

CA HIGH-SPEED RAIL AUTHORITY PROGRAM UPDATE

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Chief Executive Officer



BUSINESS PLAN

LEGISLATIVE REQUIREMENTS

- **Required by PUC Section 185033**
 - » Foundational document for implementing the program
 - » Required every two years (even years)
- **Includes**
 - » Summary of progress over the last two years
 - » Approach to deliver the system using funds available
 - » Describes major milestones
- **Released in mid February and requires 60 day public review**
- **Board to adopt April 21, 2020**
- **Due to the Legislature May 1, 2020**



5 KEY THEMES

2020 DRAFT BUSINESS PLAN

1. California is the national leader on clean transportation – don't turn back.
2. Cost Estimates are within 2018 Ranges with modest impact to Valley-to-Valley.
3. Best use of available high-speed rail funding is to expand Central Valley segment to Merced-Fresno-Bakersfield.
4. Organizational changes at high-speed rail are having a positive impact – more to come.
5. Rail can advance across the state while high-speed service is delivered from Merced to Bakersfield.



2020 BUSINESS PLAN

KEY THEMES

1. California is the national leader on clean transportation in the era of climate change; we should maintain that leadership.

- » HSR is the heart of electrifying our transportation sector to reduce GHG, improve mobility, and expand the economy
- » Let's put the era of diesel behind us when it comes to passenger rail
- » Now is not the time to turn back in any region in California

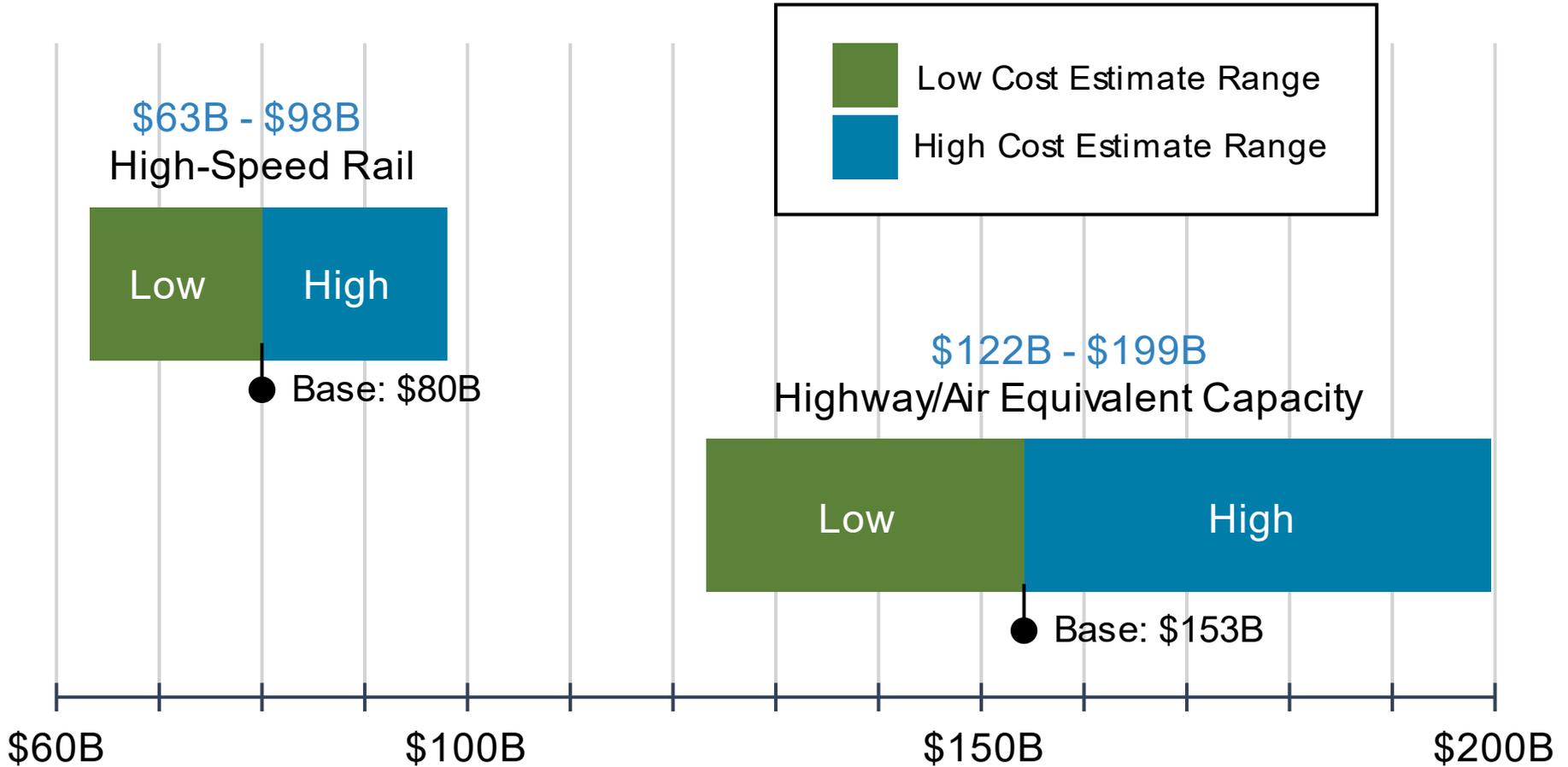
2. Modest cost adjustments only.

- » Central Valley Segment costs unchanged from 2019 Project Update Report
- » Valley-to-Valley estimate range adjusted to account for Merced segment being added and base cost up \$1.3 Billion to account for later year of completion – 2031
- » Phase 1 cost estimate ranges unchanged – base cost estimate reflects Valley-to-Valley change to 2031 completion date.



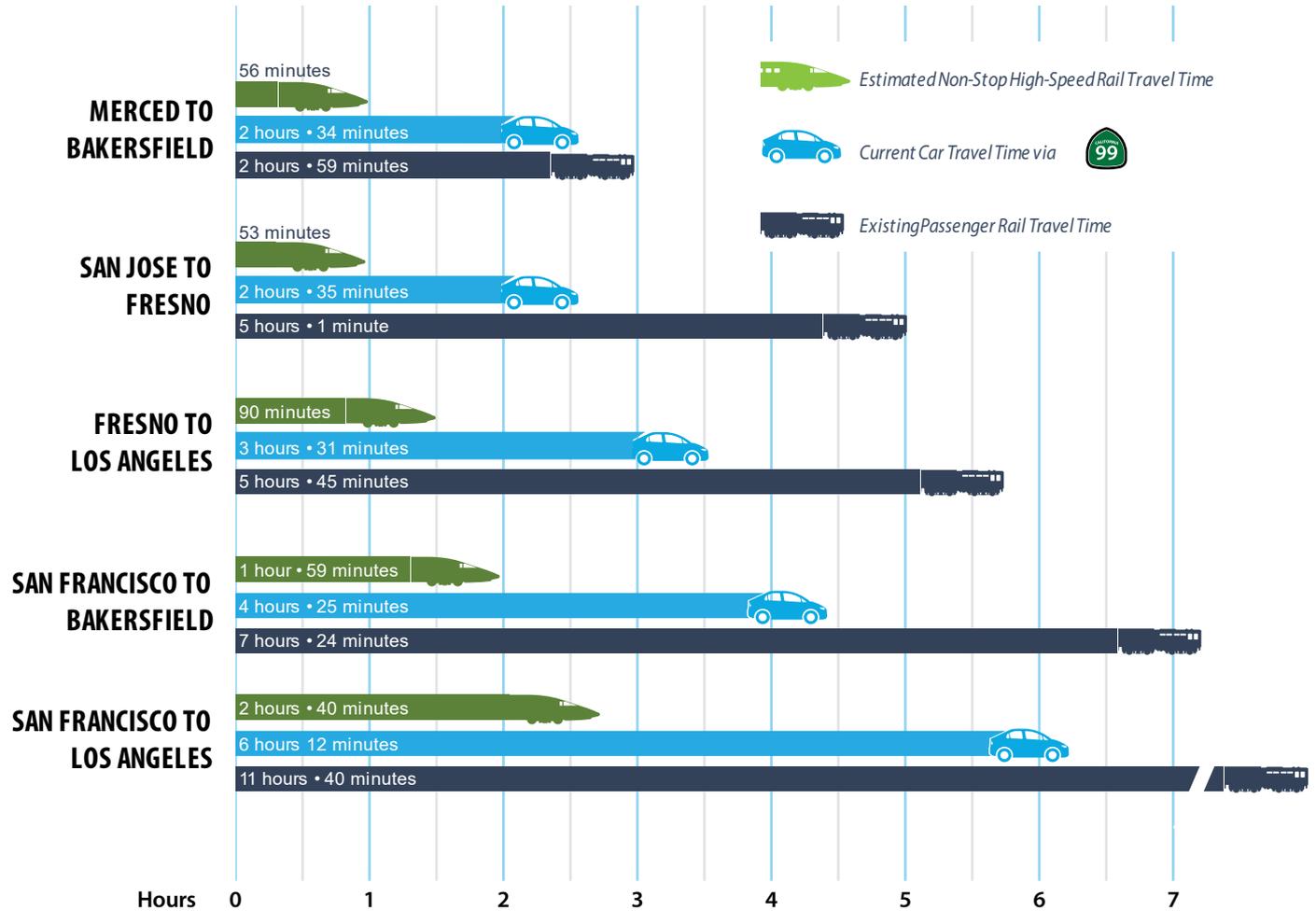
COST OF PHASE 1 HIGH-SPEED RAIL

COMPARED TO EQUIVALENT COST IN HIGHWAY/AIR CAPACITY



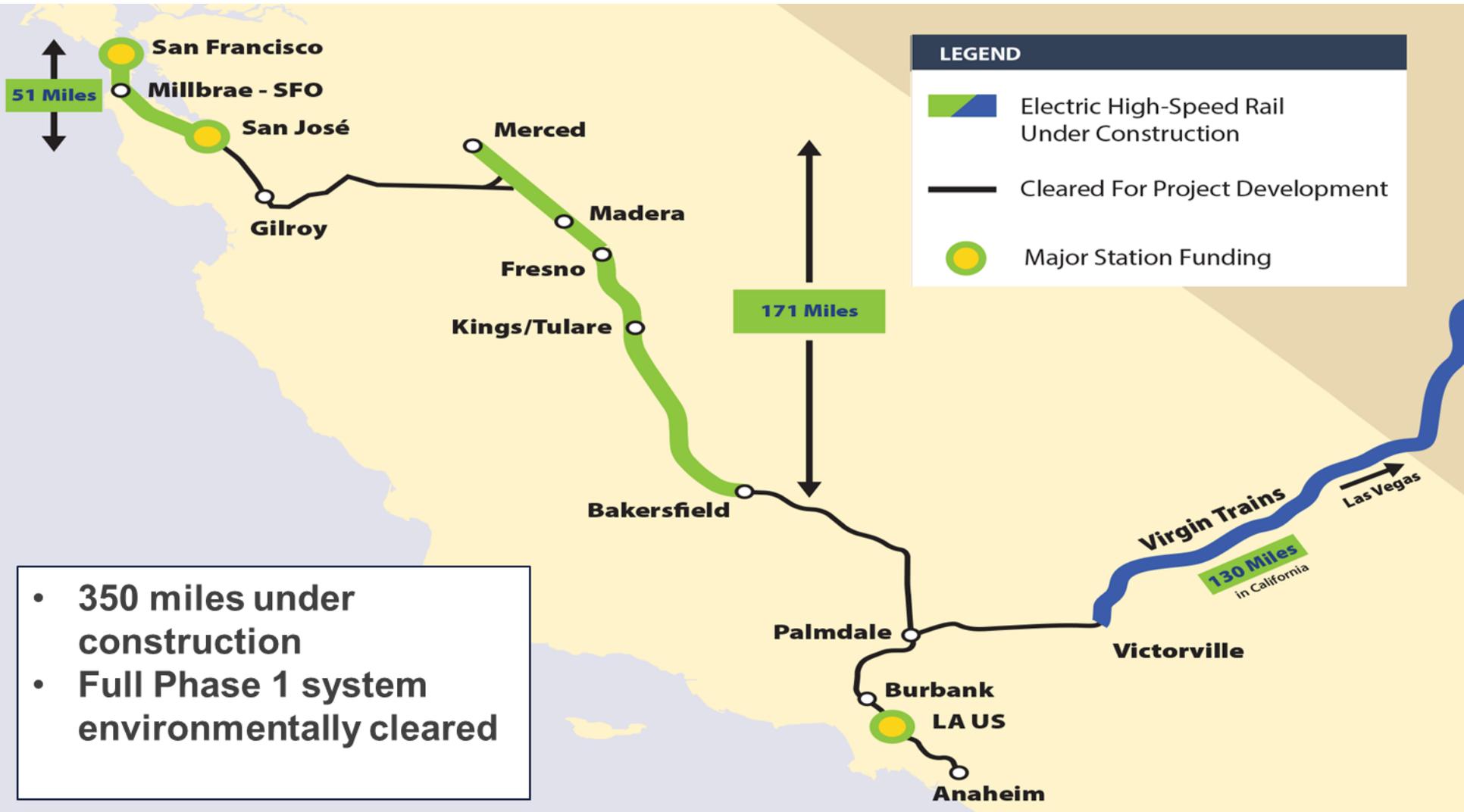
COMPARATIVE TRAVEL TIMES

CAR, EXISTING RAIL, AND NON-STOP HIGH-SPEED RAIL



2022 PROGRESS

CALIFORNIA HIGH-SPEED RAIL



COSTS LARGELY UNCHANGED

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

Program Phase	2018 Business Plan	2019 Project Update Report	2020 Business Plan
Merced to Bakersfield	N/A	\$20.4 Billion	\$20.4 Billion
Silicon Valley to Central Valley	<p>Range: \$25 – 37 billion</p> <p>Base: \$29.5 billion</p>	<p>Range: \$25 – 37 billion</p> <p>Base: \$31.3 billion <i>(including \$1.8 billion for increased reserve)</i></p>	<p>Range: \$27 – 39 billion**</p> <p>Base: \$34.5 billion</p> <p>} • Added Merced Extension to Valley to valley. • Completion date moved to 2031</p>
Phase 1	<p>Range: \$63 – 98 billion</p> <p>Base: \$77.3 billion</p>	<p>Range: \$63 – 98 billion</p> <p>Base: \$79.1 billion <i>(including 1.8 billion for increased reserve)</i></p>	<p>Range: \$63 – 98 billion</p> <p>Base: \$80.3 billion</p>



3. The best use of available HSR funding is to get an operating segment going between Merced-Fresno-Bakersfield and expand from there as funding becomes available.

- » The 171-mile operating segment is affordable, will expand employment on the project to 203,000 job years and will result in nearly \$40 Billion in Economic Output
- » It is the best place in the state to invest \$5 billion to significantly expand ridership, expand train service, reduce GHG emissions, reduce state operating costs and reduce travel times by more than 90 minutes
- » We keep our commitment to Central Valley Communities to provide clean, electrified high-speed rail service and related facilities that provide permanent jobs in the Valley
- » Recommendation affirmed by two board-requested studies since summer 2019



WHY EXTEND TO BAKERSFIELD AND MERCED

171-MILE INTERIM SERVICE

- **Best value**
 - » Expands train service
 - » Reduces travel time
 - » Increases ridership with lowered state operating costs
- **It's affordable**
 - » Cost of \$20.4 billion is within the \$20.6 billion and \$23.4 billion range budget
- **It connects three of the fastest growing counties of the state**
 - » Merced, Fresno and Bakersfield
- **It Provides for interim connection**
 - » North into Bay Area and Sacramento via the San Joaquin and ACE service
 - » South into LA Basin via bus connection

Bakersfield Station Artist Concept



WHY EXTEND TO BAKERSFIELD AND MERCED

171-MILE INTERIM SERVICE

- The only section in the state to run trains at truly high speed (200+ MPH) – reduces travel time by 90-minutes
- Implementation for 171-mile segment expected to generate 203k job years and \$37B in economic activity
- It follows through on our commitments to the Central Valley on permanent jobs and economic development

Bakersfield Station Artist Concept



EARLY TRAIN OPERATOR SIDE BY SIDE ANALYSIS

CALIFORNIA HIGH-SPEED RAIL

Aspects Compared	Northern California Peninsula Corridor	Central Valley Segment	Southern California Burbank to Anaheim Corridor
Length of Corridor (in miles)	77	171	44
Speed Attainable	110	220	110 to 125
Ridership Increase (in millions)	1.9	4.8	2.5
Greenhouse Gas Emissions Reductions (in thousand metric tons of CO2)	36.8	50.6	19.3
Annual Vehicle Miles Traveled Reduction (in million of miles)	75.7	283.6	90.0
Total Funding Required (\$YOE billions)	24.7	5.3	15.8
Operational Within 10 Years	Possible	Yes	Unlikely



BUSINESS CASE - KPMG

CALIFORNIA HIGH-SPEED RAIL

The Study presents key conclusions and a set of recommendations for the Board's consideration regarding the implementation of Merced to Bakersfield Interim Service.

Conclusions

- 1 – Significant socio-economic benefits
- 2 – Enhanced ridership due to the creation of a mobility hub at Merced
- 3 – Interim Service utilizes and maintains Authority's assets prior to completion of the Silicon Valley to Central Valley line
- 4 – Interim Service reduces state operating costs in the Central Valley but does not break even
- 5 – M-B is affordable under base case scenario
- 6 – Positive Return on Investment when incorporated into Silicon Valley to Central Valley line
- 7 – Interim Service requires its own business model
- 8 – Additional capital investments need to be completed by partners
- 9 – Long-term contracts affect Interim Service
- 10 – Delineation of capital program and Interim Service risks

Recommendations

- 1 – Implement Interim Service to unlock mobility benefits and fund infrastructure maintenance
- 2 – Pursue an Interagency Agreement with Other Agencies
- 3 – Secure funding streams to complete capital program
- 4 – Preparatory work required before executing T&S and trainsets contracts
- 5 – Advance extensions to downtown Bakersfield and Merced incrementally by segment



4. Organizational changes in Governor's first year has led to performance improvements:

- » 4 New Board Members in 2019
- » Executive Management staff almost completely turned over
- » Significant progress underway
- » 2020 will see progress advance more quickly
- » 350 Miles under construction statewide and all 520 miles of Phase 1 (SF-LA) will be environmentally cleared by 2022

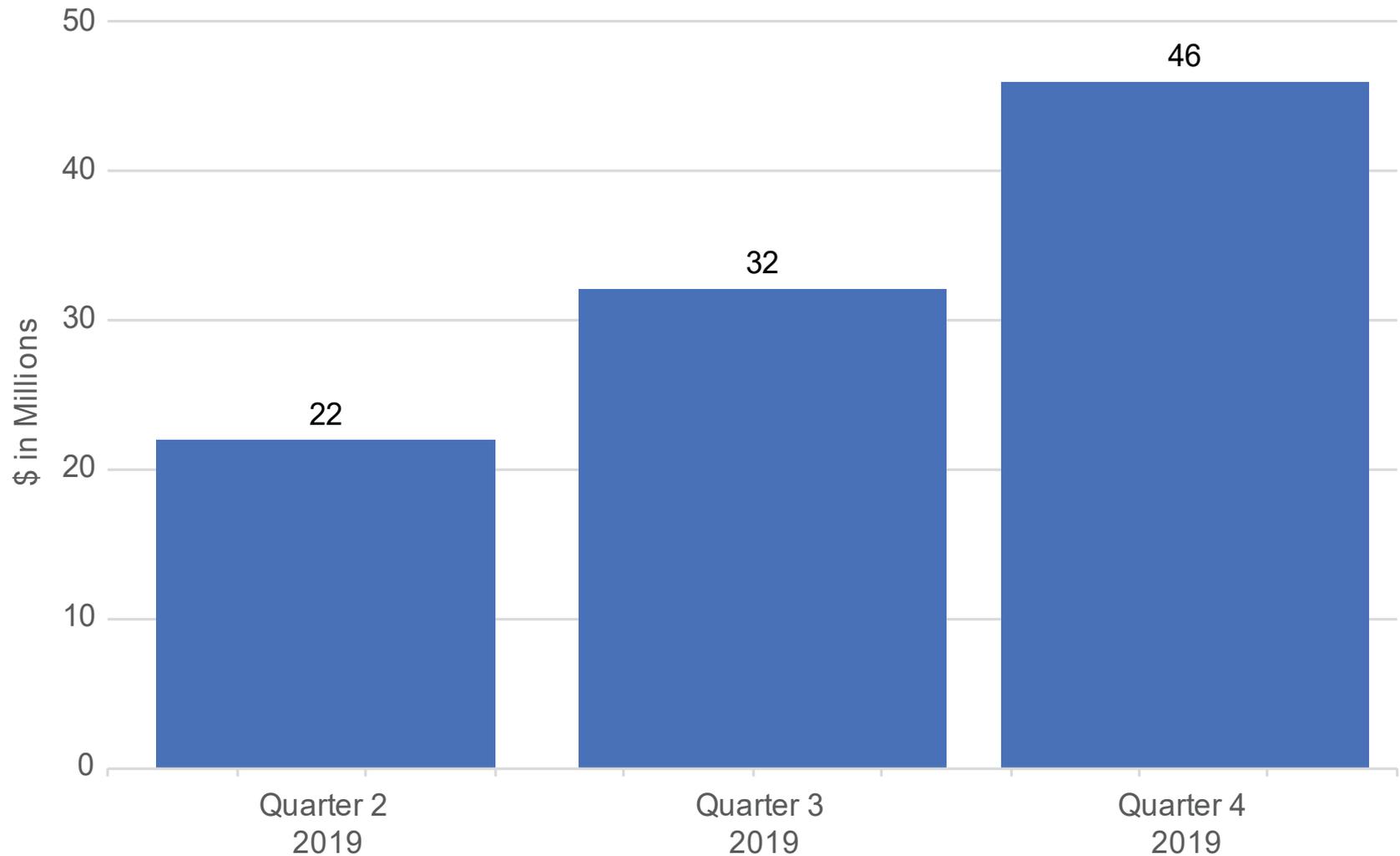
5. Rail can advance across the state while high-speed service is delivered from Merced to Bakersfield.

- » Extending Cap and Trade means billions for all transit and affordable housing
- » Targeting SB 1 rail funds to high-priority regional and commuter rail



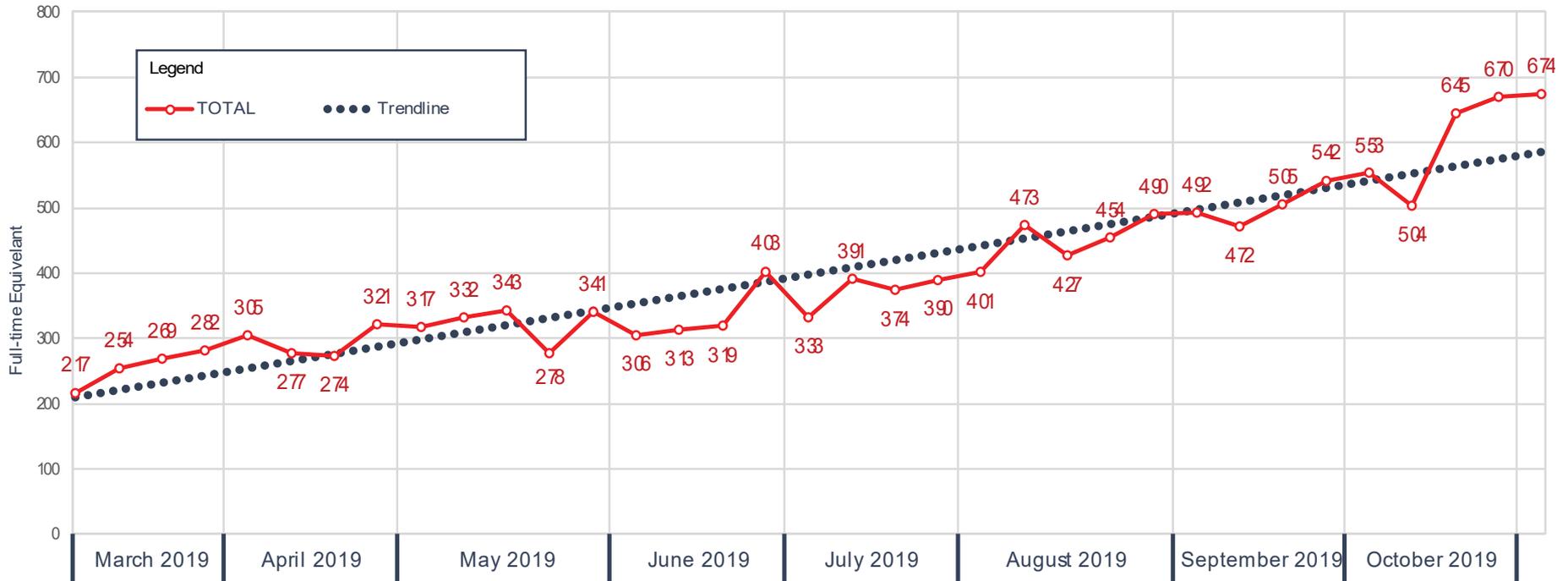
MOMENTUM PICKING UP IN THE FIELD

AVERAGE MONTHLY EXPENDITURES BY QUARTER



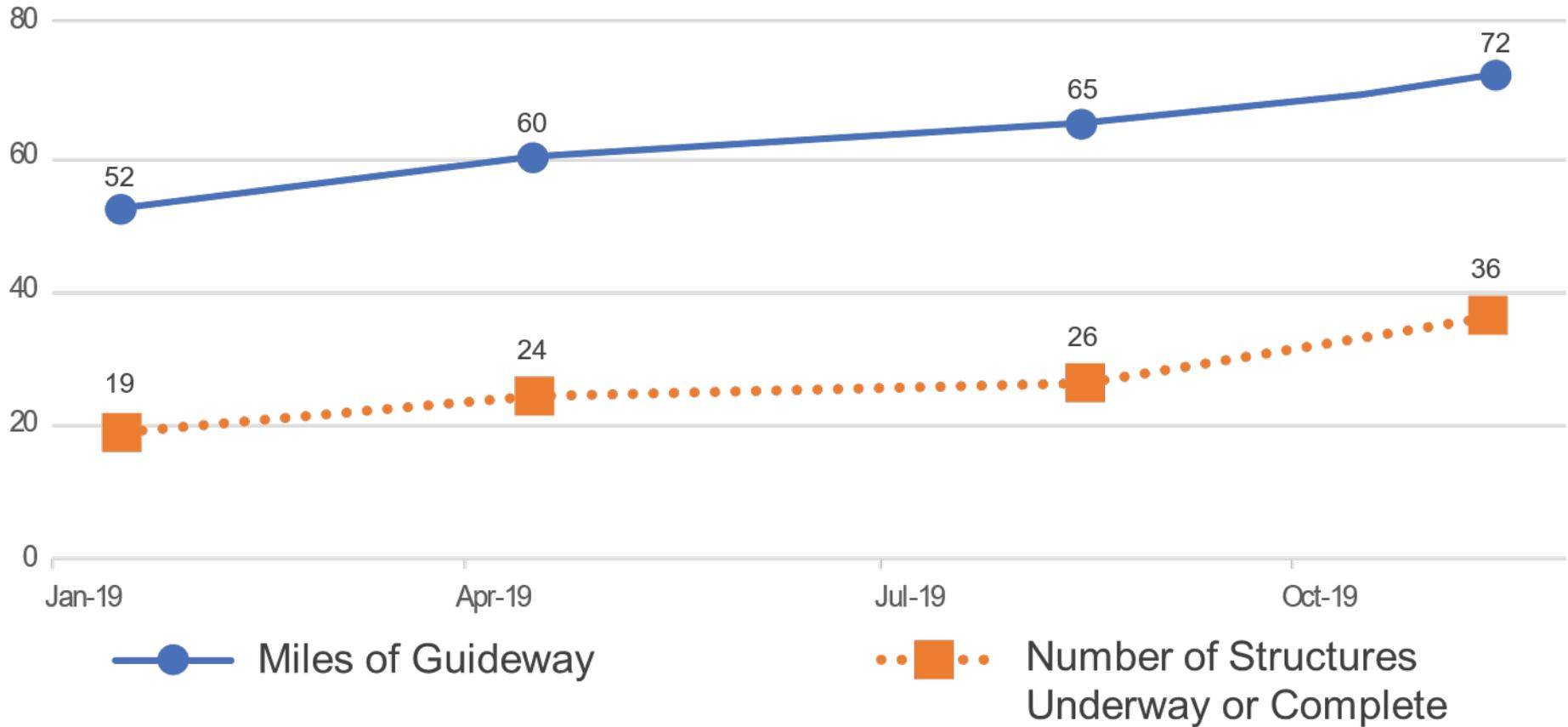
MOMENTUM PICKING UP IN THE FIELD

WEEKLY AVERAGE WORKERS DISPATCHED



MOMENTUM PICKING UP IN THE FIELD

STRUCTURE AND GUIDEWAY PROGRESS IN 2019



ADDITIONAL FUNDING GENERATED BY CAP-AND-TRADE EXTENSION TO 2050 (\$ IN BILLIONS)

Funding Uses	Allocation Percentage	\$2.0 Billion/Year Scenario	\$3.0 Billion/Year Scenario
High-Speed Rail	25	10	15
Transit and Intercity Rail Capital Program (TIRCP)	10	4	6
Low Carbon Transit Operations Program (LCTOP)	5	2	3
Affordable Housing/ Sustainable Communities Program (AHSC)	20	8	12
Safe and Affordable Drinking Water Program	5	2	3
Discretionary Funding for Other Projects	35	14	21
Total	100	40	60



DISCUSSION

CALIFORNIA HIGH-SPEED RAIL AUTHORITY

- **Schedule / Board Meetings**

- » Timing:

- » Business Plan Draft out Wednesday (2/12)
- » February Board Meeting Tuesday 2/18 Sacramento
- » March Board Meeting Tuesday 3/17 Los Angeles
- » April Board Meeting Tuesday 4/21 Fresno
- » May 1 Business Plan due to Legislature

