Purpose of Performance Report

- Track trends and progress towards goals in transportation plans
  - Countywide Transportation Plan
  - Countywide Bicycle and Pedestrian Plans
  - Congestion Management Program statute
- Identify needs for more extensive analysis
- System-level monitoring
  - Complemented by other more focused monitoring efforts (e.g. LOS monitoring, modal plans)
### Scope of Performance Report

#### Commute Patterns
- General population and employment trends
- Commute flows
- Commute mode share

#### Roadways
- Freeway delays
- Freeway speeds
- Local road pavement condition
- Collisions

#### Transit
- Ridership
- Service utilization
- Cost-effectiveness
- Service interruptions & fleet age
- On-time performance & speed
- All 7 operators, fixed route only

#### Bicycling and Walking
- Collisions
- Counts
- Network/project completion from local jurisdiction summaries
- Master plan completion
- Program participation

### Data Sources:
Existing or publicly available data
Previous fiscal year (FY12/13) or most recent available plus historic trends

### Key Findings

- **Demand for travel on the rise**: Alameda County had largest percentage increase in population in California in 2013 and saw job growth for third consecutive year
- **Uneven employment recovery**: Alameda County employment rate lags the overall Bay Area
- **Regionally essential**: More than 25% of all Bay Area commuters touch Alameda County
- **More regional commute patterns**: Alameda County residents increasingly work in other counties; Alameda County workers increasingly commute from other counties
- **Balanced commute modes**: 36% of Alameda County workers use transit, walking, biking, telecommute, or carpool, while 64% drive alone
- **More multimodal**: share of Alameda County workers using transit, walking, biking, and telecommuting up 5% since 2000
Key Findings, cont.

- **Freeway congestion up**: Severe congestion increased by over 20% on freeways last year.
- **Local road state of repair unchanged**: Average local road condition not improving greatly and 20% of roads are poor or failed.
- **Overall safety improvements**: Roadway collisions are down over last decade.
- **Transit ridership climbing but challenges loom**: Ridership is up overall and for most operators, but aging assets, crowding, and dense urban operating conditions (for buses) pose challenges.
- **Walking and biking**: Counts are on the rise, collision rates declining, and network buildout continues.

Commuter Patterns: Population and Jobs

- **Population and job recovery both continued in 2013**

Source: Department of Finance Estimates, Bureau of Labor Statistics Local Area Employment data
Commute Patterns: Worker Flows

Alameda County plays a critical role supporting regional commute travel.

Commutes within, to, from, or through the Bay Area Region

- 3160,000
- 1,159,000

Commutes within, to, from, or through Alameda County

- 309,000
- 318,000
- 246,000
- 286,000

Not Involving Alameda County (73%)

Involving Alameda County (27%)

Source: Census Bureau Longitudinal Employment-Household Dynamics data

Commute Patterns: Worker Flows

Alameda County commutes became more regional in nature over last decade.

Origin-Destination pairs of workers who live or work in Alameda County

- 2002
- 2011

- Live in another county, work in Alameda County
- Live in Alameda County, work in another county
- Live and work within Alameda County
Commute Patterns: Journey-to-work Mode Share

Workers living in Alameda County use a diverse mix of transportation modes to commute to work.

All modes
- Drive Alone: 64%
- Carpool: 10%
- Bike: 26%
- Walk: 4%
- Public Transit: 64%
- Work from Home: 2%

Non-driving modes
- Drive Alone: 26%
- Carpool: 4%
- Public Transit: 1%
- Work from Home: 1%
- Other: 6%

Source: American Community Survey 2012 1-Year Estimate

Commuting Patterns: Journey-to-work Mode Share

Alameda County commutes became more multimodal over the last decade.

- Combined share of solo-driving and carpooling dropped by 5 percent.
- Working from home is the fastest-growing mode.
- Public transit, walking, and biking mode share all increased.
- Biking mode share nearly doubled.

Source: Census 2000 and American Community Survey 2012 1-Year Estimate
Average daily freeway delay increased by 22 percent overall from FY11/12 to FY12/13.

**Average Daily Vehicle Hours of Delay vs. 35 mph threshold**

- **Weekday**:
  - FY11/12: 21%
  - FY12/13: 37%

- **Weekend**:
  - FY11/12: 0%
  - FY12/13: 21%

*Note: chart shows “severe” delay (excess travel time from speeds below 35 mph)*

Source: INRIX, Inc. Analytics Suite

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Average PCI declined slightly and is flat over last 5 years; one in five roads is “failed” or “poor”.

**Average PCI cent of Lane-Miles**

- **Poor or Failed**
- **At Risk, Fair, or Good**
- **Very Good or Excellent**
- **Average PCI**

Source: MTC StreetSaver Database
Roadways: Collisions

Collisions continued a long-term downward trend in 2011; injury and fatal collisions down 32 percent since 2002.

Transit: Ridership

Total annual boardings in Alameda County increased by 4 percent in FY12/13 over FY11/12

- BART accounted for two-thirds of ridership growth
- Bus boardings up after declining in four of five previous years amid major service cuts
- Ferry boardings increased while commuter rail declined
- Long-term shift from bus to BART
Transit: Service Utilization

Most transit operators saw improvement or minimal change in service utilization in FY2012-13

- Service utilization is measured by boardings per revenue vehicle hour (RVH)
- BART saw large increase in service utilization and carries nearly 15 passengers per RVH more than in 2005
- AC Transit improved service utilization in FY2013 and has improved this metric in 3 of last 4 years

Source: National Transit Database (2005-2012) and preliminary NTD filings (2013)

<table>
<thead>
<tr>
<th>Transit Operator</th>
<th>FY2005</th>
<th>FY2012</th>
<th>FY2013</th>
<th>Percent Change vs. FY2012</th>
<th>Percent Change vs. FY2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>BART</td>
<td>55.95</td>
<td>65.44</td>
<td>69.49</td>
<td>6%</td>
<td>24%</td>
</tr>
<tr>
<td>ACE</td>
<td>34.22</td>
<td>38.97</td>
<td>39.82</td>
<td>2%</td>
<td>16%</td>
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<tr>
<td>AC Transit</td>
<td>36.05</td>
<td>33.23</td>
<td>34.20</td>
<td>-3%</td>
<td>-5%</td>
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<tr>
<td>LAVTA</td>
<td>16.93</td>
<td>14.00</td>
<td>13.86</td>
<td>-1%</td>
<td>-18%</td>
</tr>
<tr>
<td>Union City</td>
<td>10.05</td>
<td>12.74</td>
<td>12.52</td>
<td>-2%</td>
<td>25%</td>
</tr>
<tr>
<td>WETA</td>
<td>75.46</td>
<td>110.22</td>
<td>107.25</td>
<td>-3%</td>
<td>42%</td>
</tr>
</tbody>
</table>

Transit: Other Trends

Cost Efficiency
- Most operators have seen increasing in cost per rider and/or cost per Revenue Vehicle Hour since 2005

State of Good Repair
- Frequency of service interruptions declined for all operators in FY12/13
- Fleets of most operators are in midlife on average
  - Union City Transit (relatively new fleet) and BART (very old fleet) are exceptions
  - AC Transit unveiled first shipment of new bus purchase in late FY12/13 and BART procuring new cars

Service Quality
- Experiences improving on-time performance were mixed
  - AC Transit achieves lower on-time performance but must contend with dense, congested urban conditions
  - AC Transit has seen steady decline in commercial speed (speed accounting for delays) since 2005
Bicycling and Walking: Counts

Data collected through the Alameda CTC bicycle and pedestrian count program suggest that levels of cycling and walking are growing and that the diversity of cyclists is increasing.

Number of Bicyclists Counted (9 long-term monitoring locations)

Number of pedestrians counted (6 long-term monitoring locations)

Source: Alameda CTC Bicycle and Pedestrian Count Program

Bicycling and Walking: Collisions

Collisions involving bicyclists have increased, however bicycle counts have increased faster.

Collisions involving pedestrians have declined even as counts of pedestrians have increased.

Changes from 2002 to 2011

<table>
<thead>
<tr>
<th></th>
<th>Injury/Fatal Collisions</th>
<th>Counts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biking</td>
<td>+21%</td>
<td>+75%</td>
</tr>
<tr>
<td>Walking</td>
<td>-18%</td>
<td>+47%</td>
</tr>
</tbody>
</table>

Sources: Statewide Integrated Traffic Reporting System, Alameda CTC Bicycle and Pedestrian Count Program
**Bicycling and Walking: Network Completion**

Jurisdictions reported installing more than 25 miles of bikeways and completing more than 30 major pedestrian capital projects FY12/13.

**Miles of Bikeway Installed**

- Multi-use Trail (paved)
- Bike lane (not upgraded*)
- Bike lane (upgraded*)
- Bike route (route with shared lane markings)
- Bike route (bicycle boulevard)

**Major Pedestrian Capital Projects Completed**

- New trail
- Sidewalk gap closure
- Widened sidewalk
- Crossing improvements
- Traffic calming elements
- Major pathway rehabilitation
- Total

Source: Survey of Local Jurisdictions

Note: Categories defined by Alameda CTC staff based on responses from local jurisdictions staff. A project may fall in multiple categories. Chart does not include improvements including signal timings or detection to improve crossing safety, curb ramp installations, or installation of standalone traffic calming elements (e.g. single speed bump).

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**Alameda CTC Performance Monitoring: What’s Next?**

- Explore ways to integrate data requests with Compliance Reports
- Coordinate with regional agencies on collection of land use data (e.g. development approvals) and evaluation of land use/transportation coordination measures
- Identify new performance measures as part of Goods Movement, Arterials, and Transit plans
  - System-level to Facility-level
- Evaluate investments in relation to performance
Questions?

EXTRAS
Commute Patterns: Worker Flows

Alameda County commutes became more regional in nature over last decade.

Where Alameda County Workers Seek Employment

2002 2011
46% 54%
52% 48%

Where Alameda County Businesses Find Workers

2002 2011
48% 52%
53% 47%

Roadways: Freeway Travel Speeds

Average speeds declined in weekday AM and PM peaks and weekend midday from FY11/12 to FY12/13

<table>
<thead>
<tr>
<th></th>
<th>Average Freeway Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weekday, AM Peak (7-9 am)</td>
<td>FY10-11 54</td>
</tr>
<tr>
<td>Weekday, Midday (12-2 pm)</td>
<td>FY10-11 62</td>
</tr>
<tr>
<td>Weekday, PM Peak (4-6 pm)</td>
<td>FY10-11 56</td>
</tr>
<tr>
<td>Weekend, Midday (12-2 pm)</td>
<td>FY10-11 58</td>
</tr>
</tbody>
</table>
Transit: Cost Efficiency

Cost containment is a critical challenge facing transit operators

- Cost efficiency is one of many service planning considerations for transit operators; operators achieve different cost per rider based on different technologies and service structures.
- BART has generally managed to contain cost per rider though it saw an increase in FY2013.
- AC Transit has seen longer term increases in cost per rider, though this metric declined in FY2013.

<table>
<thead>
<tr>
<th>Transit Operator</th>
<th>FY2005</th>
<th>FY2012</th>
<th>FY2013</th>
<th>Percent Change vs. FY2012</th>
<th>Percent Change vs. FY2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>BART</td>
<td>$5.01</td>
<td>$4.21</td>
<td>$4.59</td>
<td>9%</td>
<td>-8%</td>
</tr>
<tr>
<td>ACE</td>
<td>$20.74</td>
<td>$15.86</td>
<td>$16.03</td>
<td>2%</td>
<td>-23%</td>
</tr>
<tr>
<td>AC Transit</td>
<td>$4.32</td>
<td>$5.61</td>
<td>$5.32</td>
<td>-5%</td>
<td>23%</td>
</tr>
<tr>
<td>LAVTA</td>
<td>$5.76</td>
<td>$7.36</td>
<td>$7.14</td>
<td>-3%</td>
<td>24%</td>
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<tr>
<td>Union City</td>
<td>$8.73</td>
<td>$6.26</td>
<td>$6.64</td>
<td>6%</td>
<td>-24%</td>
</tr>
<tr>
<td>WEBA</td>
<td>$11.19</td>
<td>$9.57</td>
<td>$15.03</td>
<td>57%</td>
<td>34%</td>
</tr>
</tbody>
</table>

Source: National Transit Database (2005-2012) and preliminary NTD filings (2013)

Transit: Service Interruptions & Fleet Age

All transit operators reduced the frequency of service interruptions in FY2013.

<table>
<thead>
<tr>
<th>Transit Operator</th>
<th>Average Age (yrs)</th>
<th>Typical Useful Life</th>
</tr>
</thead>
<tbody>
<tr>
<td>BART</td>
<td>33.8</td>
<td>34.8</td>
</tr>
<tr>
<td>ACE</td>
<td>13.5/12.1</td>
<td>30/40</td>
</tr>
<tr>
<td>AC Transit</td>
<td>7.6</td>
<td>15</td>
</tr>
<tr>
<td>LAVTA</td>
<td>8.7</td>
<td>15</td>
</tr>
<tr>
<td>Union City</td>
<td>4.4</td>
<td>12</td>
</tr>
<tr>
<td>WEBA</td>
<td>12.6</td>
<td>15</td>
</tr>
</tbody>
</table>

The fleets of most operators are midway through their useful lives on average.

Source: National Transit Database (2005-2012) and preliminary NTD filings (2013)
Transit: On-Time Performance & Commercial Speed

Bus operators generally saw declines in average commercial speed (speed accounting for delays) in FY12/13; different operating conditions lead to differences in performance across operators.

Experiences improving on-time performance were mixed; different operating conditions lead to differences in performance across operators.

Source: National Transit Database (2005-2012) and preliminary NTD filings (2013)

Transit: BART Trends

Boardings
- Revenue Vehicle Hours
- Operating Costs ($2013)
- Fare Revenue ($2013)

Boardings/RVH
Transit: AC Transit Trends

![Graphs showing transit trends](image)

Bicycling: Counts

Data collected through the Alameda CTC bicycle and pedestrian count program suggest that levels of cycling are growing and that the diversity of cyclists is increasing.

![Graphs showing bicycle counts](image)
Bicycling: Collisions

Collisions involving bicyclists have increased, however bicycle counts have increased faster.

Sources: Statewide Integrated Traffic Reporting System, Alameda CTC Bicycle and Pedestrian Count Program

Bicycling: Local Master Plan Completion

At the conclusion of FY12/13, nine jurisdictions had local master plans that were adopted within the last five years, and three more have a plan or update underway.
Bicycling: Network Completion

Jurisdictions reported installing more than 25 miles of bikeways in FY12/13, and several reported installing upgraded bicycle lane facilities that improve separation and visibility of cyclists.

Miles of Bikeway Installed by Facility Type

- Multi-use trail (paved)
- Bike lane (not upgraded*)
- Bike lane (upgraded*)
- Bike route (route with shared lane markings)
- Bike route (bicycle boulevard)

Source: Survey of Local Jurisdictions

Bicycling: Programs and Education

Bicycle safety education classes, attendance, and attendance per class have all increased in consecutive years.

Bike to Work Day energizer stations and participants tallied have grown since 2006.

Sources: Bicycle Safety Education Grant Program Progress Reports, Bike to Work Day Annual Report
Walking: Counts

Count data collected through the Alameda CTC count program suggests that walking increased in 2012 and has increased over the long-term.

**Number of pedestrians counted**

- **2010**: 15,000
- **2011**: 20,000
- **2012**: 25,000

Year-over-year percent change

- 2002: 0%
- 2003: 0%
- 2010: 0%
- 2011: 10%
- 2012: 10%

Locations monitored:
- North
- Central
- South
- East

Source: Alameda CTC Bicycle and Pedestrian Count Program

Walking: Collisions

Collisions involving pedestrians have declined by nearly one-fifth even as pedestrian counts have increased by nearly fifty percent.

**Percent Change (2002 to 2011)**

- Injury and Fatal Collisions: -20%
- Pedestrians Counted: +50%

Sources: Statewide Integrated Traffic Reporting System, Alameda CTC Bicycle and Pedestrian Count Program
Walking: Local Master Plan Completion

At the conclusion of FY12/13, eight jurisdictions had local master plans that were adopted within the last five years, and four more have a plan or update underway.

Walking: Network Completion

Jurisdictions reported completing 30 major pedestrian capital projects in FY12/13.

Note: categories defined by Alameda CTC staff based on responses from local jurisdictions staff. A project may fall in multiple categories. Chart does not include improvements including signal timings or detection to improve crossing safety, curb ramp installations, or installation of standalone traffic calming elements (e.g. single speed bump).

Source: Survey of Local Jurisdictions
Safe Routes to School has expanded rapidly into 147 schools countywide.

Source: Safe Routes to School Program Annual Reports