Ridership Growth Action Plan

Final Report

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Ridership Growth Action Plan

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CHAPTER 1

Introduction

Los Angeles County is a diverse community of over 10 million residents that is served by a network of public transit agencies: the Los Angeles County Metropolitan Transportation Authority (Metro) and 16 municipal operators that make up the Los Angeles County Municipal Operators Association (LACMOA). Metro bus and rail operations account for 64 percent of the region’s transit service and LACMOA operators distribute 36 percent of the service. Together, we provide crucial service to get people where they need to go.
And yet, like most major metropolitan areas in the United States, ridership is declining in Los Angeles County. External forces certainly play a critical role, with deep recessions then rising incomes, increasing auto ownership, steep jumps in housing prices, and the advent of new mobility services potentially changing how and when people choose to ride.

However, as agencies, we know that while some trends are out of our control, there is much we can do. Despite declining ridership, a resounding 71 percent of Los Angeles County voters supported continued investment in our shared and public transportation system by approving Measure M in 2016. We believe the region is primed for transit ridership growth. Given the diverse and regional nature of travel in the County and the interdependency between agencies providing service, Metro and LACMOA are taking a collaborative approach to growing ridership.

As part of that process, the Regional Ridership Improvement Task Force (RRITF) was established in 2016 with the goal of increasing overall trips made on transit in Los Angeles County. The Task Force is the first of its kind in the nation to evaluate regional service holistically and develop a collaborative path for regional partners to implement the plan’s recommendations.

The Ridership Growth Action Plan (RGAP) is the outgrowth of these efforts. This plan identifies innovative solutions to attract customers to ride more, in what we are calling the three “R’s” - Retaining current customers, Reclaiming past customers and Recruiting new customers.

Through the work of the RRITF and that of the Consultant Team, four action strategy categories surfaced as particularly high priority for the RGAP:

- **Information**—Make it easy to pay, reward frequent use, and market dynamically to individuals based on their own needs and interests
- **Collaboration**—Share data and collaborate across agencies to unify efforts and ensure a consistent customer experience
- **Quality of Life**—Enhance perceptions of safety and comfort through engagement with customer-minded staff and technology
- **Service Quality**—Provide consistent quality at stops and a unified transit network that serves travel demand efficiently through multiple mobility options

The report that follows expands on these strategy categories, provides their data and research justification, and structures actions to be implemented at the regional, subregional, and agency level.

At the heart of our approach is shifting our collective mindset as agencies to put the customer at the core of everything that we do. As we look to the future and move towards implementation of the RGAP, we are guided by three core tenets:

- Know your customer
- People, not Rides
- Seamless Customer-Focused System
Key to the project approach documented in this report is the integration of technical analysis with market research and engagement. Data tell a compelling story about opportunities to enhance the transit network within Los Angeles County, but the diverse opinions of transit customers, former customers, and those that have never used transit, are critical to understanding the individual choices that people make about whether or not and when to ride transit.
Our team embarked on a multi-faceted approach to answer critical research questions about ridership behavior, and to align broad ranging strategies to address ridership decline based on our findings. Key research questions include:

- What variables have a statistically significant relationship to ridership trends?
- How well does the transit network align with actual travel patterns of the County based on cell phone data?
- How does access to on-demand services like Uber and Lyft affect transit riding habits?
- How do perceptions of service, safety and quality of life vary between frequent, occasional, and customers that left the system?
- What strategies can bring former customers back?
- What strategies are critical to retain existing customers?
- How can information barriers hinder riding transit, and how can those barriers be overcome?

Los Angeles County is known for its diverse communities, economy and built environment. While macro trends such as increasing rates of car ownership, widespread availability of transportation network companies (TNCs), and substantially increasing housing costs are experienced fairly consistently throughout the County, and all agencies in the County are experiencing ridership decline, isolated regional approaches can fall short because they are insufficiently reflective of the individual needs and wants of the communities that make up the rich fabric of the County.

Therefore, the RGAP provides recommendations that align with both subregional and regional needs and are flexible and adaptable at different geographic levels. The planning and analysis approach laid out in this report is emblematic of this flexibility with geographic scale. The interactive map developed during the initial data analysis phase is an innovation that typifies this flexibility.

This tool allows the user to view subregional travel and data trends, will zooming into the neighborhood level to understand how change in key demographics can affect opportunities for the transit system to serve the community.

While this summary report incorporates all of the findings and strategies into a cohesive document, it can also be explored at the local level, with agency specific and subregional data trends coupled with subregional action plans that are relevant to each local agency.

RGAP is unique in its efforts to apply strategies at both regional and subregional geographies and through collaborative implementation by multiple agencies. It is intended as both a procedural and strategic model for addressing the complexities of ridership decline in comparable contexts across the United States. The following details the project approach in the core areas of analysis and research:

**Ridership Trends Analysis**

Multi-year ridership analyses provide valuable comparisons, but the selected base year makes a big difference in the outcome and the conclusions. To overcome this concern, as well as the wide variation in how agencies in Los Angeles County report ridership, the Consultant Team conducted an analysis of average annual change in ridership at the line level for all routes in the County where a minimum of four years of ridership data were provided to the team. This approach ensured a consistent comparison metric to determine how many routes are consistently decreasing, growing, or staying flat in their multi-year ridership trends. Continuing such time series analysis using a consistent metric across all agencies will be critical to measure the effects of the implementation of the RGAP.

The Consultant Team conducted an extensive analysis of 13 months of TAP utilization data in the regional database. This database contained hundreds of millions of records of individual rides across nearly every LACMA agency and Metro. Based on anonymous TAP card IDs, the team was able to segment customers by their frequency of riding transit, look at how ridership frequency varied by pass type, by geography, and by time of day in all of the subregions. The team also looked at estimated TAP penetration (ratio of rides on TAP versus total ridership) by agency and subregion.

**Demographic & Travel Trends Analysis**

The Consultant Team conducted detailed analyses of demographic and travel trends for each subregion, looking at the variables that prior research has shown to be associated with ridership. The analysis was summarized in subregional cutsheets, to provide agencies a consolidated package of critical data that they can use to inform service decisions and ridership strategies at the subregional level. The data evaluation included:

- **Demographics**—changes in households, households with children, zero car households, income by households, population, employed population, jobs
- **Travel Trends**—Average travel time, top destinations for trips originating in sub-region, typical commute mode and trip length, growth in TNCs and other mobility options
- **Transit Trends**—Service provision (type of service and amount of service), annual average change in ridership, TAP trends (including by pass type, frequency, and time of day) and TAP card availability

http://gis.fehrandpeers.com/rgap/
Demographic and travel variables were also analyzed at the corridor level for 50 case study corridors, representing all operators, and with a range of service types, and ridership trends. A regression analysis of the corridor variables was conducted to determine if any variables were statistically significant predictors of ridership trends.

### Travel Pattern Analysis

The advent of “big data” with GPS data from in-vehicle navigation, cell phones, and location-based service (LBS) smart phone applications, affords a new opportunity to understand travel patterns within the region at a regional, subregional and localized level in ways that have not been available until this point. Introducing this innovative approach the Consultant Team conducted three distinct travel pattern analyses using vehicle navigation and location-based data sets to explore how well the current transit network does or does not align with overall travel patterns. The team analyzed travel within and between subregions and evaluated how that has changed over a three-year period. Delving into more detailed travel pattern analysis, the team analyzed LBS data for the 50 case study corridors, to quantify how well the routes and stop-level ridership trends align or do not align with the travel that originate along the corridor. Finally, travel patterns to key activity centers in most subregions were analyzed using the LBS data set to identify opportunities for transit to serve those destinations.

### Agency Engagement

#### PEER AGENCIES

Outreach to agencies outside of Los Angeles County provided important perspectives on the ridership trends experienced in other cities, and the strategies agencies are taking to maintain and grow ridership. The outreach was structured around gaining insight from agencies with relevancy to aspects of the transit context in Los Angeles County:

- Multi-agency region with overlapping service areas (interviewed AC Transit in the San Francisco Bay Area of California)
- Agency with increasing bus ridership (interviewed King County Metro in the Seattle, Washington region)
- Large agency with decreasing bus ridership (interviewed New York City Transit)
- Agency which recently rebranded and restructured its system (interviewed Maryland Transit in Baltimore)

These interviews informed several of the RGAP strategies.

#### LACMOA AGENCIES

Three workshops were held with LACMOA agency general managers (GMs) over the course of the project. At the kickoff, the Consultant Team led an initial prioritization exercise with the GMs to understand how strong or mixed the GM group’s priorities were for different strategy areas (such as marketing and promotions and service provision). This exercise informed the initial development of the RGAP technical approach and provided an opportunity to compare GM priorities with those of the public collected during the market research process. This exercise was facilitated using instant keypad polling, so the GMs could immediately see which strategy areas had strong consensus, and which did not.

A half-day data workshop was held with the GMs at the midpoint of the project, when the analytic findings were ready for review. This workshop provided the opportunity for agencies to engage with the interactive map tool, and the subregional demographic and travel trends analyses. The workshop was focused on facilitated discussions with agencies that share overlapping service areas, to discuss how the trends are affecting their service and local travel needs and begin to initiate ideas for collective action at the subregional level in response to those trends.

The final half-day GM workshop was held towards the end of the project, to present action strategies and get feedback on priorities for each strategy from the participating agencies. The key outcome of the workshop was again focused on subregional coordination of the same agencies that had met together in the previous workshop. Each group identified strategies that were important to their sub-region. This feedback informed the final market research phase, as well as the structuring of the subregional action plans.

### Market Research

The market research conducted for RGAP was the most critical aspect of the data evaluation and analysis, as it was central to understanding the meaning and impact of the data evaluation, and most directly engaged with current and potential customers. The market research task was initiated with a review of previously completed surveys and studies by Metro and LACMOA agencies to identify regional gaps in information around strategy effectiveness and customer interests. The market research plan was oriented towards addressing those gaps and reaching multiple geographies across the County.

The market research approach included a mix of qualitative focus group research and quantitative countywide surveys.

#### INITIAL COUNTYWIDE FOCUS GROUPS

The initial phase of the research consisted of a series of six focus groups. The first focus group participants were current customers, and the second group was infrequent and non-customers. The recruiting plan was careful to identify participants from a broad area of the County, and for the current customer focus group, culled from participants with experience riding and/or awareness of most of the transit agencies in the County.

The focus group facilitators asked similar questions of both groups to discern where current and non-customers have similar or different points of view about how they travel, why they ride transit (or why they don’t) and understand areas of
sensitivity (e.g. safety and security). The findings from these focus groups were used to frame the relative importance of strategies, and understand the language used by participants to inform the development of the countywide quantitative survey.

**GEOGRAPHIC/MARKET SEGMENT FOCUS GROUPS**

Following the two countywide focus groups, a series of four focus groups where conducted that served two simultaneous purposes: provide responses to similar questions in different geographic areas, as well as to provide responses to questions based on four different market segments that were identified as gap areas in the review of existing research. The four different geographies that were selected for the focus groups were identified via the demographic trends analysis, which indicated areas where the market segments make up higher portions of the existing population. The market segments and geographies included:

- **“Almost the Last Straw”** (Retain existing customers)—Conducted in South Los Angeles which has a strong transit ridership base and is served by multiple agencies. This focus group was oriented towards understanding the pain points of existing customers and what could ultimately drive them away from riding transit.

- **“Welcoming First Impressions”** (Recruit new customers)—Conducted in the San Gabriel Valley, which has newly expanded rail transit and bus service restructuring that has provided more transit accessibility to new users. Based on the demographic analysis, this is one of the areas in the County with substantial growth in new households. This focus group was oriented towards understanding why this market segment made the decision to start riding transit, and what were their positive and negative impressions.

- **“Life Transition - Graduation”** (Retain existing customers)—Conducted in West Los Angeles because of to the number of colleges and universities and sizable student population based on demographic analysis. Many students receive discounted transit passes while in school, but many ride less or not at all when they enter the workforce. This focus group sought to understand how the transit system can keep these customers riding after that life transition.

- **“Life Transition - Newly Transit Accessible”** (Reclaim past customers, Recruit new customers)—Conducted in the San Fernando Valley due to expanded housing options and jobs around transit and substantial growth in households based on the demographic analysis. This focus group sought to understand what role transit played in their residential or work location choices.

These market segments were oriented towards groups of people that could imminently make a choice about whether or not to ride transit. Based on the Consultant Team’s review of the completed body of research conducted by the agencies, there was a gap in the research of market segments on the cusp of choosing to ride or not. These focus groups were structured to understand the critical areas that make people ultimately decide whether or not to ride, and the strategies that agencies can employ to increase the likelihood that people choose to ride or keep riding as they go through key transitions in their lives.

**COUNTYWIDE QUANTITATIVE SURVEY**

Following the completion of the first six focus groups, a countywide quantitative survey was deployed in order to gain statistically significant results for current, and past/ non-customers on their transportation choices, and their preference and priorities for strategies. The implemented sampling plan sought to balance samples from the sub-regions of the County, while slightly oversampling sub-regions with more LACMOA operated service in order to ensure that perception of Metro service wouldn’t overwhelm the results.

Agency outreach and social media targeting were used to push out the online survey. Facebook’s geographically targeted advertising service was used to ensure sufficient samples from the subregional geographies for current customers and non-customers. To ensure statistical reliability at the subregional level, the survey targeted 800 samples from current customers, and 1,200 samples from infrequent or non-customers. The response rate exceeded these goals with over 1,400 completions per target population.

The survey design employed the Max-Diff technique to present responders with a series of paired strategy preference choices in order to better understand the relative strength of their preferences for each strategy. These preferences informed the strategy development, and the variations at the subregional level were used to inform the development of the subregional action plans.

**FINAL FOCUS GROUPS**

Following the development of the draft RGAP strategies, and the incorporation of feedback from the GMs, two final focus groups were conducted to gain insight into how the strategies resonated with a mixed group of current, infrequent, and non-customers. One focus group was conducted in English, while the other focus group was conducted with participants whose primary language is Spanish.

Preference for the strategies were assessed, as well as reaction from the participants for how well they understood the description of each strategy. The findings from the focus group were used to refine the strategy descriptions and the prioritization within the action plan.
To evaluate the relationship between different demographic and travel variables and ridership trends, analyses were conducted at the agency, Subregional and corridor level. The goal of this research was to evaluate ridership trends and determine if there are any critical factors both in or out of an agency’s control that disproportionately affect ridership.
Agency Ridership Analysis

AVERAGE ANNUAL RIDERSHIP CHANGE

Extensive effort was put into simply obtain and compile ridership trends at a line-level for all participating agencies over a five-year period (2012-2016). Because agencies track and summarize ridership differently, and in several cases, changed their data collection process (especially as APCs came online) within the studied time period, it was necessary to develop a metric that could provide consistent trend comparisons. Analyzed lines included only those with at least four out of the five years of ridership data. The annual average ridership change metric best characterizes the five-year trend of ridership on the line by accounting for year-over-year fluctuations.

Agency summary data sheets contained in Chapter 9 provide a detailed breakdown by each agency, but collectively, all agencies and most routes experienced some level of ridership decline. The average annual change in ridership was about -4% per year, with around 50% of the 325 analyzed routes within +/- 2% of this average, with 25% of routes performing better, and 25% losing more ridership. In most cases, the routes performing at the extreme ends of the scale are complementary, meaning one line number that exchanged service levels with another, like an agency allocating more frequency from the local to the rapid along the same corridor.

TAP USAGE PROFILES

The TAP regional database was used to develop individual agency and subregional customer usage profiles. Customer riding frequency, using individual TAP card IDs was summarized for a 13-month period, using the massive regional database of all agencies on TAP. Will riding frequency varies between subregions, and customers with passes tend to ride more frequently, the majority of customers appear to ride infrequently, with 67% of TAP cards in the database being used less than once per week (and the analysis excludes all cards used less than twice in a 30-day period). Agency TAP analysis are presented on the datasheets in Chapter 9, and Subregional results are presented in Chapter 10.
Subregional Analysis

Subregional data analyses investigated demographic, travel trend, and transit service data that could possibly explain ridership trends. Overall Subregional comparisons are presented in the following pages, and detailed metrics for many of these variables are summarized in the datasheets contained in Chapter 10.

Variables evaluated include:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Data Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Household change</td>
<td>2012-2016 5-Year ACS</td>
</tr>
<tr>
<td>Families change (by number of children)</td>
<td>2012-2016 5-Year ACS</td>
</tr>
<tr>
<td>No car household change</td>
<td>2012-2016 5-Year ACS</td>
</tr>
<tr>
<td>Population change (by age)</td>
<td>2012-2016 5-Year ACS</td>
</tr>
<tr>
<td>Forecast population growth</td>
<td>SCAG Model</td>
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<tr>
<td>Household income change</td>
<td>2012-2016 5-Year ACS</td>
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<tr>
<td>Journey to Work commute mode</td>
<td>Respective agencies</td>
</tr>
<tr>
<td>Presence of bikeshare</td>
<td>Consultant Team analysis</td>
</tr>
<tr>
<td>Uber Expansion</td>
<td>Uber</td>
</tr>
<tr>
<td>StreetLight share of countywide travel</td>
<td>Consultant Team analysis of StreetLight data</td>
</tr>
<tr>
<td>StreetLight average travel time change</td>
<td>Consultant Team analysis of StreetLight data</td>
</tr>
<tr>
<td>StreetLight activity center travel patterns</td>
<td>Consultant Team analysis of StreetLight data</td>
</tr>
<tr>
<td>TAP Ridership Usage Patterns</td>
<td>Consultant Team analysis of TAP Regional Database</td>
</tr>
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</table>

Multiple regression analyses were conducted to determine whether there are any statistically significant predictors of ridership change at the Subregional level. The Random Forest regression technique was used and four regression model iterations were prepared.

Most variables were found to have low to moderate relationships with ridership trends, but three variables were found to have a strong negative correlation to annual average ridership change (correlation coefficients of -0.65 to -0.75):

- Percentage change in total numbers of families
- Percentage change in zero car households
- Percentage change in households with income $35,000 - $75,000

These variables are often associated with being predictors for ridership, so this finding suggest that ridership losses may disproportionately be coming from areas and demographics that historically were a core transit customer base for agencies.

While none of the tested variables had strong positive correlations with ridership trend, the following two variables were moderately correlated (correlation coefficients of 0.40 to 0.48):

- Percentage change in population age 30-54
- Percentage change in households with income over $125,000

This suggests that areas with growing working age population, even those with higher incomes, are modestly increasing their transit use, which is not enough to offset the losses from previously core customers but is moderating the ridership decline.

These conclusions could be further explored via subsequent study of the data collected and analyzed for the RGAP. In addition to further regression testing of additional variables, such as the countywide quantitative survey results, potential additional explanatory research questions could include:

- Does the countywide survey support these findings about ridership loss from formerly core customer segments?
- Does the countywide survey support findings for ridership growth from higher income individuals, and core working age population?
- Do time of day ridership trends indicate that ridership loss occurred more from non-commute than commute periods?
Subregional Analysis
Demographic Statistics for All 20 Zones

Key Demographics and Travel Trends analyses are shown here for easy comparison across all 20 zones studied. The information is organized into household, population, job/employment, and travel metrics. The zones are in alphabetical order and represented in the charts by numbers across the x-axis; in order to identify the zones by name, use the key to the right. Most of the data is shown in percentages rather than absolute values in order to facilitate easier comparison over time. For more information on specific metrics per zone, please see the Demographics and Travel Trends spreads for each zone individually.

Key Household Metrics

Household Income

PERCENT WITH AN ANNUAL INCOME LESS THAN $35,000

PERCENT WITH AN ANNUAL INCOME $35,000 - $75,000

PERCENT WITH AN ANNUAL INCOME $75,000 - $125,000

PERCENT WITH AN ANNUAL INCOME $125,000+

Household Characteristics

PERCENT OF HOUSEHOLDS WITH CHILDREN

PERCENT OF HOUSEHOLDS WITHOUT CARS
**Zone Key (Numbers Correspond to Charts)**

1. Agoura Hills - Malibu  
2. Compton  
3. Downey - Norwalk  
4. Downtown - NELA  
5. East San Fernando Valley  
6. East San Gabriel Valley  
7. LAX  
8. Long Beach - Lakewood  
9. Newhall  
10. North Antelope Valley  
11. Pasadena - West San Gabriel Valley  
12. Ports  
13. Santa Monica West LA  
14. South Antelope Valley  
15. South Bay Cities - Palos  
16. South Gate East LA  
17. South LA - Inglewood  
18. West San Fernando Valley  
19. Westside - Midcity  
20. Whittier

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**Key Population and Jobs Metrics**

**Population and Age**

**POPULATION DENSITY (PEOPLE PER SQUARE MILE)**

**PERCENT OF RESIDENTS UNDER AGE 30**

**PERCENT OF RESIDENTS BETWEEN AGE 30 AND 55**

**PERCENT OF RESIDENTS AGE 55+**

**Jobs and Employment**

**JOBS DENSITY (JOBS PER SQUARE MILE)**

**PERCENT OF RESIDENTS EMPLOYED**
While the demographic and travel data varies greatly across the 20 zones studied, common trends are apparent when comparing all zones to one another over time. In almost every zone across the county, commuting by driving alone has increased, commuting by carpooling has decreased, and commuting on transit has decreased or stayed relatively the same. Overall transit ridership is down across all zones, and an increasing proportion of the County is becoming accessible to alternative modes such as ridesharing options (e.g. with Uber/Lyft). Generally, households with middle-range incomes have decreased countywide, while high and lower income households have increased, and employment has gone down. While each zone includes unique neighborhoods and will require specific transit solutions, looking at the countywide trends can help local agencies understand larger social and financial shifts which may be useful to consider in their decision-making process.

### Zone Key (Numbers Correspond to Charts)

1. Agoura Hills - Malibu
2. Compton
3. Downey - Norwalk
4. Downtown - NELA
5. East San Fernando Valley
6. East San Gabriel Valley
7. LAX
8. Long Beach - Lakewood
9. Newhall
10. North Antelope Valley
11. Pasadena - West San Gabriel Valley
12. Ports
13. Santa Monica West LA
14. South Antelope Valley
15. South Bay Cities - Palos
16. South Gate East LA
17. South LA - Inglewood
18. West San Fernando Valley
19. Westside - Midcity
20. Whittier

---

**Jobs per Square Mile**

- 0 - 2,500
- 2,501 - 15,000
- 15,001 - 50,000
- 50,001 - 125,000
- 125,001 - 282,309

**Frequent Bus Corridors**

- Avg daytime headway 15 minutes or less
Key Travel Metrics

Commuting Mode

**PERCENT COMMUTING BY DRIVING ALONE**

![Graph showing percent commuting by driving alone over years 2010 to 2015.]

**PERCENT COMMUTING BY CARPOOL**

![Graph showing percent commuting by carpool over years 2010 to 2015.]

**PERCENT COMMUTING BY TRANSIT**

![Graph showing percent commuting by transit over years 2010 to 2015.]

**PERCENT COMMUTING BY OTHER MODES/TELECOMMUTING**

![Graph showing percent commuting by other modes or telecommuting over years 2010 to 2015.]

Transit Stops and Ridership

**BUS SERVICE LEVEL PER SQUARE MILE**

![Graph showing bus service level per square mile over years 2010 to 2015.]

**ESTIMATED AVERAGE ANNUAL RIDERSHIP CHANGE (2012-2016)**

![Graph showing estimated average annual ridership change from 2012 to 2016 over years 2010 to 2015.]

Other Mobility Options

**PERCENT OF AREA WITH UBER <5-MINUTE WAIT (2016)**

![Graph showing percent of area with Uber <5-minute wait over years 2010 to 2015.]

**AVERAGE TRAVEL TIME (MIN) TO ZONE (STREETLIGHT DATA)**

![Graph showing average travel time to zone (streetlight data) over years 2010 to 2015.]

Ridership Growth Action Plan 17
Subregional Analysis
Activity Centers of Regional Significance

StreetLight travel data for all trips identifies the distribution and magnitude of travel to various regional activity centers around Los Angeles County. The regional centers selected here represent one regional center per zone (out of the 20 subregional zones) that attract the greatest amount of travel to that zone. They are presented in order of magnitude relative to the whole County; in other words, the first zone presented (LA Convention Center) attracts more daily trips than any other regional center. Many zones have an area of influence (shown in purple) that extends several miles away. Transit agencies can review these regional centers and consider their service area and alignment in light of the overall travel demand.

Key Activity Centers

LA CONVENTION CENTER

WEST LA & WESTWOOD & WESTSIDE PAVILION

MID-WILSHIRE

BLUFF PARK
Activity Centers of Regional Significance

The magnitude of travel from each regional center varies by its geographic location and the type of regional activity center. For context, according to the StreetLight data, the highest magnitude of travel is from the LA Convention Center area, which includes the Downtown Los Angeles financial district and environs. This area generates more than twice the average travel of all the regional centers presented, and about seven times as much travel as either of the lowest two centers (the Westfield Valencia Town Center and the Antelope Valley Mall areas).

Key Map Components

<table>
<thead>
<tr>
<th>Percent of Origin Travel to Regional Center</th>
<th>Color</th>
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</thead>
<tbody>
<tr>
<td>0% - 1%</td>
<td>Light Gray</td>
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<tr>
<td>2% - 4%</td>
<td>Light Purple</td>
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<tr>
<td>5% - 10%</td>
<td>Purple</td>
</tr>
<tr>
<td>11% - 20%</td>
<td>Dark Purple</td>
</tr>
<tr>
<td>21% - 41%</td>
<td>Dark Purple</td>
</tr>
</tbody>
</table>

Key Activity Centers

GLENDALE & THE AMERICANA AT THE BRAND, GLENDALE GALLERIA

LONG BEACH & DOWNTOWN LONG BEACH

PASADENA, ROSE BOWL & PASEO COLORADO

WARNER CENTER & VILLAGE AT TOPANGA
Corridor Analysis

To further develop explanations for ridership trends in the County and identify example opportunities to implement strategies, we selected a set of 50 case study corridors for detailed demographic, transit service, and travel pattern analyses, to determine what variables would be predictive of ridership trends at this more detailed level.

Case study corridors were allocated to the agencies in proportion to ridership (with oversampling of municipally operates routes), with a minimum of one per agency actively participating in the study. Routes with both a local and rapid overlay were included, as applicable on the case study corridor. Routes included a mix of local, rapid, express, and circulator services, with a mix of ridership trends, including 25% performing below, 25% performing above, and 50% performing around the countywide trend.

The following key demographic, travel trend, and transit service variables were evaluated, and compared with the ridership trends on the route using correlation analysis.

Delving into more detailed travel pattern analysis, the team analyzed LBS data for the case study corridors, to quantify how closely the routes and stop-level ridership trends align with the general travel (by any mode) that originates along the corridor. The StreetLight data were used initially as a variable to potentially explain ridership change in a unique way compared to traditional variables. Later, the same dataset identified areas of opportunity for marketing strategies, described below.

StreetLight data were used to measure trips of any mode, not specifically bus passengers, originating within one-mile of the case study route. This represents the potential market for transit, assuming anyone will take the bus regardless of demographics. The destinations for all of these trips (limited to trips within Los Angeles County) were plotted and aggregated in small, equalized hexagonal zones that represent roughly three miles in diameter. For all trips originating within one-mile of the bus route, the percentage of those trips that also end near the bus route is considered well-aligned to the travel market of the route. A “high” percentage of trips (closer to 100%) would mean that most people in that area could likely take the bus for their trips. Lower percentages (closer to zero) mean that most people around the bus route are traveling somewhere away from that area; this is not to say that there is no transit potentially serving those trips, but rather that the particular case study corridor is not closely aligned with the majority of trips, and so would require transfers. The results ranged from just about 70% to just below 40%.

Metrics for many of these variables are summarized in the detailed corridor datasheets contained in Chapter 11.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Data Source</th>
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<tbody>
<tr>
<td>Percent of TAP trips made w/ monthly pass</td>
<td>Respective agencies’ TAP data</td>
</tr>
<tr>
<td>Percent of TAP trips made w/ student pass</td>
<td>Respective agencies’ TAP data</td>
</tr>
<tr>
<td>Percent of TAP trips made w/ senior/disabled pass</td>
<td>Respective agencies’ TAP data</td>
</tr>
<tr>
<td>Weekday service frequency</td>
<td>Respective agencies</td>
</tr>
<tr>
<td>Number of weekday trips</td>
<td>Respective agencies</td>
</tr>
<tr>
<td>Days of service per week</td>
<td>Respective agencies</td>
</tr>
<tr>
<td>Weekday span of service</td>
<td>Respective agencies</td>
</tr>
<tr>
<td>Population living below poverty line, 2016</td>
<td>2012-2016 5-Year ACS</td>
</tr>
<tr>
<td>Change in population living below poverty line, 2010-2016</td>
<td>2012-2016 5-Year ACS, 2006-2010 5-Year ACS</td>
</tr>
<tr>
<td>Workers with no auto access, 2016</td>
<td>2012-2016 5-Year ACS</td>
</tr>
<tr>
<td>Change in workers with no auto access, 2010-2016</td>
<td>2012-2016 5-Year ACS, 2006-2010 5-Year ACS</td>
</tr>
<tr>
<td>Residents over age 65, 2016</td>
<td>2012-2016 5-Year ACS</td>
</tr>
<tr>
<td>Change in residents over age 65, 2010-2016</td>
<td>2012-2016 5-Year ACS, 2010 Census</td>
</tr>
<tr>
<td>Residents under age 25, 2016</td>
<td>2012-2016 5-Year ACS</td>
</tr>
<tr>
<td>Change in residents under age 25, 2010-2016</td>
<td>2012-2016 5-Year ACS, 2010 Census</td>
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<tr>
<td>Aggregate vehicles</td>
<td>2012-2016 5-Year ACS</td>
</tr>
<tr>
<td>Change in aggregate vehicles, 2010-2016</td>
<td>2012-2016 5-Year ACS, 2006-2010 5-Year ACS</td>
</tr>
<tr>
<td>Percent of Travel Staying on Corridor</td>
<td>2018 StreetLight</td>
</tr>
</tbody>
</table>
Finally, the StreetLight data and stop-level boardings (for routes with available data) were paired to identify areas of opportunity where the travel market might suggest there is potential to recruit additional customers. The methodology uses StreetLight data to measure the percent of general travel originating near each segment of the bus route that has both an origin and a destination along the same route. These results were compared with stop-level ridership data to identify segments where most travel ends somewhere along the bus route, but ridership was low relative to the rest of the route. This is described as an area of opportunity where transit agencies can focus strategies, especially direct marketing, to boost boardings because the travel market data suggests many trips being made by other modes could use that specific bus route.
CHAPTER 4

Relevant Research
Causal Factors and What Agencies and Local Governments Can Do To Address Transit Ridership Declines

External Factors

Studies in Los Angeles and nationally cite a number of factors that play some role in declining transit ridership. These may include decreasing transit service levels, eroding service quality, rising fares, falling fuel prices, the growth of TNCs (such as Uber and Lyft), the migration of frequent transit users to outlying neighborhoods with less transit service, and rising vehicle ownership. With so many factors at play, it’s difficult for any one or two factors to tell the whole story.

UCLA researchers have found that fuel prices have likely played a contributing, but not leading role. While there is a generally positive correlation (as fuel prices rise so, too, does ridership), it is a relatively weak one – fuel prices rise and fall much more dramatically than transit patronage. Per capita transit use in Southern California has been mostly falling since 2007, and it fell between 2009 and 2011 when fuel prices were rising sharply. Important to note is per capita transit use – many agencies during the same period reported increased total boardings year over year, but the population in Southern California grew at a faster pace than transit use.

TNCs do not appear to have cannibalized transit, according to the UCLA research. Data availability to directly measure the effect of transportation network companies on transit use is limited. The typical TNC user does not resemble the typical transit rider, the typical TNC trip does not occur when and where most transit trips occur, and most TNC users report no change in their travel by other modes. The UCLA study found that ridership decline in LA began before such services were offered. Bruce Schaller’s recent The New Automobility: Lyft, Uber And The Future Of American Cities determined that about 40% of TNC trips are replacing trips that would have been made using taxis in the past. The remaining 60% is likely a blend of trips that would replace walking, biking, and public transit trips, or are entirely new trips. However, because TNCs are largely replacing or expanding trips that would not have been private-auto trips before, the proliferation of TNCs is contributing to traffic congestion, not reducing total trips or vehicle miles traveled.

A separate external factor, examined by the National Academies of Sciences and the University of South Florida, is the shift in demographics that could impact the makeup of the transit market over the next three decades. The aging Baby Boomer generation is reaching an age where they travel fewer times per day. The Millennial Generation is now the largest single age-based component of the U.S. population and will get proportionately larger. As of 2010, there were one million more Millennials than Baby Boomers; by 2030, it is forecast that there will be 22 million more Millennials than Baby Boomers. This pattern of demographic shift over time is important for transit policy makers for two reasons:

1. The Millennial cohort group is the largest and its dominance will increase over the next two decades, and;
2. This generation has current patterns of transit use that are quite positive.

For example, younger age groups believe they are less dependent on cars as compared to their parents. However, these same Millennials are predicted to decrease their transit use patterns as they age and move to the suburbs over the next two decades. Thus, a critical market group presently consuming transit at high rates will most likely soon demonstrate a sharp decline in its transit use. Researchers conclude that proactive policies should be developed to deal with this potential outcome. Additionally, ethnicity, where you live, the type of residential neighborhood you live in and transit level-of-service all have implications for future transit ridership.

The most significant external factor of decreased transit ridership, UCLA researchers concluded, may well be increased motor vehicle access, particularly among low-income households that have traditionally supplied the region with its most frequent and reliable transit users. From 2000 to 2015, the proportion of immigrant households that owned zero vehicles dropped 42 percent, but among Mexican immigrant households, non-vehicle ownership dropped by 66 percent. A factor that is likely leading to higher car ownership rates by low-income residents is the migration of poor families to the suburbs where housing is cheaper, but transit service is spotty or nonexistent.

Meanwhile, McGill University researchers found through a study of 25 cities across North America that ridership decline since 2000 has had a stronger relationship to factors mainly within the control of public administrators – vehicle revenue miles. Despite increasing population and economic activity in urban centers over the past two decades, transit service levels have declined. However, many researchers also caution that public spending on transit has consistently been increasing despite declining ridership per capita. The relationship of declining revenue service miles and car ownership also presents a chicken-and-the-egg question, as transit agencies will reduce service not only due to funding constraints, but also decreasing ridership.
What Agencies and Local Governments Can Do

Who’s On Board 2016 and the UCLA study address what agencies and local government can do to reverse the trend in declining transit ridership in Southern California. The UCLA study states that only a minority of the population in the SCAG region rides transit very frequently or even occasionally. More than three-quarters of SCAG-region residents ride transit very little or not at all (averaging less than one trip per month). Heavy transit use is concentrated among the low-income population, and especially low-income foreign-born residents.

One remedy may be to convince the vast majority of people who rarely or never use transit to begin riding occasionally instead of driving. The UCLA study suggests that if one out of every four persons replaced a single driving trip with a transit trip once every two weeks, annual ridership would grow by 96 million – more than compensating for the losses of recent years. The study goes on to say that the future of public transit in the SCAG region then, will be shaped less by the mobility needs of people who do not own vehicles, and more by policy decisions that encourage vehicle-owning households to drive less and use transit more.

Who’s On Board 2016 provides specific recommendations, shown in the table at right, regarding what agencies and local governments can do to make transit more appealing.

Some additional recommendations from the TCRP Private Transit Report are valuable for transit agencies to consider. Transit agencies can follow trends in TNCs and other private transit services to serve as an indicator of where travel markets and needs are changing to respond with suitable public transit service. The report also recommends engaging private transit operators including TNCs in the planning for future “Mobility as a Service” (MaaS) developments – in other words, expanding the range of options for travel without driving alone.

<table>
<thead>
<tr>
<th>Transit Agencies</th>
<th>Local Governments</th>
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<tbody>
<tr>
<td>Focus on improving transit service in walkable neighborhoods.</td>
<td>Use zoning to concentrate development around transit corridors and encourage dense, walkable, mixed-use neighborhoods.</td>
</tr>
<tr>
<td>Reduce transit travel times by:</td>
<td>Improve street and sidewalk connectivity in poorly connected neighborhoods and use subdivision regulations to require well-connected street grids in new development. (Connectivity makes it easier to reach transit on foot.)</td>
</tr>
<tr>
<td>• Creating dedicated rights-of-way for transit.</td>
<td></td>
</tr>
<tr>
<td>• Adopting prepaid fare collection, “tap-and-go” farecards, and other methods to speed up boarding.</td>
<td></td>
</tr>
<tr>
<td>• Designing (and redesigning) routes to be straight and direct.</td>
<td></td>
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<tr>
<td>• Consolidating stops on transit routes that currently have stops too close together.</td>
<td></td>
</tr>
<tr>
<td>Improve frequency of service on routes with high potential for ridership. Consider redesigning bus networks to provide more high-frequency service in walkable neighborhoods and fewer infrequent routes in car-dependent areas.</td>
<td>Reduce transit travel times through transit signal priority, dedicated bus lanes, boarding bulbs, and other street treatments.</td>
</tr>
<tr>
<td>Ensure transit stops provide shelter and comfort (this often requires coordination with municipal government).</td>
<td>Coordinate with transit agencies to install and improve transit shelters and create safe and pleasant walking conditions around transit.</td>
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<tr>
<td>Make real-time information available to customers.</td>
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References


Knowing that others were concurrently studying transit ridership in Los Angeles, this study sought to complement those findings. In several cases, even using different methodologies, the RGAP study came to similar conclusions about probable factors aligning with transit ridership decline. RGAP used agency-provided boardings by line or by stop, rather than the National Transit Database which the UCLA study relied on, and found that even in a narrower time frame (2010-2016), population growth in the County outpaced ridership. Examining changes in households and demographic makeup by subregion, RGAP found evidence to suggest that lower-income households are a growing proportion of households in outlying areas of the County to the east and north, where transit service levels are lower than the central subregions. StreetLight travel data also showed an increase in average travel times countywide between 2014 and 2017 alone, which corresponds to increasing traffic congestion as a result of more driving. Finally, our examination of more than a year’s worth of countywide TAP data found evidence in line with UCLA’s finding that very few individuals ride transit very regularly (making up the bulk of the “ridership” metric), while many more individuals ride transit very infrequently, and even more individuals in the County never ride despite access to transit.

The research review framed much of the later parts of the study, especially with respect to focus group and survey research questions, examining rider travel habits by market segment, how those may be shaped geographically by varying availability of transit around the County, and how particular trip types lend themselves to more or less regular use of transit.

Finally, this research and relationship to RGAP findings informed numerous strategies in the Plan that address the varied needs and priorities of the subregions. If the best option for increasing ridership is to focus on the majority of residents who have not or very rarely use transit, this is best accomplished through direct marketing efforts that connect with people on a personal level – the same strategy that auto manufacturers and car dealers have been using for decades, drawing people away from transit. The TransitCenter Who’s On Board report also provides many great, best-practices recommendations within the control of agencies that are broadly applicable to LA, and several RGAP strategies address the local context such as the network of numerous municipal operators, and the potential benefit of aligning service to better fit the geography and development pattern of Los Angeles County.

Perhaps most uniquely, the UCLA research effort itself inspired a strategy to connect with the many universities in the region to continue this study and support transit agencies’ data analysis needs. Transit agencies are generating a wealth of data, and the daily operational needs and administrative requirements keep the focus of analysis typically near-term. Universities have students and professors studying data and often seeking real-world applications that provide a better learning experience. What better opportunity is there to support the mission of both parties than to work together?
Agency stakeholders and focus group participants alike desired to learn about how other metropolitan areas and transit agencies are innovating on service delivery and marketing to attract customers. There are many lessons to be learned from other metropolitan areas to help understand what is influencing change in ridership. Most importantly are the ideas, strategies, and cultural differences that other transit agencies utilize or are considering to retain their customers, recruit new customers, and reclaim past customers.
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Four agencies each participated in interviews on the subject of ridership trends, agency policies and initiatives that their staff believe contribute to increasing their customer base. The topic areas and questions were similar for each agency, to understand the different contexts and approaches among each, and compared to Los Angeles County. The agencies interviewed were chosen for a variety of reasons that addressed interests of the RGAP study participants:

- AC Transit (Alameda County, California), chosen as an operator serving with a major metropolitan area and connecting with several other operators, such as BART and SFMTA, but still having its own distinct service area. This is one of the closer analogues to the LACMA context, since relatively few major metropolitan areas in the U.S. have many different subregional transit operators overlapping service like LA does.
- King County Metro (Seattle region), selected as one of the only major urban transit operators in the nation with steadily increasing ridership alongside a hotbed of urban development.
- Maryland Transit Administration, selected for having recently employed a comprehensive restructuring of its entire regional service, including several strategies such as re-branding, service realignment, and implementation of bus-only lanes.
- New York MTA, chosen as the only agency in the U.S. larger than LA Metro, with a comparably large and dense service area and declining bus ridership, despite increasing development and economic activity.

### Common Markets

Schools are major markets for each transit agency, especially universities in the AC Transit and King County Metro service areas, where partnerships with UC Berkeley or University of Washington were considered major ridership generators. In New York City, MTA middle and high school students account for an estimated 30% of riders on the bus network. These market segments are present in and familiar to Los Angeles; many agencies here count high school and college students among their stronger customer bases. There are certainly opportunities to further expand those relationships and attract more student riders by building on partnerships that are successful in LA and learning from the successes elsewhere.

Partnerships with major employers or express services to major employment centers were areas of stability and opportunity for each agency. King County Metro, in particular, attributes its ridership health to a proactive agency program engaging employers, and state law requiring larger employers to provide transit subsidies for employees. By partnering with businesses directly, King County Metro is able to identify markets for service and ensure that there are customers ready and willing to ride, especially because the personal cost for using transit is near zero thanks to employer-paid transit passes. Although each agency interviewed had some pass program for employees, especially city government employees, King County Metro’s institutional pass and employer pass programs were the most robust.

All four agencies interviewed also operate a relatively high degree of express, commuter-focused services to major employment hubs, especially compared to Los Angeles. Although Los Angeles has many regional employment centers compared to the more mono-centric cities surveyed, the sheer magnitude of travelers in every part of the County suggests there should be at least some grounds for employment-focused transit service and marketing.

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This informed strategies **8: Enhance College Pass Programs** and **10: Life Transition Marketing**. In focus groups and surveys, many student respondents used transit during school but anticipated reducing their use of transit after graduation. There are certainly more college students who could be using transit – work towards capturing these potential customers by making college pass programs easier to obtain and better understood as part of campus life. Retain these customers through their life transition into the workforce by extending their college-eligible benefit for their first year post-graduation, and expand the network of employers participating in pass programs (below).

This informed strategies **9: Engage Major Employers**, **10: Life Transition Marketing**, and **35: Expand Express Service**. Various agencies in LA County already have established business pass programs or relationships with major employers, but these are transit agency-dependent, which is limiting in a region served by numerous operators and where employees increasingly live in very different parts of the County than where their job is. Work together to offer a universal transit pass through employers that is easy for the employer to implement and promote. Cross-promote the effort by marketing to people as they are changing job and home locations, in order to ensure newcomers know about established service offerings. Identify potential new markets for express service through these business relationships – in some cases, major employers can even be seed funding partners.
In Alameda County and New York City, agencies have found that bus lines that serve similar origins and destinations to crowded rail lines have also performed well, because the bus – especially express alternatives, can provide a relief valve for crowded rail lines. Maryland Transit Administration focused their restructuring on ensuring every bus route makes a connection to a rail line (commuter and light rail).

New York is an international city that attracts tourists, many of whom look to transit during their stay. New York City MTA staff estimated that a fairly high percentage of customers on the subway are visitors and tourists. Los Angeles is also a worldwide tourist destination, and one can often encounter tourists on transit near attractions such as Santa Monica and Venice beaches or Hollywood. A system that is prepared for international tourists who may be unfamiliar with both the geography and the native language will naturally be straightforward for locals to navigate as well.

Marketing plays an important, but hard-to-quantify role in broadening a customer population. Many people may be aware and supportive of public transit offerings, even think favorably of their local agency, yet still never ride it. Marketing a brand is not simply about informing people of the existence of something – it’s about convincing you that we offer something valuable to you.

Disruptive Trends

The perceived causes for ridership decline varied somewhat from agency to agency. Each believes that to some degree, the same individuals are making fewer trips on transit, replacing some trips with TNCs, particularly in the evenings and weekends when transit service is less available. Agencies also believe the growing economy following the peak of the Great Recession is enabling more people to afford cars. Similarly, economic forces and redevelopment of urban centers are pushing people out who traditionally depended on transit to save money, and those households are relocating where transit service is less available and less direct to job centers, accelerating the choice to buy a car. All of these disruptive factors are present in some form in Los Angeles, and transit agencies should consider how to respond. Improving Rapid-style and express services connecting suburbs with employment centers, as well as marketing to new households outside the urban core are some possibilities.
MTA attributed some ridership decline to five fare hikes in an eight-year period. Balancing fare revenues with ridership is a high priority for most agencies, but where possible agencies should be looking ahead enough to identify other means to bring in revenue, starting with filling seats on routes and trips with available capacity – a function of an integrated marketing plan.

Systemwide restructuring has received a great deal of national press attention for its promise in attracting customers. For example, Houston METRO was widely covered in 2016 and 2017 for having carried out a comprehensive restructure of the network and initially experienced an increase in ridership. For this study, Maryland Transit Administration’s BaltimoreLink restructuring provides several lessons on system disruption. In general, the bus network had not been updated since the 1960s, meaning they weren’t serving contemporary job centers and were often long and winding routes. A major motivator for the restructuring was to improve service reliability, with on-time performance hovering in the 50% range. Maryland Transit Administration focused on creating high-frequency corridors, aligning service with major destinations and employment centers, and creating more opportunities for single-seat rides. In the initial roll-out, ridership dropped somewhat – a caution to consider when significantly changing a bus network for the first time in decades. Also important to consider is the level of outreach and marketing to non-riders who could benefit from the new service, in addition to discussions with current customers. A year after restructuring, systemwide ridership has recovered for BaltimoreLink, and Maryland is identifying next steps to continue improving the new service.

Agencies can potentially avoid a major shakeup by focusing efforts on specific service enhancements that coordinate with a well-established network. New York City MTA and King County Metro have strategically introduced new BRT services (Select Bus Service and Rapid Ride, respectively), with coordinated marketing efforts. These programs were not a full disruption of the entire system, and have enjoyed increased ridership compared to the prior service. Both agencies also focused on marketing heavily around the revamped service to attract new customers.

Unique Strategies

Each interview revealed something an agency was doing to improve service and expand ridership that others were not. There are thousands of transit agencies in the US, and each is working on their own innovation. Agencies should devote some energy to collaboration and communication between agencies, utilizing the many online resources to stay in touch with what others are doing that shows promise, and empowering staff to develop relationships at other agencies.

AC Transit has evaluated their fixed-route services in low-density areas and tested a modern demand-response “FLEX” service as a replacement. Although so far these services have not experienced a big increase in ridership, the FLEX service is better for customers while still fitting in AC Transit’s operational footprint. FLEX eliminates the need for customers to plan a trip around a bus with an hour headway and offers a transit service that is more competitive with car trips. This model could be successful in many areas of Los Angeles County where fixed routes operate infrequently and passenger trips are low.

Maryland Transit Administration has rolled out a “rate your ride” app that solicits a quick-response feedback from customers by route. Although currently less than 1% of riders complete surveys (that’s probably less than 1% of trips, not customers), it’s a useful source of feedback and a customer engagement tool that many people have become familiar with in the “app age”. Agencies often spend considerable resources on an infrequent basis to conduct customer satisfaction surveys only periodically, by which time unsatisfied customers may have left the system entirely. A feedback app can help the agency direct their resources in a reasonable timeframe, and reduces barriers for customers providing feedback by making it quick and simple.

New York MTA is preparing to roll out its new MetroCard system that will ensure customers get the best fare deal at the end of the month, based on their usage. This is known as “fare capping” or “guaranteed best fare,” which addresses fare equity concerns, rewards frequent customers, and simplifies the payment system for transit for the end-user. Essentially, if someone pays the fare using stored value on their card every time they ride, they could conceivably spend more money per-trip at the end of a month than they would have if they had bought a monthly pass at the beginning of the month. For many low-income customers, a monthly pass is too great an expense upfront, but they are then penalized for relying on transit by paying more in total at the end of the month. Agencies may be concerned about the revenue implications of fare capping, because it reduces revenue gained from the most frequent customers. If used in conjunction with an external marketing campaign focused on recruiting new customers, it can be a powerful tool to help retain price-sensitive current customers, and thus at least balance out the bottom line.
CHAPTER 6

Market Research Findings
Focus Group Summary
Market Research with Current and Potential Customers

Market research was the most critical aspect of study for RGAP, directly soliciting perspectives from current and potential customers on travel habits, familiarity with the details of current transit service and amenities, and what types of changes agencies could make to influence willingness to ride more (or at all). We conducted a series of focus groups to frame quantitative, statistically valid survey research, and to tell the personal stories that relate to the countywide demographic and transit data analysis. Six focus groups conducted around the County addressed different market segments:

- Current transit customers
- Non-riders
- Current customers who have submitted service complaints
- People who have moved their home location recently
- College students
- People who are new transit customers within the last year

A second set of focus groups explored how current and potential customers would react to particular strategies, to understand what might make the most difference in convincing someone to ride transit more often.

Many stories emerged from the focus groups that paint a picture of opportunities for transit around Los Angeles. In many cases, experiences and opinions were similar across market segments, and even between current customers and non-riders. This summary focuses on those similarities as areas of opportunity for transit in LA, and any key differences between market segments are identified where relevant. The discussions covered many topics about the transit experience that roll up into a few themes: marketing to varied populations, customer experience and safety, and information in the form of customer awareness of changing transit features.

Market Service Differently to Different Market Segments

The nature of transit service is to provide a service that meets different needs of many people, and the focus groups demonstrated that transit agencies should market how existing service meets the needs of a target population. Four focus groups identified different market segments, such as college students (“Graduating”), current customers who are dissatisfied with service (“Last Straw”), new customers (“First Impressions”), and people who have changed home and/or work locations within the past year (“Newly Accessible”). Everyone generally agreed, even if they were not current customers, that the bus network in Los Angeles covers most every destination that people travel to regularly, even if they believed their particular travel habits were not served directly enough or in a timely manner. Transit agencies can identify target populations, especially ones that are easier to reach such as college students or commuters to major employers, and speak to their needs directly.

Each market segment represents examples of both current customers and potential customers – identify who potential customers are and follow strategy 2 TAP Distribution and Direct Marketing, with messaging that is relevant to that segment.

For new and infrequent customers who use transit on “special occasions”, play on the adventure and exploration of Los Angeles with the benefit of focusing on the journey rather than the driving. The “Welcoming First Impressions” and “Newly Transit Accessible” focus groups, made up mostly of occasional customers, were generally positive about their transit experience, citing it as “exciting,” “adventurous” and “fun” and some said that it can get them to whatever destination they need. They cited specific issues that deterred them from taking public transit more often, including concern over “sketchy” people at the bus stops and on the buses or trains, unpredictable service quality, and service that starts too late or ends too early which forced them to have a back-up plan. Also, there was anxiety over their experience at the bus stop about whether they would have the right amount of change for the fare or whether they were on the right side of the street for the direction they were headed and no signage to give them that information. Ensuring that customer information and service quality is as high as possible will attract this group and encourage them to continue riding, and doing so also helps to retain current customers.

Stay connected with students through their college years and after graduation. The “Life Transitions – Graduation” focus group participants all were students, and all but one was in their 20s. The group included seven who are currently working, and only two who use student passes. In responding to why they like the bus, participants said it was inexpensive, with one calling out DASH, as being the most affordable at $0.35. Four participants said the availability of a subsidy influenced their decision to take the bus citing the ability for unlimited rides made a difference. This group seemed to be less settled in their life direction and, therefore, less willing to commit to a bus-rider lifestyle. All said access to public transit would not
be a factor in where they work, but could be a factor in where they live. All participants said they expect to drive in the future. Attracting current students as customers can focus on college pass benefits as a means to experience the city affordably and connect to jobs during the school years. Retaining students as customers after graduation is a key strategy for building ridership, and doing so will require countering the misconception that once you begin a career, you “just drive.”

Finally, many of the key service quality and passenger experience improvements needed to attract potential customers will help to retain current customers and perhaps even reclaim former customers. The “Almost the Last Straw” focus group consisted of 11 people who knew about and had used multiple bus operators in the region. As such, their comments reflected experiences across multiple operators and geographies and imparted well-informed opinions related to the workings of the regional bus network. To that end, participants shared many well-known concerns, but said they had taken the extra step to report the most egregious. For many of these participants, the response from customer service was less important than having the opportunity to express their views because most did not expect problems to be immediately resolved. Current customers can help agencies prioritize issues to address with better detail on time, route, and location – when analyzed appropriately, this data can illustrate opportunities for improvement. Gathering customer feedback makes current customers feel more valued for their loyalty and input, and is a marketing opportunity to demonstrate that transit agencies care deeply about the customer experience and are continually improving.

Customer Experience and Safety

The perception of safety, security, and comfort and the total experience from door to door heavily influences how people think about using transit, whether or not they are a regular rider. These themes became integral to many strategies, as they emerged from the focus groups because of the emphasis participants placed on these subjects, especially in ways that are hard to infer or measure with the quantitative survey method. The passenger experience truly includes every element from leaving one’s home until they return, including the walk to the stop, the condition of the stop and the people hanging around it (or not), the interaction with the bus operator when boarding, the other customers on board, and the same factors for the return trip.

Agencies have the opportunity to build a great customer experience within the elements they control directly, especially bus operator customer engagement and the atmosphere on board the bus. Agencies also can revisit the method for stop management to ensure a more consistently positive experience across Los Angeles. While many other elements of the transit rider experience are outside of the agencies’ direct control, by making it easier for passengers to provide feedback and easier for agencies to gather and report it, agencies can report back to the local jurisdiction to help prioritize attention to safety and security and the pedestrian environment leading to transit.
Whether a rider’s experience is pleasant or unpleasant depends largely on the attitude and comportment of the bus driver. Participants’ attitude about bus operators illustrated the inconsistency of this experience for customers; some drivers are very helpful and polite, taking time to answer questions, hailing down another bus to ensure a transfer and even helping one rider install her bike on the rack. However, participants cited instances where a bus operator was rude, inconsiderate and unhelpful. Issues centered around the drivers ignoring unruly and unpleasant passengers, forcing other passengers to resort to handling the situation themselves or resulting in passengers often having to put up with other people’s smoking, drinking, and rude and obnoxious behavior, including harassment.

Bus service has many beneficial customer experience aspects that compete with other travel options. Participants really like not having the stress of driving in traffic with other “dangerous, road rage people” and not having to pay for expensive parking. Nearly all agreed that bus operators are skilled and trustworthy drivers, lending a preference for many people to take the bus to work when traffic is at its peak. Participants found that buses tend to be cleaner than subway trains, and riding the bus provides them with an opportunity to read, sleep or catch up on work or social media.

Awareness of Transit Passes and Information/Technology

A key finding throughout the study is the opportunity to increase awareness of the existence and value of transit among the non-riding public, but there are key knowledge gaps even among regular-riding customers about offerings that can improve their experience. Availability of employer or school-subsidized transit passes, third-party apps to navigate the system, and improving ease of paying for and transferring between agencies could attract new customers and reclaim or retain customers. Several, if not all, agencies have made strides on these specific subjects, but current customers had low awareness of recent improvements. If customers with regular interaction with the system are unaware of improvements, it’s likely there is a missed opportunity to recruit new customers as well.

All participants stated they used some sort of technology to access information about bus schedules, routes or bus arrival times. Many used agency websites for information, but the...
A slew of third-party apps have been available for years which provide schedules and trip-planning for most agencies in the County, but focus group participants seemed to believe this was a major unfilled need. There was overwhelming agreement that having one easy-to-use “universal” app which included all schedules, routes and notifications for all the regional operators, including subway and train times as well as bike-share information, would go a long way in reducing confusion and anxiety, and make using public transit a lot simpler choice. Although a few participants were aware of options such as Google Maps, the Transit App, and others, even most regular customers were unfamiliar with the apps or unaware of their features. A key feature that several participants suggested, app-based fare payment, is also available, but not integrated (at this time) with any official agency app or in third-party trip planning apps.

Availability of TAP sales options other than ticket vending machines at rail stations was also very low. Most participants believed the TAP system provides great benefit to customers, but the flexibility was limited in their view by needing to reload value at rail stations or visiting customer service centers to purchase some passes. Very few participants who ride regularly were familiar with the availability of taptogo.net website for purchasing and reloading TAP cards, and the few who mentioned it described poor experiences in the past and were unaware of recent usability upgrades. Few participants were aware of Metro’s TAP retail vendor network such as convenience stores where TAP cards could be purchased. Focus groups were conducted shortly after a marketing campaign had begun regarding an impending change to shift interagency transfers to TAP, but only one or two individuals out of dozens participating had heard about the improvement.

Most participants stated that their employers don’t offer subsidized transit passes. Given the low awareness of other long-standing options, it’s possible that subsidized passes are more widely available than customers realize. Some said that the employer discount used to be offered, but was discontinued for reasons not clearly understood by them. For those that do have employer discount passes available, some said the discounts are still expensive because of how the benefit is structured, such as monthly passes vs. per ride, depending on the value of the monthly discount.
Strategy Testing Focus Groups

At the end of the study, we revisited the focus group model to gather reactions from both customers and non-customers on some of the key strategies that resonated with agencies. Eight strategies were tested with two focus groups, one in English and a second in Spanish with participants for whom that is their primary language, in part to probe for cultural variations on the importance of the strategies. The eight strategies were adapted to avoid leading the participants to an obvious choice or influencing their preference, as much as possible. Participants ranked the strategies on their perceived influence to get them to ride transit more often:

1. Create a universal, countywide app for transit trip planning, schedules, fare payment, and incident reporting
2. Maximize speed and reliability of transit along major corridors in exchange for reducing less-frequent, but possibly closer service
3. Make fare payments seamless across operators
4. Increase physical locations where customers can purchase and manage TAP cards
5. Expand express transit service to regional centers
6. Empower operators to provide better customer service and manage conditions on board
7. Expand employer and college pass programs
8. Provide bus trip rewards in exchange for marketing contact information and customer feedback surveys

Both groups were highly supportive of an integrated mobile app that would provide all the services and information that they need at their fingertips. Not one person ranked it lower than a “3.” The mobile app strategy was actually listed last in both focus groups, however, both groups brought up the need for the use of technology and a mobile app long before the topic’s place in the discussion outline. Additionally, it was noted that people are becoming used to doing everything online and through their smartphones. A universal app would make taking public transit more convenient and attractive, especially for younger potential customers.

The English- and Spanish-language groups disagreed on the trade-offs for maximizing transit service speed and reliability by focusing service onto major corridors. The English group participants ranked it higher overall (2.91) than the Spanish Group (4.09). They were more likely to consider taking the bus if the bus stops were farther apart but service came more frequently, and if there were fewer transfers to get to their destinations, such as to work or places where they don’t want to drive or park. The Spanish-language group did not want to walk further to bus stop, regardless of whether the bus came more frequently.

Many said it would be very unpleasant walking in the heat or rain. They reiterated that if they knew exactly when the bus was coming (via real-time mobile app), then they could time their trip to the bus stop more accurately and not have to wait as long.

Both focus groups supported the strategy to have one seamless way to pay for public transit throughout the County, with some potentially significant differences. In the English group, all but one person agreed that reloading the TAP card automatically with a credit card, or via their smartphone, would make it more likely that they would considering taking the bus more often. The Spanish-language group was more hesitant about automatic reloading a TAP account via credit card, but supported the smartphone option wholeheartedly and stated that they would consider taking the bus if it was easy to pay for it on their phone. In several cases, participants were able to describe instances where they intended to take the bus, realized they did not have adequate cash or value on TAP, and had to choose another method for their trip. The loss of incremental trips is a gap to consider as transit agencies have traditionally lagged years behind changing point-of-sale technology.

Both groups expressed confusion around the term, “Guaranteed Best Fare,” potentially affecting the priority of that strategy in the participants’ minds. Some thought customers were being penalized or receiving unequal treatment based on how often or how infrequently they ride. They felt that people who ride less were subsidizing the cost of those who ride more frequently. At a minimum, this uncommon strategy requires thoughtful and thorough outreach to ensure customer understanding. The discussion also underscored a key challenge that transit agencies face, which is misunderstanding and proliferation of misinformation by word of mouth. In the focus groups, when one participant misunderstood the intent of this strategy, their confusion and control of the conversation heavily influenced the other participants, even when others had initially understood it correctly.

Although ranked last, no one had any reservations or hesitations about providing contact information for the purpose of completing customer surveys in exchange for a bus pass. However, participants preferred a TAP card or bus pass that had stored value rather than a time-based pass, like a monthly pass. Interestingly, many participants in the Spanish-language group were concerned that people would take advantage of the bus “companies” and suggested that passes should be awarded only after the survey was completed and only for a limited time afterwards. Many said filling out a survey would make them feel good to be helpful, to be able to report something that wasn’t desirable on the bus or patterns experienced around the service.
Ridership Growth Action Plan

Countywide Quantitative Survey

Who Participated?

1,426 customers who ride frequently, 626 infrequent customers, 674 former customers and 153 residents who have never been on transit completed the survey.

All genders, ages, ethnicities, income levels, employment status, school status, and people with disabilities were represented.

All sub regions of the County were represented and balanced relative to population.

What are the riding patterns of customers?

Most customers in the County (77%) ride three or more days in a week. The South Bay (88%) and San Fernando Valley (84%) have a higher share of frequent riders, and North County (64%) has a lower share.

All-Purpose Riders make up 40% of the customers in the County, Commuters make up 43%, and 17% use transit for other types of trips. Customers in the South Bay, San Fernando Valley, and the San Gabriel Valley are more likely to be Commuters than All-Purpose Riders, and Westside/Central customers are more likely to be All-Purpose Riders.

How many customers experienced life transitions in the last year?

Many customers experienced life transitions in the last year, with 12% changing their home location, and 16% changing their school or work location. While these percentages are relatively small, with nearly 500 million unlinked passenger trips made on transit, a life transition has the potential to increase or decrease ridership considerably, and will require a substantial effort to reach out to these customers each year.

North County, San Gabriel Valley, and Gateway Cities customers experienced the most moves, and South Bay customers experienced the fewest moves.
How many people have access to a vehicle?

The majority of customers in the County have access to a car. 51% of Customers have access to a car usually or always, 24% sometimes, and 25% never. Gateway Cities (32%), Westside/Central (27%), and San Gabriel Valley (28%) have the highest share of customers with no access to a car. The density of transit trips is highest in Westside/Central, so this could be an opportunity to focus strategies on growing ridership in the other two sub-regions.

Nearly all potential customers (occasional, former, and non-riders) have access to a car usually or always (90%) or sometimes (7%).

How will Transportation Network Company (TNC) access affect riding habits?

While most customers and non-customers do not think that access to TNCs will change their transit riding habits, some customers (17%) and non-customers (18%) think that TNC access further decreases their likelihood of riding transit. But more customers (25%) and occasional customers (34%) think that TNC access actually will increase their likelihood of riding more frequently.

Do employers and schools subsidize transit for non-customers, and do non-customers have access to transit stops?

Most of the non-customer respondents (82%) indicate that they have access to free parking, or their employers pay for their parking. 22% of non-customers indicate that their employers pay for part or all of their transit costs.

86% of non-customers indicated that they have a transit stop within walking distance of their home, and 83% indicated they have one within walking distance of their work or school.
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86% of non-customers indicated that they have a transit stop within walking distance of their home, and 83% indicated they have one within walking distance of their work or school.

What is the main reason customers ride/rode transit?

36% of customers cited having limited access to a car or no license, 18% cited avoiding traffic, and 14% cited saving money or fuel as their main reason to ride.

28% of occasional customers cited avoiding traffic, 20% cited parking costs, and 18% cited special events as their main reason to ride.

The main reason occasional and former customers took their first transit trip was limited access to a car or no license (47% of respondents), or to avoid traffic (14% of respondents).

How long have/did customers ride transit?

Most frequent customers (71%) have been riding transit for five or more years. Even most occasional customers (64%) have been riding that long. Westside/Central and Gateway Cities have the largest share of frequent customers who have been riding for five or more years. The South Bay has the largest share of occasional riders (72%) who have been riding for five or more years.

Most former riders stopped riding after less than a year (32%).
What are current opinions of the transit system?

Frequent customers generally have moderate to favorable ratings of the transit system in all categories. Frequent customers rate drivers as the most positive categories, and the behavior/hygiene of passengers as the lowest rated category. Non-customers (which includes occasional customers) rate the system lower than customers in all categories, with the biggest differences in ratings for “travel time by bus” and “buses go where I need to go.”

Key sub-regional differences in ratings by customers include North County and South Bay, which have more positive ratings of quality of life issues such as safety riding and waiting, cleanliness, and behavior and hygiene of other riders.

Non-customers in Gateway Cities and North County generally have more favorable ratings across quality of life and service characteristics.
How will riding habits change?

Most customers (69%) expect to ride about the same amount in a year, with 16% expecting to ride more often, 9% expecting to ride less often, 1% expecting to stop riding, and 5% who are unsure. South Bay customers are more likely to expect to ride the same or more (95%) in a year, and North County (17%), Gateway Cities (13%), San Fernando Valley (12%) and Westside/Central have the highest share of customers expecting to ride less or stop riding.

Personal time and relaxing (50%), saving money (36%), and changing job or school location (12%) are the primary reasons customers expect to ride more.

Customers expect to ride less because driving is faster or they prefer the comfort of their car (40%), bus travel times are unreliable (11%), they have concerns about the behavior or hygiene of other riders (14%), or they expect to change their home, job, or school location (10%).

80% of occasional customers are likely to consider riding more often. San Fernando Valley (26%) and San Gabriel Valley (24%) have a greater share of occasional riders who indicate they are less likely to ride more.
Will non-riders become customers?

Respondents who have never rode are split with 48% indicating that they are likely to try riding, and 52% indicating they will never ride. South Bay (55%) and Westside/Central (54%) have the highest share of respondents that are likely to try riding.

The main reason cited by respondents who indicated they will never ride is split between service/reliability concerns (44%), and safety/comfort concerns (42%). Service/reliability concerns are the main concern in Westside/Central (55%), San Fernando Valley (54%), and Gateway Cities (50%). Safety and comfort are the main concern in the San Gabriel Valley (52%) and North County (54%).

1 | Seamless Fare Payment Options
2 | TAP Distribution & Direct Marketing
20 | Enhanced Customer-Facing Operator Role
21 | Supportive Fare Enforcement
22 | Integrated Incident Reporting App
23 | Incident Response Communication
24 | Data-Driven Security
25 | Social Services Outreach
26 | Consistent Community Policing
27 | Standardized Stop Amenities/Design
28 | Data-Driven Stop Improvements
29 | Reliably Clean Stops
30 | Service Updates by App
32 | Optimize Fixed-Route Network
33 | Frequent Reliable Service
34 | Reduce Transfers
35 | Expand Express Service
36 | Enhance Demand-Based Night Options
37 | New Mobility Partnerships
Why did former customers leave, and will they ride again?

Most former customers switched to a car including driving alone via a newly accessible car (59%), in a TNC (7%), or in a carpool (2%) as their main reason for stopping riding. Life transitions (changing home or work location or graduating) was another common reason (13%).

Westside/Central had a higher share of former customers citing a switch to TNC (11%) as their primary reason for stopping riding. Former customers in South Bay (21%) and San Fernando (17%) were more likely to cite life transitions.

Of the former customers that switched to driving, service and reliability issues with transit (63%) was the most common group of reasons, followed by safety and comfort-related reasons (29%).

The majority of former riders say they are likely (59%) to ride again.
What strategies rate most positively?

Several high-level strategies were tested within the survey to determine the strength of ratings between customers and non-customers. Customers rated service improvements to the bus network as more impactful than other strategies. Non-customers also rated service improvements as impactful, but rated app-based fare payment and on-demand transit options as more impactful than customers.
The strategies that follow are the core of the Ridership Growth Action Plan—38 strategies that address wide-ranging actions that agencies can take through collective action to address their customers’ experience on transit. These strategies were identified through the extensive data analysis and research phase, as highlighted in previous chapters, and with close coordination with the Project Leadership Team and the Taskforce.
Many strategies address multiple themes, which underlies the integrated nature of the plan, and the need for a multi-faceted solution to an extremely complex problem. All agencies in the County have experienced ridership decline. It will take collective action to address this growing crisis.

Strategies are classified into the following seven different action categories:

- Processes & Agency Coordination
- Employees
- Systems
- Quality of Life
- Customer Information
- Marketing & Promotions
- Fares & Payment Methods
- Service Delivery

The following highlights the most critical elements of collective action for each of these strategy categories. The order of these categories is purposeful. Without meaningful collaboration across agencies, which will require addressing governance and funding, it will be difficult to fully implement any of the following strategies. What the focus groups and survey research proved is that despite many transit operators in the County, most customers rely on multiple agencies for their daily travels, illustrating the importance of a more collaborative and cooperative approach between agencies. Without the employee training and systems resources, it is difficult to achieve consistent quality of life outcomes across the County. Without customers and future resources, it is difficult to achieve consistent quality of life outcomes across all operators.

Critical to be able to achieve this is to address coordination and systems between agencies. Funding allocations, and the resulting ability of agencies to implement these strategies vary considerably, and in some cases hinder the ability for agencies to work to collectively implement what is best for the customer. If service allocation decisions create financial trade-offs and competition between agencies, there will be “winners” and “losers,” and any collective action will be substantially diminished. First and foremost, agencies, through LACMOA and Metro collaboration, must initiate a path forward for funding that removes this disincentive for collaboration.

One of the major data collection and analysis efforts for the Consultant Team was to simply obtain consistent line level ridership across all agencies over multiple years. Agencies track ridership differently, which substantially limits the ability to discern conclusions about ridership trends consistently across the County. Without the same baseline and periodic updates that are consistently tracked across all agencies, it will be very difficult to measure the success of the RGAP and adjust agency responses to trends accordingly. Again, each agency is comfortable analyzing their own service according to their traditional practices, but this is not aligned with how their customers use the greater transit network, choosing the combination of routes and schedules across operators and geographies that suit their needs.

It is critical that every agency in the County track and analyze ridership consistently, and in as disaggregated a form as possible (at the stop level) to allow for the evaluation of localized trends. Regional funding for Automated Passenger Count (APC) technology for EVERY agency in the County is vital to achieve this goal. Consistent analysis of trends, including consistency in measuring ridership by stops over time, will ensure that all agencies have the ability to respond.

Data management will be another critical aspect of this regional coordination. Data could be housed with Metro, or LACMOA could create staff positions to manage the data. Other alternatives could include a non-profit partner such as a major research university, or a consultant team, to provide ongoing data hosting and periodic reporting. Transit agencies are often consumed by meeting federal and state reporting requirements; having a well-defined data structure and staff expertise in data management can improve the ability to meet reporting requirements at the same time as, rather than in competition with, analyzing performance to support the regional initiatives.

Process & Agency Coordination

While several of the RGAP strategies have or are being partially implemented by some agencies in the County, through the focus groups and countywide survey, it became very clear that the customer does necessarily distinguish one agency from another. Customers want one seamless transit system and experience and are frustrated by barriers they perceive when transferring from one agency to another.

Critical to the success of the RGAP is that EACH agency is able to implement the same customer-facing strategies to a consistent level. A customer should not have a better or worse experience on one bus or another because it is operated by a different agency.

Employees

Agencies have the most control over their employees, so these strategies are early opportunities for implementation. In keeping with the core tenets of the RGAP, employee strategies will be most effective if implemented and achieved consistently across all operators.
The regional coordination that occurs for mechanics is a good example of agencies ability to leverage economies of scale to provide a similar level of service for all. Helping bus operators present a customer first mentality is in part a recruiting challenge, but it is also an issue of training, and an opportunity for LACMCOA agencies to work together to achieve consistently high levels of customer service across the County. Bus operators are the front line and primary representative for each agency that the customer interacts with most frequently on a daily basis and is the most important employee to support and mentor towards enhancing their customer interactions.

**Systems**

Integrated systems that facilitate direct interaction with customers is a core approach of the RGAP. Nearly all current transit customers use apps for real time arrival, trip planning, etc., and most non-customers use apps for real-time traffic conditions, travel routing, etc. There are a multitude of transit apps available, some distributed by agencies, and others by third parties. However, none of them truly integrate all aspects of the RGAP recommendations, and none of them span all agencies in the County. A customer should be able to use one app to plan a trip, see accurate real-time arrival information, pay for a ride, communicate with security or customer service staff directly if an issue occurs while they ride, and provide direct feedback to the agency on how their ride went.

Agencies should be able to directly communicate back with that customer, push out promotional campaigns, such as rider rewards that dynamically respond to that individual’s riding habits. The app landscape and the agency landscape in the County is distributed and fragmented. Without full integration of all of these elements in an easy to use system, transit agencies will continue to lose more ground to the competition. Mobility on demand services, such as TNCs, already have easy to use apps that provide all of these elements in one integrated system. It’s critical that agencies respond to their competitors in like fashion but do so with collective efforts that involve each agency. TAP is developing an app that can provide smartphone based payment functionality. It’s important to seize this opportunity to ensure that if TAP’s app is going to be the standard for the County, that it will rival the completeness and ease of use it, and this is where great opportunity for agencies lies.

**Quality of Life**

Quality of life issues can make or break whether a customer will continue to ride transit, and perceptions about quality of life issues can act as a barrier for getting new customers on the system. Proactive engagement through well trained and friendly personnel, coupled with data-driven prioritization approaches to security, maintenance, and facility planning are the key RGAP strategies. As with all of the other categories, implementation should be done in coordinated fashion to ensure consistency of experience across all agencies. The county is fragmented from both a transit agency and a policing agency perspective, and it is unreasonable to expect that customers should be able to navigate these jurisdictional splits. Technology coupled with employee training to facilitate improved communication with customers, can help to address many of these issues.

Most individuals ride transit infrequently, so managing first or occasional impressions through employees and facilities (both bus stops and vehicles) are particularly important to get this largest customer base to ride just a few additional trips in a month.

**Customer Information**

With the advent of smart phone technology, and the penetration of smart phones across nearly every income bracket, customers and potential customers expect to be able to easily find accurate and real-time information in the palm of their hand. They also expect to be able to provide feedback, and see the feedback of others easily. When potential customers don’t know where a bus stop is, where it is supposed to go, how to pay, how much it will cost, they are a lot less likely to leave their car parked at home. There are almost no barriers to using a private vehicle once it has been purchased. Transit agencies should implement, primarily through technology but also through employees, information that can eliminate as much of this barrier as possible. It’s important to remember, although private car ownership is one of the greatest competitors to transit, everyone has to learn how to drive AND earn a license to do so, not to mention have access to or purchase a car. Transit has a much lower barrier – you simply need to learn how to use it, and this is where great opportunity for agencies lies.

**Marketing & Promotions**

All agencies market and promote their service, but these efforts are generally not coordinated, and unlike private sector enterprises, do not achieve the goals of developing deeper understanding of individual customers.

The “million TAP card giveaway” is a commendable effort to improve TAP card penetration, but it is not being implemented with a system that allows individual TAP card IDs to be linked to any personalized information such as home or work address to build a much more sophisticated understanding of localized customer behaviors, and generate an opportunity to build a two-way communication relationship with customers. This is a critical missed opportunity that should be addressed with any future marketing and promotional campaign. As it is heavily focused on transitioning current customers from cash payment to TAP-payment, it is also a missed opportunity to connect with potential customers and promote using services through free-ride incentives.
Static transit awareness campaigns are important, and should span all agencies, since awareness of transit benefits all. However, collective campaign approaches should be paired with many more localized approaches, targeting employers, institutions, neighborhoods, etc. It is particularly important to include marketing and promotional effort with EVERY service change of substance. Whether or not a new service is an improvement over a current service, it’s insufficient to put it on the street without every effort to build awareness of the change on the corridor. If you build it, it is no guarantee that people will come.

Fares & Payment Systems

Many customers ride transit to save money, and when they have access to a good deal through an unlimited monthly pass, they ride more. The RGAP strategies are directed towards incentivizing riding by pricing and marketing lower-cost pass options, and by eliminating barriers to lower-cost pass products through information providing, or guaranteeing all customers the best deal possible, whether or not they are able to afford to pay for a monthly pass upfront.

Most frequent customers are knowledgeable about the cost of riding, but the majority of customers do not regularly use TAP cards, so miss out on the convenience and cost savings with transfers provided by paying with TAP. Non-customers lack knowledge about cost and payment systems, and see that as a barrier to riding, so providing convenient payment options, in particular through an integrated smartphone app can bring the transit system on-par with what customers of TNCs enjoy.

Service Delivery

All agencies in the County routinely adjust their service to enhance their system, respond to customer concerns, or address budgetary need. It’s important that each agency’s service changes be viewed thought the collective lens of the whole unified system. Customers are looking for frequent direct service that gets them where they need to go with reliability and reasonable travel time. At the same time, the analysis in prior chapters shows that people’s travel patterns have changed, and change throughout their life, and the transit network in many ways is a legacy system that hasn’t responded to these changes.

Implementing truly customer-focused service delivery will be a major undertaking that will require hard negotiations between agencies about who should operate the most direct service, as well as working through the political challenges of local jurisdictions that control the right of way and are the gatekeepers for strategies that can improve reliability.

Understanding the Strategy Evaluation

The spreads that follow provide a description of the strategy, identify its goals, application, key performance indicators (KPIs) for success, and evaluate its timing and cost.

GOALS

The ‘Three R’ goals of Retaining, Reclaiming, and Recruiting are the first evaluation for a strategy. Many strategies that benefit the retention of existing customers, can also help to reclaim and recruit, but it is most important to keep current loyal customers happy with their transit experience.

IMPLEMENTATION AND COST

Many of the strategies can and are being implemented by individual agencies. However, collective effort is vital to the success of RGAP, so many strategies should be rolled out at the subregional and regional level. The plan includes subregional prioritization following the presentation of strategies.

The evaluation of timing and cost is meant to be a high-level look at the level of effort, timeframe for benefit, and type of expenditures that are expected with each strategy. The RGAP strategies are implementable within a ten-year horizon.

- **“Near-term”** for implementation and benefit indicates strategies that can be implemented and benefits that can be felt within a two-year period.
- **“Mid-term”** represents strategies and benefits in an up to a six-year period.
- **“Long-term”** represents strategies and benefits in an up to ten-year period of the RGAP.
- **“Ongoing”** represents strategies that should become part of annual activities going forward.

Cost evaluation looks at the blend of internal and external resources and operating versus capital expenditures.

- **Strategies with one $**—Can be implemented quickly, generally with internal staff resources or small procurements
- **Strategies with two $$$**—Some operations or capital expenditures
- **Strategies with three $$$**—Larger expenditures, typically both capital and operational

As LACMOA and Metro work through the RGAP strategies and move towards the development of future regional and subregional actions, implementation plans should be prepared, which will include detailed cost estimates, funding mechanism, and staff and cost sharing agreements across agencies.
Key Performance Indicators (KPIs) will guide LACMOA agencies on the progress of the Ridership Growth Action Plan. Each strategy relies on at least one KPI, and often several in combination. Many KPIs rely on data that agencies already have, whether it is already aligned to measure success or requires adaptation to work best for a particular strategy. Several KPIs will require the development of new data and reporting methods.

### Ridership and Trip-Making

Ridership is the key metric of success for most strategies in the RGAP. Agencies can best track ridership by converging on a standardized method of gathering raw data for unlinked passenger trips and create a better structure for time-series analysis by stop, line, and agency. Having a universal structure for ridership data management and analysis between LACMOA agencies ensures this effort can be carried forward for better subregional and countywide trend monitoring across all agencies. Ridership trends should be measured based on an agreed-upon historical points; agencies often report “trends” as the most current information compared only to the next most recent month or year. A trend is best understood over a longer period of time, although annual or monthly reports help understand the near-term effect of strategies as they are implemented. Smaller agencies may have difficulty implementing modern data collection and analysis methods, and the largest agencies are sometimes “stuck” with legacy systems. Working together, LACMOA agencies can support each other to improve data collection by doing joint-procurement for better software and hardware, or sharing methods and training. Many agencies do not have APCs or only have the tech on some vehicles. Work cooperatively on joint procurement or technology sharing to improve stop-level data availability as a critical component for this KPI, and ensure consistency across all agencies.

**DATA REQUIRED**

- Boardings and alightings by stop and route (APC data)

### Customer Understanding

Although the key metric is commonly called “ridership”, it is actually a measure of trip-making, not riders. Agencies need to begin to truly understand their customers as individuals, in addition to measuring unlinked trips. Customer profiles are an integral part of running a successful and adaptable modern business that public transit has not yet adopted. Once a true baseline of data has been gathered about current customers, agencies will understand whether their ridership is made up of five individuals riding 100 times, or 100 individuals riding five times. Paired with other basic customer information, these details become important not only in service planning but in effectively marketing transit to individuals based on their usage, as well as people who are like current customers. Several RGAP strategies are focused on building a customer profile database as part of promotional marketing efforts, which achieves two goals at once. In the long term, customer profile data helps define which riders stay with the system and how the customer base changes in response to effects both inside and outside of the agency’s control.

**DEVELOP**

- A TAP-integrated customer profile database

### Market Capture

Public transit “competes” on some level with other travel options - driving, TNCs, walking, bicycling, scooters, etc. At a corridor-level or subregional screenline, transit ridership data can be compared to all other travel data and measured over time to evaluate the effectiveness of new strategies, especially those relating to service quality. Data measuring vehicle trips is being gathered constantly and metrics for other modes are improving. Understanding the market capture and trends helps to frame whether transit ridership is increasing because people are making more trips, or if transit is actually moving the needle on reducing single-occupant vehicle trips. This is most valuable for TDM strategies and monitoring the effects of implementing bus-only lanes or other measures designed to improve transit service quality. In addition to trip data monitoring, a countywide longitudinal transit survey can expand the story on transit trip-making.

**DATA REQUIRED**

- Ridership data; Traffic counts; Vehicle occupancy estimates; TNC-use estimates; Big-data sources
Customer Perception

Customer satisfaction becomes a more powerful data point when paired with customer profiles, where agencies can learn how the perception of their service is changing over time by how long customers have been riding. The ultimate goal is to have consistently high ratings over time from long-time customers, paired with high ratings from new customers. Customer profiles and customer satisfaction data can identify what the “churn” is - are we retaining riders through life transitions like college graduation and new job locations? Developing a coordinated, subregional survey process will measure the satisfaction level at one time, setting the baseline against which to measure the benefits of RGAP strategies. Gathering data for customer satisfaction need not be a lengthy paper survey on the bus or a SurveyMonkey on the website. Several strategies identify opportunities to build a customer satisfaction database by engaging customers during promotional outreach efforts and gathering basic data through one to three-question surveys via text message, to ensure that feedback is a more dynamic and regular aspect of riding transit, similar to riding a TNC trip.

Non-Customer Perception

Regular follow-up on the “non-rider” survey is essential for understanding how some strategies are affecting the perception of the general public (people who are not yet transit customers). Some strategies may have a less immediate or tangible effect on ridership, and measuring public awareness of strategies that have been implemented will help define how well they are working. Standardize a survey that will be effective for all LACMOA agencies and useful in an ongoing, longitudinal analysis. Deploy the survey using social media targeting and push the survey out as a travel or transportation survey, not a “bus” survey, which non-riders are likely to ignore. Use intercept survey methods at regional events. Take advantage of employer-pass program outreach to distribute surveys to determine why employees do or don’t take advantage of their pass benefit. Conducting a regular non-rider survey gathers data for the agency and is also a marketing and outreach opportunity.

Operating Effectiveness

Build upon the operational effectiveness that agencies already measure to monitor other strategies and identify consistent ways to measure operational efficiency across agencies. Much of the data already exists for these strategies and can be adapted to evaluate progress on RGAP strategies. Operating efficiency metrics will identify the success of efforts to improve transit service quality; in conjunction with ridership data and customer profiles, this data will also help make the case for even more improvements in the future.

Cross-Agency Collaboration

The undertaking of the Ridership Growth Action Plan by more than a dozen transit operators in LA County is an historic collaboration step to collectively address shared challenges. Some of the most effective strategies for retaining, recruiting, and reclaiming customers will be those done in coordination among all the LACMOA agencies, at the regional or subregional level, because most current customers ride on many different agencies, and service area boundaries often don’t match up with regional travel patterns. Therefore, a measure of success for these strategies is whether or not the collaboration of these agencies continues beyond the development of the RGAP and through to implementation and follow-up. LACMOA can continue to monitor the progress of agencies individually and the group as a whole.
The matrix on the following pages details the 38 ridership growth strategies in the four primary categories of influence (Information, Agency Collaboration, Safety, and Service Quality). Each strategy is identified by the main category, and some affect other aspects as well. For example, a platform for customer experience ratings provides information to agencies about their services, and in turn can be used to improve service quality and safety.

**Theme: Information**

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<thead>
<tr>
<th>No.</th>
<th>Strategy Name</th>
<th>Coord. Level</th>
<th>Customer Goals</th>
<th>Themes</th>
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<td>Enhance College Pass Programs</td>
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<td>Engage Major Employers</td>
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<td>Life Transition Marketing</td>
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<td>Unified Transit Marketing</td>
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<td>Culturally Aware Communication</td>
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Theme: Collaboration

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<td>Develop a Customer Experience Program</td>
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<td>Leverage Operating Data</td>
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Nearly every strategy is implemented at the agency level; most should involve coordination with neighboring agencies in the subregion. Many are best accomplished with a unified regional approach. This is indicated by the Coordination Level boxes. For example, the Agency Collaboration at Every Level is an agency strategy in that internal staff from each department should work together towards attracting new customers. It is a subregional strategy in which staff and leadership from different departments can work directly on ridership growth initiatives between neighboring agencies. And, it is a regional strategy that began with the LACMA Regional Ridership Improvement Task Force and must continue to be a focus for the leadership of all agencies.
### Theme: Safety

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<td>Consistent Community Policing</td>
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The **Customer Goals** boxes indicate the expected group(s) to attract with the strategy; retaining existing customers, recruiting new customers, and reclaiming past customers. Many strategies should have some effect on two or three of the potential audiences. Strategies that improve the quality of service and customer experience to retain current customers will work best to recruit new customers and reclaim past customers when paired with marketing and promotional efforts.

Each strategy falls into one or more **Implementation Areas** as described earlier in this chapter. Like the Coordination Level factor, many strategies fall into the Process and Coordination Implementation Area to meet the goal of providing a seamless customer experience between agencies and across the region.
# Theme: Service Quality

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<td>38</td>
<td>Align Service with New Development</td>
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Seamless Fare Payment Options

Make fare payments on all LA County transit agencies as seamless as other mobility services.

Integrate payment options into existing transit trip-planning apps, smart phone payment technology (e.g. ApplePay), modeling the user experience off the simplicity and familiar interface that private sector transportation start-ups use to great success. Offer easy online payment by credit card, as well as autopay for automatic renewal of monthly passes or stored value, when it drops below the cost of a one-way fare. Making fare payments simpler and more accessible reduces boarding times, encourages ridership, and decreases the chances of negative operator/passenger interactions.

Customer Goals

RETAIN
RECLAIM
RECRUIT

Geographic Application

AGENCY
SUBREGIONAL
REGIONAL

Key Performance Indicators

RIDERSHIP
CUSTOMER UNDERSTANDING
MARKET CAPTURE
CUSTOMER PERCEPTION
NON-CUSTOMER PERCEPTION
OPERATING EFFECTIVENESS
AGENCY COLLABORATION

Timing and Cost

Mid-term
IMPLEMENTATION TIMELINE

Mid-term
BENEFITS EXPECTED

$\$
ESTIMATED COST

Focus Groups, Agency Interviews

CONTENT BASED ON

56 Ridership Growth Action Plan
Focus direct mailing and on-site promotional outreach at specific neighborhoods, schools, large employers, special events, and other institutions to get pre-loaded TAP cards into potential customers’ hands and encourage more trip-making through targeted marketing.

TAP card records are a powerful data analysis platform for understanding customer response to pass promotions. Designate a batch of pre-loaded TAP cards for distribution at particular events or places and monitor their travel patterns over time. Engage with people while distributing cards (or include a text-back code in the mailer to ‘activate transit rewards’) and incentivize continued transit use by offering auto-loading of additional seven-day passes in exchange for contact info and a brief follow-up survey asking simple questions about their experience and motivation to continue riding. Track outreach success and expand the program strategically. Monitor individual card use and stay in communication with customers via app communication or text messages (e.g. “Nice! You rode ten times last month. Here’s another seven-day pass! Keep it up!”).
Expand the number and visibility of physical locations where customers can purchase and reload TAP cards. Prioritize corridors with high ridership and/or high-frequency routes, especially locations with bus transfer stations.

For many customers, whether they are local residents or tourists, purchasing a TAP card online may be infeasible, and reloading online is not available immediately. Most people think first of the TAP vending machines (TVM), but TVMs are almost exclusively located at rail stations. Although there are retailers and other locations where TAP cards can be purchased or reloaded, the public awareness of this option is inadequate to substitute for the limited geography of the TVMs. TVMs should be located at major bus transfer stations. Efforts to increase TAP adoption should focus on raising awareness of the retail locations where TAP cards can be purchased and reloaded.

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**Customer Goals**

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- ![Blank](blank.png)
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RETAIN
RECLAIM
RECRUIT

**Geographic Application**

- ![Blank](blank.png)
- ![Checkmark](checkmark.png)
- ![Checkmark](checkmark.png)

AGENCY
SUBREGIONAL
REGIONAL

**Key Performance Indicators**

- RIDERSHIP
- CUSTOMER UNDERSTANDING
- MARKET CAPTURE
- CUSTOMER PERCEPTION
- NON-CUSTOMER PERCEPTION
- OPERATING EFFECTIVENESS
- AGENCY COLLABORATION

**Timing and Cost**

**Mid-term**

- IMPLEMENTATION TIMELINE
- BENEFITS EXPECTED

**Mid-term**

- **$$**
- ESTIMATED COST

**TAP Data Analysis, Focus Groups**

**CONTENT BASED ON**
Guaranteed Best Fare

Ensure customers get the best deal possible, based on how often they ride. If customers meet the monthly threshold of trips that equal a pass, make subsequent rides free.

A regional fare structure should encourage transit trip-making, with simple pay-as-you-go options that make riding a better deal the more you do it. Customers shouldn’t need to know everything about an agency’s fare structure and pass system and shouldn’t have to do math to determine if a pass is their best option. Los Angeles should follow the lead of New York’s MTA to reduce information barriers and implement Guaranteed Best Fare (GBF) systems with TAP- or smartphone-based payment. This is an equitable way to keep costs down for regular riders who may not have the cashflow to pay for a monthly pass up front if they don’t know that they will get the most value.

---

Customer Goals

- RETAIN
- RECLAIM
- RECRUIT

Geographic Application

- AGENCY
- SUBREGIONAL
- REGIONAL

Key Performance Indicators

- RIDERSHIP
- CUSTOMER UNDERSTANDING
- MARKET CAPTURE
- CUSTOMER PERCEPTION
- NON-CUSTOMER PERCEPTION
- OPERATING EFFECTIVENESS
- AGENCY COLLABORATION

Timing and Cost

**Near-term**

- IMPLEMENTATION TIMELINE

**Mid-term**

- BENEFITS EXPECTED

**$**

- ESTIMATED COST

Agency Interviews, Focus Groups

**CONTENT BASED ON**
Create a frequent rider reward program that incentivizes trip-making via direct dynamic marketing while gathering customer information.

Airlines use frequent flyer programs as more than promotional tools; they use them to gather customer data and analyze travel habits to better tailor services and identify potential customers. Most transit reward programs, on the other hand, rely on discounts at businesses, which are easy to secure but tangential to motivating additional rides. Develop a rider reward program modeled off frequent flyer programs: more trips as a reward for making trips. In exchange, customers volunteer a minimum amount of information about themselves to help the agency build a better service and larger customer base. Other incentives could include referral rewards for encouraging non-riders to take transit. Focus reward programs on incentivizing infrequent riders to make more trips by making the reward value greater for less frequent riders.

Customer Goals

- RETAIN
- RECLAIM
- RECRUIT

Geographic Application

- AGENCY
- SUBREGIONAL
- REGIONAL

Key Performance Indicators

- RIDERSHIP
- CUSTOMER UNDERSTANDING
- MARKET CAPTURE
- CUSTOMER PERCEPTION
- NON-CUSTOMER PERCEPTION
- OPERATING EFFECTIVENESS
- AGENCY COLLABORATION

Timing and Cost

- Mid-term IMPLEMENTATION TIMELINE
- Mid-term BENEFITS EXPECTED
- Mid-term ESTIMATED COST
- Agency Interviews, TAP Data Analysis CONTENT BASED ON
Price Passes to Increase Market Demand

Reduce fare pass multipliers to target customers who ride less than twice per day. Offer online payment and autopay for automatic monthly pass renewal.

Current fare passes only appeal to a small share of regular customers and require a lot of riding to be cost effective. Lower the cost of passes to appeal to a wider market of customers and encourage this broader pool to ride more often. Once customers have paid for a pass, they may be more likely to take the bus for their next trip, because it feels free to them or because they ‘want to get the most out of their money.’ Lowering the barrier to entry for buying a pass will encourage more customers to think in this way. Offer easy online payment by credit card, as well as autopay for those who wish to automatically renew their fare passes every month.

Customer Goals

- ✔ RETAIN
- ✔ RECLAIM
- ✔ RECRUIT

Geographic Application

- ✔ AGENCY
- ■ SUBREGIONAL
- ✔ REGIONAL

Key Performance Indicators

- RIDERSHIP
- CUSTOMER UNDERSTANDING
- MARKET CAPTURE
- CUSTOMER PERCEPTION
- NON-CUSTOMER PERCEPTION
- OPERATING EFFECTIVENESS
- AGENCY COLLABORATION

Timing and Cost

**Near-term**

- IMPLEMENTATION TIMELINE

**Mid-term**

- BENEFITS EXPECTED
- ESTIMATED COST

**$\$**

Content based on Agency Interviews, TAP Data Analysis
Ridership Growth Action Plan

Dynamic Customer Experience Ratings

Offer customers the opportunity to rate their experience through a smartphone app. Use customer ratings to develop Key Performance Indicators.

Popular apps like Uber and Lyft allow their customers to rate their experience. In turn, the companies use these ratings to evaluate the performance of drivers. Offer customers a similar opportunity to rate their experience, whether in terms of cleanliness, safety, service, reliability, and/or some other measure, and use monthly averages or median ratings as Key Performance Indicators.

Customer Goals

- Retain
- Reclaim
- Recruit

Geographic Application

- Agency
- Subregional
- Regional

Key Performance Indicators

- Ridership
- Customer Understanding
- Market Capture
- Customer Perception
- Non-Customer Perception
- Operating Effectiveness
- Agency Collaboration

Timing and Cost

Mid-term

- Implementation Timeline
- Benefits Expected

Mid-term

- Estimated Cost

Focus Groups

Content Based On
Enhance College Pass Programs

Expand the U-Pass program and incorporate cooperatively with the municipal operators. Proactively engage schools and develop a standardized welcome package for newly admitted students.

Consolidate the several college pass programs into a single, easy-to-manage offering for all agencies and colleges in LA County, to build a common transit culture among operators and students. Make the administration of the program as easy as possible for schools and proactively engage schools to participate. Creating a standardized “welcome package” for newly admitted students will acquaint them with their new transit benefit. Consider offering the first semester pass to students for free; as with all other TAP-based strategies, monitor this data to measure the success of the program. Offer the college pass discount for an additional 6-12 months after the student is no longer enrolled to encourage continued use of transit while transitioning to adult life.

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Key Performance Indicators

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<th>CUSTOMER PERCEPTION</th>
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Timing and Cost

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Mid-term

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<th>ESTIMATED COST</th>
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Agency Interviews, TAP Data Analysis

CONTENT BASED ON
Engage Major Employers

Court major regional employers to capture the commuter market with a special business TAP program.

Places such as Seattle and Denver have made great strides in highlighting transit as the best commute option through strong partnerships with large employers. LA County transit agencies should re-orient employer transit benefits to utilize the countywide EZPass and pool resources to court enthusiastic business partners. Use TAP analysis from this study to prioritize areas of regional significance, especially where the commute times are long and parking costs are high. Align promotional outreach and trip-making incentives to other strategies, including new TAP incentives, data gathering efforts, express service expansion, and others. Gather feedback from new participants to iteratively improve the program.

Customer Goals

| RETAIN | RECLAIM | RECRUIT |

Geographic Application

| AGENCY | SUBREGIONAL | REGIONAL |

Key Performance Indicators

| RIDERSHIP | CUSTOMER UNDERSTANDING | MARKET CAPTURE | CUSTOMER PERCEPTION | NON-CUSTOMER PERCEPTION | OPERATING EFFECTIVENESS | AGENCY COLLABORATION |

Timing and Cost

| Near-term | Mid-term | $ |

Agency Interviews, TAP Data Analysis

64 Ridership Growth Action Plan
Life-Transition Marketing

Connect with potential customers undergoing a life transition, such as moving to a new home or changing jobs, to make them aware of the local transit services and offer promotional opportunity for free ride trial.

When most people move to a new home, they receive mail automatically from nearby businesses welcoming them to the neighborhood and offering coupons to attract them to the store. Public transit should also be a local business offering a deal to the newcomer. Subregional materials can be developed and tailored to the transit offerings near the address. Include a TAP card in the mailing and track the success of the program through data analysis of the utilization of cards mailed out. A similar approach can be made in partnerships with agencies, especially those participating in the B-TAP or similar programs to welcome new passholders and provide basic information on getting started with transit.

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**Customer Goals**

- RETAIN
- RECLAIM
- RECRUIT

**Geographic Application**

- AGENCY
- SUBREGIONAL
- REGIONAL

**Key Performance Indicators**

- RIDERSHIP
- CUSTOMER UNDERSTANDING
- MARKET CAPTURE
- CUSTOMER PERCEPTION
- NON-CUSTOMER PERCEPTION
- OPERATING EFFECTIVENESS
- AGENCY COLLABORATION

**Timing and Cost**

**Near-term**

- IMPLEMENTATION TIMELINE

**Mid-term**

- BENEFITS EXPECTED

**$**

- ESTIMATED COST

Focus Groups

Content Based On
Coordinate at the agency, regional, and subregional levels to methodically market transit. Focus on reaching non-riders with messaging that positions transit as an essential part of a new LA lifestyle.

Good marketing has been essential to the success of transit’s greatest competition since the 1940s: car culture. Public transit can borrow these techniques to market itself as a convenient and desirable benefit of living in LA County. Elsewhere in the U.S., transit agencies coordinate their marketing staff with every department so that each aspect of operations is accompanied by a marketing component. Marketing campaigns can target specific neighborhoods using data from related strategies, tailoring messaging to resonate with a specific customer profile. Marketing should target non-riders and avoid apologizing for the known trade-offs of riding transit versus driving alone. Brand transit as a single, countywide-unified service. Be sure the basics of riding are covered so the experience portrayed in advertising matches customers’ experiences when they first ride.

### Customer Goals

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### Key Performance Indicators

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### Timing and Cost

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Culturally Aware Communication

Ensure that messaging to customers is not only provided in translation but that it is culturally aware.

It’s important that customers can access information in the language that’s most comfortable to them. Equally important, however, is that communications to customers are culturally aware, regardless of language in targeted communication via apps, social media, etc.

Customer Goals
- RETAIN
- RECLAIM
- RECRUIT

Geographic Application
- AGENCY
- SUBREGIONAL
- REGIONAL

Key Performance Indicators
- RIDERSHIP
- CUSTOMER UNDERSTANDING
- MARKET CAPTURE
- CUSTOMER PERCEPTION
- NON-CUSTOMER PERCEPTION
- OPERATING EFFECTIVENESS
- AGENCY COLLABORATION

Timing and Cost

Ongoing
- IMPLEMENTATION TIMELINE

Ongoing
- BENEFITS EXPECTED

$ ESTIMATED COST

Focus Groups
CONTENT BASED ON
Implement a regional standard for data management and reporting, especially for foundational data on ridership and service levels.

Gathering ridership and operations data from the many transit agencies in LA County highlighted the need for standardization. Currently, each agency has a unique method for recording and reporting what is essentially the same activity: picking up and dropping off customers. Resolving these differences and aligning analysis will help agencies collaboratively monitor and react to ridership trends. A unified standard will also make it easier to understand true longitudinal patterns at the stop, line, corridor, subregional, and regional levels. Metro and LACMA agencies can pool resources to identify software(s) for standardization and train staff to make the most of the vastly-improved data source.
Institutionalize regional collaboration across agencies at the staff level and make subregional planning a regular activity.

Los Angeles County is one-of-a-kind when it comes to the number and scope of its public transit agencies. The collaboration amongst these agencies that has occurred on this RGAP project represents a historic step towards more customer-oriented regional transit. Continue to cooperate and develop strong subregional relationships across agencies to optimize service. Focus on bolstering quality service amongst agencies and shy away from a competitive culture. By empowering and expecting staff to build these collaborative relationships, the work of the RRITF will become proactive and foundational.

Customer Goals
- RETAIN
- RECLAIM
- RECRUIT

Geographic Application
- AGENCY
- SUBREGIONAL
- REGIONAL

Key Performance Indicators
- RIDERSHIP
- CUSTOMER UNDERSTANDING
- MARKET CAPTURE
- CUSTOMER PERCEPTION
- NON-CUSTOMER PERCEPTION
- OPERATING EFFECTIVENESS
- AGENCY COLLABORATION

Timing and Cost
- Ongoing
  - IMPLEMENTATION TIMELINE
- Ongoing
  - BENEFITS EXPECTED
- $$
  - ESTIMATED COST
  - GM Workshop
  - CONTENT BASED ON
Cooperative Skills Development

Develop a shared learning or internship program to build uniform planning and operations management skills among agencies.

Public transit operations and service planning is a career and skill set that few people go to school for. Pool the great on-the-job knowledge from the many agencies around the county to cooperatively develop staff skills. Plan for the future by engaging with high schools and college programs to develop internships within these functions, which can build a pool of young people interested in public transit careers and help agencies stay current with technology and culture. All transit agencies fundamentally serve the same function, and each can learn something from another to help support the many strategies recommended here. A more efficient and resilient operations staff opens the door to providing the highest quality service.

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**Customer Goals**

- RETAIN
- RECLAIM
- RECRUIT

**Geographic Application**

- AGENCY
- SUBREGIONAL
- REGIONAL

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**Key Performance Indicators**

- RIDERSHIP
- CUSTOMER UNDERSTANDING
- MARKET CAPTURE
- CUSTOMER PERCEPTION
- NON-CUSTOMER PERCEPTION
- OPERATING EFFECTIVENESS
- AGENCY COLLABORATION

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**Timing and Cost**

**Mid-term**

IMPLEMENTATION TIMELINE

**Long-term**

BENEFITS EXPECTED

**$$**

ESTIMATED COST

GM Workshop

CONTENT BASED ON
Develop a Customer Experience Program

Thread the importance of the customer experience throughout each agency department, and cooperatively between Metro and LACMOA agencies, at a policy and programmatic level.

Agencies must make a concerted effort to ensure that all of the strategies for improving service and marketing those improvements are borne out when customers make their first, fifth, and fiftieth trips. Rather than striving to “innovate,” transit operators must excel on the basics of good customer experience and service quality. This is a role in which transit competes best against other mobility options. Develop a staff role for ensuring that all functions of the agency are engaged in providing the best possible customer service. Besides regularly riding the service themselves to truly understand the customer experience, this person must have the ability and authority to engage with all departments to identify opportunities to improve the customer experience and ensure that these improvements are carried out.

Customer Goals

- RETAIN
- RECLAIM
- RECRUIT

Geographic Application

- AGENCY
- SUBREGIONAL
- REGIONAL

Key Performance Indicators

- RIDERSHIP
- CUSTOMER UNDERSTANDING
- MARKET CAPTURE
- CUSTOMER PERCEPTION
- NON-CUSTOMER PERCEPTION
- OPERATING EFFECTIVENESS
- AGENCY COLLABORATION

Timing and Cost

- Near-term
  - IMPLEMENTATION TIMELINE
- Mid-term
  - BENEFITS EXPECTED
- $$
  - ESTIMATED COST

Focus Groups, Agency Interviews

CONTENT BASED ON
Metro and LACMOA agencies should support or even sponsor some of the already-existing and free apps that provide easy to use real-time arrival and trip planning data for all transit agencies, rather than developing single-agency apps.

Many software developers have been offering extremely high-quality apps for transit trip-planning and real-time info for years. These apps have extremely intuitive interfaces and are frequently updated. Many of the developers are transit enthusiasts themselves and offer partnerships with agencies to provide even better data and feedback to the agencies. Individual agency apps limit the ability of the customer to find the best travel option for the particular trip they are making. The best apps available already integrate agencies not only in the same region, but typically work worldwide. Agencies can and should recommend these apps to their customers as a means to make traveling by transit easier to understand and more reliable to plan on.

### Customer Goals

- RETAIN
- RECLAIM
- RECRUIT

### Geographic Application

- AGENCY
- SUBREGIONAL
- REGIONAL

### Key Performance Indicators

- RIDERSHIP
- CUSTOMER UNDERSTANDING
- MARKET CAPTURE
- CUSTOMER PERCEPTION
- NON-CUSTOMER PERCEPTION
- OPERATING EFFECTIVENESS
- AGENCY COLLABORATION

### Timing and Cost

**Mid-term**

- IMPLEMENTATION TIMELINE
- BENEFITS EXPECTED
- ESTIMATED COST

**Focus Groups**

CONTENT BASED ON
Partner with universities and civic hacktivists to improve data management and analysis.

Universities are on the cutting edge of technology and data science, and their students and faculty are enthusiastic about solving problems. Maintain detailed, standardized, and regularly updated transit data on a regional open-data portal, and leverage LA County’s powerful academic resources to analyze it. Encourage civic ‘hacktivists’ and the open-source software community to create apps and other tools that move transit accessibility and information-sharing forward.

Customer Goals

- Retain
- Reclaim
- Recruit

Geographic Application

- AGENCY
- SUBREGIONAL
- REGIONAL

Key Performance Indicators

- Ridership
- Customer Understanding
- Market Capture
- Customer Perception
- Non-Customer Perception
- Operating Effectiveness
- Agency Collaboration

Timing and Cost

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Share the wealth of data from transit operations to help local jurisdictions address issues of reliability and bottlenecks along corridors.

Agencies often need the help of the local jurisdiction to address traffic operations issues that negatively affect transit service. Using the robust data that many agencies already collect on transit performance, such as automated vehicle location and on-time performance reports, transit operators can work with local jurisdictions to justify investment at locations that cause delay for transit; in many cases, this will also help improve traffic flow, making it a win-win for the local jurisdiction. Good transit data can show how travel conditions have changed over time and make the case for transit priority improvements.

**Customer Goals**

- RETAIN
- RECLAIM
- RECRUIT

**Geographic Application**

- AGENCY ✓
- SUBREGIONAL ✓
- REGIONAL

**Key Performance Indicators**

- RIDERSHIP
- CUSTOMER UNDERSTANDING
- MARKET CAPTURE
- CUSTOMER PERCEPTION
- NON-CUSTOMER PERCEPTION
- OPERATING EFFECTIVENESS
- AGENCY COLLABORATION

**Timing and Cost**

**Mid-term**

IMPLEMENTATION TIMELINE

**Long-term**

BENEFITS EXPECTED

**$$**

ESTIMATED COST

Subregional Analysis

CONTENT BASED ON
Enhanced Customer Facing Operator Role

Develop a common policy that sets high expectations for customer service. Empower operators to provide excellent customer service through new training.

Transit becomes part of the social fabric when operators welcome every customer on board, valuing them as members of a community that doesn’t exist among drive-alone commuters. Through common training, policies, and expectations, operators for all agencies can create a consistently friendly and welcoming onboard environment. Operators will assume all customers are first-time riders and be able to provide them with reliable information. By engaging every customer as they board, the rider experience becomes more personal, and operators are better situated to monitor their buses and de-escalate incidents. Consistent operator response to onboard problems will improve customer trust and comfort, ensuring stable ridership. As agencies move to autonomous transit vehicles in the future, operators can transition to focus exclusively to customer needs and be a safety presence (such as the role played by flight attendants).

Customer Goals

- RETAIN
- RECLAIM
- RECRUIT

Geographic Application

- AGENCY
- SUBREGIONAL
- REGIONAL

Key Performance Indicators

- RIDERSHIP
- CUSTOMER UNDERSTANDING
- MARKET CAPTURE
- CUSTOMER PERCEPTION
- NON-CUSTOMER PERCEPTION
- OPERATING EFFECTIVENESS
- AGENCY COLLABORATION

Timing and Cost

**Near-term**

- IMPLEMENTATION TIMELINE

**Mid-term**

- BENEFITS EXPECTED

**$**

- ESTIMATED COST

Focus Groups, Agency Interviews
Supportive Fare Enforcement

Provide operators with clear expectations and protocols for engaging fare evaders.

It’s important to enforce the rules of riding. Customers who regularly witness fare evasion may think that they, too, can break the rules, or they may feel that rules related to their safety won’t be enforced. Fare enforcement, however, doesn’t need to be impersonal. It should be a part of customer outreach; an opportunity for operators to engage with riders and provide them with payment options when they are without fare. An equity-centric, proactive approach should involve expanding access to TAP cards to make fare payment easier for both operators and riders. Engaging with fare evaders does not need to escalate to the point of risk for the operator. Simply greeting customers as they board and politely asking for some fare is better than operators simply staring forward as people walk on the bus without paying.

Customer Goals

- RETAIN
- RECLAIM
- RECRUIT

Geographic Application

- AGENCY
- SUBREGIONAL
- REGIONAL

Key Performance Indicators

- RIDERSHIP
- CUSTOMER UNDERSTANDING
- MARKET CAPTURE
- CUSTOMER PERCEPTION
- NON-CUSTOMER PERCEPTION
- OPERATING EFFECTIVENESS
- AGENCY COLLABORATION

Timing and Cost

Near-term

Mid-term

$
Create or adapt smartphone app(s) that allows customers to report security incidents and other concerns quickly and easily, regardless of the transit service they’re riding.

A universal app for all transit agencies in LA County would offer customers a one-stop shop for reporting problems they experience with transit. Determine the most frequently reported issues and make these the main reporting categories in the app’s user interface. Simple, streamlined, and intuitive options make it easy and quick for riders to submit a concern, as in apps like Lyft and Limebike. Designing the app with ease of use in mind will encourage customers to use it regularly and will strengthen an important data source. Data collected through the app would allow maintenance and security resources to be deployed efficiently. Alternatively include functionality into most used third-party apps.
Ridership Growth Action Plan

**Enhance Incident Response Communication**

Respond to incidents in a timely manner, including incident review after the fact. Provide follow-up with affected customers to offer closure and maintain their trust.

How agencies respond to incidents reported by customers and operators directly affects the customer experience and customers’ willingness to ride transit again. Incidents therefore provide important opportunities to demonstrate agencies’ commitment to customer service, including safety, comfort, and service. Ensure that responses are timely and appropriate, that incidents are reviewed effectively, and follow up with affected customers after the fact to build and maintain trust and demonstrate next-level customer service.

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**Customer Goals**

RETAIN

RECLAIM

RECRUIT

**Geographic Application**

AGENCY

SUBREGIONAL

REGIONAL

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**Key Performance Indicators**

RIDERSHIP

CUSTOMER UNDERSTANDING

MARKET CAPTURE

CUSTOMER PERCEPTION

NON-CUSTOMER PERCEPTION

OPERATING EFFECTIVENESS

AGENCY COLLABORATION

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**Timing and Cost**

Near-term

IMPLEMENTATION TIMELINE

Mid-term

BENEFITS EXPECTED

$$_$$

ESTIMATED COST

Focus Groups

CONTENT BASED ON
Data-Driven Security

Ridership Growth Action Plan

Use incident reporting and security data to anticipate problem areas and strategically deploy security resources.

Coordinate across agencies to ensure proactive monitoring and security presence at stops where the risk of incidents is high. Simplify enforcement and staff incident reports to focus on broader categories that align with issues that negatively affect customer experience and discourage ridership. Deploy security, staff, and physical improvements to stops where data show problems that make people feel unsafe or uncomfortable on transit.

Customer Goals

- RETAIN
- RECLAIM
- RECRUIT

Geographic Application

- AGENCY
- SUBREGIONAL
- REGIONAL

Key Performance Indicators

- RIDERSHIP
- CUSTOMER UNDERSTANDING
- MARKET CAPTURE
- CUSTOMER PERCEPTION
- NON-CUSTOMER PERCEPTION
- OPERATING EFFECTIVENESS
- AGENCY COLLABORATION

Timing and Cost

- Mid-term
  - IMPLEMENTATION TIMELINE

- Long-term
  - BENEFITS EXPECTED

- $$
  - ESTIMATED COST

Data Collection, Agency Interviews

Content Based On
Social Services Outreach

Develop a social service outreach program focused on routes where the need is greatest. Engage with riders in need of mental health services to prevent behavior issues that discourage others from riding.

Transit is both a service and a public space where people of all walks of life encounter one another. Many who need social support can be found riding transit simply as a means to shelter. Often these riders are not actively misbehaving, but unfortunately the increasing presence on transit of people with hygiene or mental health issues can discourage others from riding. A comprehensive partnership with social services to find and engage riders in need will help improve everyone's experience, and can help prevent behavioral issues on transit that may negatively affect others. Consider building on Metro’s existing intervention program on rail and at stations to expand to other agencies.

Customer Goals

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<td>Focus Groups</td>
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80 Ridership Growth Action Plan
Develop a strategy to provide consistent community policing. Consistent messaging and proactive engagement will ensure that all customers feel safe. Provide comprehensive training to de-escalate incidents and prevent issues before they arise in transit.

Public transit is a community environment that demands community policing to help customers feel safe. The safety and enforcement culture should be proactive in engaging with the customers and focused on preventing incidents by being consistently present on transit. Provide best-practices training and expectations for de-escalating incidents.

**Customer Goals**

- RETAIN
- RECLAIM
- RECRUIT

**Geographic Application**

- AGENCY
- SUBREGIONAL
- REGIONAL

**Key Performance Indicators**

- RIDERSHIP
- CUSTOMER UNDERSTANDING
- MARKET CAPTURE
- CUSTOMER PERCEPTION
- NON-CUSTOMER PERCEPTION
- OPERATING EFFECTIVENESS
- AGENCY COLLABORATION

**Timing and Cost**

- **Mid-term**
  - IMPLEMENTATION TIMELINE

- **Long-term**
  - BENEFITS EXPECTED

- **$$**
  - ESTIMATED COST

- Focus Groups

**CONTENT BASED ON**

Ridership Growth Action Plan
Develop a county-wide transit stop program for a universally-recognizable stop design with consistent wayfinding, shade, shelter, and seating. The design kit should support local agency and community branding and identity yet be uniform enough to allow easy recognition as a transit stop.

Uniform stop guidelines for all LA County transit will make transit easily recognizable, accessible, and familiar to riders. In areas where multiple agencies serve the same curb, wayfinding clutter and competing priorities can be replaced with a clean, simple, and modern aesthetic that is welcoming and comfortable. The design should follow international best practices for every element: universally accessible wayfinding and physical space, functional shade, and benches designed for short-term seating. A county-wide cooperative stop program will reap other benefits, such as bulk procurement, simplicity of installation, and more efficient maintenance. Stop guidelines should facilitate local branding and identity while providing a consistent, easily recognizable design and comfortable wait for transit.
Data-Driven Stop Improvements

Combine incident data and ridership reporting to evaluate where stop amenities are serving customers’ needs. Prioritize stop improvements where incidents are high and/or ridership is low.

Matching stop amenities to customers’ needs and addressing problems where they are a proven trend are key components of consistent and proactive customer service. Incident data show trends in where problems exist and persist. Paired with ridership reports, a relationship can be drawn between existing amenities, incidents, and ridership. Where ridership is low and incidents high, strategic improvements to stop amenities can have an important impact. Using data to drive such decisions ensures that resources are being used strategically towards the largest ridership returns.
Reliably Clean Stops

Work with communities and service organizations to clean stops regularly of trash and graffiti, keeping them in good repair.

Bus stops offer the customer a first impression of the transit experience. Trash, graffiti, and damage to amenities like furniture and trash cans give the impression that rules can be broken and that nobody is paying attention. Clean and well-maintained stops and amenities, on the other hand, send a message that the entire system is in order and that the customer can know what to expect. Transit agencies can work with other agencies, their local jurisdiction or service organizations to develop clean-up plans for regular upkeep. An “adopt-a-stop” program may also serve the need at select high-visibility locations and offers the benefits of sponsorship for community partners.

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Customer Goals

- Retain
- Reclai
- Recruit

Geographic Application

- Agency
- Subregional

Key Performance Indicators

- Ridership
- Customer Understanding
- Market Capture
- Customer Perception
- Non-Customer Perception
- Operating Effectiveness
- Agency Collaboration

Timing and Cost

Near-term

- Implementation Timeline
- Benefits Expected

Long-term

- Estimated Cost

Focus Groups

Content Based On
Service Updates by App

Use real-time data to communicate service conditions via up-to-the-minute alerts. Crowdsource transit issues to engage customers and serve them better.

For transit riders, information is power. By integrating real-time transit data into trip-planning and other transit apps, agencies can provide customers with updates on delays, detours, and stop closures. In 2018, it isn’t enough to passively report this information; it needs to be actively communicated to customers through push notifications, text alerts, and timely app updates. Some transit agencies already do this via the Transit app, notifying customers with service alerts. Crowdsourcing service issues can also generate important service condition data. Waze, the immensely popular driving app, incentivizes its users to report crashes and other delays that can be shared with other drivers. Similar functionality in a transit app could engender trust and confidence in the reliability of transit trip-making information for customers.
Display Best Available Info

At stops and stations where real-time signs are provided, specify equipment and software that can default to scheduled info when real-time data is offline. Ensure equipment is kept in a state of good repair.

The importance of providing on-location real-time information is declining with the widespread adoption of smartphones. However, at many locations this amenity exists and at busy locations it is still an important element of providing a high-quality passenger experience. Design and specify systems that provide the most reliable information available; if the real-time arrival service goes down, a resilient system will switch to display (and preferably, denote) scheduled information instead. Providing the best available information is better than none at all. If legacy systems cannot be upgraded for whatever reason, provide information on or near the sign directing customers to use a recommended app when the system is offline.

Customer Goals

- RETAIN
- RECLAIM
- RECRUIT

Geographic Application

- AGENCY
- SUBREGIONAL
- REGIONAL

Key Performance Indicators

- RIDERSHIP
- CUSTOMER UNDERSTANDING
- MARKET CAPTURE
- CUSTOMER PERCEPTION
- NON-CUSTOMER PERCEPTION
- OPERATING EFFECTIVENESS
- AGENCY COLLABORATION

Timing and Cost

- Mid-term IMPLEMENTATION TIMELINE
- Mid-term BENEFITS EXPECTED
- $\$\$ ESTIMATED COST
- Focus Groups CONTENT BASED ON
At the subregional level, refine fixed-route bus network across agencies to maximize speed and reliability along major corridors. Emphasize unified system for customers across operators. Implement extensive corridor marketing strategies along with service changes.

Fixed-route transit is competitive for medium-distance trips in LA County; those too far for walking or biking, far enough to compete with Lyft and Uber on price, and direct enough that they are comparable to driving along the same corridor. Although trips on the whole in LA County are widely dispersed, there is still a substantial market of travel between two points along the same corridor, or a short distance away from a main corridor by transfer. The fixed-route network falters when trying to do too much to serve individual interests. Except where walkability is a major limitation to accessing transit, align routes to serve the major corridor and reduce stop density, especially in walkable commercial and residential districts. Consider shifting service allocation from low-frequency parallel routes on minor streets to the major corridor as a tradeoff to support frequency increases. Implement service changes with extensive marketing campaign via geographically targeted social media, outdoor advertising, and targeted outreach to businesses and institutions on the corridor.
Implement all best practices to provide frequent and reliable service delivery. Prioritize corridors with the highest potential for ridership growth.

Best-practices for improving transit speed and reliability are well-documented and examples of their success are found around the nation and the world. Strategies such as increased stop spacing, all-door boarding, transit signal priority, and bus-only lanes will all improve the appeal of mainline routes and every step of progress along this path is an opportunity to market investment in transit to gain more customers. Begin with low-hanging fruit such as stop consolidation in walkable areas. In conjunction with strategies to develop better customer understanding through TAP promotions and data analysis, and service alignment strategies, focus financial and political capital on strategic, corridor-based implementation of transit service quality improvements. Develop subregional plans in collaboration with neighboring agencies and engage the riders and the local jurisdiction to build support. Identify corridors with high ridership, especially those which have been most heavily impacted (both in terms of ridership and service quality) by increasing traffic - these corridors with the most to gain from transit improvements will receive the greatest support from past, present, and potential customers.
Reduce Transfers

Let the customer experience - not historic routing - drive corridor-level service planning. Reduce transfers to attract new customers.

Serving markets with one-seat rides to and from major destinations will dramatically improve the customer experience and increase ridership. Often, bus routes outgrow the one-time development patterns they were designed to serve. Old streetcar lines, for example, are not always the best reference for corridor-level planning today. Instead, travel market analysis of current land use patterns can reveal potential customers and underserved areas. Aim to serve these markets at a practical corridor level, with the goal of reducing transfers and serving existing demand, rather than splitting corridors up amongst agencies. In some places, realignment might mean expanding beyond historic service areas and trading shorter local routes for longer, regional service.

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**Customer Goals**

- **RETAIN**
- **RECLAIM**
- **RECRUIT**

**Geographic Application**

- **AGENCY**
- **SUBREGIONAL**

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**Key Performance Indicators**

- **RIDERSHIP**
- **CUSTOMER UNDERSTANDING**
- **MARKET CAPTURE**
- **CUSTOMER PERCEPTION**
- **NON-CUSTOMER PERCEPTION**
- **OPERATING EFFECTIVENESS**
- **AGENCY COLLABORATION**

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**Timing and Cost**

- **Long-term IMPLEMENTATION TIMELINE**
- **Long-term BENEFITS EXPECTED**
- **$$$$ ESTIMATED COST**

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Expand Express Service

Use new data sources to identify good markets for additional express transit.

Directing express transit investments towards major employment hubs will help shift low-hanging commute trips from drive-alone to transit. While local routes dominate bus service in LA County, a higher share of express routes operate successfully in other large metro areas. For many riders, local bus service is too time-consuming for a commute trip of more than a few miles, meaning a large market of commuters in the County remains untapped. Using new big data sources to find commute centers can reveal these untapped markets for longer, express service, especially in recently-redeveloped underserved areas. Integrate expanded express service with improved workplace transit marketing and passes to increase the likelihood of success.

Customer Goals

- RETAIN
- RECLAIM
- RECRUIT

Geographic Application

- AGENCY
- SUBREGIONAL
- REGIONAL

Key Performance Indicators

- RIDERSHIP
- CUSTOMER UNDERSTANDING
- MARKET CAPTURE
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- NON-CUSTOMER PERCEPTION
- OPERATING EFFECTIVENESS
- AGENCY COLLABORATION

Timing and Cost

Long-term

- IMPLEMENTATION TIMELINE

Long-term

- BENEFITS EXPECTED

Long-term

- ESTIMATED COST

GM Workshop, Focus Groups, Survey, Agency Interviews, Streetlight Data Analysis

CONTENT BASED ON
Enhance Demand-Based Night Options

Implement demand-response services and/or TNC integration to augment late-night fixed routes.

Night service is essential in a 24/7 world city, but existing coverage in LA County is thin and frequency is low. Evaluate areas where demand could be met with an e-hailing-style service. The concept is to make it possible for customers to use transit for the daytime half of their trip but use e-hailing services for their return, where frequency and coverage are less appealing. This service could be provided by agencies, or could be part of a mobility partnership with a TNC. Continue to provide fixed-route services on major corridors and use demand-response to fill in coverage gaps and feed to trunk lines. With an app-based trip-making experience, the level of service and service area can be increased at a cost similar to transit.

Customer Goals

- Retain
- Reclaim
- Recruit

Geographic Application

- Agency
- Subregional
- Regional

Key Performance Indicators

- Ridership
- Customer Understanding
- Market Capture
- Customer Perception
- Non-Customer Perception
- Operating Effectiveness
- Agency Collaboration

Timing and Cost

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Focus Groups, Subregional Analysis
New Mobility Partnerships

Promote transit as part of new mobility options, developing partnerships with companies like Lyft, which complement transit trips and can provide data on travel habits back to the transit agency.

Partnerships with transportation-technology firms like TNCs provide a valuable opportunity to expand awareness of transit as an option for at least one leg of a trip that someone might otherwise make entirely by TNC. A well-negotiated partnership can also produce information for the transit agency about customer tripmaking that could help improve service alignment and allocation by optimizing service for where it competes with TNCs and stepping back when it doesn’t.
Monitor land use and market trends to align service where subregional development is active and/or where the cost of travel and parking is high. Offer direct connections to existing activity centers, while responding to changes in land use and development that offer opportunities to serve new riders. Offer service to new developments and take advantage of increases in the cost or frustration of traveling by car and parking in areas experiencing new development.

<table>
<thead>
<tr>
<th>Customer Goals</th>
<th>Geographic Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>RETAIN</td>
<td>✓</td>
</tr>
<tr>
<td>RECLAIM</td>
<td>✓</td>
</tr>
<tr>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>RECRUIT</td>
<td></td>
</tr>
<tr>
<td>AGENCY</td>
<td>✓</td>
</tr>
<tr>
<td>SUBREGIONAL</td>
<td>✓</td>
</tr>
<tr>
<td>REGIONAL</td>
<td></td>
</tr>
</tbody>
</table>

Key Performance Indicators

<table>
<thead>
<tr>
<th>RIDERSHIP</th>
<th>CUSTOMER UNDERSTANDING</th>
<th>MARKET CAPTURE</th>
<th>CUSTOMER PERCEPTION</th>
<th>NON-CUSTOMER PERCEPTION</th>
<th>OPERATING EFFECTIVENESS</th>
<th>AGENCY COLLABORATION</th>
</tr>
</thead>
</table>

Timing and Cost

<table>
<thead>
<tr>
<th>Long-term IMPLEMENTATION TIMELINE</th>
<th>Long-term BENEFITS EXPECTED</th>
<th>$$$ ESTIMATED COST</th>
<th>Subregional Analysis CONTENT BASED ON</th>
</tr>
</thead>
</table>
The subregional action plans present a selected subset of the RGAP strategies, which are the eight to ten high-priority strategies to be implemented in each subregion. These strategies were identified as priorities based on findings from the agency and subregional data analysis, the subregional results from the countywide quantitative survey, and were also the priorities for each subregion identified at the General Managers workshop.
Connecting with potential and current customers directly is an integral element of making transit a part of the community fabric. This subregion is home to a great diversity of communities and is above the County average for households earning less than $125,000 and households with children. There are opportunities to make every family dollar earned go farther with transit and to connect with people in the greatest need to improve community outcomes and make the region a better place.

Use the travel market analysis and demographics to identify neighborhoods where TAP card distribution and direct marketing could benefit a great number of people – especially neighborhoods near frequent transit other than the Metro Blue or Green lines. The demographic data can illustrate neighborhoods where incomes are lower and jobs are farther, while the travel market data can identify the strongest trip connections. For each neighborhood, distribute TAP cards to the community with promotional value and information on a featured service connection that matches the travel market.

Distributing TAP cards provides a limited-time benefit for potential customers, but many others in our communities are in greater need of services and have nowhere else to go. While out on the system, engaging with customers and ensuring a positive experience, partner with social services experts (and train staff) to identify and support customers who need help and access to health and human services. Social services outreach will help those in the greatest need who are often found on transit, and improve the riding experience and public perception of transit where conditions are poor.

Support the community long-term through a guaranteed best fare (or “fare-capping”) structure, so that customers are encouraged to make as many trips as they need, regardless of the network design or their personal finances. In many cases, people with tight incomes may ration their transit use because they pay per trip, or may avoid using transit altogether if the fare and transfer structure requires paying a full additional fare to change lines. Guaranteed best fare gives our most frequent customers the benefit of the monthly pass discount (and incentive to ride as much as possible), even when they are unable to pay upfront for a monthly pass.

With numerous independent cities and transit agencies in this subregion, agencies should work together to make transit a more cohesive experience and welcoming for potential customers. From one city to the next, amenities provided at stops, wayfinding, and service characteristics differ, making navigating the network more hassle or confusing than it needs to be – and thus discouraging to current and potential customers. Agency collaboration will help identify where information, processes, and service can be improved or streamlined. Doing so will begin to illustrate opportunities for service alignment to better suit the customers’ needs and match development and travel patterns that changed over the past several decades while transit service boundaries largely have not. Share staff knowledge and training opportunities whenever possible. Some agencies have more staff capacity and resources than others, or expertise in an area that another does not, but each agency has the same mission to provide excellent public transit service to the community.
The South Bay’s network of smaller, subregional operators have great potential for collaboration, knowledge-sharing and joint planning to improve the transit network. The StreetLight travel market analysis suggests that there is a tremendous amount of travel in the South Bay that could be better served by a corridor-focused, coordinated subregional network. Work together to share staff knowledge, processes, and resources. Pooling resources will maximize the power of the agencies and give each a stake in the game. This includes managing data to ensure consistent analysis across services and along corridors, which in turn provides a better foundation for analyzing performance and planning ahead for service adjustments.

Build on the potential of existing services by supporting high-quality 3rd-party apps that make it easy for potential customers to learn how to make a trip by transit. Apps can simplify the network of agencies, lines, and connections by providing directions and real-time information. Ensure that when new customers board the bus the first time, a positive experience is reinforced by operators who are friendly, welcoming, and knowledgeable. Gather input from customers, both new and long-term and incorporate the data into near and long-term responses through a customer experience program.

Over time, optimize the network to provide subregional connections with greater speed and reliability. The South Bay faces atypical geographic challenges, with large areas unfriendly to transit such as aviation and industrial land use or the LAX zone. Focus efforts on main corridors with dense residential and employment locations, where potential is high for ridership growth. The travel market analysis strongly suggests a north-south pattern that is currently under-served – evaluate the potential for increased, direct connections to West LA (Century City, UCLA, Santa Monica) using both Rapid-style and Express services to overcome the challenge of long distance and heavy congestion.
SFV / North County
East and West San Fernando Valley, Newhall, North and South Antelope Valley Zones

Agencies Represented
AVTA
LADOT
METRO
CITY OF SANTA CLARITA TRANSIT

Key Strategies

- TAP Distribution and Direct Marketing
- Enhance College Pass Programs
- Engage Major Employers
- Optimize Fixed-Route Network
- Frequent, Reliable Service
- Expand Express Service
- Enhance Demand-Based Night Options
- New Mobility Partnerships

The San Fernando Valley and North County share in common the promise of Los Angeles for many: affordable housing stock that’s still relatively close to the center of a major metropolitan region. This results in a lot of time spent traveling: the North and South Antelope Valley, Newhall, and the West San Fernando Valley zones have among the highest average travel times according to the StreetLight data analysis. An opportunity for transit in these areas is to compete with car travel in terms of productivity and comfort, in addition to affordability.

The Los Angeles region is known for a rarity in traditional metropolitan areas – heavy traffic in both directions at peak times. There are thousands of travelers commuting from this subregion towards the Los Angeles basin, and express service reflects that market, with lines from this subregion towards UCLA, Century City, LAX, and downtown LA. However, there are several regional job centers located in this subregion itself; Warner Center, North Hollywood/Studio City, and a growing engineering/aerospace industry in North County. Engage with employers on several fronts – both the established service areas to potentially expand an already-successful line of service, and in new areas where reverse-commute routes may be especially effective. These employer connections can lead to new markets for recruiting customers and potentially develop entirely new express services.

Universities and colleges in this subregion and neighboring areas, such as UCLA, are a major market for transit – including the campus staff. Like engaging major employers, connect with these schools to gather information about where students and staff are coming from and times when service is most likely needed. Evaluate the pass benefits and value to maximize ridership over revenue, investing in the future of these potential customers to retain them long-term.

Evaluate neighborhoods in the service area that are already near frequent transit for a combined TAP distribution and direct marketing effort. Transit service in this subregion balances the need for coverage with the areas where high-frequency can be supported. Start with the “low-hanging fruit” neighborhoods and major destinations along frequent lines to recruit new customers and entice occasional customers to consider the service more regularly. Doing so maximizes the productivity of lines with a strong market, should benefit ridership on connecting services, and will support a long-term case for improving frequent and reliable service on these corridors as ridership increases. Align the marketing message to where the TAP cards are being distributed, and ensure the information is good enough to get the potential customer interested both in trying the service and finding out more.

Optimize the fixed-route network by focusing on corridors and avoiding diversions or complex routing. Development patterns in recent decades have made the mission of transit even more challenging by turning new neighborhoods and employment centers inward, ignoring the need to connect with established transit on the main roads. Rather than realigning routes to make twists and turns, work with cities and developers to improve pedestrian and other connections to transit over time. Consider partnerships with new mobility services, especially in lower-density areas of sprawling development where walk distance (and time) can be a significant barrier to transit use.

Along with new mobility partnerships, explore the expansion of demand-based service in exchange for very infrequent routes that provide coverage service at the fringe. This can be a strategy to improve the value of transit with a similar operational footprint and resources. It also may be an opportunity to expand night services, especially when connecting to regional rail services where transit service availability after early evening may not currently match what’s available in the morning commute.
As the center of Los Angeles County, many of the LACMOA agencies operate some or all of their service here, where development is the most dense and traffic congestion is highest – and so is potential for transit use. With so many agencies making up the network of services here, the subregional strategies focus heavily on alignment not only of service, but of agency processes and priorities – collaborating to provide the highest quality service for the customer.

First, reduce potential barriers to using transit and reacquaint residents to your services with a TAP distribution and direct marketing campaign. The most frequent transit in the County is available throughout this subregion, and familiarity with transit agencies is high according to the focus group and survey research. Connect with potential customers in this region who have never, or very rarely ride and promote services to encourage occasional use. Leverage the affordable and relaxing alternative that transit provides compared to the stress and frustration of driving at peak times throughout this subregion.

Distributing TAP cards directly as a marketing effort also reduces perceived and real concerns that occasional or new customers about using the bus – making sure that you can pay easily when boarding. With many agencies, make sure that fare payment options are seamless and encourage people to make more trips and ride between lines as needed without worry.

With so much transit service and so much potential for new customers, ensure that the experience is consistently high-quality and welcoming. Beyond making it easy to pay and get in the door, the bus operator should welcome customers on board and be interested in helping new customers understand or find information about other transit lines in the subregion.

These strategies will recruit new customers to ride an already robust transit network, while over time agencies collaborate on the “back-end” to optimize service to best align with the modern travel market. Reduce transfers where historical agency boundaries require passengers to change from one operator to another to continue what might be a single-seat ride on a parallel corridor. Revisit the service design to focus on higher-speed service over longer distances and direct connections to major regional centers. Especially in a very high-density environment, transit service is slowed by stopping every block or other block and in heavy competition with high vehicle ownership and many other mobility options, transit should rely on the walkable nature of the subregion with regards to average stop spacing.

Long-term ridership growth is also a function of good planning and administrative functions, in which agencies will benefit by improving their own efficiency and therefore be better prepared to look ahead and adapt to future changes. As agency staff collaborate, share experience and refine processes, begin to work together to monitor changes around the subregion that can influence transit ridership – especially real estate development. With the resurgence of Downtown Los Angeles and the redevelopment of areas such as South Park, the Arts District, along the Expo Line and many others over the past decade, transit agencies must be prepared to welcome potential customers in these new developments. In some cases, marketing and outreach will suffice where the transit network is already robust; in others, agencies should be working ahead with each other to identify service changes that align with new development.
The San Gabriel Valley has been increasingly called “home” as many people (and jobs) move east of Los Angeles where more affordable housing options have developed over the past couple of decades. Increasing transit ridership and recruiting potential customers will focus on particular populations including students and long-distance commuters, alongside improvements to make transit an affordable all-day alternative to driving.

The San Gabriel Valley is home to many colleges and universities, a great source of ridership for many transit agencies and a great opportunity for attracting even more customers. Engage directly with schools throughout this region and personalize the approach to each school. Identify specific transit connections that can serve the students and the staff, such as a nearby downtown or shopping center, express services to Downtown LA, and connections to the regional rail lines. Attract college students early, especially in the admissions process, to institutionalize the idea of campus life without needing a car, and connect with them throughout their time in the pass program to solicit feedback and keep them engaged as customers.

As people move to new housing developments or affordable neighborhoods throughout the subregion, take the opportunity to connect with them following a similar strategy to student outreach. Engage new residents through mailings, web and social media advertising, and presence at community events. Focus on target populations like new homeowners as a means to strike up the conversation and demonstrate the benefits of transit – for example, saving money and maximizing productivity on a new and unfamiliar commute. Consider evaluating the market for express services to better serve recent development patterns and the resurgence of Downtown LA. Transit ridership may have declined in part because as people move east, travel time by transit becomes too great. The travel market analysis (and the well-known congestion along the east-west freeways through this region) demonstrate commute patterns that would support expanded express services.

To keep people coming back regularly, price transit passes at a level that improves the value for potential customers, especially who have access to a vehicle. Transit passes are often priced at a level where the benefit is not gained without riding at least twice daily, five days a week, and therefore very few customers purchase these passes outright. Pricing the pass to become a deal when riding more occasionally over the course of a month and using this change as a marketing opportunity could attract more customers to purchase a pass without substantially affecting revenue gained.

Work with “new mobility” providers such as TNCs and dockless bikeshare to improve connections to transit and alternatives to fixed-route service where and when frequency is very low. Distances between major streets and destinations can be significant in the San Gabriel Valley with wide streets, wide blocks, and lower-density development. Potential customers who are interested in transit may be discouraged by the walk time to reach high-frequency service. Provide better connecting options through new mobility partnerships, especially where the infrastructure supports alternatives like biking to connect with high-quality bus and rail lines. In some areas, night-time service may be desired but not in high-enough demand for a frequent route. In surveys and focus groups, this was especially true in areas with travel market connections to Downtown LA – once transit service frequency drops off or ends altogether in the evening, interested customers become stranded. New mobility partnerships and demand-response service can expand nighttime service options in a defined area and connect to higher-speed regional services.
This chapter presents the detailed agency analysis of ridership trends, fares, and service characteristics.
AVTA Ridership Trends

Key Themes

Since 2012, AVTA ridership has declined an average of 8% per year, with average daily boardings of analyzed lines down from over 10,800 to about 7,700 in 2016. Commuter ridership accounts for almost 13% of daily boardings, up from 10% in 2012.

Agency Lines and Cost

Base Fare | Express Fare
---|---
$1.50 | $8.75

2016 | $0.91 | 2012 | $0.70
Fare Revenue Per Unlinked Trip

Children under 44, Active Military, Veterans, Rider Relief Program

Reduced/Special Pass Options

Agency TAP

3,075,538 2016 NTD Unlinked Trips

1,241,100 Total Uses in 12 Mon.

40% Estimated TAP Adoption

27% Percent Using Monthly Pass

Reading This Document

Key Themes identifies general takeaways for this agency and the zones it serves.

This graph shows the average annual change in daily boardings of the agency’s routes between 2012 and 2016. It includes only routes that were present in the data for at least four of the five years, and is ordered left to right from most average decline to most average growth (if any). For comparison, the average agency-total change, and the countywide-total change, are shown.

This shows the year-to-year change in average daily boardings for the agency, and compares it to the countywide total. The fluctuation year to year in average daily boardings at the agency level can help understand the average change over the five years, shown above. See the Notes section to the right for more information.

Shown are the NTD-reported total trips for 2012 and 2016. This puts into context the two charts above using a consistently-reported value across agencies. Ridership always fluctuates year to year. Although every agency experienced decline in 2015 and 2016, some had higher ridership in 2013 or 2014 than 2012, which affects the average annual change and the year-over-year change differently.

The total average daily boardings for routes analyzed in the study (minimum of four years of data). For some agencies this value is estimated based on converting from another number such as annual or monthly totals.

The average annual change in daily boardings for the analyzed lines. This means that over the past five years, daily boardings on analyzed lines have declined an average of 2.1% each year. This approach differs from how agencies typically report ridership change, which is year-over-year total riders. This methodology helps understand the five-year trend, which accounts for fluctuations year to year.

Source: Agency data, F&P analysis

Source: Agency data, F&P analysis

Source: Agency data, F&P analysis

Source: National Transit Database (NTD)

Source: Agency, F&P analysis

Source: Agency, F&P analysis
What’s Inside

Each RRITF-participating agency with fixed-route service that had submitted at least four years of route-level ridership data have an overview spread containing their agency service summary (Ridership Trends), and Demographics and Travel Trends analyses for each zone in which their agency operates. Other participating agencies operating demand-response service or who were unable to provide the minimum data have zone-level demographics and travel trends in their service area without an agency Ridership Trends page.

**Notes about Agency Data**

The analysis methodology for agency ridership trends was consistent for all agencies and sought to accommodate for service changes by only evaluating routes for which there were at least four years of data. The purpose of selecting only lines with four years of data was to gain a clearer understanding of the longer trend in the region among 12 operators and focused on the core network of routes operating since throughout the 2012-2016 period. This first step of the RGAP study develops agency-level and regional context that will guide the outreach efforts and strategies developed for the ridership growth action plan.

In some cases, especially Big Blue Bus and Long Beach Transit, service and route number changes occurred on several routes, so those routes are excluded from the analyzed routes. This would lead the “average daily boardings” numbers of our analyzed routes to be different from those at the total agency level. On the Big Blue Bus and Long Beach Transit spreads, the line graphs of year-to-year ridership change refer to the total agency-reported ridership, rather than the analyzed lines approach that was used for other agencies.

A common theme among many agencies was changing methodology for reporting ridership between 2012 and 2016. Several agencies integrated TAP payment and/or APC systems on their buses in this five-year period, and noted that the differences in reporting would make the data incomparable or unreliable. There were some agencies which did not provide data for years which they did not have comparably calculated ridership at the line or stop level.

While presumably this is a one-time methodology issue for these agencies, it is important to note that data and methodology differences between agencies for a core metric such as ridership is a key opportunity to improve collaboration and more effectively respond to ridership trends. Many residents, workers, and visitors in the Los Angeles region use transit as a network regardless of agency, and agencies themselves strive to reduce service duplication to avoid competition and provide a true network. Given that, being able to generate and evaluate comparable data for ridership between agencies is a critical step towards monitoring regional service effectiveness.

Finally, a few agencies do not have a General Transit Feed Specification (GTFS) dataset for their service, or do not produce a complete feed. This universal method for publishing searchable transit schedules is a valuable resource for the public and can also help evaluate service across time and between agencies. In this study, GTFS was used to estimate level of bus service in a zone; no data were available for AVTA, so this metric is not shown in the Antelope Valley zones. Certain agencies only include timepoint stops in their feed, which limits its applicability in the analysis methodology. For this study, Fehr & Peers made a copy of the feed, interpolating stop times between timepoints, only to develop a comparable trips-at-stops metric.
AVTA
Ridership Trends

Key Themes
Since 2012, AVTA ridership has declined an average of 8% per year, with average daily boardings of analyzed lines down from over 10,800 to about 7,700 in 2016. Commuter ridership accounts for almost 13% of daily boardings, up from 10% in 2012.

Agency Lines and Cost

<table>
<thead>
<tr>
<th>2016</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0.70</td>
<td>$0.91</td>
</tr>
<tr>
<td>$8.75</td>
<td>$7.00</td>
</tr>
</tbody>
</table>

FARE REVENUE PER UNLINKED TRIP

Children under 44", Active Military, Veterans, Rider Relief Program

REDUCED/SPECIAL PASS OPTIONS

Agency TAP Data

<table>
<thead>
<tr>
<th>3,075,538</th>
<th>1,241,100</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016 NTD UNLINKED TRIPS</td>
<td>TOTAL USES IN 12 MONTHS</td>
</tr>
</tbody>
</table>

40% ESTIMATED TAP ADOPTION

27% PERCENT USING MONTHLY PASS
Agency Statistics for Analyzed Routes

**Agency**
- **10,390** total 2012 average daily boardings of analyzed lines

**Routes**
- **0** rapid routes
- **13** local routes
- **16** express routes

**Ridership Trends**
- **-7.70%** average annual line level rate of change
- **5** routes above countywide trend
- **6** routes below countywide trend

**Agency Ridership Change, 2012 - 2016**¹

**Average 5-Year Change by Analyzed Routes**

<table>
<thead>
<tr>
<th>Year</th>
<th>Agency change</th>
<th>Countywide change</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>-8%</td>
<td>-3%</td>
</tr>
<tr>
<td>2013</td>
<td>-10%</td>
<td>-6%</td>
</tr>
<tr>
<td>2014</td>
<td>-5%</td>
<td>-4%</td>
</tr>
<tr>
<td>2015</td>
<td>-2%</td>
<td>-3%</td>
</tr>
<tr>
<td>2016</td>
<td>-1%</td>
<td>-2%</td>
</tr>
</tbody>
</table>

¹ Analyzed routes include those provided by the agency with at least 4 years of average daily boardings data between 2012 and 2016. The data evaluated are for the purpose of context in this study and results may differ from statistics calculated by the agency for other purposes. Any changes by the agency to data collection or estimation methodology in the analyzed time frame are taken as provided.

**Agency (All Routes) and Countywide Yearly Change**

<table>
<thead>
<tr>
<th>Year</th>
<th>Agency change</th>
<th>Countywide change</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>-10%</td>
<td>-7%</td>
</tr>
<tr>
<td>2014</td>
<td>-5%</td>
<td>-4%</td>
</tr>
<tr>
<td>2015</td>
<td>-2%</td>
<td>-3%</td>
</tr>
<tr>
<td>2016</td>
<td>-1%</td>
<td>-2%</td>
</tr>
</tbody>
</table>

**2012 NTD Unlinked Trips**
- **3,155,895**

**2016 NTD Unlinked Trips**
- **3,075,538**
Beach Cities Transit

Ridership Trends

Key Themes

Beach Cities Transit operates two fixed-route services which both saw year-over-year gains in ridership in 2013 and 2015, resulting in relatively a stable average of 1,100 daily boardings.

Agency Lines and Cost

Beach Cities Transit Transit Routes

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base Fare</td>
<td>$0.85</td>
<td>$0.81</td>
</tr>
<tr>
<td>Express Fare</td>
<td>$1.00</td>
<td>$1.00</td>
</tr>
<tr>
<td>FARE REVENUE PER UNLINKED TRIP</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Reduced/Special Pass Options**

Students, Lawndale Residents, Redondo Beach Children, Redondo Beach Seniors

Agency TAP Data

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2016 NTD Unlinked Trips</td>
<td>407,272</td>
</tr>
<tr>
<td>Total Uses in 12 Months</td>
<td>43,220</td>
</tr>
</tbody>
</table>

**TAP Adoption**

11%

**Percent Using Monthly Pass**

19%
Agency Statistics for Analyzed Routes

<table>
<thead>
<tr>
<th>Agency</th>
<th>1,080</th>
<th>1,100</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL 2012 AVERAGE DAILY BOARDINGS OF ANALYZED LINES</td>
<td>TOTAL 2016 AVERAGE DAILY BOARDINGS OF ANALYZED LINES</td>
<td>ROUTES ANALYZED</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Routes</th>
<th>0</th>
<th>2</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAPID ROUTES</td>
<td>LOCAL ROUTES</td>
<td>EXPRESS ROUTES</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ridership Trends</th>
<th>0.60%</th>
<th>2</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>AVERAGE ANNUAL LINE LEVEL RATE OF CHANGE</td>
<td>ROUTES ABOVE COUNTYWIDE TREND</td>
<td>ROUTES BELOW COUNTYWIDE TREND</td>
<td></td>
</tr>
</tbody>
</table>

Agency Ridership Change, 2012 - 2016¹

AVERAGE 5-YEAR CHANGE BY ANALYZED ROUTES

- Agency average: 1%
- Countywide average: -3%

AGENCY (ALL ROUTES) AND COUNTYWIDE YEARLY CHANGE

403,041
2012 NTD UNLINKED TRIPS

407,272
2016 NTD UNLINKED TRIPS

¹ Analyzed routes include those provided by the agency with at least 4 years of average daily boardings data between 2012 and 2016. The data evaluated are for the purpose of context in this study and results may differ from statistics calculated by the agency for other purposes. Any changes by the agency to data collection or estimation methodology in the analyzed time frame are taken as provided.
Ridership Growth Action Plan

Key Themes
Many service changes have occurred in the past five years as BBB prepared for Expo light rail, with service on many streets realigned and new lines added. Of the core service routes, ridership peaked in 2014 and has declined since.

Agency Lines and Cost

<table>
<thead>
<tr>
<th>Year</th>
<th>Base Fare</th>
<th>Express Fare</th>
<th>Fare Revenue per Unlinked Trip</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>$0.77</td>
<td>$2.50</td>
<td>$1.25</td>
</tr>
<tr>
<td>2012</td>
<td>$0.65</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Youth, College, Rider Relief Program

Reduced/Special Pass Options

Agency TAP Data

- 16,601,271 2016 NTD Unlinked Trips
- 3,438,840 Total Uses in 12 Months
- 21% Estimated TAP Adoption
- 45% Percent Using Monthly Pass
### Agency Statistics for Analyzed Routes

<table>
<thead>
<tr>
<th></th>
<th>2012 Average Daily Boardings of Analyzed Lines</th>
<th>2016 Average Daily Boardings of Analyzed Lines</th>
<th>Routes Analyzed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agency</td>
<td>48,290</td>
<td>42,400</td>
<td>15</td>
</tr>
<tr>
<td>Routes</td>
<td>3</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>Local</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Rapid</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Express</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Ridership Trends**: -2.90%
- **Rapid Routes**: 3
- **Local Routes**: 11
- **Express Routes**: 1
- **Routes above Countywide Trend**: 7
- **Routes below Countywide Trend**: 6

- **Agency Average**
- **Countywide Average**
- **Agency Change**: -3%
- **Countywide Change**: -3%

### Agency Ridership Change, 2012 - 2016

**Average 5-Year Change by Analyzed Routes**

<table>
<thead>
<tr>
<th>Year</th>
<th>Agency Change</th>
<th>Countywide Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>-2%</td>
<td>-3.5%</td>
</tr>
<tr>
<td>2014</td>
<td>-3%</td>
<td>-4%</td>
</tr>
<tr>
<td>2015</td>
<td>-4%</td>
<td>-5%</td>
</tr>
<tr>
<td>2016</td>
<td>-5%</td>
<td>-6%</td>
</tr>
</tbody>
</table>

### Agency (All Routes) and Countywide Yearly Change

- **2012 NTD Unlinked Trips**: 21,314,018
- **2016 NTD Unlinked Trips**: 16,601,271

---

1. Analyzed routes include those provided by the agency with at least 4 years of average daily boardings data between 2012 and 2016. The data evaluated are for the purpose of context in this study and results may differ from statistics calculated by the agency for other purposes. Any changes by the agency to data collection or estimation methodology in the analyzed time frame are taken as provided.
Commerce Municipal Bus Lines
Ridership Trends

Key Themes
Commerce operates a fare-free local shuttle network and express service to downtown Los Angeles. Total annual boardings in 2016 were down 8% from 2012 despite service expansion during the same time.

Agency Lines and Cost

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base Fare</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>Express Fare</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
<tr>
<td>Fare Revenue per Unlinked Trip</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Entire service is fare-free

Reduced/Special Pass Options

Bold lines are selected for detailed case study analysis in next phase.

Agency TAP Data

Fare-free bus service; no TAP data available
Agency Statistics for Analyzed Routes

<table>
<thead>
<tr>
<th>Agency</th>
<th>2,141</th>
<th>1,284</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Routes</td>
<td>0</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Ridership Trends</td>
<td>-11.60%</td>
<td>0</td>
<td>5</td>
</tr>
</tbody>
</table>

**AVERAGE 5-YEAR CHANGE BY ANALYZED ROUTES**

- **Agency average** -12%
- **Countywide average** -3%

**AGENCY (ALL ROUTES) AND COUNTYWIDE YEARLY CHANGE**

- **2013**
  - **Agency change**
  - **Countywide change**

- **2014**
  - **Agency change**
  - **Countywide change**

- **2015**
  - **Agency change**
  - **Countywide change**

- **2016**
  - **Agency change**
  - **Countywide change**

---

1 Analyzed routes include those provided by the agency with at least 4 years of average daily boardings data between 2012 and 2016. The data evaluated are for the purpose of context in this study and results may differ from statistics calculated by the agency for other purposes. Any changes by the agency to data collection or estimation methodology in the analyzed time frame are taken as provided.
### Culver CityBus

#### Ridership Trends

**Key Themes**

Culver CityBus ridership on analyzed lines is performing slightly above the countywide trend, following a peak in 2014. Service changes were made in recent years to adjust for the Expo Line light rail.

---

**Agency Lines and Cost**

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BASE FARE</strong></td>
<td>$1.00</td>
<td>$1.00</td>
</tr>
<tr>
<td><strong>EXPRESS FARE</strong></td>
<td>$1.00</td>
<td>$1.00</td>
</tr>
<tr>
<td><strong>FARE REVENUE PER UNLINKED TRIP</strong></td>
<td>$0.63</td>
<td>$0.71</td>
</tr>
</tbody>
</table>

**K-12 Student, College, Rider Relief Program**

**REDUCED/SPECIAL PASS OPTIONS**

**Bold lines are selected for detailed case study analysis in next phase.**

---

**Agency TAP Data**

- **5,662,728**
  - 2016 NTD UNLINKED TRIPS
- **1,044,460**
  - TOTAL USES IN 12 MONTHS
- **18%**
  - ESTIMATED TAP ADOPTION
- **37%**
  - PERCENT USING MONTHLY PASS
## Agency Statistics for Analyzed Routes

<table>
<thead>
<tr>
<th>Agency</th>
<th>16,850</th>
<th>15,700</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total 2012 AVERAGE DAILY BOARDINGS OF ANALYZED LINES</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Routes</td>
<td>1</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Routes</td>
<td>RAPID ROUTES</td>
<td>LOCAL ROUTES</td>
<td>EXPRESS ROUTES</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average Annual Line Level Rate of Change</td>
<td>-2.10%</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Routes</td>
<td>ROUTES ABOVE COUNTYWIDE TREND</td>
<td>ROUTES BELOW COUNTYWIDE TREND</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Agency Ridership Change, 2012 - 2016

AVERAGE 5-YEAR CHANGE BY ANALYZED ROUTES

- **Agency average**: -2%
- **Countywide average**: -3%

**Agency (All Routes) and Countywide Yearly Change**

- **Agency change**: 2012 NTD UNLINKED TRIPS: 5,341,546
- **Agency change**: 2016 NTD UNLINKED TRIPS: 5,662,728
- **Countywide change**: 2012 NTD UNLINKED TRIPS: 5,341,546
- **Countywide change**: 2016 NTD UNLINKED TRIPS: 5,662,728

---

1 Analyzed routes include those provided by the agency with at least 4 years of average daily boardings data between 2012 and 2016. The data evaluated are for the purpose of context in this study and results may differ from statistics calculated by the agency for other purposes. Any changes by the agency to data collection or estimation methodology in the analyzed time frame are taken as provided.
Key Themes

Of the analyzed lines, Foothill experienced growth year-to-year from 2012-2014, and began to decline afterwards. Express ridership has fluctuated between 15 and 18% since 2012 and is currently about 17% of average daily boardings.

Agency Lines and Cost

<table>
<thead>
<tr>
<th>Year</th>
<th>Base Fare</th>
<th>Express Fare</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>$1.26</td>
<td>$5.00</td>
</tr>
<tr>
<td>2012</td>
<td>$1.33</td>
<td>$5.00</td>
</tr>
</tbody>
</table>

K-12 & College Students, Children under 5, Rider Relief Program

REduced/SPECIAL PASS OPTIONS

FARE Revenue per Unlinked Trip

Agency TAP Data

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016 NTD Unlinked Trips</td>
<td>13,584,135</td>
</tr>
<tr>
<td>Total Uses in 12 Months</td>
<td>5,170,710</td>
</tr>
<tr>
<td>Estimated TAP Adoption</td>
<td>38%</td>
</tr>
<tr>
<td>Percent Using Monthly Pass</td>
<td>51%</td>
</tr>
</tbody>
</table>
Agency Statistics for Analyzed Routes

<table>
<thead>
<tr>
<th>Agency Statistics for Analyzed Routes</th>
<th>2012 AVERAGE DAILY BOARDINGS</th>
<th>2016 AVERAGE DAILY BOARDINGS</th>
<th>ROUTES ANALYZED</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Agency</strong></td>
<td><strong>39,450</strong></td>
<td><strong>36,500</strong></td>
<td><strong>35</strong></td>
</tr>
<tr>
<td><strong>Routes</strong></td>
<td><strong>0</strong></td>
<td><strong>28</strong></td>
<td><strong>7</strong></td>
</tr>
<tr>
<td><strong>Ridership Trends</strong></td>
<td><strong>-1.80%</strong></td>
<td><strong>11</strong></td>
<td><strong>5</strong></td>
</tr>
</tbody>
</table>

Agency Ridership Change, 2012 - 2016

**AVERAGE 5-YEAR CHANGE BY ANALYZED ROUTES**

- Agency average: -2%
- Countywide average: -3%

**AGENCY (ALL ROUTES) AND COUNTYWIDE YEARLY CHANGE**

- 2012 NTD UNLINKED TRIPS: 13,860,335
- 2016 NTD UNLINKED TRIPS: 13,584,135

1 Analyzed routes include those provided by the agency with at least 4 years of average daily boardings data between 2012 and 2016. The data evaluated are for the purpose of context in this study and results may differ from statistics calculated by the agency for other purposes. Any changes by the agency to data collection or estimation methodology in the analyzed time frame are taken as provided.
GTrans
Ridership Trends

Key Themes
Gardena data is analyzed for years 2013-2017 based on available data. During this time, average daily boardings have declined overall from over 11,000 across all routes to under 9,000 in 2017. The Line 1 express service has rebounded, but accounts for only 9% of total ridership.

Agency Lines and Cost

<table>
<thead>
<tr>
<th>Base Fare</th>
<th>Express Fare</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>2012</td>
</tr>
<tr>
<td>$1.00</td>
<td>$1.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fare Revenue per Unlinked Trip</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
</tr>
<tr>
<td>0.71</td>
</tr>
</tbody>
</table>

Senior/Disabled, Student K-12, Children under 5
REDUCED/SPECIAL PASS OPTIONS

Agency TAP Data

3,610,717 2016 NTD UNLINKED TRIPS
475,080 TOTAL USES IN 12 MONTHS

13% ESTIMATED TAP ADOPTION
10% PERCENT USING MONTHLY PASS
Agency Statistics for Analyzed Routes

- **Agency**: 11,042
  - TOTAL 2012 AVERAGE DAILY BOARDINGS OF ANALYZED LINES
- **Routes**: 0
  - RAPID ROUTES
- **Ridership Trends**: -5.10%
  - AVERAGE ANNUAL LINE LEVEL RATE OF CHANGE
- **Agency Change**
  - -5%
- **Countywide Change**
  - -3%

**Agency Ridership Change, 2012 - 2016**

- **Average 5-Year Change by Analyzed Routes**
- **Agency (All Routes) and Countywide Yearly Change**

**Agency**
- TOTAL 2012 AVERAGE DAILY BOARDINGS OF ANALYZED LINES
- TOTAL 2016 AVERAGE DAILY BOARDINGS OF ANALYZED LINES
- ROUTES ANALYZED
- LOCAL ROUTES
- EXPRESS ROUTES

**Routes**
- ROUTES ABOVE COUNTYWIDE TREND
- ROUTES BELOW COUNTYWIDE TREND

1 Analyzed routes include those provided by the agency with at least 4 years of average daily boardings data between 2012 and 2016. The data evaluated are for the purpose of context in this study and results may differ from statistics calculated by the agency for other purposes. Any changes by the agency to data collection or estimation methodology in the analyzed time frame are taken as provided.
Ridership Trends

Key Themes
The agency-level trend for LADOT has closely matched the countywide average. The agency-provided ridership estimates show an average 10% growth or more on all routes in 2013.

Agency Lines and Cost

<table>
<thead>
<tr>
<th></th>
<th>2012</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base Fare</td>
<td>$0.43</td>
<td>$0.38</td>
</tr>
<tr>
<td>Express Fare</td>
<td>$0.43</td>
<td>$0.50</td>
</tr>
</tbody>
</table>

FARE REVENUE PER UNLINKED TRIP

Children under 4, Rider Relief Program
REDUCED/SPECIAL PASS OPTIONS

Agency TAP Data

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2016 NTD Unlinked Trips</td>
<td>21,458,817</td>
</tr>
<tr>
<td>Total Uses in 12 Months</td>
<td>4,718,380</td>
</tr>
</tbody>
</table>

ESTIMATED TAP ADOPTION: 22%
PERCENT USING MONTHLY PASS: 30%

Bold lines are selected for detailed case study analysis in next phase.
### Agency Statistics for Analyzed Routes

<table>
<thead>
<tr>
<th>Agency</th>
<th>92,010</th>
<th>81,700</th>
<th>45</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total 2012 Average Daily Boardings of Analyzed Lines</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Routes</td>
<td>0</td>
<td>32</td>
<td>13</td>
</tr>
<tr>
<td>Rapid Routes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Local Routes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Express Routes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ridership Trends</td>
<td>-2.70%</td>
<td>16</td>
<td>11</td>
</tr>
<tr>
<td>Average Annual Line Level Rate of Change</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Routes Above Countywide Trend</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Routes Below Countywide Trend</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Agency Ridership Change, 2012 - 2016

**Average 5-Year Change by Analyzed Routes**

![Chart showing the average 5-year change by analyzed routes.]

Agency average: -3%
Countywide average: -3%

*Analyzed routes include those provided by the agency with at least 4 years of average daily boardings data between 2012 and 2016. The data evaluated are for the purpose of context in this study and results may differ from statistics calculated by the agency for other purposes. Any changes by the agency to data collection or estimation methodology in the analyzed time frame are taken as provided.*
Long Beach Transit
Ridership Trends

Key Themes
Long Beach Transit ridership for analyzed lines are generally performing above the countywide trend; some routes were excluded due to service changes since 2012. Many routes experienced a peak in 2013. Overall ridership has declined since 2014.

Agency Lines and Cost

<table>
<thead>
<tr>
<th>Year</th>
<th>Base Fare</th>
<th>Express Fare</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>$0.63</td>
<td>$1.25</td>
</tr>
<tr>
<td>2012</td>
<td>$0.63</td>
<td>$1.25</td>
</tr>
</tbody>
</table>

Children under 4, Legally-Blind, College Students, Rider Relief Program
REDUCED/SPECIAL PASS OPTIONS

Agency TAP Data

- 2016 NTD UNLINKED TRIPS: 26,323,460
- TOTAL USES IN 12 MONTHS: 5,685,100

- ESTIMATED TAP ADOPTION: 22%
- PERCENT USING MONTHLY PASS: 62%
### Agency Statistics for Analyzed Routes

<table>
<thead>
<tr>
<th>Agency</th>
<th>Routes</th>
<th>Ridership Trends</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="bus.png" alt="Bus" /></td>
<td><img src="map-pin.png" alt="Map Pin" /></td>
<td><img src="graph.png" alt="Graph" /></td>
</tr>
<tr>
<td><strong>74,900</strong></td>
<td><strong>0</strong></td>
<td><strong>1.40%</strong></td>
</tr>
<tr>
<td><strong>79,710</strong></td>
<td><strong>34</strong></td>
<td><strong>12</strong></td>
</tr>
<tr>
<td><strong>34</strong></td>
<td><strong>0</strong></td>
<td><strong>6</strong></td>
</tr>
</tbody>
</table>

**TOTAL 2012 AVERAGE DAILY BOARDINGS OF ANALYZED LINES**

**TOTAL 2016 AVERAGE DAILY BOARDINGS OF ANALYZED LINES**

**ROUTES ANALYZED**

**AVERAGE ANNUAL LINE LEVEL RATE OF CHANGE**

**ROUTES ABOVE COUNTYWIDE TREND**

**ROUTES BELOW COUNTYWIDE TREND**

### Agency Ridership Change, 2012 - 2016

**AVERAGE 5-YEAR CHANGE BY ANALYZED ROUTES**

- **Agency average**: 1%
- **Countywide average**: -3%

### Agency (All Routes) and Countywide Yearly Change

- **Agency change**
- **Countywide change**

### Data Points

- **Agency**: 28,183,414 2012 NTD Unlinked Trips
- **Countywide**: 26,323,460 2016 NTD Unlinked Trips

---

1. Analyzed routes include those provided by the agency with at least 4 years of average daily boardings data between 2012 and 2016. The data evaluated are for the purpose of context in this study and results may differ from statistics calculated by the agency for other purposes. Any changes by the agency to data collection or estimation methodology in the analyzed time frame are taken as provided.
Ridership Growth Action Plan

Metro

Ridership Trends

Key Themes

Metro is largely driving the agencywide trend given the magnitude of service provided. Few routes performed above the trend and in most cases were lines that had service enhancements since 2012.

Agency Lines and Cost

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>BASE FARE</td>
<td>$1.75</td>
<td>$2.50</td>
</tr>
<tr>
<td>EXPRESS FARE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FARE REVENUE PER UNLINKED TRIP</td>
<td>$0.82</td>
<td>$0.78</td>
</tr>
</tbody>
</table>

College/Vocational, K-12 Student, Employer Pass Program, Rider Relief Program

REDUCED/SPECIAL PASS OPTIONS

Agency TAP Data

- 320,869,835 2016 NTD UNLINKED TRIPS
- 221,512,390 TOTAL USES IN 12 MONTHS
- 69% ESTIMATED TAP ADOPTION
- 27% PERCENT USING MONTHLY PASS

Bold lines are selected for detailed case study analysis in next phase.
### Agency Statistics for Analyzed Routes

<table>
<thead>
<tr>
<th>Agency</th>
<th>TOTAL 2012 AVERAGE DAILY BOARDINGS OF ANALYZED LINES</th>
<th>TOTAL 2016 AVERAGE DAILY BOARDINGS OF ANALYZED LINES</th>
<th>ROUTES ANALYZED</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1,150,880</td>
<td>939,850</td>
<td>130</td>
</tr>
<tr>
<td>Routes</td>
<td>18</td>
<td>104</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td><strong>RAPID ROUTES</strong></td>
<td><strong>LOCAL ROUTES</strong></td>
<td><strong>EXPRESS ROUTES</strong></td>
</tr>
<tr>
<td>Ridership Trends</td>
<td>-4.80%</td>
<td>17</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td><strong>AVERAGE ANNUAL LINE LEVEL RATE OF CHANGE</strong></td>
<td><strong>ROUTES ABOVE COUNTYWIDE TREND</strong></td>
<td><strong>ROUTES BELOW COUNTYWIDE TREND</strong></td>
</tr>
</tbody>
</table>

### Agency Ridership Change, 2012 - 2016

#### AVERAGE 5-YEAR CHANGE BY ANALYZED ROUTES

- **Agency average**: -5%
- **Countywide average**: -3%

1 Analyzed routes include those provided by the agency with at least 4 years of average daily boardings data between 2012 and 2016. The data evaluated are for the purpose of context in this study and results may differ from statistics calculated by the agency for other purposes. Any changes by the agency to data collection or estimation methodology in the analyzed time frame are taken as provided.

#### AGENCY (ALL ROUTES) AND COUNTYWIDE YEARLY CHANGE

- **Agency change**:
- **Countywide change**

#### 2012 NTD UNLINKED TRIPS

- **Agency total**: 360,002,885
- **Countywide total**: 320,869,835
Montebello Bus Lines

Ridership Trends

Key Themes
Montebello average daily ridership has declined between 2 and 8% each year since 2012. The agency average decline was greater than the countywide average.

Agency Lines and Cost

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base Fare</td>
<td>$1.10</td>
<td>$1.30</td>
</tr>
<tr>
<td>Express Fare</td>
<td>$1.30</td>
<td>$1.10</td>
</tr>
<tr>
<td>Fare Revenue</td>
<td>$1.01</td>
<td>$0.72</td>
</tr>
</tbody>
</table>

K-12 Student, Rider Relief Program

<table>
<thead>
<tr>
<th>Reduced/Special Pass Options</th>
<th>14%</th>
<th>15%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated TAP Adoption</td>
<td>7,036,779</td>
<td>985,870</td>
</tr>
<tr>
<td>Total Uses in 12 Months</td>
<td>2016 NTD Unlinked Trips</td>
<td>2016</td>
</tr>
</tbody>
</table>

Bold lines are selected for detailed case study analysis in next phase.
Agency Statistics for Analyzed Routes

**Agency**

<table>
<thead>
<tr>
<th>2012 Average Daily Boardings of Analyzed Lines</th>
<th>2016 Average Daily Boardings of Analyzed Lines</th>
<th>Routes Analyzed</th>
</tr>
</thead>
<tbody>
<tr>
<td>26,170</td>
<td>20,890</td>
<td>8</td>
</tr>
</tbody>
</table>

**Routes**

<table>
<thead>
<tr>
<th>Rapid Routes</th>
<th>Local Routes</th>
<th>Express Routes</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>7</td>
<td>1</td>
</tr>
</tbody>
</table>

**Ridership Trends**

<table>
<thead>
<tr>
<th>Average Annual Line Level Rate of Change</th>
<th>Routes Above Countywide Trend</th>
<th>Routes Below Countywide Trend</th>
</tr>
</thead>
<tbody>
<tr>
<td>-4.80%</td>
<td>0</td>
<td>2</td>
</tr>
</tbody>
</table>

Agency Ridership Change, 2012 - 2016

**Average 5-Year Change by Analyzed Routes**

- Countywide average: -3%
- Agency average: -5%

**Agency (All Routes) and Countywide Yearly Change**

- Countywide change: 8,494,330 2012 NTD Unlinked Trips
- Agency change: 7,036,779 2016 NTD Unlinked Trips

---

1 Analyzed routes include those provided by the agency with at least 4 years of average daily boardings data between 2012 and 2016. The data evaluated are for the purpose of context in this study and results may differ from statistics calculated by the agency for other purposes. Any changes by the agency to data collection or estimation methodology in the analyzed time frame are taken as provided.
Ridership Growth Action Plan

Norwalk Transit
Ridership Trends

Key Themes
NTS ridership has declined each year, with average daily riders of 4,800 in 2016 compared to about 7,900 in 2012. Note, 2013 data were not available from the agency.

Agency Lines and Cost

<table>
<thead>
<tr>
<th></th>
<th>2012</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base Fare</td>
<td>$0.68</td>
<td>$1.25</td>
</tr>
<tr>
<td>Express Fare</td>
<td>$1.25</td>
<td>$1.25</td>
</tr>
<tr>
<td>Fare Revenue per Unlinked Trip</td>
<td>$0.98</td>
<td>$1.25</td>
</tr>
</tbody>
</table>

K-12 Student, Rider Relief Program
Reduced/Special Pass Options

Agenda TAP Data

- 1,400,384 2016 NTD Unlinked Trips
- 371,900 Total Uses in 12 Months

- 27% Estimated TAP Adoption
- 31% Percent Using Monthly Pass
Agency Statistics for Analyzed Routes

- **Agency**: 7,900
  - **Total 2012 Average Daily Boardings of Analyzed Lines**
- **Routes**: 4,850
  - **Total 2016 Average Daily Boardings of Analyzed Lines**
- **Ridership Trends**: -15.30%
  - **Average Annual Line Level Rate of Change**
- **Routes Analyzed**: 6
  - **Routes Above Countywide Trend**: 0
  - **Routes Below Countywide Trend**: 6

**Agency Ridership Change, 2012 - 2016**

**Average 5-Year Change by Analyzed Routes**

- **Agency Average**: -15%
- **Countywide Average**: -3%

**Agency (All Routes) and Countywide Yearly Change**

- **Agency Change**
  - 2012 NTD Unlinked Trips: 2,142,887
  - 2016 NTD Unlinked Trips: 1,400,384

---

1. Analyzed routes include those provided by the agency with at least 4 years of average daily boardings data between 2012 and 2016. The data evaluated are for the purpose of context in this study and results may differ from statistics calculated by the agency for other purposes. Any changes by the agency to data collection or estimation methodology in the analyzed time frame are taken as provided.
Santa Clarita average daily boardings fluctuated since 2013 with a substantial drop in 2015. Express ridership has made a growing percentage of the total to about 28% of analyzed lines in 2016.

Agency Lines and Cost

- **BASE FARE**
  - 2016: $0.84
  - 2012: $1.14

- **EXPRESS FARE**
  - 2016: $3.00
  - 2012: $1.00

- **FARE REVENUE PER UNLINKED TRIP**

- **Children under 5, Rider Relief Program**
  - **REDUCED/SPECIAL PASS OPTIONS**

Agency TAP Data

- **2016 NTD UNLINKED TRIPS**: 3,167,020
- **TOTAL USES IN 12 MONTHS**: 1,054,750

- **ESTIMATED TAP ADOPTION**: 33%
- **PERCENT USING MONTHLY PASS**: 47%
### Agency Statistics for Analyzed Routes

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agency Ridership</td>
<td>9,660</td>
<td>Total 2012 average daily boardings of analyzed lines</td>
</tr>
<tr>
<td>Routes</td>
<td>7,050</td>
<td>Total 2016 average daily boardings of analyzed lines</td>
</tr>
<tr>
<td>Routes</td>
<td>14</td>
<td>Routes analyzed</td>
</tr>
<tr>
<td>Rapid Routes</td>
<td>0</td>
<td>Routes</td>
</tr>
<tr>
<td>Local Routes</td>
<td>7</td>
<td>Routes</td>
</tr>
<tr>
<td>Express Routes</td>
<td>7</td>
<td>Routes</td>
</tr>
<tr>
<td>Average Annual Line Level Rate of Change</td>
<td>-8.50%</td>
<td>Routes above countywide trend</td>
</tr>
<tr>
<td>Routes Above Countywide Trend</td>
<td>3</td>
<td>Routes below countywide trend</td>
</tr>
<tr>
<td>Routes Below Countywide Trend</td>
<td>5</td>
<td>Routes below countywide trend</td>
</tr>
</tbody>
</table>

### Agency Ridership Change, 2012 - 2016

#### Average 5-Year Change by Analyzed Routes

![Graph showing average 5-year change by analyzed routes]

- **Agency average:** -9%
- **Countywide average:** -3%

#### Agency (All Routes) and Countywide Yearly Change

![Graph showing agency and countywide yearly change]

- **2012 NTD unlinked trips:** 3,626,743
- **2016 NTD unlinked trips:** 3,167,020

---

1. Analyzed routes include those provided by the agency with at least 4 years of average daily boardings data between 2012 and 2016. The data evaluated are for the purpose of context in this study and results may differ from statistics calculated by the agency for other purposes. Any changes by the agency to data collection or estimation methodology in the analyzed time frame are taken as provided.
Ridership trends for Torrance Transit closely match the county average year-over-year. The agency boardings were higher overall in 2013 and 2014 and have declined since.

### Agency Lines and Cost

<table>
<thead>
<tr>
<th></th>
<th>2012</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base Fare</td>
<td>$0.79</td>
<td>$1.00</td>
</tr>
<tr>
<td>Express Fare</td>
<td>$0.79</td>
<td>$2.00</td>
</tr>
<tr>
<td>Fare Revenue Per Unlinked Trip</td>
<td>$0.75</td>
<td>$2.00</td>
</tr>
</tbody>
</table>

**Bold** lines are selected for detailed case study analysis in next phase.

### Agency TAP Data

- **3,791,127** 2016 NTD Unlinked Trips
- **555,580** Total Uses in 12 Months
- **15%** Estimated TAP Adoption
- **22%** Percent Using Monthly Pass

*Children, Students, Rider Relief Program REDUCED/SPECIAL PASS OPTIONS*
Agency Statistics for Analyzed Routes

<table>
<thead>
<tr>
<th>Agency</th>
<th>Routes</th>
<th>Ridership Trends</th>
</tr>
</thead>
<tbody>
<tr>
<td>13,120</td>
<td>1</td>
<td>-3.40%</td>
</tr>
<tr>
<td>11,350</td>
<td>9</td>
<td>4</td>
</tr>
<tr>
<td>11</td>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>

11,350
11,350
11

Agency Ridership Change, 2012 - 2016

AVERAGE 5-YEAR CHANGE BY ANALYZED ROUTES

Agency average: -3%
Countywide average: -3%

AGENCY (ALL ROUTES) AND COUNTYWIDE YEARLY CHANGE

3,983,088
2012 NTD UNLINKED TRIPS

3,791,127
2016 NTD UNLINKED TRIPS

1 Analyzed routes include those provided by the agency with at least 4 years of average daily boardings data between 2012 and 2016. The data evaluated are for the purpose of context in this study and results may differ from statistics calculated by the agency for other purposes. Any changes by the agency to data collection or estimation methodology in the analyzed time frame are taken as provided.
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CHAPTER 10

Detailed Subregional Analysis

This chapter presents the detailed subregional analysis of ridership trends, demographic trends, travel trends service characteristics, and subregional travel patterns.
Reading This Document

Zone Demographics

A Each zone is identified by its name, and a number (1-20, sorted alphabetically). The first spread shows the demographic analysis of the zone. The second shows the travel analysis.

B This section summarizes the demographic changes relevant to transit ridership, based on the data to the right. It concludes with a qualitative assessment of what rider profile, based on the TransitCenter “Who’s On Board 2016” report, is most likely found in this zone: Commuter, Occasional, or All-Purpose. In some cases, a zone may fall between two rider profiles. Every zone will have individuals and households who fall into each category.

C The map shows the service population density (residents plus jobs, divided by zone square miles).

D This key shows the categories that correspond to the household breakdown. Data are shown for 2010 (gray shades) and 2015 (purple shades). The four income categories correspond with the TransitCenter report.

E Shown here are the total households in 2010 and 2015. The length of the bar is relative to the amount of households in this zone compared to all other zones. The zone with the most households has the longest bars. This example shows one of the highest zones. The 2010 and 2015 bars are different lengths based on the total number.

F The percent growth or decline in households between 2010 and 2015. Also shown is the regional planning model forecast for household change between 2016 and 2040.

G This is the percent of all households with at least one child under age 18 present in the home.
This key shows the categories that correspond to the population-age breakdown. Data are shown for 2010 (gray shades) and 2015 (purple shades). The three age categories correspond with the TransitCenter “Who’s on Board 2016” report.

Source: TransitCenter, F&P

This is the percentage of households with no car available.

Source: ACS 2010 and 2015 Table B25044
This section summarizes the changing travel demands and choices in the zone. It provides context for what may have affected transit ridership and identifies opportunities.

The estimate of countywide travel is based on sampled vehicle GPS navigation data in 2014 and 2017 (the oldest and newest data available, respectively). This estimate is a rough measure of the percentage of trips originating in this zone with any destination in LA County.

These are the two zones that represent the highest percentage of destinations from this zone. The zones named correspond with the map below.

The average travel time is estimated from all trips in the sample traveling to this zone from within LA County, including those that originated within the zone. These are vehicle trips.

The map visualizes the 2017 estimated travel data (above) in relation to all other zones in the county.

Mode of travel (all trips) for Zone

Average trip distance for vehicle and bus trips for Sub Area
**Household Travel Survey Trends**

<table>
<thead>
<tr>
<th>Year</th>
<th>Mode of Travel</th>
<th>2010</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SDV</td>
<td>40%</td>
<td>40%</td>
</tr>
<tr>
<td></td>
<td>HOV</td>
<td>6%</td>
<td>6%</td>
</tr>
<tr>
<td></td>
<td>Travel</td>
<td>11%</td>
<td>11%</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>43%</td>
<td>43%</td>
</tr>
</tbody>
</table>

**Workers Commuting Trends**

<table>
<thead>
<tr>
<th>Year</th>
<th>Mode of Travel</th>
<th>2010</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SDV</td>
<td>73%</td>
<td>62%</td>
</tr>
<tr>
<td></td>
<td>HOV</td>
<td>5%</td>
<td>8%</td>
</tr>
<tr>
<td></td>
<td>Travel</td>
<td>7%</td>
<td>12%</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>17%</td>
<td>19%</td>
</tr>
</tbody>
</table>

**Other Mobility Options**

**Other Mobility Options**

<table>
<thead>
<tr>
<th>Year</th>
<th>BIKESHARE SERVICE?</th>
<th>EXPRESS LANES?</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>2015</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

This shows the categories corresponding to commute modes. Data are shown for 2010 (gray shades) and 2015 (purple shades). Single-Occupant Vehicle (SOV) means commuters driving alone. High-Occupancy Vehicle (HOV) represents people carpooling to work. Transit includes bus and rail. “Other” includes telecommuting, walking, bicycling, or taking a taxi to work. The Census does not incorporate questions distinguishing use of TNCs. The countywide averages are shown in the gray text between the key and the zone data.

Source: ACS 2010 and 2015 Table S0802

The Uber Zone Coverage is estimated from an analysis published by Uber showing changing availability of an average wait time of 5 minutes or less between January 2013 and January 2016.


These major planned transportation projects were identified for funding in County Measures R (2009) and M (2016).

Source: Metro

The first bikeshare services in the county launched in Santa Monica in late 2015 with new service areas and providers launching throughout 2016 and 2017. It is unlikely that bikeshare had a substantial effect on transit ridership by 2016, but is something to consider for the near and long-term future.

Source: F&P

The Metro Express Lanes launched in 2013 on I-10 east of, and I-110 south of downtown LA. This conversion of HOV lanes allowed people driving alone to pay a toll for access to the HOV lanes for a faster or more reliable commute. The toll revenue supported expanded express bus service on the Metro Silver Line Transitway service.

Source: F&P
**Reading This Document**

**Zone Travel Trends**

**A**
These are the RRITF-agencies participating in the RGAP study that are operating at least one route in the zone. Other agencies may operate in this zone who did not participate in this study or did not provide at least four years of data.

Source: Agency data, F&P analysis

**B**
This is the number of routes operating in this zone in 2016 for which at least four years of ridership data were available. The number of routes in each service category (local, rapid and express) are shown, as identified by the agency.

**C**
Count of buses stopping per day at buses in zone divided by zone square miles.

Source: GTFS; F&P Analysis

**D**
This is a rough estimate of the average change in daily boardings from 2012-2016 for lines operating in this zone. The estimate was made at the line-level, which was the best available data for all participating agencies. Routes crossing zone borders are included in the average for each zone.

Source: Agency data, F&P analysis

**E**
Map of TAP Card purchase locations in zone, with count and calculation per square mile.

Source: TAP; F&P analysis

---

**Zone: Westside - Midcity**

**Transit Travel Trends**

- 6 Transit Agencies in Zone
- 56 Analyzed Bus Routes
- 10 Rapid Routes
- 39 Local Routes
- 7 Express Routes
- 2,624 Bus Service (Trips at Stops) Per Square Mile
- Average Annual Change in Line Level Ridership on Analyzed Routes (2012-2016): -5%

**TAP Card Purchase Locations**

- 6 TAP Vending Machine Locations in Zone
- 39 TAP Retail Vendors in Zone
- 0.97 TAP Card Purchase Locations Per Square Mile in Zone

Source: TAP; F&P Analysis
Ridership is displayed hourly for both weekday and weekend trips using a TAP card. The bar charts show the zone’s ridership and percentages of trips, and the line represents the countywide average.

- TAPs originating in zone (per year)
  Source: TAP Regional Data Base; Nelson\Nygaard Analysis

- Percentage of TAPs by pass type in zone: No Pass (single rides, day passes); Reg. Fare (full fare monthly passes); Student, Senior/Disabled, Reduced Fare (specialty discounted passes)
  Source: TAP Regional Data Base; Nelson\Nygaard Analysis

- Frequency of TAP card use (min 2 uses in 30 days) in zone
  Source: TAP Regional Data Base; Nelson\Nygaard Analysis

- Hourly TAP ridership in zone (weekday and weekend) compared with County average
  Source: TAP Regional Data Base; Nelson\Nygaard Analysis
Key Themes

The Agoura Hills - Malibu zone is the wealthiest in the County, with nearly half of households earning more than $125,000 per year. The zone ranks #18 out of 20 zones in terms of service population (residents + employment) density. Population growth in the zone was higher than the County average between 2010 and 2015, while household growth was lower. Households in the zone are the most likely to own a car, with the smallest proportion of zero-car households. Similar to other areas with a large proportion of high-earning households, the zone has a relatively low percentage of households with children.

Potential for ridership growth based on the demographics of Agoura Hills - Malibu fall somewhat between commuter and all-purpose riders.
Zone: Agoura Hills - Malibu

Travel Trends

Key Themes

Agoura Hills - Malibu is served by Metro, with a single line connecting to the Expo Line in Santa Monica. Only 1% of workers living in Malibu use transit for commuting in the County. The average travel time to this zone is relatively high compared to other zones, reflecting its access limitations to the Pacific Coast Highway and canyon roads over the Santa Monica Mountains. Ridership decline in this zone appears much worse than the County average, but represents only a single bus route out of over 350.

Zone Travel Trends

1% 0%
2017 PERCENT OF COUNTYWIDE TRAVEL 2014 PERCENT OF COUNTYWIDE TRAVEL

Santa Monica - West LA - West San Fernando Valley
2017 TOP TWO DESTINATIONS FROM ZONE

2017 AVERAGE TRAVEL TIME* 2014 AVERAGE TRAVEL TIME*

Santa Monica - West LA - West San Fernando Valley
* To zone from other zones

2017 Percent of Total Travel

2017 Streetlight Data
Percent of Total Travel

- 12% - 16%
- 8% - 11%
- 6% - 7%
- 4% - 5%
- 2% - 3%
- 0% - 1%
### Household Travel Survey Trends

- **Mode of Travel**
  - SOV: 60%
  - HOV: 34%
  - Transit: 1%
  - Other: 5%

- **Average Trip Distance:**
  - Single Occupancy Vehicle: **12.3 miles**
  - Bus: N/A

Source: California Household Travel Survey, 2012

### Workers Commuting Trends

- **Mode of Travel**
  - County Average 2015
    - SOV: 73%
    - HOV: 10%
    - Transit: 7%
    - Other: 10%

- **2010**
  - SOV: 67%
  - HOV: 6%
  - Transit: 6%
  - Other: 26%

- **2015**
  - SOV: 66%
  - HOV: 6%
  - Transit: 11%
  - Other: 27%

Source: American Community Survey, 2015

### Other Mobility Options

- **2013**
  - 0%
  - **UBER ZONE COVERAGE (LESS THAN 5 MINUTE WAIT):** None

- **2016**
  - 10%
  - **MAJOR PLANNED TRANSPORTATION PROJECTS:** None

- **BIKESHARE SERVICE?:** No

- **EXPRESS LANES?:** No
Zone: Agoura Hills - Malibu

Travel Trends

Transit Travel Trends

- **Agencies**
  - 1 Transit Agencies in Zone
  - 0 Transit Agencies in Zone

- **Routes**
  - 1 Analyzed Bus Routes
  - 1 Express Routes
  - 0 Local Routes
  - 0 Rapid Routes

- **Service**
  - 18 Bus Service (Trips at Stops) per Square Mile
  - Average Annual Change in Line Level Ridership on Analyzed Routes (2012-2016):
    - -11%

TAP Card Purchase Locations

- **TAP Vending Machine Locations in Zone**: 0
- **TAP Retail Vendors in Zone**: 1
- **TAP Card Purchase Locations per Square Mile in Zone**: 0.01
Hourly TAP Ridership

Ridership is displayed below hourly for both weekday and weekend trips using a TAP card. The bar charts show this zone’s ridership and percentages of trips, and the line represents the countywide average.
Key Themes

The Compton zone includes several communities such as Lynwood and Carson. The zone is ranked 7th out of 20 for its population and employment density in the County. The service population density (residents + jobs) in the zone is near the middle of the range for Los Angeles County. Jobs grew 11% between 2010 and 2015, above the countywide average of 7%. Population growth averaged 3%, concentrated among the older population. The proportion of medium and high-income households grew 2 percentage points. Households with children fell slightly, although proportionally still make up about half of households, substantially higher than the County average.

Compton’s higher proportion of younger residents, and low-to-middle-income households aligns most closely with the all-purpose rider demographic.

2015 Population and Employment Density
### Households

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>97,913</td>
</tr>
<tr>
<td>2015</td>
<td>98,257</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Zone</th>
<th>2010</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>County</td>
<td>34%</td>
<td>36%</td>
</tr>
<tr>
<td>Zone</td>
<td>20%</td>
<td>10%</td>
</tr>
</tbody>
</table>

**CHANGE 2010-2015**

- County: 1%
- Zone: 0%

**FORECAST CHANGE 2016-2040**

- County: 17%
- Zone: 9%

**PERCENT WITH CHILDREN**

<table>
<thead>
<tr>
<th>Year</th>
<th>County</th>
<th>Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>38%</td>
<td>52%</td>
</tr>
<tr>
<td>2015</td>
<td>35%</td>
<td>49%</td>
</tr>
</tbody>
</table>

**PERCENT WITH ZERO CARS**

<table>
<thead>
<tr>
<th>Year</th>
<th>County</th>
<th>Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>9%</td>
<td>7%</td>
</tr>
<tr>
<td>2015</td>
<td>10%</td>
<td>7%</td>
</tr>
</tbody>
</table>

### Population

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>375,877</td>
</tr>
<tr>
<td>2015</td>
<td>386,893</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Zone</th>
<th>2010</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>County</td>
<td>49%</td>
<td>33%</td>
</tr>
<tr>
<td>Zone</td>
<td>18%</td>
<td></td>
</tr>
</tbody>
</table>

**CHANGE 2010-2015**

- County: 3%
- Zone: 3%

**FORECAST CHANGE 2016-2040**

- County: 14%
- Zone: 8%

**PERCENT EMPLOYED**

<table>
<thead>
<tr>
<th>Year</th>
<th>County</th>
<th>Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>51%</td>
<td>55%</td>
</tr>
<tr>
<td>2015</td>
<td>51%</td>
<td>54%</td>
</tr>
</tbody>
</table>

### Jobs

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>140,185</td>
</tr>
<tr>
<td>2015</td>
<td>155,872</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Zone</th>
<th>2010</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>County</td>
<td>6%</td>
<td>17%</td>
</tr>
<tr>
<td>Zone</td>
<td>11%</td>
<td>12%</td>
</tr>
</tbody>
</table>

**CHANGE 2010-2015**

- County: 6%
- Zone: 11%

**FORECAST CHANGE 2016-2040**

- County: 17%
- Zone: 12%
Zone: Compton

Travel Trends

Key Themes

The Compton zone is served by five transit agencies participating in the study, including GTrans, LADOT, Long Beach, Montebello, Norwalk, and Metro. Compton ranks among the top 10 zones for bus trips per day. Average daily boardings declined in this zone slightly worse than the County average. Compton has freeway access to the I-110 ExpressLanes. Travel times and SOV commuting have grown since 2010. A new ExpressLanes route on I-105 is planned for the future. Compton is also served by the LA Metro Rail network Green and Blue lines, as well as Metro’s Silver Line BRT.

Zone Travel Trends

<table>
<thead>
<tr>
<th>2017 PERCENT OF COUNTYWIDE TRAVEL</th>
<th>2014 PERCENT OF COUNTYWIDE TRAVEL</th>
<th>2017 TOP TWO DESTINATIONS FROM ZONE</th>
<th>2014 AVERAGE TRAVEL TIME*</th>
<th>2017 AVERAGE TRAVEL TIME*</th>
<th>AVERAGE TRAVEL TIME CHANGE*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1%</td>
<td>3%</td>
<td>South Bay Cities - Palos Verdes</td>
<td>45 min</td>
<td>46 min</td>
<td>3%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>South LA - Inglewood</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2017 Percent of Total Travel

<table>
<thead>
<tr>
<th>Percent of Total Travel</th>
</tr>
</thead>
<tbody>
<tr>
<td>12% - 16%</td>
</tr>
<tr>
<td>8% - 11%</td>
</tr>
<tr>
<td>6% - 7%</td>
</tr>
<tr>
<td>4% - 5%</td>
</tr>
<tr>
<td>2% - 3%</td>
</tr>
<tr>
<td>0% - 1%</td>
</tr>
</tbody>
</table>

2017 Streetlight Data

* To zone from other zones
Ridership Growth Action Plan

Household Travel Survey Trends

<table>
<thead>
<tr>
<th>Mode of Travel</th>
<th>SOV</th>
<th>HOV</th>
<th>Transit</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>73%</td>
<td>10%</td>
<td>7%</td>
<td>10%</td>
</tr>
<tr>
<td>2015</td>
<td>74%</td>
<td>14%</td>
<td>5%</td>
<td>7%</td>
</tr>
</tbody>
</table>

Source: California Household Travel Survey, 2012

Workers Commuting Trends

<table>
<thead>
<tr>
<th>Mode of Travel</th>
<th>SOV</th>
<th>HOV</th>
<th>Transit</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>County Average 2015</td>
<td>73%</td>
<td>10%</td>
<td>7%</td>
<td>10%</td>
</tr>
<tr>
<td>2010</td>
<td>73%</td>
<td>15%</td>
<td>5%</td>
<td>7%</td>
</tr>
<tr>
<td>2015</td>
<td>74%</td>
<td>14%</td>
<td>5%</td>
<td>7%</td>
</tr>
</tbody>
</table>

Source: American Community Survey, 2015

Other Mobility Options

<table>
<thead>
<tr>
<th>Year</th>
<th>Uber Zone Coverage</th>
<th>BikeShare Service</th>
<th>Express Lanes</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>0%</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>2016</td>
<td>40%</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

I-105 Express Lane from I-405 to I-605
I-110 Express Lane Ext South to I-405/I-110 Interchange
I-405 South Bay Curve Improvements

MAJOR PLANNED TRANSPORTATION PROJECTS
**Zone: Compton**

**Travel Trends**

### Transit Travel Trends

- **Agencies**: 5
- **Routes**: 49
- **Service**: 4
- **Ridership & Trips**: 917
- **Average Annual Change in Line Level Ridership on Analyzed Routes (2012-2016)**: -4%

**Transit Agencies in Zone**
- Gtrans, LADOT, Long Beach Transit, Metro, Torrance Transit

**TAP Card Purchase Locations**

- **TAP Vending Machine Locations in Zone**: 10
- **TAP Retail Vendors in Zone**: 12
- **TAP Card Purchase Locations per Square Mile in Zone**: 0.43
**TAP Data Trends**

5,735,887

TRIPS ORIGINATING IN ZONE

**Hourly TAP Ridership**

Ridership is displayed below hourly for both weekday and weekend trips using a TAP card. The bar charts show this zone’s ridership and percentages of trips, and the line represents the countywide average.

**WEEKDAY**

**WEEKEND**
Zone: Downey - Norwalk

Demographic Trends

Key Themes

Downey-Norwalk also includes the community of Cerritos. It ranks 5th out of 20 for the population and employment density. Job growth was near the County average between 2010 and 2015 of 7%. Population grew somewhat slower than the County average. The working-age population was relatively stable in this time period. Downey-Norwalk proportion of households with children is well above the countywide average, and declined slightly. Downey-Norwalk has population-age proportions reflective of the countywide average. Households in Downey-Norwalk are somewhat more concentrated in the middle-income ranges than the countywide average. The proportion of households earning <$35,000/year is lower than the countywide average, with more households earning between $35,000 and $125,000. Downey-Norwalk demographics fall somewhat more along the lines of commuter riders. The zone has somewhat higher proportion of households with higher incomes and car ownership than the all-purpose rider demographic. However, the younger population distribution of the zone suggests potential for more all-purpose riders.

2015 Population and Employment Density
### Ridership Growth Action Plan

#### Households

**2010: 119,448 TOTAL**
- 29%
- 35%
- 24%
- 13%

**2015: 116,727 TOTAL**
- 27%
- 35%
- 24%
- 14%

<table>
<thead>
<tr>
<th>Change 2010-2015</th>
<th>County</th>
<th>Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>PERCENT WITH CHILDREN</td>
<td>2010</td>
<td>2015</td>
</tr>
<tr>
<td>County</td>
<td>38%</td>
<td>35%</td>
</tr>
<tr>
<td>Zone</td>
<td>48%</td>
<td>45%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Change 2010-2015</th>
<th>County</th>
<th>Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>PERCENT WITH ZERO CARS</td>
<td>2010</td>
<td>2015</td>
</tr>
<tr>
<td>County</td>
<td>9%</td>
<td>10%</td>
</tr>
<tr>
<td>Zone</td>
<td>6%</td>
<td>5%</td>
</tr>
</tbody>
</table>

#### Population

**2010: 412,826 TOTAL**
- 46%
- 34%
- 20%

**2015: 420,017 TOTAL**
- 44%
- 34%
- 22%

<table>
<thead>
<tr>
<th>Change 2010-2015</th>
<th>County</th>
<th>Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>PERCENT WITH CHILDREN</td>
<td>2010</td>
<td>2015</td>
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<td>35%</td>
</tr>
<tr>
<td>Zone</td>
<td>48%</td>
<td>45%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Change 2010-2015</th>
<th>County</th>
<th>Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>PERCENT WITH ZERO CARS</td>
<td>2010</td>
<td>2015</td>
</tr>
<tr>
<td>County</td>
<td>9%</td>
<td>10%</td>
</tr>
<tr>
<td>Zone</td>
<td>6%</td>
<td>5%</td>
</tr>
</tbody>
</table>

#### Jobs

**2010: 123,320 TOTAL**

**2015: 132,439 TOTAL**

<table>
<thead>
<tr>
<th>Change 2010-2015</th>
<th>County</th>
<th>Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>PERCENT WITH CHILDREN</td>
<td>2010</td>
<td>2015</td>
</tr>
<tr>
<td>County</td>
<td>38%</td>
<td>35%</td>
</tr>
<tr>
<td>Zone</td>
<td>48%</td>
<td>45%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Change 2010-2015</th>
<th>County</th>
<th>Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>PERCENT WITH ZERO CARS</td>
<td>2010</td>
<td>2015</td>
</tr>
<tr>
<td>County</td>
<td>9%</td>
<td>10%</td>
</tr>
<tr>
<td>Zone</td>
<td>6%</td>
<td>5%</td>
</tr>
</tbody>
</table>
Zone: Downey - Norwalk

Travel Trends

Key Themes

Downey-Norwalk is served by three transit agencies participating in the study: Long Beach Transit, Norwalk, and Metro. Downey-Norwalk is also served by the Metro Green Line light rail and Metrolink provides commuter rail service on the northeast edge of the zone. Downey-Norwalk has a relatively low percentage of transit commuting, below the countywide average of 7%. Transit ridership decline was similar to the County average. Bus trips at stop per day are medium to low compared to other zones in the County. Proportion of commuters carpooling declined in 2015 while solo driving (SOV) increased somewhat. There are both rail transit and ExpressLanes expansion projects planned for this zone.

Zone Travel Trends

2017 Percent of Total Travel

<table>
<thead>
<tr>
<th>Destination</th>
<th>2017 Percent of Countywide Travel</th>
<th>2014 Percent of Countywide Travel</th>
<th>2017 Top Two Destinations from Zone</th>
<th>2014 Average Travel Time</th>
<th>2017 Average Travel Time*</th>
<th>Average Travel Time Change*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long Beach - Lakewood - Whittier</td>
<td>2%</td>
<td>3%</td>
<td>3%</td>
<td>47 min</td>
<td>51 min</td>
<td>2%</td>
</tr>
<tr>
<td>Countywide average travel time</td>
<td>78 min</td>
<td>53 min</td>
<td>3%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2017 Percent of Total Travel

2017 Streetlight Data

Percent of Total Travel

- 12% - 16%
- 8% - 11%
- 6% - 7%
- 4% - 5%
- 2% - 3%
- 0% - 1%
Household Travel Survey Trends

<table>
<thead>
<tr>
<th>Mode of Travel</th>
<th>2010</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOV</td>
<td>73%</td>
<td>80%</td>
</tr>
<tr>
<td>HOV</td>
<td>13%</td>
<td>10%</td>
</tr>
<tr>
<td>Transit</td>
<td>7%</td>
<td>3%</td>
</tr>
<tr>
<td>Other</td>
<td>10%</td>
<td>6%</td>
</tr>
</tbody>
</table>

Source: American Community Survey, 2015

Workers Commuting Trends

<table>
<thead>
<tr>
<th>Mode of Travel</th>
<th>County Average 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOV</td>
<td>73%</td>
</tr>
<tr>
<td>HOV</td>
<td>13%</td>
</tr>
<tr>
<td>Transit</td>
<td>7%</td>
</tr>
<tr>
<td>Other</td>
<td>10%</td>
</tr>
</tbody>
</table>

Source: American Community Survey, 2015

Other Mobility Options

- **West Santa Ana Branch Corridor**
  - I-5 Carpool and Mixed-Flow Lanes
  - Green Line Eastern Extension (Norwalk)
  - I-105 Express Lane from I-405 to I-605

**Major Planned Transportation Projects**

- **2013**: 0%
- **2016**: 60%

**Uber Zone Coverage (Less Than 5 Minute Wait)**

- **No**

**Bikeshare Service?**

- **No**

**Express Lanes?**

- **No**
Zone: Downey - Norwalk

Travel Trends

Transit Travel Trends

3
TRANSIT AGENCIES IN ZONE

Long Beach Transit, Metro, Norwalk Transit

32
ANALYZED BUS ROUTES

2
EXPRESS ROUTES

30
LOCAL ROUTES

0
RAPID ROUTES

656
BUS SERVICE (TRIPS AT STOPS) PER SQUARE MILE

-3%
AVERAGE ANNUAL CHANGE IN LINE LEVEL RIDERSHIP ON ANALYZED ROUTES (2012-2016)

TAP Card Purchase Locations

2
TAP VENDING MACHINE LOCATIONS IN ZONE

13
TAP RETAIL VENDORS IN ZONE

0.34
TAP CARD PURCHASE LOCATIONS PER SQUARE MILE IN ZONE
TAP Data Trends

3,565,169
TRIPS ORIGINATING IN ZONE

Hourly TAP Ridership

Ridership is displayed below hourly for both weekday and weekend trips using a TAP card. The bar charts show this zone’s ridership and percentages of trips, and the line represents the countywide average.
Zone: Downtown - NELA

Demographic Trends

Key Themes

Downtown - NELA (Northeast Los Angeles) is ranked highest out of 20 zones for its service population (residents + jobs) density. About 46% of households in this zone earn less than $35,000 per year, and 22% of households have no car - among the highest proportions for both metrics in the County. The proportion of households with children is lower than the County average. Downtown - NELA is one of the few zones where the proportion of households in the middle-income categories is increasing as the poorest households decrease. Jobs in the zone increased at a higher rate than the County average between 2010 and 2015.

Downtown - NELA demographics are closely aligned with the all-purpose rider demographic, due to the proportions of households earning lower incomes, the distribution of the population younger than age 55, and the high proportion of households without cars.

2015 Population and Employment Density
Key Themes

Downtown - Northeast Los Angeles is served locally by Metro and LADOT, and is a central hub for express bus service from numerous other operators and the hub for nearly all rail transit in the County. This zone has the highest percentage of commuters using transit of any zone, corresponding with the high availability of service and the demographics and car ownership. However, the zone also has the most travel options, with increasing rail access, high coverage by TNCs, the centerpoint of the two freeway ExpressLanes, and a new bikeshare network. Several major transit projects are underway or planned in this zone. As downtown revitalizes, even small percentage declines in boardings in this zone have a large effect in absolute numbers. Annual average ridership decline was worse than the County average.

Zone Travel Trends

2017 Percent of Total Travel

<table>
<thead>
<tr>
<th>Zone</th>
<th>2017 Percent of Countywide Travel</th>
<th>2014 Percent of Countywide Travel</th>
<th>2017 Top Two Destinations From Zone</th>
<th>2014 Average Travel Time*</th>
<th>2017 Average Travel Time*</th>
<th>Average Travel Time Change*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Westside - Midcity</td>
<td>6%</td>
<td>6%</td>
<td>Downtown - NELA</td>
<td>41 min</td>
<td>44 min</td>
<td>7%</td>
</tr>
<tr>
<td>East San Fernando Valley</td>
<td>6%</td>
<td>6%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* To zone from other zones

2017 Streetlight Data

Percent of Total Travel

- 12% - 16%
- 8% - 11%
- 6% - 7%
- 4% - 5%
- 2% - 3%
- 0% - 1%
Household Travel Survey Trends

- **Mode of Travel**
  - SOV: 30%
  - HOV: 27%
  - Transit: 19%
  - Other: 24%

**Average Trip Distance:**
- Single Occupancy Vehicle: 9.6 miles
- Bus: 7.1 miles

Source: California Household Travel Survey, 2012

Workers Commuting Trends

<table>
<thead>
<tr>
<th>Year</th>
<th>SOV</th>
<th>HOV</th>
<th>Transit</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>58%</td>
<td>11%</td>
<td>20%</td>
<td>11%</td>
</tr>
<tr>
<td>2015</td>
<td>50%</td>
<td>10%</td>
<td>18%</td>
<td>12%</td>
</tr>
</tbody>
</table>

Source: American Community Survey, 2015

Other Mobility Options

- **2013**
  - UBER Zone Coverage (Less than 5 minute wait): 0%
  - BIKESHARE Service?: Yes
  - EXPRESS LANES?: Yes
- **2016**
  - UBER Zone Coverage (Less than 5 minute wait): 80%
  - BIKESHARE Service?: Yes
  - EXPRESS LANES?: Yes

Regional Connector West Santa Ana Branch Corridor
Regional Commuter Rail (Metrolink and Amtrak) Improvements West Santa Ana light rail Corridor: Union Station to City of Artesia

Major Planned Transportation Projects
## Zone: Downtown - NELA

### Travel Trends

#### Transit Travel Trends

<table>
<thead>
<tr>
<th><strong>Agencies</strong></th>
<th>9</th>
<th><strong>Transit Agencies in Zone</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Routes</strong></td>
<td>110</td>
<td><strong>Analyzed Bus Routes</strong></td>
</tr>
<tr>
<td><strong>Service</strong></td>
<td>4,178</td>
<td><strong>Bus Service (Trips at Stops) per Square Mile</strong></td>
</tr>
<tr>
<td><strong>Ridership &amp; Trips</strong></td>
<td>-5%</td>
<td><strong>Average Annual Change in Line Level Ridership on Analyzed Routes (2012-2016)</strong></td>
</tr>
</tbody>
</table>

- AVTA, Big Blue Bus, Foothill Transit, Gtrans, LADOT, Montebello Bus Lines, Metro, Santa Clarita Transit, Torrance Transit

#### TAP Card Purchase Locations

- **Vending Machine Locations in Zone**: 27
- **Retail Vendors in Zone**: 57
- **Card Purchase Locations per Square Mile in Zone**: 1.40
TAP Data Trends

TRIPS ORIGINATING IN ZONE

61,520,142

FARE TYPE BY PASS

Hourly TAP Ridership

Ridership is displayed below hourly for both weekday and weekend trips using a TAP card. The bar charts show this zone's ridership and percentages of trips, and the line represents the countywide average.

WEEKDAY

WEEKEND
Key Themes

The East San Fernando Valley is the most populated zone in the study in absolute terms, with over 1.16 million residents. The zone includes a large portion of the City of Los Angeles, as well as Glendale, Burbank, San Fernando, and unincorporated county land. In terms of service population (jobs + residents) density, it is ranked 13th out of 20. Between 2010 and 2015, both population and jobs growth were slightly higher than the County average. The population distribution shifted slightly towards ages 55 and older. The proportion of households with children is close to the County average, as are households without cars. The household income distribution is also close to the County average, with more than 60% of households earning less than $75,000 per year.

The East San Fernando Valley average demographic is closely aligned with the all-purpose rider, based on the proportions of household incomes and households with children, the age distribution of the population. In such a large and populous area, 9% (approximately 35,000) of households have no car.

2015 Population and Employment Density
**Key Themes**

East San Fernando Valley is served by several operators, including express bus service to and through the zone. This zone has access to both Metro Rail and Metrolink commuter rail services, as well as robust access to TNCs in the more densely settled area. Despite relatively high number of bus trips and stops in this zone, only 6% of the population uses transit to commute to work, a proportion which held steady since 2010 amidst a 4% increase in population. As one of the most heavily-populated and largest zones and a high-percentage of SOV commuters, this zone also generates a high proportion of countywide travel, which increased between 2014 and 2017. This is also reflected by a growing average travel time in the same period. Many major transportation projects are planned, including a major new rail line connecting to the Westside/Midcity area.

**Zone Travel Trends**

<table>
<thead>
<tr>
<th>2017 Percent of Countywide Travel</th>
<th>2014 Percent of Countywide Travel</th>
<th>2017 Top Two Destinations from Zone</th>
<th>2014 Average Travel Time*</th>
<th>2017 Average Travel Time*</th>
<th>Average Travel Time Change*</th>
</tr>
</thead>
<tbody>
<tr>
<td>14%</td>
<td>12%</td>
<td>West San Fernando Valley - Westside - Midcity</td>
<td>45 min</td>
<td>47 min</td>
<td>4%</td>
</tr>
</tbody>
</table>

**2017 Percent of Total Travel**

<table>
<thead>
<tr>
<th>Percent of Total Travel</th>
<th>2017 Streetlight Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>12% - 16%</td>
<td>East San Fernando Valley</td>
</tr>
<tr>
<td>8% - 11%</td>
<td>North San Fernando Valley</td>
</tr>
<tr>
<td>6% - 7%</td>
<td>South San Fernando Valley</td>
</tr>
<tr>
<td>4% - 5%</td>
<td>West San Fernando Valley</td>
</tr>
<tr>
<td>2% - 3%</td>
<td>South Bay Cities - Palos Verdes</td>
</tr>
<tr>
<td>0% - 1%</td>
<td>Los Angeles Urban Area</td>
</tr>
</tbody>
</table>

* To zone from other zones

<table>
<thead>
<tr>
<th>Countywide average travel time</th>
<th>76 min</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014 Average Travel Time*</td>
<td>51 min</td>
</tr>
<tr>
<td>2017 Average Travel Time*</td>
<td>53 min</td>
</tr>
<tr>
<td>Average Travel Time Change*</td>
<td>4%</td>
</tr>
</tbody>
</table>
### Household Travel Survey Trends

**Mode of Travel**
- SOV: 44%
- HOV: 37%
- Transit: 6%
- Other: 13%

**Average Trip Distance: Single Occupancy Vehicle**
- 7.1 miles

Source: California Household Travel Survey, 2012

### Workers Commuting Trends

**Mode of Travel**
- SOV: 73%
- HOV: 12%
- Transit: 6%
- Other: 9%

**County Average 2015**
- 73% SOV
- 10% HOV
- 7% Transit
- 10% Other

Source: American Community Survey, 2015

### Other Mobility Options

**Major Planned Transportation Projects**
- East San Fernando Valley Transit Corridor
- Sepulveda Pass Transit Corridor
- I-5 Carpool Lanes SR-170 to SR-134
- Regional Commuter Rail (Metrolink and Amtrak) Improvements
- BRT Connector Orange/Red Line to Gold Line
- Orange Line Conversion to light rail
- Orange Line BRT Improvements

**Other**
- SOV: 50%
- HOV: 10%
- Transit: 6%
- Other: 9%

**Uber Zone Coverage (Less Than 5 Minute Wait)**
- 5%

**Bikeshare Service?**
- No

**Express Lanes?**
- No
Zone: East San Fernando Valley

Travel Trends

Transit Travel Trends

- **Agencies**: 4
- **Routes**: 62
- **Service**: Buses
- **Ridership & Trips**: 403
- **Change in Ridership**: -4%
- **Bus Service (Trips at Stops) per Square Mile**: 403
- **Average Annual Change in Line Level Ridership on Analyzed Routes (2012-2016)**: -4%

**Transit Agencies in Zone**
AVTA, LADOT, Metro, Santa Clarita Transit

**TAP Card Purchase Locations**

- **Vending Machine Locations**: 8
- **Retail Vendors**: 40
- **Card Purchase Locations per Square Mile**: 0.17

**TAP Card Purchase Locations**
- TAP Retail Vendor
- TAP Vending Machine (TVM)
- Metro Customer Center
TAP Data Trends

TRIPS ORIGINATING IN ZONE

31,529,863

FARE TYPE BY PASS

TRIP FREQUENCY

Hourly TAP Ridership

Ridership is displayed below hourly for both weekday and weekend trips using a TAP card. The bar charts show this zone’s ridership and percentages of trips, and the line represents the countywide average.

WEEKDAY

WEEKEND
Key Themes

East San Gabriel Valley is the third-most populated zone in the County, just shy of one million residents. In terms of service population (residents + jobs) density, it is ranked 12 out of 20. The region population growth was slightly slower than the County average and job growth was substantially lower at 1%. Although the number of households was effectively unchanged, the income distribution shifted slightly towards earnings over $125,000 per year with a slight decline in households earning between $35,000 and $125,000. The zone has a higher proportion of households with children than the County average, although the difference has narrowed since 2010. The East San Gabriel Valley has substantially fewer households without cars than the County average.

The East San Gabriel Valley is somewhat more aligned with commuter or occasional rider demographics based on the average household income and car ownership rates. However, the relatively younger age of the population would otherwise align this zone more with all-purpose riders.

2015 Population and Employment Density

[Map image showing population and employment density across different zones, with zones color-coded from low to high density.]
### Households

**2010: 264,388 TOTAL**

- **Percentage Distribution:**
  - 25% Households
  - 32% Jobs
  - 25% Forecasts
  - 17% Change

**2015: 264,681 TOTAL**

- **Percentage Distribution:**
  - 25% Households
  - 31% Jobs
  - 24% Forecasts
  - 19% Change

**Change 2010-2015**

<table>
<thead>
<tr>
<th>COUNTY</th>
<th>1% Change</th>
<th>17%forecast</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZONE</td>
<td>0%</td>
<td>12%</td>
</tr>
</tbody>
</table>

**Forecast Change 2016-2040**

<table>
<thead>
<tr>
<th>COUNTY</th>
<th>1% Change</th>
<th>17%forecast</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZONE</td>
<td>0%</td>
<td>12%</td>
</tr>
</tbody>
</table>

**Percent with Children**

<table>
<thead>
<tr>
<th>COUNTY</th>
<th>2010</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZONE</td>
<td>38%</td>
<td>35%</td>
</tr>
</tbody>
</table>

**Percent with Zero Cars**

<table>
<thead>
<tr>
<th>COUNTY</th>
<th>2010</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZONE</td>
<td>9%</td>
<td>10%</td>
</tr>
</tbody>
</table>

---

### Population

**2010: 937,108 TOTAL**

- **Percentage Distribution:**
  - 45% Households
  - 34% Jobs
  - 21% Forecasts

**2015: 957,556 TOTAL**

- **Percentage Distribution:**
  - 42% Households
  - 33% Jobs
  - 25% Forecasts

**Change 2010-2015**

<table>
<thead>
<tr>
<th>COUNTY</th>
<th>3% Change</th>
<th>14%forecast</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZONE</td>
<td>2%</td>
<td>10%</td>
</tr>
</tbody>
</table>

**Forecast Change 2016-2040**

<table>
<thead>
<tr>
<th>COUNTY</th>
<th>3% Change</th>
<th>14%forecast</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZONE</td>
<td>2%</td>
<td>10%</td>
</tr>
</tbody>
</table>

**Percent Employed**

<table>
<thead>
<tr>
<th>COUNTY</th>
<th>2010</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZONE</td>
<td>51%</td>
<td>51%</td>
</tr>
</tbody>
</table>

---

### Jobs

**2010: 316,956 TOTAL**

- **Percentage Distribution:**
  - 6% Households
  - 17% Jobs
  - 12% Forecasts

**2015: 318,672 TOTAL**

- **Percentage Distribution:**
  - 6% Households
  - 17% Jobs
  - 12% Forecasts

**Change 2010-2015**

<table>
<thead>
<tr>
<th>COUNTY</th>
<th>6% Change</th>
<th>17%forecast</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZONE</td>
<td>1%</td>
<td>12%</td>
</tr>
</tbody>
</table>

---
Zone: East San Gabriel Valley

Travel Trends

Key Themes

The East San Gabriel Valley is primarily served by Foothill Transit and Norwalk Transit, with additional Metro service including a recent expansion of the Gold Line light rail, and commuter rail service by Metrolink. Despite the size of the zone and the service population, bus trips at stops per day is in the middle of the range for all zones. Transit ridership declined at about the County average. The zone has moderate TNC coverage and a relatively low percentage of households without cars. An additional expansion of the Gold Line towards the east is currently underway.

Zone Travel Trends

<table>
<thead>
<tr>
<th>Percent of Total Travel</th>
<th>2017 Percent of Total Travel</th>
<th>2014 Percent of Total Travel</th>
<th>2017 Top Two Destinations from Zone</th>
<th>2014 Average Travel Time*</th>
<th>2017 Average Travel Time*</th>
<th>Average Travel Time Change*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5%</td>
<td>6%</td>
<td>Pasadena - West San Gabriel Valley</td>
<td>51 min</td>
<td>56 min</td>
<td>2%</td>
</tr>
<tr>
<td></td>
<td>2017 PERCENT OF COUNTYWIDE TRAVEL</td>
<td>2014 PERCENT OF COUNTYWIDE TRAVEL</td>
<td>Downtown - NELA</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2017 Percent of Total Travel

2017 Streetlight Data

Percent of Total Travel

- 12% - 16%
- 8% - 11%
- 6% - 7%
- 4% - 5%
- 2% - 3%
- 0% - 1%
**Household Travel Survey Trends**

<table>
<thead>
<tr>
<th>Mode of Travel</th>
<th>2010</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOV</td>
<td>39%</td>
<td>76%</td>
</tr>
<tr>
<td>HOV</td>
<td>49%</td>
<td>13%</td>
</tr>
<tr>
<td>Transit</td>
<td>2%</td>
<td>3%</td>
</tr>
<tr>
<td>Other</td>
<td>10%</td>
<td>8%</td>
</tr>
</tbody>
</table>

**Average Trip Distance: Single Occupancy Vehicle**

- **2010**: 8.1 miles
- **2015**: 11.0 miles

Source: California Household Travel Survey, 2012

**Workers Commuting Trends**

<table>
<thead>
<tr>
<th>Mode of Travel</th>
<th>2010</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOV</td>
<td>73%</td>
<td>77%</td>
</tr>
<tr>
<td>HOV</td>
<td>10%</td>
<td>12%</td>
</tr>
<tr>
<td>Transit</td>
<td>7%</td>
<td>3%</td>
</tr>
<tr>
<td>Other</td>
<td>10%</td>
<td>8%</td>
</tr>
</tbody>
</table>

**County Average 2015**

- **SOV**: 76%
- **HOV**: 13%
- **Transit**: 3%
- **Other**: 8%

Source: American Community Survey, 2015

**Other Mobility Options**

<table>
<thead>
<tr>
<th>Year</th>
<th>UBER Zone Coverage</th>
<th>BIKESHARE Service</th>
<th>EXPRESS Lanes</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>0%</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>2016</td>
<td>30%</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

**Major Planned Transportation Projects**

- Gold Line Foothill Extension
- Regional Commuter Rail (Metrolink and Amtrak) Improvements
- SR-71 Gap from I-10 to Rio Rancho Rd.
- SR-57/SR-60 Interchange Improvements
Zone: East San Gabriel Valley

Travel Trends

Transit Travel Trends

- **3** transit agencies in zone
- **39** analyzed bus routes
- **0** rapid routes
- **31** local routes
- **8** express routes
- **262** bus service (trips at stops) per square mile
- **-3%** average annual change in line level ridership on analyzed routes (2012-2016)

TAP Card Purchase Locations

- **3** TAP vending machine locations in zone
- **19** TAP retail vendors in zone
- **0.10** TAP card purchase locations per square mile in zone
TAP Data Trends

391,924
TRIPS ORIGINATING IN ZONE

Hourly TAP Ridership

Ridership is displayed below hourly for both weekday and weekend trips using a TAP card. The bar charts show this zone’s ridership and percentages of trips, and the line represents the countywide average.
Zone: LAX

Demographic Trends

Key Themes

The LAX zone was drawn separate (following its Census Tract boundaries) from its surrounding area to isolate the somewhat unique travel and employment patterns of the major international airport from the neighborhoods and communities nearby. Thus, there is no population or household information for this zone. However, the zone is still home to a substantial number of jobs in the region, and is served peripherally by public transit.

2015 Population and Employment Density
### Households

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>County Change 2010-2015</th>
<th>County Forecast Change 2016-2040</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>N/A</td>
<td>1%</td>
<td>17%</td>
</tr>
<tr>
<td>2015</td>
<td>N/A</td>
<td>34%</td>
<td>15%</td>
</tr>
</tbody>
</table>

### Population

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>County Change 2010-2015</th>
<th>County Forecast Change 2016-2040</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>N/A</td>
<td>3%</td>
<td>14%</td>
</tr>
<tr>
<td>2015</td>
<td>N/A</td>
<td>6%</td>
<td>17%</td>
</tr>
</tbody>
</table>

### Jobs

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>County Change 2010-2015</th>
<th>County Forecast Change 2016-2040</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>30,856</td>
<td>6%</td>
<td>17%</td>
</tr>
<tr>
<td>2015</td>
<td>41,489</td>
<td>34%</td>
<td>15%</td>
</tr>
</tbody>
</table>
**Zone: LAX**

**Travel Trends**

---

### Key Themes

The LAX zone is served by several bus operators involved in the study, as well as long-distance buses including LAX Flyaway. The Metro Green Line provides regional rail connections, and the future Crenshaw Line and LAX People Mover will expand rail service to the airport. Access for TNCs to the airport was ubiquitous by 2016, adding further competition to established transit and taxi service. Bus trips at stops per day is relatively high for this zone given its size.

---

### Zone Travel Trends

<table>
<thead>
<tr>
<th>2017 Percent of Total Travel</th>
<th>2014 Percent of Total Travel</th>
<th>2017 Top Two Destinations from Zone</th>
<th>2014 Average Travel Time*</th>
<th>2017 Average Travel Time*</th>
<th>Average Travel Time Change*</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
<td>1%</td>
<td>Santa Monica - West LA</td>
<td>44 min</td>
<td>53 min</td>
<td>11%</td>
</tr>
<tr>
<td>2017 PERCENT OF COUNTYWIDE TRAVEL</td>
<td>2014 PERCENT OF COUNTYWIDE TRAVEL</td>
<td>South Bay Cities - Palos Verdes</td>
<td>49 min</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

### 2017 Percent of Total Travel

![Map showing travel trends](image)

**2017 Streetlight Data**

Percent of Total Travel

- 12% - 16%
- 8% - 11%
- 6% - 7%
- 4% - 5%
- 2% - 3%
- 0% - 1%
Household Travel Survey Trends

<table>
<thead>
<tr>
<th>Mode of Travel</th>
<th>2010</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOV</td>
<td>40%</td>
<td>73%</td>
</tr>
<tr>
<td>HOV</td>
<td>34%</td>
<td>10%</td>
</tr>
<tr>
<td>Transit</td>
<td>11%</td>
<td>7%</td>
</tr>
<tr>
<td>Other</td>
<td>15%</td>
<td>10%</td>
</tr>
</tbody>
</table>

- **SOV Average Trip Distance:** 17.3 miles
- **BUS Average Trip Distance:** N/A

Workers Commuting Trends

<table>
<thead>
<tr>
<th>Mode of Travel</th>
<th>2010</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOV</td>
<td>73%</td>
<td>N/A</td>
</tr>
<tr>
<td>HOV</td>
<td>10%</td>
<td>N/A</td>
</tr>
<tr>
<td>Transit</td>
<td>7%</td>
<td>N/A</td>
</tr>
<tr>
<td>Other</td>
<td>10%</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Other Mobility Options

- **UBER Zone Coverage (Less Than 5 Minute Wait):**
  - 2013: 0%
  - 2016: 75%

- **Bikeshare Service:** No
- **Express Lanes:** No

**Major Planned Transportation Projects**

- Crenshaw/LAX Transit Corridor
- I-105 Express Lane from I-405 to I-605
- I-405 South Bay Curve Improvements

**Source:**
- California Household Travel Survey, 2012
- American Community Survey, 2015
Zone: LAX

Travel Trends

Transit Travel Trends

- **7 Transit Agencies** in Zone
- **12 Analyzed Bus Routes**
- **2 Rapid Routes**
- **2 Express Routes**
- **613 Bus Service (Trips at Stops) per Square Mile**
- **-4% Average Annual Change in Line Level Ridership on Analyzed Routes (2012-2016)**

TAP Card Purchase Locations

1 TAP Vending Machine Locations in Zone
0 TAP Retail Vendors in Zone
0.13 TAP Card Purchase Locations per Square Mile in Zone
Hourly TAP Ridership

Ridership is displayed below hourly for both weekday and weekend trips using a TAP card. The bar charts show this zone’s ridership and percentages of trips, and the line represents the countywide average.
Key Themes

The Long Beach - Lakewood zone includes the communities of Signal Hill and Hawaiian Gardens. Ranking 6th out of 20 for population + employment density, the zone is somewhat younger than the countywide average and residents are more likely to be employed than the County average. The population aged overall between 2010 and 2015. Population growth in the zone was slower than the County average and jobs declined slightly, one of only three zones in the County to do so. The proportion of households with children is similar to the County average. The household income distribution in Long Beach - Lakewood is closely reflective of the countywide average. Proportion of households with children is similar to the countywide average.

Long Beach - Lakewood has a demographic mix similar to the all-purpose rider. There are a higher proportion of households earning less than $75,000 per year, households with no car, and a generally younger population.

2015 Population and Employment Density
Households

2010: 182,408 TOTAL

2015: 184,758 TOTAL

<table>
<thead>
<tr>
<th>CHANGE 2010-2015</th>
<th>COUNTY</th>
<th>ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1%</td>
<td>1%</td>
<td>5%</td>
</tr>
</tbody>
</table>

FORECAST CHANGE 2016-2040

<table>
<thead>
<tr>
<th>COUNTY</th>
<th>ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>17%</td>
<td>5%</td>
</tr>
</tbody>
</table>

Percent with Children

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>COUNTY</td>
<td>38%</td>
<td>35%</td>
</tr>
<tr>
<td>ZONE</td>
<td>40%</td>
<td>39%</td>
</tr>
</tbody>
</table>

Percent with Zero Cars

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>COUNTY</td>
<td>9%</td>
<td>10%</td>
</tr>
<tr>
<td>ZONE</td>
<td>10%</td>
<td>10%</td>
</tr>
</tbody>
</table>

Population

2010: 547,304 TOTAL

2015: 555,936 TOTAL

<table>
<thead>
<tr>
<th>CHANGE 2010-2015</th>
<th>COUNTY</th>
<th>ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>3%</td>
<td>2%</td>
<td>3%</td>
</tr>
</tbody>
</table>

FORECAST CHANGE 2016-2040

<table>
<thead>
<tr>
<th>COUNTY</th>
<th>ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>14%</td>
<td>3%</td>
</tr>
</tbody>
</table>

Percent Employed

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>COUNTY</td>
<td>51%</td>
<td>51%</td>
</tr>
<tr>
<td>ZONE</td>
<td>61%</td>
<td>57%</td>
</tr>
</tbody>
</table>

Jobs

2010: 149,143 TOTAL

2015: 145,184 TOTAL

<table>
<thead>
<tr>
<th>CHANGE 2010-2015</th>
<th>COUNTY</th>
<th>ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>6%</td>
<td>-3%</td>
<td>15%</td>
</tr>
</tbody>
</table>

FORECAST CHANGE 2016-2040

<table>
<thead>
<tr>
<th>COUNTY</th>
<th>ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>17%</td>
<td>15%</td>
</tr>
</tbody>
</table>
Zone: Long Beach - Lakewood

Travel Trends

Key Themes

Long Beach - Lakewood is primarily served by Long Beach Transit, as well as Metro and Torrance Transit. In terms of bus trips per day, the zone ranks #5 out of 20 zones. Average annual decline in ridership is one of the lowest, despite nearly 100% coverage of high-quality TNC access. Long Beach Transit is the primary service provider and one of the most stable-performing in terms of average daily boardings between 2012 and 2016 in the study. Long Beach - Lakewood is also served by the Metro Blue Line light rail.

Zone Travel Trends

2% 3%
2017 PERCENT OF COUNTYWIDE TRAVEL 2014 PERCENT OF COUNTYWIDE TRAVEL

Ports Downey - Norwalk

2017 TOP TWO DESTINATIONS FROM ZONE

2017 AVERAGE TRAVEL TIME*

2017 AVERAGE TRAVEL TIME CHANGE*

AVERAGE TRAVEL TIME CHANGE* To zone from other zones

2017 Percent of Total Travel

2017 Streetlight Data
Percent of Total Travel

12% - 16%
8% - 11%
6% - 7%
4% - 5%
2% - 3%
0% - 1%
Household Travel Survey Trends

- **36%** SOV
- **41%** HOV
- **6%** Transit
- **17%** Other

**Mode of Travel**

- **7.1 miles** AVERAGE TRIP DISTANCE: SINGLE OCCUPANCY VEHICLE
- **6.4 miles** AVERAGE TRIP DISTANCE: BUS

Source: California Household Travel Survey, 2012

Workers Commuting Trends

<table>
<thead>
<tr>
<th>Mode of Travel</th>
<th>2010</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOV</td>
<td>73%</td>
<td>75%</td>
</tr>
<tr>
<td>HOV</td>
<td>12%</td>
<td>10%</td>
</tr>
<tr>
<td>Transit</td>
<td>6%</td>
<td>6%</td>
</tr>
<tr>
<td>Other</td>
<td>8%</td>
<td>9%</td>
</tr>
</tbody>
</table>

County Average 2015

Source: American Community Survey, 2015

Other Mobility Options

**I-710 South Corridor Project**

- **MAJOR PLANNED TRANSPORTATION PROJECTS**
  - **Yes** BIKESHARE SERVICE?
  - **No** EXPRESS LANES?

**UBER ZONE COVERAGE (LESS THAN 5 MINUTE WAIT)**

- **2013**: 0%
- **2016**: 95%
## Zone: Long Beach - Lakewood

### Travel Trends

#### Transit Travel Trends

<table>
<thead>
<tr>
<th>Category</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agencies</td>
<td>3 TRANSIT AGENCIES IN ZONE</td>
</tr>
<tr>
<td>Routes</td>
<td>47 ANALYZED BUS ROUTES</td>
</tr>
<tr>
<td>Service</td>
<td>2 RAPID ROUTES</td>
</tr>
<tr>
<td>Ridership &amp; Trips</td>
<td>1 EXPRESS ROUTES</td>
</tr>
<tr>
<td></td>
<td>1,551 BUS SERVICE (TRIPS AT STOPS) PER SQUARE MILE</td>
</tr>
<tr>
<td></td>
<td>-2% AVERAGE ANNUAL CHANGE IN LINE LEVEL RIDERSHIP ON ANALYZED ROUTES</td>
</tr>
</tbody>
</table>

#### TAP Card Purchase Locations

- 6 TAP VENDING MACHINE LOCATIONS IN ZONE
- 15 TAP RETAIL VENDORS IN ZONE
- 0.36 TAP CARD PURCHASE LOCATIONS PER SQUARE MILE IN ZONE
Hourly TAP Ridership

Ridership is displayed below hourly for both weekday and weekend trips using a TAP card. The bar charts show this zone’s ridership and percentages of trips, and the line represents the countywide average.
Zone: Newhall

Demographic Trends

Key Themes

Newhall includes the city of Santa Clarita and unincorporated lands north of the San Fernando Valley. It is ranked 17th out of 20 zones in terms of its service population (residents + jobs) density. Though relatively small, the population of the zone grew at a faster rate than the County average between 2010 and 2015. Employment grew substantially faster as a percentage (18% compared to 6% on average), although there were fewer than 80,000 jobs reported by 2015. Households in Newhall skew heavily towards higher incomes, with nearly 60% earning more than $75,000 per year. Households were slightly more likely than the County average to have children. Likewise, the population distribution is substantially younger than the County average, with nearly 80% under the age of 55 and 43% under 30. The zone has among the lowest proportions of households without cars in the County.

Given the relatively high household incomes and low proportion without cars, this zone most closely aligns with the occasional and commuter demographics, despite a younger population overall.

2015 Population and Employment Density

![Map showing population and employment density in Newhall and surrounding areas.](image-url)
Zone: Newhall

Travel Trends

Key Themes

Newhall is served primarily by Santa Clarita Transit with pass-through service from AVTA. Metrolink provides regional commuter rail service. The zone has a modest percentage of commuters using transit, even considering very high rates of household car ownership. The average travel time to the zone increased somewhat since 2014. Average daily boardings declined more since 2012 than the County average.

Zone Travel Trends

<table>
<thead>
<tr>
<th>2017 Percent of Countywide Travel</th>
<th>2014 Percent of Countywide Travel</th>
<th>2017 Top Two Destinations from Zone</th>
<th>2014 Average Travel Time*</th>
<th>2017 Average Travel Time*</th>
<th>Average Travel Time Change*</th>
</tr>
</thead>
<tbody>
<tr>
<td>2%</td>
<td>2%</td>
<td>East San Fernando Valley</td>
<td>59 min</td>
<td>62 min</td>
<td>4%</td>
</tr>
</tbody>
</table>

2017 Percent of Total Travel

2017 Streetlight Data

Percent of Total Travel

- 12% - 16%
- 8% - 11%
- 6% - 7%
- 4% - 5%
- 2% - 3%
- 0% - 1%
Household Travel Survey Trends

- **SOV**: 41%
- **HOV**: 47%
- **Transit**: 1%
- **Other**: 11%

**AVERAGE TRIP DISTANCE: SINGLE OCCUPANCY VEHICLE**

8.7 miles

**AVERAGE TRIP DISTANCE: BUS**

N/A

Source: California Household Travel Survey, 2012

Workers Commuting Trends

**County Average 2015**

- **SOV**: 73%
- **HOV**: 10%
- **Transit**: 7%
- **Other**: 10%

2010

- **SOV**: 75%
- **HOV**: 13%
- **Transit**: 4%
- **Other**: 8%

2015

- **SOV**: 77%
- **HOV**: 12%
- **Transit**: 3%
- **Other**: 8%

Source: American Community Survey, 2015

Other Mobility Options

- **UBER ZONE COVERAGE (LESS THAN 5 MINUTE WAIT)**
  - **2013**: 0%
  - **2016**: 5%

- **BIKESHARE SERVICE?**
  - **2013**: No
  - **2016**: No

- **EXPRESS LANES?**
  - **2013**: No
  - **2016**: No

**MAJOR PLANNED TRANSPORTATION PROJECTS**

- I-5 North Capacity Enhancements
- Regional Commuter Rail (Metrolink and Amtrak) Improvements
- I-5 N Cap. Enhancements (SR-14 to Lake Hughes Rd)
## Zone: Newhall

### Travel Trends

#### Transit Travel Trends

<table>
<thead>
<tr>
<th>Category</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agencies</td>
<td>2 TRANSIT AGENCIES IN ZONE AVTA, Santa Clarita Transit</td>
</tr>
<tr>
<td>Routes</td>
<td>47 ANALYZED BUS ROUTES 37 LOCAL ROUTES</td>
</tr>
<tr>
<td>Ridership &amp; Trips</td>
<td>0 RAPID ROUTES 10 EXPRESS ROUTES</td>
</tr>
<tr>
<td>Service</td>
<td>43 BUS SERVICE (TRIPS AT STOPS) PER SQUARE MILE</td>
</tr>
<tr>
<td>Ridership</td>
<td>-6% AVERAGE ANNUAL CHANGE IN LINE LEVEL RIDERSHIP ON ANALYZED ROUTES (2012-2016)</td>
</tr>
</tbody>
</table>

#### TAP Card Purchase Locations

- **TAP Vending Machine Locations in Zone**: 0
- **TAP Retail Vendors in Zone**: 17
- **TAP Card Purchase Locations per Square Mile in Zone**: 0.03
TAP Data Trends

1,142,727
TRIPS ORIGINATING IN ZONE

Hourly TAP Ridership

Ridership is displayed below hourly for both weekday and weekend trips using a TAP card. The bar charts show this zone’s ridership and percentages of trips, and the line represents the countywide average.
**Key Themes**

The North Antelope Valley includes the city of Lancaster and unincorporated areas of northern Los Angeles County. It is ranked 19th out of 20 zones in terms of its service population (residents + jobs) density. The population and jobs growth between 2010 and 2015 were reflective of the County average. The population in North Antelope Valley is relatively young, although relatively similar to the County average. Household incomes are somewhat lower than the County average. The proportion of households with children is above the County average, but less so in 2015 than 2010. Households were somewhat more likely to own a car than the County average.

The North Antelope Valley average demographic is most closely aligned with all-purpose riders, given the age and income distribution.
### Households

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>Percent with Children 2010</th>
<th>Percent with Children 2015</th>
<th>Percent with Zero Cars 2010</th>
<th>Percent with Zero Cars 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>55,843</td>
<td>38%</td>
<td>35%</td>
<td>9%</td>
<td>10%</td>
</tr>
<tr>
<td>2015</td>
<td>58,144</td>
<td>44%</td>
<td>39%</td>
<td>6%</td>
<td>7%</td>
</tr>
</tbody>
</table>

### Population

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>182,524</td>
<td>51%</td>
<td>51%</td>
<td>38%</td>
<td>35%</td>
<td>9%</td>
<td>10%</td>
<td>6%</td>
</tr>
<tr>
<td>2015</td>
<td>190,251</td>
<td>51%</td>
<td>45%</td>
<td>44%</td>
<td>39%</td>
<td>6%</td>
<td>7%</td>
<td>4%</td>
</tr>
</tbody>
</table>

### Jobs

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>37,265</td>
</tr>
<tr>
<td>2015</td>
<td>39,380</td>
</tr>
</tbody>
</table>
Zone: North Antelope Valley

Travel Trends

Key Themes

North Antelope Valley is served exclusively by AVTA with regional commuter rail service by Metrolink. The zone has some of the lowest rates of commuting by transit of the County, despite a modest percentage of households without cars. Carpool commuting declined substantially while single-occupant commuting increased. The average travel time to this zone is relatively high given its distance from all other zones and the limited access routes. Transit ridership decline in the zone was worse than average as a percentage but the magnitude of absolute change is relatively small.

Zone Travel Trends

2017 Percent of Total Travel

<table>
<thead>
<tr>
<th>2017 Percent of Countywide Travel</th>
<th>2014 Percent of Countywide Travel</th>
<th>2017 Top Two Destinations from Zone</th>
<th>2014 Average Travel Time*</th>
<th>2017 Average Travel Time*</th>
<th>Average Travel Time Change*</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
<td>1%</td>
<td>South Antelope Valley</td>
<td>Newhall</td>
<td>86 min</td>
<td>86 min</td>
</tr>
</tbody>
</table>

2017 Streetlight Data

Percent of Total Travel

- 12% - 16%
- 8% - 11%
- 6% - 7%
- 4% - 5%
- 2% - 3%
- 0% - 1%
Household Travel Survey Trends

- **Mode of Travel**
  - SOV: 34%
  - HOV: 58%
  - Transit: 1%
  - Other: 7%

- **Average Trip Distance**: Single Occupancy Vehicle (SOV) = 7.4 miles
- **Average Trip Distance**: Bus (N/A)

Source: California Household Travel Survey, 2012

Workers Commuting Trends

- **Mode of Travel**
  - SOV: 77%
  - HOV: 16%
  - Transit: 9%
  - Other: 1%

- **County Average 2015**
  - SOV: 73%
  - HOV: 10%
  - Transit: 7%
  - Other: 10%

Source: American Community Survey, 2015

Other Mobility Options

- **2013**
  - Uber Zone Coverage (Less Than 5 Minute Wait): 0%
  - BikeShare Service?: No
  - Express Lanes?: No

- **2016**
  - Uber Zone Coverage (Less Than 5 Minute Wait): 5%
  - BikeShare Service?: No
  - Express Lanes?: No

High Desert Corridor 1-5 North Capacity Enhancements
Regional Commuter Rail (Metrolink and Amtrak) Improvements

**Major Planned Transportation Projects**
Zone: North Antelope Valley

Travel Trends

Transit Travel Trends

- **1** transit agencies in zone (AVTA)
- **9** analyzed bus routes
- **0** rapid routes
- **13** tap card purchase locations per square mile in zone
- **-5%** average annual change in line level ridership on analyzed routes (2012-2016)

TAP Card Purchase Locations

- **0** tap vending machine locations in zone
- **13** tap retail vendors in zone
- **0.02** tap card purchase locations per square mile in zone
TAP Data Trends

1,337,147
TRIPS ORIGINATING IN ZONE

Hourly TAP Ridership

Ridership is displayed below hourly for both weekday and weekend trips using a TAP card. The bar charts show this zone’s ridership and percentages of trips, and the line represents the countywide average.
Key Themes

Pasadena - West San Gabriel Valley includes several cities east of downtown Los Angeles. It is among the most-populated zones in the study, and ranks 9th out of 20 in terms of service population (residential + jobs) density. The population growth was slightly slower than the County average, while jobs grew at about the same rate. Household, population, and jobs are forecast to grow slower than the average for the County. The population is somewhat older on average than the County, and has become more so since 2010. Households earnings are relatively close to the County distribution, with slightly fewer earning less than $35,000 per year and slightly more earning greater than $125,000.

The Pasadena - West San Gabriel Valley zone is best aligned with the all-purpose rider demographic, based on the relatively even distribution of age and income.

2015 Population and Employment Density
### Households

<table>
<thead>
<tr>
<th>2010: 297,646 TOTAL</th>
<th>2015: 303,378 TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="chart.png" alt="Households Chart" /></td>
<td><img src="chart.png" alt="Households Chart" /></td>
</tr>
</tbody>
</table>

#### Percent with Children

<table>
<thead>
<tr>
<th>COUNTY</th>
<th>2010</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>County</td>
<td>38%</td>
<td>35%</td>
</tr>
<tr>
<td>Zone</td>
<td>38%</td>
<td>34%</td>
</tr>
</tbody>
</table>

#### Percent with Zero Cars

<table>
<thead>
<tr>
<th>COUNTY</th>
<th>2010</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Country</td>
<td>9%</td>
<td>10%</td>
</tr>
<tr>
<td>Zone</td>
<td>7%</td>
<td>7%</td>
</tr>
</tbody>
</table>

### Population

<table>
<thead>
<tr>
<th>2010: 913,160 TOTAL</th>
<th>2015: 928,025 TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="chart.png" alt="Population Chart" /></td>
<td><img src="chart.png" alt="Population Chart" /></td>
</tr>
</tbody>
</table>

#### Percent Employed

<table>
<thead>
<tr>
<th>COUNTY</th>
<th>2010</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>County</td>
<td>51%</td>
<td>51%</td>
</tr>
<tr>
<td>Zone</td>
<td>58%</td>
<td>57%</td>
</tr>
</tbody>
</table>

### Jobs

<table>
<thead>
<tr>
<th>2010: 312,045 TOTAL</th>
<th>2015: 329,400 TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="chart.png" alt="Jobs Chart" /></td>
<td><img src="chart.png" alt="Jobs Chart" /></td>
</tr>
</tbody>
</table>

#### Change 2010-2015

<table>
<thead>
<tr>
<th>COUNTY</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>County</td>
<td>6%</td>
</tr>
<tr>
<td>Zone</td>
<td>6%</td>
</tr>
</tbody>
</table>
Key Themes

Pasadena - West San Gabriel Valley includes transit service from a number of bus operators, as well as Metro Gold Line light rail, and access to commuter rail service by Metrolink. The zone also has access to the I-10 ExpressLanes, and bikeshare recently launched in the city of Pasadena. The zone represents a moderate and growing proportion of countywide travel. The zone has generally high bus trips at stops per day compared with other zones. Average ridership decline was worse than the County average.

Zone Travel Trends

<table>
<thead>
<tr>
<th>2017 Percent of Countywide Travel</th>
<th>2014 Percent of Countywide Travel</th>
<th>2017 Top Two Destinations from Zone</th>
<th>2014 Average Travel Time*</th>
<th>2017 Average Travel Time*</th>
</tr>
</thead>
<tbody>
<tr>
<td>10%</td>
<td>8%</td>
<td>Downtown - NELA, East San Fernando Valley</td>
<td>44 min</td>
<td>44 min</td>
</tr>
<tr>
<td>1%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*A: To zone from other zones

2017 Percent of Total Travel
Household Travel Survey Trends

- Mode of Travel: SOV, HOV, Transit, Other
- 2010: 40% SOV, 44% HOV, 3% Transit, 13% Other
- 2015: 77% SOV, 10% HOV, 4% Transit, 9% Other

**Average Trip Distance:**
- Single Occcupancy Vehicle (SOV): 6.5 miles
- Bus: 7.0 miles

Source: California Household Travel Survey, 2012

Workers Commuting Trends

- Mode of Travel: SOV, HOV, Transit, Other
- County Average 2015: 73% SOV, 10% HOV, 7% Transit, 10% Other

2010:
- 75% SOV, 11% HOV, 5% Transit, 9% Other

2015:
- 77% SOV, 10% HOV, 4% Transit, 9% Other

Source: American Community Survey, 2015

Other Mobility Options

- BRT Connector Orange/Red Line to Gold Line, Eastside Transit Corridor Phase 2, SR-710 North, Regional Commuter Rail (Metrolink and Amtrak) Improvements
- Major Planned Transportation Projects
- Uber Zone Coverage: 0% in 2013, 75% in 2016
- BikeShare Service: Yes
- Express Lanes: Yes

Ridership Growth Action Plan
Zone: Pasadena - West San Gabriel Valley

Travel Trends

Transit Travel Trends

- **6** Transit Agencies in Zone
- **57** Analyzed Bus Routes
- **3** Rapid Routes
- **42** Local Routes
- **12** Express Routes
- **657** Bus Service (Trips at Stops) per Square Mile
- **-4%** Average Annual Change in Line Level Ridership on Analyzed Routes (2012-2016)

TAP Card Purchase Locations

- **11** TAP Vending Machine Locations in Zone
- **32** TAP Retail Vendors in Zone
- **0.31** TAP Card Purchase Locations per Square Mile in Zone

TAP Card Purchase Locations:
- TAP Retail Vendor
- TAP Vending Machine (TVM)
- Metro Customer Center
TAP Data Trends

12,061,817
TRIPS ORIGINATING IN ZONE

Hourly TAP Ridership

Ridership is displayed below hourly for both weekday and weekend trips using a TAP card. The bar charts show this zone’s ridership and percentages of trips, and the line represents the countywide average.
Zone: Ports

Demographic Trends

Key Themes

The Ports zone includes the Los Angeles communities of San Pedro and Wilmington, and the Ports of Los Angeles and Long Beach. It ranks 15th out of 20 zones in terms of service population (residents + jobs) density. Much of the area of this zone is dedicated to Ports and industrial functions. The population growth was slightly higher than the County average. Forecast household and population growth are expected to be substantially lower than the County average. The population is slightly younger than the County average, and the proportion of households with children is similar to the County average. Job growth in the Ports region was well above average for the County. Household income distribution is relatively similar to the County average.

The Ports region aligns closely with the all-purpose rider based on the household income and age distribution.

2015 Population and Employment Density
## Ridership Growth Action Plan

### Households

**2010: 65,861 TOTAL**

<table>
<thead>
<tr>
<th>COUNTY</th>
<th>34%</th>
<th>32%</th>
<th>21%</th>
<th>14%</th>
</tr>
</thead>
</table>

**2015: 66,826 TOTAL**

<table>
<thead>
<tr>
<th>COUNTY</th>
<th>33%</th>
<th>31%</th>
<th>21%</th>
<th>16%</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>CHANGE 2010-2015</th>
<th>FORECAST CHANGE 2016-2040</th>
</tr>
</thead>
<tbody>
<tr>
<td>COUNTY 1%</td>
<td>17%</td>
</tr>
<tr>
<td>ZONE 1%</td>
<td>8%</td>
</tr>
</tbody>
</table>

### Population

**2010: 182,109 TOTAL**

<table>
<thead>
<tr>
<th>COUNTY</th>
<th>44%</th>
<th>37%</th>
<th>19%</th>
</tr>
</thead>
</table>

**2015: 189,306 TOTAL**

<table>
<thead>
<tr>
<th>COUNTY</th>
<th>42%</th>
<th>36%</th>
<th>22%</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>CHANGE 2010-2015</th>
<th>FORECAST CHANGE 2016-2040</th>
</tr>
</thead>
<tbody>
<tr>
<td>COUNTY 3%</td>
<td>14%</td>
</tr>
<tr>
<td>ZONE 4%</td>
<td>7%</td>
</tr>
</tbody>
</table>

### Jobs

**2010: 64,644 TOTAL**

**2015: 75,080 TOTAL**

<table>
<thead>
<tr>
<th>COUNTY</th>
<th>6%</th>
<th>17%</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZONE 16%</td>
<td>15%</td>
<td></td>
</tr>
</tbody>
</table>
Zone: Ports

Travel Trends

Key Themes

The Ports zone is served primarily by Metro and LADOT, with additional service near the boundary provided by Gardena, Torrance and Long Beach. Access to TNCs is growing, and bikeshare recently launched in a limited area. Metro extended BRT service on the Silver Line to San Pedro in recent years. Much of the land area of this zone is ports and freight related, where many jobs are located but may be difficult to serve with transit. Ridership decline was slightly better compared to the countywide trend.

Zone Travel Trends

<table>
<thead>
<tr>
<th>2017 PERCENT OF COUNTYWIDE TRAVEL</th>
<th>2014 PERCENT OF COUNTYWIDE TRAVEL</th>
<th>2017 TOP TWO DESTINATIONS FROM ZONE</th>
<th>2014 AVERAGE TRAVEL TIME*</th>
<th>2017 AVERAGE TRAVEL TIME*</th>
<th>AVERAGE TRAVEL TIME CHANGE*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1%</td>
<td>3%</td>
<td>South Bay Cities - Palos Verdes - Long Beach - Lakewood</td>
<td>51 min</td>
<td>52 min</td>
<td>0%</td>
</tr>
</tbody>
</table>

2017 Percent of Total Travel

2017 Streetlight Data

Percent of Total Travel

- 12% - 16%
- 8% - 11%
- 6% - 7%
- 4% - 5%
- 2% - 3%
- 0% - 1%
Household Travel Survey Trends

<table>
<thead>
<tr>
<th>Mode of Travel</th>
<th>2010</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOV</td>
<td>32%</td>
<td>76%</td>
</tr>
<tr>
<td>HOV</td>
<td>35%</td>
<td>9%</td>
</tr>
<tr>
<td>Transit</td>
<td>5%</td>
<td>12%</td>
</tr>
<tr>
<td>Other</td>
<td>28%</td>
<td>10%</td>
</tr>
</tbody>
</table>

Source: California Household Travel Survey, 2012

Workers Commuting Trends

2010

<table>
<thead>
<tr>
<th>Mode of Travel</th>
<th>SOV</th>
<th>HOV</th>
<th>Transit</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>73%</td>
<td>12%</td>
<td>5%</td>
<td>10%</td>
<td>10%</td>
</tr>
</tbody>
</table>

2015

<table>
<thead>
<tr>
<th>Mode of Travel</th>
<th>SOV</th>
<th>HOV</th>
<th>Transit</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>76%</td>
<td>9%</td>
<td>5%</td>
<td>9%</td>
<td>10%</td>
</tr>
</tbody>
</table>

Source: American Community Survey, 2015

Other Mobility Options

<table>
<thead>
<tr>
<th>Year</th>
<th>Uber Zone Coverage (Less than 5 minute wait)</th>
<th>BikeShare Service?</th>
<th>Express Lanes?</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>0%</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>2016</td>
<td>10%</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

I-710 South Corridor Project

MAJOR PLANNED TRANSPORTATION PROJECTS
**Zone: Ports**

**Travel Trends**

### Transit Travel Trends

- **Agencies**
  - 5
  - TRANSIT AGENCIES IN ZONE
  - Gtrans, LADOT, Long Beach Transit, Metro, Torrance Transit

- **Routes**
  - 43
  - ANALYZED BUS ROUTES

- **Service**
  - 1
  - RAPID ROUTES

- **Ridership & Trips**
  - 551
  - BUS SERVICE (TRIPS AT STOPS) PER SQUARE MILE

- **Ridership**
  - -2%
  - AVERAGE ANNUAL CHANGE IN LINE LEVEL RIDERSHIP ON ANALYZED ROUTES (2012-2016)

### TAP Card Purchase Locations

- **TAP VENDING MACHINE LOCATIONS IN ZONE**
  - 3

- **TAP RETAIL VENDORS IN ZONE**
  - 3

- **TAP CARD PURCHASE LOCATIONS PER SQUARE MILE IN ZONE**
  - 0.12
Hourly TAP Ridership

Ridership is displayed below hourly for both weekday and weekend trips using a TAP card. The bar charts show this zone's ridership and percentages of trips, and the line represents the countywide average.
Key Themes

Santa Monica - West LA includes the city of Culver City, communities near LAX and major regional centers such as UCLA and Century City. The zone is ranked 8th out of 20 for population + employment density, although in absolute terms it contains the third-largest number of jobs of zones in the study. The zone is one of the wealthiest, with proportion of households in the highest income category well above the County average and a much lower proportion of low-income households. The percent of households with children is below the County average. The population growth was slightly above the County average, although households were essentially unchanged. Santa Monica - West LA is the only zone in the County with an increase in the population under age 30. The Santa Monica - West LA population distribution is slightly older than the County average. Job growth was substantially higher than the County average.

This zone is most likely to support the commuter rider demographic, with a substantial proportion of households earning higher incomes, fewer households without cars, and a slightly lower proportion of households with children.

2015 Population and Employment Density
Households

2010: 247,941 TOTAL
24% 26% 21% 28%

2015: 247,659 TOTAL
24% 24% 21% 31%

<table>
<thead>
<tr>
<th>COUNTY</th>
<th>CHANGE 2010-2015</th>
<th>FORECAST CHANGE 2016-2040</th>
<th>PERCENT WITH CHILDREN</th>
</tr>
</thead>
<tbody>
<tr>
<td>COUNTY</td>
<td>1%</td>
<td>17%</td>
<td>38% 35%</td>
</tr>
<tr>
<td>ZONE</td>
<td>0%</td>
<td>16%</td>
<td>22% 21%</td>
</tr>
</tbody>
</table>

Population

2010: 537,511 TOTAL
37% 39% 25%

2015: 561,516 TOTAL
38% 37% 25%

<table>
<thead>
<tr>
<th>COUNTY</th>
<th>CHANGE 2010-2015</th>
<th>FORECAST CHANGE 2016-2040</th>
<th>PERCENT WITH CHILDREN</th>
</tr>
</thead>
<tbody>
<tr>
<td>COUNTY</td>
<td>3%</td>
<td>14%</td>
<td>38% 35%</td>
</tr>
<tr>
<td>ZONE</td>
<td>4%</td>
<td>15%</td>
<td>22% 21%</td>
</tr>
</tbody>
</table>

Jobs

2010: 357,395 TOTAL

2015: 396,373 TOTAL
6% 17% 11% 14%
Zone: Santa Monica - West LA

Travel Trends

Key Themes

Santa Monica - West LA has one of the highest proportions of commuters using modes other than drive-alone, carpool, or transit. This would include walking, biking, and telecommuting. This zone also had some of the earliest access to TNCs (Lyft and Uber), and a high proportion of service coverage by 2016. Decline in bus ridership was somewhat higher than the County average, and comes alongside a new and heavily-used rail line, a 10% increase in average travel time to the zone, and increasing telecommuting, walking, biking, or other commute modes. Santa Monica - West LA generates a relatively high and growing percentage of the countywide travel compared to other zones. Santa Monica has been served by the Expo Line light rail since May 2016. The zone is among the highest for bus trips at stops per day.

Zone Travel Trends

<table>
<thead>
<tr>
<th>2017 PERCENT OF COUNTYWIDE TRAVEL</th>
<th>2014 PERCENT OF COUNTYWIDE TRAVEL</th>
<th>2017 TOP TWO DESTINATIONS FROM ZONE</th>
<th>2014 AVERAGE TRAVEL TIME*</th>
<th>2017 AVERAGE TRAVEL TIME*</th>
<th>AVERAGE TRAVEL TIME CHANGE*</th>
</tr>
</thead>
<tbody>
<tr>
<td>16%</td>
<td>13%</td>
<td>13%</td>
<td>42 min</td>
<td>46 min</td>
<td>10%</td>
</tr>
</tbody>
</table>

2017 Percent of Total Travel

2017 Streetlight Data

Percent of Total Travel

- 12% - 16%
- 8% - 11%
- 6% - 7%
- 4% - 5%
- 2% - 3%
- 0% - 1%
### Household Travel Survey Trends

<table>
<thead>
<tr>
<th>Mode of Travel</th>
<th>2010</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOV</td>
<td>43%</td>
<td>72%</td>
</tr>
<tr>
<td>HOV</td>
<td>34%</td>
<td>6%</td>
</tr>
<tr>
<td>Transit</td>
<td>4%</td>
<td>5%</td>
</tr>
<tr>
<td>Other</td>
<td>19%</td>
<td>17%</td>
</tr>
</tbody>
</table>

**Average Trip Distance:**
- Single Occupancy Vehicle (SOV): 7.2 miles
- Bus: 8.5 miles

Source: California Household Travel Survey, 2012

### Workers Commuting Trends

<table>
<thead>
<tr>
<th>Mode of Travel</th>
<th>2010</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOV</td>
<td>73%</td>
<td>71%</td>
</tr>
<tr>
<td>HOV</td>
<td>10%</td>
<td>6%</td>
</tr>
<tr>
<td>Transit</td>
<td>7%</td>
<td>5%</td>
</tr>
<tr>
<td>Other</td>
<td>10%</td>
<td>19%</td>
</tr>
</tbody>
</table>

Source: American Community Survey, 2015

### Other Mobility Options

- **Uber Zone Coverage (Less than 5 minute wait):** 80%
- **Bikeshare Service:** Yes
- **Express Lanes:** No

**Major Planned Transportation Projects:**
- Purple Line Extension
- Sepulveda Pass Transit Corridor
- Lincoln Blvd BRT
- Metro Rail Westwood to LAX
- Sepulveda Pass Express Bus Transit Corridor
Zone: Santa Monica - West LA

Travel Trends

Transit Travel Trends

- **Agencies**: 7
- **Routes**: 65
- **Ridership & Trips**: 1,104
- **Average Annual Change in Line Level Ridership on Analyzed Routes (2012-2016)**: -4%

**TAP Card Purchase Locations**

- **Vending Machine Locations in Zone**: 8
- **Retail Vendors in Zone**: 19
- **TAP Card Purchase Locations per Square Mile in Zone**: 0.28
TAP Data Trends

TRIPS ORIGINATING IN ZONE

10,268,605

FARE TYPE BY PASS

TRIP FREQUENCY

Hourly TAP Ridership

Ridership is displayed below hourly for both weekday and weekend trips using a TAP card. The bar charts show this zone’s ridership and percentages of trips, and the line represents the countywide average.
Key Themes

The South Antelope Valley region includes the city of Palmdale and portions of unincorporated northern Los Angeles County. It ranks 20th out of 20 zones for its service population (residents + jobs) density. The population of South Antelope Valley grew at a faster rate than the County average between 2010 and 2015. However, jobs actually declined in the same time period, compared with 6% growth across the County. The population is generally younger than the County average, and households with children are well above the County average. Household incomes are slightly more concentrated in the middle than the County average, with about 53% of households earning between $35,000 and $125,000 per year. There was a slight shift towards households earning less than $35,000 per year since 2010. The zone also has among the lowest rates for households without cars in the County.

The best fit for rider demographics in this zone is somewhat unclear.

2015 Population and Employment Density
Key Themes

South Antelope Valley is served exclusively by AVTA with commuter rail service provided by Metrolink. The zone has some of the lowest proportions of transit-commuters, although a relatively high proportion of carpoolers compared to other zones. Ridership decline as a percentage was substantially worse than the County average, but in absolute terms was a relatively small number.

Zone Travel Trends

2017 Percent of Total Travel

<table>
<thead>
<tr>
<th>2017 Percent of Total Travel</th>
<th>2014 Percent of Total Travel</th>
<th>2017 Average Travel Time*</th>
<th>2014 Average Travel Time*</th>
<th>Average Travel Time Change*</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
<td>1%</td>
<td>51 min</td>
<td>76 min</td>
<td>-7%</td>
</tr>
</tbody>
</table>

* To zone from other zones
Household Travel Survey Trends

Mode of Travel

<table>
<thead>
<tr>
<th>Year</th>
<th>SOV</th>
<th>HOV</th>
<th>Transit</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>30%</td>
<td>56%</td>
<td>1%</td>
<td>12%</td>
</tr>
</tbody>
</table>

10.8 miles

AVERAGE TRIP DISTANCE: SINGLE OCCUPANCY VEHICLE

Source: California Household Travel Survey, 2012

Workers Commuting Trends

Mode of Travel

<table>
<thead>
<tr>
<th>Year</th>
<th>SOV</th>
<th>HOV</th>
<th>Transit</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>73%</td>
<td>10%</td>
<td>7%</td>
<td>10%</td>
</tr>
<tr>
<td>2015</td>
<td>76%</td>
<td>16%</td>
<td>2%</td>
<td>7%</td>
</tr>
</tbody>
</table>

Source: American Community Survey, 2015

Other Mobility Options

- SR-138 Capacity Enhancements
- Regional Commuter Rail (Metrolink and Amtrak) Improvements
- High Desert Multi-Purpose Corridor

Major Planned Transportation Projects

- No BIKESHARE SERVICE?
- No EXPRESS LANES?

Uber Zone Coverage (less than 5 minute wait)

2013: 0%
2016: 5%

Ridership Growth Action Plan
Zone: South Antelope Valley

Travel Trends

Transit Travel Trends

- **2** Agencies
- **16** Analyzed Bus Routes
- **0** Rapid Routes
- **13** Local Routes
- **N/A** Buses stopping per day on analyzed routes serving zone
- **-7%** Average annual change in line level ridership on analyzed routes (2012-2016)

TAP Card Purchase Locations

- **0** TAP Vending Machine Locations in Zone
- **5** TAP Retail Vendors in Zone
- **0.00** TAP Card Purchase Locations per square mile in Zone
TAP Data Trends

1,337,147
TRIPS ORIGINATING IN ZONE

Hourly TAP Ridership

Ridership is displayed below hourly for both weekday and weekend trips using a TAP card. The bar charts show this zone’s ridership and percentages of trips, and the line represents the countywide average.
South Bay Cities - Palos Verdes includes numerous cities in southwestern Los Angeles County, south of LAX and generally west of I-405. The zone is ranked #10 out of 20 zones in terms of service population (residents + jobs) density. The zone is home to both a relatively high population and concentration of jobs given its size. Households in the South Bay Cities are generally much more wealthy than the County average, with one of the lowest proportions of households earning less than $35,000 per year. It also has among the lowest proportions of households without cars. Residents are older than the County average. The population growth was slower than the County average, while jobs growth was somewhat higher, between 2010 and 2015. Forecast growth for households and population are expected to be substantially lower than the averages for the County. The percentage of households with children is lower than the County average. Based on the household income distribution, vehicle availability, and age distribution, South Bay Cities - Palos Verdes aligns most closely with the Occasional and Commuter ridership profiles.
**Key Themes**

South Bay Cities - Palos Verdes is served by several operators and includes some commuter express service to other areas such as Downtown Los Angeles. This zone has the highest proportion of drive-alone commuters and some of the lowest rates for transit commuting of any zone in the study. The frequency of bus trips at stops per day relative to other zones is low. The zone also has high coverage of TNC service. Although Santa Monica - West LA is a major destination for this zone (and major employment center), there are no express routes serving this demand. Ridership decline in the zone was worse than the County average.

**Zone Travel Trends**

<table>
<thead>
<tr>
<th>2017 Percent of Countywide Travel</th>
<th>2014 Percent of Countywide Travel</th>
<th>2017 Top Two Destinations From Zone</th>
<th>2014 Average Travel Time*</th>
<th>2017 Average Travel Time*</th>
<th>Average Travel Time Change*</th>
</tr>
</thead>
<tbody>
<tr>
<td>6%</td>
<td>5%</td>
<td>Santa Monica - West LA, South LA - Inglewood</td>
<td>47 min</td>
<td>49 min</td>
<td>5%</td>
</tr>
</tbody>
</table>

---

**2017 Percent of Total Travel**

2017 Streetlight Data

Percent of Total Travel

- 12% - 16%
- 8% - 11%
- 6% - 7%
- 4% - 5%
- 2% - 3%
- 0% - 1%

[Map showing travel trends and destinations]
Household Travel Survey Trends

- Mode of Travel:
  - SOV: 42%
  - HOV: 42%
  - Transit: 2%
  - Other: 14%

- Average Trip Distance: Single Occupancy Vehicle: 6.6 miles
- Average Trip Distance: Bus: 8.3 miles

Source: California Household Travel Survey, 2012

Workers Commuting Trends

- County Average 2015:
  - SOV: 73%
  - HOV: 10%
  - Transit: 7%
  - Other: 10%

- Mode of Travel:
  - 2010:
    - SOV: 81%
    - HOV: 8%
    - Transit: 2%
    - Other: 10%

- 2015:
  - SOV: 80%
  - HOV: 6%
  - Transit: 2%
  - Other: 11%

Source: American Community Survey, 2015

Other Mobility Options

- UBER Zone Coverage (Less Than 5 Minute Wait):
  - 2013: 0%
  - 2016: 60%

- BikeShare Service?: No
- Express Lanes?: No

South Bay Metro Green Line Extension
I-405
South Bay Curve Improvements

Major Planned Transportation Projects
Zone: South Bay Cities - Palos Verdes

Travel Trends

Transit Travel Trends

- 5 Transit Agencies in Zone
- 33 Analyzed Bus Routes
- 3 Rapid Routes
- 26 Local Routes
- 4 Express Routes
- 434 Bus Service (Trips at Stops) per Square Mile
- -6% Average Annual Change in Line Level Ridership on Analyzed Routes (2012-2016)

TAP Card Purchase Locations

- 3 TAP Vending Machine Locations in Zone
- 12 TAP Retail Vendors in Zone
- 0.21 TAP Card Purchase Locations per Square Mile in Zone
TAP Data Trends

TRIPS ORIGINATING IN ZONE

1,899,431

TAP Data Trends

1,899,431
TRIPS ORIGINATING IN ZONE

Hourly TAP Ridership

Ridership is displayed below hourly for both weekday and weekend trips using a TAP card. The bar charts show this zone’s ridership and percentages of trips, and the line represents the countywide average.
**Zone: South Gate - East LA**

**Demographic Trends**

---

**Key Themes**

South Gate - East LA includes several cities to the southeast of downtown Los Angeles, and is bisected by the Los Angeles River. The zone ranks 4th out of 20 zones for its service population (residents + jobs) density. Forecast growth for households, population, and jobs are expected to be substantially lower than the averages for the County. Although much of the zone includes large, low-density industrial lands, such as the areas of Vernon and Commerce, the residential population density is also very high, with about 500,000 residents. The population is heavily skewed towards younger demographics, with 50% under the age of 30, and more than half of households have children. Household incomes are low compared to the County average; about 80% of households earn less than $75,000 per year, and the majority of those earn less than $35,000. The proportion of households without cars is also among the highest in the County, although as with most zones this declined between 2010 and 2015. Based on the high proportion of households without cars, the relatively young population, and the income distribution, this zone aligns best with the all-purpose transit rider.

---

**2015 Population and Employment Density**

![Population and Employment Density Map]

*Population+Employment Density*

- **Low**
- **Medium**
- **High**
### Households

**2010: 121,430 TOTAL**

- 45%: **County**
- 37%: **Zone**
- 14%: **Change**

**2015: 121,636 TOTAL**

- 46%: **County**
- 35%: **Zone**
- 15%: **Change**

<table>
<thead>
<tr>
<th>County</th>
<th>Change 2010-2015</th>
<th>Forecast Change 2016-2040</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1%</td>
</tr>
<tr>
<td>Zone</td>
<td>0%</td>
<td>10%</td>
</tr>
</tbody>
</table>

**Percent with Children**

<table>
<thead>
<tr>
<th>County</th>
<th>2010</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>38%</td>
<td>35%</td>
</tr>
<tr>
<td>Zone</td>
<td>59%</td>
<td>54%</td>
</tr>
</tbody>
</table>

**Percent with Zero Cars**

<table>
<thead>
<tr>
<th>County</th>
<th>2010</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>9%</td>
<td>10%</td>
</tr>
<tr>
<td>Zone</td>
<td>14%</td>
<td>12%</td>
</tr>
</tbody>
</table>

### Population

**2010: 496,228 TOTAL**

- 53%: **County**
- 33%: **Zone**
- 14%: **Change**

**2015: 502,516 TOTAL**

- 50%: **County**
- 33%: **Zone**
- 17%: **Change**

<table>
<thead>
<tr>
<th>County</th>
<th>Change 2010-2015</th>
<th>Forecast Change 2016-2040</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3%</td>
<td>14%</td>
</tr>
<tr>
<td>Zone</td>
<td>1%</td>
<td>8%</td>
</tr>
</tbody>
</table>

### Jobs

**2010: 165,446 TOTAL**

- 6%: **County**
- 6%: **Zone**
- 17%: **Change**

**2015: 175,144 TOTAL**

- 6%: **County**
- 6%: **Zone**
- 8%: **Change**

<table>
<thead>
<tr>
<th>County</th>
<th>Change 2010-2015</th>
<th>Forecast Change 2016-2040</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6%</td>
<td>17%</td>
</tr>
<tr>
<td>Zone</td>
<td>6%</td>
<td>8%</td>
</tr>
</tbody>
</table>
Zone: South Gate - East LA

Travel Trends

Key Themes

South Gate - East LA is served primarily by Metro and Montebello Bus Lines, as well as LADOT and some pass-through Foothill Transit service. There is Metrolink commuter rail service to the east of the zone. The Metro Gold Line is available in the northern part of the zone, while the Blue and Green lines closely follow the western and southern boundaries, respectively. TNC coverage is growing but concentrated towards the northern area. The percentage of transit commuters and carpoolers is relatively high compared to other zones, making this one of the lower SOV-commuting populations. Ridership decline in the zone was worse than the County average.

Zone Travel Trends

2017 Percent of Total Travel

- **2%**
  - 2017 PERCENT OF COUNTYWIDE TRAVEL

- **3%**
  - 2014 PERCENT OF COUNTYWIDE TRAVEL

- **3%**
  - 2017 AVERAGE TRAVEL TIME CHANGE*

- **3%**
  - 2017 TOP TWO DESTINATIONS FROM ZONE

- **2%**
  - 2014 AVERAGE TRAVEL TIME*

- **3%**
  - Countywide average travel time

2017 Streetlight Data

Percent of Total Travel

- 12% - 16%
- 8% - 11%
- 6% - 7%
- 4% - 5%
- 2% - 3%
- 0% - 1%
Household Travel Survey Trends

<table>
<thead>
<tr>
<th>Mode of Travel</th>
<th>SOV (%)</th>
<th>HOV (%)</th>
<th>Transit (%)</th>
<th>Other (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOV</td>
<td>20%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HOV</td>
<td>40%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transit</td>
<td>8%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>23%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Average trip distance: Single Occupancy Vehicle

- 2010: 8.4 miles
- 2015: 6.5 miles

Source: California Household Travel Survey, 2012

Workers Commuting Trends

<table>
<thead>
<tr>
<th>Mode of Travel</th>
<th>SOV (%)</th>
<th>HOV (%)</th>
<th>Transit (%)</th>
<th>Other (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOV</td>
<td>67%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HOV</td>
<td>14%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transit</td>
<td>11%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>8%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

County Average 2015

- 73%
- 10%
- 7%
- 10%

Source: American Community Survey, 2015

Other Mobility Options

- 2013: 0%
- 2016: 25%

UBER Zone Coverage (Less Than 5 Minute Wait)

- No

- No

BIKESHARE SERVICE?

- EXPRESS LANES?
Zone: South Gate - East LA

Travel Trends

**Transit Travel Trends**

- **Agencies**: 4
- **Routes**: 58
- **Ridership & Trips**: 1,788
- **Average Annual Change in Line Level Ridership on Analyzed Routes (2012-2016)**: -5%

**TAP Card Purchase Locations**

- **Vending Machine Locations in Zone**: 7
- **Retail Vendors in Zone**: 42
- **Card Purchase Locations per Square Mile in Zone**: 1.18
TAP Data Trends

17,403,104

TRIPS ORIGINATING IN ZONE

Hourly TAP Ridership

Ridership is displayed below hourly for both weekday and weekend trips using a TAP card. The bar charts show this zone’s ridership and percentages of trips, and the line represents the countywide average.

WEEKDAY

WEEKEND
Zone: South LA - Inglewood

Demographic Trends

Key Themes

South LA - Inglewood also includes the communities of Watts, Hawthorne and Lawndale. This zone ranks 3rd among all 20 zones for the service population (residents + jobs) density. In absolute terms, over 1 million people live in this zone. This zone has the highest proportion and largest absolute number of households in the lowest income category, and more than 80% of households earn less than $75,000 annually. The zone is aging like the rest of the County, and the percent of households with children also grew well above the County average and counter to the trend. Residents of South LA - Inglewood are younger than the County average, with a substantially higher proportion of households with children. Jobs declined 10% since 2010, significantly counter to the countywide trend. However, job growth is forecast to be substantially higher than the County average. The proportion of households without cars is notably higher than the County average. South LA - Inglewood demographics are strongly aligned with the all-purpose rider, with a majority of households earning less than $75,000 per year, a majority of residents younger than 55, and a well-above average percent of households without cars.

2015 Population and Employment Density

![Population and Employment Density Map](image)
**Households**

**2010: 302,176 TOTAL**

- Population: 1,001,851
- Largest Zone Value: < $35,000
- Change 2010-2015: 3% (County), 2% (Zone)
- Forecast Change 2016-2040: 14% (County), 12% (Zone)
- Percent with children:
  - County: 38% (2010), 35% (2015)
  - Zone: 47% (2010), 44% (2015)
- Percent with zero cars:
  - County: 9% (2010), 10% (2015)
  - Zone: 16% (2010), 16% (2015)

**2015: 304,672 TOTAL**

- Population: 1,024,622
- Change 2010-2015: 6% (County), 17% (Zone)
- Forecast Change 2016-2040: 17% (County), 15% (Zone)

**Population**

**2010: 1,001,851 TOTAL**

- Change 2010-2015: 3% (County), 2% (Zone)
- Forecast Change 2016-2040: 14% (County), 12% (Zone)
- Percent with children:
  - County: 38% (2010), 35% (2015)
  - Zone: 47% (2010), 44% (2015)
- Percent with zero cars:
  - County: 9% (2010), 10% (2015)
  - Zone: 16% (2010), 16% (2015)

**2015: 1,024,622 TOTAL**

- Change 2010-2015: 6% (County), 17% (Zone)
- Forecast Change 2016-2040: 17% (County), 15% (Zone)

**Jobs**

**2010: 175,301 TOTAL**

- Change 2010-2015: 3% (County), 2% (Zone)
- Forecast Change 2016-2040: 14% (County), 12% (Zone)

**2015: 158,493 TOTAL**

- Change 2010-2015: 6% (County), -10% (Zone)
- Forecast Change 2016-2040: 17% (County), 30% (Zone)
Key Themes

South LA - Inglewood has among the highest transit service availability of all zones in the County. The area is served to varying degrees by 7 transit agencies participating in the study. The primary agencies include Beach Cities (Hawthorne and Lawndale), GTrans, LADOT, Torrance, and Metro. Connecting service to the Westside is provided by limited connections with Big Blue Bus and Culver CityBus, primarily at the Metro Green Line / LAX. South LA - Inglewood has the third highest percentage of transit commuters in the County (12%), a 5% decline from 2010. Average travel times to the zone increased 5% in recent years. Ridership decline was slightly worse than the County average as a percentage, and in terms of magnitude represents a substantial number of trips in the region. This zone has a wide range of mobility options, including high availability of TNCs, ExpressLanes, and Metro Rail service.

Zone Travel Trends

2017 Percent of Total Travel

<table>
<thead>
<tr>
<th>Destination</th>
<th>Percent of Total Travel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Santa Monica - West LA</td>
<td>12% - 16%</td>
</tr>
<tr>
<td>South Bay Cities - Palos Verdes</td>
<td>8% - 11%</td>
</tr>
<tr>
<td>Westside - Midcity</td>
<td>6% - 7%</td>
</tr>
<tr>
<td>Downtown - NELA</td>
<td>4% - 5%</td>
</tr>
<tr>
<td>South LA - Inglewood</td>
<td>2% - 3%</td>
</tr>
<tr>
<td>North Antelope Valley</td>
<td>0% - 1%</td>
</tr>
</tbody>
</table>

*To zone from other zones
Household Travel Survey Trends

- **SOV**: 27%
- **HOV**: 45%
- **Transit**: 11%
- **Other**: 17%

**Average Trip Distance: Single Occupancy Vehicle**
- **2010**: 6.5 miles
- **2015**: 6.3 miles

Source: California Household Travel Survey, 2012

Workers Commuting Trends

- **2010**
  - **SOV**: 67%
  - **HOV**: 12%
  - **Transit**: 13%
  - **Other**: 8%

- **2015**
  - **SOV**: 68%
  - **HOV**: 11%
  - **Transit**: 12%
  - **Other**: 9%

Source: American Community Survey, 2015

Other Mobility Options

- **2013**: 0%
- **2016**: 95%
- **Uber Zone Coverage (Less Than 5 Minute Wait)**: Yes
- **Bikeshare Service?**: No
- **Express Lanes?**: Yes

Major Planned Transportation Projects

- Crenshaw/LAX Transit Corridor
- Vermont BRT Corridor
- Crenshaw Northern Extension
- I-105 Express Lane from I-405 to I-605
- I-405 South Bay Curve Improvements
## Zone: South LA - Inglewood

### Travel Trends

**Transit Travel Trends**

<table>
<thead>
<tr>
<th>Bus Service</th>
<th>Ridership &amp; Trips</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>7</strong> Transit Agencies in Zone</td>
<td><strong>2,483</strong> Bus Service (Trips at Stops) per Square Mile</td>
</tr>
<tr>
<td><strong>84</strong> Analyzed Bus Routes</td>
<td><strong>-4%</strong> Average Annual Change in Line Level Ridership on Analyzed Routes (2012-2016)</td>
</tr>
<tr>
<td><strong>7</strong> Rapid Routes</td>
<td><strong>63</strong> Local Routes</td>
</tr>
<tr>
<td><strong>14</strong> Express Routes</td>
<td><strong>Big Blue Bus, Beach Cities, Culver City, Gtrans, LADOT, Metro, Torrance Transit</strong></td>
</tr>
</tbody>
</table>

**TAP Card Purchase Locations**

<table>
<thead>
<tr>
<th>Location</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAP Vending Machine Locations in Zone</td>
<td>19</td>
</tr>
<tr>
<td>TAP Retail Vendors in Zone</td>
<td>53</td>
</tr>
<tr>
<td>TAP Card Purchase Locations per Square Mile in Zone</td>
<td>1.03</td>
</tr>
</tbody>
</table>

*Note: The map and chart show the locations of TAP Card Purchase Locations, TAP Retail Vendors, and TAP Vending Machines.*
TAP Data Trends

42,454,157
TRIPS ORIGINATING IN ZONE

Hourly TAP Ridership

Ridership is displayed below hourly for both weekday and weekend trips using a TAP card. The bar charts show this zone’s ridership and percentages of trips, and the line represents the countywide average.
Key Themes

The West San Fernando Valley includes the northwest portions of the City of Los Angeles as well as unincorporated county land. The zone ranks #16 out of 20 in terms of service population (residents + jobs) density. The population and jobs in West San Fernando Valley are growing slightly faster than the County average. The age distribution of the population is somewhat older than the County average. Household incomes are generally higher than the County average, with a substantially smaller proportion of households earning less than $35,000 per year than the average. There are fewer zero-car households than the County average. The proportion of households with children is somewhat lower than the County average. West San Fernando Valley most closely aligns with the Commuter rider profile, based on the distribution of income, access to cars, and age of the population.

2015 Population and Employment Density
Zone: West San Fernando Valley

Travel Trends

Key Themes

The West San Fernando Valley is served primarily by Metro and LADOT with some commuter services to and through the region. The zone has a medium level of bus trips at stops relative to other zones. The Metro Orange Line provides BRT connections east-west into the East San Fernando Valley, and Metrolink has commuter rail stations in the zone. Expansion of TNC availability has been significant, with most of the densely-settled area covered by 2016. The zone generates a substantial and growing proportion of countywide travel, with travel times increasing notably since 2014. Many major transportation projects are planned, including a major new rail line connecting to the Westside / Midcity area. Transit average daily boardings declined slightly worse than the County average.

Zone Travel Trends

<table>
<thead>
<tr>
<th>2017 PERCENT OF COUNTYWIDE TRAVEL</th>
<th>2014 PERCENT OF COUNTYWIDE TRAVEL</th>
<th>2017 TOP TWO DESTINATIONS FROM ZONE</th>
<th>2014 AVERAGE TRAVEL TIME*</th>
<th>2017 AVERAGE TRAVEL TIME*</th>
<th>AVERAGE TRAVEL TIME CHANGE*</th>
</tr>
</thead>
<tbody>
<tr>
<td>10%</td>
<td>9%</td>
<td>East San Fernando Valley - Santa Monica - West LA</td>
<td>51 min</td>
<td>53 min</td>
<td>4%</td>
</tr>
</tbody>
</table>

2017 Percent of Total Travel

2017 Streetlight Data

Percent of Total Travel

- 12% - 16%
- 8% - 11%
- 6% - 7%
- 4% - 5%
- 2% - 3%
- 0% - 1%
Household Travel Survey Trends

Mode of Travel

<table>
<thead>
<tr>
<th></th>
<th>SOV</th>
<th>HOV</th>
<th>Transit</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>44%</td>
<td>44%</td>
<td>2%</td>
<td>9%</td>
</tr>
<tr>
<td>2015</td>
<td>76%</td>
<td>9%</td>
<td>11%</td>
<td>2%</td>
</tr>
</tbody>
</table>

Source: California Household Travel Survey, 2012

Workers Commuting Trends

Mode of Travel

<table>
<thead>
<tr>
<th></th>
<th>SOV</th>
<th>HOV</th>
<th>Transit</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>73%</td>
<td>10%</td>
<td>7%</td>
<td>10%</td>
</tr>
<tr>
<td>2015</td>
<td>76%</td>
<td>9%</td>
<td>4%</td>
<td>11%</td>
</tr>
</tbody>
</table>

Source: American Community Survey, 2015

Other Mobility Options

- Sepulveda Pass Transit Corridor
- Regional Commuter Rail (Metrolink and Amtrak) Improvements
- Orange Line Conversion to light rail
- Orange Line BRT Improvements
- Sepulveda Pass Express Bus Transit Corridor

**Major Planned Transportation Projects**

- Uber Zone Coverage (Less than 5 minute wait): 2013: 0%, 2016: 60%
- BikeShare Service: No
- Express Lanes: No
Zone: West San Fernando Valley

Travel Trends

Transit Travel Trends

- **4** Transit Agencies in Zone
- **41** Analyzed Bus Routes
- **2** Rapid Routes
- **17** Express Routes
- **298** Bus Service (Trips at Stops) per Square Mile
- **-4%** Average Annual Change in Line Level Ridership on Analyzed Routes (2012-2016)

TAP Card Purchase Locations

- **13** TAP Vending Machine Locations in Zone
- **13** TAP Retail Vendors in Zone
- **0.13** TAP Card Purchase Locations per Square Mile in Zone
TAP Data Trends

12,125,524
TRIPS ORIGINATING IN ZONE

Hourly TAP Ridership

Ridership is displayed below hourly for both weekday and weekend trips using a TAP card. The bar charts show this zone’s ridership and percentages of trips, and the line represents the countywide average.

WEEKDAY

WEEKEND
Zone: Westside - Midcity

Demographic Trends

Key Themes

Westside - Midcity includes neighborhoods of the city of Los Angeles, as well as the cities of West Hollywood and Beverly Hills. The zone is ranked 2nd out of 20 zones for its service population density. Households in the Westside - Midcity zone are slightly more likely than the County average to earn less than $35,000 per year. The proportion of households with children is also among the lowest in the study, despite the lower average income. This zone has the second-highest proportion of zero-car households among all zones, likely in relation to the density and availability of transit service as well as the income distribution. The age distribution is somewhat more concentrated in the 30-55 age group than the County average, with fewer people under age 30. The population growth was slightly less than the County average, but job growth was markedly stronger. Forecast growth in households, population and jobs are expected to be similar to county averages. Given the household income distribution, proportion without cars, and the age distribution of the population, this zone closely aligns with the all-purpose transit rider.

2015 Population and Employment Density
Zone: Westside - Midcity

Travel Trends

Key Themes

The Westside - Midcity zone is served by numerous operators and has the second-highest number of bus trips at stops of any zone. The zone also has access to the Red and Purple Line subways, while the recently-opened Expo Line is not far to the south. The Westside was one of the first regions to have access to TNC service and now has nearly 100% coverage of low wait times for rides. Westside - Midcity generates a relatively high and growing percentage of the countywide travel compared to other zones. Average travel times have increased substantially since 2014. The zone has the second-highest percentage of commuters using transit and some of the highest availability of transit in the County. Given that, the percentage decline of ridership in this zone, which is worse than the County average, represents a substantial loss in absolute numbers of trips.

Zone Travel Trends

16%
2017 PERCENT OF COUNTYWIDE TRAVEL
13%
2014 PERCENT OF COUNTYWIDE TRAVEL

Santa Monica - West LA
LA Downtown - NELA

2017 TOP TWO DESTINATIONS FROM ZONE
2014 AVERAGE TRAVEL TIME*
2017 AVERAGE TRAVEL TIME*
6%
AVERAGE TRAVEL TIME CHANGE*

Santa Monica - West LA

1945 min
1948 min

2017 Percent of Total Travel
Household Travel Survey Trends

<table>
<thead>
<tr>
<th>Mode of Travel</th>
<th>SOV</th>
<th>HOV</th>
<th>Transit</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage</td>
<td>34%</td>
<td>32%</td>
<td>13%</td>
<td>21%</td>
</tr>
</tbody>
</table>

Average Trip Distance: Single Occupancy Vehicle

6.8 miles

Source: California Household Travel Survey, 2012

Workers Commuting Trends

<table>
<thead>
<tr>
<th>Mode of Travel</th>
<th>SOV</th>
<th>HOV</th>
<th>Transit</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>County Average 2015</td>
<td>73%</td>
<td>10%</td>
<td>7%</td>
<td>10%</td>
</tr>
</tbody>
</table>

2010

<table>
<thead>
<tr>
<th>Percentage</th>
<th>SOV</th>
<th>HOV</th>
<th>Transit</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>64%</td>
<td>8%</td>
<td>15%</td>
<td>14%</td>
<td></td>
</tr>
</tbody>
</table>

2015

<table>
<thead>
<tr>
<th>Percentage</th>
<th>SOV</th>
<th>HOV</th>
<th>Transit</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>64%</td>
<td>7%</td>
<td>14%</td>
<td>16%</td>
<td></td>
</tr>
</tbody>
</table>

Source: American Community Survey, 2015

Other Mobility Options

<table>
<thead>
<tr>
<th>Year</th>
<th>Uber Zone Coverage</th>
<th>Bike Share Service</th>
<th>Express Lanes</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>50%</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>2016</td>
<td>95%</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Purple Line Extension, Vermont BRT Corridor, Crenshaw Northern Extension

Major Planned Transportation Projects
Zone: Westside - Midcity

Travel Trends

Transit Travel Trends

- **6** Transit Agencies in Zone
- **56** Analyzed Bus Routes
- **10** Rapid Routes
- **7** Express Routes
- **2,624** Bus Service (trips at stops) per square mile
- **-5%** Average annual change in line level ridership on analyzed routes (2012-2016)

TAP Card Purchase Locations

- **6** TAP Vending Machine Locations in Zone
- **39** TAP Retail Vendors in Zone
- **0.97** TAP Card Purchase Locations per square mile in Zone
TAP Data Trends

40,207,345
TRIPS ORIGINATING IN ZONE

Hourly TAP Ridership

Ridership is displayed below hourly for both weekday and weekend trips using a TAP card. The bar charts show this zone’s ridership and percentages of trips, and the line represents the countywide average.
Key Themes

Whittier includes communities east of downtown Los Angeles such as La Mirada and portions of Santa Fe Springs. The zone is ranked #11 out of 20 zones in terms of service population (residents + jobs) density. The zone is somewhat bisected by industrial and warehouse land uses. The population and jobs grew at about the same rate as the County average between 2010 and 2015. Forecast growth in households, population, and jobs are expected to be well below county averages. The population age distribution is similar to the County average. Household incomes are somewhat more concentrated in the $35,000 to $125,000 per year groups than the County average, and a smaller proportion of households have zero cars. A somewhat higher proportion of households have children than the County average.

Whittier most closely aligns with the all-purpose rider demographic, based on household incomes and age of population; however, car ownership is relatively high in the zone compared with this rider profile.

2015 Population and Employment Density
### Households

**2010: 92,053 TOTAL**

<table>
<thead>
<tr>
<th>Change 2010-2015</th>
<th>Forecast Change 2016-2040</th>
</tr>
</thead>
<tbody>
<tr>
<td>County</td>
<td></td>
</tr>
<tr>
<td>Zone</td>
<td></td>
</tr>
</tbody>
</table>

- 25% 32% 27% 16%

**2015: 92,613 TOTAL**

<table>
<thead>
<tr>
<th>Change 2010-2015</th>
<th>Forecast Change 2016-2040</th>
</tr>
</thead>
<tbody>
<tr>
<td>County</td>
<td></td>
</tr>
<tr>
<td>Zone</td>
<td></td>
</tr>
</tbody>
</table>

- 25% 31% 25% 18%

### Population

**2010: 315,518 TOTAL**

<table>
<thead>
<tr>
<th>Change 2010-2015</th>
<th>Forecast Change 2016-2040</th>
</tr>
</thead>
<tbody>
<tr>
<td>County</td>
<td></td>
</tr>
<tr>
<td>Zone</td>
<td></td>
</tr>
</tbody>
</table>

- 45% 34% 21%

**2015: 325,794 TOTAL**

<table>
<thead>
<tr>
<th>Change 2010-2015</th>
<th>Forecast Change 2016-2040</th>
</tr>
</thead>
<tbody>
<tr>
<td>County</td>
<td></td>
</tr>
<tr>
<td>Zone</td>
<td></td>
</tr>
</tbody>
</table>

- 42% 34% 24%

### Jobs

**2010: 121,752 TOTAL**

<table>
<thead>
<tr>
<th>Change 2010-2015</th>
<th>Forecast Change 2016-2040</th>
</tr>
</thead>
<tbody>
<tr>
<td>County</td>
<td></td>
</tr>
<tr>
<td>Zone</td>
<td></td>
</tr>
</tbody>
</table>

- 6% 17%

**2015: 129,954 TOTAL**

<table>
<thead>
<tr>
<th>Change 2010-2015</th>
<th>Forecast Change 2016-2040</th>
</tr>
</thead>
<tbody>
<tr>
<td>County</td>
<td></td>
</tr>
<tr>
<td>Zone</td>
<td></td>
</tr>
</tbody>
</table>

- 7% 10%
Key Themes

The Whittier zone is served by several operators including Metro, Montebello Bus Lines, Norwalk Transit, and Foothill Transit. Metrolink provides regional commuter rail service on the southern edge of the zone. There is no Metro Rail service in or particularly near the zone, although an expansion of the Gold Line is planned for the future. The number of bus trips at stops per day per line in the zone is relatively low compared to other zones in the area. The proportion of drive-alone commuters is among the highest in the County. Average daily riders in this zone declined slightly more than the County average.

Zone Travel Trends

2017 Percent of Total Travel

<table>
<thead>
<tr>
<th>2017 Percent of Countywide Travel</th>
<th>2014 Percent of Countywide Travel</th>
<th>2017 Top Two Destinations from Zone</th>
<th>2014 Average Travel Time*</th>
<th>2017 Average Travel Time*</th>
<th>Average Travel Time Change*</th>
</tr>
</thead>
<tbody>
<tr>
<td>2%</td>
<td>1%</td>
<td>Downey - Norwalk</td>
<td>51 min</td>
<td>52 min</td>
<td>0.2 min</td>
</tr>
<tr>
<td>2017</td>
<td>2014</td>
<td>Pasadena - West</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>San Gabriel Valley</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* To zone from other zones
**Household Travel Survey Trends**

- **Mode of Travel**
  - SOV: 40%
  - HOV: 46%
  - Transit: 3%
  - Other: 11%

- **Average Trip Distance: Single Occupancy Vehicle**
  - 7.4 miles

- **Average Trip Distance: Bus**
  - 13.4 miles

*Source: California Household Travel Survey, 2012*

**Workers Commuting Trends**

- **County Average 2015**
  - SOV: 73%
  - HOV: 10%
  - Transit: 7%
  - Other: 10%

- **2010**
  - SOV: 80%
  - HOV: 10%
  - Transit: 3%
  - Other: 7%

- **2015**
  - SOV: 82%
  - HOV: 9%
  - Transit: 3%
  - Other: 6%

*Source: American Community Survey, 2015*

**Other Mobility Options**

- **2013**
  - Uber Zone Coverage (Less than 5 minute wait): 0%
- **2016**
  - Uber Zone Coverage (Less than 5 minute wait): 5%

- **Major Planned Transportation Projects**
  - Eastside Transit Corridor Phase 2
  - I-5 Carpool and Mixed-Flow Lanes
  - Regional Commuter Rail (Metrolink and Amtrak) Improvements
  - Green Line Eastern Extension (Norwalk)

- **Bikeshare Service?**
  - No

- **Express Lanes?**
  - No
**Zone: Whittier**

**Travel Trends**

**Transit Travel Trends**

- **Agencies in Zone**: 4
- **Routes in Zone**: 20
- **Rapid Routes**: 0
- **Express Routes**: 3
- **Bus Service (Trips at Stops) per Square Mile**: 336
- **Average Annual Change in Line Level Ridership on Analyzed Routes (2012-2016)**: -4%

**TAP Card Purchase Locations**

- **TAP Vending Machine Locations in Zone**: 0
- **TAP Retail Vendors in Zone**: 8
- **TAP Card Purchase Locations**
  - TAP Retail Vendor
  - TAP Vending Machine (TVM)
  - Metro Customer Center

---

**RAPID ROUTES**
- 0

**EXPRESS ROUTES**
- 3

**ANALYZED BUS ROUTES**
- 20

**LOCAL ROUTES**
- 17

**TRANSIT AGENCIES IN ZONE**
- Foothill Transit, Montebello Bus Lines, Metro, Norwalk Transit

**TRANSIT AGENCIES IN ZONE**
- 4

---

**Ridership & Trips**

**Bus Service (Trips at Stops) per Square Mile**: 336

**Average Annual Change in Line Level Ridership on Analyzed Routes (2012-2016)**: -4%
TAP Data Trends

1,732,454
TRIPS ORIGINATING IN ZONE

FARE TYPE BY PASS

TRIP FREQUENCY

Hourly TAP Ridership

Ridership is displayed below hourly for both weekday and weekend trips using a TAP card. The bar charts show this zone’s ridership and percentages of trips, and the line represents the countywide average.
This page is intentionally left blank.
This chapter presents the detailed corridor analysis of ridership trends, demographic trends, service characteristics, and corridor travel patterns.
This section summarizes the operation of the route, as well as local demographic and travel data. There is also a brief discussion of the trends on this route as compared to those countywide.

This chart and value represent the annual change in ridership on this particular route. Located directly next to this information is a note on whether this is above, below, or around the countywide trends in ridership.

On this map, the gray and white dashed area represents one mile around the route studied, which we have called the “route area”. As travelers depart from the route area, the density of their destinations is represented by the purple hexagon zones. The darker the purple, the more travel from the route area is destined there.

The ratio of overall travel coming to and arriving within the route area is represented by this value. This value may help us understand the potential to attract customers that a route may have.

Source: Streetlight Data, F&P analysis

### Culver City
Bus 1
Local Bus Route

#### Route Trends

- **Route Area**
- **Bus Route**
- **Percent of Travel from Route Area**
- **Percent of Travel with Destination Near Route**

Source: Streetlight Data, F&P analysis

### Route Statistics

- **3,414**
- **AVERAGE DAILY BOARDINGS**
- **-6%**
- **AROUND TREND**

- **30%**
- **50%**
- **70%**

### Streetlight Travel and Service Relationship

For all trips measured by Streetlight originating within 1 mile of the route, the purple shading shows the destination zones, with darker zones representing more trips. The route line is segmented showing where nearby trip origins are more or less likely to be heading somewhere else along the route. This represents the strength of potential travel market for the route. Yellow segments represent areas where travelers are less likely to have a destination along the bus route.
**Writing assistant scenarios:**

**E** The demographic data displayed here shows how many people within the route area fall into various categories that are often associated with higher transit use. The arrows to the right represent how much these values have changed over time - gray for countywide change, and purple for this route's change. Three purple arrows, for example, indicate that this ratio has increased greatly.

Source: US Census ACS; Nelson\Nygaard Analysis

**F** These charts represent the ratio of TAP card customers using various types of specialized passes.

Source: TAP Regional Database; Nelson\Nygaard Analysis

**G** When we look at stop-level boardings along this route, and compare it to origins and destinations of travel, we can develop a sense of areas of opportunity for transit to take more riders. For example, areas with low ridership but a high correlation to travel patterns may be a good candidate for marketing strategies.

Source: Streetlight Data, 2016 Agency Stop-Level Ridership; F&P Analysis
**AVTA 1**
Local Bus Route

### Route Analysis and Strategies

This local route represents the highest Average Daily Boardings in 2016 of any AVTA route.

For this and similar routes, consider the following strategies:

- **Guaranteed Best Fare and Frequent Rider Rewards** - As one of the areas in the county with increasing households without cars and low-income households, improving the affordability of service and making it more attractive to riders weighing their finances on a per-trip cost can help attract people to transit. Growth in the region is also forecast to outpace the county average.

- **Optimize Fixed-Route Service** - With low-density and sprawling development, providing high-quality fixed-route service can be a challenge. Focus on enhancing major corridor service that strings together many neighborhoods and key destinations, including shopping centers and medical offices. Consider transitioning infrequent fixed-route service in outlying areas to modern demand-response options that provide better quality service for customers with the same operating footprint.

### StreetLight Travel and Service Relationship

All trips (car, bike, walk, bus, etc.) originating within approximately a 1-mile radius of the bus route (shown as the dotted line) are assumed to be potential customers. Their destinations within LA County are measured and shown in the purple hexagons. A dark purple hexagon represents an area where more trips go. Empty hexagons represent areas where less than 1% of trips go.

The percentage shown below is an estimation of how many trips start and end near the bus route - the alignment of the general travel market with the bus route.

**73%**
**Percent of Travel with Destination Near Route**

**1,917**
**Average Daily Boardings in 2016**

**TO COUNTYWIDE RIDERSHIP TREND**

**-4%**
**Average Annual Change in Ridership**
Demographic Data

26%  AVERAGE PERCENT OF POPULATION BELOW POVERTY LINE
3%    AVERAGE PERCENT OF WORKERS WITHOUT CAR ACCESS
9%    AVERAGE PERCENT OF SENIOR POPULATION
42%   AVERAGE PERCENT OF YOUTH POPULATION

Ratio of TAP Card Trips Taken with Passes

33%  TRIPS WITH MONTHLY PASS
2%    TRIPS WITH STUDENT PASS
58%   TRIPS WITH SENIOR/DISABLED PASS
**AVTA 3**
Local Bus Route

### Route Analysis and Strategies

This local route likely underwent substantial service changes around 2014, after which time ridership declined substantially.

For this and similar routes, consider the following strategies:

- **Guaranteed Best Fare and Frequent Rider Rewards** - As one of the few areas in the county with increasing households without cars and low-income households, improving the affordability of service and making it more attractive to riders weighing their finances on a per-trip cost can help attract people to transit.

- **Optimize Fixed-Route Service** - With low-density and sprawling development, providing high-quality fixed-route service can be a challenge. Focus on enhancing major corridor service that strings together many neighborhoods and key destinations, including shopping centers and medical offices. Consider transitioning infrequent fixed-route service in outlying areas to modern demand-response options that provide better quality service for customers with the same operating footprint.

### StreetLight Travel and Service Relationship

All trips (car, bike, walk, bus, etc.) originating within approximately a 1-mile radius of the bus route (shown as the dotted line) are assumed to be potential customers. Their destinations within LA County are measured and shown in the purple hexagons. A dark purple hexagon represents an area where more trips go. Empty hexagons represent areas where less than 1% of trips go.

The percentage shown below is an estimation of how many trips start and end near the bus route - the alignment of the general travel market with the bus route.
## Demographic Data

<table>
<thead>
<tr>
<th></th>
<th>Average percent change over time</th>
</tr>
</thead>
<tbody>
<tr>
<td>26%</td>
<td>Average percent of population below poverty line</td>
</tr>
<tr>
<td>3%</td>
<td>Average percent of workers without car access</td>
</tr>
<tr>
<td>8%</td>
<td>Average percent of senior population</td>
</tr>
<tr>
<td>44%</td>
<td>Average percent of youth population</td>
</tr>
</tbody>
</table>

## Ratio of TAP Card Trips Taken with Passes

<table>
<thead>
<tr>
<th></th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trips with monthly pass</td>
<td>22%</td>
</tr>
<tr>
<td>Trips with student pass</td>
<td>3%</td>
</tr>
<tr>
<td>Trips with senior/disabled pass</td>
<td>64%</td>
</tr>
</tbody>
</table>
AVTA 786
Express Bus Route

Route Analysis and Strategies

This express route connects the Antelope Valley with West Los Angeles employment and education centers. Although the route has had relatively stable ridership over the period, it is not the highest of the express routes in terms of ridership; this is reflective of the route’s fewer trips than the other AVTA express lines.

For this and similar routes, consider the following strategies:

- **Frequent Rider Rewards** - Ensure long-term rider retention through customer appreciation.
- **Engage Major Employers** - Build a market for filling express bus seats by partnering with particular employers whose workers live in the service area, and use the employer relationship to market directly to those potential customers.
- **Expand Express Service** - There seems to be travel-market potential for expanded frequency to West LA. There may also be opportunities for reverse-commute service by engaging employers in the Antelope Valley. Alternatively, collaborate with other agencies to identify express opportunities within LA, rather than layovers and deadhead.

StreetLight Travel and Service Relationship

All trips (car, bike, walk, bus, etc.) originating within approximately a 1-mile radius of the bus route (shown as the dotted line) are assumed to be potential customers. Their destinations within LA County are measured and shown in the purple hexagons. A dark purple hexagon represents an area where more trips go. Empty hexagons represent areas where less than 1% of trips go.

The percentage shown below is an estimation of how many trips start and end near the bus route - the alignment of the general travel market with the bus route.
Demographic Data

<table>
<thead>
<tr>
<th>Percent</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>16%</td>
<td>Average percent of population below poverty line</td>
</tr>
<tr>
<td>3%</td>
<td>Average percent of workers without car access</td>
</tr>
<tr>
<td>13%</td>
<td>Average percent of senior population</td>
</tr>
<tr>
<td>31%</td>
<td>Average percent of youth population</td>
</tr>
</tbody>
</table>

Ratio of TAP Card Trips Taken with Passes

- **0%** for trips with monthly pass
- **0%** for trips with student pass
- **19%** for trips with senior/disabled pass
Big Blue Bus 1
Local Bus Route

Route Analysis and Strategies

Ridership has held relatively stable, but saw declines since a recent high in 2014. An area of opportunity for increased market share is the segment of the route along Main Street through south Santa Monica to Venice. The travel market in this area aligns closely with the service provided, but ridership is lower in this segment than others (see the map at lower-right).

For this and similar routes, consider the following strategies:

- Frequent, Reliable Service - given the alignment with the travel market, this route must remain competitive with other modes. Deploy strategies to keep the route on-time, and increase frequency where possible.
- Leverage Operating Data - work with the communities this route serves to identify traffic operations improvements using the route performance data, and to make a case for improved service reliability.
- TAP Distribution and Direct Marketing - High TAP adoption will reduce dwell times and improve reliability, as well as attract new riders to a service aligned with their travel habits.

StreetLight Travel and Service Relationship

All trips (car, bike, walk, bus, etc.) originating within approximately a 1-mile radius of the bus route (shown as the dotted line) are assumed to be potential customers. Their destinations within LA County are measured and shown in the purple hexagons. A dark purple hexagon represents an area where more trips go. Empty hexagons represent areas where less than 1% of trips go.

The percentage shown below is an estimation of how many trips start and end near the bus route - the alignment of the general travel market with the bus route.

6,558
AVERAGE DAILY BOARDINGS IN 2016

-2%
AVERAGE ANNUAL CHANGE IN RIDERSHIP

30%
-30%
TO COUNTYWIDE RIDERSHIP TREND

56%
PERCENT OF TRAVEL WITH DESTINATION NEAR ROUTE
Demographic Data

<table>
<thead>
<tr>
<th></th>
<th>Average Percent of Population Below Poverty Line</th>
<th>Average Percent of Workers Without Car Access</th>
<th>Average Percent of Senior Population</th>
<th>Average Percent of Youth Population</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>19%</td>
<td>6%</td>
<td>12%</td>
<td>34%</td>
</tr>
</tbody>
</table>

Ratio of TAP Card Trips Taken with Passes

Data not available

Ridership and StreetLight Travel Relationship

Stop-level boardings for this route are added together in segments and compared to the StreetLight travel alignment. Orange areas are where the travel market aligns well with the route being analyzed (travelers have destinations near the route), but ridership in that area is lower than other portions of the route. These represent areas of opportunity, where potentially more travelers could be using this particular transit route to make their trip, and the route could have higher average daily boardings.

For all green segments, there is still always the potential to increase ridership, but these are segments where the route performance is at least as strong as the potential travel market.
Big Blue Bus 14
Local Bus Route

Route Analysis and Strategies

Ridership has fluctuated between 2012 and 2016, with a high in 2014. Data are not reflective of the new connection to the Expo Line starting in May 2016.

For this and similar routes, consider the following strategies:

• Frequent, Reliable Service - given the alignment with the travel market, this route must remain competitive with other modes. Deploy strategies to keep the route on-time, and increase frequency where possible.

• Reduce Transfers - Consider the north-south service market and the current route’s terminus and assess whether service could be extended to an anchor destination that is nearby.

• TAP Distribution and Direct Marketing - The Average Daily Boardings in 2016 in a very dense market suggest there is opportunity to increase awareness of the service offerings and benefits of the route and its connections.

• Price Passes to Increase Market Demand - given the east-west nature of the travel market, ensure that fare options support a route that serves those connections.

StreetLight Travel and Service Relationship

All trips (car, bike, walk, bus, etc.) originating within approximately a 1-mile radius of the bus route (shown as the dotted line) are assumed to be potential customers. Their destinations within LA County are measured and shown in the purple hexagons. A dark purple hexagon represents an area where more trips go. Empty hexagons represent areas where less than 1% of trips go.

The percentage shown below is an estimation of how many trips start and end near the bus route - the alignment of the general travel market with the bus route.

PERCENT OF TRAVEL WITH DESTINATION NEAR ROUTE

47%
Demographic Data

11% 4% 16% 25%
AVERAGE PERCENT OF POPULATION BELOW POVERTY LINE AVERAGE PERCENT OF WORKERS WITHOUT CAR ACCESS AVERAGE PERCENT OF SENIOR POPULATION AVERAGE PERCENT OF YOUTH POPULATION

Ratio of TAP Card Trips Taken with Passes

Data not available

Ridership and StreetLight Travel Relationship

Stop-level boardings for this route are added together in segments and compared to the StreetLight travel alignment. Orange areas are where the travel market aligns well with the route being analyzed (travelers have destinations near the route), but ridership in that area is lower than other portions of the route. These represent areas of opportunity, where potentially more travelers could be using this particular transit route to make their trip, and the route could have higher average daily boardings.

For all green segments, there is still always the potential to increase ridership, but these are segments where the route performance is at least as strong as the potential travel market.
Big Blue Bus 2
Local Bus Route

Route Analysis and Strategies

Ridership for Line 2 has remained very stable between 2012 and 2016, reflecting its travel market strength and the stability of service over that time.

For this and similar routes, consider the following strategies:

- Enhance College Pass Programs and Engage Major Employers - this route overlaps with a high-frequency Metro Rapid, which improves bus frequency along Wilshire, but BBB 2 directly serves Westwood and UCLA. Attract a larger customer base by engaging this community of both students and employees with pass options that take advantage of the overlapping service, rather than competing for market share.

- Life Transition Marketing - with service near to or connecting Santa Monica High School, Santa Monica College, and UCLA, there are many opportunities to engage and stay engaged with students moving into and out of higher education.

StreetLight Travel and Service Relationship

All trips (car, bike, walk, bus, etc.) originating within approximately a 1-mile radius of the bus route (shown as the dotted line) are assumed to be potential customers. Their destinations within LA County are measured and shown in the purple hexagons. A dark purple hexagon represents an area where more trips go. Empty hexagons represent areas where less than 1% of trips go.

The percentage shown below is an estimation of how many trips start and end near the bus route - the alignment of the general travel market with the bus route.

2,273
AVERAGE DAILY BOARDINGS IN 2016

1%
AVERAGE ANNUAL CHANGE IN RIDERSHIP

Above
COUNTYWIDE RIDERSHIP TREND

48%
PERCENT OF TRAVEL WITH DESTINATION NEAR ROUTE
**Demographic Data**

<table>
<thead>
<tr>
<th>Category</th>
<th>Average Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population below poverty line</td>
<td>21%</td>
</tr>
<tr>
<td>Workers without car access</td>
<td>7%</td>
</tr>
<tr>
<td>Senior population</td>
<td>12%</td>
</tr>
<tr>
<td>Youth population</td>
<td>39%</td>
</tr>
</tbody>
</table>

**Ratio of TAP Card Trips Taken with Passes**

*Data not available*

**Ridership and StreetLight Travel Relationship**

Stop-level boardings for this route are added together in segments and compared to the StreetLight travel alignment. Orange areas are where the travel market aligns well with the route being analyzed (travelers have destinations near the route), but ridership in that area is lower than other portions of the route. These represent areas of opportunity, where potentially more travelers could be using this particular transit route to make their trip, and the route could have higher average daily boardings.

For all green segments, there is still always the potential to increase ridership, but these are segments where the route performance is at least as strong as the potential travel market.
Ridership Growth Action Plan

**Big Blue Bus Rapid 7**

**Rapid Bus Route**

**Route Analysis and Strategies**

Rapid 7 overlaps with Line 7 for most of its length; the ridership trends are heavily affected by service changes shifting trips between the local and rapid route. Corridor-level ridership has fluctuated substantially between 2012 and 2016. The service is closely aligned with the travel market but has some areas of opportunity for increasing customers.

For this and similar routes, consider the following strategies:

- **Frequent Rider Rewards** - with heavy fluctuations in ridership, consider increased incentive for occasional patrons to choose this service.
- **Enhance College Pass Programs and Life Transition Marketing** - Santa Monica College and Santa Monica High School are major anchors on this route. Attract more riders with attractive pass programs that support their travel needs, which may include transferring to services operated by other agencies, and keep them engaged as customers after graduation.

**StreetLight Travel and Service Relationship**

All trips (car, bike, walk, bus, etc.) originating within approximately a 1-mile radius of the bus route (shown as the dotted line) are assumed to be potential customers. Their destinations within LA County are measured and shown in the purple hexagons. A dark purple hexagon represents an area where more trips go. Empty hexagons represent areas where less than 1% of trips go.

The percentage shown below is an estimation of how many trips start and end near the bus route - the alignment of the general travel market with the bus route.
Demographic Data

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>13%</td>
<td>Average percent of population below poverty line</td>
</tr>
<tr>
<td>5%</td>
<td>Average percent of workers without car access</td>
</tr>
<tr>
<td>15%</td>
<td>Average percent of senior population</td>
</tr>
<tr>
<td>27%</td>
<td>Average percent of youth population</td>
</tr>
</tbody>
</table>

Ratio of TAP Card Trips Taken with Passes

Data not available

Ridership and StreetLight Travel Relationship

Stop-level boardings for this route are added together in segments and compared to the StreetLight travel alignment. Orange areas are where the travel market aligns well with the route being analyzed (travelers have destinations near the route), but ridership in that area is lower than other portions of the route. These represent areas of opportunity, where potentially more travelers could be using this particular transit route to make their trip, and the route could have higher average daily boardings.

For all green segments, there is still always the potential to increase ridership, but these are segments where the route performance is at least as strong as the potential travel market.
Ridership on this local route remained stable between 2012 and 2016. The intensity of the travel market in the South Bay suggests there is a great opportunity for expanded transit options and increased market share.

For this and similar routes, consider the following strategies:

- **Optimize Fixed-Route Network** - This region features several operators and routes serving numerous destinations in ways that can increase travel time on the bus. The travel market analysis (below) suggests that considerable travel demand falls beyond the scope of this route. Work with subregional partners to design a subregional transit network that serves major centers frequently, and focus on making transit travel time competitive with autos where possible.

- **New Mobility Partnerships** - A challenge for providing fixed-route service in this area is the combination of medium-density development and long distances between “anchor” destinations. Consider serving a broader population by enhancing connections to transit through first-last mile alternatives, especially for connections to regional rail service.

### StreetLight Travel and Service Relationship

All trips (car, bike, walk, bus, etc.) originating within approximately a 1-mile radius of the bus route (shown as the dotted line) are assumed to be potential customers. Their destinations within LA County are measured and shown in the purple hexagons. A dark purple hexagon represents an area where more trips go. Empty hexagons represent areas where less than 1% of trips go.

The percentage shown below is an estimation of how many trips start and end near the bus route - the alignment of the general travel market with the bus route.
Demographic Data

- **7%** AVERAGE PERCENT OF POPULATION BELOW POVERTY LINE
- **1%** AVERAGE PERCENT OF WORKERS WITHOUT CAR ACCESS
- **13%** AVERAGE PERCENT OF SENIOR POPULATION
- **28%** AVERAGE PERCENT OF YOUTH POPULATION

Ratio of TAP Card Trips Taken with Passes

Data not available

Ridership and StreetLight Travel Relationship

Stop-level boardings for this route are added together in segments and compared to the StreetLight travel alignment. Orange areas are where the travel market aligns well with the route being analyzed (travelers have destinations near the route), but ridership in that area is lower than other portions of the route. These represent areas of opportunity, where potentially more travelers could be using this particular transit route to make their trip, and the route could have higher average daily boardings.

For all green segments, there is still always the potential to increase ridership, but these are segments where the route performance is at least as strong as the potential travel market.
Culver City Bus 1
Local Bus Route

Route Analysis and Strategies

Data for 2012 was not available for this line. It held relatively steady ridership through the analysis period until 2016 with a substantial drop compared to the prior years. The travel market analysis (below) suggests that the route serves high travel demand within its area and north-south connections along the Sepulveda/405 corridor are important. Also notable is the eastward reach of the travel market towards Downtown Los Angeles.

For this and similar routes, consider the following strategies:

- Optimize Fixed-Route Network and Reduce Transfers - Connections with north-south services are important, but transfers for travelers going east-west beyond the end of this route are less desirable. Through further market analysis and agency collaboration, find opportunities to provide one-seat rides along the Washington corridor east of Culver City.

StreetLight Travel and Service Relationship

All trips (car, bike, walk, bus, etc.) originating within approximately a 1-mile radius of the bus route (shown as the dotted line) are assumed to be potential customers. Their destinations within LA County are measured and shown in the purple hexagons. A dark purple hexagon represents an area where more trips go. Empty hexagons represent areas where less than 1% of trips go.

The percentage shown below is an estimation of how many trips start and end near the bus route - the alignment of the general travel market with the bus route.

COUNTYWIDE RIDERSHIP TREND

-30% 0% 30%

AVERAGE ANNUAL CHANGE IN RIDERSHIP

3,414 AVERAGE DAILY BOARDINGS IN 2016

-6%

PERCENT OF TRAVEL WITH DESTINATION NEAR ROUTE

45%
Demographic Data

- Average percent of population below poverty line: 13%
- Average percent of workers without car access: 5%
- Average percent of senior population: 12%
- Average percent of youth population: 25%

Ratio of TAP Card Trips Taken with Passes

- Trips with monthly pass: 14%
- Trips with student pass: 7%
- Trips with senior/disabled pass: 53%

Ridership and StreetLight Travel Relationship

Stop-level boardings for this route are added together in segments and compared to the StreetLight travel alignment. Orange areas are where the travel market aligns well with the route being analyzed (travelers have destinations near the route), but ridership in that area is lower than other portions of the route. These represent areas of opportunity, where potentially more travelers could be using this particular transit route to make their trip, and the route could have higher average daily boardings.

For all green segments, there is still always the potential to increase ridership, but these are segments where the route performance is at least as strong as the potential travel market.
Culver CityBus 6
Local Bus Route

Route Analysis and Strategies

Data for 2012 was not available for this line. The StreetLight travel market analysis (maps below) show that there is a strong alignment with travel demand along the route, and the UCLA/West LA area represents a possible market for increased ridership. Trips using student passes are potentially much higher than shown from the TAP data due to a UCLA student pass option that is not TAP-based.

For this service area, consider the following strategies:

- Enhance College Pass Programs - The busiest portion of this route is well south of UCLA, suggesting there is an opportunity to attract significantly more student, staff and faculty riders traveling the corridor. This route also serves a relatively high youth population.

- Optimize Fixed-Route Network - this relatively long route has strong anchor points and the travel market analysis suggests that connectivity to the east and west may be important as well. Provide a time-competitive travel option by increasing Rapid service and implementing strategies to improve speed and reliability along the corridor.

StreetLight Travel and Service Relationship

All trips (car, bike, walk, bus, etc.) originating within approximately a 1-mile radius of the bus route (shown as the dotted line) are assumed to be potential customers. Their destinations within LA County are measured and shown in the purple hexagons. A dark purple hexagon represents an area where more trips go. Empty hexagons represent areas where less than 1% of trips go.

The percentage shown below is an estimation of how many trips start and end near the bus route - the alignment of the general travel market with the bus route.

4,063
AVERAGE DAILY BOARDINGS IN 2016

Above
COUNTYWIDE RIDERSHIP TREND

20%
AVERAGE ANNUAL CHANGE IN RIDERSHIP

-30%

30%

54%
PERCENT OF TRAVEL WITH DESTINATION NEAR ROUTE

Percent of Travel from Route Area
- < 1%
- 1% - 3%
- 3% - 5%
- 5% - 7%
- 7% - 24%
Demographic Data

- **Average Percent of Population Below Poverty Line**: 20%
- **Average Percent of Workers Without Car Access**: 5%
- **Average Percent of Senior Population**: 10%
- **Average Percent of Youth Population**: 39%

Ratio of TAP Card Trips Taken with Passes

- **Trips with Monthly Pass**: 47%
- **Trips with Student Pass**: 41%
- **Trips with Senior/Disabled Pass**: 28%

Ridership and StreetLight Travel Relationship

Stop-level boardings for this route are added together in segments and compared to the StreetLight travel alignment. Orange areas are where the travel market aligns well with the route being analyzed (travelers have destinations near the route), but ridership in that area is lower than other portions of the route. These represent areas of opportunity, where potentially more travelers could be using this particular transit route to make their trip, and the route could have higher average daily boardings.

For all green segments, there is still always the potential to increase ridership, but these are segments where the route performance is at least as strong as the potential travel market.
Ridership on Line 187 remained relatively stable until 2016, with a notable decrease in boardings that likely followed the opening of the Metro Gold Line, which runs parallel to and intersects this route. This route has been altered since the analysis period. The travel market analysis shown reflects the prior routing, which has since been split into two separate routes (Line 188 comprising the segments east of Azusa).

Consider the following strategies for this and similar routes:

- **Life Transition, TAP Distribution and Direct Marketing** - As demographics shift and people move to the San Gabriel Valley for affordable housing options, engage them as potential customers. Connections to the recent and future Gold Line extension are also a source for potential new customers.

- **Enhance College Pass Programs** - With service near to several colleges, this route already features 1/3rd ridership by students according to TAP data. Connect with students as potential customers and incentivize using transit.

**Similar TO COUNTYWIDE RIDERSHIP TREND**

**Foothill Transit 187**

Local Bus Route

**Route Analysis and Strategies**

**StreetLight Travel and Service Relationship**

All trips (car, bike, walk, bus, etc.) originating within approximately a 1-mile radius of the bus route (shown as the dotted line) are assumed to be potential customers. Their destinations within LA County are measured and shown in the purple hexagons. A dark purple hexagon represents an area where more trips go. Empty hexagons represent areas where less than 1% of trips go.

The percentage shown below is an estimation of how many trips start and end near the bus route - the alignment of the general travel market with the bus route.
**Demographic Data**

- **13%** Average percent of population below poverty line
- **2%** Average percent of workers without car access
- **14%** Average percent of senior population
- **34%** Average percent of youth population

**Ratio of TAP Card Trips Taken with Passes**

- **48%** Trips with monthly pass
- **33%** Trips with student pass
- **43%** Trips with senior/disabled pass

**Ridership and StreetLight Travel Relationship**

Stop-level boardings for this route are added together in segments and compared to the StreetLight travel alignment. Orange areas are where the travel market aligns well with the route being analyzed (travelers have destinations near the route), but ridership in that area is lower than other portions of the route. These represent areas of opportunity, where potentially more travelers could be using this particular transit route to make their trip, and the route could have higher average daily boardings.

For all green segments, there is still always the potential to increase ridership, but these are segments where the route performance is at least as strong as the potential travel market.
Foothill Transit 280
Local Bus Route

Route Analysis and Strategies

This line is among the most stable in the study period. The travel market analysis suggests that while the route does align with strong travel demand, there may also be demand for east-west trips that would require a transfer to another line. There may also be opportunity to increase ridership from the southern portion of the line (see the Ridership and StreetLight map at right), which serves the Puente Hills Mall.

For this and similar routes, consider the following strategies:

- Optimize Fixed-Route Network and Frequent, Reliable Service - A consistent performance route with a recent connection to the Gold Line can build on ridership by increasing frequency and ensuring reliable connections to the east-west routes aligned with the travel market. Consider east-west connecting route frequency.

- TAP Distribution and Direct Marketing - The Puente Hills Mall area is an example location to target direct marketing efforts through distribution of TAP cards. Use the opportunity to engage with potential customers and inform them how this and other lines can serve their travel needs.

StreetLight Travel and Service Relationship

All trips (car, bike, walk, bus, etc.) originating within approximately a 1-mile radius of the bus route (shown as the dotted line) are assumed to be potential customers. Their destinations within LA County are measured and shown in the purple hexagons. A dark purple hexagon represents an area where more trips go. Empty hexagons represent areas where less than 1% of trips go.

The percentage shown below is an estimation of how many trips start and end near the bus route - the alignment of the general travel market with the bus route.

43% PERCENT OF TRAVEL WITH DESTINATION NEAR ROUTE
Demographic Data

<table>
<thead>
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<th>Category</th>
<th>Percent</th>
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<tbody>
<tr>
<td>Average percent of population below poverty line</td>
<td>12%</td>
</tr>
<tr>
<td>Average percent of workers without car access</td>
<td>2%</td>
</tr>
<tr>
<td>Average percent of senior population</td>
<td>13%</td>
</tr>
<tr>
<td>Average percent of youth population</td>
<td>34%</td>
</tr>
</tbody>
</table>

Ratio of TAP Card Trips Taken with Passes

- **Taps with Monthly Pass**: 50%
- **Taps with Student Pass**: 26%
- **Taps with Senior/Disabled Pass**: 51%

Ridership and StreetLight Travel Relationship

Stop-level boardings for this route are added together in segments and compared to the StreetLight travel alignment. Orange areas are where the travel market aligns well with the route being analyzed (travelers have destinations near the route), but ridership in that area is lower than other portions of the route. These represent areas of opportunity, where potentially more travelers could be using this particular transit route to make their trip, and the route could have higher average daily boardings.

For all green segments, there is still always the potential to increase ridership, but these are segments where the route performance is at least as strong as the potential travel market.
Foothill Transit 281
Local Bus Route

Route Analysis and Strategies

Ridership on this line has remained relatively stable over the analysis period. The travel market analysis (below) suggests that the route provides service mostly aligned with general travel, and there are areas of opportunity to attract more customers, including segments with multiple high schools and shopping districts.

For this and similar routes, consider the following strategies:

- TAP Distribution and Direct Marketing - as Puente Hills Mall serves as a hub for numerous transit routes in the San Gabriel Valley, it is an ideal location to engage with potential customers and find a transit alternative they may not have considered.

- Enhance College Pass Programs - APU and Citrus College present an opportunity to build student ridership from a strong start with 38% of trips using student passes according to the TAP data. Also consider engaging with the several high schools along the route to expand the potential customer base, especially as both are likely to be cost-sensitive populations with lower-than-average access to cars.

![Similar TO COUNTYWIDE RIDERSHIP TREND](image)

StreetLight Travel and Service Relationship

All trips (car, bike, walk, bus, etc.) originating within approximately a 1-mile radius of the bus route (shown as the dotted line) are assumed to be potential customers. Their destinations within LA County are measured and shown in the purple hexagons. A dark purple hexagon represents an area where more trips go. Empty hexagons represent areas where less than 1% of trips go.

The percentage shown below is an estimation of how many trips start and end near the bus route - the alignment of the general travel market with the bus route.

![PERCENT OF TRAVEL WITH DESTINATION NEAR ROUTE](image)
**Demographic Data**

- **Average percent of population below poverty line**: 12%
- **Average percent of workers without car access**: 2%
- **Average percent of senior population**: 13%
- **Average percent of youth population**: 36%

**Ratio of TAP Card Trips Taken with Passes**

- **Trips with monthly pass**: 62%
- **Trips with student pass**: 38%
- **Trips with senior/disabled pass**: 44%

**Ridership and StreetLight Travel Relationship**

Stop-level boardings for this route are added together in segments and compared to the StreetLight travel alignment. Orange areas are where the travel market aligns well with the route being analyzed (travelers have destinations near the route), but ridership in that area is lower than other portions of the route. These represent areas of opportunity, where potentially more travelers could be using this particular transit route to make their trip, and the route could have higher average daily boardings.

For all green segments, there is still always the potential to increase ridership, but these are segments where the route performance is at least as strong as the potential travel market.
Foothill Transit 480
Local Bus Route

Route Analysis and Strategies

Ridership on this line has declined since 2014 from over 2,000 Average Daily Boardings in 2016. The route has since been revised the period analyzed. The market analysis presented below reflects prior routing, although the service area is generally similar. West Covina and downtown Pomona are areas of opportunity where additional marketing may attract more riders whose travel aligns with the service provided.

For this and similar routes, consider the following strategies:

- Enhance College Pass Programs - With connections to several schools, downtowns, and shopping centers, college students could benefit greatly from access to transit and off-campus opportunities. Work with schools not only to implement and incentivize passes, but also to foster student culture of using public transit, perhaps through student ambassadors.

- TAP Distribution and Direct Marketing - Service along this route connects several community centers in the San Gabriel Valley, suggesting great potential for new customers. Engage with people in these key subregional destinations and provide incentives to use transit.

StreetLight Travel and Service Relationship

All trips (car, bike, walk, bus, etc.) originating within approximately a 1-mile radius of the bus route (shown as the dotted line) are assumed to be potential customers. Their destinations within LA County are measured and shown in the purple hexagons. A dark purple hexagon represents an area where more trips go. Empty hexagons represent areas where less than 1% of trips go.

The percentage shown below is an estimation of how many trips start and end near the bus route - the alignment of the general travel market with the bus route.

Percent of Travel with Destination Near Route

West Covina
Demographic Data

17%  
AVERAGE PERCENT OF POPULATION BELOW POVERTY LINE

2%  
AVERAGE PERCENT OF WORKERS WITHOUT CAR ACCESS

11%  
AVERAGE PERCENT OF SENIOR POPULATION

40%  
AVERAGE PERCENT OF YOUTH POPULATION

Ratio of TAP Card Trips Taken with Passes

63%  
TRIPS WITH MONTHLY PASS

42%  
TRIPS WITH STUDENT PASS

36%  
TRIPS WITH SENIOR/ DISABLED PASS

Ridership and StreetLight Travel Relationship

Stop-level boardings for this route are added together in segments and compared to the StreetLight travel alignment. Orange areas are where the travel market aligns well with the route being analyzed (travelers have destinations near the route), but ridership in that area is lower than other portions of the route. These represent areas of opportunity, where potentially more travelers could be using this particular transit route to make their trip, and the route could have higher average daily boardings.

For all green segments, there is still always the potential to increase ridership, but these are segments where the route performance is at least as strong as the potential travel market.
Ridership Growth Action Plan

Route Analysis and Strategies

Like most Foothill Transit lines, ridership began to decline after a peak in 2014. As with other lines in this area, the Puente Hills Mall and Pomona are connecting points to other lines. These represent areas where ridership is strong and well-aligned with the local travel market.

For this and similar routes, consider the following strategies:

- Guaranteed Best Fare - A transit network must balance efficiency with productivity. In many cases, this results in transfer centers, such as the Puente Hills Mall, where many buses connect to maximize choice for riders. However, requiring passengers to pay per boarding penalizes the customer whose best transit option requires transfers within the agency because of service design. Use Guaranteed Best Fare as a marketing opportunity to attract customers who could use transit and are best served with a timely and reliable transfer. Also, this corridor has an increasing percentage of low-income population, who may be sensitive to per-trip prices and also unable to afford the upfront price of a monthly pass.

StreetLight Travel and Service Relationship

All trips (car, bike, walk, bus, etc.) originating within approximately a 1-mile radius of the bus route (shown as the dotted line) are assumed to be potential customers. Their destinations within LA County are measured and shown in the purple hexagons. A dark purple hexagon represents an area where more trips go. Empty hexagons represent areas where less than 1% of trips go.

The percentage shown below is an estimation of how many trips start and end near the bus route - the alignment of the general travel market with the bus route.

Similar

TO COUNTYWIDE RIDERSHIP TREND

1,744
AVERAGE DAILY BOARDINGS IN 2016

-4%
AVERAGE ANNUAL CHANGE IN RIDERSHIP

59%
PERCENT OF TRAVEL WITH DESTINATION NEAR ROUTE
Demographic Data

- 15% Average Percent of Population Below Poverty Line
- 2% Average Percent of Workers Without Car Access
- 13% Average Percent of Senior Population
- 34% Average Percent of Youth Population

Ratio of TAP Card Trips Taken with Passes

- 55% Trips with Monthly Pass
- 31% Trips with Student Pass
- 46% Trips with Senior/Disabled Pass
Foothill Transit Silver Streak (707) Express Bus Route

Route Analysis and Strategies
This route experienced notable gains in ridership in 2013 and 2014, with smaller declines in more recent years. The service is primarily express-type BRT focused on connecting transit centers and park & rides with downtown Los Angeles, resulting in a somewhat unique position in the corridor analysis. Approximately half of the route overlaps with the Metro Silver Line, which is not included in this analysis.

For this and similar routes, consider the following strategies:

- Engage Major Employers - With a full 24-hour service span and express-style delivery, this route can support commutes of all kinds in downtown Los Angeles. Identify major employers who may have or want to attract employees from the east and partner to provide and market transit benefits.

- Life Transition Marketing - The catchment area for an express route like this one is wider than a typical local bus. Engage new residents of the San Gabriel Valley and provide promotional free rides to try the service. Consider cross-promotion with events downtown, focusing on the 24-hour service availability.

StreetLight Travel and Service Relationship

All trips (car, bike, walk, bus, etc.) originating within approximately a 1-mile radius of the bus route (shown as the dotted line) are assumed to be potential customers. Their destinations within LA County are measured and shown in the purple hexagons. A dark purple hexagon represents an area where more trips go. Empty hexagons represent areas where less than 1% of trips go.

The percentage shown below is an estimation of how many trips start and end near the bus route - the alignment of the general travel market with the bus route.

56% PERCENT OF TRAVEL WITH DESTINATION NEAR ROUTE
Demographic Data

- **20%** Average percent of population below poverty line
- **4%** Average percent of workers without car access
- **13%** Average percent of senior population
- **34%** Average percent of youth population

Ratio of TAP Card Trips Taken with Passes

- **40%** Trips with monthly pass
- **20%** Trips with student pass
- **31%** Trips with senior/disabled pass

Ridership and StreetLight Travel Relationship

Stop-level boardings for this route are added together in segments and compared to the StreetLight travel alignment. Orange areas are where the travel market aligns well with the route being analyzed (travelers have destinations near the route), but ridership in that area is lower than other portions of the route. These represent areas of opportunity, where potentially more travelers could be using this particular transit route to make their trip, and the route could have higher average daily boardings.

For all green segments, there is still always the potential to increase ridership, but these are segments where the route performance is at least as strong as the potential travel market.
LADOT 409
Express Bus Route

Route Analysis and Strategies

Average Daily Boardings in 2016 for this line are estimated from annual data and may differ from agency-calculated data. Ridership on this express route has remained relatively stable throughout the analysis period. The travel market analysis is performed on AM peak period data, showing a wide spread of commutes from the service area.

For this and similar routes, consider the following strategies:

- Engage Major Employers and Expand Express Service - An established express service to downtown Los Angeles may be able to expand further through targeted partnerships with employers downtown.

StreetLight Travel and Service Relationship

All trips (car, bike, walk, bus, etc.) originating within approximately a 1-mile radius of the bus route (shown as the dotted line) are assumed to be potential customers. Their destinations within LA County are measured and shown in the purple hexagons. A dark purple hexagon represents an area where more trips go. Empty hexagons represent areas where less than 1% of trips go.

The percentage shown below is an estimation of how many trips start and end near the bus route - the alignment of the general travel market with the bus route.

416
AVERAGE DAILY BOARDINGS IN 2016

30%
0%
-1%
-30%
AVERAGE ANNUAL CHANGE IN RIDERSHIP

TO COUNTYWIDE RIDERSHIP TREND

56%
PERCENT OF TRAVEL WITH DESTINATION NEAR ROUTE
Demographic Data

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>19%</td>
<td>Average percent of population below poverty line</td>
</tr>
<tr>
<td>6%</td>
<td>Average percent of workers without car access</td>
</tr>
<tr>
<td>13%</td>
<td>Average percent of senior population</td>
</tr>
<tr>
<td>30%</td>
<td>Average percent of youth population</td>
</tr>
</tbody>
</table>

Ratio of TAP Card Trips Taken with Passes

- **40%** TRIPS WITH MONTHLY PASS
- **0%** TRIPS WITH STUDENT PASS
- **6%** TRIPS WITH SENIOR/DISABLED PASS

Average percent change over time

- **Data not available**
Route Analysis and Strategies

Average Daily Boardings in 2016 for this line are estimated from annual data and may differ from agency-calculated data. Ridership on this express route has fluctuated throughout the analysis period. The travel market analysis is performed on AM peak period data, and suggests that the travel market to downtown LA is relatively small.

For this and similar routes, consider the following strategies:

- Engage Major Employers - With fluctuating ridership over the analysis period, building relationships with additional employers in the service area can help stabilize and even boost ridership. The broader regional centers travel market analysis also suggested a potential market for reverse-commute service from the dense area south of the Hollywood Hills towards Sherman Oaks and Warner Center.

Similar

TO COUNTYWIDE RIDERSHIP TREND

StreetLight Travel and Service Relationship

All trips (car, bike, walk, bus, etc.) originating within approximately a 1-mile radius of the bus route (shown as the dotted line) are assumed to be potential customers. Their destinations within LA County are measured and shown in the purple hexagons. A dark purple hexagon represents an area where more trips go. Empty hexagons represent areas where less than 1% of trips go.

The percentage shown below is an estimation of how many trips start and end near the bus route - the alignment of the general travel market with the bus route.

PERCENT OF TRAVEL WITH DESTINATION NEAR ROUTE
Demographic Data

- **Average percent of population below poverty line**: 22%
- **Average percent of workers without car access**: 9%
- **Average percent of senior population**: 13%
- **Average percent of youth population**: 30%

Ratio of TAP Card Trips Taken with Passes

- **Trips with monthly pass**: 44%
- **Trips with student pass**: 0%
- **Trips with senior/disabled pass**: 7%
Ridership Growth Action Plan

Route Analysis and Strategies

Average Daily Boardings in 2016 for this line are estimated from annual data and may differ from agency-calculated data. Ridership on this express route has fluctuated throughout the analysis period, but ended slightly above the 2012 ridership. The travel market analysis is performed on AM peak period data, showing a wide spread of commutes from the service area, including travel patterns extending north along I-405.

For this and similar routes, consider the following strategies:

- Engage Major Employers and Expand Express Service - An established express service to downtown Los Angeles may be able to expand further through targeted partnerships with employers downtown. Furthermore, there appears to be a strong travel market for commute-period service to the north along I-405.

StreetLight Travel and Service Relationship

All trips (car, bike, walk, bus, etc.) originating within approximately a 1-mile radius of the bus route (shown as the dotted line) are assumed to be potential customers. Their destinations within LA County are measured and shown in the purple hexagons. A dark purple hexagon represents an area where more trips go. Empty hexagons represent areas where less than 1% of trips go. The percentage shown below is an estimation of how many trips start and end near the bus route - the alignment of the general travel market with the bus route.
Demographic Data

30%  9%  9%  37%
AVERAGE PERCENT OF POPULATION BELOW POVERTY LINE
AVERAGE PERCENT OF WORKERS WITHOUT CAR ACCESS
AVERAGE PERCENT OF SENIOR POPULATION
AVERAGE PERCENT OF YOUTH POPULATION

Ratio of TAP Card Trips Taken with Passes

47%  0%  3%
TRIPS WITH MONTHLY PASS
TRIPS WITH STUDENT PASS
TRIPS WITH SENIOR/DISABLED PASS
LADOT EL SERENO (601)
Local Bus Route

Route Analysis and Strategies

Average Daily Boardings in 2016 for this line are estimated from annual data and may differ from agency-calculated data. Ridership on this route fluctuated throughout the analysis period, ending around the same level as in 2012. The service is a frequent, neighborhood shuttle and serves several schools in the community. This route is among the busiest of the 30+ DASH lines.

For this and similar routes, consider the following strategies:

- Regional Uniform Data Standard - Differences in agency data availability, methods of calculating, and structure can mask opportunities to provide more effective service in a region served by several overlapping operators.

Average Daily Boardings in 2016: 2,488

Average Annual Change in Ridership: Above 40%

StreetLight Travel and Service Relationship

All trips (car, bike, walk, bus, etc.) originating within approximately a 1-mile radius of the bus route (shown as the dotted line) are assumed to be potential customers. Their destinations within LA County are measured and shown in the purple hexagons. A dark purple hexagon represents an area where more trips go. Empty hexagons represent areas where less than 1% of trips go.

The percentage shown below is an estimation of how many trips start and end near the bus route - the alignment of the general travel market with the bus route.

Percent of Travel with Destination Near Route: 40%
Demographic Data

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>23%</td>
<td>Average percent of population below poverty line</td>
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<tr>
<td>5%</td>
<td>Average percent of workers without car access</td>
</tr>
<tr>
<td>11%</td>
<td>Average percent of senior population</td>
</tr>
<tr>
<td>37%</td>
<td>Average percent of youth population</td>
</tr>
</tbody>
</table>

Ratio of TAP Card Trips Taken with Passes

Data not available

TRIPS WITH MONTHLY PASS  TRIPS WITH STUDENT PASS  TRIPS WITH SENIOR/DISABLED PASS
Route Analysis and Strategies

Average Daily Boardings in 2016 for this line are estimated from annual data and may differ from agency-calculated data. Ridership on this route fluctuated throughout the analysis period, ending above the 2012 level. The service is a neighborhood loop shuttle. The local travel market extends well outside of the service range, especially to the south (Warner Center area) and to the east.

For this and similar routes, consider the following strategies:

- TAP Distribution and Direct Marketing - This subregion has few zero-car households, but the population near the route living below the poverty line is increasing. Market the affordable DASH service to people who already drive.

- Enhance Demand-Based Night Options - With service ending in the early evening, there may be an opportunity to expand evening offerings within the same service area using a demand-response service. Focus on connections to high-speed regional services, such as the Metro Orange Line.

StreetLight Travel and Service Relationship

All trips (car, bike, walk, bus, etc.) originating within approximately a 1-mile radius of the bus route (shown as the dotted line) are assumed to be potential customers. Their destinations within LA County are measured and shown in the purple hexagons. A dark purple hexagon represents an area where more trips go. Empty hexagons represent areas where less than 1% of trips go.

The percentage shown below is an estimation of how many trips start and end near the bus route - the alignment of the general travel market with the bus route.
Demographic Data

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<tr>
<td>2%</td>
<td>Average percent of workers without car access</td>
</tr>
<tr>
<td>11%</td>
<td>Average percent of senior population</td>
</tr>
<tr>
<td>38%</td>
<td>Average percent of youth population</td>
</tr>
</tbody>
</table>

Ratio of TAP Card Trips Taken with Passes

Data not available
Ridership Growth Action Plan

Route Analysis and Strategies

Average Daily Boardings in 2016 for this line are estimated from annual data and may differ from agency-calculated data. Ridership on this route declined overall during the analysis period. This route is the busiest of the DASH lines. The travel market extends well outside the service area in each direction, but the route is located in the most dense network of transit availability in the County.

For this and similar routes, consider the following strategies:

- Frequent Rider Rewards - As perhaps one of the strongest community-oriented services in an area of strong redevelopment activity, ridership on this line could be increasing tremendously. It serves one of the largest population of potential customers without access to a car, but also an area with expanding mobility options like bikeshare. Retain current riders and encourage increased trip-making through loyalty appreciation.

StreetLight Travel and Service Relationship

All trips (car, bike, walk, bus, etc.) originating within approximately a 1-mile radius of the bus route (shown as the dotted line) are assumed to be potential customers. Their destinations within LA County are measured and shown in the purple hexagons. A dark purple hexagon represents an area where more trips go. Empty hexagons represent areas where less than 1% of trips go.

The percentage shown below is an estimation of how many trips start and end near the bus route - the alignment of the general travel market with the bus route.

Percent of Travel with Destination Near Route

43%
Demographic Data

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Description</th>
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<tbody>
<tr>
<td>36%</td>
<td>Average percent of population below poverty line</td>
</tr>
<tr>
<td>25%</td>
<td>Average percent of workers without car access</td>
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<td>9%</td>
<td>Average percent of senior population</td>
</tr>
<tr>
<td>34%</td>
<td>Average percent of youth population</td>
</tr>
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</table>

Ratio of TAP Card Trips Taken with Passes

Data not available

<table>
<thead>
<tr>
<th>Category</th>
<th>Ratio</th>
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<tbody>
<tr>
<td>Trips with monthly pass</td>
<td></td>
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<tr>
<td>Trips with student pass</td>
<td></td>
</tr>
<tr>
<td>Trips with senior/disabled pass</td>
<td></td>
</tr>
</tbody>
</table>
LADOT WATTS (610)
Local Bus Route

Route Analysis and Strategies

Average Daily Boardings in 2016 for this line are estimated from annual data and may differ from agency-calculated data. Ridership on this route decreased, especially between 2015 and 2016. The service is a neighborhood loop shuttle operating in both directions. The local travel market extends well outside of the service range, although there are other regional routes serving this market.

For this and similar routes, consider the following strategies:

- Optimize Fixed-Route Network - There appears to be a gap between customer potential and actual ridership, for a route serving a relatively dense area, connecting with regional transit services, and operating a fairly high level of service. Consider making select route adjustments to reduce turns and provide more direct connections in a shorter time.

- Enhance Demand-Based Night Options - With service ending in the early evening, there may be an opportunity to expand evening offerings within the same service area using a demand-response service. Focus on connections to high-speed regional services, such as the Metro Orange Line.

StreetLight Travel and Service Relationship

All trips (car, bike, walk, bus, etc.) originating within approximately a 1-mile radius of the bus route (shown as the dotted line) are assumed to be potential customers. Their destinations within LA County are measured and shown in the purple hexagons. A dark purple hexagon represents an area where more trips go. Empty hexagons represent areas where less than 1% of trips go.

The percentage shown below is an estimation of how many trips start and end near the bus route - the alignment of the general travel market with the bus route.
Demographic Data

<table>
<thead>
<tr>
<th>statistic</th>
<th>value</th>
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</thead>
<tbody>
<tr>
<td>Average percent of population below poverty line</td>
<td>34%</td>
</tr>
<tr>
<td>Average percent of workers without car access</td>
<td>6%</td>
</tr>
<tr>
<td>Average percent of senior population</td>
<td>6%</td>
</tr>
<tr>
<td>Average percent of youth population</td>
<td>46%</td>
</tr>
</tbody>
</table>

Ratio of TAP Card Trips Taken with Passes

Data not available
Long Beach Transit 1
Local Bus Route

Route Analysis and Strategies
This route experienced an overall gain in ridership since 2012; this is likely related to service alignment changes during the same period 2016 extending into the neighboring City of Carson and connecting with Cal State University, Dominguez Hills.

For this and similar routes, consider the following strategies:

- **Enhance College Pass Programs** - Build on the success of college outreach to increase ridership related to CSUDH and the direct connection to Long Beach and the Metro Blue Line.

- **TAP Distribution and Direct Marketing** - A large portion of the route serves dense residential areas along the west side of Long Beach and the east side of Carson - engage these households directly to promote the subregional connections to Carson and Long Beach destinations, as well as the Blue Line connections to the greater region.

StreetLight Travel and Service Relationship

All trips (car, bike, walk, bus, etc.) originating within approximately a 1-mile radius of the bus route (shown as the dotted line) are assumed to be potential customers. Their destinations within LA County are measured and shown in the purple hexagons. A dark purple hexagon represents an area where more trips go. Empty hexagons represent areas where less than 1% of trips go.

The percentage shown below is an estimation of how many trips start and end near the bus route - the alignment of the general travel market with the bus route.

310 Ridership Growth Action Plan
Demographic Data

- **22%** AVERAGE PERCENT OF POPULATION BELOW POVERTY LINE
- **7%** AVERAGE PERCENT OF WORKERS WITHOUT CAR ACCESS
- **11%** AVERAGE PERCENT OF SENIOR POPULATION
- **37%** AVERAGE PERCENT OF YOUTH POPULATION

Ratio of TAP Card Trips Taken with Passes

- Data not available

Ridership and StreetLight Travel Relationship

Stop-level boardings for this route are added together in segments and compared to the StreetLight travel alignment. Orange areas are where the travel market aligns well with the route being analyzed (travelers have destinations near the route), but ridership in that area is lower than other portions of the route. These represent areas of opportunity, where potentially more travelers could be using this particular transit route to make their trip, and the route could have higher average daily boardings.

For all green segments, there is still always the potential to increase ridership, but these are segments where the route performance is at least as strong as the potential travel market.
Long Beach Transit 102/104
Local Bus Route

Route Analysis and Strategies

Line 102 and 104 operate as a pair with slightly alternating paths. The route serves Long Beach Airport and ends in the City of Hawaiian Gardens. The travel market analysis suggests that more ridership may be gained from the eastern portion of the route along Spring Street and towards Hawaiian Gardens.

For this and similar routes, consider the following strategies:

- Optimized Fixed-Route Network and New Mobility Partnerships - The opportunity to build ridership along this corridor is defined by the typical walk distance to the service and the frequency at which it runs. Seek opportunities to maximize fixed-route frequency if possible, and ensure that the catchment area is as wide as possible by improving first/last-mile options.

- Consider the distance traveled to make connections to other services - when serving primarily lower-density residential, travel time along the route to connect to another service, including the Blue Line, must be competitive with car travel as much as possible.

StreetLight Travel and Service Relationship

All trips (car, bike, walk, bus, etc.) originating within approximately a 1-mile radius of the bus route (shown as the dotted line) are assumed to be potential customers. Their destinations within LA County are measured and shown in the purple hexagons. A dark purple hexagon represents an area where more trips go. Empty hexagons represent areas where less than 1% of trips go.

The percentage shown below is an estimation of how many trips start and end near the bus route - the alignment of the general travel market with the bus route.

-6%

AVERAGE ANNUAL CHANGE IN RIDERSHIP

COUNTYWIDE RIDERSHIP TREND

1,578
AVERAGE DAILY BOARDINGS IN 2016

30% -6%

0%

-30%

PERCENT OF TRAVEL WITH DESTINATION NEAR ROUTE

54%
Demographic Data

<table>
<thead>
<tr>
<th>Population Below Poverty Line</th>
<th>Workers Without Car Access</th>
<th>Senior Population</th>
<th>Youth Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>12%</td>
<td>2%</td>
<td>13%</td>
<td>33%</td>
</tr>
</tbody>
</table>

Ridership and StreetLight Travel Relationship

Stop-level boardings for this route are added together in segments and compared to the StreetLight travel alignment. Orange areas are where the travel market aligns well with the route being analyzed (travelers have destinations near the route), but ridership in that area is lower than other portions of the route. These represent areas of opportunity, where potentially more travelers could be using this particular transit route to make their trip, and the route could have higher average daily boardings.

For all green segments, there is still always the potential to increase ridership, but these are segments where the route performance is at least as strong as the potential travel market.
Long Beach Transit 173
Local Bus Route

Route Analysis and Strategies

Route 173 operates partly in tandem with routes 172 and 174, with overlapping service along PCH, but the routes diverge east of the traffic circle. For this analysis, Route 173 is analyzed independent of the others. The travel market analysis suggests relatively strong route alignment with travel patterns, with potential to attract more riders in the north-south segments. Ridership was relatively stable with some decline between 2015 and 2016.

For this and similar routes, consider the following strategies:

- Optimize Fixed-Route Network: Routes that provide corridor-based service that is both east-west and north-south are uncommon in a region with a mostly grid-based street network. There may be an opportunity to improve service frequency and serve more passengers by separating the north-south from the east-west portion, and providing a more grid-connection based network. Combined with strategies to improve service speeds, this could benefit more potential customers along the corridor. Examine actual origin-destination of both current riders and general travelers from the StreetLight data to determine how substantial the market for travel along the majority of the current route is.

StreetLight Travel and Service Relationship

All trips (car, bike, walk, bus, etc.) originating within approximately a 1-mile radius of the bus route (shown as the dotted line) are assumed to be potential customers. Their destinations within LA County are measured and shown in the purple hexagons. A dark purple hexagon represents an area where more trips go. Empty hexagons represent areas where less than 1% of trips go.

The percentage shown below is an estimation of how many trips start and end near the bus route - the alignment of the general travel market with the bus route.

4,671
AVERAGE DAILY BOARDINGS IN 2016

-3%
AVERAGE ANNUAL CHANGE IN RIDERSHIP

67%
PERCENT OF TRAVEL WITH DESTINATION NEAR ROUTE
Demographic Data

18% 5% 12% 36%
AVERAGE PERCENT OF POPULATION BELOW POVERTY LINE AVERAGE PERCENT OF WORKERS WITHOUT CAR ACCESS AVERAGE PERCENT OF SENIOR POPULATION AVERAGE PERCENT OF YOUTH POPULATION

Ratio of TAP Card Trips Taken with Passes

Data not available

Ridership and StreetLight Travel Relationship

Stop-level boardings for this route are added together in segments and compared to the StreetLight travel alignment. Orange areas are where the travel market aligns well with the route being analyzed (travelers have destinations near the route), but ridership in that area is lower than other portions of the route. These represent areas of opportunity, where potentially more travelers could be using this particular transit route to make their trip, and the route could have higher average daily boardings.

For all green segments, there is still always the potential to increase ridership, but these are segments where the route performance is at least as strong as the potential travel market.
Long Beach Transit 191
Local Bus Route

Route Analysis and Strategies
Routes 191 and 192 operate partially in tandem from downtown Long Beach, but diverge in two locations, primarily east of Long Beach Boulevard. They are analyzed separately for the purpose of this study. Ridership remained relatively stable over the analysis period, ending slightly above the 2012 level (Route 192 was also relatively stable in the same period, ending slightly below its 2012 level).

StreetLight Travel and Service Relationship
All trips (car, bike, walk, bus, etc.) originating within approximately a 1-mile radius of the bus route (shown as the dotted line) are assumed to be potential customers. Their destinations within LA County are measured and shown in the purple hexagons. A dark purple hexagon represents an area where more trips go. Empty hexagons represent areas where less than 1% of trips go.

The percentage shown below is an estimation of how many trips start and end near the bus route - the alignment of the general travel market with the bus route.

4,197
AVERAGE DAILY BOARDINGS IN 2016

1%
AVERAGE ANNUAL CHANGE IN RIDERSHIP

52%
PERCENT OF TRAVEL WITH DESTINATION NEAR ROUTE
### Demographic Data

- **Average percent of population below poverty line**: 17%
- **Average percent of workers without car access**: 5%
- **Average percent of senior population**: 12%
- **Average percent of youth population**: 34%

### Ratio of TAP Card Trips Taken with Passes

Data not available

### Ridership and StreetLight Travel Relationship

Stop-level boardings for this route are added together in segments and compared to the StreetLight travel alignment. Orange areas are where the travel market aligns well with the route being analyzed (travelers have destinations near the route), but ridership in that area is lower than other portions of the route. These represent areas of opportunity, where potentially more travelers could be using this particular transit route to make their trip, and the route could have higher average daily boardings.

For all green segments, there is still always the potential to increase ridership, but these are segments where the route performance is at least as strong as the potential travel market.
Route Analysis and Strategies

Routes 45 and 46 operate as a pair serving Cal State University, Long Beach, with Route 45 providing connections west along Anaheim Street towards the Ports area. Ridership has declined slightly during the analysis period.

For this and similar routes, consider the following strategies:

- Optimize Fixed-Route Network - the Long Beach Transit network is often designed around route pairings to provide a common anchor point and corridor, with different end points. In this case, examine the stop-level boarding data and StreetLight travel market to determine the need for corridor services to continue directly west along Anaheim Street, or if truncating the route and providing increased frequency might result in more trip-making.

StreetLight Travel and Service Relationship

All trips (car, bike, walk, bus, etc.) originating within approximately a 1-mile radius of the bus route (shown as the dotted line) are assumed to be potential customers. Their destinations within LA County are measured and shown in the purple hexagons. A dark purple hexagon represents an area where more trips go. Empty hexagons represent areas where less than 1% of trips go.

The percentage shown below is an estimation of how many trips start and end near the bus route - the alignment of the general travel market with the bus route.

62%
Demographic Data

- **31%** AVERAGE PERCENT OF POPULATION BELOW POVERTY LINE
- **10%** AVERAGE PERCENT OF WORKERS WITHOUT CAR ACCESS
- **7%** AVERAGE PERCENT OF SENIOR POPULATION
- **42%** AVERAGE PERCENT OF YOUTH POPULATION

Ratio of TAP Card Trips Taken with Passes

Data not available

**Ridership and StreetLight Travel Relationship**

Stop-level boardings for this route are added together in segments and compared to the StreetLight travel alignment. Orange areas are where the travel market aligns well with the route being analyzed (travelers have destinations near the route), but ridership in that area is lower than other portions of the route. These represent areas of opportunity, where potentially more travelers could be using this particular transit route to make their trip, and the route could have higher average daily boardings.

For all green segments, there is still always the potential to increase ridership, but these are segments where the route performance is at least as strong as the potential travel market.
Long Beach Transit 61
Local Bus Route

Route Analysis and Strategies

This core route for Long Beach Transit has the highest boardings of any route and experienced a slight average decline. The route is relatively well-aligned to the travel market, and as a trunk line provides connections to most, if not all, east-west services in the subregion.

For this and similar routes, consider the following strategies:

- **Frequent, Reliable Service** - As a core route providing connections to and from east-west lines and to the regional Blue Line service on both ends, maximize frequency and reliability of the service to attract new customers and maintain existing riders.

- **TAP Distribution and Direct Marketing** - Ensure potential customers along this core, high-frequency route are aware of its benefits by putting TAP cards directly in their hands with an incentive to try the service.

All trips (car, bike, walk, bus, etc.) originating within approximately a 1-mile radius of the bus route (shown as the dotted line) are assumed to be potential customers. Their destinations within LA County are measured and shown in the purple hexagons. A dark purple hexagon represents an area where more trips go. Empty hexagons represent areas where less than 1% of trips go.

The percentage shown below is an estimation of how many trips start and end near the bus route - the alignment of the general travel market with the bus route.

62%
PERCENT OF TRAVEL WITH DESTINATION NEAR ROUTE
### Demographic Data

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average percent of population below poverty line</td>
<td>22%</td>
</tr>
<tr>
<td>Average percent of workers without car access</td>
<td>6%</td>
</tr>
<tr>
<td>Average percent of senior population</td>
<td>10%</td>
</tr>
<tr>
<td>Average percent of youth population</td>
<td>37%</td>
</tr>
</tbody>
</table>

### Ratio of TAP Card Trips Taken with Passes

Data not available

### Ridership and StreetLight Travel Relationship

Stop-level boardings for this route are added together in segments and compared to the StreetLight travel alignment. Orange areas are where the travel market aligns well with the route being analyzed (travelers have destinations near the route), but ridership in that area is lower than other portions of the route. These represent areas of opportunity, where potentially more travelers could be using this particular transit route to make their trip, and the route could have higher average daily boardings.

For all green segments, there is still always the potential to increase ridership, but these are segments where the route performance is at least as strong as the potential travel market.
Long Beach Transit 93
Local Bus Route

Route Analysis and Strategies

Route 93, combined with Routes 91, 92, and 94 depending on the day and time, provide high-frequency service along 7th Street to CSULB and on Bellflower Boulevard, after which the routes diverge to serve neighborhoods at a much lower frequency. The combined ridership for the set is approximately 11,000 average daily boardings, and fluctuated between 2012 and 2016 while ending around the same level. The stability of this route and its siblings is likely due in part to a strong alignment with the travel market, shown below. A short segment through the middle of the route represents an area of potential to increase ridership (shown at right).

For this and similar routes, consider the following strategies:

- **Frequent Rider Rewards** - on a series of routes with relatively stable ridership, major anchor destinations including CSULB and downtown Long Beach, creating a customer appreciation program will serve to retain existing customers and recruit new ones through a word-of-mouth and incentive program. Encourage current customers to serve as ambassadors to get friends and family to ride, rewarding the current customer and incentivizing the new rider to try by providing trips to both. Analyze patterns of use by TAP card to monitor the success of the program and expand its reach to a larger service area.

StreetLight Travel and Service Relationship

All trips (car, bike, walk, bus, etc.) originating within approximately a 1-mile radius of the bus route (shown as the dotted line) are assumed to be potential customers. Their destinations within LA County are measured and shown in the purple hexagons. A dark purple hexagon represents an area where more trips go. Empty hexagons represent areas where less than 1% of trips go.

The percentage shown below is an estimation of how many trips start and end near the bus route - the alignment of the general travel market with the bus route.

66%
Demographic Data

<table>
<thead>
<tr>
<th>Population Below Poverty Line</th>
<th>Workers Without Car Access</th>
<th>Senior Population</th>
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</tr>
</thead>
<tbody>
<tr>
<td>19%</td>
<td>6%</td>
<td>11%</td>
<td>36%</td>
</tr>
</tbody>
</table>

Ratio of TAP Card Trips Taken with Passes

Data not available

Ridership and StreetLight Travel Relationship

Stop-level boardings for this route are added together in segments and compared to the StreetLight travel alignment. Orange areas are where the travel market aligns well with the route being analyzed (travelers have destinations near the route), but ridership in that area is lower than other portions of the route. These represent areas of opportunity, where potentially more travelers could be using this particular transit route to make their trip, and the route could have higher average daily boardings.

For all green segments, there is still always the potential to increase ridership, but these are segments where the route performance is at least as strong as the potential travel market.
Montebello Bus Lines 10
Local Bus Route

Route Analysis and Strategies

Average Daily Boardings in 2016 for this line are estimated from annual data and may differ from agency-calculated data. This main route for Montebello Bus Lines carries the greatest number of passengers annually and experienced a slight decline in boardings between 2012 and 2016. According to the TAP data, Line 10 is heavily used by seniors and people with disabilities. Stop-level data shows an area of opportunity on the eastern half of the line to generate more riders, as the travel market from near that portion of the route is closely aligned with the service provided.

For this and similar routes, consider the following strategies:

- **TAP Distribution and Direct Marketing** - Reach out to neighbors and businesses along the line to increase brand recognition and understanding of the service availability.

- **Frequent Rider Rewards** - Build on the success of a key line to retain current customers and recruit new ones with the help of happy riders. Encourage current customers to serve as ambassadors to get friends and family to ride, rewarding the current customer and incentivizing the new rider to try by providing trips to both. Analyze patterns of use by TAP card to monitor the success of the program and expand its reach to a larger service area.

StreetLight Travel and Service Relationship

All trips (car, bike, walk, bus, etc.) originating within approximately a 1-mile radius of the bus route (shown as the dotted line) are assumed to be potential customers. Their destinations within LA County are measured and shown in the purple hexagons. A dark purple hexagon represents an area where more trips go. Empty hexagons represent areas where less than 1% of trips go.

The percentage shown below is an estimation of how many trips start and end near the bus route - the alignment of the general travel market with the bus route.

- **55%**
- **30%**
- **0%**
- **-1%**

**PERCENT OF TRAVEL WITH DESTINATION NEAR ROUTE**

**AVERAGE ANNUAL CHANGE IN RIDERSHIP**

- **30%**
- **0%**
- **-30%**
Demographic Data

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average percent of population below 75%</td>
<td>16%</td>
</tr>
<tr>
<td>Average percent of workers without car</td>
<td>3%</td>
</tr>
<tr>
<td>Average percent of senior population</td>
<td>13%</td>
</tr>
<tr>
<td>Average percent of youth population</td>
<td>35%</td>
</tr>
</tbody>
</table>

Ratio of TAP Card Trips Taken with Passes

- **Trips with Monthly Pass**: 19%
- **Trips with Student Pass**: 6%
- **Trips with Senior/Disabled Pass**: 78%

Ridership and StreetLight Travel Relationship

Stop-level boardings for this route are added together in segments and compared to the StreetLight travel alignment. Orange areas are where the travel market aligns well with the route being analyzed (travelers have destinations near the route), but ridership in that area is lower than other portions of the route. These represent areas of opportunity, where potentially more travelers could be using this particular transit route to make their trip, and the route could have higher average daily boardings.

For all green segments, there is still always the potential to increase ridership, but these are segments where the route performance is at least as strong as the potential travel market.
Montebello Bus Lines 50
Local Bus Route

Route Analysis and Strategies

Average Daily Boardings in 2016 for this line are estimated from annual data and may differ from agency-calculated data. Ridership on Line 50 has declined considerably since 2012. TAP data shows a high percentage of riders are seniors or people with disabilities.

For this and similar routes, consider the following strategies:

Optimize Fixed-Route and Expand Express Services - Evaluate the route-specific origin and destination patterns of current riders compared with the StreetLight travel market analysis. The route travels a relatively long distance from La Mirada to Downtown Los Angeles, operating as a local service with relatively low frequency. There may be opportunities to increase peak frequency, streamline the route, and/or speed up service along the alignment to increase the value of the connection to Downtown LA and attract more riders.

StreetLight Travel and Service Relationship

All trips (car, bike, walk, bus, etc.) originating within approximately a 1-mile radius of the bus route (shown as the dotted line) are assumed to be potential customers. Their destinations within LA County are measured and shown in the purple hexagons. A dark purple hexagon represents an area where more trips go. Empty hexagons represent areas where less than 1% of trips go.

The percentage shown below is an estimation of how many trips start and end near the bus route - the alignment of the general travel market with the bus route.
Demographic Data

19%  
AVERAGE PERCENT OF POPULATION BELOW POVERTY LINE

6%  
AVERAGE PERCENT OF WORKERS WITHOUT CAR ACCESS

12%  
AVERAGE PERCENT OF SENIOR POPULATION

35%  
AVERAGE PERCENT OF YOUTH POPULATION

Ratio of TAP Card Trips Taken with Passes

20%  
TRIPS WITH MONTHLY PASS

6%  
TRIPS WITH STUDENT PASS

68%  
TRIPS WITH SENIOR/DISABLED PASS

Ridership and StreetLight Travel Relationship

Stop-level boardings for this route are added together in segments and compared to the StreetLight travel alignment. Orange areas are where the travel market aligns well with the route being analyzed (travelers have destinations near the route), but ridership in that area is lower than other portions of the route. These represent areas of opportunity, where potentially more travelers could be using this particular transit route to make their trip, and the route could have higher average daily boardings.

For all green segments, there is still always the potential to increase ridership, but these are segments where the route performance is at least as strong as the potential travel market.
Norwalk Transit System 1  
Local Bus Route

Route Analysis and Strategies

Ridership on this line has declined since 2013. Results may be affected by availability of data. The travel market from this area is widely dispersed around the route, suggesting that many potential transit trips may require transfers or connections with other modes.

For this and similar routes, consider the following strategies:

Enhance College Pass Programs - Identify programs and class times at Rio Hondo College that could generate additional transit trips and connect with those potential customers directly. If possible, align service schedule and span to better support class connections.

Optimize Fixed-Route Network - Norwalk, Montebello, Metro, and others overlap or connect services throughout this area, especially as Metro has gradually transferred operation of lines or segments of lines over many years to other operators. Collaborate with neighboring agencies to plan at the subregional level for a customer-focused transit network that supports contemporary travel patterns.

StreetLight Travel and Service Relationship

All trips (car, bike, walk, bus, etc.) originating within approximately a 1-mile radius of the bus route (shown as the dotted line) are assumed to be potential customers. Their destinations within LA County are measured and shown in the purple hexagons. A dark purple hexagon represents an area where more trips go. Empty hexagons represent areas where less than 1% of trips go.

The percentage shown below is an estimation of how many trips start and end near the bus route - the alignment of the general travel market with the bus route.

47%  
PERCENT OF TRAVEL WITH DESTINATION NEAR ROUTE
Demographic Data

- **14%**
  - Average percent of population below poverty line

- **2%**
  - Average percent of workers without car access

- **12%**
  - Average percent of senior population

- **35%**
  - Average percent of youth population

Ratio of TAP Card Trips Taken with Passes

- **38%**
  - Trips with monthly pass

- **32%**
  - Trips with student pass

- **54%**
  - Trips with senior/disabled pass
Santa Clarita Transit 5 & 6
Local Bus Route

Route Analysis and Strategies

Ridership analysis may differ slightly from agency-calculated data. Lines 5 and 6 operate as a pair with diverging eastern endpoints. The routes connect neighborhoods throughout the City of Santa Clarita and two Metrolink train stations. Ridership declined over the period from 2013-2016. The travel market analysis suggests relatively high alignment with the transit service provided, with an area of opportunity to attract potential customers through the center portion. Due in part to land use patterns, the route makes a fair number of turns in order to connect with several destinations.

For this and similar routes, consider the following strategies:

• TAP Distribution and Direct Marketing - the Newhall area has the second-lowest percentage of zero-car households in the County, presenting a challenge for a local route with many turns. However, ridership on the line is relatively strong. Identify potential markets for riders making quick local trips, outings for the day, and school trips - connect with those individuals and provide incentives for riding the service. Keep new customers hooked with excellent service and continued, personalized interaction and marketing.

StreetLight Travel and Service Relationship

All trips (car, bike, walk, bus, etc.) originating within approximately a 1-mile radius of the bus route (shown as the dotted line) are assumed to be potential customers. Their destinations within LA County are measured and shown in the purple hexagons. A dark purple hexagon represents an area where more trips go. Empty hexagons represent areas where less than 1% of trips go.

The percentage shown below is an estimation of how many trips start and end near the bus route - the alignment of the general travel market with the bus route.

-6%

3,166

AVERAGE DAILY BOARDINGS IN 2016

AVERAGE ANNUAL CHANGE IN RIDERSHIP

COUNTYWIDE RIDERSHIP TREND

62%

PERCENT OF TRAVEL WITH DESTINATION NEAR ROUTE
### Demographic Data

- **Average Percent of Population Below Poverty Line:** 10%
- **Average Percent of Workers Without Car Access:** 2%
- **Average Percent of Senior Population:** 12%
- **Average Percent of Youth Population:** 35%

### Ratio of TAP Card Trips Taken with Passes

- **Trips with Monthly Pass:** 37%
- **Trips with Student Pass:** 3%
- **Trips with Senior/Disabled Pass:** 48%

### Ridership and StreetLight Travel Relationship

Stop-level boardings for this route are added together in segments and compared to the StreetLight travel alignment. Orange areas are where the travel market aligns well with the route being analyzed (travelers have destinations near the route), but ridership in that area is lower than other portions of the route. These represent areas of opportunity, where potentially more travelers could be using this particular transit route to make their trip, and the route could have higher average daily boardings.

For all green segments, there is still always the potential to increase ridership, but these are segments where the route performance is at least as strong as the potential travel market.
Ridership data is estimated from annual totals and may differ from agency-calculated statistics. Ridership on the combined local and rapid line has declined since 2012. The routes serve different end points to the west and diverge somewhat through the City of Carson.

For this and similar routes, consider the following strategies:

Optimized Fixed-Route Network and Frequent, Reliable Service - Evaluate the stop-level origin and destination patterns of the current customers in comparison with the travel market. With that information, identify opportunities to improve travel times and serve the travel market that best aligns with current ridership patterns. If ridership is presently mostly short distances, the route may be appropriately aligned. If ridership and the general travel market are traveling longer distances, a faster and more frequent service schedule may attract potential customers frustrated with traffic congestion.

Agency Collaboration and Leverage Operating Data - The schedule for this route shows that travel time dilates from 60 minutes to nearly 90 minutes at peak traffic times. With better data and relationships to the many local jurisdictions served, it may be possible to identify bottlenecks and poor-performing areas of the route where targeted transit priority improvements would help the service capture more riders.

All trips (car, bike, walk, bus, etc.) originating within approximately a 1-mile radius of the bus route (shown as the dotted line) are assumed to be potential customers. Their destinations within LA County are measured and shown in the purple hexagons. A dark purple hexagon represents an area where more trips go. Empty hexagons represent areas where less than 1% of trips go.

The percentage shown below is an estimation of how many trips start and end near the bus route - the alignment of the general travel market with the bus route.

Agency Collaboration and Leverage Operating Data - The schedule for this route shows that travel time dilates from 60 minutes to nearly 90 minutes at peak traffic times. With better data and relationships to the many local jurisdictions served, it may be possible to identify bottlenecks and poor-performing areas of the route where targeted transit priority improvements would help the service capture more riders.

All trips (car, bike, walk, bus, etc.) originating within approximately a 1-mile radius of the bus route (shown as the dotted line) are assumed to be potential customers. Their destinations within LA County are measured and shown in the purple hexagons. A dark purple hexagon represents an area where more trips go. Empty hexagons represent areas where less than 1% of trips go.

The percentage shown below is an estimation of how many trips start and end near the bus route - the alignment of the general travel market with the bus route.
Demographic Data

19%  
AVERAGE PERCENT OF POPULATION BELOW POVERTY LINE

5%  
AVERAGE PERCENT OF WORKERS WITHOUT CAR ACCESS

12%  
AVERAGE PERCENT OF SENIOR POPULATION

35%  
AVERAGE PERCENT OF YOUTH POPULATION

Ratio of TAP Card Trips Taken with Passes

26%  
TRIPS WITH MONTHLY PASS

3%  
TRIPS WITH STUDENT PASS

46%  
TRIPS WITH SENIOR/DISABLED PASS
Ridership on this local route has increased over the analyzed time period. The corridor has a relatively high and growing share of workers with no vehicle access, and moderate percentage growth in the population living below the poverty line and the senior population. The youth population is declining. The route has higher usage of monthly passes and senior/disabled passes relative to other corridors.

The central portion of the route aligns well with overall corridor travel.

For this and similar routes, consider the following strategies:

- Life Transition Marketing
- Engage Major Employers
- Optimize Fixed-Route Network

All trips (car, bike, walk, bus, etc.) originating within approximately a 1-mile radius of the bus route (shown as the dotted line) are assumed to be potential customers. Their destinations within LA County are measured and shown in the purple hexagons. A dark purple hexagon represents an area where more trips go. Empty hexagons represent areas where less than 1% of trips go.

The percentage shown below is an estimation of how many trips start and end near the bus route - the alignment of the general travel market with the bus route.
## Demographic Data

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>22%</td>
<td>Average percent of population below poverty line</td>
</tr>
<tr>
<td>12%</td>
<td>Average percent of workers without car access</td>
</tr>
<tr>
<td>14%</td>
<td>Average percent of senior population</td>
</tr>
<tr>
<td>28%</td>
<td>Average percent of youth population</td>
</tr>
</tbody>
</table>

### Ratio of TAP Card Trips Taken with Passes

- **32%** Trips with monthly pass
- **14%** Trips with student pass
- **42%** Trips with senior/disabled pass

Average percent change over time
Metro 60
Local Bus Route

Route Analysis and Strategies

This key north-south route has declined worse than the countywide average over the analysis period. The moderate population living below the poverty line, and workers without vehicle access are both increasing while the proportion of youth are declining slightly. The travel market is not tightly aligned with the service provided, extending east and west of the route.

For this and similar routes, consider the following strategies:

- Engage Major Employers
- Optimize Fixed-route Network
- Frequent, Reliable Service
- Frequent Rider Rewards

StreetLight Travel and Service Relationship

All trips (car, bike, walk, bus, etc.) originating within approximately a 1-mile radius of the bus route (shown as the dotted line) are assumed to be potential customers. Their destinations within LA County are measured and shown in the purple hexagons. A dark purple hexagon represents an area where more trips go. Empty hexagons represent areas where less than 1% of trips go.

The percentage shown below is an estimation of how many trips start and end near the bus route - the alignment of the general travel market with the bus route.

15,086
AVERAGE DAILY BOARDINGS IN 2016

-8%
AVERAGE ANNUAL CHANGE IN RIDERSHIP

Below
TO COUNTYWIDE RIDERSHIP TREND

49%
PERCENT OF TRAVEL WITH DESTINATION NEAR ROUTE
Demographic Data

- 27% Average percent of population below poverty line
- 8% Average percent of workers without car access
- 10% Average percent of senior population
- 37% Average percent of youth population

Ratio of TAP Card Trips Taken with Passes

- 22% Trips with monthly pass
- 9% Trips with student pass
- 33% Trips with senior/disabled pass
Metro 70
Local Bus Route

Route Analysis and Strategies

Ridership on this local route has declined around the trend over the analyzed time period. The corridor has a relatively high and growing share of population living below the poverty line and moderate workers with no vehicle access. The senior share of the population is moderate and increasing. The route has very high usage of senior/disabled passes relative to other corridors. It has low usage of student passes relative to other corridors, even though it serves Cal State Los Angeles. The route does not align well with overall corridor travel except for at the western end of the route.

For this and similar routes, consider the following strategies:

- Guaranteed Best Fare
- Price Passes to Increase Market Demand
- Enhance College Pass Program
- Engage Major Employers
- Life Transition Marketing
- Optimize Fixed-Route Network

StreetLight Travel and Service Relationship

All trips (car, bike, walk, bus, etc.) originating within approximately a 1-mile radius of the bus route (shown as the dotted line) are assumed to be potential customers. Their destinations within LA County are measured and shown in the purple hexagons. A dark purple hexagon represents an area where more trips go. Empty hexagons represent areas where less than 1% of trips go.

The percentage shown below is an estimation of how many trips start and end near the bus route - the alignment of the general travel market with the bus route.
Demographic Data

25% AVERAGE PERCENT OF POPULATION BELOW POVERTY LINE
7% AVERAGE PERCENT OF WORKERS WITHOUT CAR ACCESS
14% AVERAGE PERCENT OF SENIOR POPULATION
31% AVERAGE PERCENT OF YOUTH POPULATION

Ratio of TAP Card Trips Taken with Passes

26% TRIPS WITH MONTHLY PASS
7% TRIPS WITH STUDENT PASS
53% TRIPS WITH SENIOR/DISABLED PASS

Average percent change over time
Ridership on this local route has declined around the countywide trend over the analyzed time period. The corridor has a moderate share of population living below the poverty line, which is growing modestly. The youth share of the population is moderate and declining. The senior share of the population is moderate and is increasing. The route has moderate usage of monthly passes and high usage of senior/disabled passes relative to other corridors. The route does not align well with the overall travel market except for at the western and eastern ends of the route.

For this and similar routes, consider the following strategies:

- TAP Distribution & Direct Marketing
- Optimize Fixed-Route Network

StreetLight Travel and Service Relationship

All trips (car, bike, walk, bus, etc.) originating within approximately a 1-mile radius of the bus route (shown as the dotted line) are assumed to be potential customers. Their destinations within LA County are measured and shown in the purple hexagons. A dark purple hexagon represents an area where more trips go. Empty hexagons represent areas where less than 1% of trips go.

The percentage shown below is an estimation of how many trips start and end near the bus route - the alignment of the general travel market with the bus route.
Demographic Data

- **24%**  
  Average percent of population below poverty line

- **7%**  
  Average percent of workers without car access

- **12%**  
  Average percent of senior population

- **32%**  
  Average percent of youth population

Ratio of TAP Card Trips Taken with Passes

- **26%**  
  Trips with monthly pass

- **13%**  
  Trips with student pass

- **40%**  
  Trips with senior/disabled pass
Route Analysis and Strategies

Line 150 and 240 provide combined service along Ventura Boulevard. Only Line 150 is analyzed here. Ridership declined around the countywide trend for the analyzed time period. The population living below the poverty line is low relative to other corridors but increasing. The percentage of workers without vehicle access is very low despite increasing since 2010. The route is only moderately aligned with the general travel market.

For this and similar routes, consider the following strategies:

- Optimize Fixed-Route Network
- Frequent, Reliable Service

StreetLight Travel and Service Relationship

All trips (car, bike, walk, bus, etc.) originating within approximately a 1-mile radius of the bus route (shown as the dotted line) are assumed to be potential customers. Their destinations within LA County are measured and shown in the purple hexagons. A dark purple hexagon represents an area where more trips go. Empty hexagons represent areas where less than 1% of trips go.

The percentage shown below is an estimation of how many trips start and end near the bus route - the alignment of the general travel market with the bus route.

- 51%
Demographic Data

- **15%** - Average percent of population below poverty line
- **3%** - Average percent of workers without car access
- **14%** - Average percent of senior population
- **31%** - Average percent of youth population

### Ratio of TAP Card Trips Taken with Passes

- **24%** - Trips with monthly pass
- **12%** - Trips with student pass
- **31%** - Trips with senior/disabled pass

Average percent change over time
## Metro 167
Local Bus Route

### Route Analysis and Strategies

Ridership on this local route has remained relatively stable over the analyzed time period. The corridor has a relatively high and substantially growing share of population living below the poverty line. Workers with no vehicle access is a small share of workers. The youth population is declining. The route has moderate usage of monthly passes and high usage of senior/disabled passes relative to other corridors.

The route aligns moderately well with overall corridor travel.

For this and similar routes, consider the following strategies:

- Guaranteed Best Fare
- Price Passes to Increase Market Demand
- Life Transition Marketing

### StreetLight Travel and Service Relationship

All trips (car, bike, walk, bus, etc.) originating within approximately a 1-mile radius of the bus route (shown as the dotted line) are assumed to be potential customers. Their destinations within LA County are measured and shown in the purple hexagons. A dark purple hexagon represents an area where more trips go. Empty hexagons represent areas where less than 1% of trips go.

The percentage shown below is an estimation of how many trips start and end near the bus route - the alignment of the general travel market with the bus route.
Demographic Data

- **17%**
  - Average percent of population below poverty line

- **3%**
  - Average percent of workers without car access

- **13%**
  - Average percent of senior population

- **34%**
  - Average percent of youth population

Ratio of TAP Card Trips Taken with Passes

- **23%**
  - Trips with monthly pass

- **24%**
  - Trips with student pass

- **38%**
  - Trips with senior/disabled pass
Ridership on this local line has declined greater than the countywide average since 2012. A relatively high proportion of the population is living below the poverty line within the service area. Although there is a strong alignment with the north-south travel market, travel patterns extend strongly towards Midcity and Downtown Los Angeles, suggesting the need for reliable connections in order to make the trips by transit. Despite that, the route carries a relatively high volume of average daily boardings.

For this and similar routes, consider the following strategies:

- Guaranteed Best Fare
- Price Passes to Increase Market Demand
- TAP Distribution & Direct Marketing
- Optimize Fixed-Route Network
- Frequent, Reliable Service

All trips (car, bike, walk, bus, etc.) originating within approximately a 1-mile radius of the bus route (shown as the dotted line) are assumed to be potential customers. Their destinations within LA County are measured and shown in the purple hexagons. A dark purple hexagon represents an area where more trips go. Empty hexagons represent areas where less than 1% of trips go.

The percentage shown below is an estimation of how many trips start and end near the bus route - the alignment of the general travel market with the bus route.
Demographic Data

- **34%** AVERAGE PERCENT OF POPULATION BELOW POVERTY LINE
- **14%** AVERAGE PERCENT OF WORKERS WITHOUT CAR ACCESS
- **9%** AVERAGE PERCENT OF SENIOR POPULATION
- **38%** AVERAGE PERCENT OF YOUTH POPULATION

Ratio of TAP Card Trips Taken with Passes

- **31%** TRIPS WITH MONTHLY PASS
- **16%** TRIPS WITH STUDENT PASS
- **38%** TRIPS WITH SENIOR/DISABLED PASS
Ridership on this local route has declined greater than the trend over the analyzed time period. The corridor has a relatively low but substantially growing share of population living below the poverty line. Workers with no vehicle access is a small share of workers but is growing moderately. The senior population is moderate with moderate growth. The travel market extends significantly away from the route throughout the corridor, with the strongest alignment near Long Beach, Redondo Beach, El Segundo, and LAX.

For this and similar routes, consider the following strategies:

- TAP Distribution & Direct Marketing
- Price Passes to Increase Market Demand
- Engage Major Employers
- Optimize Fixed-Route Network
- Frequent, Reliable Service

All trips (car, bike, walk, bus, etc.) originating within approximately a 1-mile radius of the bus route (shown as the dotted line) are assumed to be potential customers. Their destinations within LA County are measured and shown in the purple hexagons. A dark purple hexagon represents an area where more trips go. Empty hexagons represent areas where less than 1% of trips go.

The percentage shown below is an estimation of how many trips start and end near the bus route - the alignment of the general travel market with the bus route.

Percent of Travel with Destination Near Route: 48%
Demographic Data

17%  
AVERAGE PERCENT OF POPULATION BELOW POVERTY LINE

5%  
AVERAGE PERCENT OF WORKERS WITHOUT CAR ACCESS

11%  
AVERAGE PERCENT OF SENIOR POPULATION

34%  
AVERAGE PERCENT OF YOUTH POPULATION

Ratio of TAP Card Trips Taken with Passes

11%  
TRIPS WITH MONTHLY PASS

9%  
TRIPS WITH STUDENT PASS

33%  
TRIPS WITH SENIOR/DISABLED PASS
Route Analysis and Strategies

Ridership on this local route has declined around the trend over the analyzed time period. The corridor has a high but declining youth population, and a small but growing senior population. The route has moderate usage of monthly passes and high usage of senior/disabled passes relative to other corridors.

The travel market around the route is heavily weighted west of the service, resulting in relatively low alignment with service provided.

For this and similar routes, consider the following strategies:

- Life Transition Marketing
- Optimize Fixed-Route Network

StreetLight Travel and Service Relationship

All trips (car, bike, walk, bus, etc.) originating within approximately a 1-mile radius of the bus route (shown as the dotted line) are assumed to be potential customers. Their destinations within LA County are measured and shown in the purple hexagons. A dark purple hexagon represents an area where more trips go. Empty hexagons represent areas where less than 1% of trips go.

The percentage shown below is an estimation of how many trips start and end near the bus route - the alignment of the general travel market with the bus route.

Percent of Travel with Destination Near Route: 47%
Demographic Data

- **27%**
  - Average percent of population below poverty line

- **7%**
  - Average percent of workers without car access

- **9%**
  - Average percent of senior population

- **40%**
  - Average percent of youth population

Ratio of TAP Card Trips Taken with Passes

- **25%**
  - Trips with monthly pass

- **14%**
  - Trips with student pass

- **39%**
  - Trips with senior/disabled pass
Metro 258
Local Bus Route

Route Analysis and Strategies

Ridership on this local route is one of the few case study corridors with a high growth percentage in the analyzed time period. The corridor has relatively high percentage growth in the population living below the poverty line as well as growth in the senior population. The route does not align closely with overall corridor travel, which extends to the east and west of this route, suggesting many potential transit trips could require connections.

For this and similar routes, consider the following strategies:

• TAP Distribution & Direct Marketing
• Price Passes to Increase Market Demand
• Optimize Fixed-Route Network
• Frequent, Reliable Service

StreetLight Travel and Service Relationship

All trips (car, bike, walk, bus, etc.) originating within approximately a 1-mile radius of the bus route (shown as the dotted line) are assumed to be potential customers. Their destinations within LA County are measured and shown in the purple hexagons. A dark purple hexagon represents an area where more trips go. Empty hexagons represent areas where less than 1% of trips go.

The percentage shown below is an estimation of how many trips start and end near the bus route - the alignment of the general travel market with the bus route.

8% AVERAGE ANNUAL CHANGE IN RIDERSHIP

44% PERCENT OF TRAVEL WITH DESTINATION NEAR ROUTE

1,992 AVERAGE DAILY BOARDINGS IN 2016
Demographic Data

19%  4%  12%  35%
AVERAGE PERCENT OF POPULATION BELOW POVERTY LINE
AVERAGE PERCENT OF WORKERS WITHOUT CAR ACCESS
AVERAGE PERCENT OF SENIOR POPULATION
AVERAGE PERCENT OF YOUTH POPULATION

Ratio of TAP Card Trips Taken with Passes

26%  16%  31%
TRIPS WITH MONTHLY PASS
TRIPS WITH STUDENT PASS
TRIPS WITH SENIOR/DISABLED PASS
Metro 266
Local Bus Route

Route Analysis and Strategies

Ridership on this local route has declined around the trend over the analyzed time period.

The corridor has a low but substantially growing share of population living below the poverty line and workers with no vehicle access. The route has low usage of monthly passes and moderate usage of senior/disabled passes relative to other corridors. The route does not align well with overall corridor travel except for in the southern portion of the route.

For this and similar routes, consider the following strategies:

- TAP Distribution & Direct Marketing
- Guaranteed Best Fare
- Optimize Fixed-Route Network

5,113
AVERAGE DAILY BOARDINGS IN 2016

-4%
AVERAGE ANNUAL CHANGE IN RIDERSHIP

Similar
TO COUNTYWIDE RIDERSHIP TREND

StreetLight Travel and Service Relationship

All trips (car, bike, walk, bus, etc.) originating within approximately a 1-mile radius of the bus route (shown as the dotted line) are assumed to be potential customers. Their destinations within LA County are measured and shown in the purple hexagons. A dark purple hexagon represents an area where more trips go. Empty hexagons represent areas where less than 1% of trips go.

The percentage shown below is an estimation of how many trips start and end near the bus route - the alignment of the general travel market with the bus route.

41%
PERCENT OF TRAVEL WITH DESTINATION NEAR ROUTE
Demographic Data

14% AVERAGE PERCENT OF POPULATION BELOW POVERTY LINE
3% AVERAGE PERCENT OF WORKERS WITHOUT CAR ACCESS
13% AVERAGE PERCENT OF SENIOR POPULATION
33% AVERAGE PERCENT OF YOUTH POPULATION

Ratio of TAP Card Trips Taken with Passes

18% TRIPS WITH MONTHLY PASS
13% TRIPS WITH STUDENT PASS
37% TRIPS WITH SENIOR/DISABLED PASS
Metro 704
Rapid Bus Route

Route Analysis and Strategies

Ridership on this Rapid route is declining around the trend in the analyzed time period. The corridor has moderate percentage growth in the share of population living in poverty, and high percentage growth in the share of workers without access to a vehicle. A smaller share of the population in the corridor are youths, and that population is declining. The route aligns moderately well with corridor travel.

For this and similar routes, consider the following strategies:

- TAP Distribution and Direct Marketing
- Engage Major Employers
- Frequent, Reliable Service

Similar TO COUNTYWIDE RIDERSHIP TREND

StreetLight Travel and Service Relationship

All trips (car, bike, walk, bus, etc.) originating within approximately a 1-mile radius of the bus route (shown as the dotted line) are assumed to be potential customers. Their destinations within LA County are measured and shown in the purple hexagons. A dark purple hexagon represents an area where more trips go. Empty hexagons represent areas where less than 1% of trips go.

The percentage shown below is an estimation of how many trips start and end near the bus route - the alignment of the general travel market with the bus route.

PERCENT OF TRAVEL WITH DESTINATION NEAR ROUTE

52%
### Demographic Data

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>20%</td>
<td>Average percent of population below poverty line</td>
</tr>
<tr>
<td>9%</td>
<td>Average percent of workers without car access</td>
</tr>
<tr>
<td>13%</td>
<td>Average percent of senior population</td>
</tr>
<tr>
<td>23%</td>
<td>Average percent of youth population</td>
</tr>
</tbody>
</table>

### Ratio of TAP Card Trips Taken with Passes

- **31%** Trips with monthly pass
- **10%** Trips with student pass
- **31%** Trips with senior/disabled pass
**Metro 710**
Rapid Bus Route

### Route Analysis and Strategies

Ridership on this Rapid route remained relatively stable over the analyzed time period. The corridor has moderate percentage growth in the share of population living in poverty, growth in the senior population, and a high percentage decline in the youth population relatively to other Metro routes studied. It has a high share of Senior/Disabled pass usage. Except for the northern and southernmost sections, the route is not well aligned to the corridor travel. Because the Crenshaw/LAX line will serve the same travel market, the route will likely be strongest between the Metro Expo Line and the Purple Line and is a candidate for restructuring as a result.

For this and similar routes, consider the following strategies:

- Life Transition Marketing
- Optimize Fixed-Route Network
- Frequent, Reliable Service

### StreetLight Travel and Service Relationship

All trips (car, bike, walk, bus, etc.) originating within approximately a 1-mile radius of the bus route (shown as the dotted line) are assumed to be potential customers. Their destinations within LA County are measured and shown in the purple hexagons. A dark purple hexagon represents an area where more trips go. Empty hexagons represent areas where less than 1% of trips go.

The percentage shown below is an estimation of how many trips start and end near the bus route - the alignment of the general travel market with the bus route.

- **40%**
  - **Percent of travel with destination near route**
Demographic Data

- 17% Average percent of population below poverty line
- 6% Average percent of workers without car access
- 13% Average percent of senior population
- 30% Average percent of youth population

Ratio of TAP Card Trips Taken with Passes

- 29% Trips with monthly pass
- 18% Trips with student pass
- 36% Trips with senior/disabled pass
Metro 734
Rapid Bus Route

Route Analysis and Strategies

Ridership on this Rapid route is one of the few case study corridors with a high growth percentage in the analyzed time period. However, route ridership is below what it was before realignment. The corridor has the highest growth in population living below the poverty line and has a substantial share of the population that are seniors or youth. Monthly pass and student pass usage is lower than on other corridors, and the route serves UCLA. The route aligns reasonably well with the travel patterns to the job centers along the route but is mixed in terms of overall corridor travel.

For this and similar routes, consider the following strategies:

- TAP Distribution & Direct Marketing
- Frequent, Reliable Service
- Price Passes to Increase Market Demand
- Enhanced College Pass Program

StreetLight Travel and Service Relationship

All trips (car, bike, walk, bus, etc.) originating within approximately a 1-mile radius of the bus route (shown as the dotted line) are assumed to be potential customers. Their destinations within LA County are measured and shown in the purple hexagons. A dark purple hexagon represents an area where more trips go. Empty hexagons represent areas where less than 1% of trips go.

The percentage shown below is an estimation of how many trips start and end near the bus route - the alignment of the general travel market with the bus route.
Demographic Data

19% AVERAGE PERCENT OF POPULATION BELOW POVERTY LINE
5% AVERAGE PERCENT OF WORKERS WITHOUT CAR ACCESS
12% AVERAGE PERCENT OF SENIOR POPULATION
38% AVERAGE PERCENT OF YOUTH POPULATION

Ratio of TAP Card Trips Taken with Passes

24% TRIPS WITH MONTHLY PASS
14% TRIPS WITH STUDENT PASS
28% TRIPS WITH SENIOR/DISABLED PASS
Metro 745
Rapid Bus Route

Route Analysis and Strategies

Ridership on this Rapid route is declining around the trend. The corridor has a high share of population living in poverty, and a substantial but declining share of the population that are youth. The corridor has substantial growth in and relatively high share of workers with no vehicle access. The overall route alignment is mixed in terms of overall corridor travel, with the travel market extending away from the route towards Midcity, and east towards Compton.

For this and similar routes, consider the following strategies:

- TAP Distribution & Direct Marketing
- Guaranteed Best Fare
- Price Passes to Increase Market Demand
- Optimize Fixed-Route Network

![Average Daily Boardings in 2016](image)

5,925
AVERAGE DAILY BOARDINGS IN 2016

-4%
AVERAGE ANNUAL CHANGE IN RIDERSHIP

Similar
TO COUNTYWIDE RIDERSHIP TREND

StreetLight Travel and Service Relationship

All trips (car, bike, walk, bus, etc.) originating within approximately a 1-mile radius of the bus route (shown as the dotted line) are assumed to be potential customers. Their destinations within LA County are measured and shown in the purple hexagons. A dark purple hexagon represents an area where more trips go. Empty hexagons represent areas where less than 1% of trips go.

The percentage shown below is an estimation of how many trips start and end near the bus route - the alignment of the general travel market with the bus route.

46%
PERCENT OF TRAVEL WITH DESTINATION NEAR ROUTE
Demographic Data

39% 12% 8% 38%

AVERAGE PERCENT OF POPULATION BELOW POVERTY LINE
AVERAGE PERCENT OF WORKERS WITHOUT CAR ACCESS
AVERAGE PERCENT OF SENIOR POPULATION
AVERAGE PERCENT OF YOUTH POPULATION

Ratio of TAP Card Trips Taken with Passes

23% 12% 30%

TRIPS WITH MONTHLY PASS
TRIPS WITH STUDENT PASS
TRIPS WITH SENIOR/DISABLED PASS