Valley Metro Transit Program
Environmental & Economic Benefits

Pima Association of Governments
May 24, 2017
# Phoenix-Mesa Traffic Congestion

<table>
<thead>
<tr>
<th>Annual Impact / Individual Commuter</th>
<th>Phoenix – Mesa</th>
<th>National Average in areas with &gt; 1 million persons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delay</td>
<td>51 hours</td>
<td>63 hours</td>
</tr>
<tr>
<td>Congestion cost</td>
<td>$1,201</td>
<td>$1,440</td>
</tr>
<tr>
<td>Excess fuel consumed</td>
<td>25 gallons</td>
<td>27 gallons</td>
</tr>
</tbody>
</table>

Transit System Map
Rail/High-Capacity Transit Corridors
Valley Metro Services

- Local, Express & RAPID bus
- Light rail
- Neighborhood circulators
- Rural route
- Paratransit
- Vanpool
- Commuting alternatives
  - ShareTheRide
Regional Transit Facts

- Operates 365 days a year
- 60 local routes
- 20 Express/RAPID routes
- 18 circulator routes
- 26 miles of light rail
- Fixed route & vanpool service – 39M revenue mi./year
- Paratransit – 429K revenue hours/year
- 95% of the fleet is alternatively fueled
- Number of vanpools approaching 400 vehicles annually

From FY16 Transit Performance Report; numbers include the vanpool program.
Transit Ridership by Mode

<table>
<thead>
<tr>
<th>Year</th>
<th>Rail</th>
<th>Bus</th>
<th>Total Ridership</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY13</td>
<td>14,286,093</td>
<td>59,123,712</td>
<td>73,409,805</td>
</tr>
<tr>
<td>FY14</td>
<td>14,331,488</td>
<td>57,805,780</td>
<td>72,137,268</td>
</tr>
<tr>
<td>FY15</td>
<td>14,276,884</td>
<td>56,482,963</td>
<td>70,759,847</td>
</tr>
<tr>
<td>FY16</td>
<td>15,574,737</td>
<td>51,778,088</td>
<td>67,352,825</td>
</tr>
</tbody>
</table>
Defining LRT Success: Economic Development

Capital Investment [billions]

- Light Rail: $1.9
- Public: $2.3
- Private: $6.6

Development Breakdown

- Residential: 46%
- Commercial: 12%
- Public: 40%
- Education: 2%
A Sustainable Light Rail System

• 50 vehicles
• All electric
• Bicycle storage
• Light colored vehicle paint scheme and tinted windows reduce energy use
Operations and Maintenance Center Solar Panels

- 771.35 kW DC system
- Began operations in March 2015
A “Green” Bus Fleet

• 70% of Valley Metro buses use Compressed Natural Gas (CNG) or Liquefied Natural Gas (LNG) fuel

• 30 hybrid electric diesel buses have been added to the fleet helping to reduce fuel usage
Sustainable Bus Facilities

East Valley Bus Operations & Maintenance Facility

- USGBC LEED Gold certification
- 250-bus maintenance/transit facility opened in 2007
- Features include 53% reduction in operating energy usage

Source: City of Tempe, http://www.tempe.gov/city-hall/public-works/transportation/evbom
Passenger Capacity by Transit Mode

- 200 passengers in one light rail vehicle
- 600 passengers in one light rail train
- 200 passengers in five buses
- 200 passengers in 180 autos
Traffic Congestion Reduction

• In the Phoenix-Mesa Area nearly 76 million gallons of excess fuel are consumed each year by vehicles in traffic congestion.

• Transit reduced vehicle miles traveled by 450,000 mi.

Light Rail Air Quality Benefits

- 38% of light rail passengers are “first time choice riders” with access to a car
- 10,300 cars off of the road daily
- Annual carbon emission savings of 23.2 million pounds
Vanpool Program

• In FY16, riders saved 50.5 million miles and 2 million gallons of fuel
  – 50.5 M miles = distance traveled in 89 years if driving non-stop at 65 mph
  – 2 M gallons of fuel = 108,000 barrels of US-refined crude oil
Vanpool Program

- Riders saved nearly $4.6 million in fuel cost; equivalent to:
  - approximately 69 passenger vehicles driven for one year, or
  - energy used by more than 34 homes for an entire year
ShareTheRide

• 42,926 users

• Saved nearly 5.2M pounds of greenhouse emissions

• This equates to:
  – 496 passenger vehicles driven for one year, or
  – 746 tons of waste recycled, or
  – Energy used by more than 248 homes for an entire year
Key Points

• Valley Metro helps to improve air quality by taking vehicles off the road

• “Green” transit fleet and facilities reduce the energy we consume to run our buses and trains

• ShareTheRide and Vanpool programs give passengers attractive travel options and help make area roads and freeways less congested
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