

CHAPTER 2



Photo source: CDM Smith

EXISTING CONDITIONS

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In terms of transportation, much has changed in Alameda over the past few years. Economic recovery has resulted in record traffic on Interstate-880. Job growth in the South Bay has resulted in increasing numbers of Alameda residents traveling south on Interstate-880. Younger commuters are opting for transportation options beyond traditional automobile purchases and recent changes in technology have made on-demand rideshare and carshare a popular option. This chapter describes existing transportation conditions as well as provides an overview of important factors that impact transportation conditions, such as housing, jobs, and travel behaviors.

The findings presented in this chapter describe the current conditions, and identify specific problems facing Alameda. In the following chapter, priority strategies are presented that describe solutions to these problems and will help the City achieve its goals.

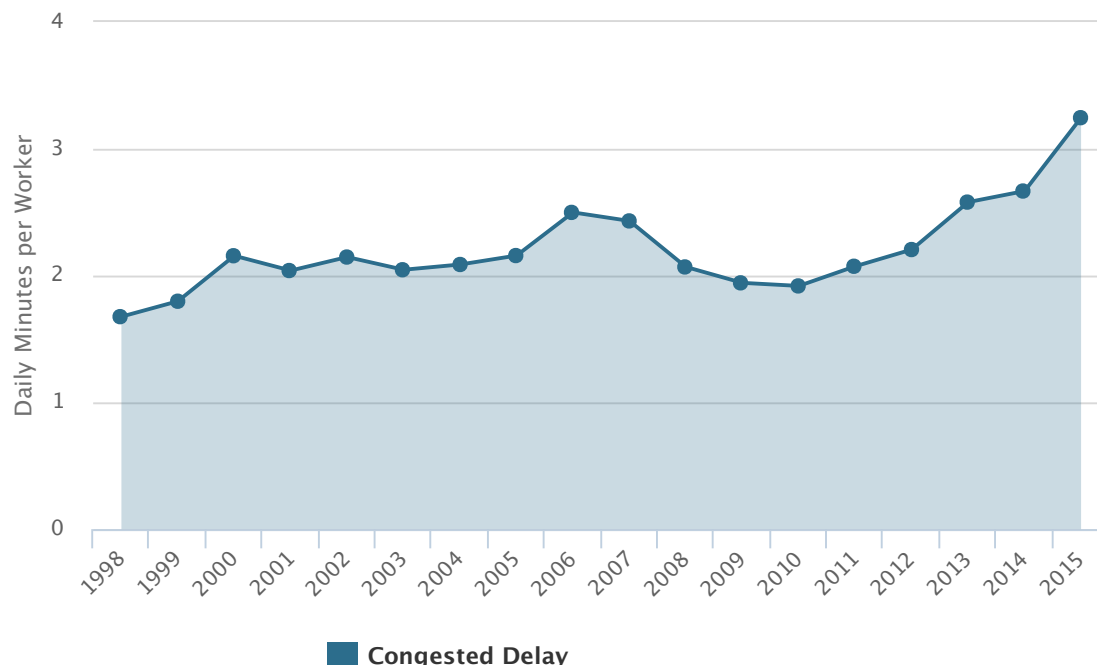
CONGESTION IS INCREASING

Based on data from the Metropolitan Transportation Commission (MTC), delay from region wide congestion has surpassed 2006 levels and has increased 70 percent since 2010. This congestion has impacts on estuary crossings

in Alameda with congestion on Park Street, the Webster/Posey Tubes, as well as ridership increases on the ferries and transbay buses. Significant bottlenecks also form during morning and afternoon school drop-off and pick-up times, especially at local magnet and charter schools. While fluctuations in delay have occurred, the overall trajectory displays a steady increase in Bay Area delay over time (see Figure 8). In 1998, the congested delay per worker was 1.7 minutes. In 2015, that number increased to 3.2 minutes.

This increase in congestion not only impacts drivers, but also transit users when buses are delayed in traffic and when parking is limited at the ferry terminals. The estuary crossings and/or the adjacent intersections and ramps are bottlenecks that limit the amount of traffic that can leave or enter Alameda during peak periods. The result is increased queuing and delay as the travel demand grows, as well as a lengthening of the duration of the peak travel period. By shifting travel behavior away from driving alone, congestion increases can be minimized. The projects presented in this plan address congestion by increasing transportation choices for commuters, especially Alamedans going to BART, Oakland, and San Francisco.

Figure 8: Bay Area Delay Caused by Congestion



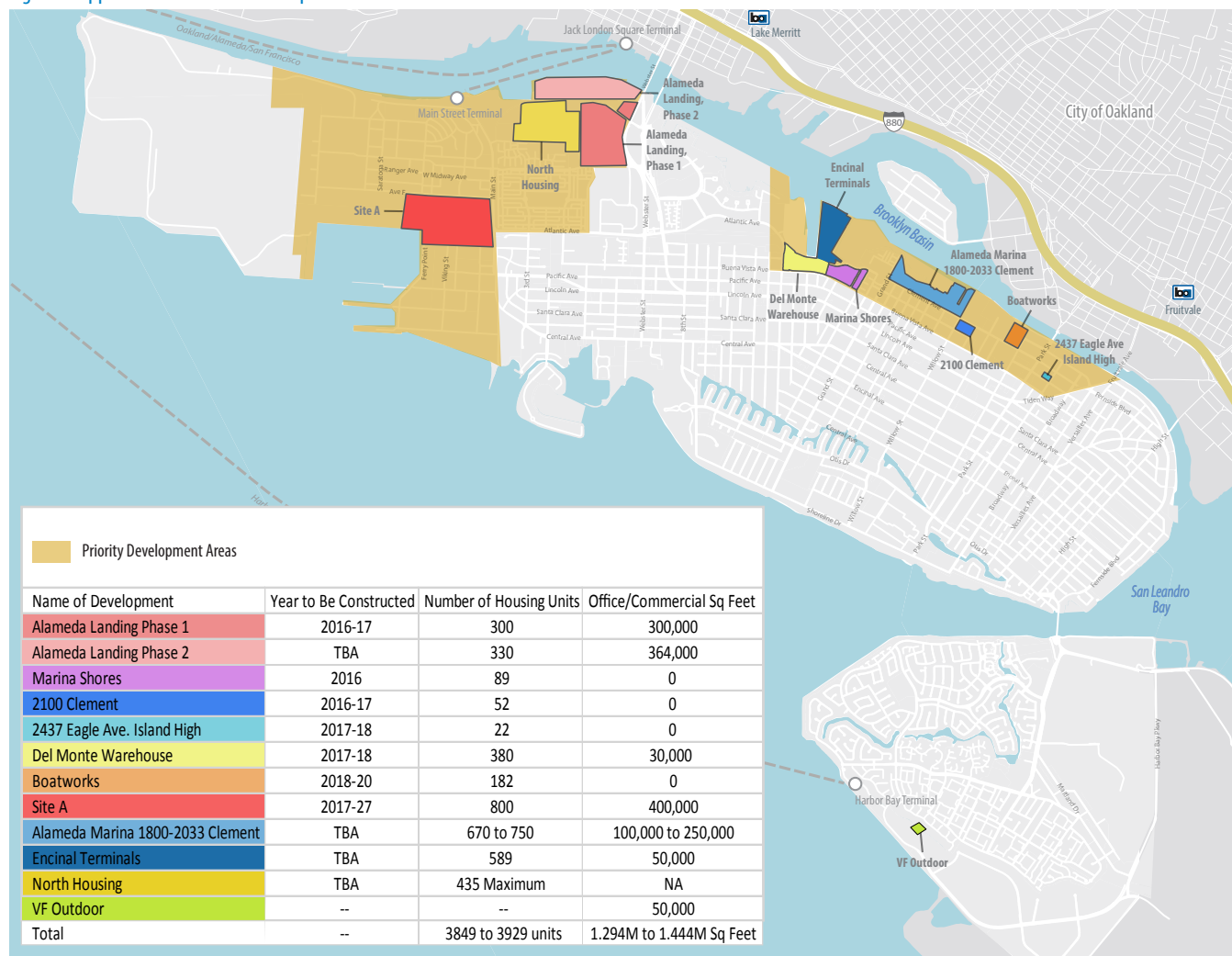
Source: Metropolitan Transportation Commission, Vital Signs. <http://www.vitalsigns.mtc.ca.gov/>

HOUSING AND JOBS ARE GROWING

Alameda is experiencing moderate growth in housing and jobs, and is now back to pre-base closure housing levels. According to the 2015 Census, there are 76,733 residents living in 30,708 households. And as of 2014 there are 24,655 jobs in Alameda (LEHD, 2014). Over the next 10 years, approved and entitled developments in Alameda Point and the Northern Waterfront will account for 2,260 units (a 7 percent increase over 2015) and 7,909 jobs (a 30 percent increase over 2014). Figure 9 below provides an overview of approved, proposed, and entitled developments in Alameda, including two regionally identified Priority Development Areas specifically targeted for growth.

Growth in housing units is slower than the expected average Bay Area growth rate of 8.5 percent over 10 years. Nevertheless, job growth is expected to outpace the Bay Area average, which is forecasted at 11.4 percent over 10 years. The high job growth will help reduce the jobs-housing imbalance that currently exists in Alameda; however, there is concern about whether Alameda employees can afford to live in Alameda. In the year 2000, there were 31,664 total housing units in Alameda. The number decreased to 31,572 by 2014. In the year 2002, there were 21,719 jobs in Alameda. Following a decline in jobs that began in 2000, the total number of jobs in Alameda has seen a steady increase since 2004. The total number of jobs in Alameda increased to 24,655 by 2014.

Figure 9: Approved and Entitled Developments



Source: City of Alameda

COMMUTE PATTERNS ARE CHANGING

Since 2010, there have been two notable trends in commute patterns in the Bay Area: One is that the percentage of auto commuters is declining and the other is that the percentage of transit commuters is increasing. This pattern reflects trends in Alameda with a drop in drive alone commuting between 2010 and 2015 from 64 percent to 60 percent and a related increase in transit use. In actual numbers drive alone commuters remained about the same (just under 23,000) during this time period and transit commuters increased by more than 1,400.

Figure 10 presents 2015 mode choice preferences for Bay Area cities, including Alameda, and other large metro areas around the country. Alameda outperforms most other Bay Area cities and metro areas around the country in that Alamedans are more apt to use non-drive alone options than residents in other cities except for Berkeley and Oakland.

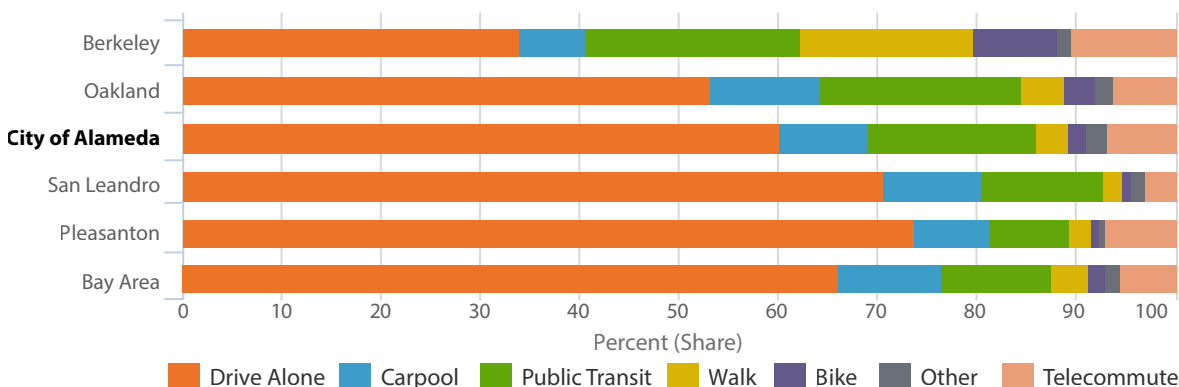
Another trend for Alameda is that there are more commuters leaving the City for work, nearly 5,000 more compared to 2005 (see Figure 11). An increasing number of commuters head to San Francisco, South Bay and Peninsula each day. Figure 12 shows changes in commute totals over a nine year period to nearby counties. Alameda residents commuting to Santa Mateo County increased from 1,613 in 2005 to 2,172 in 2014, to San Francisco the number increased from 4,667 to 7,189, and to Santa Clara County the number increased

from 1,682 to 2,096. The City of Oakland is a destination with a large number of trips, second only to San Francisco, although the growth the number of trips from 2005 to 2014 was relatively small. Trips to other East Bay locations; which include Berkeley, Emeryville, San Leandro and Oakland; actually declined somewhat during the same time period.

San Francisco and Oakland are the two highest destinations for Alameda residents commuting to work, but commute mode choice to these cities are very different. Only one out of every five Alamedans commuting to San Francisco drives alone. Nevertheless, for those commuting to Oakland, nearly four out of every five residents drive alone. Figure 13 shows the commute patterns of Alameda residents to the Inner East Bay (Oakland, Berkeley, Emeryville, San Leandro, Hayward, and Fremont), San Francisco, San Mateo, and Santa Clara counties.

A sampling of in-vehicle GPS data which shows personal trips from Alameda to the surrounding areas for average weekday mornings (Monday through Thursday from 6 a.m. to 10 a.m.) is displayed in Table 4. Top locations include Oakland, downtown Oakland, San Francisco, San Leandro, Berkeley, and Hayward. The new data affirms the information collected by the LEHD in 2014. The greatest share of trips from Alameda went to Oakland and Southern Alameda County (Inner East Bay cities) followed by San Francisco, San Mateo, and Santa Clara counties.

Figure 10: Mode Split (Select Cities and Metro Areas)



Source: Metropolitan Transportation Commission, Vital Signs. <http://www.vitalsigns.mtc.ca.gov/> (Commute Mode Choice)



Table 4: Estimated AM (6 – 10 AM) Vehicle Trips to Surrounding Areas

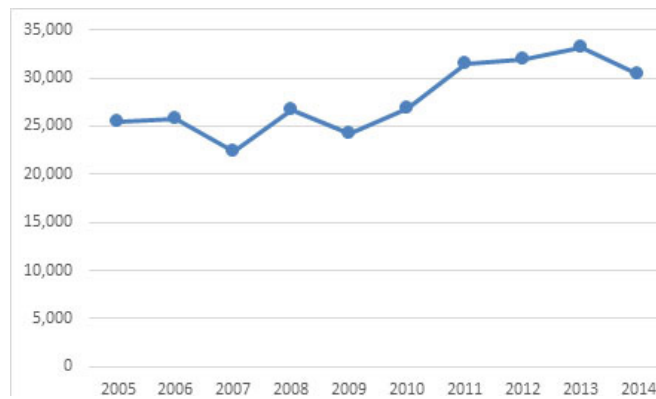
| Destinations | Estimated Average Morning Weekday Trips | Percent |
|--|---|---------|
| Albany | 22 | 0.13% |
| Berkeley | 646 | 3.69% |
| Emeryville | 373 | 2.13% |
| Piedmont | 54 | 0.31% |
| Oakland | 8,925 | 51.00% |
| • Downtown Oakland | 4,262 | 24.36% |
| • Fruitvale BART | 308 | 1.76% |
| • West Oakland BART | 146 | 0.84% |
| Eastern Alameda County (Pleasanton and East) | 191 | 1.09% |
| Southern Alameda County (South of Oakland) | 2,442 | 13.96% |
| • Castro Valley | 318 | 1.82% |
| • Hayward | 636 | 3.63% |
| • Fremont | 243 | 1.39% |
| • San Leandro | 782 | 4.47% |
| • San Lorenzo | 38 | 0.22% |
| San Francisco | 1,923 | 10.99% |
| Eastern Contra Costa County | 757 | 4.32% |
| Western Contra Costa County | 285 | 1.63% |
| San Mateo County | 692 | 3.95% |
| Santa Clara County | 500 | 2.86% |
| Other Areas | 690 | 3.94% |

Source: Streetlight Insight, 2015

Telecommuting and working from home is also a trend that has increased steadily over the last five years. Since 2010, working from home has increased from 4.0 percent in 2010 to 7.0 percent in 2015.

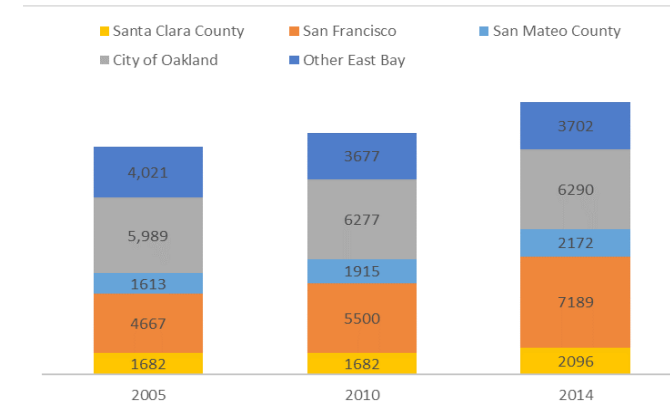
By increasing the number of transit options, such as additional bus service to BART, connecting to the South Bay and increasing ferry service operations, additional workers commuting outside Alameda will have more alternatives to driving.

Figure 11: Off-Island Commuters



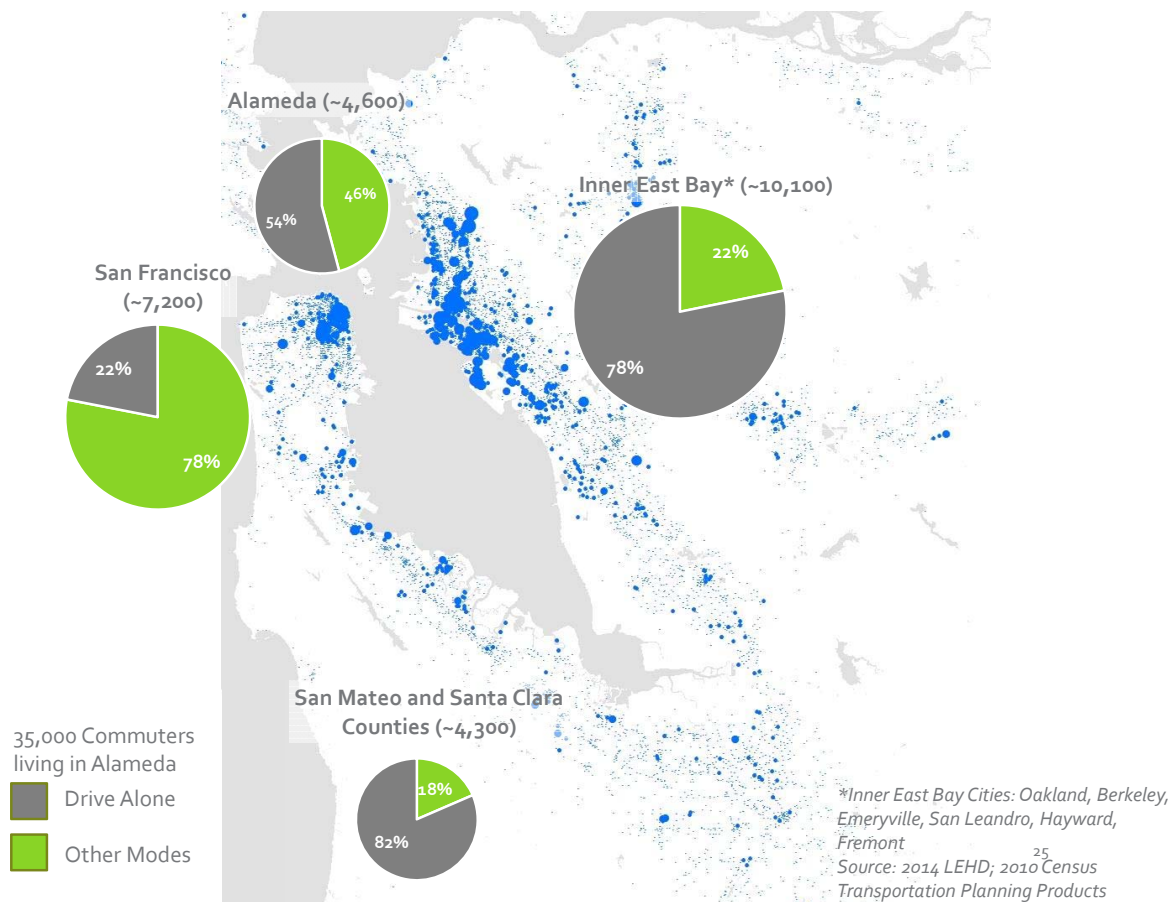
Source: Longitudinal Employer-Household Dynamics (LEHD, 2014)

Figure 12: Number of Alameda Commuters to Nearby Destinations



Source: Longitudinal Employer-Household Dynamics (LEHD, 2014)

Figure 13: Commute Patterns from Alameda to East Bay vs San Francisco



Source: Longitudinal Employer-Household Dynamics (LEHD, 2014; 2010 Census Transportation Planning Products)



FINDINGS FROM PUBLIC OPINION AND WEB SURVEYS

DRIVE ALONE COMMUTER RESPONSES

The public opinion survey provided insight on the attitudes and behavior of drive alone commuters and meeting the goals of this plan will rely on shifting behavior of these commuters. This information was used in determining and validating the priority strategies and projects. The most common reasons for driving alone include:

- Needing a car for personal use before, during, or after work (73%)
- Alternatives to driving increase commute time too much (71%)
- There is free parking at work location (65%)

Regarding the question of how the city can encouraging more transit use, bicycling, and walking, respondents stated:

- More frequent, reliable, and accessible public transit (32%)
- Expanded and improved bicycle facilities (6%)
- A free shuttle (6%)
- Improved access to BART (6%)

ALL RESPONDENTS

Other key findings related to Alameda residents' transportation behavior and attitudes from all respondents include the following.

- **Free Bus Service:** Two-thirds of respondents (69%) would use locally sponsored free buses (supplementing existing AC transit) serving BART, ferry terminals and Alameda shopping. Only a third (33%) would support higher sales or property taxes to pay for locally sponsored free buses.
- **BART to Alameda:** Two-thirds of respondents (65%) would strongly support (47%) or support somewhat (18%) a BART station in Alameda.
- **School Access:** 64% of respondents strongly agreed (46%) or agreed (18%) that Alameda should make it easier to walk, bicycle or take transit to and from school.
- **Estuary Crossings:** 61% of respondents stated that traffic congestion at estuary crossings at rush hour is either a major issue (42%) or an issue (19%).
- **Multimodal Destinations:** 58% of respondents strongly agreed (37%) or agreed (21%) that Alameda should make it easier to walk, bicycle or take transit to destinations rather than relying on a car. Only 29% of respondents would support higher sales or property taxes to improve transit, bicycling and walking conditions in Alameda.
- **Bike Share:** 58% of respondents strongly disagreed (48%) or disagreed (10%) that they would use a bike share system in Alameda.
- **Parking:** 54% of respondents strongly disagreed (39%) or disagreed (15%) that more of Alameda's parking spaces should be dedicated to bicycle, transit and walking uses.
- **Driving/Parking Easier:** 50% of respondents strongly agreed (33%) or agreed (17%) that Alameda should make it easier to drive and park in Alameda.

MOST FREQUENT WEB SURVEY COMMENTS

Two web surveys were administered to engage community members and to obtain input from the community. The following are the most frequent comments expressed organized by travel mode. “(1)” represents the most frequent comment, “(2)” represents the second most frequent comment, and so on.

- **BART:** (1) Reaching nearby BART stations is difficult. (2) Bring BART to Alameda.
- **Ferry:** (1) Increase ferry frequencies. (2) Increase/improve parking at ferry terminals.
- **Bus:** (1) Improve reliability and frequency of service, especially to nearby BART Stations and WETA ferry terminals. (2) Implement an Alameda-only free shuttle, similar to Emeryville.
- **Bicycling:** (1) Increase the number of bikeways throughout Alameda, including those going to/from Oakland. (2) Increase safety for bicyclists. (3) Improve existing bicycling facilities.
- **Walking:** (1) Increase pedestrian safety. (2) Improve existing pedestrian facilities.
- **Drive Alone:** (1) People should have the option to drive places, such as to daycare or when shopping.
- **Estuary Crossings:** (1) Improve bicycling options to/from Oakland, especially on the west end of Alameda. (2) Improve traffic flow during peak hours. (3) Add another option for entering and leaving Alameda.

YOUTH TRANSPORTATION SURVEY KEY FINDINGS

The Youth Transportation Survey was conducted in Fall 2016 to better understand the current transportation needs and experiences of Alameda middle and high school students.

- Nearly half of respondents who reported driving or being driven to school use an alternative mode to get home.
- Most respondents live within three blocks of a bus stop.
- Students who commute using transit are most concerned with time, distance and adequate bus service.
- Students who commute by bicycle are most concerned with poor weather, safety at intersections, and riding home when it's dark outside.
- Students expressed concern that buses are too crowded and frequency is inadequate.

A note on the Public Opinion Survey: A total of 500 interviews were conducted during the period August 17, 2016 to September 30, 2016. Interviews were conducted in English, Spanish, and Cantonese, reaching Alameda residents with landlines and mobile phones. The statistical margin of error was +/-4.3%. The following key findings highlight attitudes, behavior, and barriers to transportation for Alameda Residents.

HOME INFO SIGN IN HELP

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Please share your thoughts about transportation issues in the City of Alameda to help with future planning for the city.

Introduction Feedback Your Response Outcome

Introduction

This survey effort is part of the citywide Transit/TDM* Plan, which we are developing to help ensure that Alameda sustains its high quality of life during a time of population growth throughout the Bay Area.

Please take a few minutes to answer five questions by clicking on ["Take the Survey."](#)

*Transportation Demand Management (TDM) refers to strategies that shift drive alone trips to carpooling, walking, bicycling and taking transit.

Follow Progress: To follow the Plan's progress, please go to the [project webpage](#).

Get Alerts: To receive email updates, please send an email to gpayne@alamedaca.gov

Contact City Staff: Gail Payne, Transportation Coordinator: ph 510-747-6892; email gpayne@alamedaca.gov

image: alamedact.org



ALAMEDA IS A MULTIMODAL CITY

Alameda has many characteristics, existing policies and infrastructure that supports multimodal mobility, including:

- **Well-suited geography:** A flat topography and temperate climate makes Alameda an ideal place for walking and bicycling.
- **General Plan has strong goals and policies:** The general plan's goals, objectives, and policies provide strong support for and encourage alternatives to driving alone.
- **City requires transportation alternatives for new development projects:** The transportation demand management funding and requirements for new developments provide transportation alternatives for residents and employees at new developments.
- **Funding for multimodal improvements:** The City actively pursues and obtains funding for pedestrian, bicycle, and transit infrastructure improvements.
- **Coordinating services with transit agencies:** The City is proactively engaging with transit agencies to improve transit service in Alameda.

Figure 14 shows commute mode share for Alameda commuters. The number of drive alone mode share went up between 2000 and 2010, but declined in 2015. As of 2015, more than 40 percent of commuters travel by modes other than driving alone. These alternative modes to driving alone are described below and in the next section – Alameda's Transit Access.

Carpooling: There are limited carpool programs in Alameda and residents looking to carpool are left on their own to find rides. Nevertheless, the city has recognized casual carpool

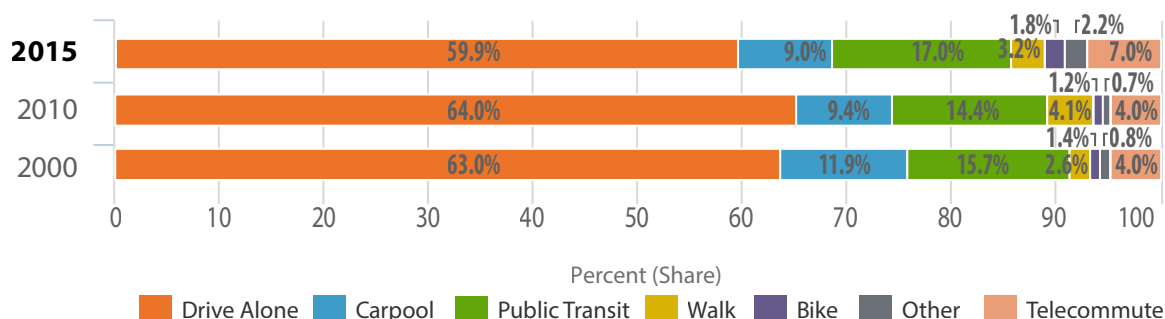
pick up locations used by residents to share rides into San Francisco. Carpool parking is not currently given preference at ferry terminals or other locations with limited parking.

Walking: Walking is a healthy and environmentally friendly means of getting to nearby destinations within Alameda and nearly all streets have sidewalks and most are separated from the street with a landscape strip with street trees, bike racks and other amenities. Issues related to walking are related to safe crossings, improving visibility, and calming traffic and speeding motorists. At estuary crossings into Oakland where pedestrian facilities are limited and intimidating to use; improvements are needed. This plan identifies streets where traffic calming is needed and improvements to pedestrian amenities at sidewalks are needed.

Bicycling: Bicycling is convenient and an often used option for people travelling within Alameda. A network of bikeways is provided throughout the City. Nevertheless, several gaps exist for bicycles. Also, speeding traffic can make bicycling feel unsafe on some streets. At estuary crossings into Oakland where bicycle facilities are limited and intimidating to use; improvements are needed. This plan identifies the gaps in the network and makes suggestions on where to focus resources to better connect residents with key destinations, including shopping, jobs, and transit hubs.

The recommended projects and programs described in the following chapters expand mobility, including increasing awareness of transportation options, addressing public perceptions of public transit, making multimodal choices more attractive than driving, tackling island crossing issues for all modes, balancing the needs of all users on public rights-of-way, and adapting to new technologies as they arise.

Figure 14: City of Alameda Commute Choice (2000-2015)



Source: U.S. Census (2000); U.S. Census American Community Survey 5-Year Data (2009-2014)

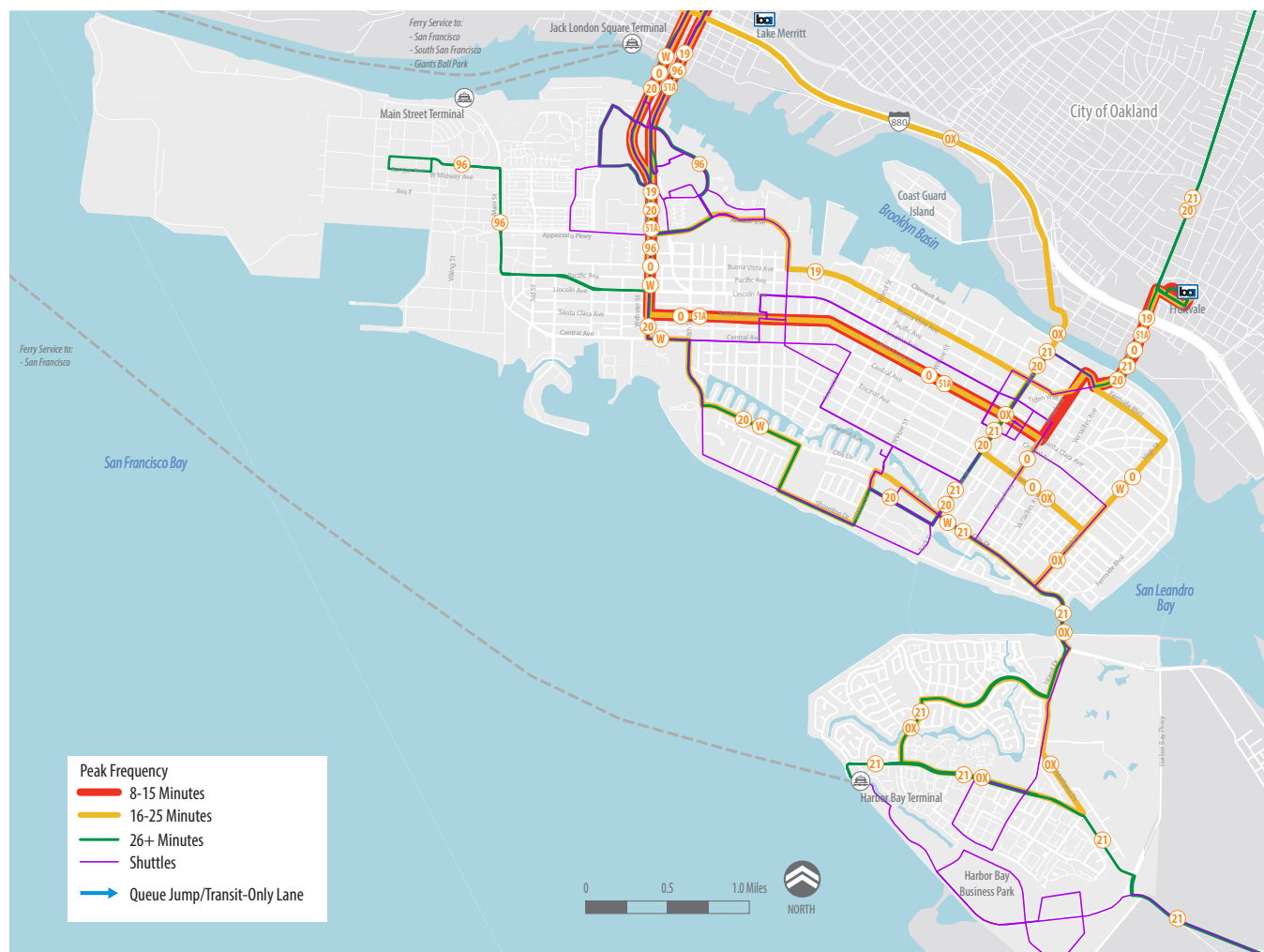
ALAMEDA'S TRANSIT ACCESS

The City of Alameda is served by multiple transit agencies and services, including five local bus routes, three transbay bus routes, three school routes, two ferry terminals providing service to Oakland and San Francisco, five nearby BART stations (within two miles of estuary crossings), a door-to-door paratransit service, a free fixed route shuttle for the general public that targets seniors/people with disabilities, and three private shuttles connecting to BART. Seventeen percent of Alameda residents commute using transit, and

there are more than 12,000 transit boardings each weekday in Alameda. Comparing Alameda's transit commute mode share to other nearby cities, Berkeley's is 21 percent, Oakland's is 19 percent, San Leandro's is 12 percent and Hayward's is 8 percent. Furthermore, access to bus service is good with two-thirds of residents and jobs located within a ¼-mile of a bus stop and 92 percent located within a ½ mile of a bus stop.

Figure 15 provides an overview of existing AC Transit fixed-route local and transbay service in Alameda.

Figure 15: Existing AC Transit Local and Transbay Services



Currently, there are shuttle services in operation by the City of Alameda with the Alameda Loop Shuttle, by major employers with the Harbor Bay and Marina Village shuttles or by Transportation Management Associations (TMAs) with the Alameda Landing Shuttle (Figure 16). The Marina Village and Alameda Landing shuttles duplicate in part services being provided by AC Transit. The City has been working with private developers/owners and AC Transit to consolidate these services to increase frequency, but this is dependent on private development/owner cooperation.

Figure 16: Existing Private Shuttle Services



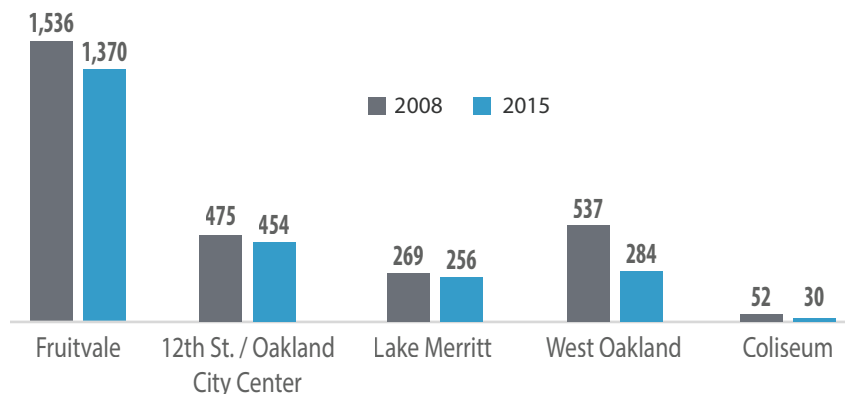
There are no BART stations within Alameda; however, there are five BART Stations nearby that are used by Alamedans on a daily basis. Nearby BART locations include 12th Street, Coliseum, Fruitvale, Lake Merritt, and West Oakland. The Fruitvale Station attracts the most riders from Alameda with more than 1,300 daily trips originating in Alameda. Daily boardings originating from Alameda total 2,395 as shown in Figure 17. Between 2008 and 2015, the data shows a decline in BART ridership from Alameda residents by 17 percent.

While access to transit is good, transit usage could be increased, especially within Alameda and to Oakland and BART. In the public opinion survey, web surveys and community workshops, suggested improvements to transit focused on three primary areas:

- Improving bus access to regional transit hubs, including BART stations and ferry terminals;
- Improving the frequency, speed and reliability of buses; and
- Providing more direct bus access to destinations within Alameda.

The recommended projects and programs described in the following chapters address these areas with new routes, improvements to frequency, and several projects aimed at improving speed and reliability.

Figure 17: Alameda Home-Based BART Boardings



Source: Bay Area Rapid Transit (BART) Station Profile Study (2015)



TDM AND PRIVATE SECTOR PARTICIPATION

The City requires new development to mitigate their transportation impacts and increase transportation choices, which is referred to as transportation demand management (TDM). TDM strategies improve transportation efficiency by shifting drive alone trips to carpooling, walking, bicycling, and taking transit, among others. TDM requirements for new developments in Alameda have resulted in additional transit service, transit pass programs, a shuttle that connects to BART, and bicycle and pedestrian facilities at new developments. Nevertheless, TDM programs only are required for new developments. Programs have been adopted in the former Naval Air Station, Alameda Landing and the Northern Waterfront areas (see Figure 18). These three development areas are required to be part of a Transportation

Management Association (TMA) to efficiently manage the TDM programs and successfully meet TDM goals and targets. Alameda Landing TMA and Alameda TMA (Alameda Point and Northern Waterfront) currently exist with the potential to further expand to other parts of the city. The challenge for TDM is expanding these programs to include the established neighborhoods and commercial areas, which represent the vast majority of Alameda's residents and employee population.

Current City Policies

The City has adopted several plans and policies governing transportation impacts over the past few years. The Transportation Element of the General Plan focused on policies for new residential and commercial development.

Figure 18: Areas with Adopted TDM Programs



The Transportation Element of the General Plan requires all new developments establish trip reduction goals as follows: 10 percent peak hour trip reduction for new residential developments and 30 percent peak hour trip reduction for new commercial development.

Included in all recent Development Agreements for projects requiring Planning Board approval is perpetual funding dedicated to transportation services to assure the General Plan targets will be reached. Annual monitoring requirements assure compliance. Table 5 summarizes the annual fee structures for several new developments as of 2017.

Table 6 provides a description of TDM requirements for these developments.

Table 5: TDM Funding Requirements for Approved Developments (2017\$)

| | Alameda Landing | Alameda Point Site A (Zone 1) | Alameda Point Adaptive Reuse (Zone 2) | Del Monte | Marina Shores | 2100 Clement | Wind River |
|--|-----------------|-------------------------------|---------------------------------------|-----------|---------------|--------------|-------------------|
| Annual Per Condominium | \$495 | \$798 | \$1,435 | \$362 | \$568 | \$465 | N/A |
| Annual Per Townhome w/Garage | \$495 | \$2,844 | \$2,258 | N/A | \$568 | \$465 | N/A |
| Annual Per Single Family Home w/ Detached Garage | \$495 | N/A | N/A | N/A | \$550 | \$465 | N/A |
| Annual Per Square Footage for Commercial | \$0.57 | \$0.55 | \$0.55 | \$0.57 | N/A | N/A | \$76 per employee |

Dollar amounts are shown in 2017 dollars and may differ from the current amount charged to developers.

Table 6: TDM Requirements by Development

| | Alameda Landing | Alameda Point | Del Monte | Marina Shores | 2100 Clement | Wind River |
|--|-----------------|---------------|-----------|---------------|--------------|------------|
| TDM Strategy (Required to be in place on day one of occupancy) | x | x | x | x | x | N/A |
| Operational TMA with a coordinator | x | x | x | x | N/A | N/A |
| Bus to BART at at 15 to 20-minute headways in AM/PM peak | x | x | x | x | x | x |
| Website | x | x | x | x | N/A | N/A |
| Marketing/Information | x | x | x | x | N/A | N/A |
| Annual monitoring and reporting | x | x | x | x | x | N/A |
| Transit subsidy or pass program | x | x | x | x | x | N/A |
| Water shuttle service | x | NA | N/A | N/A | N/A | x |



TDM AND PRIVATE SECTOR PARTICIPATION BEST PRACTICES

Cities throughout the nation as well as around the Bay Area have embraced public-private partnerships as an integral way to create sustainable growth strategies. Seattle, Boulder, Denver and Portland have long been leaders in using private sector dollars for improved transportation. Here in the Bay Area, San Francisco, Mountain View, South San Francisco and Palo Alto are all actively engaged with private sector stakeholders to help mitigate the impacts of continued growth and prosperity. Each has a slightly different approach. Boulder, for instance, instituted paid parking and a robust shuttle and express bus system, while Portland invested heavily in light rail around which new developments were built. These communities are also examples of communities that are thriving, despite growth and the vicissitudes of the economy. Below is a closer look at best practices from Seattle, San Francisco, and Palo Alto.

SEATTLE

Seattle requires all work sites with 100 or more employees to mitigate the impacts of their business by working to reduce drive alone rates. Seattle has lowered its drive alone rate by eight percent over the past decade. It has done so through strong public-private partnerships led by its local transportation management association working closely with local and regional transit providers, business associations, and King County. Transit agencies, the City and County, and the private sector all financially support Commute Seattle – the local TMA - and its ongoing services, and aggressive commute policies.

Seattle's Commute Trip Reduction program's success to date has largely been the result of activities by large employers. In 2017, the City set a new citywide goal of reducing the city's drive alone rate by an additional ten percent and is striving to bring in properties of all sizes and types. To achieve this, eight geographic areas were established within the city, each with a specific drive alone rate goal that locations within that area will work to achieve. These goals are based on several variables: geography, land uses, transit availability and other factors, allowing programming to be more responsive to local conditions. The goals range from a drive alone rate of 20 percent in the downtown to 58 percent in Fremont/Green Lake, 69 percent in Northgate and 63 percent in South Seattle.



Photo source: CDM Smith

Programs include mandatory elements, such as hiring an employee transportation coordinator and distributing information, and other flexible elements that can be selected by program participants to ensure that the transportation options best meet their needs. Sites can choose two more TDM measures selected from a list ranging from providing bike parking facilities and transit fare subsidies to preferential parking for high occupancy vehicles, reduced parking charges for high occupancy vehicles, providing shuttles and working with transit agencies to provide additional regular or express service. Program participants must submit a TDM Plan for review and approval when launching, and employee commute surveys must be conducted (or equivalent data that shows commute behavior and progress towards the trip reduction goals) every two years.

SAN FRANCISCO

Locally, San Francisco recently enacted new legislation that establishes a citywide TDM program. The City's Planning code now requires all new development, which is defined as changes in existing properties of more than 10,000 square feet or changes in use, to incorporate a combination of design features, tools and incentives that support more sustainable forms of transportation.

The new program articulates a points-based TDM approach based on land use and parking. The four land use categories are: retail, office, residential, and other. Individual properties and projects within each classification know clearly what they must achieve (i.e., a minimum of 13 points), but can then choose from a comprehensive toolbox on how they will satisfy the requirements.

TDM Plans for both new and existing projects now need approval from the Planning Department as part of the project-approvals process. Confirmation of certain physical aspects, as well as that projects have staff and other resources in place, are now required before a Certificate of Occupancy is issued. Lastly, periodic reporting is also now required.

Within San Francisco, two entities provide transportation brokerage services. San Francisco's Transportation Management Association (TMA SF) provides transportation brokerage services for over 80 Downtown and Financial District buildings while the Mission Bay Transportation Management Association provides services to members at the 300-acre SOMA redevelopment site. Each entity provides a distinctive array of services – TMA SF provides education, incentives and other 'carrots' for its members in addition to conducting periodic surveys and reporting to the City, while the Mission Bay Transportation Management Association's primary focus is to provide shuttle and other 'last mile' transportation services to its members.

PALO ALTO

Downtown Palo Alto, a much smaller community, formed a TMA in early 2016. The primary work program for this organization is customized for a special segment of downtown workers – service employees – who have the highest drive alone rates of any employment category. The Palo Alto TMA is subsidizing transit passes, carpooling and 'first' and 'last' mile solutions for this group of employees, for whom using a more sustainable alternative is often the most expensive commute.