### AVL Study Context

#### 1. Strong Ridership and Mode Share Growth
   a) Daily AVL trips could increase from 6,500 in FY19 to 15,000 by FY30
   b) Projected 9% growth per annum through 2042

<table>
<thead>
<tr>
<th>Station</th>
<th>FY15</th>
<th>FY19</th>
<th>2042</th>
<th>Growth Trends</th>
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<tr>
<td>GLENDALE</td>
<td>609</td>
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<td>BURBANK</td>
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<td>925</td>
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<td>SUN VALLEY</td>
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<td>LANCASTER</td>
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<td>475</td>
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<td><strong>TOTAL</strong></td>
<td>3,744</td>
<td>4,911</td>
<td>39,025</td>
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</table>
Existing net cost to operate and maintain the Antelope Valley Line is $34.5 million with 15 daily round trips using 6 train sets and AVTA bus support.
1. **Study identified a phased incremental plan for improving AVL service, if funding is identified.**

   a) Planning years provided are build out conditions due to multiple service options and capital project scheduling.

   b) New/Available round trips can be filled by current operators (Metrolink or Union Pacific Railroad) or future potential operators (Amtrak –Pacific Surfliner, California High Speed Rail Authority or Virgin Trains USA)
Service Scenario Plan

Five Year Plan

**Scenario 1:** 1 additional late evening train

Ten Year Plan

**Scenario 2:** 2 additional off-peak round trips to provide hourly mid-day service

Twenty Year Plan

**Scenario 3:** Improved peak service and semi-hourly off-peak service

Future Year Plan Options

**Scenario 4:** Semi-hourly service plus express service

**Scenario 5:** Same as (4), with intermediate turns at Santa Clarita

**Scenario 6:** Same as (4), with intermediate turns at Sylmar/San Fernando

1. Collectively, the 6 service scenarios will require 14 capital projects.

2. Antelope Valley Line Stakeholders advised the team to move forward with service scenarios 1, 2 and 3
Scenarios 1, 2 and 3 require 4 of 14 capital projects highlighted above.
Capital Project Investments for Scenarios 1, 2 & 3

First Phase to support Service Scenario 2
1. Balboa Double Track Extension - Balboa Boulevard to Sierra Highway; Capital Cost = $41.8M

Second Phase to support Service Scenario 3
2. Lancaster Terminal Improvements, Cost = $27.3M
3. Canyon-Santa Clarita Siding, Cost = $48.8M
4. Brighton-McGinley Double Track, Cost = $57.3M

Track Comparison

First phase capital investment allows for hourly mid-day service and existing peak service

Second phase capital investment allows for 30 minute bi-directional service to Santa Clarita and hourly service from Santa Clarita to Lancaster.
Funding Opportunities

1. Local funding has not yet been identified for the capital infrastructure required to achieve the twenty year plan, Total Cost: $175.2 M
   a) Phase I, First Ten Years: $41.8 M, Team to work with State and Local Partners to identify funding.
   b) Phase II, Second Ten Years: $133.4M, Team to work with Local, State and Federal Partners to identify funding.
A. Potential New Operator Along the Corridor

1. The State is considering an extension of intercity passenger rail service to Santa Clarita to connect with the Pacific Surfliner service in Los Angeles. This could present an opportunity for through service between Santa Clarita and San Diego with Amtrak bus service to shorten the commute to Bakersfield from the current 3 hours to about 90 minutes (LAUS to Bakersfield).

*This exhibit modified the 2018 State Rail Plan

New investment opportunity would require coordination between LOSSAN and Metrolink
Future Passenger Service with multiple Operators

HSR Blended Service/Blended Operations:

1. Current Limitations on HSR between Palmdale and Los Angeles
   a) Original HSR Plan for dedicated alignment extremely costly; funding unlikely
   b) Blended service on the AVL route offers potential benefits for CHSRA, Virgin Trains USA, Amtrak and Metrolink rail services

2. Further analysis required for additional capital investment
   a) Identify line electrification constraints for CHSRA such as vertical clearance and curve straightening projects.
   b) Identify and evaluate additional capacity projects to support blended service

Source: 2018 State Rail Plan - 2040 So Cal Vision
Future Passenger Service with multiple Operators

1. Rail Multiple Unit Technology – Rail Multiple Units
   a) Diesel Multiple Unit (DMU) – One Power Car required for four cab cars
   b) Electric Multiple Unit (EMU, similar to HSR) – 1:3 ratio for powering
   c) Metrolink is developing a Fleet Modernization Plan (Fall 2020) to plan for a zero emissions future.

2. Travel Time Improvement
   a) 100 mph maximum capability for both (79 mph CA max speed)
   b) Tilting train capability for both DMU and EMU

3. Compatibility with Future High Speed Rail
   Continue to evaluate the extent to which the EMU service supports future development of HSR in the corridor

Source: Redlands Passenger Rail Project (SBCTA)
Thank You!