

Antelope Valley Line Study Update

North Los Angeles County
Transportation Coalition Meeting
July 22, 2019

Antelope Valley Line Board Motion

On July 19, 2017, Directors Barger and Najarian issued a motion for the study of the Metrolink Antelope Valley Line to:

- a) Determine a range of frequency of service to maximize regional accessibility throughout the day;
- b) Assess the condition of the existing rail infrastructure (e.g. tracks, culverts, tunnels, crossings, etc.) that limits operational flexibility and service reliability;
- c) Recommend needed infrastructure and capital improvement costs (in level of priority) along with cost benefit analysis to support the range of frequency of service, service reliability, safety, an on-time performance including latest technologies in rail propulsion, controls and rail stock.

Antelope Valley Line Study Context

1. Strong Ridership Growth with Fare Discount Program

- a) In April 2015, the Board approved a motion to reduce fares 25% on the Metrolink Antelope Valley Line. Since that program's launch in July 2015, the AVL Fare Discount Pilot Program has been successful in growing ridership, **an increase of 29% as of June 2019.**
- b) In July 2018, Metro stopped subsidizing the Fare Discount Program and spent about \$2 Million, **well under the \$5.46 Million programmed.**

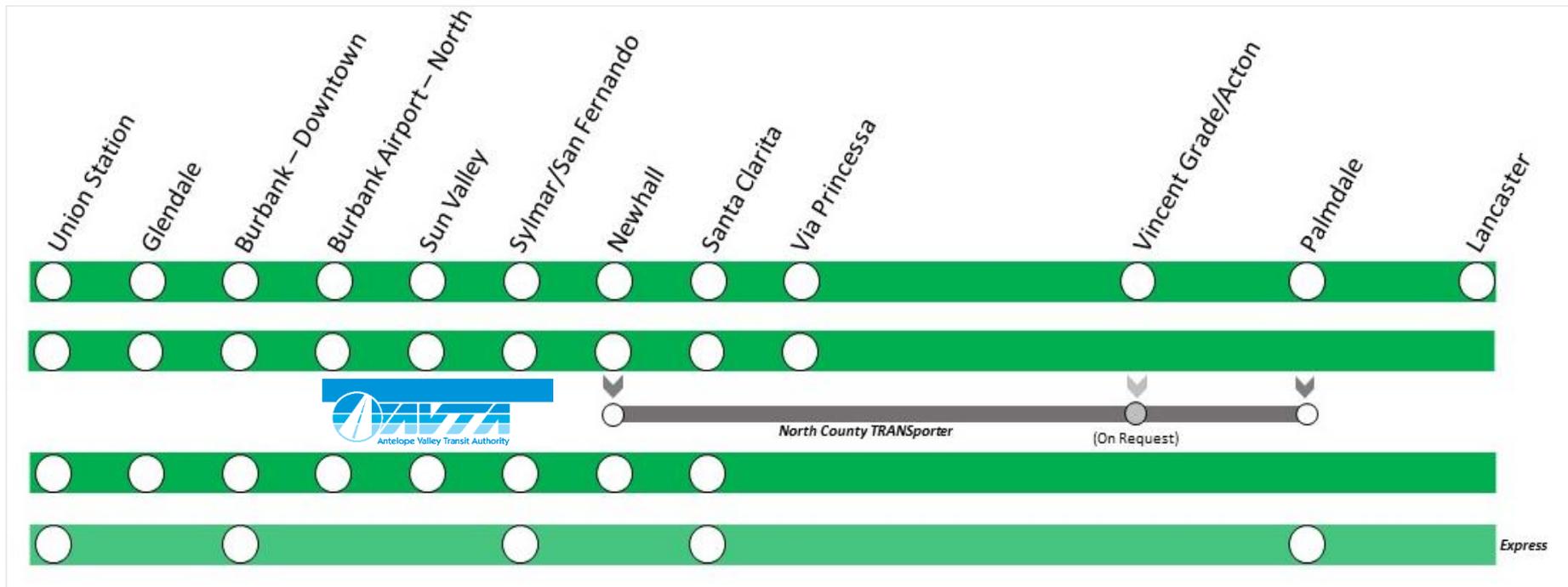
% Change since 25% FARE REDUCTION PROGRAM (Started 7/1/2015)						
<u>15 vs 16</u>	<u>16 vs 17</u>	<u>17 vs 18</u>	<u>18 vs. 19</u>	<u>15 vs 17</u>	<u>15 vs 18</u>	<u>15 vs. 19</u>
4.4%	2.7%	8.7%	7.4%	7.2%	16.5%	25.1%
6.7%	5.2%	4.9%	7.8%	12.2%	17.7%	26.8%
9.3%	8.9%	2.9%	6.5%	19.0%	22.5%	30.5%
17.5%	3.7%	3.8%	6.5%	21.9%	26.6%	34.9%
13.9%	4.5%	4.3%	1.6%	19.0%	24.2%	26.2%
14.8%	4.3%	4.6%	3.6%	19.8%	25.3%	29.8%
17.6%	9.0%	5.9%	1.5%	28.2%	35.7%	37.7%
20.0%	2.7%	3.1%	-1.3%	23.3%	27.1%	25.5%
13.4%	7.7%	1.5%	0.1%	22.1%	23.9%	24.1%
11.3%	7.9%	4.2%	2.4%	20.1%	25.1%	28.2%
12.6%	3.6%	8.0%	3.4%	16.7%	26.0%	30.3%
13.3%	4.4%	9.0%	-0.4%	18.3%	29.0%	28.4%
12.8%	5.4%	5.0%	3.3%	18.9%	24.8%	28.9%



Metro

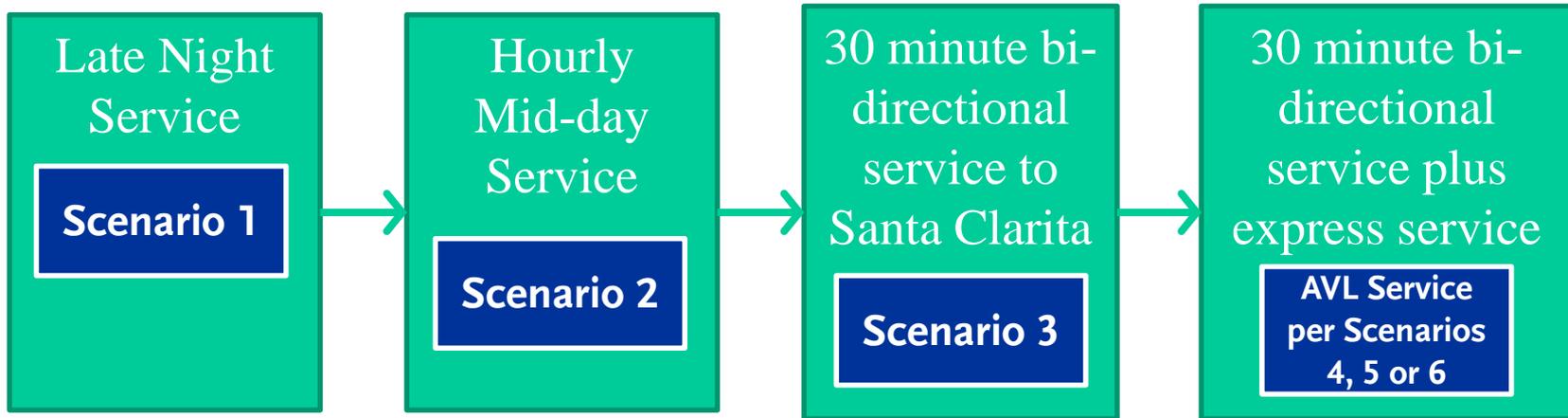
Antelope Valley Line Study Context

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.



Proposed AVL Service Scenario Plan

- 1. Study identified a phased incremental plan for improving AVL service, if funding is identified.**



- a) 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)

2. Proposed 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



Cost Benefit Analysis and Findings

1. The evaluation process considered the overall proposed service level increments against five key evaluation categories:

No.	Category	Evaluation Criteria	Possible Overall Category Score	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6
1	Operations	Capacity Improvement	18	6	6	10	15	15	15
		Travel Time Improvement	18	9	12	15	18	18	18
		Compatibility with Local Transit and Development Plans	18	6	6	15	18	18	18
		Flexibility for Future Growth in Long Term	18	10	12	15	18	18	18
		Quality of the Passenger Experience	18	6	6	10	12	12	15
		Compatibility with Clockface Schedule Patterns	18	6	9	18	15	12	9
2	Regional Connectivity	Travel Markets Served	19	6	6	13	16	16	19
		Multimodal Connectivity	19	6	6	10	16	16	19
		Regional Network Connectivity	19	6	6	13	19	19	19
		Rail Mode Share Potential	19	9	9	13	19	16	19
3	Costs and Financial Performance	Total Capital Cost	30	30	30	30	10	10	10
		Relative Impact on Annual Operating Cost of AVL service	30	30	30	20	5	5	5
4	ROW Impacts	Right-of-Way Takes	10	10	10	7	3	3	3
		Indirect Property (noise barriers, etc.)	10	10	10	10	3	7	7
		Sensitive Areas (historic, endangered species, etc.)	10	10	10	7	7	3	3
5	Applied Technology	VMT Reduction	8	3	3	5	8	8	8
		Clean Vehicle Technology (e.g., DMUs, Electrification)	8	8	8	8	8	8	8
		Compatibility with Future High Speed Rail	8	3	3	5	5	5	5
		Serves DAC s and Low Income Households/ Communities	8	4	4	6	6	6	8
Final Score (Out of 300)				178	186	230	221	215	226

2. Based on the evaluation findings, **Service Scenario 3** provides the greatest cost to benefit improvements to service on the AVL (and the capital projects needed to support those improvements).
3. Overall service planning should be viewed as an incremental service improvement continuum as funding permits.

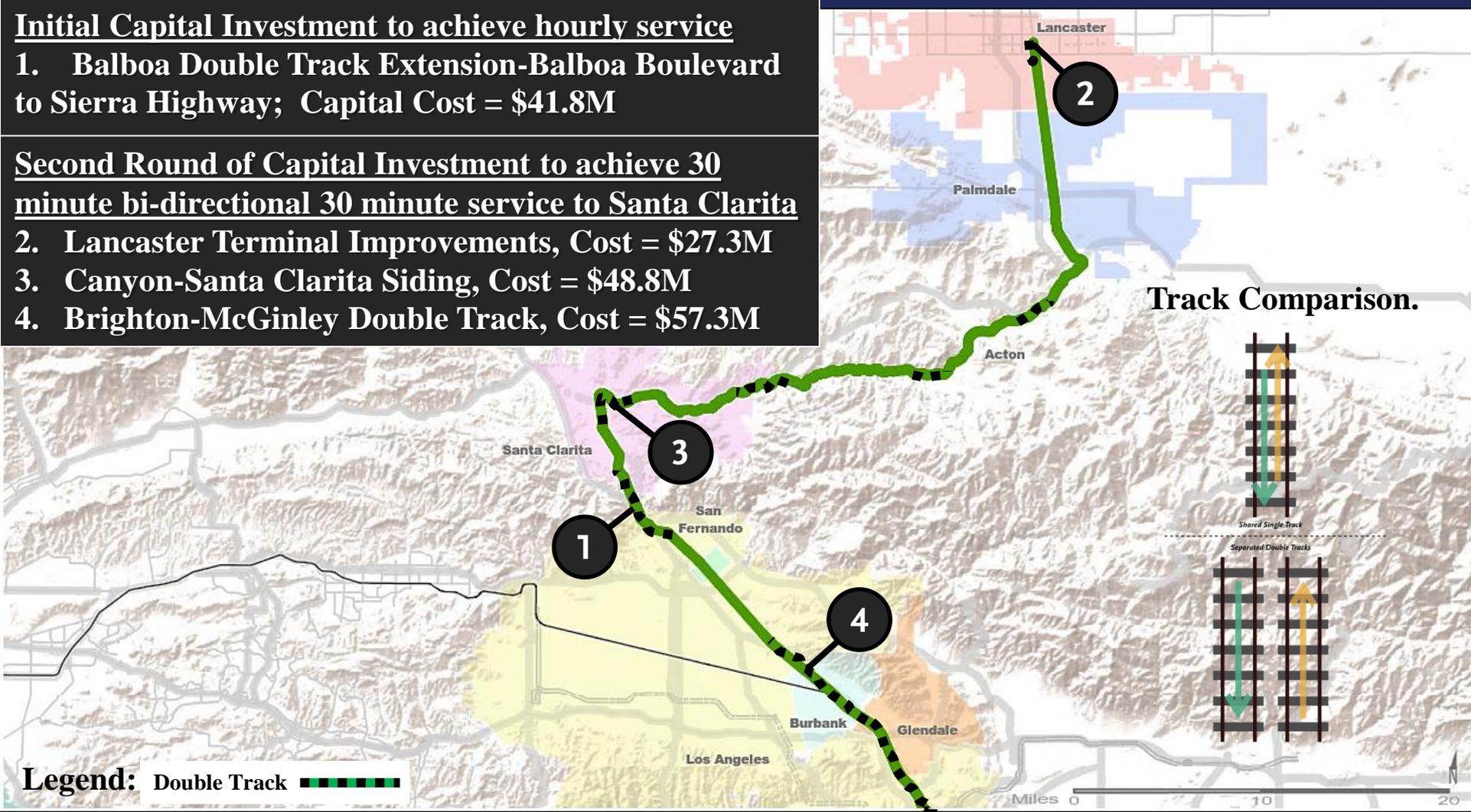
Capital Project Investments for hourly and 30 minute service

Initial Capital Investment to achieve hourly service

1. Balboa Double Track Extension-Balboa Boulevard to Sierra Highway; Capital Cost = \$41.8M

Second Round of Capital Investment to achieve 30 minute bi-directional 30 minute service to Santa Clarita

- 2. Lancaster Terminal Improvements, Cost = \$27.3M
- 3. Canyon-Santa Clarita Siding, Cost = \$48.8M
- 4. Brighton-McGinley Double Track, Cost = \$57.3M



The existing **66% single track** will reduce to **58% single track** if these four capital projects are constructed.

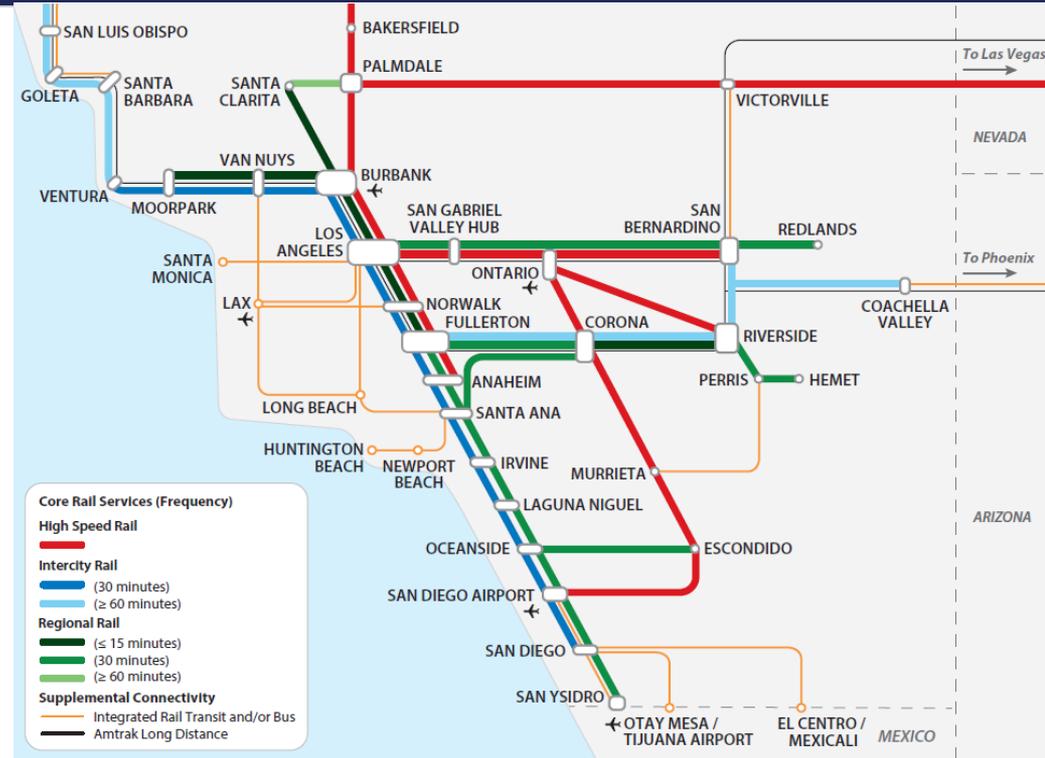
Compatibility with Future Planning Processes

2018 State Rail Plan

1. Findings of this project will enable 2040 Integrated Network Vision for LA County.

High Speed Rail Plan

1. Findings allow HSR blended service/ blended operations with limitations between Palmdale and LA.



Source: 2018 State Rail Plan- 2040 So Cal Vision

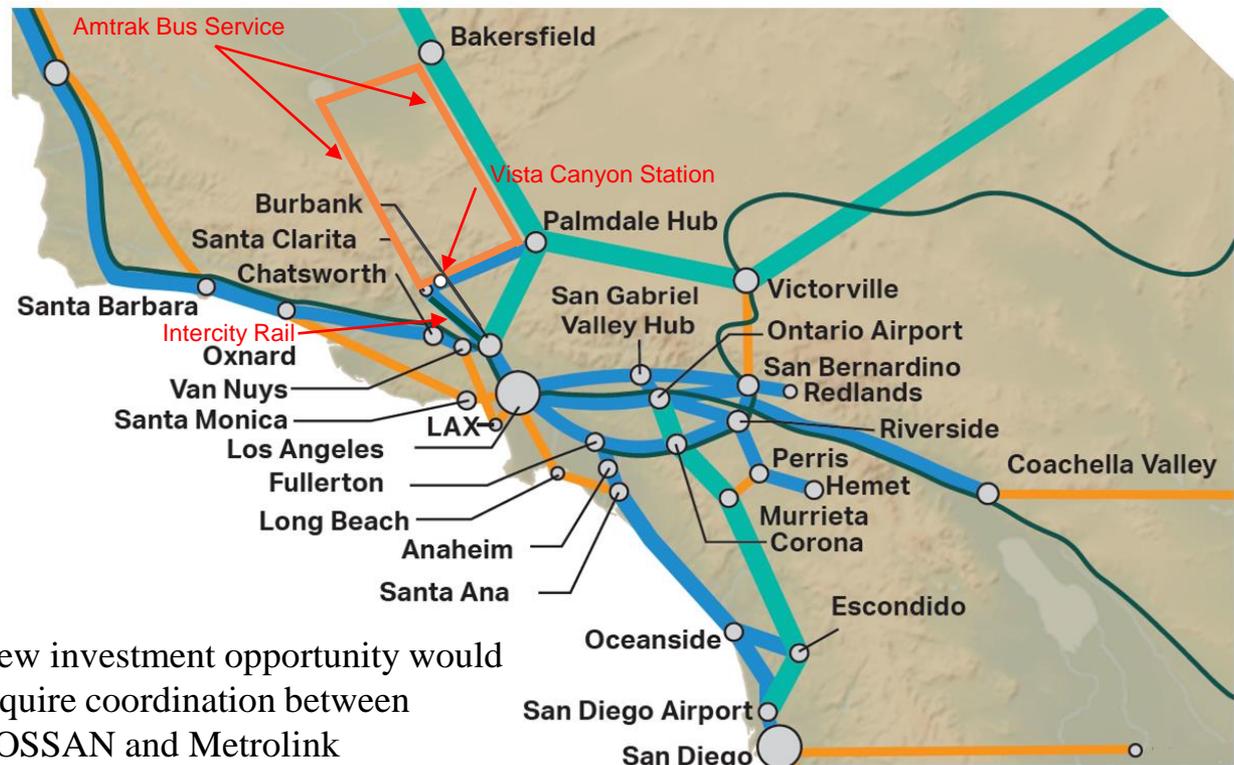
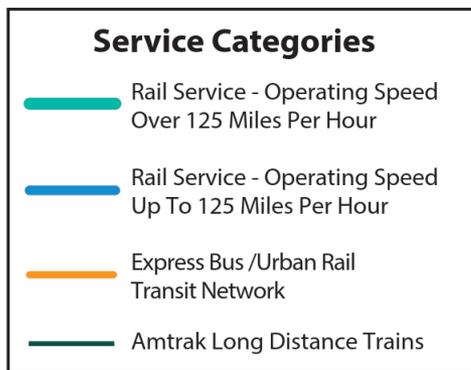
- a) Original HSR Plan for dedicated alignment extremely costly; funding unlikely
- b) Blended service on the AVL route offers potential benefits for CHSRA, Virgin Trains USA, Amtrak and Metrolink rail services

Compatibility with Future Planning Processes

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

Compatibility with Future Planning Processes

1. Rail Multiple Unit Technology – Rail Multiple Units (RMU)

- a) Metrolink is developing a Fleet Modernization Plan (Fall 2020) to plan for a zero emissions future.
- b) RMU technology allows for tilting train capability to handle existing tight curves at higher speeds.
- c) Would allow for Metrolink and Other Operators to consider increasing the maximum speed (CA 79 mph)



Source: Redlands Passenger Rail Project (SBCTA)

2. Metrolink

- a) Proposed AVL Capital Projects for the hourly and 30 minute service are consistent with the overall goals of the Southern California Optimized Rail Expansion (SCORE) Program to provide 30 minute service to Santa Clarita and hourly bi-directional service to Palmdale and Lancaster with additional express peak service.

Thank You!

