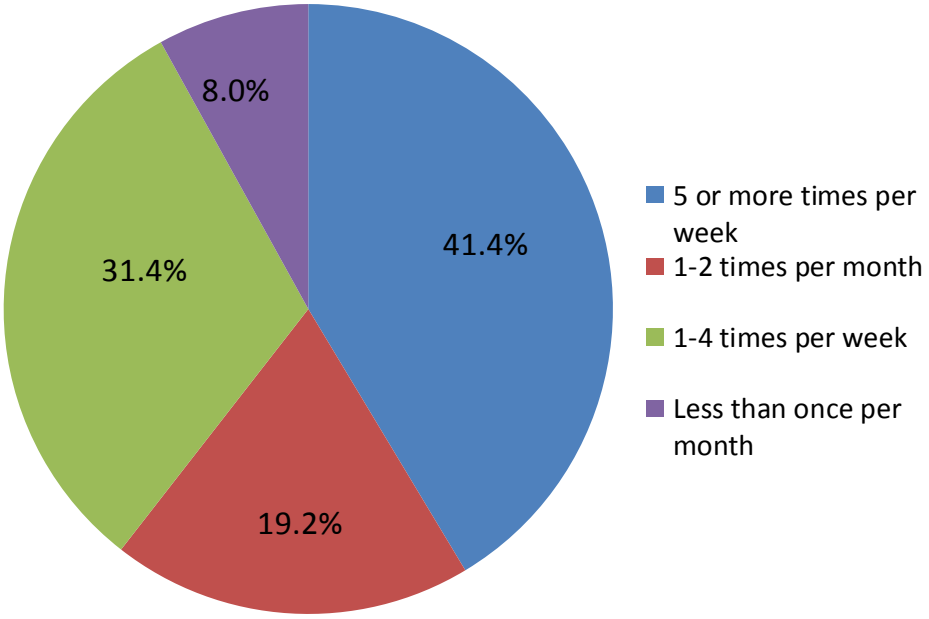
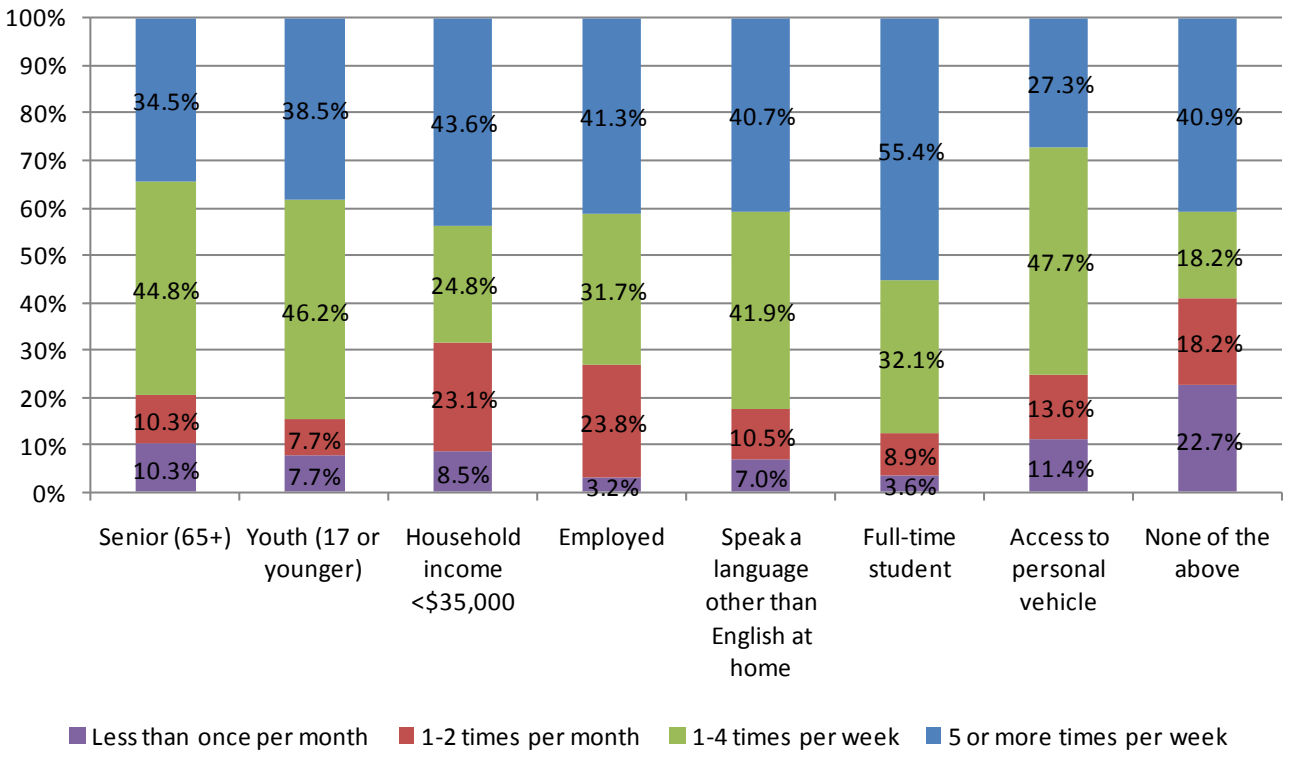


Exhibit 5.9 illustrates the possible relationship between the demographic groups participating in the survey and their frequency of use of public transit. What stands out from this exhibit is the high proportion of respondents in each demographic grouping which use transit service at least once weekly. What is also important is the large proportion of full-time students which use the service five or more times per week. What this exhibit confirms is students in Watsonville are highly dependent on public transit to meet their mobility needs.

This is also true for low-income households as well as those who are employed. Given the challenges for low-income households to access work or employment opportunities, we believe a strong correlation exists between low-income households, those who are employed, and their frequency of use. In other words, many of the transit riders in Watsonville who use the service to commute to work are also likely from low-income households.

Exhibit 5.9 Demographics vs. Frequency of Use



Customer Satisfaction

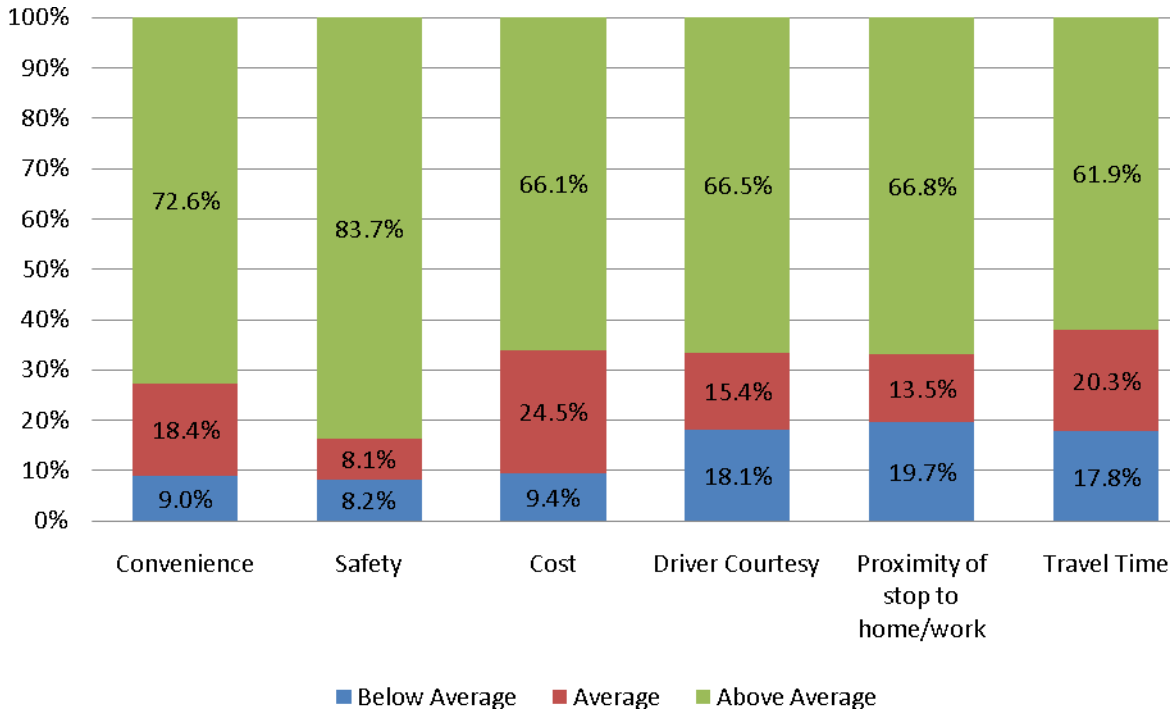
Surveys conducted both onboard Santa Cruz METRO buses and throughout Watsonville asked respondents to indicate whether they had used transit service within the past 90 days; and if so, to rate six service attributes using a five-point numerical rating scale (1 = poor, 5 = excellent). Exhibit 5.10 shows the rankings.

As a whole, riders were satisfied with all six service attributes. While service was overall shown to be adequate, there are areas that customers identified as either strengths or weaknesses that Santa Cruz METRO should use as input to improve customer satisfaction.

Riders were overwhelmingly satisfied with the safety of transit service in Watsonville. In addition, transit users were also fairly satisfied with the convenience and cost or Santa Cruz METRO service. Maintaining customer satisfaction with respect to these qualities is important in preserving the quality of the rider experience as well as to encouraging new and "choice riders" to begin using transit versus personal vehicles.

Despite this, there were a number of transit users who were displeased with the time it took to complete a trip, the proximity of a stop to their home or work, and the perceived courtesy of Santa Cruz METRO drivers. These factors are obstacles to increasing ridership and should be remedied in order to make the service more attractive. Many riders were dissatisfied with the time it took to complete a trip and, of them, a large number mentioned buses that did not run on-time. Santa Cruz METRO may wish to adjust the published schedule to more accurately reflect bus run times during different times of day. In addition, Santa Cruz METRO may want to explore more limited stop routes on high travel corridors during peak periods to decrease travel time and make bus travel more competitive with other modes. Because many riders indicated there was not a stop near their home or work, Santa Cruz METRO should focus any service expansion near areas of high population density as well as large employment centers. Another barrier to ridership that Santa Cruz METRO may want to focus on is the perception that some drivers are not courteous to riders. This is often an issue that can be resolved through educating the public to limit communicating with drivers given the top priority of safe vehicle operation.

Exhibit 5.10 Attribute Rankings



Non-Rider Assessment

This section analyzes the habits of non-riders. Exhibit 5.11 shows that almost 58 percent of survey respondents do not patronize public transit because they have access to a personal vehicle. This, combined with the feeling that the service is inconvenient and complicated, indicates local residents do not perceive public transit to be a competitive alternative (to the personal vehicle).

Exhibit 5.11 Reason for Not Riding

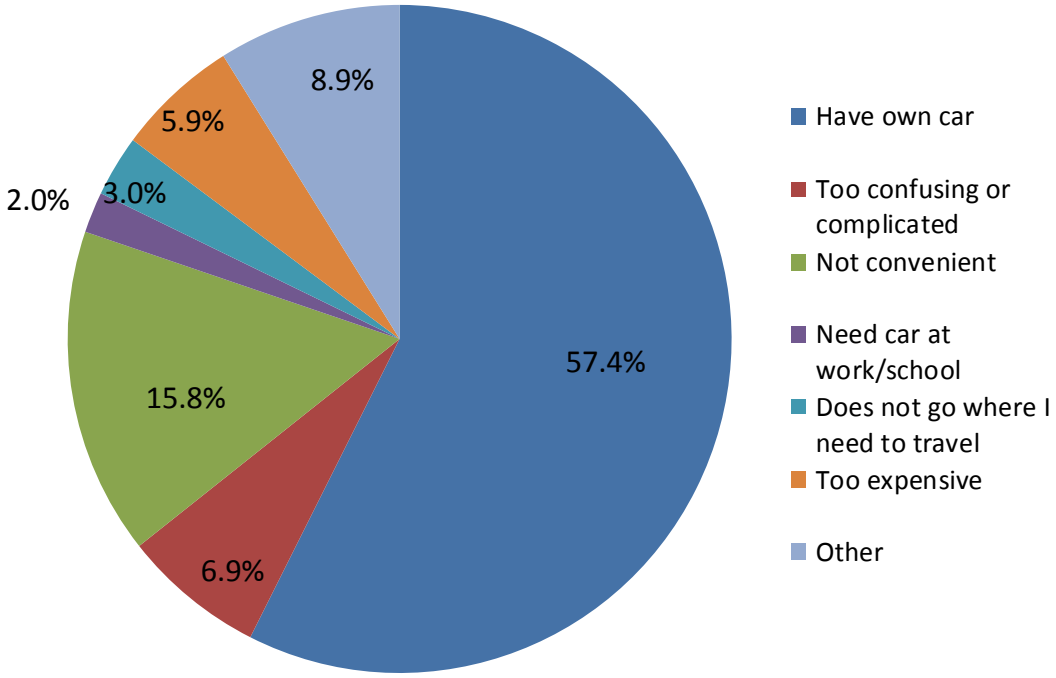


Exhibit 5.12 shows which service enhancements survey respondents said would encourage them to take transit. While there were many different enhancements identified, nearly 24.3 percent indicated they would not use public transit regardless of whether service enhancements were implemented.

In terms of preferred service enhancements, respondents identified later service and better connections to destinations outside of Watsonville as the most preferred enhancements. Lower cost (i.e., reduced fares) and earlier service were also identified as preferred enhancements. Taken together, this suggests Santa Cruz METRO may wish to expand service hours in Watsonville and increase the number of routes and/or frequency of trips connecting Watsonville to other portions of the county.

Exhibit 5.12 Preferred Service Enhancement

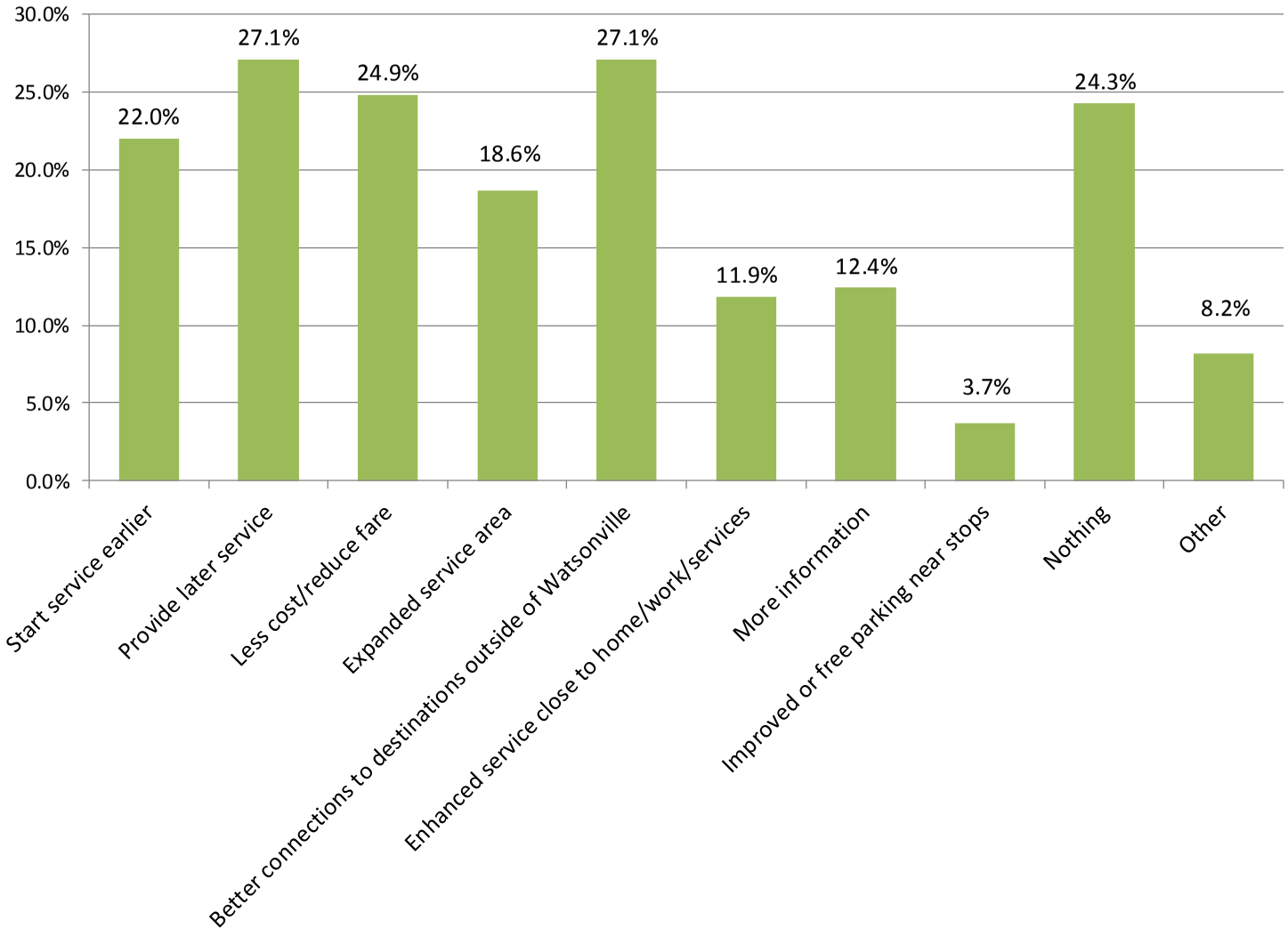
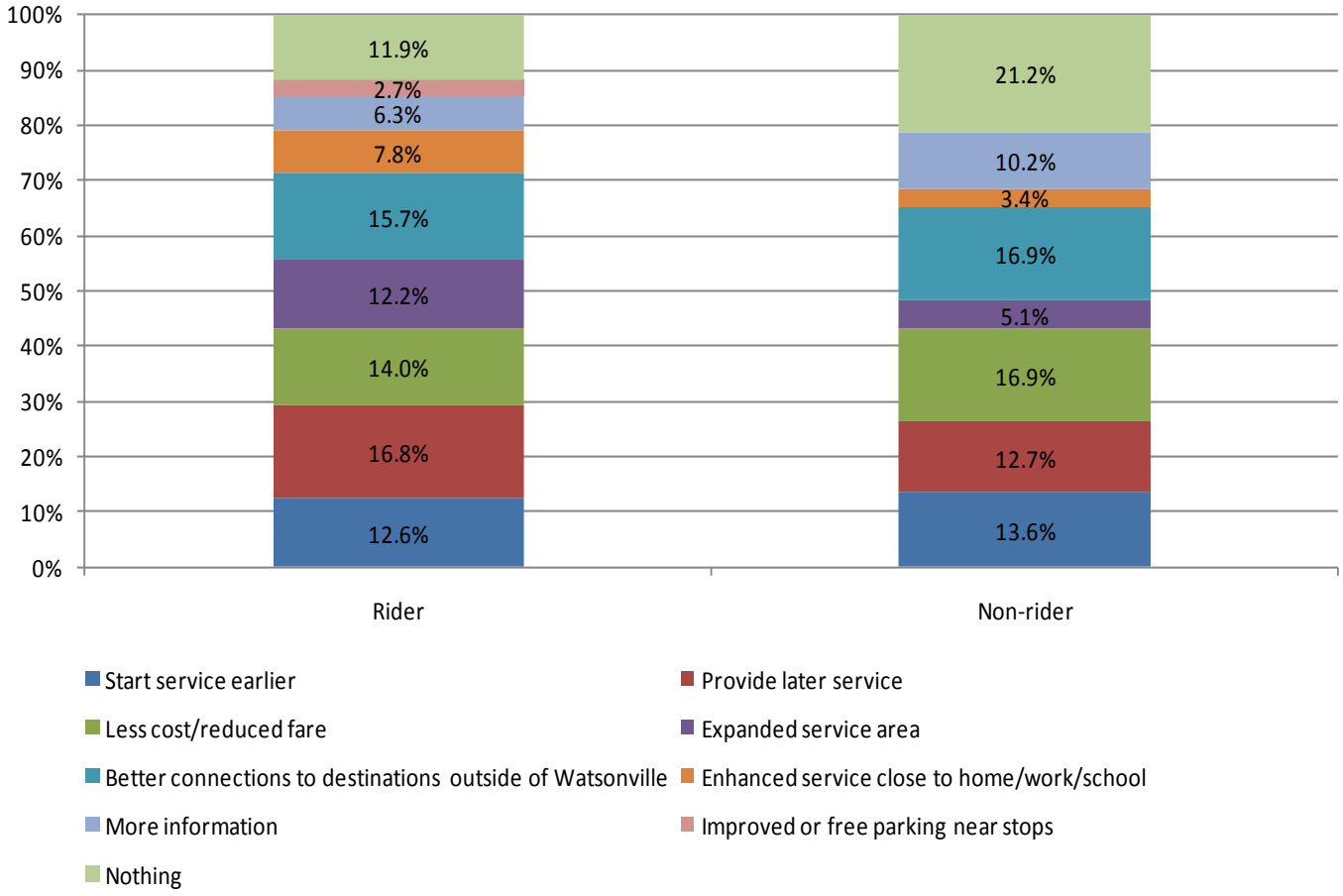


Exhibit 5.13 explores the potential relationship between riders and non-riders and their preferred service enhancements. Across both groups there is little consensus regarding a preferred service enhancement. For example, riders wanted later service, better connections to destinations outside Watsonville, and less cost/reduced fares.

Conversely, about 21 percent of non-riders indicated no desire for any service enhancements which likely represents those in the community who would not ride public transit under any circumstance. With respect to persons who indicated a preferred service enhancement, non-riders selected better connections to destinations outside Watsonville, less cost/reduced fare, and earlier service.

Exhibit 5.13 Rider vs. Non-Rider Preferred Service Enhancement

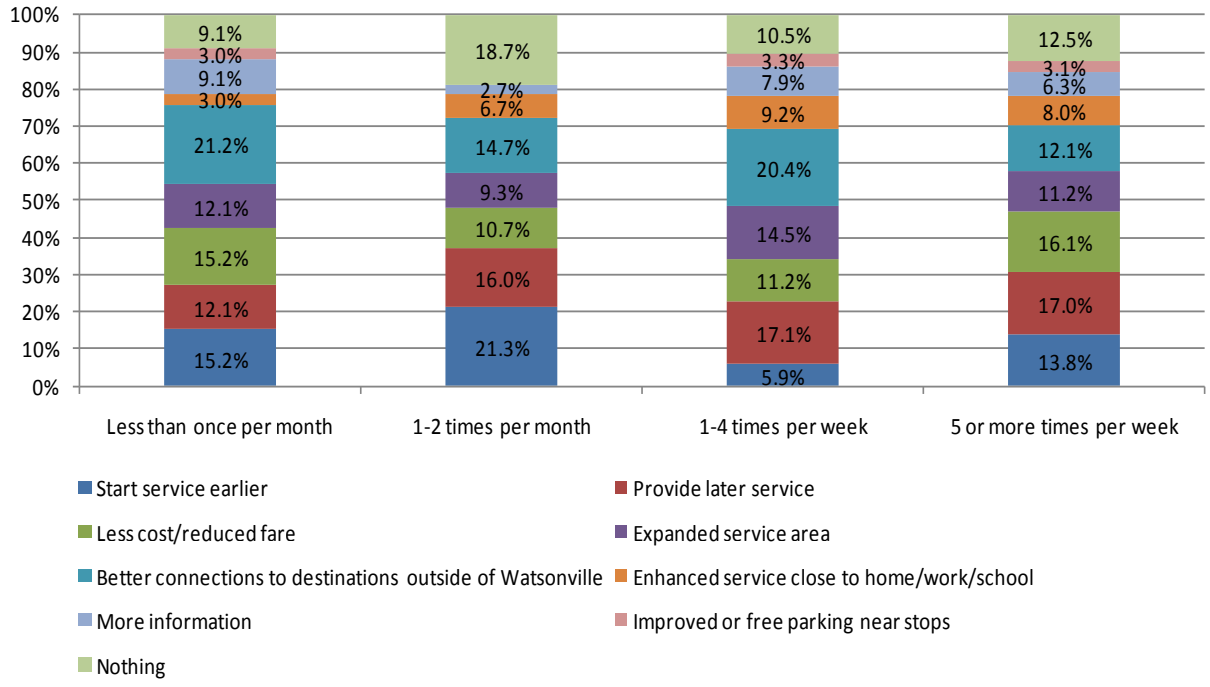


As with Exhibit 5.13, there is little consensus amongst rider groups regarding a preferred service enhancement. As Exhibit 5.14 illustrates, for those who ride infrequently, earlier service and better connections to destinations outside of Watsonville were the most popular. However, it should be noted a significant proportion of infrequent riders indicated there was no service enhancement which would encourage them to use the service more frequently.

Conversely, respondents who ride at least once per week shared a desire for better connections to destinations outside of Watsonville, later service, and less cost/reduced fare.

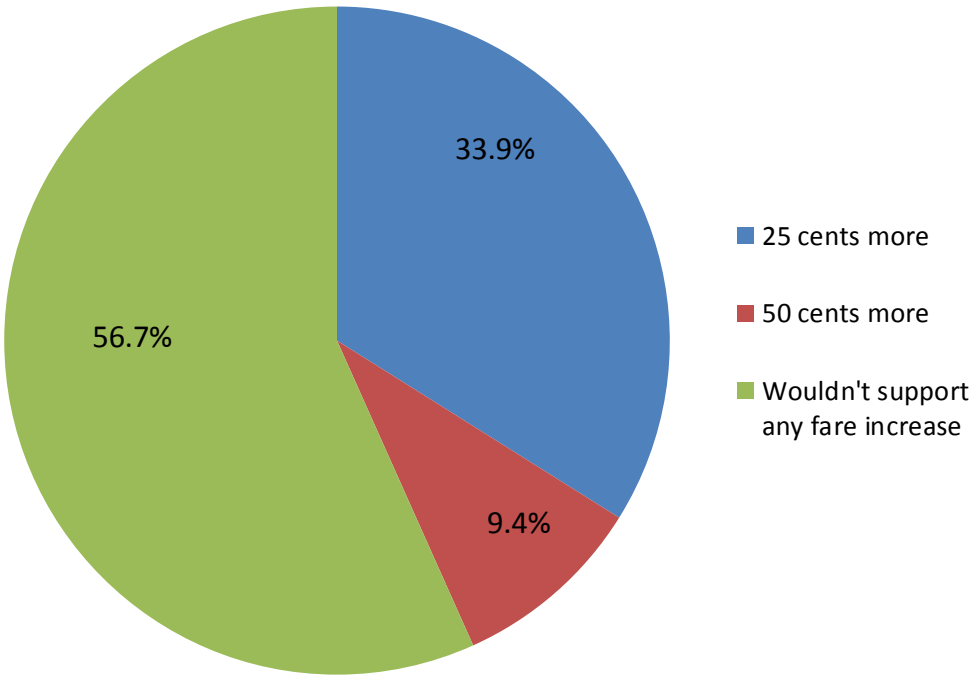
Exhibits 5.13 and Exhibit 5.14 revealed some riders feel the cost of service is high. Given Santa Cruz METRO has the same pricing scheme as Monterey-Salinas Transit, we recommend Santa Cruz METRO consider a marketing/educational campaign educating riders and potential riders about the cost savings and benefits of riding transit. Additionally, more long-haul service seems to be the only recommendation which garners significant interest amongst all rider groups as well as non-riders.

Exhibit 5.14 Frequency of Use vs. Preferred Service Enhancement



After identifying preferred service enhancements, survey respondents were asked how much they would be willing to pay should their service enhancement be implemented. Exhibit 5.15 depicts how much additional fare respondents indicated they would be willing to pay for enhanced service. Nearly 57 percent of survey respondents stated they would not support any fare increase, even if it would result in the service enhancements. This may be due to either an unwillingness or inability to pay more. In contrast, slightly over a third or respondents indicated they would be willing to pay 25 cents more for enhanced service. This indicates that although enhanced transit service is desired, the majority respondents feel as though it should happen without a fare increase. This is understandable given nearly 22 percent of Watsonville households are at or below the federal poverty level (annual income below $22,050 for a family of four).

Exhibit 5.15 Additional Fare



PUBLIC OUTREACH SUMMARY

In addition to the quantitative analysis of transit services currently operating in and through Watsonville, Moore & Associates undertook broad-ranging public outreach to assess community awareness and perception of Santa Cruz METRO, quantify unmet needs and demand, and prioritize transit service enhancements. This chapter presents the summary of those outreach activities associated with this project. The goal of the public outreach component was to actively engage the Watsonville community in the transit planning process and, in doing so, identify sustainable, market-driven recommendations which could translate to improved transit service performance.

Outreach Methodology

To gather public input, the project team facilitated six focus groups. The focus groups were held across several weeks, from July 20, 2011 through August 24, 2011. The focus groups targeted seniors, low-income residents, residents with limited-English proficiency, youth, and recently-released non-violent jail inmates recently released for drug- and alcohol-related offenses who were transit dependent usually because they were not allowed to drive. The focus groups addressed each attendee's perspective on public transit in Watsonville. These meetings yielded important feedback regarding service issues and potential enhancements to address these shortcomings.

To promote the focus groups, Santa Cruz METRO contracted with a number of social service agencies including the Volunteer Center which helped coordinate with two separate groups - the Friends Outside and Community Connection, Meals on Wheels, and La Manzana Community Resource Center, which were in turn responsible for all publicity for each meeting as well as providing food and drink, securing a location, and scheduling the meeting. In turn, Santa Cruz METRO and Moore & Associates jointly facilitated the meetings with translation available through the social service agency as needed. Each of the six meetings focused on a different demographic, and as such each focused on different issues. The two meetings organized by La Manzana took place at its facility (521 Main Street in Watsonville) and had 25 and 13 attendees, respectively. The meetings associated with the Meals on Wheels program took place at the Senior Center and attracted 25 and 21 attendees, respectively. The Volunteer Center meetings took place at its facility (12 Carr Street) and attracted 15 and 18 attendees, respectively. In general, the issues raised by focus group attendees fell into four categories:

- New service areas,
- Enhancements to existing services,
- Capital/Technology, and
- Policy.

New Areas to Serve

The following points are related to new areas not currently served by Santa Cruz METRO.

- There is considerable demand for transit services to Marintelli's and Labor Ready.
- The jail off Buena Vista has no bus service.
- Bus service should be provided along Riverside Drive.
- Las Lomas and Aromas are rural and lack bus service.
- A route to the beach would be a good idea.
- Second Harvest's food bank and the fairgrounds are critical areas to serve.
- Connections should be available to San Juan Bautista/Hollister.
- Schools should be able to use Santa Cruz METRO for field trips to the beach.
- Labor camps need service.
- Field workers along Beach Street toward the ocean need transit service.

Enhancements to Existing Service

The following points focus on improvements that could be made to existing Santa Cruz METRO services.

- The west side of the community is growing faster than the rest of Watsonville.
- Lots of people are going to schools and Cabrillo College (mostly the Aptos campus).
- There needs to be enhanced service on existing routes (more frequency).
- Graveyard work shifts can be difficult with current bus operating schedules.
- Service should be improved near Home Depot and Ramsey Park, in East Lake, and to Pajaro High School.
- Evening service to the Target/Grocery Outlet/Save Mart is lacking.
- Routes 79 and 69A are redundant.
- Route 74 is a good service but doesn't run late enough in the evening.
- Important areas needing more service include the Capitola Mall, Soquel, Dominican Hospital, Harbor High, and Santa Cruz Gardens.
- Service to the hospital in Watsonville is confusing.
- Emeline service ends too early.
- There's a clinic at Crestview Center that's important to serve.
- Frequent service on Route 71 should begin earlier in the day. There is significant crowding due to Cabrillo classes.
- Route 20 goes near the Housing Authority, but not directly to it, and the connection is difficult.
- Sometimes Route 71 runs very late.
- Green Valley needs more service.
- Route 91X is too crowded in the morning.
- Connections should be improved to local schools.
- There should be direct service to the Santa Cruz Boardwalk.
- It is too expensive to get to Salinas.
- There needs to be a direct connection to San Jose.

- Route 69 is always full, needs more capacity.
- Social Security office is difficult to reach, the bus should serve it more frequently.
- Crestview needs enhanced service.
- Broaden the availability of ParaCruz service to supplement Lift-Line.
- Need improved service to the fairgrounds area.
- Arthur Road needs more frequent service from Route 71.

Capital/Technology

The following points are related to capital aspects of Santa Cruz METRO, including rolling stock, facilities, bus stop improvements, and technology.

- More bike racks on buses.
- Commuter parking is lacking in Watsonville.
- There is not enough lighting along Freedom Boulevard (all the way out to Aptos High).
- Internet service on the bus would be a good perk.
- Crosswalks near bus stops should be improved.
- There should be benches at stops on Lincoln Street.
- Some stations don't have the correct signage (Beach Street in front of the high school).
- There are no sidewalks, shelter, or bench near the Social Security office.
- Bus stops need improvements along Green Valley, Lincoln, Pennsylvania, Freedom, Clifford, and at the high school.
- Bus stops need improvements along Route 69.

Policy

The following points are related to Santa Cruz METRO policies regarding fare, coordination with other agencies, and customer service.

- Transfers can be difficult.
- $50 is a very steep price for a monthly pass.
- There should be better coordination with MST.
- There should be a family pass or a way to register children and give them ID cards to ride at a discount.
- There is a desire for lower fares.
- Maybe implement 5-day, 7-day, or 10-day passes. (Note: Multi-day passes were being implemented in early 2012.)
- A multi-month pass would be less of a hassle. (Note: Multi-day passes were being implemented in early 2012.)
- Cleaner buses running more often would attract more "choice riders."
- Some pass outlets are sold out.
- Maybe a phone line to call for Nextbus.
- Announcements should be in Spanish all the time.

- Marketing should be improved.
- An information packet should be given to schools and teachers to make sure students have information about bus service.
- A Cabrillo bus pass would attract more riders
- Student passes should be more affordable or easily accessible.
- Not enough awareness regarding the correct phone numbers to call for information.

Some of the most often-repeated recommendations for new service were related to Sunset Beach, the fairgrounds, and labor camps. Service enhancements that were cited repeatedly include increases in frequency along existing high-traffic routes (Route 69 and 71), as well as expanded service hours along some of the local Watsonville routes. Most capital-related issues focused on bus stops, and were raised at all meetings. In particular, riders made it clear shelters and lighting would be a significant improvement. (Note: At the time of report completion, Santa Cruz METRO was in the process of installing bus shelters and lighting at 107 bus stops county-wide.) As expected, lower fares were a universal request, but failing that, making it easier for families to pre-register children so they could lower the cost of riding as a family was raised repeatedly.