RIVERSIDE COUNTY TRANSPORTATION COMMISSION

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*WORKSHOP AGENDA**

***Actions may be taken on any item listed on the agenda**

***Times are estimated**

January 25 – 26, 2024

Renaissance Palm Springs Hotel
888 E. Tahquitz Canyon Way
Palm Springs, California 92262

In compliance with the Brown Act and Government Code Section 54957.5, agenda materials distributed 72 hours prior to the meeting, which are public records relating to open session agenda items, will be available for inspection by members of the public prior to the meeting at the Commission office, 4080 Lemon Street, Third Floor, Riverside, CA, and on the Commission's website, www.rctc.org.

In compliance with the Americans with Disabilities Act and Government Code Section 54954.2, if you need special assistance to participate in a Commission meeting, please contact the Clerk of the Board at (951) 787-7141. Notification of at least 48 hours prior to meeting time will assist staff in assuring that reasonable arrangements can be made to provide accessibility at the meeting.

The start times listed on the agenda are approximate and are included for guidance only. Agenda items may be taken out of the order listed on the agenda.

THURSDAY, JANUARY 25, 2024

PUBLIC COMMENTS – *Each individual speaker is limited to speak three (3) continuous minutes or less. The Commission may, either at the direction of the Chair or by majority vote of the Commission, waive this three minute time limitation. Depending on the number of items on the Agenda and the number of speakers, the Chair may, at his/her discretion, reduce the time of each speaker to two (2) continuous minutes. In addition, the maximum time for public comment for any individual item or topic is thirty (30) minutes. Also, the Commission may terminate public comments if such comments become repetitious. Speakers may not yield their time to others without the consent of the Chair. Any written documents to be distributed or presented to the Commission shall be submitted to the Clerk of the Board. This policy applies to Public Comments and comments on Agenda Items.*

Under the Brown Act, the Commission should not take action on or discuss matters raised during public comment portion of the agenda that are not listed on the agenda. Commission members may refer such matters to staff for factual information or to be placed on the subsequent agenda for consideration.

1:00 p.m. – 1:10 p.m. **CHAIR'S WELCOME AND WORKSHOP OBJECTIVES**

Lloyd White, Chair
Anne Mayer, Executive Director

1:10 p.m. – 1:30 p.m. **COACHELLA VALLEY RAIL PROJECT AFFIRMATION**

Page 1

This item is for the Commission to affirm the following:

1) That the Commission is the lead agency for delivering the Coachella Valley Rail Project (Project) and will be the venue for policy and funding decisions regarding the Project;
2) Continuation of the 10 percent set aside of Coachella Valley State Transit Assistance (STA) funds for the Project;
3) The Commission will set aside dedicated funding for the Project and future station maintenance and operations costs in the 2024 Traffic Relief Plan in both the Western County and Coachella Valley subregions of the plan and any funding measure submitted to the voters;
4) Coachella Valley and Western County subregions will pay for their proportional shares of the total project costs;
5) Staff is authorized to negotiate with host railroads, candidate operating entities, and state and federal agencies to advance the Project; and
6) Staff is directed to evaluate existing and future funding sources to fund future phases of the Project.

1:35 p.m. – 2:00 p.m. **2024 DRAFT TRAFFIC RELIEF PLAN – ECONOMIC IMPACT STUDY**

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This item is for the Commission to:

1) Receive and file the Economic Impact Study related to the 2024 draft Traffic Relief Plan (Plan).

2:00 p.m. – 2:30 p.m. **TRAFFIC RELIEF PLAN PUBLIC OPINION SURVEY AND FOCUS GROUP UPDATE**

This item is for the Commission to:

1) Receive and file the results of the 2023 public opinion survey and focus groups.

2:30 p.m. – 3:00 p.m. **REFRESHMENT BREAK**

3:00 p.m. **CLOSED SESSION**

CONFERENCE WITH LEGAL COUNSEL—ANTICIPATED LITIGATION

Significant exposure to litigation pursuant to paragraph (2) of subdivision (d) of Section 54956.9:
One or more potential case(s)

Upon Adjournment from Closed Session – 5:00 p.m. **LEGISLATIVE UPDATE**

This item is for the Commission to:

1) Receive a legislative update.

ACA-1 TRAFFIC RELIEF PLAN OPTION

This item is for the Commission to:

1) Receive information regarding ACA-1 and provide direction to staff.

TRAFFIC RELIEF PLAN PROJECTS AND COST DISCUSSION

This item is for the Commission to:

1) Receive an update on Traffic Relief Plan projects and costs and provide comments.

5:15 p.m. – 6:00 p.m. **BREAK**

6:00 p.m. **DINNER**

7:00 p.m. **ADJOURNMENT**

The workshop will continue at 8:30 a.m., Friday, January 26, 888 E. Tahquitz Canyon Way, Palm Springs, California 92262.

FRIDAY, JANUARY 26, 2024

7:30 a.m. – 8:30 a.m. **BREAKFAST**

PUBLIC COMMENTS – *Each individual speaker is limited to speak three (3) continuous minutes or less. The Commission may, either at the direction of the Chair or by majority vote of the Commission, waive this three minute time limitation. Depending on the number of items on the Agenda and the number of speakers, the Chair may, at his/her discretion, reduce the time of each speaker to two (2) continuous minutes. In addition, the maximum time for public comment for any individual item or topic is thirty (30) minutes. Also, the Commission may terminate public comments if such comments become repetitious. Speakers may not yield their time to others without the consent of the Chair. Any written documents to be distributed or presented to the Commission shall be submitted to the Clerk of the Board. This policy applies to Public Comments and comments on Agenda Items.*

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8:30 a.m. – 9:00 a.m. **TRAFFIC RELIEF PLAN FOLLOW UP AND NEXT STEPS**

This item is for the Commission to:

1) Provide additional input and direction on Traffic Relief Plan from previous day discussion.

9:00 a.m. – 10:00 a.m. **STATE ROUTE 79 REALIGNMENT PROJECT UPDATE AND CORRIDOR ANALYSIS**

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This item is for the Commission to:

1) Direct staff to develop the necessary agreement(s) with the California Department of Transportation (Caltrans) to modify the State Route 79 (SR-79) Realignment Project (Project) from a State Route to a future County expressway;
2) Direct staff to develop the necessary agreements or documentation to designate the Commission the California Environmental Quality Act (CEQA) lead agency;
3) Adopt the proposed segments of the Project identified by the Corridor Analysis Study; and
4) Direct staff to proceed with one of the following Options:

Alternative A

a) Direct staff to draft a Request for Proposals (RFP) for the Project's Plans, Specifications, and Estimates (PS&E) phase and continue the acquisition of right of way for the SR-79 Segment 3 Modified Limits, 0.35 miles south of Newport Road to Simpson Road, or SR-79 Segment 3, 0.35 miles south of Newport Road to Domenigoni Parkway.
b) Amend the 2019-2029 Measure A Western County Highway Delivery Plan to add SR-79 Segment 3 Modified or Segment 3 to "Group 2: Partially Funding Likely Available" of the Commission-adopted Delivery Plan;
c) Direct staff to identify and recommend funding sources and any other prioritization changes necessary to the 2019-2029 Measure A Western County Highway Delivery Plan to complete PS&E and Right of Way (ROW) phases for the segment selected.

Alternative B

a) Direct staff to proceed with limited, willing seller, core parcel SR-79 corridor ROW acquisition utilizing available Regional and Zone Transportation Uniform Mitigation Fee (TUMF) funding;
b) Amend the 2019-2029 Measure A Western County Highway Delivery Plan to add limited SR-79 ROW acquisition to "Group 2: Partially Funding Likely Available" of the Commission-adopted Delivery Plan.
c) Reconsider advancing at least one segment upon identification of funding sufficient for construction for that segment.

Alternative C

a) Maintain current 2019-2029 Measure A Western County Highway Delivery Plan projects and suspend further work on SR-79. Reconsider suspension upon identification of funding sufficient for construction of at least one segment.

10:00 a.m. – 10:30 a.m. **GOODS MOVEMENT UPDATE**

This item is for the Commission to:

1) Receive and file an update on current goods movement studies.

10:30 a.m. – 10:45 a.m. **CLOSING REMARKS**

Lloyd White, Chair
Anne Mayer, Executive Director

10:45 a.m. **ADJOURNMENT**

RIVERSIDE COUNTY TRANSPORTATION COMMISSION	
DATE:	January 25, 2024
TO:	Riverside County Transportation Commission
FROM:	Erik Galloway, Project Delivery Director Lorelle Moe-Luna, Multimodal Director
THROUGH:	Anne Mayer, Executive Director
SUBJECT:	Coachella Valley Rail Project Affirmation

STAFF RECOMMENDATION:

This item is for the Commission to affirm the following:

1) That the Commission is the lead agency for delivering the Coachella Valley Rail Project (Project) and will be the venue for policy and funding decisions regarding the Project;
2) Continuation of the 10 percent set aside of Coachella Valley State Transit Assistance (STA) funds for the Project;
3) The Commission will set aside dedicated funding for the Project and future station maintenance and operations costs in the 2024 Traffic Relief Plan in both the Western County and Coachella Valley subregions of the plan and any funding measure submitted to the voters;
4) Coachella Valley and Western County subregions will pay for their proportional shares of the total project costs;
5) Staff is authorized to negotiate with host railroads, candidate operating entities, and state and federal agencies to advance the Project; and
6) Staff is directed to evaluate existing and future funding sources to fund future phases of the Project.

BACKGROUND INFORMATION:

For over 30 years, the Commission has been advocating for passenger rail service to the Coachella Valley and we have never been closer than we are today.

In 1991, the Los Angeles, Coachella Valley, Imperial County Intercity Rail Feasibility Study was completed that outlined the route and potential opportunities and challenges of establishing a passenger rail service. Other studies occurred through the years and the effort restarted in earnest with a 2010 Coachella Valley Rail Study update. This led to the Caltrans-led Coachella Valley Rail Planning Study completed in 2013.

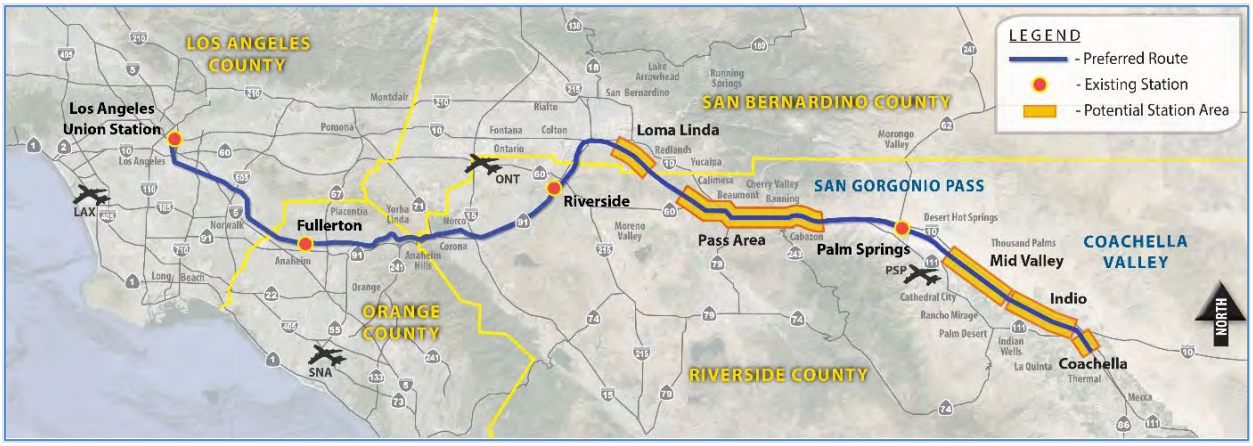
In October 2013, the Commission took bold action to advance the project by approving Resolution No. 13-042, *"Resolution of Support to Establish Daily Intercity Rail Service from Los Angeles to the Coachella Valley Via the Pass Area,"* in which the Commission committed to

overseeing preparation of a Service Development Plan (SDP) in coordination with the Caltrans Division of Rail and Mass Transit and the Federal Railroad Administration (FRA) as the next step toward establishing daily rail service between Los Angeles and the Coachella Valley. Concurrently, the Commission also approved a 10 percent set aside for STA funding for the purpose of rail project development from the STA share of funds attributable to the Coachella Valley. The 10 percent set aside was phased in between Fiscal Year (FY) 2015 and 2017, to allow SunLine Transit Agency to adjust. In FY 2023, the STA set aside provided an allocation of $441,200 to the Project.

In May 2014, following a competitive procurement process, the Commission awarded a contract to HDR to prepare a full SDP starting with an Alternatives Analysis (AA), followed by an SDP and Tier 1 program-level Environmental Impact Statement (EIS)/Environmental Impact Report (EIR).

In July 2016, the AA was completed and accepted by the Commission and FRA with the recommendation of a preferred route to be carried forward for analysis in an SDP and Tier 1 EIS/EIR. The preferred route, as shown in Figure 1, would span 144 miles from Los Angeles Union Station (LAUS), through Fullerton, Riverside, and the San Gorgonio Pass, to Indio or Coachella (Corridor), operating primarily over tracks owned by the BNSF Railway (BNSF) from Los Angeles to Colton, and tracks owned by the Union Pacific Railroad (UP) between Colton and Indio or Coachella.

Figure 1: Map of Proposed CV Rail Corridor



After five years of analysis and development, the draft Tier 1 EIS/EIR was released in summer 2021 for public comment. All public comments were reviewed and addressed in the Final Tier 1 EIS/EIR and on July 13, 2022, the Commission adopted Resolution No. 22-015 *"Resolution of the Riverside County Transportation Commission Certifying the Final Tier 1/Program Environmental Impact Statement/Environmental Impact Report for the Coachella Valley-San Gorgonio Pass Rail Corridor Service Program, Adopting Findings of Fact under the California Environmental Quality Act, Adopting a Mitigation Monitoring and Reporting Program, Adopting a Statement of Overriding Considerations, and Approving the Program"* and selected alternative Option 1, which assumes up to two daily round passenger rail trips between LAUS and the city of Coachella. This alternative is focused on the eastern section. In the eastern segment of the Corridor, the existing station in Palm Springs would be improved and utilized, and up to five new potential stations could be constructed in the Loma Linda/Redlands Area, the Pass Area, the Mid-Valley Area, the

city of Indio, and the city of Coachella. A third main line track and associated infrastructure would augment the existing two main tracks along the entire eastern section of the Corridor from Colton to Coachella. For the western section, existing stations in Los Angeles, Fullerton and Riverside would be utilized. For the Corridor from Los Angeles to Colton, RCTC has a Shared Use Agreement with BNSF for additional passenger rail service; however, discussions are needed to determine if railroad infrastructure improvements in the western section are needed, beyond what is planned for Metrolink.

To date, the Commission has expended nearly $11.5 million on the project, comprising of the following sources:

CV Rail Funding to Date	Total
Local Transportation Fund	$ 664,000
State Transit Assistance	$ 3,426,000
Proposition 1B	$ 4,200,000
FRA Grant	$ 2,900,000
Interest on Grants	$ 291,000
Total	$ 11,481,000

Of the nearly $11.5 million, $8.3 million were from formula funds, of which 57 percent came from the Western County share and 43 percent from the Coachella Valley share.

Project Status

Over the course of the last year, there has been ongoing coordination with key project stakeholders such as California State Transportation Agency (CalSTA), Caltrans Division of Rail, FRA, and UP to develop a scope of work and set the framework on the roles and responsibilities for the next phases of work. Negotiations are currently underway with UP on a reimbursement agreement that would allow UP staff and consultants to review RCTC design and environmental technical studies along with granting access to RCTC to conduct the necessary field studies required for the Tier 2 Project Level EIR/EIS. RCTC is also initiating discussions at the state and federal level to determine lead agency for National Environmental Protection Act (NEPA) oversight of the Tier 2 EIR/EIS. This is a key element of the project that needs to be finalized before moving forward with the Tier 2 EIR/EIS. Another key element is the identification of the managing agency for the future rail operations. RCTC staff has held preliminary conversations with the Los Angeles-San Diego-San Luis Obispo Rail Corridor (LOSSAN) staff on the possibility of LOSSAN serving as the managing agency of the service, and on January 17, 2024, Executive Director Anne Mayer sent a letter to the LOSSAN Managing Director to seek their commitment to move forward. RCTC has received feedback from FRA that identifying the future operator of the Project is critical to the project's competitiveness for federal grant funding. In December 2023, the Project was included in the FRA Corridor Identification Program, which makes the Project more competitive for future federal funding. This award includes $500,000 in funding to Caltrans for an updated SDP that will look at expanding from two daily round trips to five daily

round trips and address the managing agency, host railroad, and operator logistics. The updated SDP process will be completed in coordination with Caltrans.

Next steps

The next steps will include, but are not limited to, the following, which will occur currently:

Tier 2 EIR/EIS

- Finalize and execute RCTC and UP Reimbursement Agreement
- Release Request for Proposals for Tier 2 EIR/EIS
- Select consultant team for Tier 2 EIR/EIS
- Scoping meetings
- Station site selection process
- Alternative Analysis
- Environmental Technical studies
- Development of Tier 2 Draft EIR/EIS
- Draft EIR/EIS Public Circulation
- Public Meetings
- Preferred Alternative Selection
- Final EIR/EIS
- Record of Decision and Notice of Determination

Staff estimates that the Tier 2 EIR/EIS phase will take approximately six to seven years and could cost $60 - $80 million dollars.

SDP Update

- Develop revised scope of work
- Release Request for Proposals
- Select consultant team
- Complete SDP update
- Obtain FRA Approval

The SDP update is likely to take approximately two years.

LOSSAN Managing Agency Coordination

- Initiate coordination meetings
- Coordinate with staff to update LOSSAN Board on proposal and initiatives

Host Railroad Discussions

- Initiate Shared Use Agreement discussions with UP and BNSF, based on their preferred process.

The SDP update, identification of a managing agency, and discussions with host railroads will be concurrent to the Tier 2 EIR/EIS process.

DISCUSSION:

A project of this magnitude involves a significant commitment of public resources and requires the Commission to place its name and credibility behind agreements with multiple public and private entities. This Project is also the only project that RCTC has ever undertaken that spans both Western County and the Coachella Valley, meaning that decisions regarding the project have implications for the entire county. Nonetheless, the Project is not in the Measure A expenditure plan approved by Riverside County voters 2002 meaning that local funds are not available, and the Project must therefore rely on state and federal funds. These unique attributes of the Project prompt RCTC staff to request that the Commission affirm its support for the Project with the intent to develop a path to full funding and delivery. Specifically, staff seeks affirmation of the following:

1. The Commission is the lead agency for delivering the Project and will be the venue for policy and funding decisions regarding the Project;
2. Continuation of the 10 percent set aside of Coachella Valley STA funds for the Project;
3. The Commission will set aside dedicated funding for the Project and future station maintenance and operations costs in the 2024 Traffic Relief Plan in both the Western County and Coachella Valley subregions of the plan and any funding measure submitted to the voters;
4. Coachella Valley and Western County subregions will pay for their proportional shares of the total project costs;
5. Staff is authorized to negotiate with host railroads, candidate operating entities, and state and federal agencies to advance the Project; and
6. Staff is directed to evaluate existing and future funding sources to fund future phases of the Project.

FISCAL IMPACT:

There is no fiscal impact for this item. Staff will continue to provide the Commission with regular status updates and seek approvals for necessary agreements and/or policy revisions.

RIVERSIDE COUNTY TRANSPORTATION COMMISSION	
DATE:	January 25, 2024
TO:	Riverside County Transportation Commission
FROM	Matt Wallace, Deputy Director of Financial Administration Sergio Vidal, Chief Financial Officer
THROUGH:	Aaron Hake, Deputy Executive Director
SUBJECT:	2024 Draft Traffic Relief Plan – Economic Impact Study

STAFF RECOMMENDATION:

This item is for the Commission to:

1) Receive and file the Economic Impact Study related to the 2024 draft Traffic Relief Plan (Plan).

BACKGROUND INFORMATION:

In June 2023, the Commission entered into Agreement No. 23-19-014-00 with Beacon Economics, LLC (Beacon) to perform an economic impacts analysis (Study) related to the investment of a one-cent sales tax for transportation improvements in Riverside County, as outlined in the draft 2024 Traffic Relief Plan (TRP or Plan). Beacon was established in 2006 and has been providing the Commission with economic analyses and revenue forecasting services since 2010.

Beacon's independent Study is intended to provide Commissioners with data upon which to base decisions about the contents of the TRP and whether it should be funded through a sales tax ordinance submitted to voters. The Study considers not only the potential benefits of investing public funds on infrastructure, but also the costs of raising a tax to provide that investment. In order to quantify, analyze, and understand economic impact effects and community impacts, staff provided Beacon a list of twelve major capital transportation projects. The list of projects was used to develop the Study and the Socio-economic Benefits Analysis. The Study's analysis included:

- ***Sales Tax Revenue Forecast-*** *Analyze, forecast, and understand implications of a one-cent sales tax scenario in Riverside County. Provide a long-range forecast of revenues, model all relevant input drivers, and incorporate the impact of e-commerce.*

- ***Cumulative Economic Impact Analysis of RCTC's Strategic Projects-*** *Model the cumulative and project specific economic impacts (output, employment, compensation) on the local Riverside economy from direct expenditures of major capital transportation projects and programmatic expenditure categories.*

- ***Socio-economic Benefit Analysis of RCTC's Strategic Projects –*** *Model and monetize the benefits stemming directly from projects' impact on transportation time, safety, and other factors. These impacts do not represent an actual transfer of money, but instead it is a combination of mitigation costs forgone and increased productivity.*

On October 11, the Commission approved the TRP for public circulation and comment through early 2024. Beacon's independent analysis will be incorporated into the public information shared with the public. This staff report focuses on the results of Beacon's Study.

Summary

Sales Tax Revenue Forecast

Beacon estimates the total nominal revenue generated from a one-cent sales tax is approximately $25 billion over the 30-year planning horizon from April 2025 to April 2055.

The primary components in developing the revenue forecast are taxable sales forecasts, e-commerce, and tax elasticities. Beacon used a top-down approach whereby their models begin with accurate projection of the local population and labor force. These initial forecasts anchor all subsequent forecasts to the specific growth dynamics of the region and minimize drift in projections that can arise when using state and national drivers. Beacon's methodology included a detailed analysis of historical data, including visual inspection, unit root testing, checking for autocorrelation, seasonality, cointegration, and other time series diagnostics. Additionally, a variety of methods were used to bolster forecast accuracy, including in-sample and out-of-sample testing and re-estimating forecast models each quarterly update.

Cumulative Economic Impact Analysis of RCTC's Strategic Projects

The Study indicates that construction resulting from additional transportation funding would benefit the Riverside County economy. Beacon's $25 billion (nominal 2025 dollars) from Fiscal Year 2024/25 through 2054/55 projection would support $20.4 billion in construction, engineering, and design spending in Riverside County. The $20.4 billion in construction-related spending would multiply as it rippled through the Riverside County economy, generating a larger economic impact than the initial spending. After analyzing projected construction, engineering, and design spending, Beacon found that the construction spending would generate $30.9 billion in economic output and support 168,600 jobs (full and part time) and pay $10.9 billion in workforce income in Riverside County.

- Of the $30.9 billion in economic output generated in Riverside County, $20.4 billion would represent direct spending, and $10.5 billion would represent secondary spending by businesses and workers down the supply chain.

- Of the 168,600 jobs supported in Riverside County, 109,200 would represent jobs directly supported by transportation infrastructure spending, and 59,400 would be supported through secondary spending by businesses and workers down the supply chain.

- Of the $10.9 billion in workforce income generated in Riverside County, $7.7 billion would represent wages directly supported by transportation infrastructure spending, and $3.2 billion would come from businesses and workers down the supply chain.

Economic Impact Summary

Revenue Scenario	Estimated Investment	Jobs Supported	Labor Income	Economic Output
One-Cent	$25 billion	168,600*	$10.9 billion**	$30.9 billion**

Note: Totals may not add due to rounding
**Jobs Supported = An Industry-specific mix of full-time, part-time, and seasonal employment that are supported by project expenditures this includes Direct, Induced, and Indirect Jobs supported*
*** Direct, Induced, and Indirect Impact total*

To estimate the total economic and fiscal impact of the draft 2024 TRP project spending on Riverside County, Beacon used data from the set of projects listed in the Plan, spending allocations, prevailing wage estimates, and the one-cent sales tax revenue forecast. Staff provided estimates of recent projects to Beacon to model the expenditure assessments. The examples analyzed by Beacon reflect potential projects and expenditure categories evaluated by the Commission in the development of the Plan. Every project in the Plan cannot be analyzed due to time and cost constraints.

Beacon Economics then used Impact Analysis for Planning (IMPLAN), a state-of-the-art input-output modeling system that estimates how certain expenditures correlate and affect other industries in the economy to generate the total economic and fiscal impacts. Impact studies assume that any increase or change in spending has an economic direct, indirect, and induced effect.

The total economic impacts consist of the one-time increases in total output, employment, and labor income in Riverside County associated with construction activities resulting from project prototype expenditures. All of the projects and most of the employment and economic activity will be in Riverside County.

Socio-economic Benefit Analysis of RCTC's Strategic

The socio-economic benefits resulting from the 12 proposed RCTC projects are exhibited in three primary ways: travel time savings, safety improvements, and emissions reductions. These benefits are calculated over a 30-year period and should be considered as the gross benefits derived by actual use of the projects following their completion. The following monetized values follow the U.S. Department of Transportation standards for benefit-cost analyses (BCAs). It should be noted that this analysis is a high-level estimate and is not intended to comply with or part of a California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) process. When the individual projects commence the environmental phase, then the CEQA and NEPA compliant BCA will be performed.

Travel time savings contribute to increased productivity, as commute time is considered not productive, especially compared to work hours or leisure time. Thus, reductions in travel time spurred on by projects can be aggregated over all local riders and working days to determine total hours of travel avoided following the project's completion, and assigned a monetary value, based on median local incomes.

Safety improvements demonstrate a monetary value to reducing transportation accidents, injuries, and fatalities.

Finally, emissions reductions factor in the value to mitigating air pollutants that are damaging to health (such as sulfur oxides or fine particulate matter) or greenhouse warming effects (such as carbon dioxide). These reductions in emissions are calculated as a factor of a reduction in vehicle miles travelled stemming from transit projects, and ascribed a dollar value based on the potency of the emission.

As a result of the 12 example projects taken from draft 2024 TRP, approximately three-quarters of the total socio-economic monetary benefit are derived from reductions in travel times. Safety improvements and emissions reductions represent around 23 percent and 3 percent of the total socio-economic benefit. Total benefits are estimated within a range of $6.2 billion to $12.7 billion, with a midpoint estimate of $9.7 billion over the 30-year analysis window.

Socio-economic Benefit Summary

Benefit Type	Lower Bound	Estimate	Upper Bound
Time Savings	$4.4 Billion	**$7.1 Billion**	$9.4 Billion
Safety Improvements	$1.5 Billion	**$2.2 Billion**	$3.0 Billion
Emissions Reduction	$279 Million	**$297 Million**	$330 Million
30-Year Total	$6.2 Billion	**$9.7 Billion**	$12.7 Billion

Each of the 12 projects was evaluated individually for its impacts, and not all projects exhibited all three types of benefits. Nevertheless, the $9.7 billion figure represents a fair estimate of the

30-year quantifiable impact of the project set. Furthermore, there are non-monetized benefits to which these projects contribute to, such as business growth resulting from improved connectivity, improved health from active transportation usage, reduced incentive for aggressive driving, and other benefits. Since these impacts arise more nebulously, it is difficult to accurately attribute causality and quantify them; furthermore, there do not exist institutional standards by which to monetize such impacts. Despite these difficulties, they are important to mention as additional social benefits on top of the $9.7 billion figure.

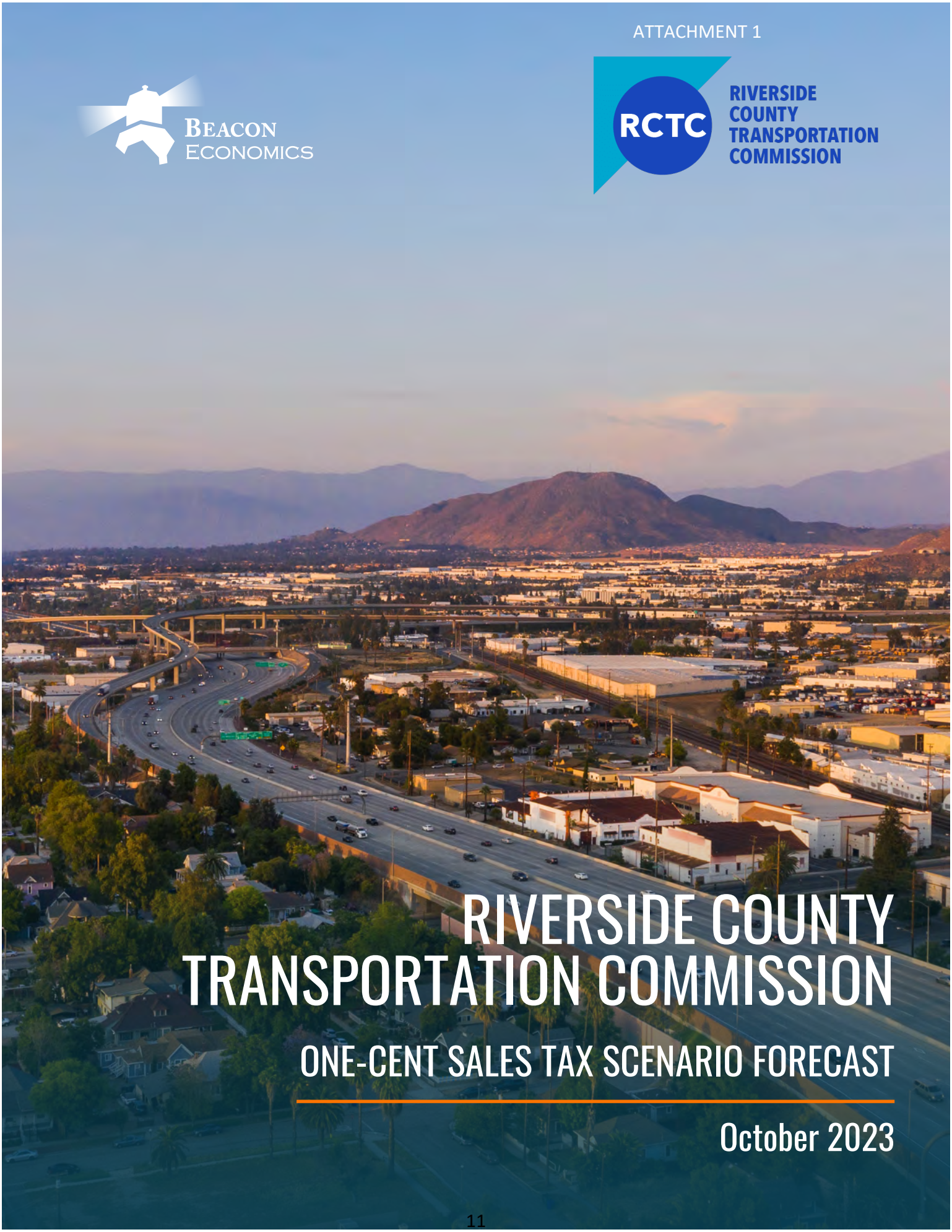
These impacts come as a benefit occurring within Riverside County, although the benefits are dispersed among users, and do not reflect an actual exchange of money.

Attachments:
1) One-Cent Sales Tax Scenario Forecast Report
2) TRP Economic & Fiscal Impacts Report
3) Socio-economic Benefits Analysis

ATTACHMENT 1

BEACON ECONOMICS

RCTC RIVERSIDE COUNTY TRANSPORTATION COMMISSION



RIVERSIDE COUNTY TRANSPORTATION COMMISSION

ONE-CENT SALES TAX SCENARIO FORECAST

October 2023

About Beacon Economics

Founded in 2007, Beacon Economics, an LLC and certified Small Business Enterprise with the state of California, is an independent research and consulting firm dedicated to delivering accurate, insightful, and objectively based economic analysis. Employing unique proprietary models, vast databases, and sophisticated data processing, the company's specialized practice areas include sustainable growth and development, real estate market analysis, economic forecasting, industry analysis, economic policy analysis, and economic impact studies. Beacon Economics equips its clients with the data and analysis required to understand the significance of on-the-ground realities and to make informed business and policy decisions.

Learn more at www.BeaconEcon.com

Project Team

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UNITED STATES OUTLOOK

Christopher Thornberg PhD, Founding Partner

HIGHLIGHTS

- **U.S. Economy Far From a Downturn** – 2023 data shows that the U.S. economy is stronger today than it was a year ago. Gross Domestic Product (GDP) growth is solid, job growth is ongoing, industrial production remains near record-highs, profits and wages are rising, and U.S. debt markets are showing little sign of stress.

- **Still, there are Headwinds** – Despite these strengths, Beacon Economics is less optimistic today than a year ago. The Fed's excessive $5 trillion in quantitative easing, and the resulting 40% jump in the money supply, created massive government deficits and a large asset bubble. The U.S. economy has weathered rising interest rates over the last year largely because of these imbalances, but increasing rates also imply that inflationary pressures are not behind us and more Fed tightening is ahead.

- **Limited Interest Rate Stresses** – The sharp rise in the cost of capital is causing signs of stress, particularly in the real estate industry. But that stress has not spread to the debt markets as lending institutions continue to have record-low delinquencies.

U.S. FORECAST OUTPUT

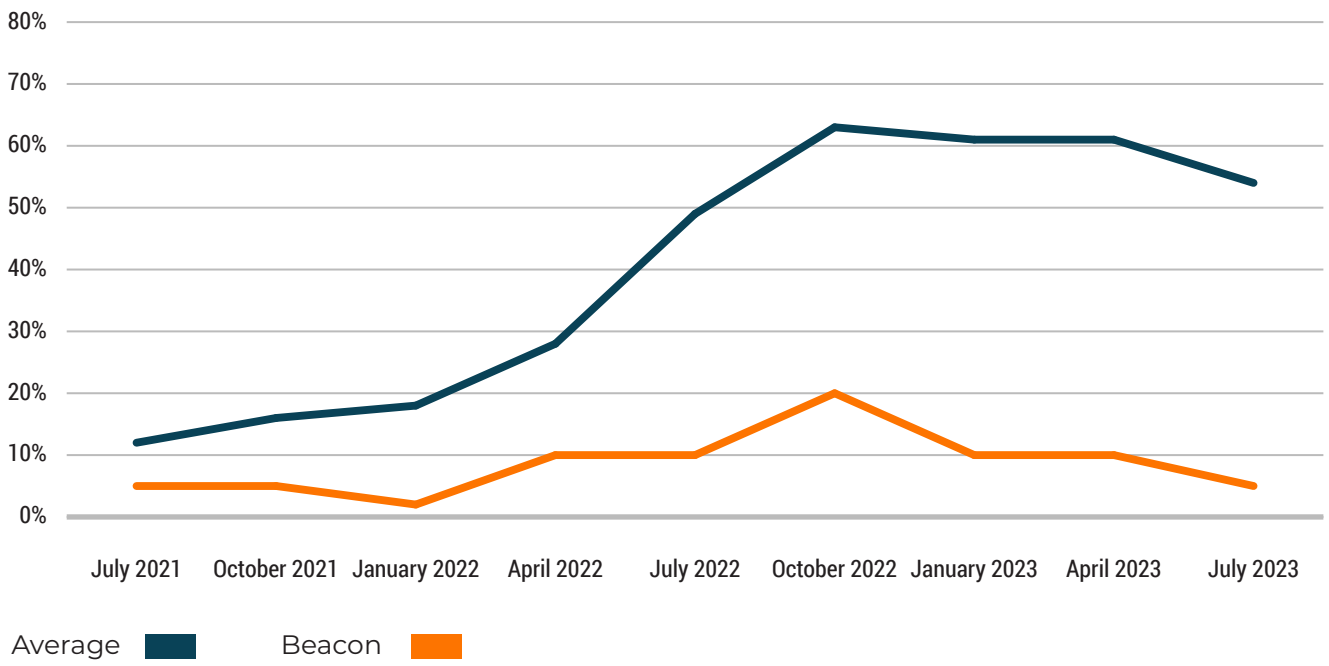
	Current	Forecast			
	Q2-23	Q3-23F	Q4-23F	Q1-24F	Q2-24F
Real GDP (Billions, 2012$)	**19,372.0**	19,563.1	19,625.0	19,679.2	19,768.0
Real GDP (% Change from Preceding Period, SAAR)	**2.1**	4.0	1.3	1.1	1.8
Consumer Spending (Billions, 2012$)	**13,563.7**	13,681.6	13,741.9	13,787.6	13,865.9
Consumer Spending (% Change from Preceding Period, SAAR)	**1.7**	3.5	1.8	1.3	2.3
Fixed Investment (Billions, 2012$)	**3,585.5**	3,645.1	3,657.8	3,671.0	3,687.0
Fixed Investment (% Change from Preceding Period, SAAR)	**3.3**	6.8	1.4	1.5	1.8
Nonresidential Investment	**3,513.0**	3,538.9	3,555.2	3,565.3	3,578.2
Nonresidential Investment (% Change from Preceding Period, SAAR)	**3.9**	3.0	1.9	1.1	1.5
Residential Investment (Billions, 2012$)	**-1.5**	28.1	24.6	27.3	29.8
Residential Investment (% Change from Preceding Period, SAAR)	**3,264.6**	3,280.0	3,291.9	3,302.5	3,310.6
Change in Private Inventories (Billions, 2012$)	**3.3**	1.9	1.5	1.3	1.0
Government Spending (Billions, 2012$)	**-1,015.1**	-1,014.9	-1,045.4	-1,065.9	-1,083.5
Government Spending (% Change from Preceding Period, SAAR)	**1.9**	-0.1	12.6	8.1	6.8
Exports (Billions, 2012$)	**2,294.9**	2,335.7	2,370.2	2,395.4	2,423.5
Exports (% Change from Preceding Period, SAAR)	**-10.6**	7.3	6.0	4.3	4.8
Imports (Billions, 2012$)	**3,310.0**	3,350.6	3,415.7	3,461.3	3,507.0
Imports (% Change from Preceding Period, SAAR)	**-7.0**	5.0	8.0	5.5	5.4

Source: U.S. Bureau of Economic Analysis; Forecast by Beacon Economics

A little over a twelve months ago, the forecast community began predicting that the U.S. economy would fall into recession "within a year." Of the 60 commentators who contributed to the October 2022 Wall Street Journal Economic Forecasting Survey, almost a third said there was a 75% or greater chance of a recession occurring by October 2023. Four out of five said there was a greater than even chance of a recession, while some put the probability as high as 100%, a level of certainty that is, frankly, inappropriate in economic forecasting. Overall, the average probability in the Journal's survey has been above 50% for a year.[1] By the beginning of 2023, the media had begun to discuss the expected downturn as if it was a fait accompli. It was not a case of 'if' but of 'when', and 'how bad'.

[1] A review of nearly two decades of results from the WSJ's Economic Forecasting Survey shows that there were only two other times when this average probability rose above 40%, in January 2008 and March 2020. Notably, these were the months after the starts of the Great Recession and Pandemic Recession, respectively. In other words, the forecast community tends to predict recessions after they have already begun, although to be fair, these official start dates are determined retroactively by the National Bureau of Economic Research. One could say that forecasters have been good at 'current casting'. Perhaps this, along with a general preference for bad news, is why many in the media began to treat a coming recession as fait accompli at the start of 2023.

WSJ RECESSION PROBABILITY FORECAST - CHANCE OF U.S. ENTERING A RECESSION IN THE NEXT 12 MONTHS



Source: Wall Street Journal Economic Forecasting Survey; Analysis by Beacon Economics

Beacon Economics never bought into the recession hyperbole, and we never raised our probability above 20% in the Journal's survey—one of only 2 contributing forecasts to be so optimistic over the past year. That optimism has been largely born out in the data; an even cursory glance at 2023 data shows that the U.S. economy is not only far from a downturn, it's actually stronger today than it was a year ago. GDP growth over the last year has averaged 2.5% SAAR, buoyed by solid growth in consumer spending. The nation has seen continued job growth, industrial production remains near record-high levels, profits and wages are rising, and U.S. debt markets are showing little sign of stress. This strength is moving into the second half of the year. According to the GDPNow estimate from the Atlanta Fed, growth in the third quarter of this year could come in between 5% and 6%. [2]

Perhaps more telling, our best leading indicators suggest little change in the current trajectory. Manufacturing orders remain high even while inventories for key goods like autos remain low, housing permits and starts have stabilized at non-recession levels, and the job openings rate remains well above normal. Moreover, notwithstanding occasional news stories about rising credit card debt, overall household finances look great and net worth has recovered from last year's decline. While overall household debt levels are growing slowly, debt burdens remain low and the consumer savings rate has actually started to rise despite a steady growth in spending. Amusingly, news headlines are now gushing about the economy's "near miss" despite the reality that there was really very little to hit in the first place. We are out of the woods. We can comfortably forecast that the Wall Street Journal's recession probability estimate will begin to fall over the next year.

[2] https://www.atlantafed.org/cqer/research/gdpnow

CALIFORNIA OUTLOOK

Sean Windle, Research Manager

HIGHLIGHTS

- **California Adds Jobs** – California has added more than 440,000 jobs since the trough of the pandemic, but that translates to just 2.5% growth. In other words, California's job gains are largely a function of its size.

- **Labor Force Still Below Pre-Pandemic Peak** – There are still roughly 168,000 fewer workers in California's labor force than there were before the pandemic, a 0.9% decline. In contrast, the national labor force has grown by about 2.7 million workers.

- **New Household Formation Exacerbating Housing Crisis** – Confoundingly, from 2020 to 2023, California lost about 600,000 people but added about 263,000 new households. The number of people per household also declined from 2.86 to 2.77.

CALIFORNIA FORECAST: KEY INDICATORS

	Q2-23	Q3-23 (F)	Q4-23 (F)	Q1-24 (F)	Q2-24 (F)
Nonfarm Payrolls (000s, SA)	18,069	18,257	18,324	18,357	18,373
Unemployment Rate (%, SA)	4.53	4.64	4.69	4.73	4.83
Real GDP (Millions 2012$, SAAR)	2,987,714	3,014,649	3,028,322	3,049,358	3,063,500
Home Prices ($, SA)	656,807	662,854	667,793	675,312	685,914
	Q3-24 (F)	Q4-24 (F)	Q1-25 (F)	Q2-25 (F)	Q3-25 (F)
Nonfarm Payrolls (000s, SA)	18,384	18,392	18,401	18,410	18,425
Unemployment Rate (%, SA)	4.96	5.10	5.22	5.34	5.43
Real GDP (Millions 2012$, SAAR)	3,075,519	3,090,151	3,102,532	3,115,083	3,130,077
Home Prices ($, SA)	696,480	706,511	714,496	722,508	730,503

Source: U.S. Bureau of Labor Statistics; Analysis by Beacon Economics

AN EXPANDING, ALBEIT CONSTRAINED CALIFORNIA ECONOMY

California continues to be a national leader in jobs creation. In the period of economic expansion following the pandemic-induced recession, the Golden State has added more than 440,000 jobs, according to the latest employment figures from the Bureau of Labor Statistics (BLS). In fact, California ranks third overall in terms of jobs added since the pandemic, behind only Florida and Texas. Nonetheless, the 440,000 jobs added translates to just 2.5% growth since the start of the pandemic, which reflects the fact that California's job gains are largely a function of its size. Which is to say, relatively modest employment growth translates to a large number of new jobs.

U.S. STATES WITH MOST JOBS ADDED

	Change in Total Jobs (Feb 2020 to July 2023)	**Percentage Change in Jobs** (Feb 2020 to July 2023)
Texas	997,800	7.7
Florida	704,000	7.8
California	443,500	2.5
North Carolina	302,500	6.5
Georgia	230,600	4.9
Tennessee	179,100	5.7
Arizona	164,800	5.5
Utah	152,200	9.7
Washington	123,300	3.5
South Carolina	112,500	5.1

Source: U.S. Bureau of Labor Statistics; Analysis by Beacon Economics

In percentage terms, California has exhibited the slowest employment growth among job states and ranks near the middle of the pack among all states. In fact, California's employment growth aligns closer to small- and mid-size states with more modest post-pandemic job gains.

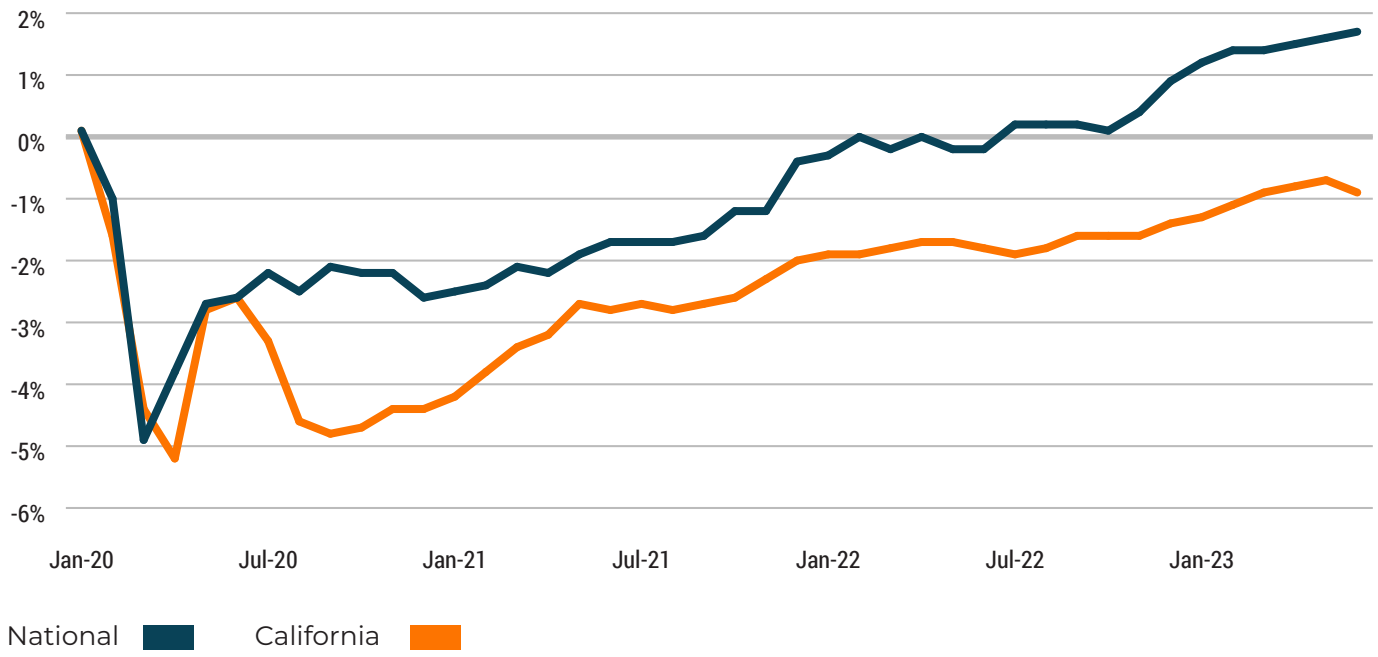
U.S. STATES WITH MOST JOBS ADDED

	Percentage Change in Jobs (Feb 2020 to July 2023)	**Change in Total Jobs** (Feb 2020 to July 2023)
Indiana	3.1	99,700
Colorado	3.1	86,700
Kentucky	3.0	57,800
Missouri	2.6	76,600
California	2.5	443,500
New Jersey	2.5	105,300
Oklahoma	1.8	30,100
Oregon	1.7	33,100
Nebraska	1.4	14,800
Virginia	1.4	58,400

Source: U.S. Bureau of Labor Statistics; Analysis by Beacon Economics

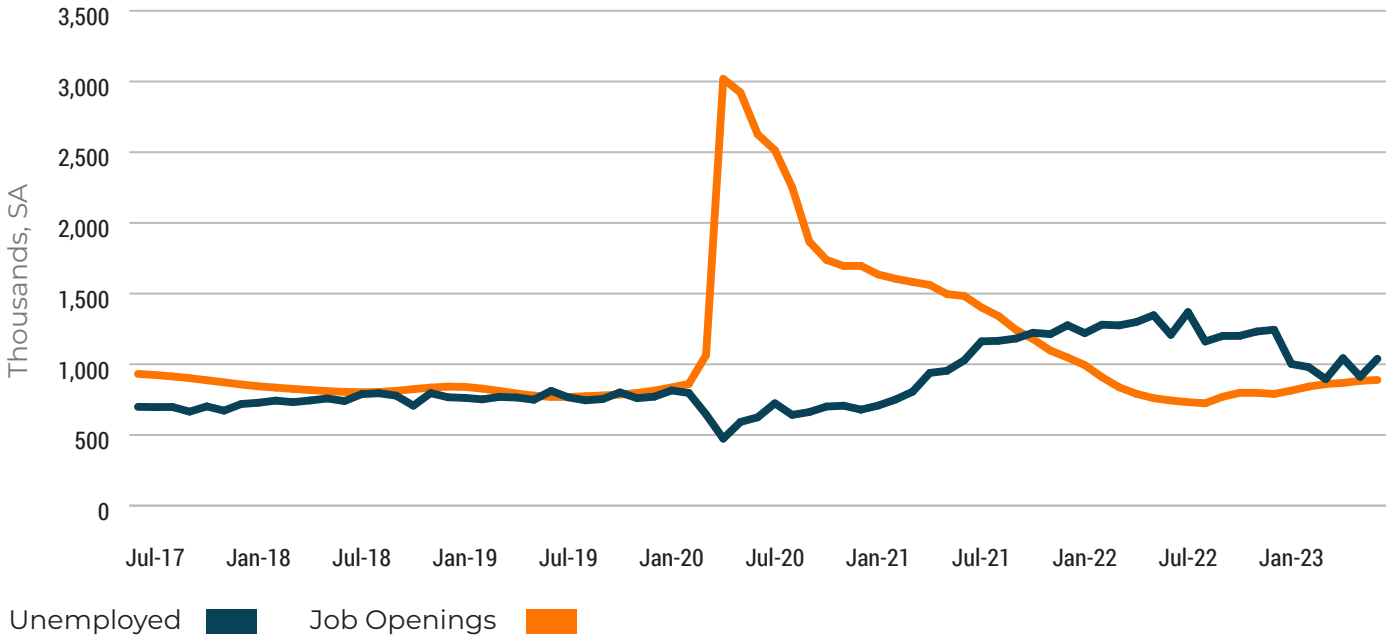
The reason California's job growth mirrors Missouri and not rapidly growing states like Texas, Florida, and North Carolina is a shortage of workers. As of July 2023, there were 1.04 million job openings in the state, but only about 889,000 unemployed persons. There simply are not enough workers to fill the current number of openings. According to the most recent data from the BLS, there are still roughly 168,000 fewer workers in the state's labor force than there were in January 2020, prior to the pandemic, which equates to a 0.9% decline. In contrast, the national labor force has grown by about 2.7 million workers, or 1.7% during the same period. California's labor force woes are evident in the chart below, which shows the percent growth in labor force compared to the nation since January 2020. While the national labor force recovered all the workers lost during the pandemic in August 2022, California lags far behind.

PERCENT CHANGE IN LABOR FORCE



Source: FRED; Analysis by Beacon Economics

CALIFORNIA JOB OPENINGS AND UNEMPLOYED PERSONS

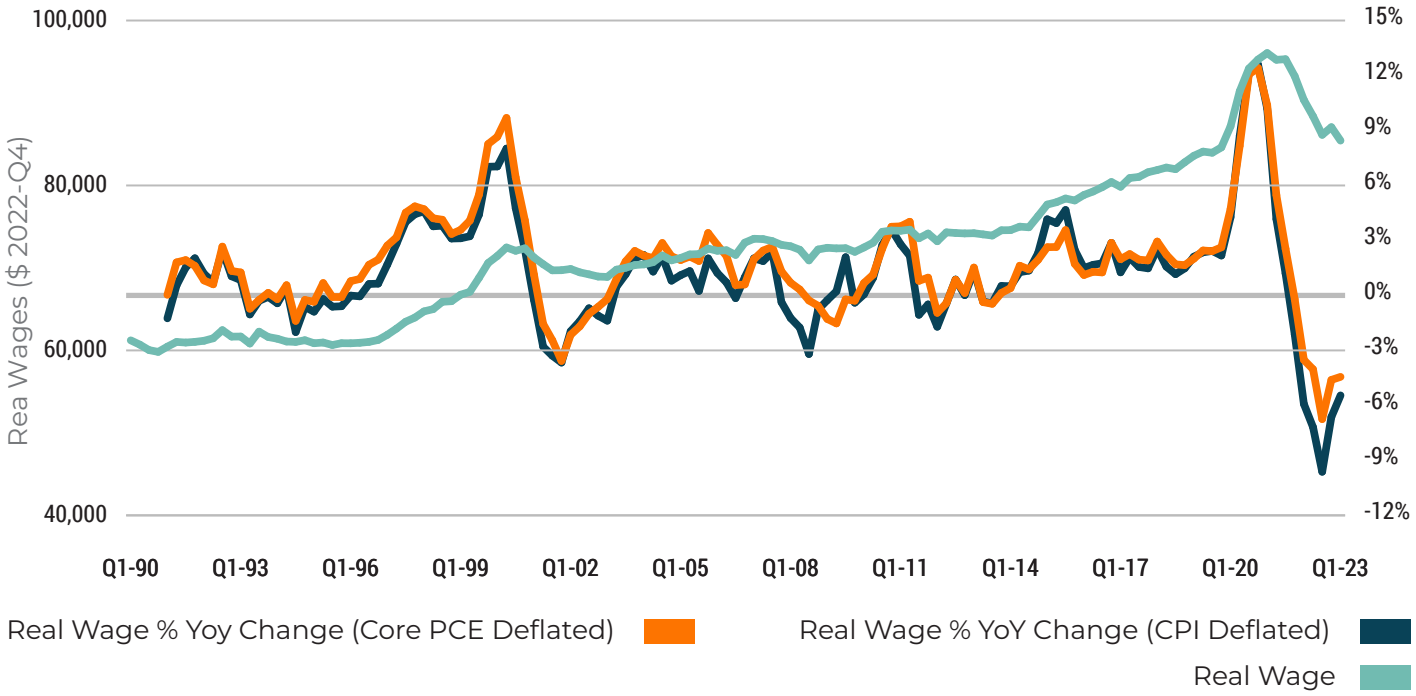


Source: California EDD; Analysis by Beacon Economics

Adding the missing 168,000 workers back into the labor force, California's unemployment rate rises above 5%. While not bad from a long-term perspective, it is higher than the published 4.5%, and reveals that part of California's recovery in the data reflects people opting out of the workforce. In summary, the concern for California is not a lack of jobs, but rather a lack of workers.

The state's simultaneous jobs gains and labor force decline also reveal a contradiction. California has added about 440,000 jobs since the start of the pandemic, but there are fewer workers active in the economy. A possible explanation is that there are more workers in the state holding multiple jobs. Whatever the underlying causes, California employers have struggled to find enough workers to fill open positions, and this caused real wages to surge during and immediately after the pandemic. Real wages have since fallen to levels just above where they were prior to the pandemic. Higher interest rates and high inflation have cooled wage growth in California, and real wages are reverting to their pre-pandemic trend.

CALIFORNIA REAL WAGES AND GROWTH



Source: Quarterly Census of Employment and Wages, U.S. Bureau of Labor Statistics; Analysis by Beacon Economics

HOME SALES CONTINUE TO DECLINE, BUT PRICES BOUNCE BACK

The major underlying factor constraining jobs growth in California is the state's chronic housing shortage. Between 2013 and 2023, the Golden State is on track to add around three million jobs, but only authorize about 1.2 million residential building permits. The huge discrepancy between housing supply and jobs added has made California one of the most expensive housing markets in the country. Beacon Economics believes that these soaring housing costs are part of the reason why the state's labor force has yet to rebound to pre-pandemic levels despite the national labor force returning to growth over a year ago.

CALIFORNIA RESIDENTIAL BUILDING FAILING TO KEEP PACE WITH EMPLOYMENT

	2013-2023*
Total Jobs Added Per New Housing Unit	2.4
Total Jobs Added	3,000,033
Total Housing Units Authorized By Building Permits	1,245,359
Share of New Housing Units That Are Multifamily	51.3%

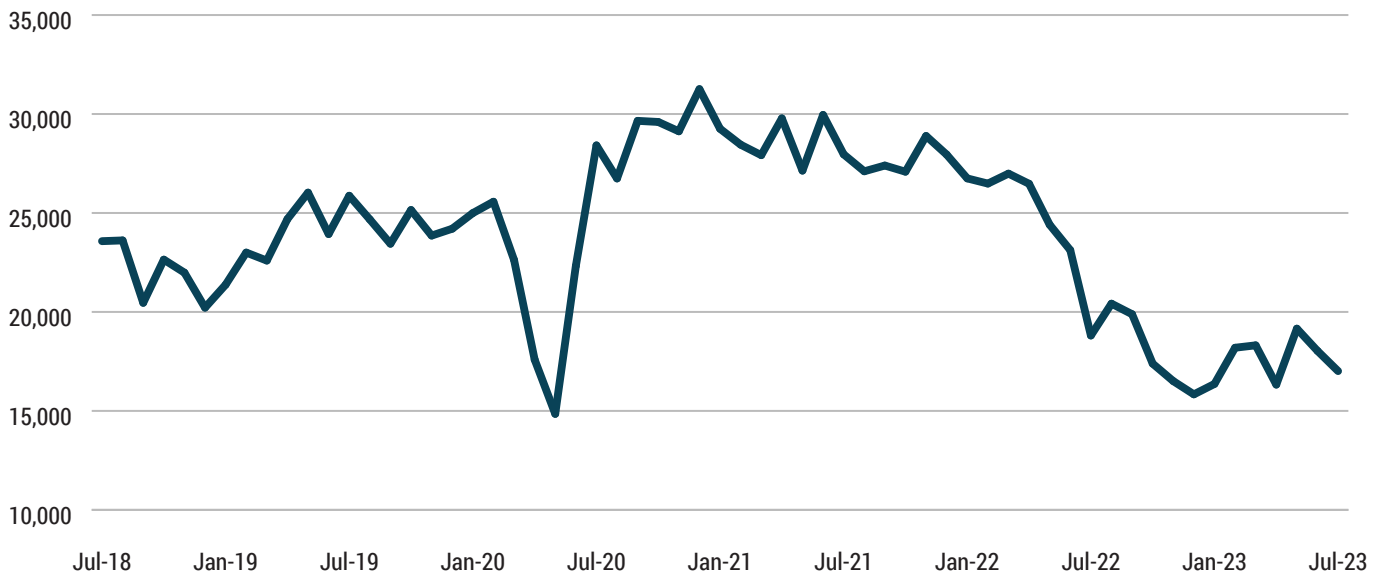
Source: CIRB and U.S. Bureau of Labor Statistics; Analysis by Beacon Economics

* Forecast

Rapidly rising interest rates have further exacerbated California's housing shortage, as existing homeowners locked into historically low mortgage rates are either unwilling or financially unable to sell. Beacon Economics expects this 'lock-in' effect and increasing cost of a mortgage to weigh on home sales in the near future. Seasonally adjusted existing home sales declined 5.9% and 5.7% in June and July, respectively. On a year-over-year basis, home sales have declined for 23 consecutive months stretching back to August 2021. Most recently, home sales fell 22.6% and 9% year-over-year in June and July, respectively, and are still about 33% below their pre-pandemic peak of February 2020.

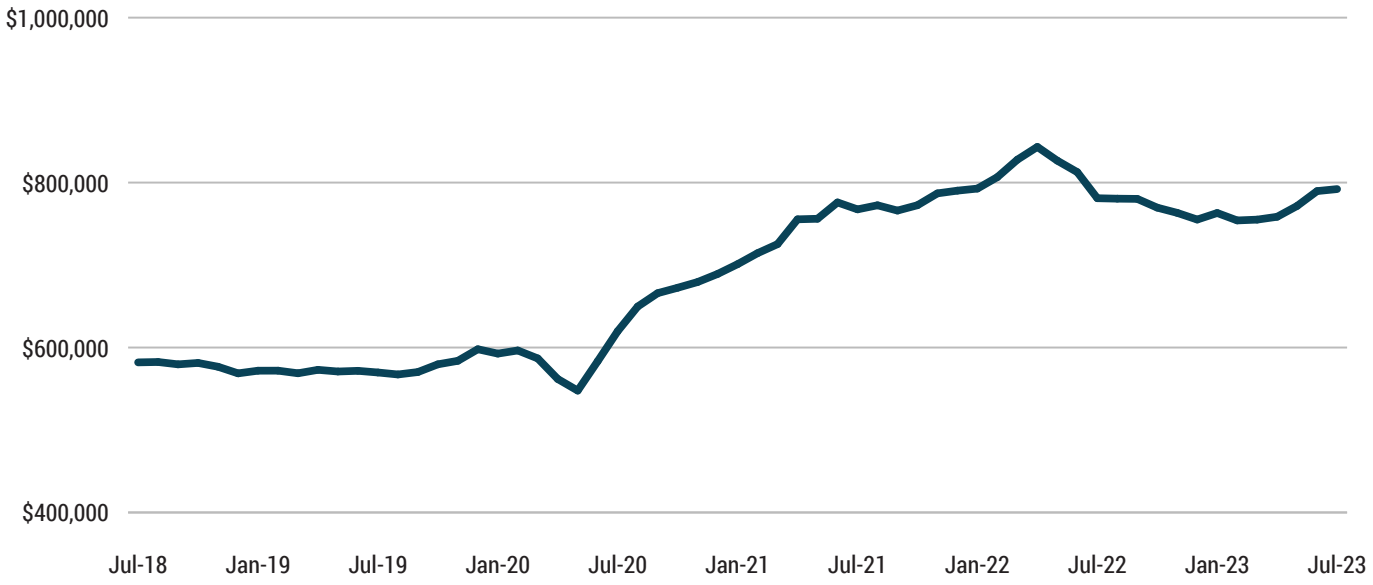
Meanwhile, median home prices have come down from their pandemic surge, falling 10.6% from their peak in April 2022 to February 2023. However, home prices appear to have bottomed out, returning to growth on a monthly basis in March 2023, and registering year-over-year growth for the first time since September 2022 in July 2023. As of July, prices are about 33% above the pre-pandemic peak, and only 6.4% below the pandemic peak. At the pace of growth seen during the past five months, California home prices will surpass their pandemic peak in the first quarter of 2024.

CALIFORNIA SINGLE FAMILY HOME SALES



Source: Redfin; Analysis by Beacon Economics

MEDIAN SALE PRICE FOR SINGLE-FAMILY HOMES IN CALIFORNIA

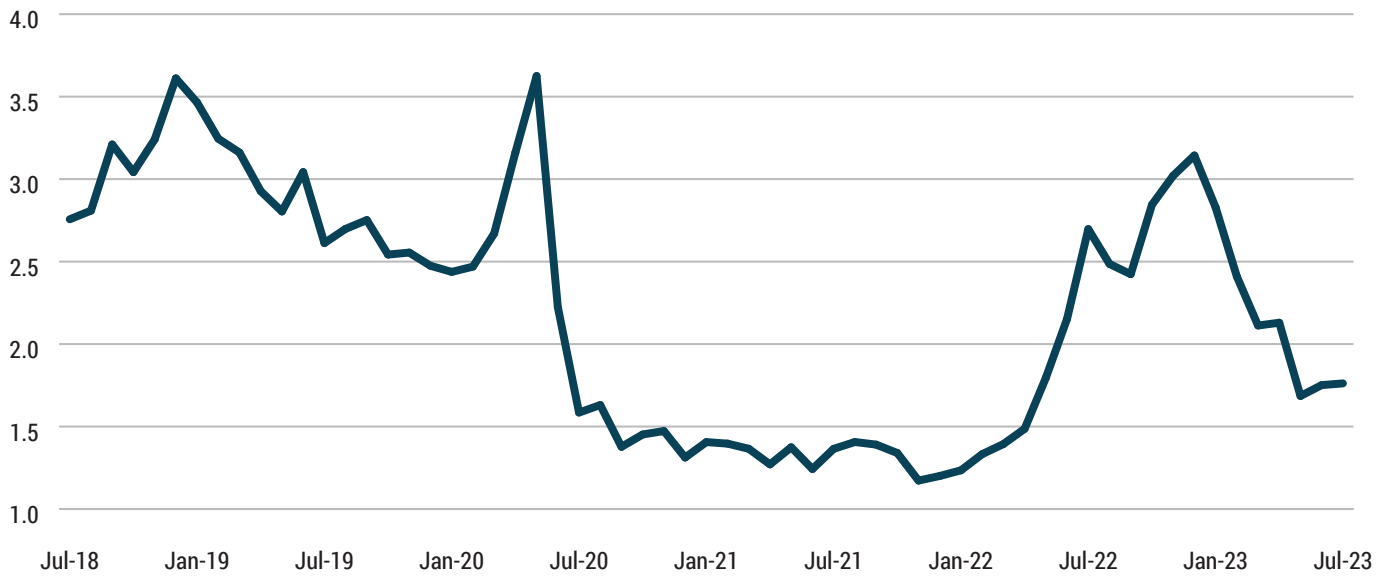


Source: Redfin; Analysis by Beacon Economics

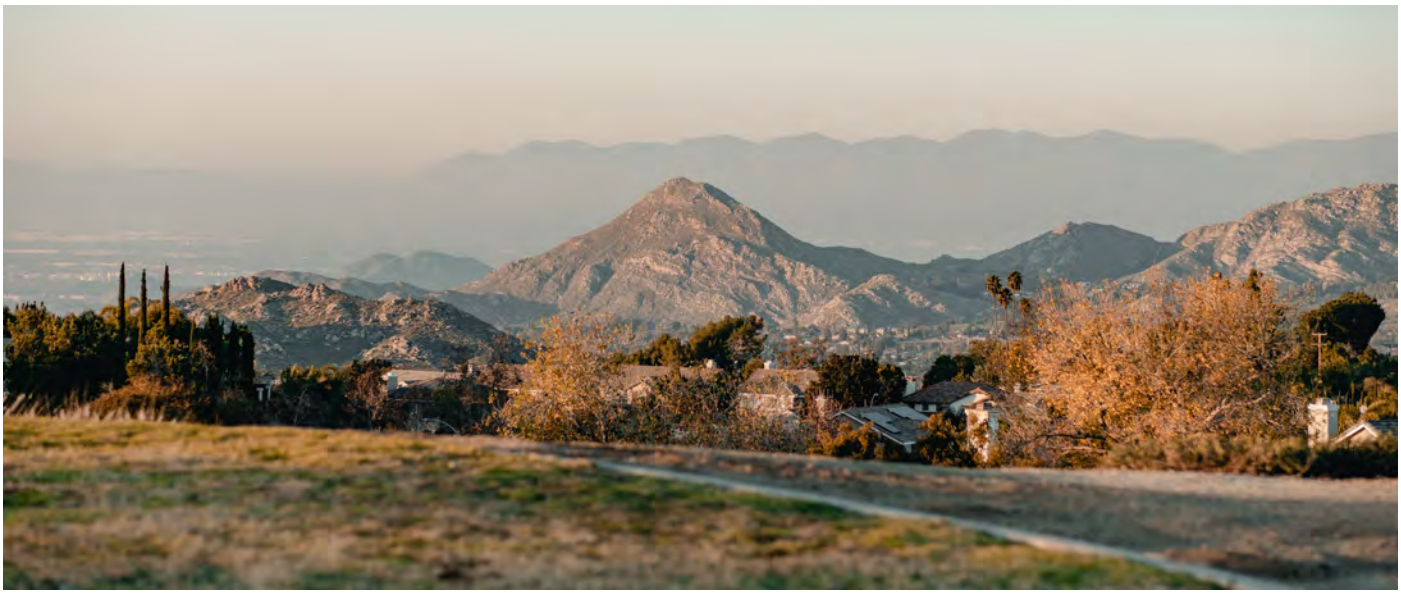
While high interest rates are putting downward pressure on home sales, house price depreciation has been limited due to California's chronic housing shortage. Additionally, consumer balance sheets are relatively strong, and although unemployment has ticked up, it is still relatively low. As such, Beacon Economics does not foresee a collapse in housing, but rather a housing correction. And recent growth in home prices suggest that the housing correction may have largely run its course.

Despite the decline in home sales, there is less than two months of housing supply available in California. In other words, if no new units were added, based on current sales activity thus far in 2023, the number of single-family homes for sale would be exhausted in about seven weeks. Typically, a healthy housing market has six months of supply. The long-term problem is, of course, that California does not build enough housing.

MONTHS OF SUPPLY IN CALIFORNIA, SINGLE-FAMILY HOMES



Source: Redfin; Analysis by Beacon Economics



RIVERSIDE COUNTY OUTLOOK

Beacon Economics has made downward adjustments to its taxable sales forecast for Riverside County. In fiscal year end (FY) 2023, taxable sales grew 3.2% compared to FY 2022. However, this masks weakness emerging in the second half of the year. In the third and fourth quarters of FY 2023, taxable sales grew 0.6% and declined 2.3% year-over-year, respectively. In fact, FY 2023's growth is largely attributable to strong gains in the first two quarters of the year, gains which reflected the tail end of the post-pandemic surge in consumer spending.

TAXABLE SALES RIVERSIDE COUNTY

Fiscal Year Quarter	Taxable Sales ($000s)	YoY Change (%)
Q1-22	14,257,273	26.5
Q2-22	14,637,983	29.6
Q3-22	15,277,450	19.3
Q4-22	15,586,748	13.2
FY 2022	**59,759,454**	**21.6**
Q1-23	15,643,926	9.7
Q2-23	15,423,240	5.4
Q3-23	15,365,189	0.6
Q4-23	15,227,706	-2.3
FY 2023	**61,660,062**	**3.2**
Q1-24	15,241,867	-2.6
Q2-24	15,145,738	-1.8
Q3-24	14,993,535	-2.4
Q4-24	14,933,006	-1.9
FY 2024	**60,314,146**	**-2.2**

Source: California Department of Tax and Fee Administration; Forecast by Beacon Economics

These latest taxable sales figures signal a potential inflection point. A combination of pent-up demand from pandemic lockdowns, surplus savings, and a hot labor market spurred a consumer spending bonanza during the past two years. Since then, however, the seasonally adjusted unemployment rate in Riverside County has risen from a low of 3.4% in May 2022 to 4.8% in August. Accordingly, Beacon Economics expects a 2.2% annual decline in taxable sales for FY 2024, as higher interest rates further cool the job market and consumers cut back on spending. Looking ahead, taxable sales are expected to remain weak, declining 0.6% in FY 2025 before returning to growth in FY 2026.

RIVERSIDE COUNTY TAXABLE SALES (YOY % GROWTH)

Source: California Department of Tax and Fee Administration; Forecast by Beacon Economics

The projected weakness through FY 2026 does not reflect deteriorating economic conditions and an impending recession, but rather consumer spending and the labor market returning to earth after a pandemic-driven surge. Accordingly, taxable sales will remain well above their pre-pandemic peak and are expected to surpass FY 2023 levels in FY 2026.

TAXABLE SALES RIVERSIDE COUNTY

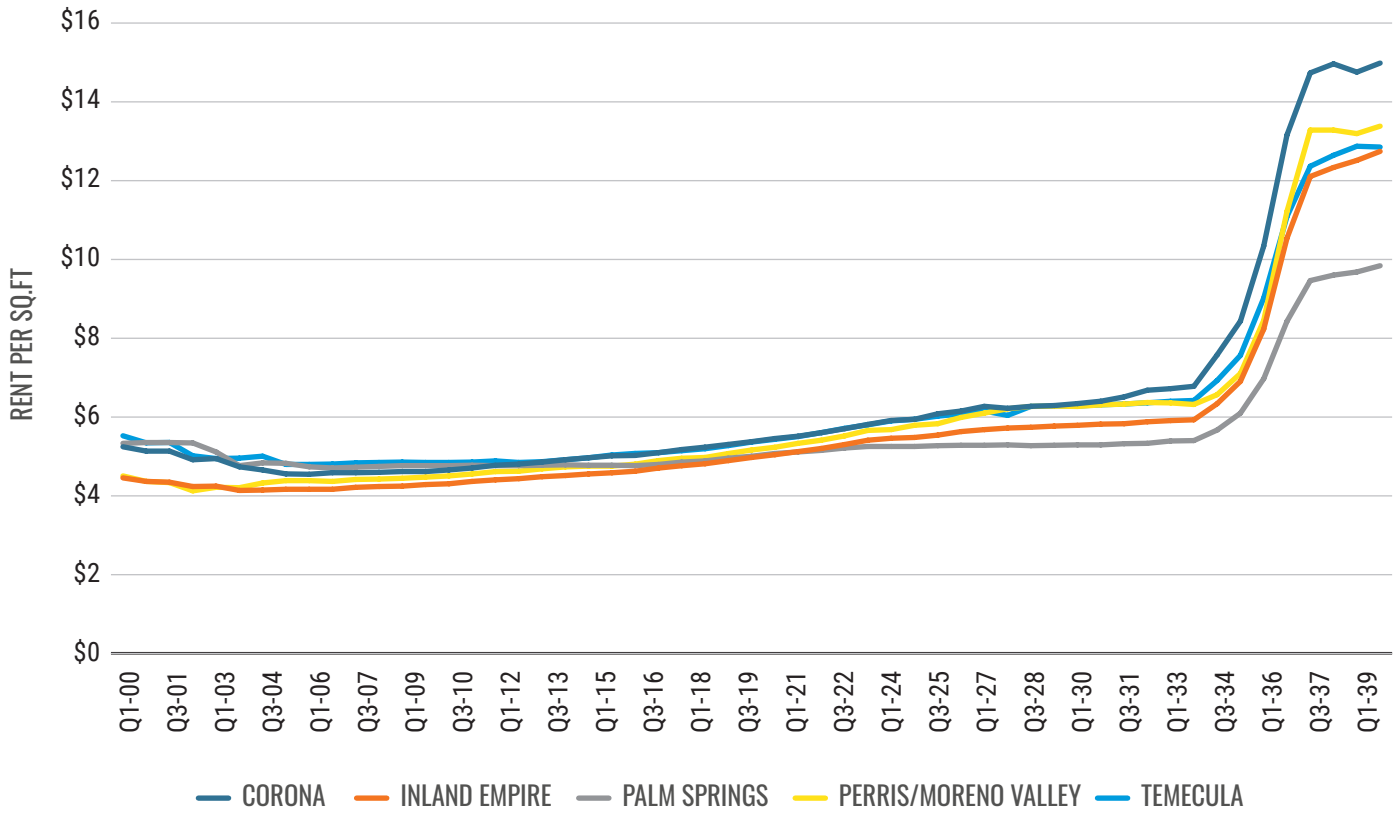
Fiscal Year End	Taxable Sales ($000s)	Fiscal Year End	Taxable Sales ($000s)
2025	59,952,547	2032	73,424,586
2026	61,778,340	2033	75,737,988
2027	64,397,746	2034	78,390,592
2028	66,672,404	2035	81,110,144
2029	68,259,366	2036	83,512,400
2030	69,649,800	2037	84,987,795
2031	71,403,766	2038	86,488,633

Source: Forecast by Beacon Economics

While the outlook for consumption has dampened slightly, the local labor market has exhibited resiliency, outperforming neighboring counties and the state. Since its pre-pandemic peak in February 2020, Riverside County has added more than 25,000 people to its labor force. During the same period, Los Angeles County's labor force declined by more than 217,000 workers. California's labor force also shrank by more than 197,000 workers from February 2020 to August 2023. Riverside County has benefited from post-pandemic worker migration trends away from coastal cities in favor of inland communities with lower housing costs. According to recently released population estimates from the California Department of Finance, the population of Riverside County increased 0.8% from 2019 to 2023, while Los Angeles County's population declined 4%. Population gains increase the taxable base and fuel job growth in locally serving sectors within Riverside County.

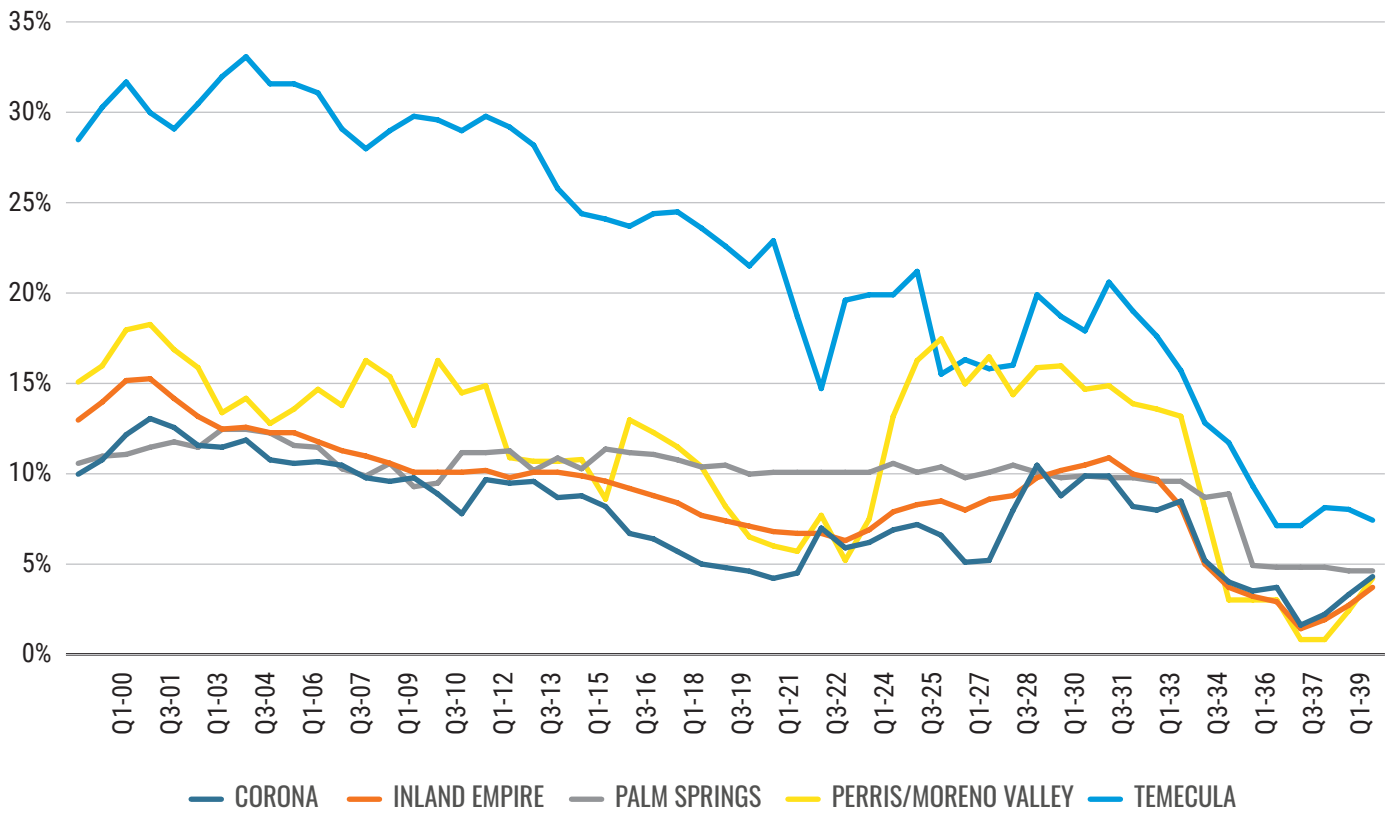
Riverside County's logistics sector is also buzzing, with year-over-year growth in logistics property asking rents surging more than 27% in all the county's major markets in the first half of 2023. In Perris/Moreno Valley and the Inland Empire, rent growth increased about 35% year-over-year through the first two quarters of 2023. The pace of growth in asking rents over the past several quarters is on par with overall growth in the decade following the Great Recession. The rapid gains in rents for Warehouse and Distribution Centers is largely due to the surge in e-commerce spending during the pandemic and after the end of lockdowns. While rent growth is beginning to cool, the ongoing shift to e-commerce spending will continue to buoy the local logistics sector, providing a basis for taxable sales growth beyond the expected short-term dip.

ASKING RENTS FOR WAREHOUSE PROPERTIES
RIVERSIDE COUNTY MARKETS



Source: REIS; Forecast by Beacon Economics

VACANCY RATES FOR WAREHOUSE PROPERTIES



Source: REIS; Forecast by Beacon Economics

ONE-CENT SALES TAX SCENARIO FORECAST

BACKGROUND

The Riverside County Transportation Commission (RCTC) is putting together a ballot measure to propose a one-cent sales tax to fund transportation initiatives. RCTC has commissioned Beacon Economics to produce a forecast projecting revenues in this scenario. The proposed one-cent increase would go into effect in April 2025 (i.e., the fourth quarter of FY 2025), and would span a 30-year planning horizon through FY 2055.

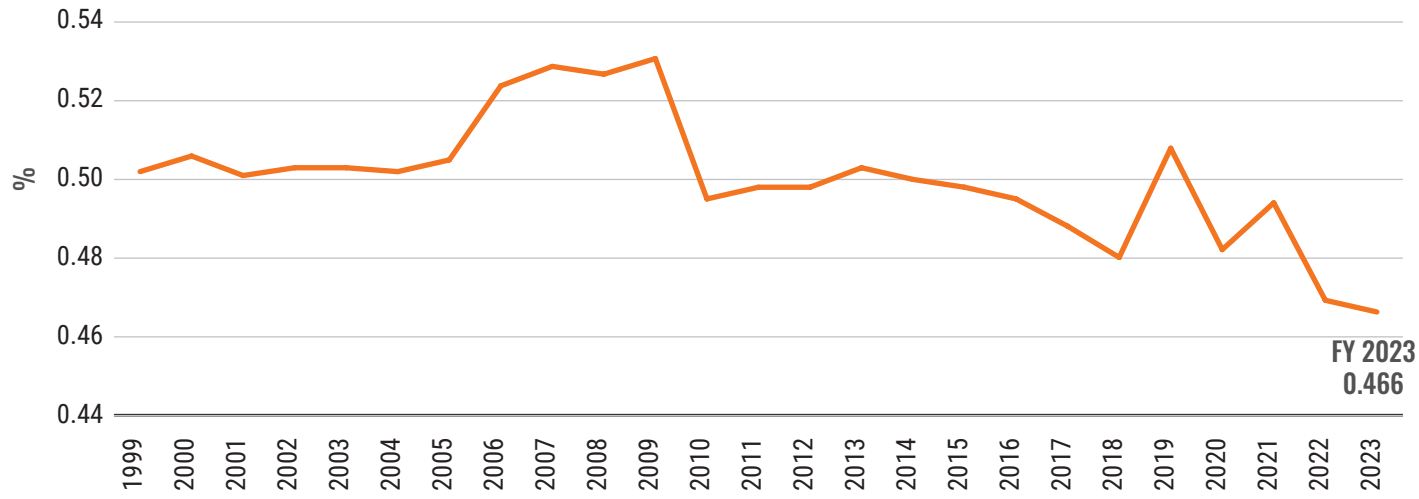
METHODOLOGY

In forecasting the revenue that would be generated from the proposed one-cent sales tax, the existing Measure A sales tax must be considered. Measure A is a half-cent sales tax that was originally passed in 1988 for improvements to roadways, commuter rail lines, public transit, and other transportation projects. In 2002, Measure A was extended by voters through 2039. Currently, it is set to expire in the third quarter of FY 2039. Because the proposed one-cent sales tax would overlap the Measure A tax through the third quarter of FY 2039, the impact on consumption would essentially be that of a one-cent tax increase.

The most straightforward approach to projecting the one-cent sales tax scenario is to take 1% of taxable sales in each quarter or fiscal year of the taxable sales forecast. However, this approach would risk overestimating revenue, because historical Measure A tax revenue is less than 0.5% of taxable sales in Riverside County.

The chart below shows the historical Measure A revenues as a ratio of historical taxable sales in Riverside County. In other words, the chart shows the effective or realized rate. From FY 1999 through FY 2014, the Measure A historical tax rate hovered around 0.5%. However, beginning around FY 2016, the rate fell sharply. Despite temporarily recovering to around 0.5% in 2019 and again in 2021, the realized rate has continued to fall during the past two years and now stands at 0.47% as of FY 2023.

MEASURE A RATE HISTORICAL TAX RATE
FISCAL YEAR



Source: Riverside County Transportation Commission; Analysis by Beacon Economics

The downward drift is likely due to the basis for Measure A, which is a 'transactions and use' or 'destination-based' tax. That is, Riverside County collects Measure A sales tax only if the destination of purchased goods reside within Riverside County. For example, if a City of Corona resident makes an in-person purchase at a local retailer, then Riverside County collects the Measure A tax. Likewise, if that same person makes an online purchase from a retailer outside of Riverside County, then the county collects the Measure A sales tax since the package was delivered to a Riverside County resident.

However, Riverside County does not collect Measure A sales tax from county residents who make purchases in-store at retailers outside county lines. The end of pandemic lockdowns likely spurred a rash of spending by county residents outside the county as consumers were able to travel freely. More importantly, Riverside County is one of the hottest warehouse and logistics markets in the United States. As such, online purchases largely originate in Riverside County, but have destinations outside the county.

From 2002 to 2022, online sales as a percentage of total retail sales increased from 1.4% to 14.7%, and this figure is expected to continue rising over the next several decades. Given Riverside County's prominence as a warehouse and distribution hub, e-commerce has and will continue to influence Measure A sales tax revenues. Accordingly, Beacon Economics incorporated the effect of increasing online sales into our projection of the proposed one-cent sales tax scenario.

The one-cent sales tax scenario is a new tax when it comes to the impact on consumption. To capture this impact, Beacon Economics utilized findings from Baker et al. (2018), which found that households respond to higher sales tax in both the short- and long-run. In the short-run, consumer spending increases in the weeks leading up to the tax increase as households stock up on durable goods, then falls in the weeks after the tax goes into effect before eventually returning to normal levels (Baker et al. 2018).

The study's analysis found that a 1% increase in sales tax led to a 2% increase in spending leading up to the increase, followed by a 2% decrease in the weeks immediately after that tax goes into effect. Beacon Economics incorporated these elasticities into the one-cent sales tax scenario. Long-run responses are driven by shifts in spending toward online purchases and lower tax jurisdictions (Baker et al. 2018). These long-run responses are captured in our use of the percentage of online sales to total retail sales to model the proposed one-cent sales tax scenario.

In summary, the primary components of the one-cent sales tax forecast are:

1. **Taxable sales forecast** –Sales tax revenue ultimately comes from the pool of taxable sales, which in turn is driven by local and national drivers, such as employment and consumer spending.

2. **E-commerce** – The long-run trend of an increasing percentage of online sales to total retail sales.

3. **Tax elasticities** – The short-run impact of a sales tax increase on consumer spending.

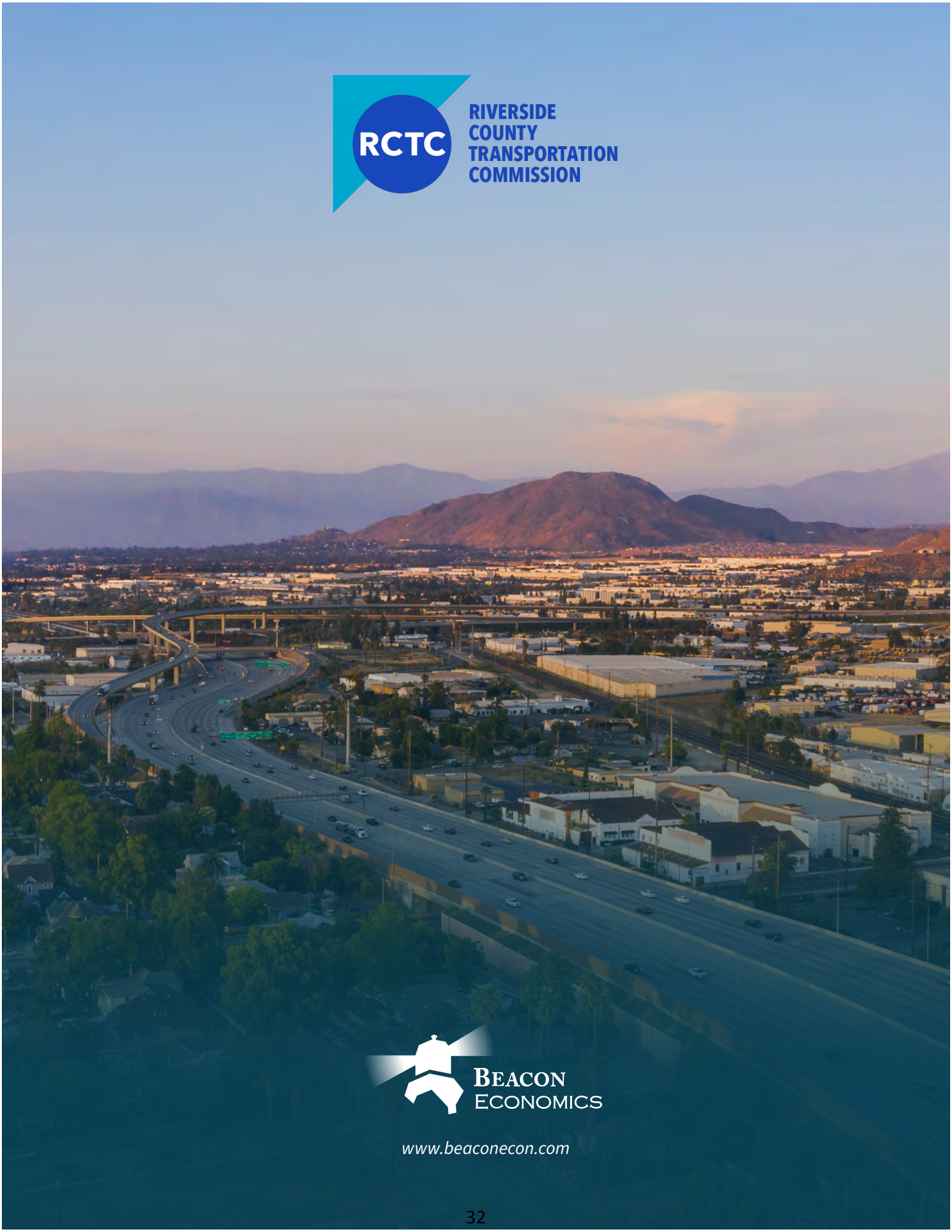
RESULTS

The annual results of the proposed one-cent sales tax scenario are listed in the table below. Beacon Economics estimates that the total nominal revenue generated from the one-cent sales tax is about $25 billion over the 30-year period April 2025 to April 2055. Because the tax would go into effect in the fourth quarter of FY 2025, the first fiscal year would include only one quarter of revenue. Similarly, the planning horizon concludes in the third quarter of 2055 so the last fiscal year would include only three quarters of revenue.

ONE-CENT SALES TAX SCENARIO FORECAST ($M)

Fiscal Year End	Revenue
2025	146.3
2026	591.2
2027	615.7
2028	636.7
2029	652.6
2030	666.3
2031	682.8
2032	701.3
2033	722.8
2034	746.1
2035	771.8
2036	796.1
2037	810.3
2038	823.7
2039	836.8
2040	851.2
2041	864.4
2042	878.5
2043	891.8
2044	903.2
2045	914.9
2046	926.3
2047	938.3
2048	950.0
2049	961.3
2050	971.8
2051	980.8
2052	989.8
2053	998.6
2054	1,007.5
2055	761.1
Total	**24,990**

Source: Forecast by Beacon Economics


RCTC
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ATTACHMENT 2

BEACON ECONOMICS

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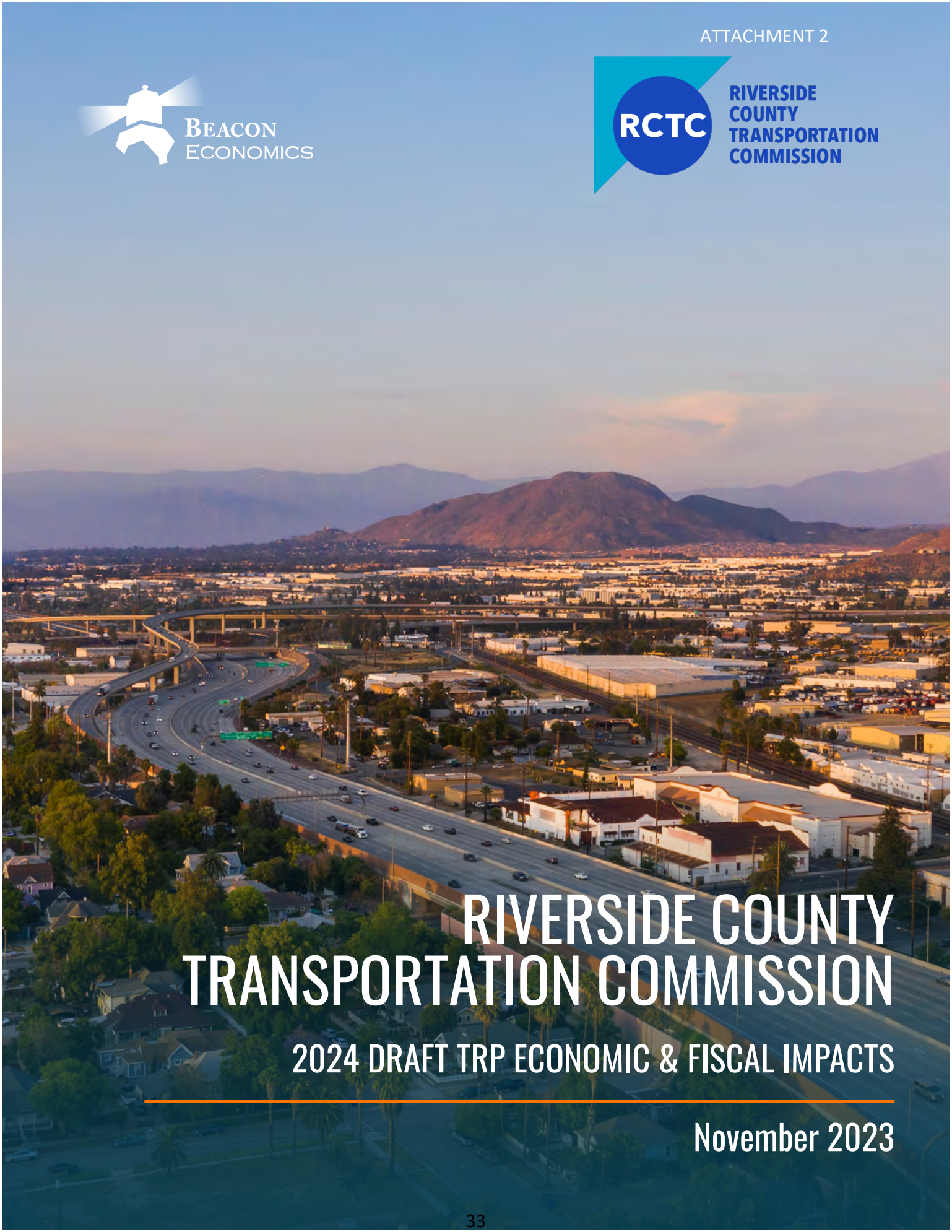

RIVERSIDE COUNTY TRANSPORTATION COMMISSION

2024 DRAFT TRP ECONOMIC & FISCAL IMPACTS

November 2023

About Beacon Economics

Founded in 2007, Beacon Economics, an LLC and certified Small Business Enterprise with the State of California, is an independent research and consulting firm dedicated to delivering accurate, insightful, and objectively based economic analysis. Employing unique proprietary models, vast databases, and sophisticated data processing, the company's specialized practice areas include sustainable growth and development, real estate market analysis, economic forecasting, industry analysis, economic policy analysis, and economic impact studies. Beacon Economics equips its clients with the data and analysis they need to understand the significance of on-the-ground realities and to make informed business and policy decisions.

Learn more at www.BeaconEcon.com

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WORLD PEACE

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EXECUTIVE SUMMARY

Riverside County has grown rapidly in the last two decades, cementing itself as a vibrant destination and developing into an economically vital part of California[1]. Growth in industrial real estate and warehousing have made the county a national logistics powerhouse, while its diverse communities also offer an attractive place to start a family. To support past and future growth, it is crucial for the county to have a robust transportation system. Increased traffic congestion can negatively affect the county's residents and businesses by slowing commute times, increasing pollution, raising costs to businesses, and resulting in a lower quality of life for residents. To address this, Riverside County Transportation Commission (RCTC) is reviewing plans for major transport and highway infrastructure projects in the county through its Draft Traffic Relief Plan (TRP). These types of large capital-intensive infrastructure projects generate local and regional economic benefits through increases in demand while also improving inter- and intra-county travel.

In this study, Beacon Economics performed an economic impact analysis to estimate and quantify the economic benefits to Riverside County as a result of 2024 Draft TRP project spending. Project spending could be funded through a 1-cent increase in county sales tax starting in fiscal year 2025.

The total economic impacts consist of one-time increases in economic output, jobs supported, and labor income in Riverside County associated with 2024 Draft TRP project spending. All projects are located in the county, and the impacts are estimated for the county.

[1] Riverside's population has grown an impressive 58.9% from 2000 - 2022 and 12.4% from 2010 - 2022. U.S. Census Bureau, Resident Population in Riverside County, CA https://www.census.gov/.

KEY ECONOMIC TERMS

TERM	DEFINITION
Direct Effect	The output of goods or services resulting from immediate spending. These expenditures occur in a variety of categories, including construction equipment, intermediate inputs like lumber or concrete, labor, engineering and design services, and transportation.
Indirect Effect	The additional output of goods or services generated by supply chain interactions. For example, when a construction worker spends money on groceries, that grocery store will go to a wholesaler and purchase additional goods, thereby generating an indirect impact.
Induced Effect	The additional output of goods or services generated by households spending their income.
Secondary Effect	Sum of indirect and induced effects.
Total Impact	The sum of the direct, indirect, and induced effects.
Employment	The number of jobs supported through spending.
Labor Income	The value of all forms of employment income paid for all types of impacts, including health benefits, bonuses, etc.
Output	The total value of production generated through project spending, including the value of intermediate inputs: the goods and services used in the production of equipment, raw materials, energy, and other production inputs.

KEY FINDINGS

Increasing county sales tax by 1 cent is forecasted to generate an approximately an additional $25 billion in revenues for Riverside County from fiscal year 2025 through fiscal year 2055, for a 30 year planning horizon. This additional revenue would then support $20.4 billion in 2024 Draft TRP spending through design, engineering, and construction spending of TRP projects in Riverside County[2].

The $20.4 billion in TRP spending is estimated to:

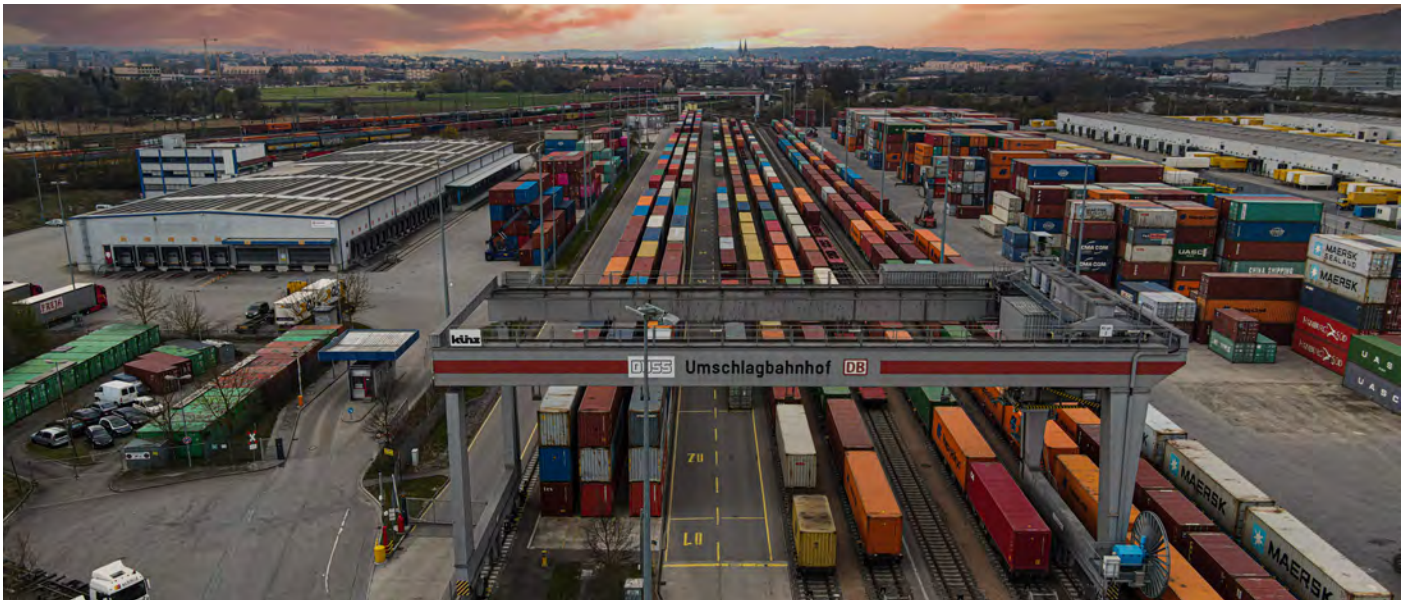
- Generate a one-time, additional $30.9 billion in economic output in Riverside County over the 30-year investment lifecycle. Of that amount, $20.4 billion represents direct effects and nearly $10.5 billion represents secondary effects.

- Support more than 168,600 jobs[3] within Riverside County over the 30-year investment life cycle. Of that amount, 109,200 are direct jobs supported and 59,400 are secondary jobs supported.

- Pay an approximate additional $10.9 billion of labor income in Riverside County over the 30-year investment life cycle. Of that amount, $7.7 billion represents direct effects and $3.2 billion represents secondary effects.

- Generate a total of over $3.2 billion in fiscal impacts at the federal, state, and local levels. Of that amount, $826 million is additional fiscal revenue generated at the state and local levels, and $2.4 billion is additional fiscal revenue generated at the federal level. Of that total, state and local induced and indirect tax revenues are estimated to be $1.1 billion, and federal tax revenues are estimated to be $637 million.

[2] Right-of-way and land purchases are generally excluded from economic impact analysis, resulting in the difference between revenue raised and direct design, engineering, and construction spending.
[3] Jobs supported is an industry-specific mixture of full-time, part-time and seasonal employment, which is backed by project expenditures. This includes direct, induced, and indirect jobs supported. This figure represents total worker years.



PROJECTED TRANSPORTATION SPENDING

SPENDING ESTIMATES

Representative 2024 Draft TRP Project Sample

To estimate economic impacts, Beacon Economics analyzed data from 12 projects provided by RCTC that make up a representative sample of the 2024 Draft TRP. Sample projects include highways, commuter rail lines, regional connectors, active transportation initiatives, and other street safety and roadway improvements. Critically, each of the sample projects will be built in Riverside County and are in various stages of design, planning, and construction. In addition to sample projects, RCTC provided Beacon Economics with the anticipated spending allocation by project category in the 2024 Draft TRP (see Table 1). Spending is broken down into construction, environmental and design, construction management, and right of way (see Table 2). Total sample project spending analyzed was $4.7 billion.

TABLE 1: 2024 DRAFT TRP PROJECT ALLOCATION

DRAFT TRP PROJECT CATEGORY	SPENDING ALLOCATION
Environmental Mitigation	25%
Highways	25%
Public Transportation	25%
Regional Connections	12%
Safe Streets and Roads	8%
Active Transportation	3%
Commuter Assistance	2%

Source: 2024 Draft Traffic Relief Plan (Riverside County Transportation Commission); Analysis by Beacon Economics
https://www.rctc.org/traffic-relief-plan/

TABLE 2: SAMPLE PROJECTS BY CATEGORY

PROJECT	CATEGORY	CONSTRUCTION ($, MIL)	ENVIRONMENTAL & DESIGN ($, MIL)	CONSTRUCTION MGMT ($, MIL)	RIGHT OF WAY ($, MIL)	TOTAL ($, MIL)	NET[4] ($, MIL)
I-10 Highland Springs Avenue Interchange	Highways	$29.3	$13.9	$2.9	$1.7	$47.8	$46.1
I-215 Harley Knox Boulevard Interchange	Highways	$51.3	$15.4	$5.1	$7.7	$79.4	$71.8
I-15 French Valley (Phase 3)	Highways	$140.0	$42.0	$14.0	$21.0	$217.0	$196.0
I-15 Express Lanes - Southern Extension	Highways	$498.6	$82.4	$67.0	$3.0	$651.0	$648.0
SR-79 Realignment (all three segments)	Regional Connections	$1,151.3	$109.3	$227.4	$151.8	$1,639.8	$1,488.0
3rd St. Grade Separation	Safe Streets and Roads	$43.0	$4.0	$4.0	$23.0	$74.0	$51.0
Mid-County Parkway 3 (MCP 3)	Regional Connections	$155.7	$14.7	$23.4	$2.4	$196.1	$193.8
Coachella Valley-San Gorgonio Pass Rail Corridor	Public Transit	$881.5	$139.9	$56.0	$123.3	$1,200.6	$1,077.4
Coachella Valley (CV) Link	Active Transportation	$89.0	$26.7	$8.9	$13.4	$138.0	$124.6
I-15 Smart Freeway Pilot Project	Safe Streets and Roads	$15.9	$7.0	$5.7	$0.0	$28.7	$28.7
SR-91 Eastbound Corridor Operations Project	Highways	$98.7	$26.0	$22.0	$11.1	$157.8	$146.7
San Jacinto Branch Line Extension	Public Transit	$480.0	$144.0	$48.0	$72.0	$744.0	$696.0

Source:RCTC; Analysis by Beacon Economics
Note: Totals may not sum due to rounding

[4] As noted above, land purchases and right of way are not generally included in the economic impact analysis and are therefore excluded.

Forecasted Revenue Available

Beacon Economics conducted a detailed revenue forecast of a 1-cent sales tax in the county that would extend from 2025 through 2055[5], for a 30 year planning horizon. An estimated $25 billion in revenue will be available over the life of the sales tax.

Total Spending Analyzed

Using sample projects, the 2024 Draft TRP spending allocation, and forecasted revenues available, Beacon Economics determined a total of $20.4 billion in net spending will be available for design, planning and construction of the Draft TRP project (see Table 3).

Environmental mitigation spending and commuter assistance spending are important parts of the 2024 Draft TRP but did not have sample projects available. To estimate the spending of these two categories, their Draft TRP allocations were applied to the total estimated revenue available. Next, Beacon Economics reduced the resulting environmental mitigation spending number to account for potential land purchases in Riverside County used for conservation[6].

TABLE 3: ESTIMATED TOTAL 2024 DRAFT TRP SPENDING

REVENUE SCENARIO	EST. SPENDING ($, BIL)	CONSTRUCTION ($, BIL)	ENVIRONMENTAL & DESIGN ($, BIL)	RIGHT OF WAY ($, BIL)	TOTAL ($, BIL)	NET ($, BIL)
1 Cent Sales Tax	$25.0	$13.3	$7.0	$4.6	$25.0	$20.4

Source: Riverside County Transportation Commission; Analysis by Beacon Economics
Note: Totals may not sum due to rounding

[5] See Measure A Revenue forecast report.
[6] To provide a reasonable and conservative estimate, Beacon Economics assumed 50% of funds available for environmental mitigation will go toward land purchases.

ECONOMIC AND FISCAL IMPACT OF 2024 DRAFT TRP SPENDING

This section of the report provides quantitative estimates of the economic and fiscal impacts that construction of 2024 Draft TRP projects will likely have in the Riverside County.

ECONOMIC IMPACT

Revenues will be available starting in 2025. Beacon Economics estimates project expenditures occurring within the county — including design and engineering, environmental reporting, general construction expenditures such as excavation and site preparation, and labor costs, etc. — will total $20.4 billion. Total expenditures are expected to stimulate the county's economy as spending ripples through the wider region. Construction workers will use their earnings to purchase goods and services in the county, and sub-contractors and other businesses will purchase or manufacture new goods and equipment to meet higher demand or replenish inventories — and so on. In total, 2024 Draft TRP project spending is estimated to generate a one-time increase of over $30.9 billion in additional economic output, support 168,000 jobs[7], and pay $10.9 billion in labor income in Riverside County.

- Of the $30.9 billion in economic output in Riverside County, $20.4 billion represents direct effects, and $10.5 billion represents secondary effects of business-to-business and worker spending.
- Of the 168,600 jobs supported within Riverside County, 109,200 represent direct jobs backed by project spending and 59,400 are jobs supported by secondary business-to-business and worker spending.
- Of the $10.9 billion in labor income paid in Riverside County, $7.6 billion represents direct labor income paid by project spending, and $3.3 billion represents labor income paid as a result of secondary business-to-business and worker spending.

TABLE 4: ESTIMATED ECONOMIC IMPACT

IMPACT TYPE	JOBS SUPPORTED (000S)*	LABOR INCOME ($, BIL)	ECONOMIC OUTPUT ($, BIL)
Direct	109.2	$7.7	$20.4
Indirect	28.2	$1.7	$5.7
Induced	31.2	$1.5	$4.8
Total	**168,600**	**$10.9 Billion**	**$30.9 Billion**

Source: Beacon Economics
Note: Totals may not sum due to rounding

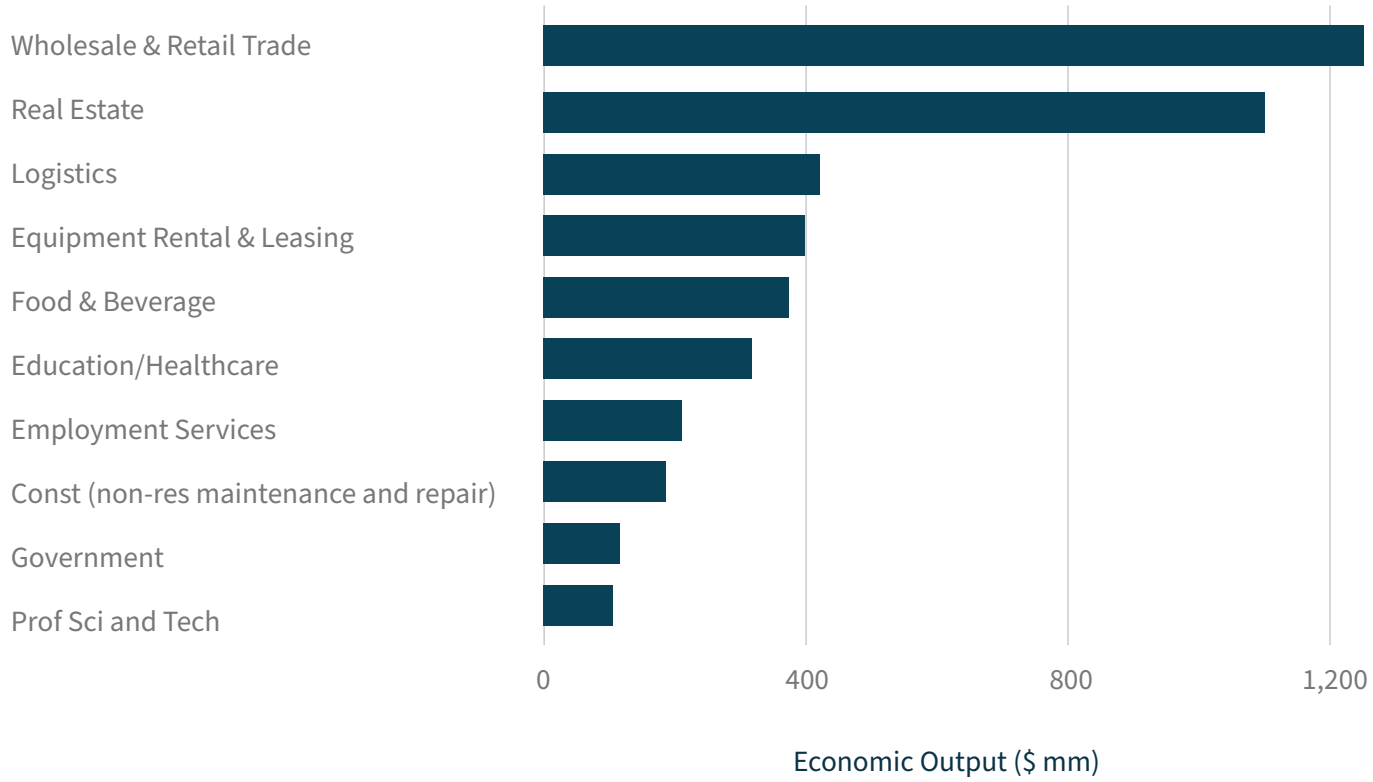
[7] Note: this figure represents total worker years over the project investment life cycle.

It is important to note that the economic impacts listed above are one-time effects and temporary in nature[8]. However, given that TRP spending will occur over several decades, it is reasonable to assume some of this jobs-supported figure represents permanent positions in the county. Furthermore, steady spending over the medium to long-term through the 2024 Draft TRP will functionally act as a permanent increase in demand, enabling local firms to grow to meet that demand.

Secondary Impacts

Unsurprisingly, 2024 Draft TRP direct project spending will support a wide variety of local industries in the county. Sectors such as wholesale and retail trade (Costco, Target, Ralphs, etc.), real estate (commercial, residential, industrial), and logistics will benefit enormously from secondary business-to-business and worker spending (see Chart 1).

CHART 1: TOP-10 SECTORS BY SECONDARY OUTPUT (RIVERSIDE COUNTY)



Source: Beacon Economics
Note: Totals may not sum due to rounding

[8] Estimating structural changes in demand or sector composition is generally beyond the scope of input-output analysis.

FISCAL IMPACT

Project spending is estimated to generate significant federal, state, and local tax revenue through both direct spending and secondary spending. Payroll taxes from direct and secondary worker spending would be collected at the federal and state levels, while other taxes such as sales tax, special tax district levies (Mello-Roos districts), and property taxes would be collected at the state and local levels. In total, an estimated $3.2 billion in tax revenue will be raised, of which $2.4 billion would be federal tax revenue and $826.2 million would be state and local tax revenue.

TABLE 5: ESTIMATED FISCAL IMPACT

TAX TYPE	STATE & LOCAL ($, MIL)	FEDERAL ($, MIL)	TOTAL ($, MIL)
Sales Tax	$113.9	$0.00	$113.9
Property Tax	$103.1	$0.00	$103.1
Income Tax	$428.4	$1,088.5	$1,516.9
Social Insurance Tax	$53.1	$1,225.9	$1,279.0
Corporate Profits Tax	$95.3	$149.4	$244.7
Other	$32.4	$(49.8)	$(17.4)
Total	**$826.2 Million**	**$2.414 billion**	**$3.24 billion**

Source: Beacon Economics
Note: Totals may not sum due to rounding

METHODOLOGY

INPUT-OUTPUT MODELING

To estimate the total economic and fiscal impact of the 2024 Draft TRP project spending on Riverside County, Beacon Economics utilized data on the set of Draft TRP projects, Draft TRP spending allocations, prevailing wage estimates, and the 1-cent sales tax revenue forecast.

With this expenditure data, Beacon Economics then used IMPLAN (Impact Analysis for Planning), a state-of-the-art input-output modeling system that estimates how certain expenditures correlate and affect other industries in the economy to generate the total economic and fiscal impacts. IMPLAN expands on the traditional I-O approach to include transactions among industries and institutions, and among institutions themselves, thereby capturing all monetary market transactions in each period. This specific report uses the IMPLAN web model. For more information on the IMPLAN modeling process, visit IMPLAN.com.

Impact studies assume that any increase or change in spending has a direct effect, indirect effect, and induced effect.

- **Direct effects** are the additional output of goods or services resulting from immediate spending. For example, if an electrician is hired by a general contractor to install wiring at a new Coachella Valley Rail station, the upfront cost of employing the electrician's services is the direct effect, which helps keep the electrician in business and enables the service provider to work for other clients.

- **Indirect effects** are the additional output of goods or services generated by business-to-business interaction with suppliers of direct purchases, as well as the suppliers of the suppliers. For example, employing an electrician supports businesses down the electrician's supply chain, such as the power tool industry and suppliers of raw materials needed to build power tools. Various 2024 Draft TRP projects will support these types of companies indirectly, allowing them to support other businesses that sell finished products to consumers.

- **Induced effects** are the additional output of goods and/or services resulting from increased spending by individuals as household incomes rise. As businesses increase production to meet new demand from both direct and indirect effects, their payroll expenditures grow through increased hiring or increased salaries. For example, higher revenues received by the electrician's business may lead to higher or larger overall payroll, or greater total employee compensation. As household incomes rise, people spend more on goods and services, such as groceries, housing, recreation, and personal shopping, which then fuels consumer spending and economic growth.

The indirect and induced effects are also known as "ripple" or "multiplier" effects, as initial direct expenditures generate sequential rounds of spending in the economy. The sum of the direct, indirect, and induced effects is the total impact.

DIRECT+INDIRECT+INDUCED=TOTAL IMPACT

This study uses a one-phase approach to estimate economic impacts of the project, meaning all estimated 2024 Draft TRP spending is analyzed at once. We then use four common economic indicators to analyze the impact of spending flows as they ripple through the economy: economic output, employment, labor income, and state and local tax revenues:

- **Economic output** refers to the total value of production generated by the project's construction and subsequent operations, including the value of intermediate inputs (goods and services used in production of equipment, raw materials, energy, and other production inputs).

- **Employment** represents the number of part-time, full-time, and temporary jobs supported by the project's construction and operations. Jobs "supported" include both jobs generated and existing jobs that have been expanded in scope, which helps keep workers more securely employed. This is particularly important when considering the construction sector, as many of these workers are project-based and new construction keeps them employed. For example, when the general contractor hires a carpenter, it is unlikely the project will be that carpenter's first client, but instead one of many clients the carpenter has done business with. The carpenter, therefore, is not a new job generated. Instead, the project supports the carpenter by increasing industry demand, which helps keep the carpenter employed.

- **Labor income** represents the value of all employment income paid, including fringe benefits such as health care, retirement (pensions), etc.

- **Federal, state, and local tax revenue** represents the estimated amount of tax revenue generated by Riverside County Transportation Commission's proposed project expenditures.

This study uses a Multi-Regional Input-Output (MRIO) modeling approach. The MRIO analysis builds on the standard Input-Output (I-O) analysis by expanding the effects of expenditures beyond a single region to capture changes in demand in other regions that would otherwise be "leaked" out of the model. In a MRIO analysis, the direct effect in one region triggers indirect and induced effects in others. The results of the analysis reveal the effects of a change in one or several economic activities on an entire economy, as well as the economic interdependence of regions. Accordingly, a MRIO analysis is the most appropriate technique to analyze the impacts of 2024 Draft TRP project spending given Riverside County's location within the larger Los Angeles-Long Beach-Orange County-Inland Empire economic region. To set up the analysis, the following two geographic regions were selected and nested together: Riverside County and the rest of California (excluding Riverside County). Although the rest-of-California region was included in the model, thereby allowing Beacon Economics to capture cross-border effects, only results for Riverside County are reported.

GLOSSARY

Input-Output: A type of applied economic analysis that tracks the interdependence among various producing and consuming industries in an economy. It measures the relationship between a given set of demands for final goods and services, as well as the inputs required to satisfy those demands.

Industries: The different IMPLAN industry codes are based on definitions by the U.S. Bureau of Economic Analysis (BEA). There is a crosswalk available between North American Industry Classification System (NAICS) codes and IMPLAN industries.

Direct: Initial effects to a local industry or industries due to the activity or policy being analyzed.

Indirect: Effects stemming from business-to-business purchases in the supply chain taking place in the region.

Induced: Effects in the region stemming from household spending of income after removal of taxes, savings, and commuters.

Output: The value of industry production (includes intermediate inputs).

Employment: An industry-specific mixture of full-time, part-time, and seasonal employment. This is an annual average that accounts for seasonality and follows the same definition used by the U.S. Bureau of Labor Statistics (BLS) and the BEA.

Labor income: All forms of employment income, including employee compensation (wages and benefits) and proprietor income.

Employee compensation: Total payroll cost of the employee, including wages and salaries, all benefits (health care, retirement, etc.), and payroll taxes.

Proprietor income: The current-production income of sole proprietorships, partnerships, and tax-exempt cooperatives. This excludes dividends, monetary interest received by non-financial business, and rental income received by persons not primarily engaged in the real estate business.

Value added: The difference between an industry or establishment's total output and the cost of its intermediate inputs. It is a measure of the contribution to Gross Domestic Product (GDP).

Intermediate inputs: Purchases of non-durable goods and services, such as energy, materials, and purchased services used to produce other goods and services rather than for final consumption.

Taxes on production and imports, net of subsidies (TOPI): Includes sales and excise taxes, customs duties, property taxes, motor vehicle licenses, severance taxes, other taxes, and special assessments.

Other property income (OPI): Gross operating surplus minus proprietor income. This includes consumption of fixed capital (CFC), corporate profits, and business current transfer payments (net).

Multipliers: Multipliers are a measure of an industry's connection to the wider local economy by way of input purchases, payments of wages and taxes, and other transactions. It is a measure of total effects per direct effect within a region.

Multi-Regional Input-Output analysis (MRIO): MRIO analyses utilize interregional commodity trade and commuting flows to quantify the demand changes across regions stemming from a change in production and/or income in another region. It measures the economic interdependence of regions.

Leakages: Economic activity associated with the modeled event(s) that does not generate additional effects in the defined region.

APPENDIX

ECONOMIC & FISCAL IMPACT BY PROJECT TYPE

TABLE 6: ECONOMIC IMPACT BY PROJECT TYPE

2024 DRAFT TRP CATEGORY	NET SPENDING ($, BIL)	EMPLOYMENT (000S)	LABOR INCOME ($, BIL)	OUTPUT ($, BIL)
Commuter Assistance	$0.5	3.2	$0.30	$0.8
Active Transportation	$0.7	5.5	$0.30	$1.0
Safe Streets and Roads	$1.8	17.7	$1.10	$2.7
Regional Connections	$2.8	23.4	$1.50	$4.0
Environmental Mitigation	$3.1	20.2	$1.60	$5.2
Highways	$5.7	46.9	$2.90	$8.4
Public Transit	$5.7	51.7	$3.20	$8.8
Total	**$20.4 Million**	**168,600**	**$10.9 Billion**	**$30.9 Billion**

Source: Beacon Economics
Note: Totals may not sum due to rounding

TABLE 7: FISCAL IMPACT BY PROJECT TYPE

2024 DRAFT TRP CATEGORY	STATE & LOCAL ($, MIL)	FEDERAL ($, MIL)	TOTAL ($, MIL)
Commuter Assistance	$-50.1	$90.2	$40.1
Active Transportation	$46.8	$68.6	$115.5
Safe Streets and Roads	$125.2	$191.7	$316.9
Regional Connections	$190.3	$292.8	$483.1
Environmental Mitigation[9]	$-312.9	$563.6	$250.7
Highways	$392.6	$586.0	$978.6
Public Transit	$434.2	$621.0	$1,055.2
Total	**$826**	**$2,414**	**$3,240**

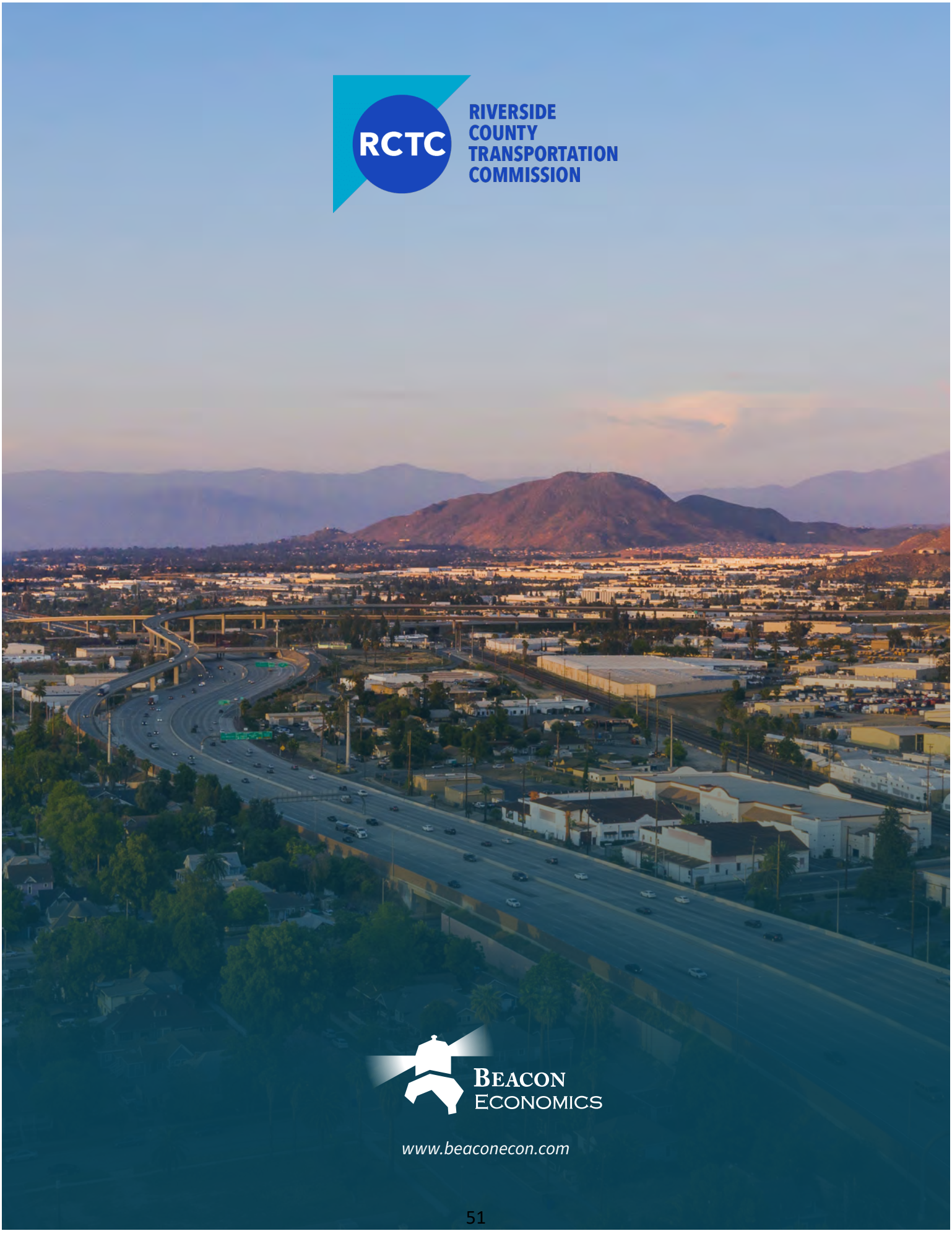
Source: Beacon Economics
Note: Totals may not sum due to rounding

[9] Note: Negative fiscal impact values represent subsidies, tax abatements, and or other programs that result in money going back to the taxpayer.

TABLE 8: SAMPLE PROJECT ECONOMIC IMPACTS

PROJECT	CATEGORY	EST. SPEND ($, MIL)	JOBS SUPPORTED	LABOR INCOME ($, MIL)	ECONOMIC OUTPUT ($, MIL)
I-10 Highland Springs Avenue Interchange	Highways	$46.1	339	$21.0	$67.0
I-215 Harley Knox Boulevard Interchange	Highways	$71.8	574	$36.0	$104.0
I-15 French Valley (Phase 3)	Highways	$196.0	1,568	$98.0	$285.0
I-15 Express Lanes - Southern Extension	Highways	$648.0	5,478	$342.0	$945.0
SR-79 Realignment (all three segments)	Regional Connections	$1,488.0	12,632	$789.0	$2,171.0
3rd St. Grade Separation	Safe Streets and Roads	$51.0	462	$29.0	$75.0
Mid-County Parkway 3 (MCP 3)	Regional Connections	$193.8	1,693	$106.0	$283.0
Coachella Valley-San Gorgonio Pass Rail Corridor	Public Transportation	$1,077.4	10,058	$618.0	$1,648.0
Coachella Valley (CV) Link	Active Transportation	$124.6	997	$62.0	$181.0
I-15 Smart Freeway Pilot Project	Safe Streets and Roads	$28.7	192	$12.0	$42.0
SR-91 Eastbound Corridor Operations Project	Highways	$146.7	1,123	$70.0	$213.0
San Jacinto Branch Line Extension	Public Transportation	$672.0	5,724	$351.0	$1,029.0

Source: Beacon Economics
Note: Totals may not sum due to rounding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Riverside County Transportation Commission

Socio-Economic Benefit Analysis

January 2024

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Executive Summary

The goal of this report is to estimate and aggregate the long-term socio-economic benefits of twelve proposed transportation projects by the Riverside County Transportation Commission. These are benefits stemming from actual usage of the transportation projects rather than the effect of spending on construction of projects, and the benefits are borne by both individual users of the transportation system and the community as a whole.

It is standard to evaluate the sum of these socio-economic benefits for 30 years, even if the projects remain useful for time beyond that. These twelve projects were evaluated analytically for their time saving, safety improvement, and emissions reductions benefits. Most of the economic benefits come from improved travel times – approximately 74% of the total sum value of benefits. Improvement in safety account for another 23%, and emissions reductions provide about 3% of the total monetary equivalent of benefits.

30-Year Benefit Type	Lower Bound ($Mil)	Estimate ($Mil)	Upper Bound ($Mil)
Time Savings	4,408.4	7,142.2	9,350.1
Safety Improvements	1,528.4	2,216.0	2,975.9
Emissions Reduction	279.1	297.1	330.3
Total	6,216.0	9,655.4	12,656.2

Overall, the estimated benefit from the 12 projects is approximately $9.7 billion dollars over 30 years, with a range of estimates of approximately ±$3 billion. With an associated cost of about $5.2 billion dollars, the midpoint estimate represents a return of $1.87 for every dollar spent – over thirty years, this represents a 2.11% annualized rate of return on investment. Note these are long-term economic benefits derived uniquely from these specific projects, without the direct impacts of spending on construction. Furthermore, there are also unquantifiable benefits stemming from these projects, which mean the socio-economic impact of these projects is even greater. These unquantifiable benefits stem from either induced changes – for example, firms relocating to the area because of improved transportation connectivity – or indirect effects, such as improved health for active transportation users or greater efficiency for logistics industry firms.

Project Description

The purpose of this report is to quantify the benefits of a set of Riverside County Transportation Commission projects. These socio-economic benefits are derived from the actual usage of these projects – the economic value they bring to the community through the effects they have on commuters and other travelers – rather than the economic effect of construction spending.

Project	Cost ($Mil)	Scope
I-10 Highland Springs Interchange	$47.8	Reconfigure & add lanes to ramps
I-215 Harley Knox Interchange	$79.4	Add lanes to ramps
I-15 French Valley Phase 3	$217.0	Add major interchange with French Valley Parkway
I-15 Express Lanes South Ext.	$651.0	Extend express lanes 14.5 miles to Lake Elsinore
SR-79 Realignment	$1,639.8	Construct new freeway in Hemet-San Jacinto area
3rd St Grade Separation	$74.0	Construct new underpass at railroad crossing in Riverside
Mid-County Parkway 3	$196.1	Add lanes, bridge, other improvements to MCP
CV-San Gorgonio Pass Rail Corr.	$1,200.6	Add tracks, stations, crossings up to Coachella Valley
Coachella Valley Link	$138.0	Upgrade active transportation route in Coachella Valley
I-15 Smart Freeway Pilot	$28.7	Sensor and ramp monitoring system in Temecula Valley
SR-91 Eastbound Corridor Ops.	$157.8	Add lanes to SR-91 near Orange County line
San Jacinto Branch Line Ext.	$744.0	Upgrade rail and extend service to San Jacinto Valley

As shown above, the proposed projects demonstrate a diversity of transportation types, project scopes, and geographic areas, as well as a wide range for the cost of each project. This report helps create an estimate of the social and economic benefit each project would generate, which can be compared with the rest of the projects despite their differences in scope and nature of benefits. The advantage of such an analysis is that it posits a dollar value for quantifiable benefits stemming from these projects, which can be compared to the project's own cost and to the benefits resulting from other projects.

While understanding the economic impacts of the direct effects of spending is relatively straightforward, monetizing the long-term impacts resulting from transportation projects requires more abstract thinking and the assignment of monetary value to non-liquid, non-transactional benefits. Nevertheless, many of the most impactful effects of these types of projects – improved traffic flow, safer travel, and reductions in greenhouse gas emissions – are quantifiable and commonly monetized. To be clear, these valuations do not imply an exchange of money; rather, they represent dispersed, economy-wide gains. For example, a worker's commute could be reduced by 10 minutes a day, thereby freeing 50 hours a year for productive work or leisure time rather than economically unproductive travel time. Similarly, reductions in risk of injury or fatality on roads and other methods of transportation can be assigned a monetary value resulting from avoiding lost productive time and decreases in quality of life. Finally, reductions in emissions derive their economic value from avoiding illness caused by air pollution and forgoing the socio-economic cost of contending with carbon emissions and adapting to climate change.

Measures of Benefits

The long-term impacts of transportation projects can be considered the economic and social impacts resulting from the actual project rather than from the spending associated with construction and maintenance. These benefits aggregate over the whole community, although there is not a direct transfer of money to users. Rather, these benefits are not tangible – instead being reflective of benefits such as time savings and safety improvements – but nonetheless can be assigned a monetary value. It is this monetary value that can then be compared to other projects, even though projects, and their benefits, may appear radically different.

For many grant applications, the federal Department of Transportation recommends aggregating these benefits over a 30-year period, even if the useful life, and therefore benefits derived, of these projects is longer than thirty years. Furthermore, to account for time preferences – wherein money today is preferred over an equivalent amount in the future – a 3% annual time discounting of benefits for future years. As transportation projects can vary significantly in their nature and impact, the measures used to quantify their benefits ought to be adaptable. Most commonly, benefits of transportation projects are measured by their impact on travel time savings, improvements in travel safety, and reductions in emissions caused by vehicles.

Time Savings

The largest source of socio-economic benefits generated by transportation projects such as highway expansion and improvement are those resulting from reductions in travel time, as nominally these savings allow for other, valuable activities such as productive work and leisure. The federal Department of Transportation (USDoT) uses a standard of 50% of median household hourly earnings (annual household earnings divided by 2,080) as the value of travel time reductions, which for Riverside County is 50% of $41.71[1] ($20.85). Intercity travel, on high-speed rail and air, is typically reflective of more valuable time, whether for work or leisure, and so is recommended to be set at 95% of median hourly earnings.

While there are several methods of calculating travel time, for the purposes of this study, planning time was utilized as a standard throughout the analyses. Planning time refers to the time required to be "set aside" for 95% of all trips to arrive on time. Alternatively, planning time can be conceived as the length of trip for the 95th percentile of travel times.

Several key assumptions guide the time savings analysis of projects. First, that returns to time savings are constant-relative, meaning that the time savings-per-driver are the same for a driver in the first year of the project as they are in the 30th year, even if the travel times are different. Ergo, the assumption effectively means the time savings is measured as the difference in travel time between the build scenario and the no-build counterfactual, and that this difference is constant over the 30-year window of analysis. This mainly accounts for the induced demand effect, in which improved travel times lead to an increase in use, thereby leading to a reduction in time savings; under this assumption, behavior doesn't change because of time improvements. This assumption is believed to lead to a slight overestimate of derived benefits.

Second, population growth is deemed independent of construction, which means that there is no assumed change in utilization over time. This leads to an underestimation of potential benefits because benefits are aggregated over the sum of all users of a project. Third, each vehicle is assumed to only carry one worker – no carpooling is modeled. As at least some people will participate in carpooling, the aggregate time savings is underestimated. Rather, it is estimated in terms of how many vehicle-hours are saved, rather than person-hours – however, this is balanced slightly by the recommendation of using *household* rather than *individual* median earnings. Therefore, over the

[1] U.S. Census Bureau; American Community Survey, 2022 American Community Survey 1-Year Estimates, Table S1901. Retrieved from data.census.gov.

three assumptions, the projection may be understood best as a lower-case estimate of gross benefits for time savings, as resolving these assumptions would likely increase the estimated benefits.

As a further note, USDoT guidance encourages a 1.2% annualized growth in median hourly earnings to model future growth.[2]

Safety Improvements

Measuring the benefits of safety improvements in transportation is often measured in terms of injuries or fatalities prevention; such prevention includes a composite measure of savings resulting from treatment costs, lost productivity, and quality-of-life for accident victims. Prevention is understood to be the willingness-to-pay in order to reduce the risk of fatality (or injury) by one in 10,000. This measure can be backwards calculated to generate a "value of statistical life" (VSL), which is often unsavorily referred to as the "cost of a human life". Nonetheless, the VSL is an important gauge of standardizing safety benefits across policies and projects. The USDoT has set and updated a VSL since 1994, with a major update based on a review of existing VSL literature in 2013[3]. USDoT endorsed a VSL of $9.1 million in that year, which meant that a reduction of the risk of fatality by one in 10,000 would be valued at approximately $910. Furthermore, USDoT adopted a formula for annual updates to the VSL based on inflation (measured by the Consumer Price Index for All Urban Consumers, or CPI-U), real income growth (based on Median Usual Weekly Earnings in 1982-84 dollars), and an income elasticity factor. Previously, USDoT used an income elasticity of approximately 0.5, meaning that a 1% increase in real income was associated with a 0.5% increase in the VSL, but, following a literature review, began using an income elasticity of 1. For 2022, USDoT used a VSL of $12,500,000. For 2023, using July figures for the CPI-U and MUWE, this year's VSL is calculated to be $13,158,190[4]. There was not an attempt to project VSLs for future years, although it would be expected to rise monotonically. Thus, the estimates of benefits derived from safety improvements represent a lower bound of actual benefits.

[2] Rogoff, P. and Ayala, R. (2014) *Revised Departmental Guidance on Valuation of Travel Time in Economic Analysis.* Department of Transportation, Office of the Under Secretary for Policy.

[3] Office of the Under Secretary for Policy (2021) *Department Guidance on the Treatment of the Value of Preventing Fatalities and Injuries in Preparing Economic Analyses.* Department of Transportation.

[4] Putnam, J. and Coes, C. (2022) *Guidance on the Treatment of the Economic Value of a Statistical Life (VSL) in U.S. Department of Transportation Analyses – 2021 Update; Memorandum to Secretarial Officers, Modal Administrators*. Department of Transportation, Office of the Under Secretary for Policy.

Furthermore, the value of injuries prevented or foregone is calculated as a fraction of a VSL, based on severity. Although the severity of an injury follows a spectrum rather than categorical buckets, for standardization these are calculated on a 7-point scale, from property damage only (PDO) to fatal. The scale and associated fractions of VSL are listed below.

Accident Severity Value[5]

Severity	Description	Fraction of VSL	2023 $
PDO	Property damage only	N/A	5,909
MAIS 1	Minor	0.003	39,388
MAIS 2	Moderate	0.047	617,025
MAIS 3	Serious	0.105	1,378,460
MAIS 4	Severe	0.266	3,492,099
MAIS 5	Critical	0.593	7,785,017
MAIS 6	Fatal	1.000	13,128,190

Emissions Reduction

A final measure of socio-economic benefits relevant to transportation projects are reductions in air pollutants and other emissions. These emissions factor in both global warming impacts resulting from carbon dioxide (CO_2) and other global warming and health effects from air pollution from emissions such as sulfur oxides (SO_x), nitrogen oxides (NO_x), volatile organic compounds, and fine particulate matter. The standard in literature has been to measure an impact on pollution based off vehicle miles travelled (VMTs).

Note that emissions per vehicle mile are usually quite limited – for most pollutants, each vehicle only generates a fraction of a gram per mile. Of course, these effects are multiplied over thousands of vehicles travelling tens of miles per day. Nonetheless, because the social cost of these pollutants is measured per metric ton, the benefits derived from projects resulting in a reduction in VMT typically do not command significant weight, especially compared to time savings or safety improvements.

[5] Office of the Under Secretary for Policy (2021) *Department Guidance on the Treatment of the Value of Preventing Fatalities and Injuries in Preparing Economic Analyses.* Department of Transportation.

Figures for average emissions per VMT were taken from the USDoT's Bureau of Transportation Statistics estimates for a mixed fleet of gasoline and diesel vehicles, with projections for average emissions in 2030. However, these figures do not account for a growth in electric vehicles in the vehicle fleet.

Social Cost of Pollutants[6]

Pollutant	Cost per Metric Ton
SO_x	$59,650
NO_x	$10,093
Volatile Organic Compounds	$2,560
$PM_{2.5}$	$461,682
Carbon Dioxide & CO_2e	Variable; from $70.38 in 2023 to $137.94 in 2070

Time Savings Analysis

Ten of the twelve sample projects were appropriate for a time savings analysis. For most projects, this was performed as a comparison of travel planning times (TPTs) along either the entire length of the proposed projects (for upgrades to roads) or for the distance between one mile before and after a proposed project site (for interchange improvements). For the SR-79 realignment and the Coachella Valley-San Gorgonio Pass rail corridor, times were compared between existing travel times between termini and estimated travel times along the new routes.

Existing TPTs were estimated using Google data for 20 randomly selected days of the year for both directions of travel, at the 7:00 AM and 4:00 PM travel hour. The time saving was estimated as the difference between the mean TPT across all 20 days and the minimum TPT. Lower bounds estimated the time saving to be only 2/3rds of the difference, whereas the upper bound was estimated as an additional minute saving of travel time. These two travel time savings were then aggregated over a portion of annual average daily traffic (AADT) data for highways from CalTrans, and then multiplied by 300 to account for all working days. This method implies no time savings on

[6] Department of Transportation, Office of the Secretary. (2016). *Benefit-Cost Analysis (BCA) Resource Guide*.

weekends or holidays, which may underestimate the true value of time savings. Nevertheless, this estimate provides a solid range of estimates of returns to time savings.

Project ($ in Millions)	Lower bound	Estimate	Upper Bound
I-10 Highland Springs Interx	$397.07	**$592.65**	$871.34
I-215 Harley Knox Interx	$482.10	**$719.56**	$1,023.83
I-15 French Valley	$602.41	**$899.12**	$1,307.45
I-15 Express Lanes	$742.84	**$1,574.28**	$1,886.47
SR-79 Realignment	$745.79	**$1,275.07**	$1,804.36
3rd St Grade Separation	$43.95	**$52.24**	$64.39
Mid-County P'way 3	$532.93	**$795.41**	$942.90
CV-San Gorgonio Rail Corr.	$228.66	**$281.42**	$334.19
I-15 Smart F'way Pilot	$608.56	**$916.42**	$1,062.96
SR-91 E-bound Corr. Ops.	$24.12	**$36.01**	$52.16

It is estimated that the time savings benefit over thirty years range between about $4.4-9.4 billion, with a midpoint estimate just over of $7 billion. The greatest contributors to the total benefit are projects affecting I-15 – the Express Lanes Southern extension, the French Valley Parkway interchange, and the Smart Freeway Pilot Project (although it is assumed the pilot is made permanents), all of which affect the high-traffic-volume on the 15 freeway. Another major contributor to this sum is the SR-79 realignment project. Its large effect reflets its scope – the construction of entirely new major roadway that does not have to contend with intra-urban traffic, including pedestrian traffic, in San Jacinto and Hemet.

As mentioned previously, the time savings benefits do not represent a transaction of money. Instead, these benefits are generally reflected in a more productive workforce – the value of their time formerly spent travelling now free to be used working or on leisure, both of which are considered valuable time spent. The benefits of directly reduced travel times for businesses like logistics are addressed later in the report.

Safety Improvement Analysis

Estimating improvements to safety and reductions in fatalities and injuries required a less generalized approach than that for estimating time savings. For the seven projects which may results in noticeable safety improvements, unique approaches were taken to estimate the effect.

For the SR-79 Realignment and Mid-County Parkway improvement projects, these routes with high rates of accidents are estimated to experience a decrease to the statewide average rates of accidents and fatalities per VMT. Thus, the difference between the present annualized rate of accidents and fatalities and a counterfactual with state average rates is the improvement resulting from the project, with a window for range.

For the two rail projects, a negligible risk of accidents is assumed, and the safety improvements are those over the average risk of accidents if train journeys were replaced by motor vehicle travel, with California average rates of accidents. For the Coachella Valley rail corridor, that is measured as the driving distance between the two termini – Union Station in Los Angeles and a new terminus in the City of Coachella. For the San Jacinto Branch Line extension project, the length of the counterfactual trip is determined by average distances for San Jacinto Valley-based commuter travel in the west/northwest direction of the rail line, using US Census OnTheMap commuter pattern data. For weekday travel, this is a 43.9-mile trip each direction based on the most recently available data.

The Coachella Valley Link project's safety improvement assumes a percentage reduction in cyclist-motorist and pedestrian-motorist accidents in the covered cities of the Coachella Valley. This assumption implies some portion of cyclists and pedestrians would switch over from using surface streets to the CV Link, where the risk of accidents is assumed to be negligible. A range for aggregate benefit is determined by the switchover percentage.

The 3rd Street Grade Separation project's safety improvement benefits come not from directly reducing traffic accidents, but rather from reducing delays for ambulances, firefighters, and law enforcement caused by the on-

grade rail crossing. Figures for injuries and deaths foregone come from the City of Riverside's grant application for state Port and Freight Infrastructure Program funds[7], and annualized.

Finally, the impact of the I-15 Smart Freeway pilot project is estimated as if it were permanent. The controlled ramp monitoring (CRM) system that is to be implemented is expected to aide in safety, based off Molan et al (2020) study[8] of CRM implementation in the two Northern California highways. Molan et al. construct counterfactuals (without CRM) for accidents and fatalities in 2019-2021 along these routes, although at the time of the publication, accident data was not yet available. Comparing the difference between counterfactuals and actual accidents (now available[9]) yields a percentage reduction in accidents, which is then applied to the I-15 Smart Freeway pilot route.

Project ($ in Millions)	Lower bound	Estimate	Upper Bound
SR-79 Realignment	$267.35	**$314.45**	$364.59
3rd St Grade Separation		**$82.09**	
Mid-County P'way	$37.94	**$42.16**	$46.37
CV-San Gorgonio Rail Corr.		**$117.20**	
Coachella Valley Link	$854.47	**$1,424.11**	$1,993.76
I-15 Smart F'way Pilot	$27.31	**$40.96**	$79.23
San Jacinto Branch Line Ext.	$142.08	**$195.08**	$292.62

It is estimated that the monetized benefit of safety improvements range from $1.5-3.0 billion, with about a $2.2 billion midpoint estimate. More than half of all safety improvement benefits are estimated to come from the

[7] Port and Freight Infrastructure Program, Selected Projects – Project Detail Summary (2023). California State Transportation Agency. Retrieved October 10, 2023, from https://calsta.ca.gov/-/media/calsta-media/documents/pfip-awards-summary-narrative-7-6-23-a11y.pdf.

[8] Molan, A., Murugesan, N., Shams, A., Tortora, C., Rahman, F., Loh, J., & Pande, A. (2020). Evaluation of coordinated ramp metering (CRM) implemented by Caltrans. *Mineta Transportation Institute*, 1812. https://doi.org/10.31979/mti.2020.1812

[9] Caltrans, Performance Measurement System Data Source [Online]. Available: http://pems.dot.ca.gov/.

Coachella Valley Link project, primarily caused by the high rates of automobile-pedestrian and automobile-bicyclist accidents in the Coachella Valley region. Even a partial switchover of active travelers to the CV Link results in significant benefits to safety, and therefore a high monetary impact. Other major contributors to the benefits are improvements to currently dangerous roadways, such as SR-79 and the Mid-County Parkway, which have above-average rates of vehicle accidents. Given the high volumes of traffic on these routes, even reducing the rate of accidents to a statewide average would be equivalent to these significant monetary benefits.

Emissions Reduction Analysis

Emission reduction modelling utilized any project where there was a predicted reduction in VMT, as well as the 3rd Street Grade Separation project. However, it should be noted that these reductions only derive gross benefits without accounting for other changes in VMT resulting in other projects – that is, the beneficial emissions impacts from these projects may be overturned by increased emissions resulting from these or other projects.

The two rail projects – the Coachella Valley-San Gorgonio Pass Rail Corridor extension and the San Jacinto Branch Line extension – use the same counterfactual routes as those used for the safety improvement analysis, multiplying the average distances travelled by expected ridership to derive the VMT reduction. Similarly, the CV Link project has developed expected ridership and anticipated average trip length, from which VMT reduction is derived.

The SR-79 Realignment project derives VMT reduction as result of the shortening of the length of the freeway, from 18.8 miles to 12 miles. Thus, 6.8 vehicle-miles are saved by each vehicle, which is multiplied by AADT for each direction and by 300 for annual working days to determine the aggregate reduction in VMT.

Each of the above VMT reductions are multiplied by average fleet emissions of pollutants, with projections from the EPA's Office of Transportation and Air Quality for fleet emissions through 2030[10]; any emissions for years beyond that assume no change from the 2030 projection. This projection does not account for a rise in electric vehicles and should be considered an overestimate. Furthermore, these reductions do not anticipate *further* switchover from personal motor vehicles to train or active transportation – that they are constant over the thirty-

[10] U.S. Environmental Protection Agency, (2023) *Estimated U.S. Average Vehicle Emissions Rates Per Vehicle by Vehicle Type Using Gasoline and Diesel.* Office of Transportation and Air Quality, personal communication, https://www.bts.gov/content/estimated-national-average-vehicle-emissions-rates-vehicle-vehicle-type-using-gasoline-and.

year window of analysis – which may be an underestimate of emissions savings if future utilization is greater than expected.

Additionally, the 3rd Street Grade Separation project grant application includes a projected reduction in specific emissions[11], a result of reducing idling times caused by train crossing.

Project ($ in Millions)	Lower bound	Estimate	Upper Bound
SR-79 Realignment		$178.07	
3rd St Grade Separation		$0.68	
CV-San Gorgonio Rail Corr.		$39.80	
Coachella Valley Link		$12.34	
San Jacinto Branch Line Ext.	$48.25	$66.25	$99.38

Furthermore, under the assumption of constant fleet composition, the county stands to forgo 5,512,772 metric tons of CO_2 emissions over the 30-year analysis window, as well as 2,185 tons of NO_x emissions and nearly 81 tons of fine particular matter (PM 2.5). However, some or all of these savings may be erased by a growing population and utilization of transportation infrastructure.

Overall, it is estimated that the value of foregone emissions is between $279-330 million, with a midpoint of approximately $297 million over thirty years. Compared to the benefits derived from time savings or safety improvements, this is quite insignificant. Most of the benefits are derived from the SR-79 realignment, as the route itself becomes shorter in the realignment plan, saving travelers 6.8 miles in VMT every trip – or approximately 4,000 miles per vehicle per year. The other major contributions come from travelers switching over from personal automobiles to rail or active transportation. Of course, should the total ridership of these rail projects increase, the potential emissions reduction benefit grows.

[11] Port and Freight Infrastructure Program, Selected Projects – Project Detail Summary (2023). California State Transportation Agency. Retrieved October 10, 2023, from https://calsta.ca.gov/-/media/calsta-media/documents/pfip-awards-summary-narrative-7-6-23-a11y.pdf.

Non-quantified Benefits

A final socio-economic impact of this set of projects is a variety of non-quantified, non-monetized benefits which are either indirectly caused by the completion of these projects or are induced through the improvement of the transportation system in the region as a whole. Namely, these impacts stem from induced benefits of time savings, users' economic benefits from improved road quality, and utilization of public and active transportation systems. These benefits often work in conjunction with other incentives to effect changes in behavior, and so make it difficult to directly attribute changes to specific projects. These benefits are also variable over time and users. This makes quantifying such effects, and attributing a dollar value to them, a difficult exercise which is often inaccurate. Nevertheless, these are benefits which should still be considered in evaluating a project as they acknowledge that such projects do not function independently of broader economy outside of transportation.

Time savings reflect a more efficient transportation system. It is possible to determine the benefits of such to individual commuters, as reflected by the earlier sections of this report. However, businesses also benefit greatly from reduced congestion and improved travel times, and although this benefit is difficult to quantify, it has significant implications for the regional economy. Businesses benefit primarily in two ways: that they are able to draw on a larger geographic area for workers, and that they have greater access to markets. In a study of the Philadelphia and Chicago metropolitan areas, Weisbrod, Vary, and Treyz modelled that increased congestion and commute times reduced labor productivity as specialized workers were more difficult to access for businesses, whereas businesses reliant on generalized labor were less affected. Furthermore, the authors found that reduced congestion improved business productivity as delivery times were shortened and market access improved. A 2.5% reduction (a 1.5 minute reduction in an hour commute, for example) in metro-wide travel times for deliveries was modelled to cause a 0.23% increase in productivity in Philadelphia and a 0.38% increase in Chicago – with most of this productivity growth occurring in service industries[12]. In Riverside County, where the logistics and warehousing industries are major employers and drivers of growth, faster delivery times could be even more impactful. Although these projects are not going to reduce travel times on all roads throughout the county, their improvements on travel times in specific areas could have a significant impact on local businesses. In addition to spurring growth in

[12] Weisbrod, G. E., Vary, D., Treyz, G., & National Cooperative Highway Research Program. (2001). *Economic implications of congestion*. Transportation Research Board.

existing businesses, greater access to labor and markets may also bring about firm relocation and creation in the region – broadening the potential economic impact of these transportation projects further.

Furthermore, reduced congestion and general highway improvement – such as that proposed for the SR-79 realignment and Mid-County Parkway projects – can diminish motorists' incentives for aggressive driving[13], which improves safety in the county's roads and can reduce the administrative costs resulting from enforcing traffic laws. Additionally, improved road quality reduces wear and tear on vehicles, a benefit whose costs are passed along to vehicle owners.

The public and active transportation projects also generate non-quantifiable benefits. For example, new commuter rail stations, such as the San Jacinto branch line extension, are associated with greater retail employment in surrounding areas following their opening[14]. As these stations bring both foot and vehicle traffic to an area, retail stores and other services often benefit by providing convenience to rail commuters. These sorts of stations create islands of activity in suburban areas that are often dominated by car travel. Similarly, retail shops located around active transportation projects are able to access customers on foot and bike – case studies throughout the world, in cities both urban and suburban, report increases in sales and local tax revenues from pedestrianization projects[15]. In areas with high car dependency, such as the Inland Empire, active transportation corridors also allow businesses and cities to increase the volume of customers without having necessitating more parking spaces.

Finally, a self-evident benefit of improved active transportation routes – such as CV Link – are benefits users derive from engaging in active transportation. Primarily, this manifests as improved health outcomes resulting from exercise, which helps reduce risks of serious conditions such as obesity, cardiovascular disease, diabetes, and other chronic illnesses[16]. These benefits are reaped by users and can encourage a healthier lifestyle among more residents, who may have been reluctant to engage in active transportation due to concerns regarding safety or accessibility.

[13] Department of Transportation Federal Highway Administration. (2019). *Status of the Nation's Highways, Bridges, and Transit: Conditions & Performance 23rd Edition*. https://www.fhwa.dot.gov/policy/23cpr/pdfs/pdf/23cpr.pdf

[14] Schuetz, J. (2015). Do rail transit stations encourage neighbourhood retail activity? *Urban Studies*, 52(14), 2699-2723. https://doi.org/10.1177/0042098014549128

[15] Campbell, R., & Wittgens, M. (2004). The business case for active transportation. *Gloucester: Go for Green*.

[16] *Active Transportation*. (2015, August 24). Transportation.gov. https://www.transportation.gov/mission/health/active-transportation

These and other benefits combine to provide a further impact of the planned projects beyond the dollar value of investment in transportation infrastructure. Even further benefits can emerge as the result of future investment in other projects being more valuable – for example, further densification of the rail or active transportation systems result in greater impacts tomorrow by investments today.

Conclusion

Overall, there are significant long-term socio-economic benefits emerging from the twelve proposed RCTC projects. These benefits stem from the usage of the projects, and their impacts broadly affect both users and the community as a whole. It is estimated that the value of these benefits is approximately $9.7 billion dollars, with a large range. Nearly three-quarters of the monetized benefits come from improved travel efficiency and reductions in travel times. A further 23% come from the benefits of improving safety and reducing accident rates, while the rest emerges from the value of reducing air pollutants and other emissions. Further benefits can emerge as a consequence of these projects and their direct benefits, but these are left unquantified. These estimates reflect the 30-year sum of benefits as compared to a counterfactual world where no such projects are undertaken.

Compared to their estimated costs, the benefits emerging from the combined set of projects represents a significant return on investment. At the midpoint estimate, for every $1 spent on these projects, there are $1.87 in benefits. This return ultimately ranges from $1.20 to $2.45. These benefits may be even greater due to the unquantifiable benefits that they also indirectly cause or induce.

About Beacon Economics

Founded in 2007, Beacon Economics, an LLC and certified Small Business Enterprise with the state of California, is an independent research and consulting firm dedicated to delivering accurate, insightful, and objectively based economic analysis. Employing unique proprietary models, vast databases, and sophisticated data processing, the company's specialized practice areas include sustainable growth and development, real estate market analysis, economic forecasting, industry analysis, economic policy analysis, and economic impact studies. Beacon Economics equips its clients with the data and analysis they need to understand the significance of on-the-ground realities and to make informed business and policy decisions.

Learn more at beaconecon.com

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RIVERSIDE COUNTY TRANSPORTATION COMMISSION	
DATE:	January 26, 2024
TO:	Riverside County Transportation Commission
FROM:	Erik Galloway, Project Delivery Director
THROUGH:	Anne Mayer, Executive Director
SUBJECT:	State Route 79 Realignment Project Update and Corridor Analysis

STAFF RECOMMENDATION:

This item is for the Commission to:

1) Direct staff to develop the necessary agreement(s) with the California Department of Transportation (Caltrans) to modify the State Route 79 (SR-79) Realignment Project (Project) from a State Route to a future County expressway;
2) Direct staff to develop the necessary agreements or documentation to designate the Commission the California Environmental Quality Act (CEQA) lead agency;
3) Adopt the proposed segments of the Project identified by the Corridor Analysis Study; and
4) Direct staff to proceed with one of the following Options:

Alternative A

a) Direct staff to draft a Request for Proposals (RFP) for the Project's Plans, Specifications, and Estimates (PS&E) phase and continue the acquisition of right of way for the SR-79 Segment 3 Modified Limits, 0.35 miles south of Newport Road to Simpson Road, or SR-79 Segment 3, 0.35 miles south of Newport Road to Domenigoni Parkway.
b) Amend the 2019-2029 Measure A Western County Highway Delivery Plan to add SR-79 Segment 3 Modified or Segment 3 to "Group 2: Partially Funding Likely Available" of the Commission-adopted Delivery Plan;
c) Direct staff to identify and recommend funding sources and any other prioritization changes necessary to the 2019-2029 Measure A Western County Highway Delivery Plan to complete PS&E and Right of Way (ROW) phases for the segment selected.

Alternative B

a) Direct staff to proceed with limited, willing seller, core parcel SR-79 corridor ROW acquisition utilizing available Regional and Zone Transportation Uniform Mitigation Fee (TUMF) funding;

b) Amend the 2019-2029 Measure A Western County Highway Delivery Plan to add limited SR-79 ROW acquisition to "Group 2: Partially Funding Likely Available" of the Commission-adopted Delivery Plan.

c) Reconsider advancing at least one segment upon identification of funding sufficient for construction for that segment.

Alternative C

a) Maintain current 2019-2029 Measure A Western County Highway Delivery Plan projects and suspend further work on SR-79. Reconsider suspension upon identification of funding sufficient for construction of at least one segment.

PROJECT OBJECTIVE:

The Project proposes to build a 12-mile limited access highway extending from south of Domenigoni Parkway north to Gilman Springs Road. The Project will provide a safer and more direct north-south route, serving the community of Winchester, the cities of Hemet and San Jacinto, and unincorporated Riverside County. The Project will:

- Improve traffic flow for local and regional north-south traffic in the San Jacinto Valley by implementing a new roadway corridor;
- Improve operational efficiency and enhance safety conditions;
- Allow regional traffic, including truck traffic, to bypass local roads; and
- Reduce the diversion of traffic from state routes onto local roads.

PROJECT HISTORY:

The Project was developed jointly with Caltrans and Federal Highway Administration (FHWA), which subjected it to state and federal environmental review requirements. Caltrans was the lead agency under both the CEQA and the National Environmental Policy Act (NEPA). FHWA's responsibility for NEPA environmental review, consultation, and other actions in accordance with applicable federal laws for this project, was carried out by Caltrans under its assumption of NEPA responsibility pursuant to 23 United States Code Section 327.

On December 8, 2016, Caltrans approved the CEQA Final Environmental Impact Report (EIR). A Notice of Determination (NOD) was filed for CEQA compliance on January 26, 2017. On December 16, 2016, Caltrans approved the NEPA Final Environmental Impact Statement (EIS). The Record of Decision (ROD) was published in the Federal Register on March 15, 2017, and the statute of limitations expired on August 14, 2017. The EIR/EIS received no legal challenges. On January 26, 2017, the Commission, as a CEQA responsible agency, adopted the CEQA findings and Mitigation Monitoring Reporting Program (MMRP) that imposes mitigation measures to reduce many of the Project's environmental impacts to below a level of significance. The cost to complete the environmental process was $42 million.

On February 2, 2023, at the Commission Workshop, the Commission directed staff to take a fresh look at the Project and evaluate the potential to accelerate delivery of the Project. Staff immediately undertook this effort as a Corridor Analysis.

On October 16, 2023, a project update and presentation of the findings from the Corridor Analysis were presented to the SR-79 Corridor Ad Hoc Committee. The Corridor Analysis segmented the Project into three segments and proposed the Project as a county facility with active transportation and transit features. Extensive discussions were held among Ad Hoc Committee members regarding the merits of the various options including potential impacts by extending the proposed southerly Segment 3 to Simpson Road. This staff report to the full Commission acknowledges and responds to comments and clarifications requested during the Ad Hoc meeting. The Ad Hoc Committee did not reach a consensus on segment prioritization or segment limits. Other suggestions included utilizing available funding for corridor ROW acquisition as a priority.

On December 21, 2023, RCTC staff met with the city of Hemet. This item was presented and discussed in detail with City representatives and staff. The City raised concerns about advancing the southerly Segment 3.

PROJECT CHALLENGES:

Funding Constraints

The Project is named in the Western County highway portion of the Measure A expenditure plan (Attachment 1), the voter-approved half-cent sales tax measure for transportation improvements in Riverside County. The expenditure plan estimates the total project cost as $132 million and identifies that Measure A, federal, and state funding sources will be used for the Project, of which 50 percent was assumed to be state and federal. These state and federal sources are not available in the manner that the authors of Measure A assumed, nor will they be given the policy changes discussed later in this staff report. For these reasons, RCTC has not been able to proceed with construction of the Project. In 2019, the Commission adopted the 2019-2029 Measure A Western County Highway Delivery Plan which placed the Project in "Group 4: Not Part of the 2019-2029 Delivery Plan: RCTC Projects," due to insufficient funds (Attachment 2).

Low Benefit/Cost

After completing the Project's environmental phase, funding constraints have limited investment in the SR-79 corridor. The Project was not included in the funded groups of projects in the 2019-2029 Measure A Western County Highway Delivery Plan due to the high project cost and relatively low traffic volumes in comparison to other corridors, such as: State Routes 60, and 91 and Interstates 10, 15, and 215. The existing average daily traffic volumes on SR-79 are between approximately 30,000 and 50,000 vehicles per day. Other corridor volumes extend up to 340,000 vehicles per day. In general, more congested corridors have been designated as priorities.

The Project has a high per mile cost to construct because it is a new facility with a new alignment. Significant ROW purchase costs for the new corridor contribute to the high per mile cost. It is estimated that the average cost per mile for the corridor will range between $150 to $200 million. For comparison purposes, constructing the same number of lanes for the 15 Express Lanes Project was approximately $33 million per mile and the 15 Express Lanes Southern Extension is estimated at approximately $44 million per mile. In addition, the Mid County Parkway Project Segment 3, which improves an existing county road and connects to the proposed SR-79, is $19 million per mile.

State Policy Changes

California Senate Bill (SB) 743, which was signed into law in 2013 and the updated CEQA guidelines took effect July 1, 2020, requires lead agencies under CEQA to identify new methodologies for transportation analyses that will encourage "land use and transportation planning decisions and investments that reduce vehicle miles traveled (VMT) and contribute to the reductions in greenhouse gas emissions required in the California Global Warming Solutions Act of 2006." SB 743 replaces Level of Service with VMT for land use and transportation projects which is intended to reduce future VMT growth. This shift in transportation impact focus is intended to align transportation impact analyses and mitigation outcomes with the state's goals to reduce greenhouse gas (GHG) emissions, encourage infill development, and improve public health through more active transportation.

Although the approved environmental document anticipated that the Project would ultimately be a state-owned facility, it is important to note that Caltrans may not accept ownership or maintenance of the Project due to current policies that discourage new auto-oriented transportation facilities or additional vehicle capacity on the state highway system.

Due to the continued need for this regional corridor, funding constraints, and policy changes at the state level, a new approach is needed for the Project.

PROJECT PROGRESS:

Right of Way Mitigation Land and Environmental Activities

To comply with the requirements set forth in the MMRP, the Commission was tasked to acquire 232.56 acres of mitigation land for the protection of aquatic resources. Since its approval, the Commission has acquired 221.5 acres of the required 232.56 acres, over 95 percent of the required mitigation lands needed for the Project. Approximately $26 million was expended for these acquisitions.

The Commission has completed the mitigation tasks cited in the Memorandum of Agreement (MOA) with the State Historic Preservation Officer (SHPO) per Section 106 of the National Historic Preservation Act of 1966. The MOA between Caltrans, SHPO, and the Commission stipulates that the Commission shall complete cultural resource mitigation measures cited in the MOA. Additionally, the MOA stipulates that construction cannot commence on any aspect of the Project until the cultural resource mitigation measures are completed. The cultural resource

mitigation work was completed and accepted by Caltrans and the Consulting Tribes in March 2022, per the Commission's direction at its August 28, 2017, meeting.

Right of Way Acquisition

Considering the magnitude of ROW acquisitions required for the Project, RCTC has commenced ROW acquisitions on critical parcels. To date, the Commission has acquired approximately 109 of 1,099 acres, or approximately 10 percent of the needed ROW. Approximately $25.8 million was expended on these purchases.

Corridor Analysis

At the 2023 Commission Workshop, the Commission directed staff to develop a corridor analysis to identify ways to re-envision the project into segments or configurations that would address the project needs while making the project fundable and buildable. The Corridor Analysis evaluated conversion of the Project from a State Route to a County expressway. This slightly reduced the project's footprint due to the implementation of County standards rather than State Highway requirements. The Corridor Analysis also included trails and multimodal features and connections to existing transit facilities and identified cost-effective buildable segments that could be constructed in phases. The Corridor Analysis also presented the necessary steps required for Caltrans to relinquish CEQA lead to RCTC. Per federal requirements, Caltrans must remain the NEPA lead.

<u>Implications of the Proposed SR-79 Becoming a County Expressway</u>

Staff will need to seek Caltrans concurrence to consider this project off-system and approve the assignment of RCTC as the CEQA lead. If Caltrans accepts this approach, RCTC will become the CEQA lead agency and Caltrans will remain the NEPA lead agency. All project matters will be directed through the District's Planning Division, Local Assistance Branch, due to Caltrans maintaining the NEPA lead.

Since the future of SR-79 will be a non-state highway, a different name will need to be determined for this new corridor. It is important to note that as a new corridor built to County standards, funding for maintenance and operations activities will need to be identified. It is unlikely that the County or the cities of Hemet and San Jacinto could absorb the maintenance costs into their existing Capital Improvement Plans. Eligibility and funding for maintenance of this proposed corridor have been included in the 2024 Draft Traffic Relief Plan.

<u>Proposed Cross-section</u>

As part of the Corridor Analysis, staff coordinated with the County to scope the Project in a way that provides a buildable, fundable project for immediate public benefit which meets the local agency needs for safety and maintenance. After numerous meetings regarding the cross-section and project segmentation, RCTC and County staff have agreed on a cross-section based on county expressway standards with a future transit facility and bicycle/pedestrian path. The proposed cross-section is included as Attachment 3.

Segmentation

It was determined that the Project could be broken into three segments, in which each segment would retain its logical termini and independent utility. The three segments are:

- Segment 1 – Sanderson Avenue to Florida Avenue (State Route 74)
- Segment 2 – Florida Avenue (State Route 74) to Domenigoni Parkway
- Segment 3 – Domenigoni Parkway to Newport Road

A map of the proposed segments is included as Attachment 4.

As part of the Corridor Analysis, the total project cost estimate was updated to current year dollars and analyzed as the corridor being considered a county expressway and broken into the three segments noted above. Table 1 summarizes the total project costs. The total project cost includes design, construction management, construction, ROW, and RCTC project management. Staff also held discussions with the County and developed a 4th segment alternative which modified the limits of Segment 3, extending it by 0.82 miles north to Simpson Road.

- Segment 3 Modified Limits – Domenigoni Parkway to Simpson Road

A map of the proposed Segment 3 Modified Limits is included as Attachment 5.

Table 1 – Updated Total Project Cost Breakdown by Segment (Caltrans vs County Facility)

	Segment	Original Caltrans Facility	Corridor Analysis County Expressway	Difference
1	Segment 1 - Northerly	$750,000,000	$340,000,000	$410,000,000
2	Segment 2 - Middle	$780,000,000	$600,000,000	$180,000,000
3	Segment 3 - Southerly	$230,000,000	$170,000,000	$60,000,000
4	Segment 3 Modified Limits	$340,000,000	$280,000,000	$60,000,000
	Total	**$1,760,000,000 to $1,870,000,000**	**$1,110,000,000 to $1,220,000,000**	**$650,000,000**

As part of the analysis, staff reviewed the ROW required for the project by segment, as this would have a significant impact on the total project cost. The ROW required by segment and estimated cost is summarized in Table 2.

Table 2 – ROW Cost by Segment

	Total Parcels Required			Cost for ROW	
Segment	**Caltrans Facility**	**Corridor Analysis**	**Parcels Acquired**	**Caltrans Facility**	**Corridor Analysis**
Segment 1 - Northerly	54	27	7	$90,067,859	$54,951,086
Segment 2 – Middle	47 / 42*	43 / 38*	2	$62,283,271/ $54,877,315*	$50,561,270/ $44,318,627*
Segment 3 - Southerly	15	14	0	$19,805,863	$19,486,305
Segment 3 Modified Limits	20	19	0	$27,211,819	$25,728,948
Total	**116**	**84**	**9**	**$172,156,993**	**$124,998,661**

* The first number is the number of parcels required for the original segments / the second number is if Segment 3 Modified is used.

As noted, discussions were held with the County resulting in the development of Segment 3 Modified Limits, which offers several benefits. Some of the benefits include:

- Increasing the limits of the initial project; and
- Redirecting traffic from the existing SR-79 in downtown Winchester to the new alignment.

A comparison of Segment 3 and Segment 3 Modified total project costs is summarized in Table 3.

Table 3 – Segment 3 compared to Segment 3 Modified

	Item	Segment 3 (Newport Rd. to Domenigoni Pky.)	Segment 3 Modified (Newport Rd. to Simpson Rd.)	Difference
1	Design	$10,548,510	$17,995,050	($7,446,540)
2	Agency Support	$5,274,255	$8,997,525	($3,723,270)
3	Construction	$112,114,105	$190,687,325	($78,573,220)
4	Construction Support	$16,817,116	$28,603,099	($11,785,983)
5	ROW Acquisitions	$18,558,386	$24,503,760	($5,945,374)
6	ROW Support	$927,919	$1,225,188	($297,269)
	Total	**$164,240,291**	**$272,011,948**	**($107,771,656)**
	Total (Rounded Up)	**$170,000,000**	**$280,000,000**	**($110,000,000)**

Segment Recommendation
After reviewing the data, if the Commission decides to proceed with the Project at this time, the most cost-effective segment is Segment 3, which has the lowest total project cost (including the lowest ROW costs), offering a greater potential to find funding required to advance the segment. It should be noted that Segment 3 Modified Limits will require other improvements to Simpson Road to address the additional traffic, which will fall outside of the SR-79 Project footprint and will need to be a separate project(s) implemented and funded by the County. The city of Hemet raised concerns that this option would require improvements to other local streets, which would also fall outside the project footprint and will need to be implemented and funded separately by the City.

Funding
The Commission approved approximately $7.7 million for the Project in its FY 23/24 budget for ROW acquisition. The Western Riverside Council of Governments (WRCOG) Hemet/San Jacinto Zone recently approved the allocation of $10 million in TUMF funds to the Project, specifically for ROW acquisition.

Given the current funding priorities at the state and federal level, it is not likely that this segment will be competitive with receiving funding. Local resources such as Measure A and TUMF will be the primary funding sources for the proposed phases of this project, including design, ROW, and construction.

Furthermore, there are additional constraints to the identified funding such as TUMF. Specifically, this project's TUMF eligibility is currently capped at $87 million. After accounting for environmental and ROW costs already incurred and assuming the $10 million in Zone TUMF mentioned above is utilized, only $40 million in TUMF funding eligibility remains.

This study effort and revised corridor concept has resulted in lowering project costs significantly however, the Project costs still exceed $1 billion. Unlike other high-cost RCTC projects, this corridor has limited opportunity for external funds for reasons previously mentioned. Viewing this cost in the context of Measure A revenues demonstrates the significant difficulty in funding the Project as shown Table 4 below. It is for this reason that the Commission placed the Project in, "Group 4: Not Part of the 2019-2029 Delivery Plan: RCTC Projects" category.

Table 4 – Summary and context of approx. Measure A collections and expenditures to date

Total Measure A collected 2009-June 30, 2023	$2.6 billion
Western County share of Measure A collected 2009-June 30, 2023	$2.0 billion
Measure A Western County Highways share collected (30%) per voter approved expenditure plan	$600 million
Total RCTC expenditures on SR-79 Realignment to date (Measure A and TUMF)	$88 million
SR-79 Realignment project cost for remaining phases per Corridor Analysis (Segments 1, 2, 3/3 Modified)	$1.1-$1.2 billion

Value of Western County Highways projects named in voter-approved Measure A expenditure plan delivered or under construction to date	$2.5-$2.8 billion

Although funding PS&E and ROW costs for either Segment 3 or Segment 3 Modified Limits is likely feasible within existing or near-term funding sources, sufficient funding for construction of Segment 3 is not yet identified and will have a significant impact on the rest of the Commission's priorities. If the Commission chooses to proceed at this time and with the Commission's direction, staff will commence a review of project priorities along with available funding and will determine what funding, if any, can be allocated to the project. This could require other Commission projects to be postponed indefinitely until other funding can be identified and allocated and the Commission will have fewer resources and flexibility to support partner agency projects such as interchanges, grade separations, and regional arterials. Once this review has been completed, staff will return to the Commission with recommendations on which project or projects will need to be postponed to allow for funding of Segment 3 or Segment 3 Modified Limits.

SUMMARY

The Project has been and will continue to be a difficult project for RCTC to fund in its entirety due to the cost of building a new roadway within a new ROW corridor. If the Commission desires to advance one segment of the Project toward construction, staff recommends proceeding with either Segment 3 or Segment 3 Modified Limits PS&E and ROW to jumpstart Project progress. Although construction funds are yet to be identified, having one segment ready to go to construction would position the Project to be eligible for more state and federal programs, though competition for those funds will be difficult. Segments 1 and 2 PS&E and ROW are not recommended due to higher costs that cannot be funded, even if other RCTC projects are postponed.

Concerns have been raised by Ad Hoc members about proceeding with Segment 3 or Segment 3 Modified Limits. Staff has provided alternative recommendations for the Commission to consider:

- Alternative A: commence PS&E and ROW phases on Segment 3 or Segment 3 Modified Limits and staff to identify funding sources necessary to complete these two phases.
- Alternative B: focus on acquiring core parcels along the corridor that may be subject to imminent development, expending available Regional and Zone TUMF funding; staff to seek funding opportunities to advance one of the project segments.
- Alternative C: maintain current 2019-2029 Measure A Western County Highway Delivery Plan priorities and suspend the Project until such time as the Project or a preferred Project segment can feasibly be funded through the construction phase.

FISCAL IMPACT:

There is no fiscal impact at this time. Staff will return to the Commission with funding recommendations, prioritization policy changes, and budget amendments, if necessary, upon

Commission direction. Funding in the current Fiscal Year 2023/24 budget is included for both ROW and Corridor Analysis related to the Project.

Attachments:
1) 2002 Measure A Expenditure Plan – Western County Highways excerpt
2) 2019-2029 Measure A Western County Highway Delivery Plan
3) Cross-section
4) Proposed Segments
5) Segment 3 Modified Limits

SPECIFIC TRANSPORTATION PROJECTS TO BE FUNDED

WESTERN RIVERSIDE COUNTY

The Expenditure Plan Map illustrates the Western and Coachella Valley areas The Western County area includes the cities of Banning, Beaumont, Calimesa, Canyon Lake, Corona, Hemet, Lake Elsinore, Moreno Valley, Riverside, Murrieta, Norco, Perris, San Jacinto, and Temecula It also includes the unincorporated communities of Jurupa, Mira Loma, Menifee, Wildomar, and Sun City and other more sparsely populated areas, and the reservations of the Pechanga Band of Mission Indians, the Soboba Band of Mission Indians, the Cahuilla Band of Mission Indians, the Ramona Band of Cahuilla Indians, and the Morongo Band of Indians

1 STATE HIGHWAYS

Many more state highway improvement projects are needed to deal with congestion and safety problems than existing state and federal revenues can fund Projected formula funds from these sources over the 30 years is estimated to be $640 million and will fund less than ½ of the improvements needed and identified in the Expenditure Plan, which are estimated to cost $1 66 billion in current dollars Measure "A" funds will supplement those funding sources by an estimated $1 02 billion and will cover the remaining costs estimated to accomplish these improvements

The Highway projects to be implemented with funding returned to the Western County Area by extending the Measure "A" Program are as follows

ROUTE	LIMITS	PROJECT	EST COST
91 60 I 15 & I-215		Reducing congestion on these routes will require that new transportation corridors are constructed	See Section 2
Rte 91	Pierce Street to Orange County Line	Add 1 lane each direction	$ 161
91/I 15	Interchange	Add new Connector from I 15 North to 91 West	$ 243
91/71	Interchange	Improve Interchange	$ 26
Rte 71	Rte 91 to San Bernardino County Line	Widen to 3 lanes each direction	$ 68
I 215	60/91/215 to San Bernardino County Line	Add 2 lanes each direction	$ 231
I-215	Eucalyptus Ave to I 15	Add 1 lane each direction	$ 210
I 15	Rte 60 to San Diego County Line	Add 1 lane each direction	$ 359
I-10	San Bernardino County Line to Banning	Add eastbound truck climbing lane	$ 75
I 10/60	Interchange	Construct new interchange	$ 129
Rte 60	Badlands area east of Moreno Valley	Add truck climbing lane	$ 26
Rte 79	Ramona Expressway to Domenigoni Parkway	Realign highway	$ 132
SUBTOTAL	**Measure A Funding** **State & Federal Formula Funds**		**$1 02 Billion** **$0 64 Billion**
TOTAL			**$1 66 Billion**

The Commission may add additional State Highway projects, should additional Measure "A" revenue become available

An estimated 5% of the total cost for these highway projects ($83 million) will be used for environmental purposes to mitigate the cumulative and indirect impacts associated with construction of these projects

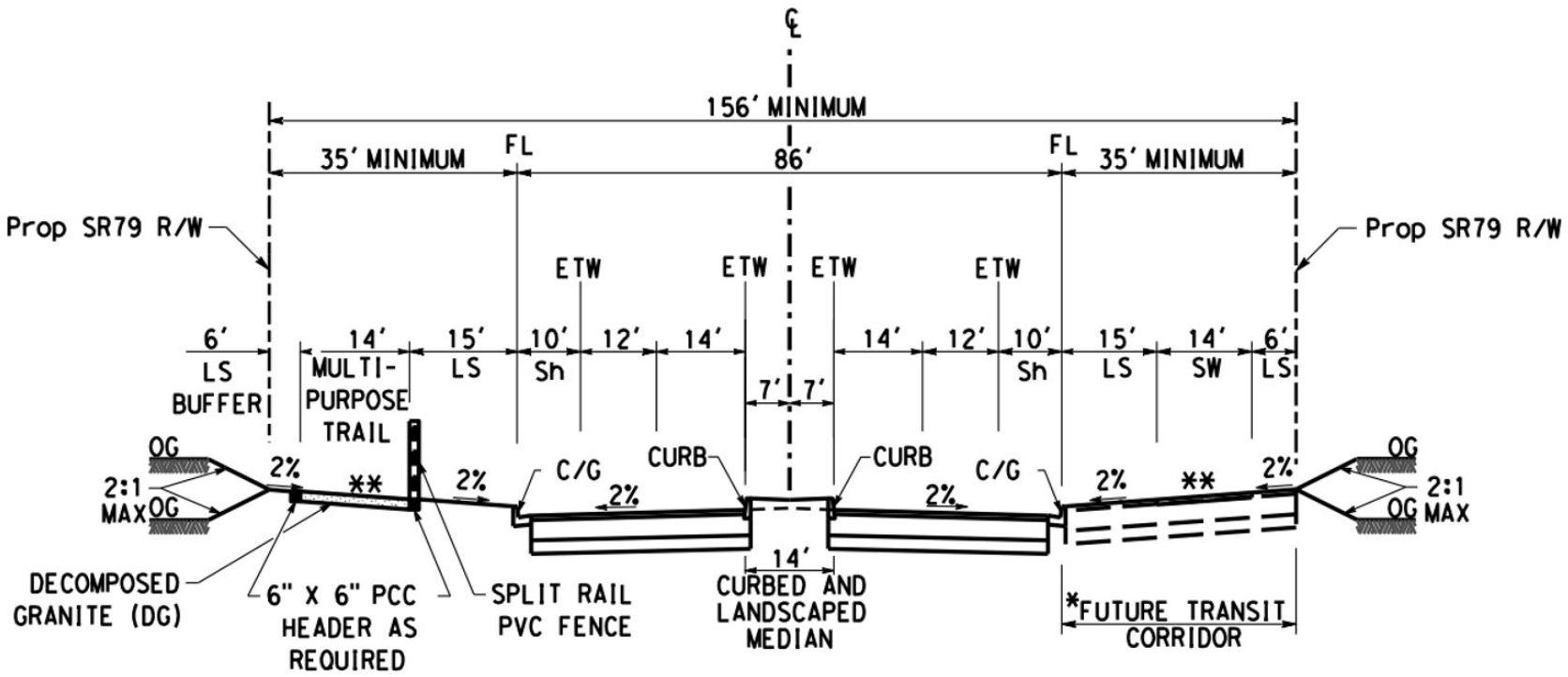
10-Year Western Riverside County Highway Delivery Plan 2019-2029
RCTC-Sponsored Group 1 and Group 2 Projects

	Projects	Phase	Sponsor	Cost	Available Funding	PRIORITIZATION FACTORS 1	2	3	4	5	6	7
				(in millions $)	(in millions $)	Consequence of deferring delivery	Deferred projects from the 2009-2019 Western County Highway Delivery Plan	Projects that fulfill or enhance projects named in the approved Measure A expenditure plan	Projects that can realistically attain sufficient funding to achieve completion of a usable segment	Projects with the potential to minimize Measure A contributions	Eligibility for "restrictive" funding sources	Economic benefit to the region due to the constructed traffic improvement
Group 1	*Fully Funded: Part of the 2019-2029 Delivery Plan*											
COMPLETE	91 CIP Completion	Design-Build	RCTC	$ 36		X		X	X	X	X	n/a (project closeout)
	I-15 ELP Completion	Design-Build	RCTC	22		X		X	X		X	n/a (project closeout)
BUILD	15/91 Express Lanes Connector	Design-Build	RCTC	220		X	X	X	X	X	X	MEDIUM
	SR-60 Truck Lanes	Construction	RCTC	123		X		X	X	X	X	MEDIUM
	Mid-County Parkway: Placentia Interchange at I-215	Construction	RCTC	60		X		X	X	X	X	MEDIUM
	91 Pachappa UP Project: Railroad realignment	Construction	RCTC	18		X		X	X	X	X	n/a (railroad constr.)
	Mid County Parkway: Sweeney Grading	Construction	RCTC	5		X		X	X		X	n/a (no lane const.)
	*71/91 Interchange	Construction	RCTC	128		X	X	X	X	X	X	MEDIUM
	*SR-91 Corridor Operations Project (Westbound auxiliary lane: Green River to 241)	Construction	RCTC	40			X	X	X	X	X	HIGH
	* I-15 Express Lanes Project Southern Extension (Cajalco to 74): Advanced Operations	Environmental through Construction	RCTC	28			X	X	X	X	X	MEDIUM
START	I-15 Express Lanes Project Southern Extension (Cajalco to 74)	Environmental	RCTC	33			X	X	X	X	X	n/a (no lane const.)
	* I-15 Express Lanes Project Southern Extension (Cajalco to 74)	Design-Build phase 1	RCTC	24			X	X	X	X	X	n/a (no lane const.)
	* 91 Downtown Riverside Express Lanes	Environmental	RCTC	22					X	X	X	n/a (no lane const.)
			Group Total	**$ 757**	**$ 757**							
Group 2	*Partial Funding Likely Available: Part of the 2019-2029 Delivery Plan*											
	Mid County Parkway: Right of Way and Environmental Mitigation	ROW/Environmental	RCTC	40		X		X	X		X	n/a (no lane const.)
	Mid-County Parkway: Package 2	Design/Construction	RCTC	84		X		X	X		X	HIGH
	Mid County Parkway: I-215 Project, Nuevo to Alessandro	Design/Construction	RCTC	145				X			X	HIGH
	I-15 Express Lanes Project Southern Extension (Cajalco to 74)	Design-Build phase 2 construction	RCTC	470			X	X		X	X	MEDIUM
	60/215 Riverside-Moreno Valley Express Lanes											
	60/215 Riverside-Moreno Valley Express Lanes	Environmental	RCTC	38				X	X	X	X	n/a (no lane const.)
	60/215 Riverside-Moreno Valley Express Lanes	Design/Construction	RCTC	342				X		X	X	HIGH
	I-215 Gap Project (I-215 to French Valley Parkway)	Environmental to Construction	RCTC	18				X	X		X	n/a
	91 Downtown Riverside Express Lanes	Design/Construction	RCTC	197						X	X	HIGH
			Group Total	**$ 1,335**	**$125-$525**							
Group 3	*Partner Agency Projects: Assist with Funding in 2019-2029*											
	Lake Elsinore: I-15/Railroad Canyon Interchange (fully funded)	Construction	Lake Elsinore	$ 36		X			X		X	MEDIUM
	RCTLMA: Cajalco Road Corridor	Environmental to Construction	County	452				X			X	HIGH
	Temecula: French Valley Parkway Phase 2	Environmental to Construction	Temecula	120							X	MEDIUM
			Group Total	**$ 608**	**$36-$100**							
Group 4	*Not Part of 2019-2029 Delivery Plan: RCTC Projects*											
	Mid County Parkway: Packages 3 and thereafter	Environmental to Construction	RCTC	$ 800		X		X			X	HIGH
	79 Realignment	Design/ROW to Construction	RCTC	1,300		X		X				MEDIUM
	I-15 Corridor (SR-74 to 215/15 interchange)	Project Study to Environmental	RCTC	35			X	X		X	X	n/a (no lane const.)
	SR-91 Corridor Ultimate Project:											
	SR-91 Corridor Ultimate Proj.: 2035 (EB & WB general purpose lanes: 71 to 241)	Environmental	RCTC	50			X	X		X	X	n/a (no lane const.)
	SR-91 Corridor Ultimate Proj.: 2035 (EB & WB general purpose lanes: I-15 to Pierce)	Environmental	RCTC	25			X	X		X	X	n/a (no lane const.)
	I-10 Truck Climbing Lane	Environmental to Construction	RCTC	75			X	X		X		n/a
	I-15 Corridor (215/15 interchange to San Diego County line)	Project Study to Environmental	RCTC	35				X		X	X	n/a (no lane const.)
	SR-71 Widening	Environmental to Construction	RCTC	100				X		X		MEDIUM
	10/60 Interchange	Environmental to Construction	RCTC	500				X		X		MEDIUM
	215 Ultimate widening (60 to San Bernardino County line)	Environmental to Construction	RCTC	1,000				X				MEDIUM
	60 Jurupa Valley-Riverside Express Lanes	Environmental	RCTC	51						X	X	n/a (no lane const.)
	Managed Freeway Projects	Pilot Project	RCTC	50								n/a (benefit unknown)
			Group Total	**$ 4,022**	**$ -**							
Group 5	***Not Part of 2019-2029 Delivery Plan: Partner Agency Projects***											
	SBCTA: 15 Express Lanes	Environmental to Construction	SBCTA	N/A							X	n/a (cost unknown)
	RCTLMA: Ethanac Corridor	Environmental to Construction	County	N/A								n/a (cost unknown)
	Temecula: French Valley Parkway Phase 3	Environmental to Construction	Temecula	N/A								n/a (cost unknown)
			Group Total	**N/A**	**$ -**							

*** = project (or project phase) fully-funded based on the June FFI Committee Innovative Financing Opportunities staff report recommendations and potential July 2019 Board approval**

Note: The June FFI Committee Innovative Financing Opportunities staff report estimated between $228M and $467M of proceeds available, use of $241M of proceeds are assumed above

PROPOSED CROSS SECTION



PROPOSED SEGMENTS

SEGMENT 3 MODIFIED