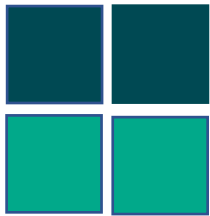


Link21 Transportation Planning and Funding



**UC Berkeley Studio Report
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Executive Summary

The looming mass transit fiscal cliff threatens the viability of long term operations of BART and future Link21 projects. BART's historic reliance on farebox recovery for financial stability necessitates an evaluation of available funding sources in an effort to increase funding for both long term project planning and ongoing operations. Given existing State and Federal policies that call for increased investment in public transit and rail and California's stated goals around greenhouse gas emission reductions and equity improvements, the time is ripe for changes to the current funding mechanisms which have long favored highway and road projects over transit and rail.

A streamlined process to ensure continuous and advanced planning is necessary for the successful completion of megaregional transit and rail projects that cross political jurisdictions. Further, this type of planning and funding is necessary for California to remain competitive for Federal funding opportunities, especially given the unprecedented amount of funding currently available from the Infrastructure Investment and Jobs Act (2021).

The purpose of this report is threefold:

- First, we identify the benefits of continuous and advanced planning and funding for transit projects;
- Second, we document the differences in Federal and State funding sources available for planning as they relate to highway and road projects versus transit and rail;
- Lastly, we present alternative funding that could be used for transit and rail projects, including a detailed look into value capture and joint development mechanisms.

Report Outline: Section 1 outlines the benefits of continuous and advanced planning for transit projects. Section 2 describes the differences in Federal and State funding processes for transit and rail projects in comparison to highway and road projects. It further describes the difference in funding levels for State programs that fund transportation and includes an analysis of eligible project types and eligible phases. Lastly, it puts forth eight recommendations for changes to the current funding landscape that seek to increase the ease and flexibility of transit funding, align priority-based spending to equitably serve all transit users, and achieve emissions reductions from passenger vehicles to meet State climate goals. Section 3 provides an overview of value capture mechanisms and alternative funding sources that could be used for public transit including joint development, land banking, financing tools and tax mechanisms.

Federal and State Funding Programs and Recommendations: As roughly one third of transportation funding derives from the Federal level, the analysis begins with a high-level overview of Federal funding programs that are distributed down to the State, metropolitan planning organizations (MPOs), and localities. Yet dedicated, legacy Federal funds are no longer able to keep pace with surface transportation demands,

relying too heavily on declining gas tax revenue in the face of EVs, inflation, and increased fuel efficiency standards. While there is a known persistent 80/20 split in funding that favors roadways over transit, this section of the report identifies the specific disparities in the planning pipeline, lack of equivalent resources for maintenance and operations, and asymmetric performance targets affixed to transit projects.

Through an analysis of existing State programs that fund transportation in California, it is clear that there is a disparity in funding across modes of transportation. Programs that fund highway and road projects are funded at a higher rate than programs that fund transit and rail projects. Furthermore, programs that fund highway and road projects include funding for planning and operations projects and staffing, whereas programs that fund transit and rail projects incorporate significantly less funding to staff and plan these same types of projects and on-going operations.

Value Capture-- Evaluation of Alternative Sources of Funding for Public Transit: Transit agencies in the United States are perpetually in search of revenue sources to supplement farebox recovery, making value capture an enticing proposition. However, many structural challenges to value capture implementation exist and a robust policy framework is required to mitigate detrimental impacts facing the surrounding community such as gentrification, displacement and land speculation.

This section focuses first on strategies of joint development and land banking through an equity lens with efforts to enhance transit expansion and affordable housing development using case studies in Hong Kong, Washington DC, New York City, Chicago, Denver, and Los Angeles. The report then investigates value capture financing and taxing measures available to local governments and public agencies, such as BART, including special assessments and tax increment financing. This section looks to explain the ways that these tools can be used and then looks into the constraints and theoretical challenges with an eye towards equity implications. This section concludes with key takeaways that have been informed by an extensive literature review and nine interviews with transit agency staff, affordable housing advocates, transportation planners and scholars.

Acronym List

AB: Assembly Bill
ATP: Active Transportation Program
AHSC: Affordable Housing and Sustainable Communities
CAFE: Corporate Average Fuel Economy
CalSTA: California State Transportation Agency
CAPTI: Climate Action Plan for Transportation Infrastructure
CARB: California Air Resources Board
CMA: Congestion Management Agency
COG: Council of Governments
COS: Capital Outlay Support
CTA: Chicago Transportation Authority
CTC: California Transportation Commission
CTP: California Transportation Plan
DOT: Department of Transportation
EIFD: Enhanced Infrastructure Financing Districts
EO: Executive Order
EV: Electric Vehicle
ETOD: Equitable Transit Oriented Development
FHWA: Federal Highway Administration
FTA: Federal Transit Administration
FY: Fiscal Year
GDP: Gross Domestic Product
HTF: Highway Trust Fund
HUTA: Highway Users Tax Account
IIJA: Infrastructure Investment and Jobs Act
ITIP: Interregional Transportation Improvement Program
ITSP: Interregional Transportation Strategic Plan
LPP: Local Partnership Program
LSRP: Local Streets and Roads Program
LTF: Local Transportation Fund
LCTOP: Low Carbon Transit Operations Program
MOU: Memorandum of Understanding
MPO: Metropolitan Planning Organization
MTC: Metropolitan Transportation Commission
MTR: Mass Transit Railway
NEPA: National Environmental Policy Act
PTA: Public Transportation Account
RMRA: Road Maintenance and Rehabilitation Account
RPA: Redevelopment Project Area
RTPA: Regional Transportation Agency (also sometimes
RPO: Rural Planning Organizations)
SB: Senate Bill
SCC: Solutions for Congested Corridors

SHMR: State Highway Maintenance and Rehabilitation Program
SHS: State Highway System
SHOPP: State Highway Operation and Protection Program
SRA: State Rail Assistance
STA: State Transit Assistance
STIP: State Transportation Improvement Program
STEP: Sustainable Transportation Equity Project
STPGP: Sustainable Transportation Planning Grant Program
TCEP: Trade Corridor Enhancement Program
TCCP: Transformative Climate Communities Program
TFIA: Transit Facility Improvement Area
TIF: Tax Increment Finance
TIRCP: Transit and Intercity Rail Capital Program
TOD: Transit Oriented Development
ULC: Urban Land Conservancy
USDOT: United States Department of Transportation
UZA: Urbanized Area Zone
VMT: Vehicle Miles Traveled
WMATA: Washington Metropolitan Area Transit Authority

1.0 Introduction

1.1 Benefits of Continuous and Advanced Planning and Funding for Transit and Rail Transportation Projects to Achieve Climate and Equity Goals

The Northern California “megaregion” encompasses 21 counties surrounding San Francisco Bay and outlines the boundaries for Link21’s project focus areas.¹ In 2018, the megaregion was home to 12.7 million people, 5.8 million jobs, and accounted for five percent of the U.S.’s total Gross Domestic Product (GDP).^{2,3} The majority of these jobs are located within the nine counties of the Bay Area (see Figure 1.1), and approximately 178,000 workers commute into the area by car to reach these jobs (95% of total workers in 2018).⁴

The value, and challenges, of early and comprehensive planning for megaregional projects is well documented within planning literature.^{5,6,7} This type of planning allows for agencies to prioritize projects and to better understand their feasibility. It also allows for planning agencies to coordinate regionally and to communicate with the public about the goals and needs around projects. Having dedicated funding and timelines with accurate estimates of budget and project completion timelines creates accountability and reduces potential for public dissatisfaction.⁸

Due to the COVID-19 pandemic and the rise of remote work, transit ridership across the U.S. has declined significantly and BART ridership has been slow to recover.⁹ Considering BART’s high reliance on passenger fare revenue to support operations, the reduced ridership is of particular concern. This financial situation has been described by

¹ Link21 Program. 2022. “Know Your Northern California Megaregion.”

<https://link21program.org/en/about/northern-california-megaregion#1>

² Bay Area Council Economic Institute. 2021. “New Transbay Rail Crossing: Making the Case for a Key Megaregional Connection.”

<http://www.bayareaeconomy.org/report/megaregionimpactsofnewtransbayrailcrossing/>

³ Link21 Program. 2022. “Know Your Northern California Megaregion.”

⁴ Bay Area Council Economic Institute. 2021. “New Transbay Rail Crossing: Making the Case for a Key Megaregional Connection.”

⁵ Bay Area Council Economic Institute. 2016. “The Northern California Megaregion: Innovative, Connected, and Growing.” <http://www.bayareaeconomy.org/report/the-northern-california-megaregion/>

⁶ Link21 Program Management Consultants. 2021. “Value Capture Paper: Draft Final.”

<https://link21program.org/en/media/248/download?inline>

⁷ SPUR. 2017. “The Caltrain Corridor Vision Plan.” <https://www.spur.org/publications/spur-report/2017-02-23/caltrain-corridor-vision-plan>

⁸ Ibid. Appendix C.

⁹ Levin, Adina. October 11, 2022. “This week, MTC and BART start planning to address transit fiscal cliff.” <https://www.seamlessbayarea.org/blog/2022/10/11/this-week-mtc-and-bart-start-planning-to-address-transit-fiscal-cliff>

many as a “looming fiscal cliff” and seriously threatens the long term operational viability of the BART system and any future Link21 projects.¹⁰

Figure 1.1. Link21 Program Area, Northern California Megaregion with Existing Transit and Rail Lines



Source: <http://www.bayareaeconomy.org/report/megaregionimpactsofnewtransbayrailcrossing/>

1.1.1 Challenges with Current Funding Mechanisms

Current funding for transportation is largely reliant on discretionary and local funds, such as sales tax measures, which are not guaranteed year over year and make continuous planning for long term projects difficult. Historically, transportation funding has also largely been focused on highway and road projects which contributes to significant issues including traffic congestion, greenhouse gas emissions, and social

¹⁰ Shrode, Garrett. November 4, 2022. “Looking to the Horizon: How Agencies are Anticipating the Mass Transit Fiscal Cliff.” <https://www.enotrans.org/article/looking-to-the-horizon-how-agencies-are-anticipating-the-mass-transit-fiscal-cliff/>

inequity.¹¹ Sustainable transportation, particularly transit and rail, projects need increased funding for planning phases so that when discretionary funding does become available, projects are developed enough to qualify and be competitive for available awards at the Federal, State, and regional levels. Similarly, agencies without continuous funding often face challenges in spending available money before deadlines.¹²

The lack of available funding for transit and rail planning leads to fewer completed transit and rail projects and creates a vicious cycle that continuously favors highway and road projects while delaying transit and rail projects which contradicts the State's climate goals.¹³ With an unprecedented amount of funding for transportation related projects currently available through the Infrastructure Investment and Jobs Act (IIJA), it is all the more important for policymakers in California to ensure long term project planning for transit and rail remains a priority so that projects are competitive for newly available grants.¹⁴

1.1.2 Equity in Transportation Planning

California's transportation infrastructure has a history of disproportionately burdening Black, Indigenous, and People of Color communities while simultaneously benefiting White populations.¹⁵ While planning for equitable outcomes has been a recent focus of transportation efforts in California and at the Federal level, it is critical that these goals do not end with their intentions.

Caltrans' equity statement states: "We will achieve equity when everyone has access to what they need to thrive —starting with our most vulnerable— no matter their race, socioeconomic status, identity, where they live, or how they travel."¹⁶ Centering equity with respect to transportation mode creates opportunities to expand options for underserved communities. Transportation challenges create barriers that impact people's ability to travel for employment, enjoyment, and essential needs.¹⁷ Ensuring

¹¹ The Pew Charitable Trusts. 2014. "Intergovernmental Challenges in Surface Transportation Funding." <https://www.pewtrusts.org/-/media/assets/2014/09/surfacetransportationintergovernmentalchallengesfunding.pdf>

¹² U.S. Department of Transportation Office of Inspector General. October 5, 2022. "Memorandum: Challenges Facing DOT in Implementing the Infrastructure Investment and Jobs Act." <https://www.oig.dot.gov/sites/default/files/OIG%20Correspondence%20-%20Challenges%20Facing%20DOT%20in%20Implementing%20IIJA.pdf>

¹³ Morales, J. May 24, 2022. "California needs to put its money where its mouth is on public transportation." CalMatters. <https://calmatters.org/commentary/2022/05/california-needs-to-put-its-money-where-its-mouth-is-on-public-transportation/>

¹⁴ Government Finance Officers Association (GFOA). 2022. "Infrastructure Investment and Jobs Act (IIJA) Implementation Resources." <https://www.gfoa.org/the-infrastructure-investment-and-jobs-act-iija-was>

¹⁵ California Transportation Commission. January 27, 2021. "Racial Equity Statement." <https://catc.ca.gov/about/racial-equity-statement>

¹⁶ California Department of Transportation. 2020. "Caltrans Equity Statement." <https://dot.ca.gov/about-caltrans/equity-statement>

¹⁷ Duan, Anna. July 21, 2020. "Mobility is Justice: Centering Equity in Transportation Planning." <https://www.metroplanning.org/news/8913/Mobility-is-Justice-Centering-equity-in-transportation-planning>

equity in transportation planning is an essential piece of ensuring equitable access to resources for all.

1.1.3 Review of Existing Programs and Policies

As a national and world leader in environmental planning and action, California has set forth a number of programs and policies to reduce carbon emissions and vehicle miles traveled (VMT), while simultaneously advancing equity and diversifying the transportation mode share (Table 1.1). Since the transportation sector accounts for about 40 percent of statewide greenhouse gas emissions, State priorities are aptly focused on improvements in this area.¹⁸

Table 1.1. Select Relevant Planning Documents, California

Plan Name	Authoring Agency	Publication Date
2022 Scoping Plan for Achieving Carbon Neutrality	California Air Resources Board (CARB)	November 2022
California Transportation Plan (CTP) 2050	Caltrans	February 2021
Climate Action Plan for Transportation Infrastructure (CAPTI)	California State Transportation Agency (CalSTA)	July 2021
California State Rail Plan	Caltrans	September 2018
Interregional Transportation Strategic Plan (ITSP)	Caltrans	October 2021

In 2006, with the passing of Assembly Bill (AB) 32, the California Air Resources Board (CARB) became responsible for creating a plan to achieve the State’s goal of reducing greenhouse gas emissions to 1990 levels by 2020.¹⁹ As emission reduction targets have been met, the 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan) is the most recent plan that details how California can meet its new goal of reducing anthropogenic greenhouse gas emissions to 85 percent below 1990 levels by 2045 (pursuant to AB 1279).²⁰ Within the 2022 Scoping Plan, Transportation Sustainability is identified as a “Key Sector ” to target in order to meet the State’s emissions goals.²¹

¹⁸ California Air Resources Board. 2022. “Current California GHG Emission Inventory Data.” <https://ww2.arb.ca.gov/ghg-inventory-data>

¹⁹ CARB. 2022. “AB 32 Climate Change Scoping Plan: About.” <https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/about>

²⁰ CARB. 2022. “2022 Scoping Plan Documents.” <https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2022-scoping-plan-documents>

²¹ CARB. November 16, 2022. “2022 Scoping Plan for Achieving Carbon Neutrality.” <https://ww2.arb.ca.gov/sites/default/files/2022-12/2022-sp.pdf>

CARB breaks transportation into three categories to focus on: technology, fuels, and vehicle miles traveled (VMT). VMT reduction is especially important with respect to sustainable transportation planning. The CARB outlines several “Strategies for Achieving Success” in this area, a selection of which are presented below. Success in categories would mean reducing per capita VMTs to “25 percent below 2019 levels by 2030 and 30 percent below 2019 levels by 2015.”²²

Select Strategies for Achieving Success in VMT Reduction from CARB 2022:

- Invest in making public transit a viable alternative to driving by increasing affordability, reliability, coverage, service frequency, and customer experience.
- Implement equitable roadway pricing strategies based on local context and need, reallocating revenues to improve transit, bicycling, and other sustainable transportation choices.
- Streamline access to public transportation through programs such as the California Integrated Travel Project.²³

Beyond general mentions of potential funding sources and a description of the “California Climate Commitment” this plan does not identify specific projects or funding sources that could be used to achieve the stated goals. Instead the CARB states: “This plan is fundamentally based on hope.”²⁴

As mandated by Federal and State law, Caltrans (under supervision of the California State Transportation Agency, CalSTA) produces a long range transportation plan, the California Transportation Plan (CTP), every 10 years. The most recent of which was published in February 2021: CTP 2050. This plan puts forth the following statement as a vision for the future of California’s transportation system: “California’s safe, resilient, and universally accessible transportation system supports vibrant communities, advances racial and economic justice, and improves public and environmental health.”²⁵ In order to work towards this vision, Caltrans identified eight priority goal areas and 14 recommendations; within each recommendation, new and continued actions are also identified. The eight goal areas include: safety, climate, equity, accessibility, quality of life & public health, economy, environment, and infrastructure; select recommendations are listed below. By design, the CTP 2050 does not include an analysis of any potential costs for projects or policies recommended in the plan.²⁶

²² Ibid.

²³ Ibid. pg. 194

²⁴ Ibid. pg. 12

²⁵ Caltrans. February 2021. “California Transportation Plan 2050.” <https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/ctp-2050-v3-a11y.pdf>

²⁶ Ibid.

Select Recommendations from CTP 2050 to Achieve California’s Transportation Vision

- Improve transit, rail, and shared mobility options.
- Encourage efficient land use.
- Seek sustainable, long-term transportation funding mechanisms.²⁷

In 2019 and 2020, Governor Gavin Newsom signed two executive orders that specifically focused on reducing greenhouse gas emissions from the transportation sector. Executive Order (EO) N-19-19 directed the CalSTA to use discretionary State transportation funds to reduce emissions from transportation in an effort to help meet the State’s climate goals.²⁸ EO N-79-20 set a target of 2035 to end sales of internal combustion passenger vehicles, and reaffirmed California’s commitment to implementing EO N-19-19, by giving a number of government agencies deadlines to implement policies toward achieving stated climate goals.²⁹

In response to these executive orders, CalSTA published the Climate Action Plan for Transportation Infrastructure (CAPTI) in 2021. This plan outlines a holistic framework that aligns the State’s transportation infrastructure investments with the State’s climate, health, and social equity, specifically for the \$5 billion in annual discretionary transportation funding.³⁰ These overarching goals are aligned with the goals outlined in CTP 2050.³¹ Within the CAPTI, CalSTA identified different “strategies,” each with several associated “actions,” that should be used to align transportation related projects with the goals. CalSTA also identifies lead and support agencies as well as a potential time frame (medium or short term³²) for each proposed action. Included within these actions are calls for Caltrans to align their existing transportation plans (such as the Interregional Transportation Strategic Plan 2021) with CAPTI’s framework.³³

Select Actions from the CAPTI 2021 to Ensure Alignment with Guiding Principles:

- Fast Track New CAPTI-Aligned Projects in Early Planning Phases by Adding them to ITIP (Interregional Transportation Improvement Program).
- Identify a Long-Term Strategic Funding Pathway Across All Funding Opportunities to Realize the State Rail Plan.
- Explore a “Highways to Boulevards” Conversion Pilot Program.³⁴

²⁷ Ibid.

²⁸ Executive Department State of California. September 20, 2019. “Executive Order N-19-19.” <https://www.gov.ca.gov/wp-content/uploads/2019/09/9.20.19-Climate-EO-N-19-19.pdf>

²⁹ Executive Department State of California. September 23, 2020. “Executive Order N-79-20.” <https://www.gov.ca.gov/wp-content/uploads/2020/09/9.23.20-EO-N-79-20-Climate.pdf>

³⁰ CalSTA. July 2021. “CAPTI: Climate Action Plan for Transportation Infrastructure.” <https://calsta.ca.gov/-/media/calsta-media/documents/capti-july-2021-a11y.pdf>

³¹ Caltrans. February 2021. “California Transportation Plan 2050.”

³² Short term is defined as 0-2 years, medium term is defined as 3-7 years

³³ CalSTA. July 2021. “CAPTI: Climate Action Plan for Transportation Infrastructure.”

³⁴ Ibid.

Within this plan, CalSTA also states that, “CAPTI helps California plan for how to best administer [...] potential new sources of federal climate-related transportation funding, as well as position the State to be competitive for federally administered funding opportunities.”³⁵

The California State Rail Plan, developed by Caltrans in 2018, promotes a vision for an integrated passenger and freight rail system across the State. Caltrans puts forth a vision of 1.3 million passenger trips (up from 115,000) and a rail mode share of 6.8 percent (up from 0.34%) by 2040.³⁶ The plan outlines a number of capital improvements that would be needed to make rail connections across the State, while pointing out that shifting individuals’ transportation modes from highways to rail will help California achieve its transportation related goals of reducing greenhouse gas emissions and decreasing congestion. The State Rail Plan also describes specific projects, identifies projected capital costs, and outlines several potential funding sources, but a specific and dedicated funding plan for the proposed improvements is absent and leaves many of the State Rail Plan’s projections without a way forward.³⁷

Lastly, Caltrans develops and publishes the Interregional Transportation Strategic Plan (ITSP), most recently in 2021, which is designed to provide guidance for planning and projects in California’s 11 strategic interregional corridors.³⁸ Importantly, the 2021 plan was updated to align with the previously described CTP 2050, CAPTI, and the California State Rail Plan to integrate each plan’s vision and goals into the updated ITSP. As part of the ITSP, recommendations are made for how projects should be evaluated for funding through the ITIP.³⁹ The ITIP is a State funding program with a specific focus on interregional projects.⁴⁰

Given the volume of plans and programs that exist to promote sustainability in California’s transportation system, the State’s big picture goals to reduce greenhouse gas emissions, promote equity and accessibility, and enhance public health and quality of life are clear. Several reviewed plans even specifically call out the need to secure a long-term funding mechanism to realize California’s transportation vision. However, specific funding and individual project plans to achieve these goals are not always apparent.

³⁵ Ibid. pg. 7

³⁶ Caltrans. 2018. “California State Rail Plan: Connecting California.” <https://dot.ca.gov/programs/rail-and-mass-transportation/california-state-rail-plan>

³⁷ Ibid.

³⁸ Caltrans. October 2021. “Interregional Transportation Strategic Plan 2021.” <https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/system-planning/systemplanning/2021-itsp-oct21-a11y.pdf>

³⁹ Ibid.

⁴⁰ Caltrans. December 2019, “2020 Interregional Transportation Improvement Program (ITIP).” <https://dot.ca.gov/-/media/dot-media/programs/financial-programming/documents/2020-ocip-final-itip-a11y.pdf>

1.1.4 Governance and the Role of Metropolitan Planning Organizations (MPO)

While this breadth of plans clearly demonstrates California’s intentions for environmental and equity goals, the sheer number of plans and conflicting priorities makes it very difficult, or nearly impossible, for transportation agencies to align projects to meet these goals. The ITSP directly aligns its stated goals and priorities with those stated in other existing transportation plans in California, but this plan is only relevant to interregional projects leaving room for coordination and prioritization of projects across agencies. Further, the lack of a comprehensive megaregional governance structure adds another level of difficulty to successful megaregional project implementation. The Link21 program area covers seven different Metropolitan Planning Organizations (MPOs).⁴¹ MPOs typically focus on long range planning efforts and set priority projects within their designated regions and urbanized areas.⁴² Further, while there is no lack of local transit agencies in the megaregion, each one has a distinct jurisdiction, and an overarching vision and priority structure is lacking.

Senate Bill (SB) 375 required MPOs to create Sustainable Communities Strategies to set plans to reduce greenhouse gas emissions to meet regional targets, yet these programs do not have dedicated funding nor do the MPOs have implementation authority.⁴³ The long-range plans MPOs generate are visionary and aspirational, but the practical limitations of an MPOs implementation authority are misaligned with these visions.⁴⁴

In January 2021, three of the seven MPOs in the megaregion (covering 16 of the 21 counties) signed a Memorandum of Understanding (MOU) to share resources and align efforts on programs and strategies.⁴⁵ While this coordination is a step in the right direction, a comprehensive structure is still lacking and creates challenges to implementing projects that cross jurisdictional boundaries. The opportunity is ripe for the State of California’s Department of Transportation (Caltrans) to play a coordinating role for megaregional efforts.

1.1.5 Conclusion

While even a highly connected and well-designed transit system cannot alone induce the level of behavior change necessary for California to meet all of its stated climate and equity related goals, it still remains a critical step in the process. Improving transit infrastructure must be just one component of a comprehensive transportation and land use plan that appropriately prices behaviors based on their externalities to induce

⁴¹ Institute for Local Government. 2015. “California’s 18 Metropolitan Planning Organizations.” <https://www.ca-ilg.org/post/californias-18-metropolitan-planning-organizations>

⁴² Federal Transit Administration. 2022. “Metropolitan Planning Organization (MPO).” <https://www.transit.dot.gov/regulations-and-guidance/transportation-planning/metropolitan-planning-organization-mpo>

⁴³ California Air Resources Board. 2022. “SB375 Regional Plan Climate Targets.” <https://ww2.arb.ca.gov/our-work/programs/sustainable-communities-program/regional-plan-targets>

⁴⁴ California Strategic Growth Council. 2022. “California Transportation Assessment Report.” https://sgc.ca.gov/resources/docs/20220218-AB_285_REPORT.pdf

⁴⁵ San Joaquin Council of Governments. 2021. “Megaregion Working Group.” <https://www.sjcog.org/554/Megaregion-Working-Group>

transit use, reduce reliance on personal vehicles, enhance social equity, and ultimately create a sustainable and efficient megaregion.

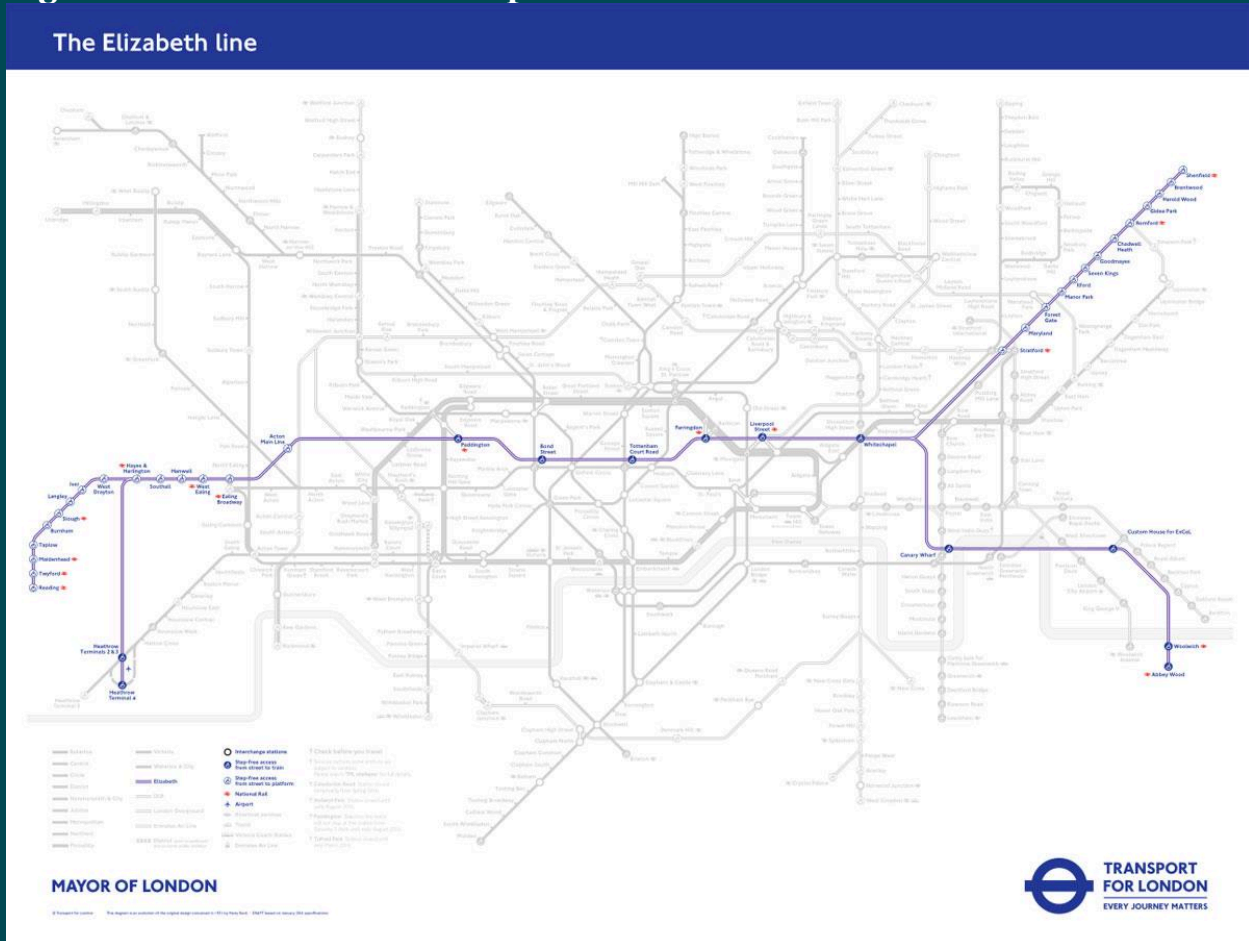
Given the current precarious financial situation BART faces for continued operation, the following sections of this report describe the differences in funding sources for transit and rail projects in comparison to highway and road projects; and put forth recommendations for changes to current policies and funding guidelines including the expanded use of alternative funding mechanisms.

Case Study: London Crossrail

Case Study: London Crossrail

The recently completed (May 2022) London Crossrail project “The Elizabeth Line” showcases how effective long range planning and expected funding can create successful transportation mega projects. This project established a new rail line across London that extends over 60 miles connecting travel from Heathrow airport, West of London’s center, through the main downtown and out to areas East of the city. The new line includes 10 major new stations and is fully integrated with London’s existing rail system (Figure CS.1).¹

Figure CS.1. Elizabeth Line Map



Source: <https://transitmap.net/tag/underground-map/>

Versions of a cross-London railway were first proposed back in the 1970s, but Transport for London (TfL) and the Department for Transport (DfT) did not develop a successful alignment and viable project plan until 2001.¹ The Business Case for the Crossrail was presented to the Secretary of State for Transport in 2003, and the Crossrail Act fully authorized the project in 2008. This Act confirmed Crossrail's route and outlined the complex funding mechanism to share costs between London's business community, the transit operator (TfL), and the central government.¹

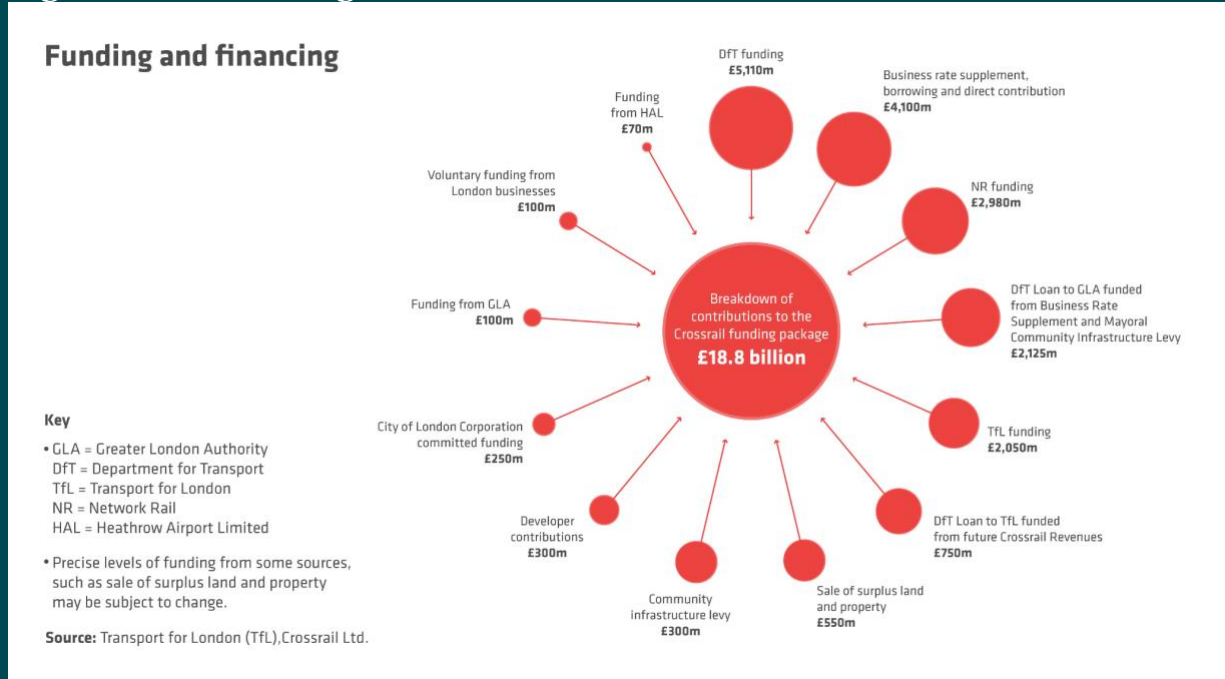
As with most, if not all megaprojects, the Elizabeth Line faced challenges and delays during construction, but many elements of the project were executed well and provide useful lessons for future transportation projects. The Elizabeth Line's original opening was scheduled for 2018 but did not open until four years later, May 2022, due to construction delays, budget constraints, and impacts related to the COVID-19 pandemic.² The original budget for the project was £ 15.9 billion in 2008, by the time the project was completed the full cost had increased to £ 18.8 billion. Most of the budget increase was attributed to operational testing and software improvements needed in order to run 24 trains per hour through the central station. These improvements reduced the potential for future service delays in trains and allowed for better integration of new trains into the existing system.³ Key components of the finance package are shown in Figure CS.2.¹ Notably, funding for the Elizabeth Line came from a wide variety of sources including government agencies, TfL, individual taxpayers, and the business community. Even with project delays, DfT and TfL remained committed to successful delivery of the Elizabeth Line and bore the majority of additional project costs.¹

Throughout the development and construction of the Elizabeth Line, project leaders prioritized keeping the public informed about progress through specific transparency measures.¹ These measures included keeping a public facing website up to date with project status and funding information, as well as holding frequent community liaison panels to allow for additional feedback from neighbors and other project stakeholders.¹

During the project, Crossrail created a training academy which was used to train employees and contractors at every stage of construction. Once construction was near completion, Crossrail passed the training academy to TfL so it could serve as a training center for new train operators and other Line staff.¹ Crossrail has also published hundreds of documents to serve as a library of resources, "Crossrail Learning Legacy," for reference by other large-scale projects. The Learning Legacy details project

information and lessons learned in 12 theme areas including project and programme management, land and property, environment, talent and resources.¹

Figure CS.2. Funding Elements for Crossrail’s Elizabeth Line



Source: <https://www.crossrail.co.uk/about-us/funding>

Crossrail’s commitment to minimizing the environmental impact of the Elizabeth Line’s construction has been apparent throughout the project. Most notably, Crossrail was able to direct nearly all of the material excavated during tunnel construction to be reused in publicly beneficial ways.¹ During original project authorization in 2008, Crossrail agreed to find beneficial uses for excavated material. Crossrail established a partnership with the Royal Society for the Protection of Birds which used the excavated material to create wetland habitat and establish a home for thousands of migratory birds. Other projects included restoring landfills, creating new parks and conservation land, mitigating impacts of coastal flooding, and re-engineering previously breached seawalls.¹ Figure CS.3 highlights ten significant projects that used this excavated material that is typically seen as construction waste.

Figure CS.3. Excavated Materials Projects from Elizabeth Line Construction



Source: <https://www.crossrail.co.uk/benefits/environmental-sustainability/wildlife-protection>

Case Study Endnotes

- [1] Crossrail. 2022. <https://www.crossrail.co.uk/> (See References for detailed source information)
- [2] Tunnicliffe, A. 2022. "A timeline of Crossrail delays." <https://www.railway-technology.com/features/timeline-crossrail-delays/>
- [3] The Committee of Public Accounts. October 2021. "Crossrail: A Progress Update." <https://committees.parliament.uk/publications/7672/documents/80054/default/>

2.0 Federal and State Funding Programs and Recommendations

“The federal government ignored urban mass transit until the 1960s. One reason was that historically most transit systems were privately owned and the government was reluctant to intervene in the private sector. Another reason was that urban transportation was considered a responsibility of local governments and not an appropriate area for federal concern” -- Urban Mass Transportation Planning⁴⁶

2.1 Introduction

This portion of the report focuses on the differences in California state funding, programs, and staffing resources for transit (buses, light/commuter rail, and active transportation) planning compared to local roads and highways. The State finances California's surface transportation system primarily with motorist user fees through fuel taxes, motor vehicle fees, and state sales taxes.

Transportation planning and funding processes are too often characterized by political inertia, making it difficult to chart a new course for a project after it is set in motion. Even when status quo approaches have not proven to achieve particular ends, a different standard applies to proving viability or justifying shifts in methods to new alternatives.

Initially, the current financial landscape is explored, considering the layers of statutes and policy. The landscape is made up of many smaller funds - heavy with contingencies on eligible phases and intended outcomes - and larger older, entrenched accounts with lighter restrictions predominantly limited to capital costs. While planning and the planning pipeline is the focal component, this report does not ignore the twin importance of operations: even well designed and constructed bus and rail lines will not experience high usage if there is not enough funding to mitigate service delays or breakdowns. Subsequently, recommendations are prioritized by the goals they meet, balanced by the difficulty in time and/or resources necessary to achieve the goals.

2.2 Unpacking Planning Funding

2.2.1 Federal: US DOT

To set the context for state funding, this report first will discuss federal dollars, as matches, grants, and direct formula funds constitute a portion of California surface transportation funding and set the stage for national priorities. *Matches* are defined as the non-federal or state share of the total project costs that a grantee is required to contribute to achieve the award. The required match percentage and sources of match

⁴⁶ Black, Alan. 1995. “Urban Mass Transportation Planning”. New York City, NY: McGraw Hill

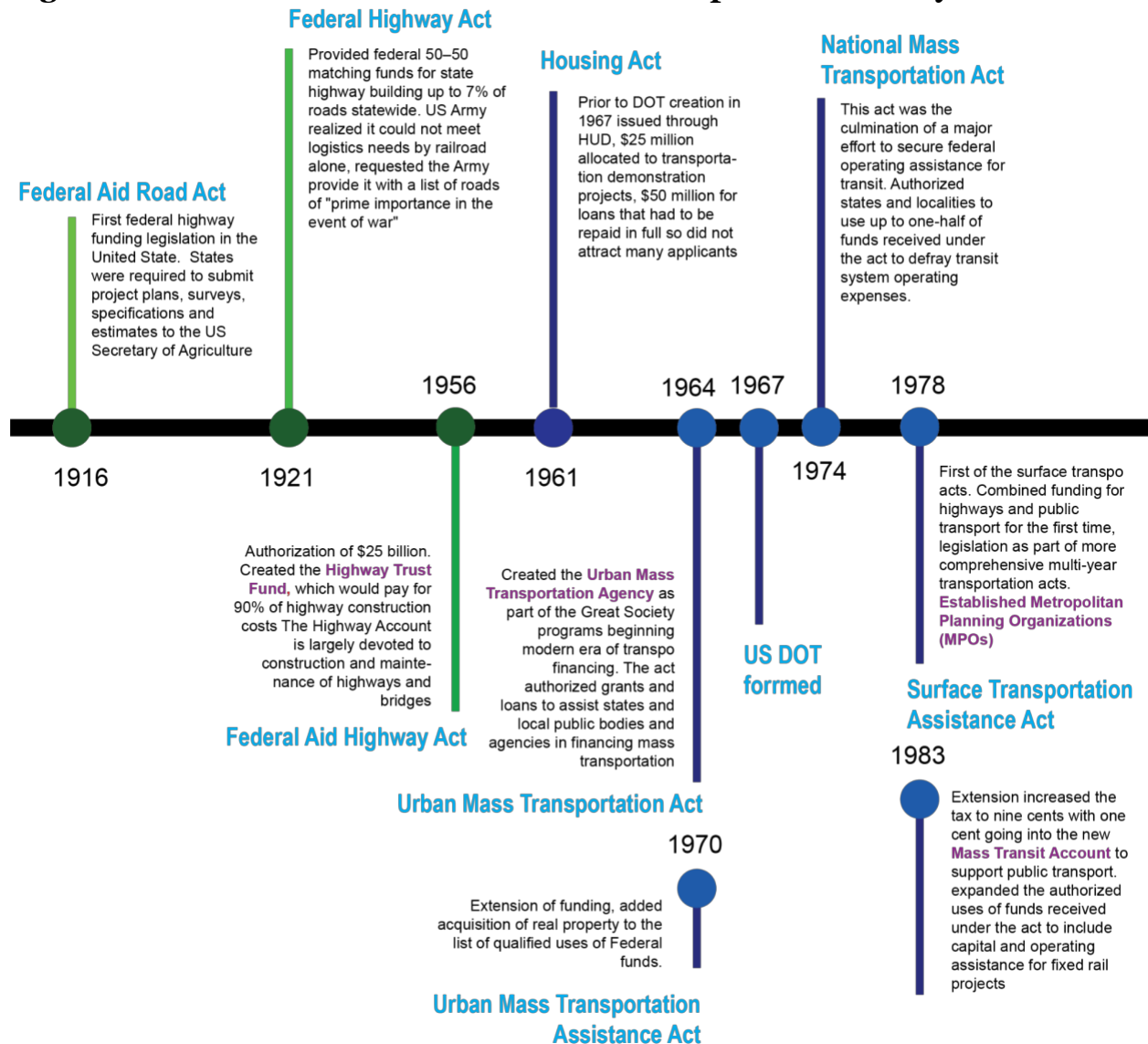
vary from program to program.⁴⁷ *Formula funds* are typically governed by statutes or appropriations acts that specify factors for eligibility with award calculations considering factors including population or transit ridership. In comparison, *discretionary funds/grants* are most often awarded on a competitive basis with predefined selection criteria.⁴⁸ An *authorization act* is "A law that establishes or continues one or more Federal agencies or programs, establishes the terms and conditions under which they operate, authorizes the enactment of appropriations, and specifies how appropriated funds are to be used. Authorization acts sometimes provide permanent appropriations."⁴⁹ Relevant examples for this analysis in the transit sector include programs such as the Intermodal Surface Transportation Efficiency Act (ISTEA, 1991) and Fixing America's Surface Transportation Act (FAST 2015). These acts served as transitions to the post-Interstate Highway Area and introduced an increasingly multi-modal approach to transit planning.

⁴⁷ Human Trafficking Capacity Building Center. "Understanding the Requirements: Federal Grant Match". https://htcbc.ovc.ojp.gov/sites/g/files/xyckuh311/files/media/document/match_requirement_tip_sheet_508c.pdf

⁴⁸ Office of Justice Programs. "Types of Funding". <https://www.ojp.gov/funding/grants101/types-funding>

⁴⁹ Wikipedia. Authorization Bill. https://en.wikipedia.org/wiki/Authorization_bill#cite_note-SenateDef-5

Figure 2.1 Federal Timeline for Relevant Transportation Policy Actions



Source: Author generated based on multiple sources

The dedicated Highway Account was created in 1956 which allowed obligation authority rather than appropriations from the general fund.⁵⁰ Obligation authority allows an agency to commit funds to a program in accordance with certain requirements rather than from a congressional appropriation. In this case, the Federal Highway Administration (FHWA) and later to a smaller extent the Federal Transit Administration (FTA) have a set aside revenue stream from gas and use taxes, specific to their agencies. Once obligated the funds are available to be dispersed. As shown in Figure 2.1, the Mass Transit subaccount was not created until 1983. The revenues for these accounts are primarily derived from taxes on different types of fuels and allocated

⁵⁰ Wegner, Richard. Spring 1996. "Milestones for U.S. Highway Transportation and the Federal Highway Administration". <https://highways.dot.gov/public-roads/spring-1996/milestones-us-highway-transportation-and-federal-highway-administration>

at a rough 5:1 ratio in favor of highway spending (see Table 2.1). Programs funded by the Highway Account have statutory limits on how federal money can be used: generally only on designated federal-aid highways and on capital construction.

Table 2.1 Tax Distribution for Highway Trust Fund

USER TAX	TAX RATE	EFFECTIVE DATE	DISTRIBUTION OF TAX			
			HIGHWAY TRUST FUND			GENERAL FUND
			HIGHWAY ACCOUNT	MASS TRANSIT ACCOUNT	LEAKING UNDERGROUND STORAGE TANK TRUST FUND	
Fuel Taxes (Cents per Gallon)						
Gasoline and Gasohol fuels	18.4	10/1/1997	15.44	2.86	0.1	-
Diesel and Kerosene fuels	24.4	10/1/1997	21.44	2.86	0.1	-
Alternative fuels (2)						
Liquefied Petroleum Gas	18.3 ⁽³⁾	1/1/2016	16.17	2.13	-	-
Liquefied Natural Gas	24.3 ⁽⁴⁾	10/1/2006	22.44	1.86	-	-
Compressed natural gas	18.3 ⁽³⁾	10/1/2006	17.07	1.23	-	-
Other Special Fuels	18.4	10/1/1997	15.44	2.86	0.1	-
Other Taxes - All Proceeds to Highway Account						
Tires	Tax is imposed on tires sold by manufacturers, producers, or importers at the rate of \$.0945 (\$.04725 in the case of a bias ply or super single tire) for each 10 pounds of the maximum rated load capacity over 3,500 pounds.					
Truck and trailer sales	12 percent of retailer's sales price for tractors and trucks over 33,000 pounds gross vehicle weight (GVW) and trailers over 26,000 pounds GVW. The tax applies to parts and accessories sold in connection with the vehicle sale.					
Heavy vehicle use	Annual tax: Trucks 55,000-75,000 pounds GVW, \$100 plus \$22 for each 1,000 pounds (or fraction thereof) in excess of 55,000 pounds Trucks over 75,000 pounds GVW, \$550					

(1) Source: Office of Highway Policy Information, Federal Highway Administration.

(2) Alternative fuels is any liquid other than gas oil, fuel oil or any product taxable under Section 4081 of the Internal Revenue Code (gasoline, diesel, kerosene, and diesel-water emulsion.)

(3) Changes to tax rate included in the Surface Transportation and Veterans Health Care Choice Improvement Act of 2015. Amounts for these products are defined as having a rate "per energy equivalent of a gallon of gasoline". Computation details can be found in 26 USC 4041.

(4) Changes to tax rate included in the Surface Transportation and Veterans Health Care Choice Improvement Act of 2015. Amounts for these products are defined as having a rate "per energy equivalent of a gallon of diesel". Computation details can be found in 26 USC 4041.

Source: Eno Trans, February 2020.⁵¹

The U.S. Congress establishes Federal fuel taxes which are set in terms of cents per gallon rather than a percentage, and Congress has not raised the gas tax since 1993. Notably in California, Senate Bill 1 of 2017 revived indexed increases in gas taxes to support transportation spending. Improved fuel economy standards (CAFE) and wider adoption of electric vehicles have reduced dollars spent at the pump, despite rises in total vehicle miles traveled (VMT). This decrease in revenues has created a gap between dedicated revenues for surface transportation and surface transportation spending needs. This gap in requested funding and spending has required general fund transfers to the Highway Trust Fund (HTF) since 2008. Prior to research, graphs similar to Figure 2.2 below by Pew Research highlighting the clear difference at State and Federal levels for funding highways were familiar. This report will research deeper to identify

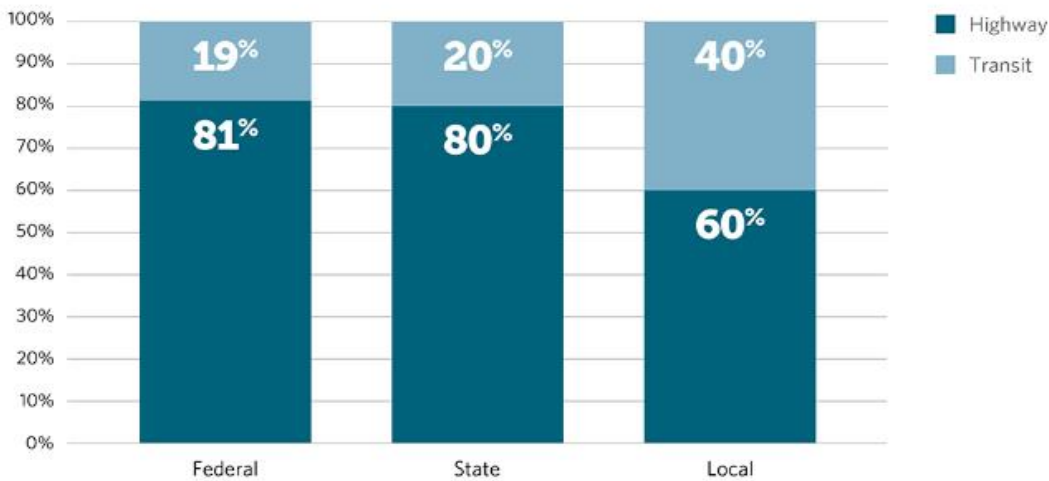
⁵¹ Eno Center for Transportation. June 2, 2020. "Highway Trust Fund 101." <https://www.enotrans.org/article/highway-trust-fund-101/>

and confirm if this same disparity in dollars and systems for funding planning stages exists.⁵²

Figure 2.2 Spending on Highways Exceeds That for Transit at Each Level of Government

Spending on Highways Exceeds That for Transit at Each Level of Government

Share of spending, 2008-12



Note: This figure excludes the roughly 2 percent of federal spending that flows directly to highway and transit infrastructure.

Source: Pew's analysis of U.S. Census Bureau's Annual Survey of State and Local Government Finances, 2008-12

© 2015 The Pew Charitable Trusts

Source: Pew Research

2.2.3 Federal: Federal Highway Administration (FHWA)

The Federal Highway Administration (FHWA) administers the Federal-Aid Highway Program (FAHP) concentrating on five core formula programs, plus the Metropolitan Planning (PL) program, and additional discretionary programs. In fiscal year 2022, the Highway Account was obligated for \$52 billion dollars with an additional \$12 billion in general fund augmentation as a result of the Infrastructure Investment and Jobs Act.

⁵² Oliff, Phillip. February 24, 2015. "Funding Challenges in Highway and Transit". Pew Trusts <https://www.pewtrusts.org/en/research-and-analysis/articles/2015/02/24/funding-challenges-in-highway-and-transit-a-federal-state-local-analysis>

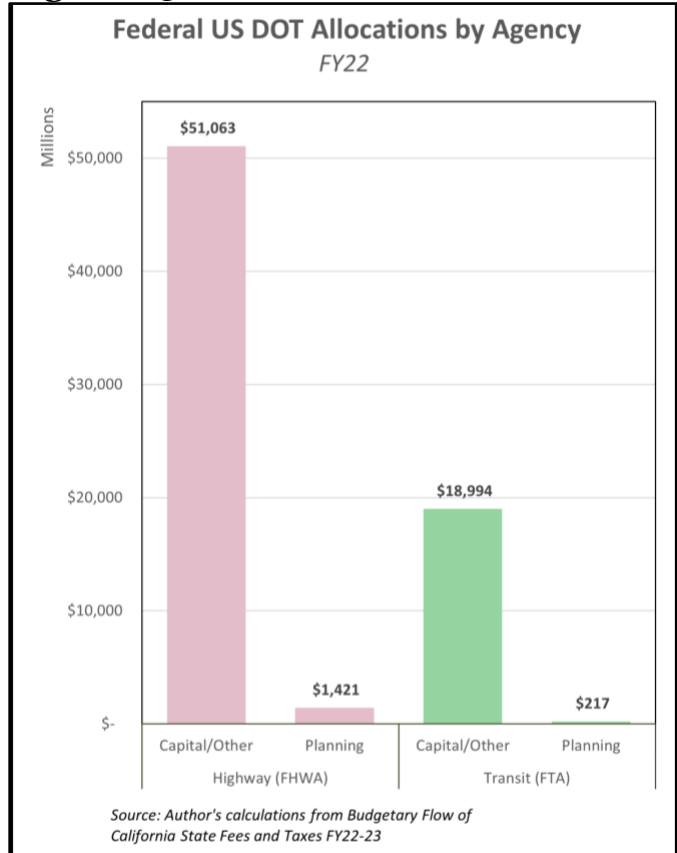
2.2.4 Federal: Federal Transportation Administration (FTA)

The Federal Transportation Administration (FTA) distributes planning funds through an analog program of Metropolitan and State Transit Planning. The Urbanized Area Formula program is distributed directly to MPOs with populations greater than 200,000 but administered by the governor for populations between 5,000 - 199,999 based on the 2010 Census.

The PL funds are the main source of planning dollars to fulfill the core responsibilities in federal statute legislated to the MPOs. While MPOs receive and allocate some FTA funds, federal FHWA project funding continues to flow through state DOTs (such as Caltrans).

Figure 2.3 easily indicates the priority in Federal funding; there is \$61 billion allocated to interstate and state highway capital, compared to \$18 billion allocated to transit specific projects. The amounts allocated to planning are less and the disparity between planning highways and roads at the federal level favors that over transit at a factor of five.

Figure 2.3



2.2.5 Federal: Federal Railroad Administration (FRA)

The Federal Railroad Administration (FRA) primarily distributes planning funding for freight rail as well as intercity passenger transit. While the Rail Passenger Service Act of 1970 removed the obligation of *private* rail carriers to provide *passenger* rail services, it established the National Railroad Passenger Corporation broadly known as Amtrak.⁵³ Amtrak is a publicly funded service yet runs almost entirely on private rail. The Passenger Rail Investment and Improvement Act of 2008 (PRIIA) authorized the USDOT to provide grants for operating costs and to repay capital leases. The 2015 FAST Act novelly included explicit funding of intercity passenger rail in a surface transportation authorization. FRA operates with a much smaller \$2.8 billion budget for fiscal year 2022 but unlike FHWA it relies on appropriated budget authority. This authority derives from appropriations bills created by Congress after review of a President's submitted budget which allocates funding to various government agencies

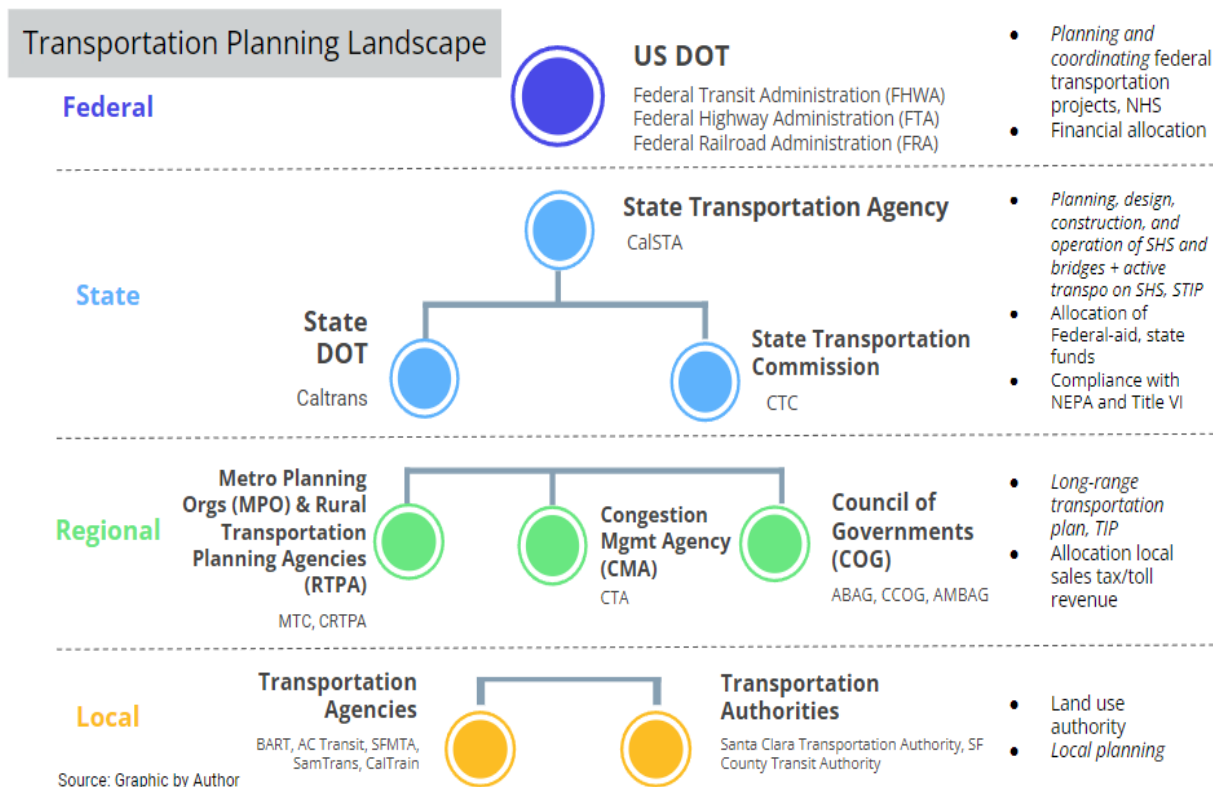
⁵³ US DOT, Federal Railroad Administration. <https://railroads.dot.gov/rail-network-development/passenger-rail/passenger-rail>

and programs. This means the allowances can vary widely depending on the current President and Congress that term. Also, unlike the FHWA/FTA, there is no Federal requirement for State DOTs to submit a State Rail Plan in order to be eligible for rail federal funding, though California opted to complete their first in 2018. A dedicated and reliable funding source for Amtrak and competitive rail grants will be key to developing the intercity passenger rail capacity. While FRA is not a focus of this report, it does help illustrate the complexities in governance and nuance in public transit planning, splitting intercity and commuter services.

2.2.6 State: Structure

Three main state agencies involved in transportation planning and financing in California. The California State Transportation Agency (**CalSTA**) develops and coordinates the policies and programs of the state’s transportation entities to achieve the state’s mobility, safety and air quality objectives from its transportation system.⁵⁴ The California Transportation Commission (**CTC**) programs and allocates funds for the construction and improvement of highways, passenger rail systems, and transit systems as well as advising on state policies.⁵⁵

Figure 2.4 Transportation Planning Landscape



⁵⁴ California State Transportation Agency. <https://calsta.ca.gov/about-us>

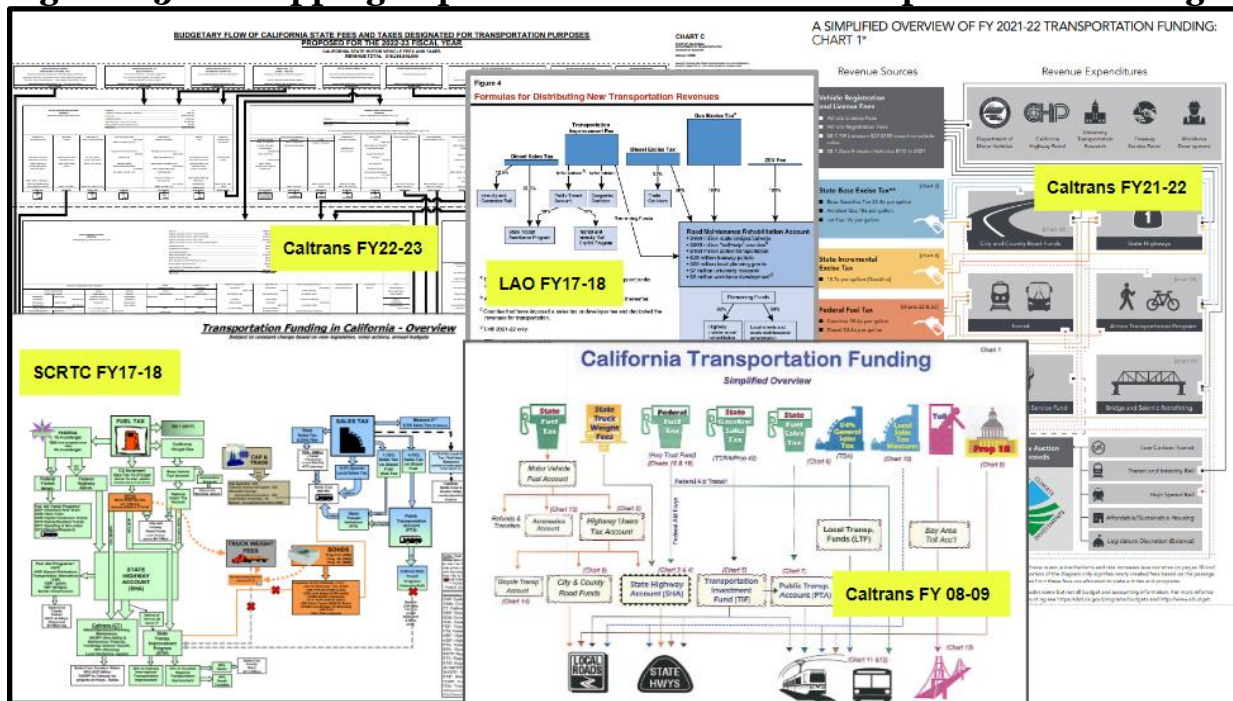
⁵⁵ California Transportation Commission. <https://catc.ca.gov/about>

The California Department of Transportation (**Caltrans**) manages the maintenance, rehabilitation and operation of the California State Highway System (**SHS**) as well as providing intercity rail services.⁵⁶ The SHS includes all Interstate routes, numbered highways, and other state-owned assets including bicycle and pedestrian facilities, culverts, safety roadside rest areas, and maintenance stations. While Caltrans operates and maintains the SHS, the county-based Congestion Management Agencies (**CMAs**) have the lead responsibility for addressing congestion issues, including those on State highways.

Caltrans will be the focus of this report and as such, only the staffing at that agency will be examined in depth. There are multiple departments at Caltrans involved in planning highways and transit. Capital Outlay and Capital Outlay Support are the primary divisions for planning the State Highway System incorporating active transportation elements on the SHS. Transit is planned by the Intercity Rail Passenger Program, Statewide and Regional Planning with support from Local Assistance. This difference in both funding and dedicated staffing between these divisions will be the basis of later recommendations.

2.2.7 State: Overview of State Level Funding

Figure 2.5 Overlapping Depictions of State Level Transportation Funding

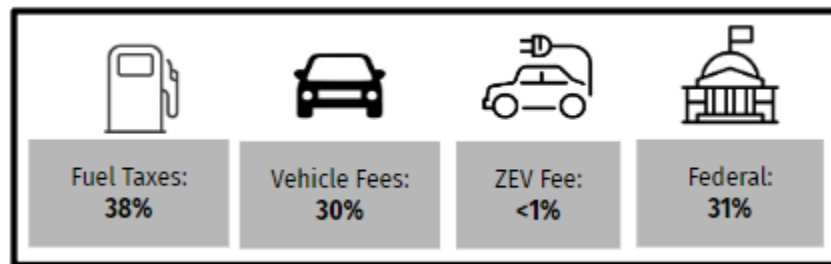


⁵⁶ California Department of Transportation. <https://dot.ca.gov/about-caltrans>

Many articles attempting to explain the financial landscape of transportation in California point to Chart C,⁵⁷ the sprawling budget summary released by Caltrans which illustrates its complexity. The many attempts by local and regional transit planning offices and journalists at simplifying the transportation funding landscape (see Figure 2.5: Caltrans Transportation Funding in California 2021,⁵⁸ SCRTC,⁵⁹ Caltrans Transportation Funding in California 2008,⁶⁰ LAO 2017 Report⁶¹) attempted to display it pictorially, which reinforced this complexity. Simplified to the most basic flow, transportation funds are appropriated from State tax revenue which are then apportioned into accounts, then allocated to programs, and finally distributed to specific projects (see Figure 2.6). There is a complicated application process to both program and appropriate or allocate non-formula funds for specific projects, which can add an additional administrative burden.

Figure 2.6 Flow of State Transportation Funds

Revenue → Account → Programs → Projects



Source: Author generated

Under the Caltrans budget structure, nine revenue sources are then allocated into any of nine different transportation tax fund accounts or five other “special funds”. Some of these funds are allocated to different agencies to administer transportation related programs (California Air Resources Boards, CalSTA, and others). The Local Transportation Fund (LTF) does not flow through Caltrans and is not accounted for in this budget. The LTF is described in section 2 of this report.

⁵⁷ Caltrans. January 2022. “Budgetary Flow of California State Fees and Taxes Designation for Transportation Purposes Proposed for the 2022-23 Fiscal Year”. <https://dot.ca.gov/-/media/dot-media/programs/budgets/documents/chart-c-a11y.pdf>

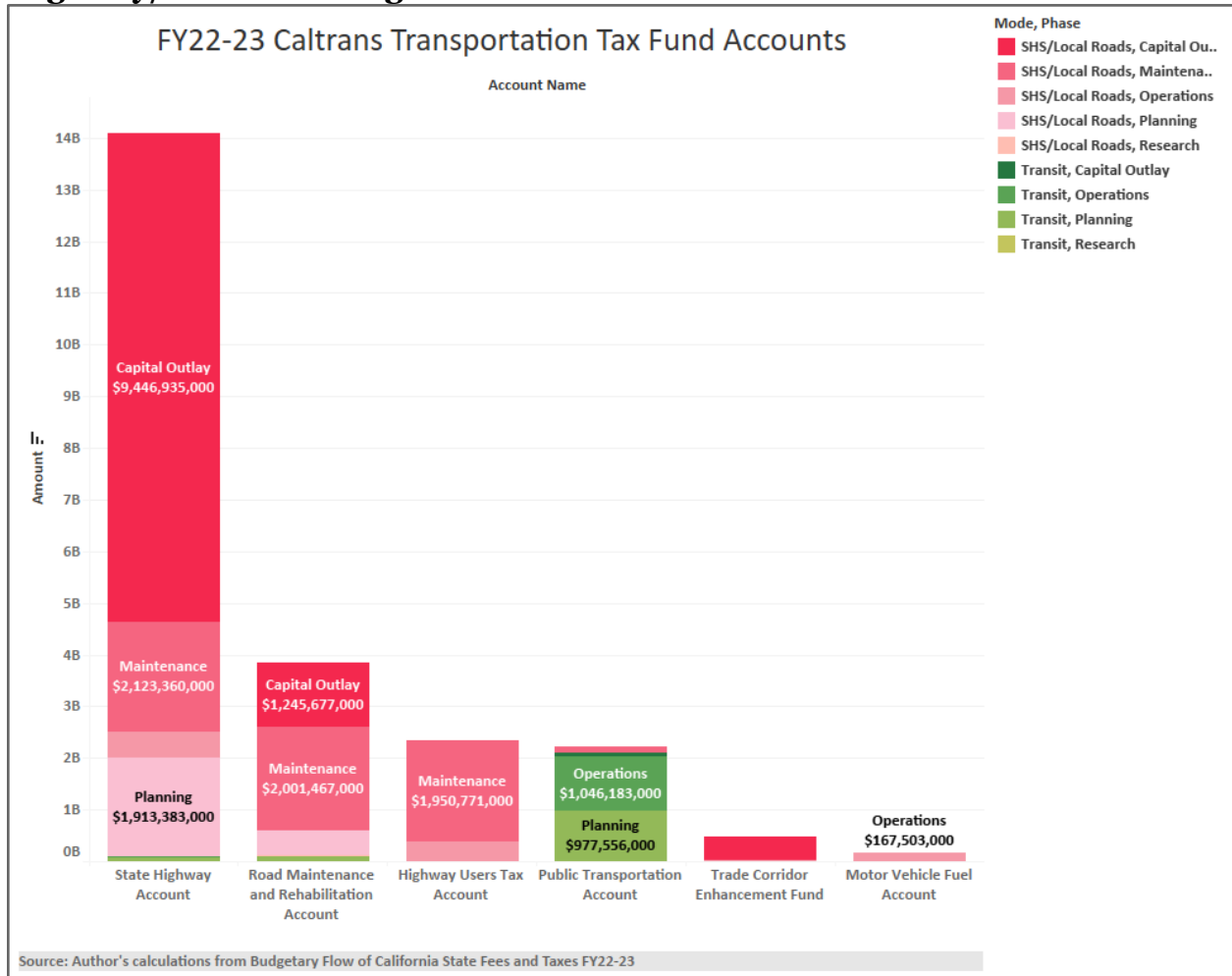
⁵⁸ Caltrans: Division of Transportation Planning. 2021. “Transportation Funding in California 2021”. <https://dot.ca.gov/programs/transportation-planning/division-of-transportation-planning/data-analytics-services/transportation-economics/transportation-funding-in-ca>

⁵⁹ Santa Cruz Regional Transportation Commission. 2017. “Transportation Funding in California - Overview”. <https://scrtc.org/wp-content/uploads/18b-FundingOverview-ChartMarch2017.pdf>

⁶⁰ Caltrans: Economic Analysis Branch and Division of Transportation Planning. 2008. “Transportation Funding in California 2008”. <https://www.srta.ca.gov/DocumentCenter/View/26/Transportation-Funding-in-California-PDF>

⁶¹Legislative Analyst’s Office. June 8, 2017. “Overview of the 2017 Transportation Funding Package”. <https://lao.ca.gov/Publications/Report/3688>

Figure 2.7 State Spending by Account on Transit Planning Vs. Highway/Road Planning



2.2.8 Highway Funds

2.2.8.1 State Highway Account

Highway funding is primarily sourced from the State Highway Account (SHA). The spending of the primary revenue source in this account - from motor vehicles - is governed by the California Constitution Article XIX Section 2 which limits use of revenues to operations and capital of roads yet, “exclud[es] the maintenance and operating costs for mass transit power systems and mass transit passenger facilities, vehicles, equipment, and services”.⁶² After pass-throughs (or redistribution to other accounts) and external allocations, the SHA contained 66 percent of the FY22-23 funds. The Public Transit Account was a distant second at 11 percent. The funds in the State Highway Account in the State Transportation Fund are prioritized by statute:

⁶² Justia US Law. “California Constitution Article XIX - Motor Vehicle Revenues, Section 2. <https://law.justia.com/constitution/california/article-xix/section-2/>

-
1. Operation, maintenance, and rehabilitation of the state highway system.
 2. Safety improvements where physical changes, other than adding additional lanes, would reduce fatalities and the number and severity of injuries.
 3. Transportation capital improvements that expand capacity or reduce congestion, or do both.
 4. Environmental enhancement and mitigation programs.

2.2.8.2 Road Maintenance and Rehabilitation Account

The Road Maintenance and Rehabilitation Account (RMRA) is funded by increases in fuel excise tax, increase in vehicle registration fees, as well as half of the revenues resulting from the increase in diesel fuel tax under Senate Bill 1 of 2017. The new revenues under SB 1 are sourced from the Transportation Improvement Fee (TIF) and the Road Improvement fee. The TIF adds an annual fee based on the fair market value of the vehicle when registration fees are due. This will be indexed based on annual CPI increases. Additionally, the Road Improvement Fee will charge EV owners a flat annual fee for model years 2020 and newer beginning in FY20-21 at \$100 but will also see future increases.

The funds available are allocated for road maintenance and other transportation improvement projects including \$25 million for local road planning grants, \$5 million for the University of California, and \$2 million to State of California universities and colleges for transportation research. The continuous appropriations are split 50 percent for maintenance of the SHS protection program and 50 percent to cities and counties for local street and road purposes.

2.2.9 Transit Funds

2.2.9.1 Public Transportation Account

The public transportation account consists primarily of the Retail Sales and Use Tax fee from State Transportation Assistance (STA), a portion of the Transportation Improvement Fee from SB1 legislation, as well as transfers from the Federal Mass Transit account and the SHA. In recent years, there has been negative capacity in the Public Transit Account. This means actual funds fell short of the amount of projected funding and therefore projects planned into prior years of the State Transportation Improvement Plan (STIP) were not able to be funded at expected levels if at all. This has also practically meant severe limits on funding for new projects. The STIP sets priorities every two years for the state's surface transportation projects, for projects in the coming years. Funds for the STIP come from the State Highway Account and Public Transportation Account (PTA). There is a mix of federal and state funds available for these projects, yet some apply for the STIP listing only state and local money sources as federal funds often have different requirements and require more administrative work to apply for and meet all criteria. Unless able to undertake these additional steps to make the project eligible for federal funds as well as state funds and/or find alternative funding sources, new transit projects will be deleted from the STIP.

Figure 2.8

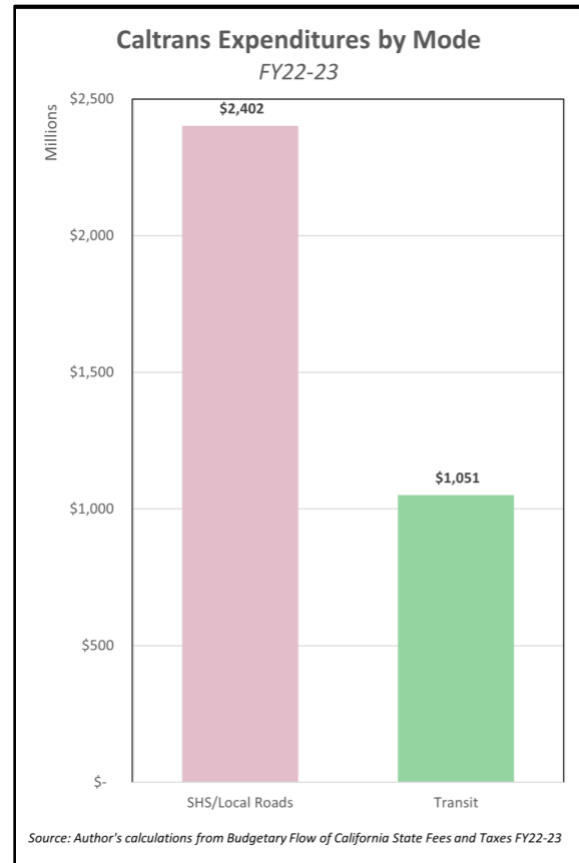


Figure 2.8 displays the significantly higher funding available to plan elements of the State Highway System and local roads compared to planning for transit modes. Road and highway planning was allocated \$2.4 billion in the most recent Caltrans budget, whereas transit planning was allocated less than half at roughly \$1 billion. Based on this disparity, recommendations for alternative funding sources and strategies are presented in Section 2.5.

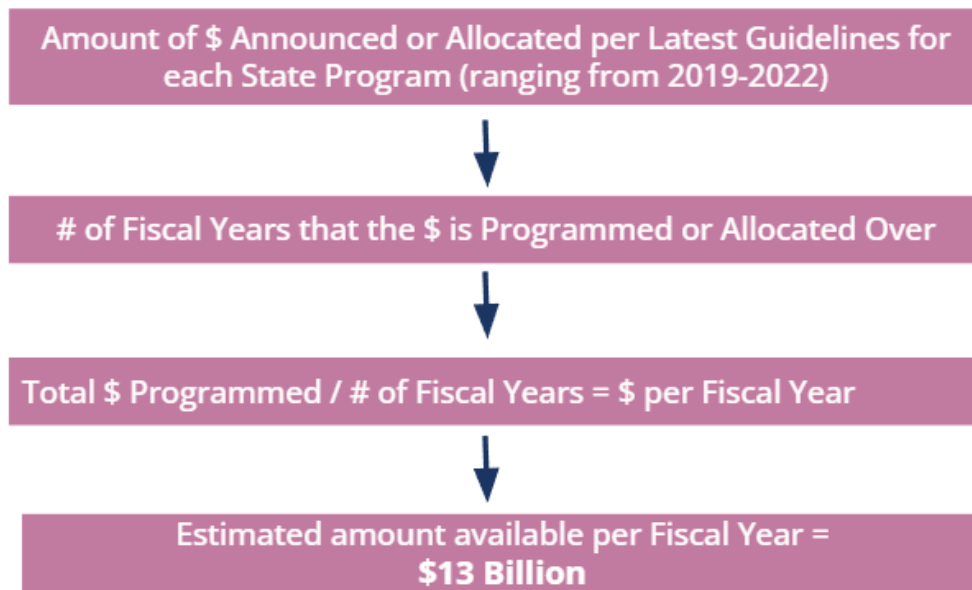
2.3 State Funding Programs for Transportation

Transportation projects receive funding from local, regional, state, and federal sources. Section 1 described how funds flow from revenue sources into Federal and State accounts, which are then distributed to subsequent programs and projects. The following section will focus on funds from California state programs that are established through legislation, such as SB1, and then distributed to regional and local agencies for

transportation projects.⁶³ *Programmed* funds have been committed to the project by the agency with the authority to do so, while *allocated* funds have been voted on by an agency for a particular project and the project can start spending those funds. It is important to note that there are additional federal and local sources that supplement these funds, however given the ambitious climate goals that California has set, this analysis focuses on the disparity between the goals of investing in sustainable forms of transportation and the funding that supports highway and road projects, as compared to transit and rail projects.

Given that funding programs occur on different timelines, ranging from annual cycles to cycles once every five years, and that funding levels can differ from the budget to programmed funds to allocated funds, a methodology was needed to facilitate a direct comparison across programs. Figure 2.9 shows the methodology used to determine an estimated amount of funding per program, per fiscal year, so that all evaluated programs could be directly compared to one another. The analysis compiled the amount of funds announced or allocated per the latest guidelines for each state program and determined the number of fiscal years over which the funds are programmed or allocated. Next, the total funds programmed are divided by the number of fiscal years to estimate the amount of funds available per program, per fiscal year.

Figure 2.9. Methodology for Analyzing California State Programs that Fund Transportation



Source: Graphic by author.

The eighteen programs that were analyzed are listed in Table 2.2. The programs are administered by five different state agencies: Caltrans, California Transportation Commission, California State Transportation Agency, California Air Resources Board, and the Strategic Growth Council.

⁶³ Caltrans. 2022. "Senate Bill 1 (SB1)." <https://dot.ca.gov/programs/sb1>

Table 2.2. State Transportation Funding Programs: Amount of Funding Programmed Per Fiscal Year, Transportation Modes Eligible, and Phases Eligible

Program	Amount (\$) Programmed in Latest Funding Cycle	Fiscal Year	# of Fiscal Years Covered	Amount Programmed Per Fiscal Year (\$)	% of Total Programmed	Transportation Modes Eligible			Phases Eligible		
						Highways and/or Roads	Transit and/or Rail	Bike/Ped	Planning and/or Design	Construction and/or Capital	Operations
Active Transportation Program	\$650,000,000	FY 23/24-FY 26/27	4	\$162,500,000	1%			x	x		
Affordable Housing and Sustainable Communities	\$405,000,000	FY 19/20	1	\$405,000,000	3%		x	x		x	
Local Partnership Program	\$400,000,000	FY 23/24 - FY 24/25	2	\$200,000,000	2%	x	x	x		x	
Local Streets and Roads Program	\$15,000,000,000	FY 17/18 - 27/28	10	\$1,500,000,000	12%	x			x	x	
Local Transportation Fund	\$4,797,994,578	2018-2021	4	\$1,199,498,645	9%	x	x	x	x	x	x
Low Carbon Transit Operations Program	\$225,400,000	FY 20/21	1	\$225,400,000	2%		x				x
Solutions for Congested Corridors	\$500,000,000	FY 23/24-24/25	2	\$250,000,000	2%	x	x			x	
State Highway Maintenance and Rehabilitation	\$1,900,000,000	FY 20/21	1	\$1,900,000,000	15%	x			x	x	
State Highway Operation and Protection Program	\$17,880,000,000	FY 22/23 - FY 26/26	4	\$4,465,000,000	34%	x			x	x	x
State Rail Assistance	\$237,000,000	FY 20/21 - FY 24/25	5	\$47,400,000	0.38%		x			x	x
State Transit Assistance	\$958,789,000	FY 22/23	1	\$958,789,000	7%		x			x	x
State Transportation Improvement Program - Interregional Share- Highways & Roads	\$89,900,000	FY 22/23 - FY 26/27	5	\$17,980,000	0.14%	x		x	x	x	
State Transportation Improvement Program- Interregional Share - Transit & Rail	\$98,803,000	FY 22/23 - FY 26/27	5	\$19,760,600	0.15%		x			x	
Sustainable Transportation Equity Project	\$35,000,000	FY 22/23	1	\$35,000,000	0.27%		x	x	x	x	x
Sustainable Transportation Planning Grant Program	\$34,700,000	FY 22/23	1	\$34,700,000	0.27%	x	x	x	x		
Trade Corridor Enhancement Program	\$1,051,000,000	FY 23/24 - FY 24/25	2	\$525,500,000	4%	x	x		x	x	
Transformative Climate Communities Program	\$106,200,000	FY 21/22	1	\$106,200,000	1%	x			x	x	
Transit and Intercity Rail Capital Program	\$4,870,000,000	FY 22/23 - FY 26/27	5	\$974,000,000	7%		x		x	x	
TOTAL	\$49,219,788,578		Total Per Fiscal Year	\$13,026,728,245							

Source: Author’s calculations based on program guidelines and allocations listed per program in Appendix A.

Note: The analysis was completed throughout Fall 2022 and represents a best-case scenario for transportation funding from the State.

The analysis was completed throughout Fall 2022 and represents a best-case scenario for transportation funding from the State. The FY 22-23 California State budget had a surplus that was used to give one time augmentations to several State programs from the General Fund.⁶⁴ For example, the Sustainable Transportation Planning Grants received a one-time \$50 million augmentation for Climate Adaptation Planning Grants, and the Transit and Intercity Rail Capital Program received a \$3.9 billion appropriation from the General Fund through the Budget Act of 2021.^{65,66} Additionally, at the time of analysis there were still funds available from the US Department of Transportation COVID-19 Relief funds that primarily support transit operations.⁶⁷ Looking ahead to FY

⁶⁴ California Legislative Analyst’s Office. February 15, 2022. “The 2022-23 Budget: Transportation Infrastructure Package.” <https://lao.ca.gov/Publications/Report/4536>

⁶⁵ Caltrans. 2022. “Sustainable Transportation Planning Grants.” <https://dot.ca.gov/programs/transportation-planning/regional-planning/sustainable-transportation-planning-grants#:~:text=The%20Sustainable%20Transportation%20Planning%20Grant%20Program%20includes%3A%20Sustainable,Plan%20Guidelines%20adopted%20by%20the%20California%20Transportation%20Commission>

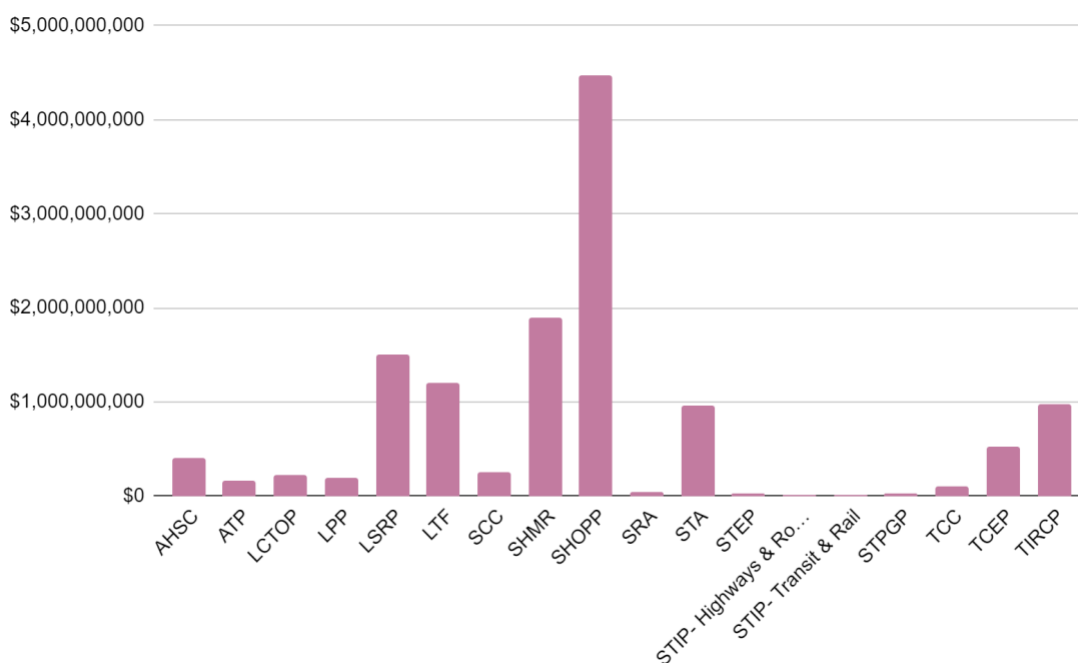
⁶⁶ California State Transportation Agency. September 30, 2022. “2022 Transit and Intercity Rail Capital Program Draft Guidelines for General Fund Augmentation.” https://calsta.ca.gov/-/media/calsta-media/documents/tircp-cycle-6-draft-guidelines_a11y.pdf

⁶⁷ US Department of Transportation. December 5, 2022. “USDOT COVID-19 Relief Funding.” <https://www.transportation.gov/mission/budget/usdot-covid-19-relief-funding>

23-24, there is a projected State budget shortfall, therefore it is unlikely that transportation programs will receive similar augmentations from the General Fund.⁶⁸

Figure 2.10 shows the results of the calculations from the previously described methodology and displays the estimated amount of funding available per program per fiscal year. The total amount of funding available is \$13 billion. As shown in Figure 2.10, the State Highway Operations and Protection Program (SHOPP) and State Highway Maintenance and Rehabilitation (SHMR) comprise the largest share of the funding as together they represent half of the total annual funding available.

Figure 2.10. State Programs Funding Transportation: Funding Available Per Program Per Fiscal Year



Source: Author’s calculations based on program guidelines and allocations listed per program in Appendix A.

Note: The analysis was completed throughout Fall 2022 and represents a best-case scenario for transportation funding from the State.

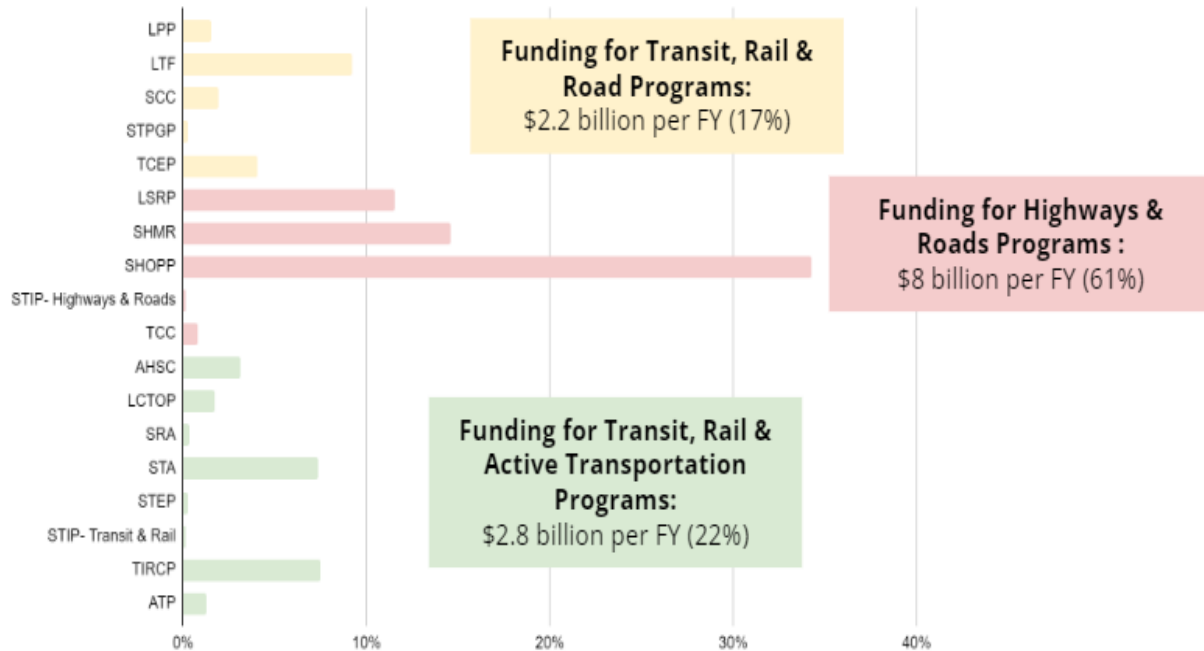
Box 2.3.1: SHOPP and SHMR, the two streamlined highway and road programs, alone comprise half of the estimated available funding per fiscal year.

To gain a better understanding of the types of transportation projects that each program funds, the programs were categorized by the primary modes of transportation they fund. Figure 2.11 shows the breakdown of modes funded:

⁶⁸ California Legislative Analyst’s Office. November 16, 2022. “The 2023-24 Budget: California’s Fiscal Outlook.” <https://lao.ca.gov/Publications/Report/4646>

The disparity is clear (Figure 2.11); there is more funding available for programs that fund highways and roads than there is for programs that fund transit and rail. This is a mismatch with the goals stated in plans such as Climate Action Plan for Transportation Infrastructure and the California Transportation Plan 2050 (see Section 1) which both call for significant investment in sustainable modes of transportation.

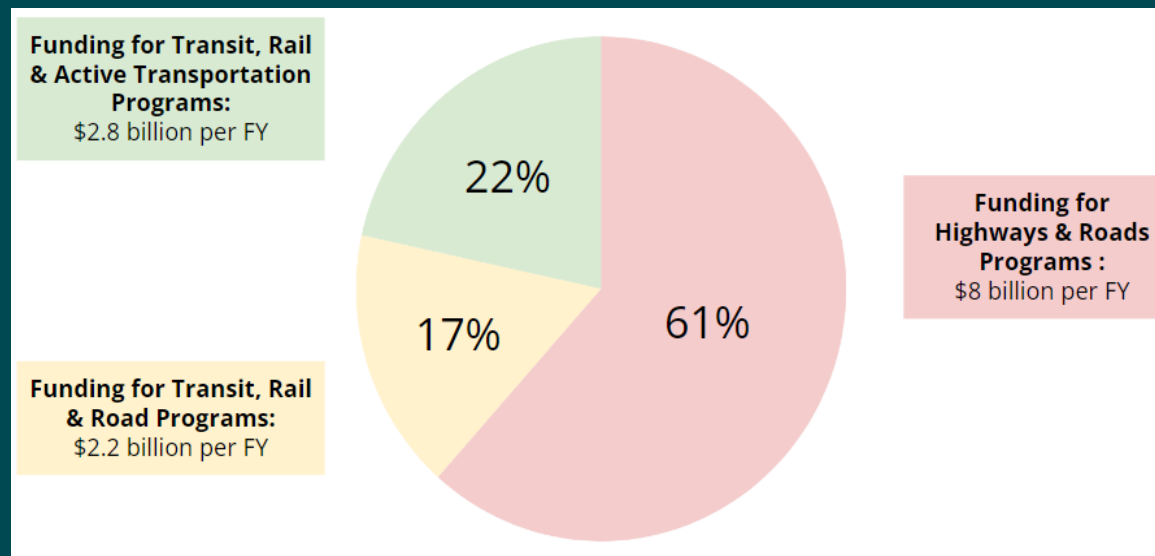
Figure 2.11. State Programs Funding Transportation: Funding Available Per Program Per Fiscal Year & Eligible Modes



Source: Author’s calculations based on program guidelines and allocations listed per program in Appendix A.

Note: The analysis was completed throughout Fall 2022 and represents a best-case scenario for transportation funding from the State.

Box 2.3.2: Highway and Road programs receive the majority of funding.



Source: Author's calculations based on program guidelines and allocations listed per program in Appendix A.

Note: The analysis was completed throughout Fall 2022 and represents a best-case scenario for transportation funding from the State.

Funding for programs like the State Highway Operation and Protection Program (SHOPP) and State Highway Maintenance and Rehabilitation Program (SHMR) allow there to be a steady pipeline of highway and road projects in development by Caltrans that are ready to compete for or obligate construction funds. The same is not true for transit and rail projects, which are typically planned on a one-off basis, rather than in a comprehensive asset management plan, which takes a holistic look at assets and how to best maintain them. Transit and rail projects are typically planned by regional and local agencies that do not have access to the same amounts of dedicated funding for planning purposes that Caltrans has to support their SHOPP and SHMR programs.

The funding programs were next analyzed based on the project phases they fund. Phases were divided into three categories: planning (pre-construction activities including planning, design, environmental review, and right-of-way acquisition); capital & construction; and operations. Figure 2.12 shows the programs that fund highways and roads, which accounts for 61 percent of the annual programmed funding per fiscal year in this analysis. All five of these programs include funding for the planning and pre-construction phases, creating a streamlined and easier process to develop highway and road projects.

Figure 2.13 shows the programs that fund both road projects and transit/rail projects, which accounts for 17 percent of the annual programmed funding per fiscal year. In this case, three of the five programs include funding for planning and pre-construction phases. The Local Transportation Fund, Sustainable Transportation Planning Grants, and Trade Corridor Enhancement Program all support the planning phase, although at

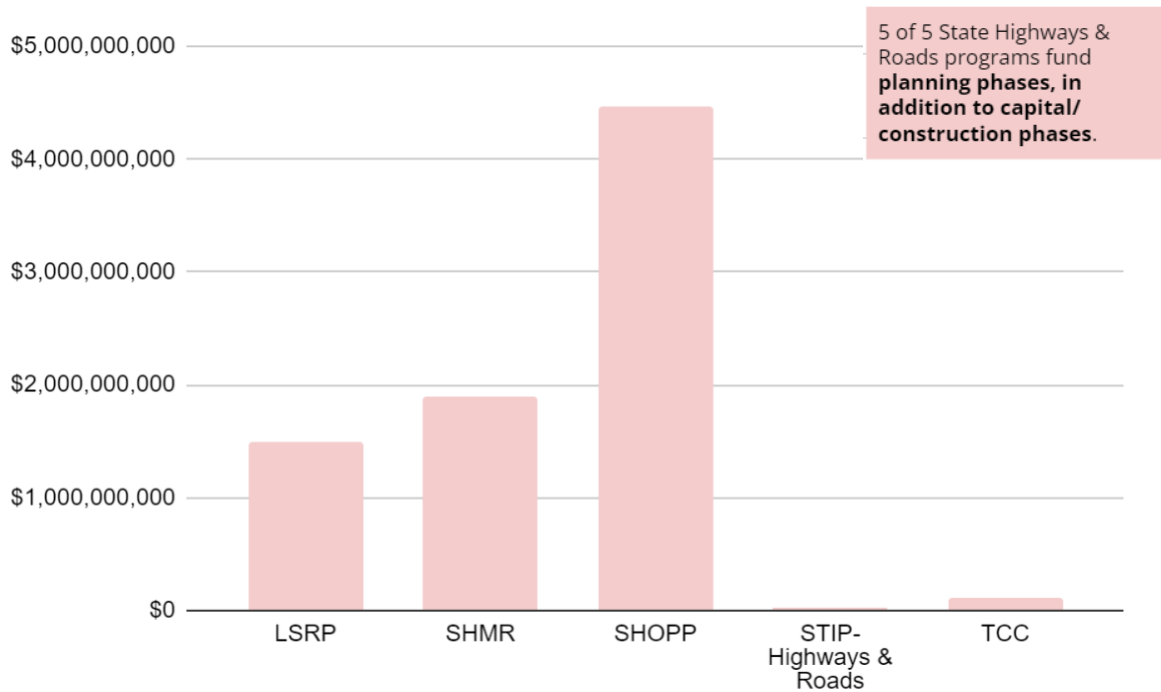
different amounts. STPG funds only planning, but represents only 0.26 percent of funding available per fiscal year. On the other hand, the Local Transportation Fund is distributed directly to counties for planning and program activities, pedestrian and bicycle facilities, community transit services, public transportation, and bus and rail projects, meaning it is up to the county to decide how the funds are spent.

Box 2.3.3: The only dedicated source to sustainable transportation planning is the Sustainable Transportation Planning Grant Program, which received 0.26% of funding. It is a competitive program and, on average, over the past three cycles (fiscal years 20/21 - 22/23), only 43% of the applications have been funded leaving a large gap in unfunded needs.¹

[1] Author's calculations based on Caltrans Sustainable Transportation Planning Grants data on number of applications and funded projects per cycle. <https://dot.ca.gov/programs/transportation-planning/regional-planning/sustainable-transportation-planning-grants>

Finally, Figure 2.14 shows the programs that fund only transit, rail, and active transportation projects, which accounts for 22 percent of the annual programmed funding per fiscal year. Three of eight programs provide funds for planning and pre-construction phases: the Active Transportation Program, Sustainable Transportation Equity Project, and the Transit and Intercity Rail Capital Program. Not only is there less funding for planning phases for transit and rail projects, but the programs that do support planning phases are not guaranteed the same amount of funding in each cycle, making these less reliable sources.

Figure 2.12. Highway & Roads Programs: Funding Available Per Program Per Fiscal Year and Eligible Phases

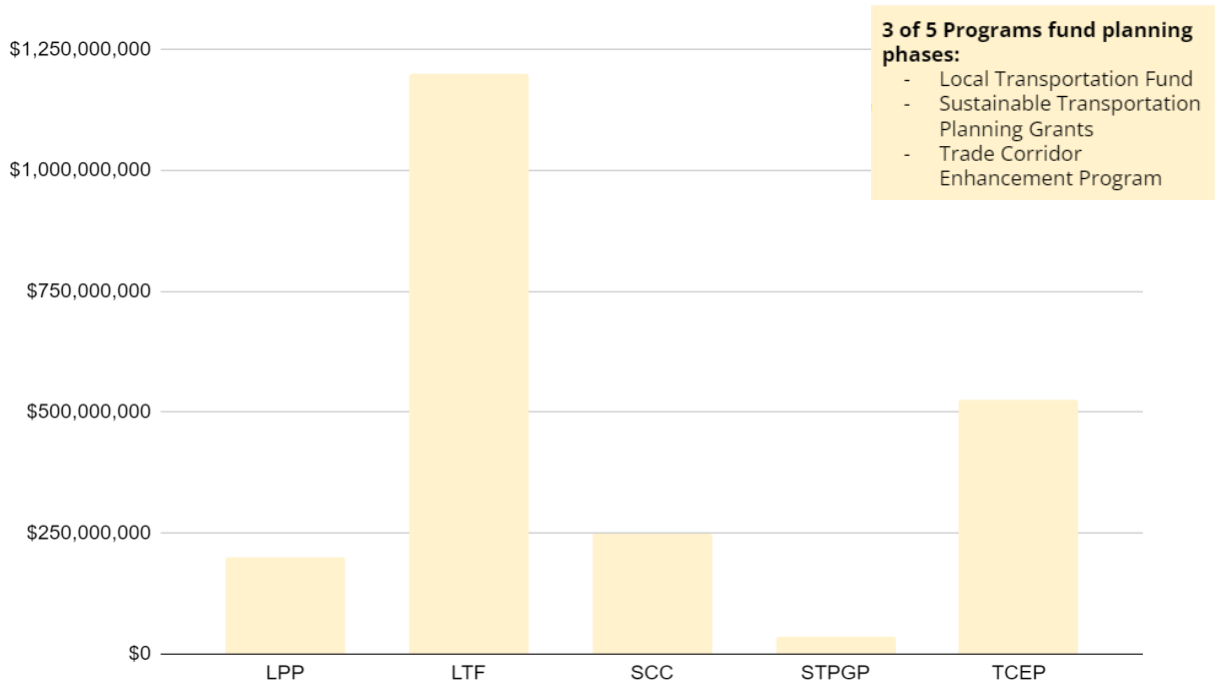


Source: Author’s calculations based on program guidelines and allocations listed per program in Appendix A.

Note: The analysis was completed throughout Fall 2022 and represents a best case scenario for transportation funding from the State.

Box 2.3.4: All 5 programs (or 61% of the total estimated annual funding across the 18 programs) that fund highways and roads include funding for planning phases, in addition to capital and construction phases. This compares to only 3 of 8 programs that fund transit and rail that fund planning phases. These three programs represent only 9% of the total estimated annual funding across the 17 programs.

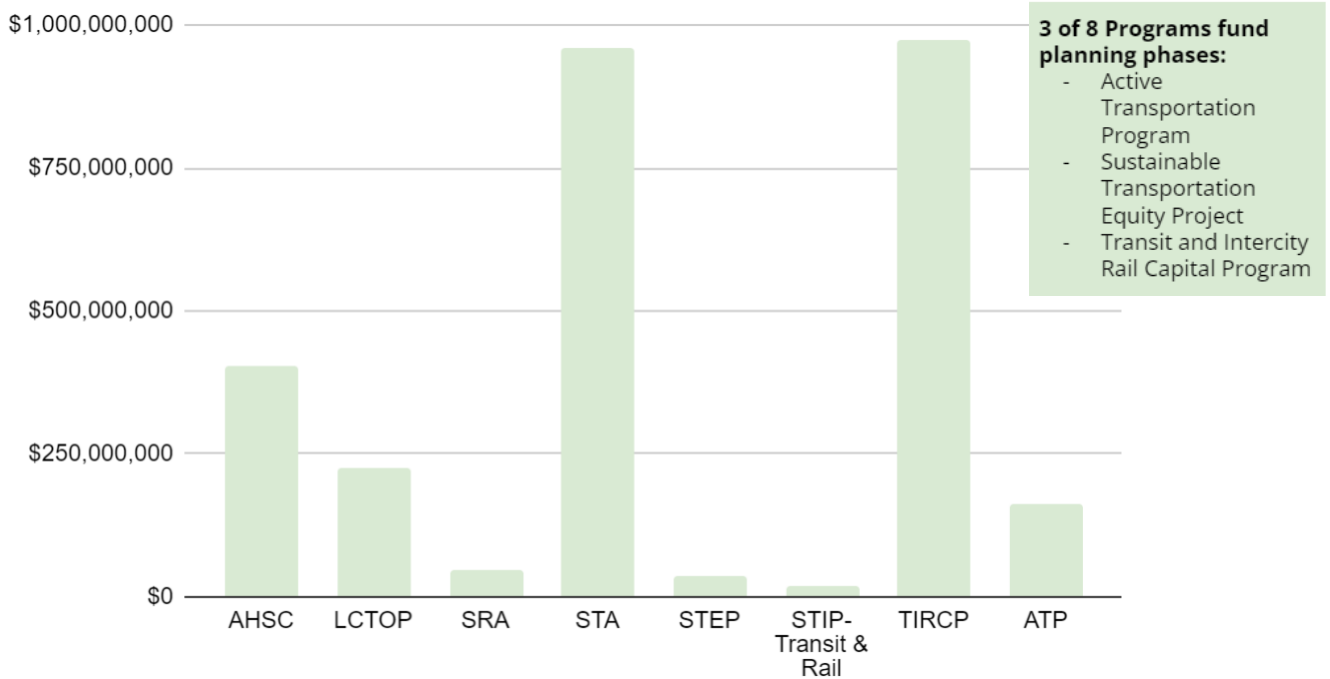
Figure 2.13. Highway, Road, and Transit Programs: Funding Available Per Program Per Fiscal Year and Eligible Phases



Source: Author’s calculations based on program guidelines and allocations listed per program in Appendix A.

Note: The analysis was completed throughout Fall 2022 and represents a best-case scenario for transportation funding from the state.

Figure 2.14. Transit, Rail, & Active Transportation Programs: Funding Available Per Program Per Fiscal Year and Eligible Phases

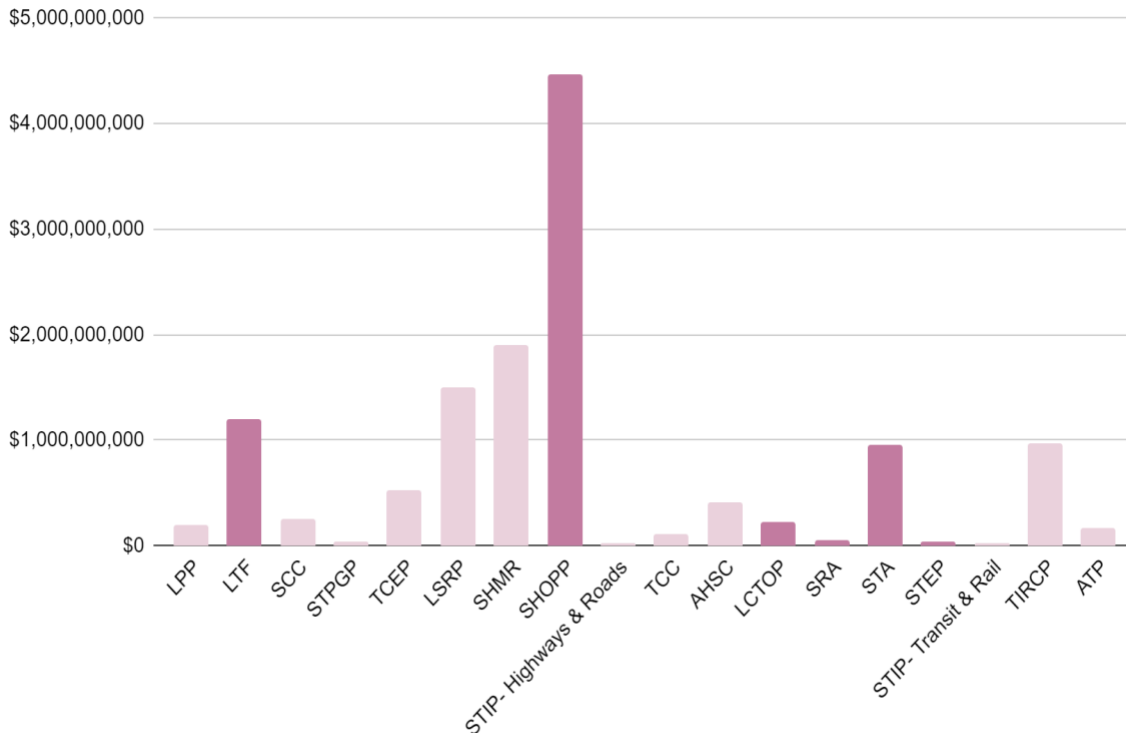


Source: Author’s calculations based on program guidelines and allocations listed per program in Appendix A.

Note: The analysis was completed throughout Fall 2022 and represents a best-case scenario for transportation funding from the State.

Beyond the disparity in funding for planning phases of projects, there is also a modal gap in operations funding. Figure 2.15 shows the programs that support operations either exclusively or in addition to planning and capital/construction phases. SHOPP accounts for 34 percent of total programmed funding available per fiscal year, while the five other programs that support operations for transit and rail account for 19 percent of total programmed funding available per fiscal year, cumulatively. Again, favoring the funding of highway and road projects over transit and rail. This disparity is a significant issue when it comes to social equity and the modes of transportation that we prioritize for funding. It is critical to provide long-term operational support for the systems that are planned, including both bus, rail, and active transportation modes such as bicycling and walking. Without ongoing operational support, continued investment in capital and construction will yield few results in creating a meaningful impact on travel patterns.

Figure 2.15. State Programs Funding Transportation: Funding Available Per Program Per Fiscal Year and Fund Operations



Source: Author’s calculations based on program guidelines and allocations listed per program in Appendix A.

Note: The analysis was completed throughout Fall 2022 and represents a best-case scenario for transportation funding from the State.

The five programs that support transit operations are:

- **Local Transportation Fund (LTF)** → 9%: The LTF is distributed to counties and can be used for planning and program activities, pedestrian and bicycle facilities, community transit services, public transportation, and bus and rail projects. In Counties with populations less than 500,000 and no unmet transit needs, funds can be used for local road projects. The funding for the LTF is from a quarter cent of the general sales tax, per the 1971 Transportation Development Act, that is collected statewide and distributed to Counties.⁶⁹ Funds are variable due to uncertainty in consumer spending year to year.
- **Low Carbon Transit Operations (LCTOP)** → 2%: LCTOP is one of two State programs that directly supports operations only. The funding varies each year

⁶⁹ Caltrans. 2022. “Transportation Development Act.” <https://dot.ca.gov/programs/rail-and-mass-transportation/transportation-development-act#:~:text=LTF%20-%20Local%20Transportation%20Fund%20%28LTF%29%2C%20is%20derived,LTF%20funds%20within%20the%20country%20based%20on%20population.>

because the revenue that supports this program is five percent of the annual Cap and Trade auction proceeds.⁷⁰

- **State Rail Assistance (SRA)** → 0.36%: SRA supports operations and capital investments for rail projects. It is built as a flexible source, but receives a low level of funding. Funding comes from SB1 and is divided equally between commuter rail and intercity operators.⁷¹
- **State Transit Assistance (STA)** → 7%: STA supports operations and capital investments for transit agencies, but is primarily used for operations. Funding is from SB1 and the sales tax on diesel gas and is distributed based on a formula that accounts for agency revenue and population.⁷² Based on FY 21-22 calculations, these revenues are primarily spent on operations (65%), with rail subsidies (16%) and capital (12%) as the preceding but less significant uses.
- **Sustainable Transportation Equity Project (STEP)** → 0.27%: The STEP is designed to increase transportation equity in communities based on State criteria that identifies these areas as disadvantaged and low-income. It is designed as a flexible source that can fund both planning and implementation grants, but also receives a low level of funding.⁷³

Overall, this analysis demonstrates that highway and road users benefit from more funding than transit and rail users. This presents challenges for social equity and ensuring that people who rely on transit have access to a reliable transit system. Proportional funds to sustain transit operations, especially bus operations, are needed to provide an equitable level of service to everyone. LTF and STA are critical for operations support because they are distributed to local agencies but have a proportionally small share of overall funding. Thus, as policymakers and others consider additional sources of revenue, funding needs to be added to the LTF and STA to sustain these vital programs.

The analysis from this section informs the recommendations in Section 2.5. For California to reach its ambitious mode shift goals to reduce transportation sector emissions and achieve its stated climate goals, a significant shift in funding as well as an overall increase in funding need to be considered. New innovative programs show significant potential to provide support for transit and rail planning, capital, and

⁷⁰ Caltrans. 2022. “Low Carbon Transit Operations Program (LCTOP).” <https://dot.ca.gov/programs/rail-and-mass-transportation/low-carbon-transit-operations-program-lctop>

⁷¹ California State Transportation Agency. 2022. “State Rail Assistance.” <https://calsta.ca.gov/subject-areas/state-rail-assistance>

⁷² California Transit Association. 2022. “Transit Funding Overview.” <https://caltransit.org/advocacy/transit-funding-overview/#:~:text=State%20Transit%20Assistance%20Since%20its%20creation%20in%201979%2C,of%20the%20total%20budget%20for%20some%20transit%20providers.>

⁷³ California Climate Investments. 2022. “Sustainable Transportation Equity Project.” <https://www.caclimateinvestments.ca.gov/sustainable-transportation-equity-project#:~:text=The%20Sustainable%20Transportation%20Equity%20Project%20%28STEP%29%20aims%20to,needs%20of%20each%20community%20within%20that%20community%E2%80%99s%20context.>

operations, however they are currently funded at a lower rate than highway and road programs.⁷⁴

2.4 State Staffing for Transportation Planning

Transportation planning takes place at all levels of government: through the State, metropolitan planning organizations (MPOs), and local transit agencies. While MPOs and local transit agencies receive State support, they supplement their budgets with other forms of revenue such as local sales tax measures and user fees to more fully cover their costs. On the other hand, Caltrans has a large and dedicated division that supports the continuous planning, operations, rehabilitation, and maintenance of highways and roads. Caltrans is comprised of many divisions; the most relevant that support transportation planning are listed below:⁷⁵

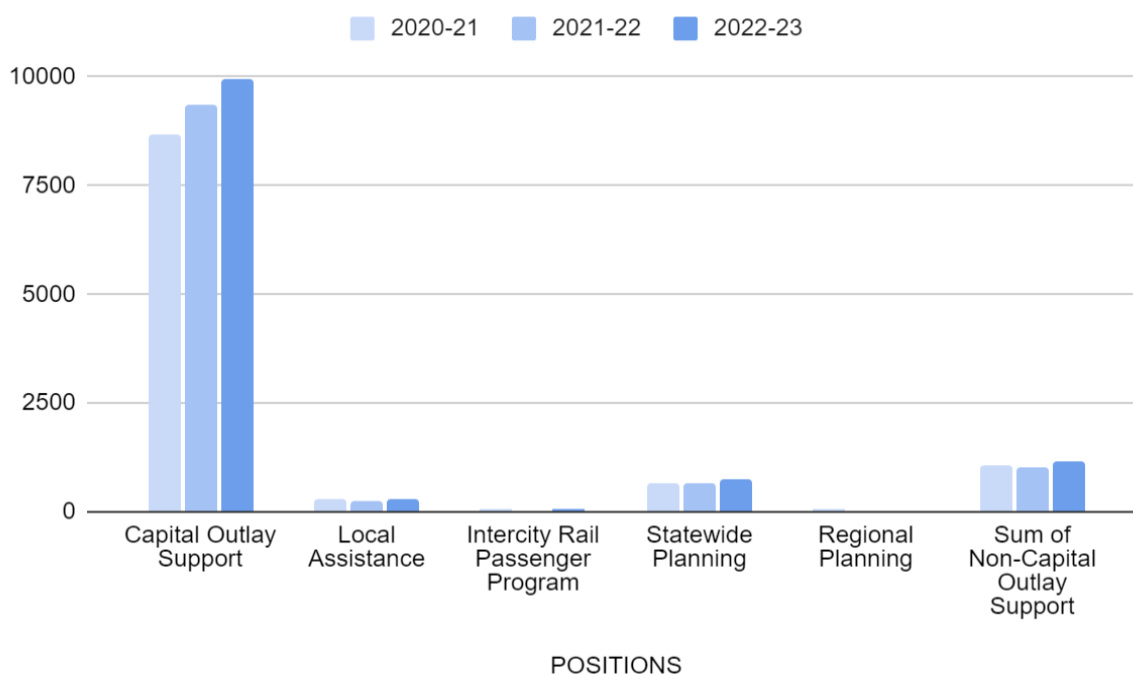
- **Capital Outlay Support:** develops capital projects on the State highway system and prepares them for the construction phase, including engineering and design work, environmental studies, right-of-way acquisition.
- **Local Assistance:** provides guidance, expertise, and oversight of transportation projects to regional and local transit agencies.
- **Intercity Rail Passenger Program:** provides leadership for the planning and implementation of a passenger rail transportation system in the State.
- **Statewide Planning:** prepares the long-range statewide transportation plan, provides long-range interregional transportation system planning and transportation planning studies to inform the State Transportation Improvement Program, and prepares the Interregional Transportation Strategic Plan.
- **Regional Planning:** implements statewide transportation policy through coordination at the regional level and develops transportation plans and projects.

Figure 2.16 shows the number of staff per division according to the 2022-23 California State Budget - 2660 Department of Transportation: 3 Year Expenditures and Positions. In FY 22-23, there were 8,834 more staff positions in the Capital Outlay Support division, than in the sum of the Non-Capital Outlay Support divisions. Capital Outlay Support is consistently staffed at levels much higher than these other divisions.

⁷⁴ California Strategic Growth Council. February 18, 2022. "California Transportation Assessment Report: Pursuant to AB 285." https://sgc.ca.gov/resources/docs/20220218-AB_285_REPORT.pdf

⁷⁵ State of California. 2022. "Department of Transportation 2660." <https://www.ebudget.ca.gov/2022-23/pdf/Enacted/GovernorsBudget/2500/2660.pdf>

Figure 2.16. Caltrans Staff Positions by Division FY 2020/21 - FY 2022/23



Source: Author’s calculations from 2022-23 State Budget: 2660 Department of Transportation

The takeaway from above Figure 2.16 is not that the State should be conducting all transportation planning, rather to highlight the disparity in the resources that Caltrans devotes to highway/road development than to multi-modal or rail planning. For example, the California State Rail Plan, which was published in 2018 by Caltrans and provides a framework for California’s rail network with the goal of providing “new and better rail and community connections”, does not have significant devoted staffing resources.⁷⁶ The California State Rail Plan lacks a clear process for implementation and does not provide a clear governance structure for how this framework could be enacted.

Considering the realities about funding for transit planning and operations and the lack of staffing support for them, projects like Link21 face considerable challenges. California is a unique state with numerous large metropolitan areas and growing megaregions.⁷⁷ Additionally, with multiple levels of government, projects that cross multiple regions and MPOs (like Link21), must have clear coordination regarding authority and project decisions. Adding an additional layer of government would likely not solve this problem, however the State could play a bigger role in megaregional coordination and funding support to develop transit and rail projects. There will need to be a financial structure to pool the funds for Link21, and the State is the only overarching authority that could do this without adding another complicated layer of governance.

⁷⁶ Caltrans. 2018. “California State Rail Plan.” <https://dot.ca.gov/programs/rail-and-mass-transportation/california-state-rail-plan>

⁷⁷ Link21. 2022. “Know Your Northern California Megaregion.” <https://link21program.org/en/about/northern-california-megaregion>

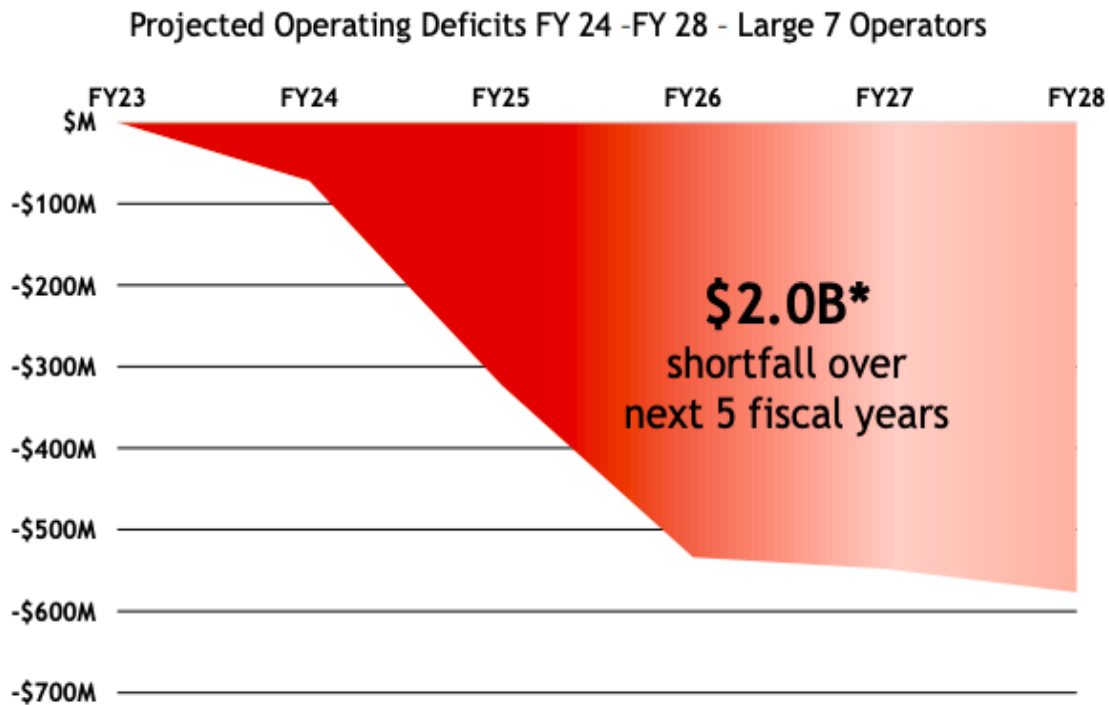
2.4.1 Missed Opportunities & Limitations to State's Approach

California's transportation funding and governance landscape is complicated and not aligned with State visions and priorities. The long list of transportation plans described in Section 1.1.3 are hard to decipher and the sheer number makes it nearly impossible to be in alignment with all of them. As the State heads into projected deficits for transit operators,⁷⁸ transportation funding and the State's role across its many agencies need to be re-envisioned. Figure 2.17 shows the projected operating deficit for the seven largest transit agencies in the Bay Area, which is a snapshot of what is to come throughout the State. The recommendations presented in the next section are based on the existing system, but it is important to think beyond the current system and imagine new ways of funding and distributing revenue that support both the development of transit and rail projects, as well as the ongoing operations needs of critical public transportation systems. In the current system, projects can be delayed for years as they complete the final step of securing a funding plan due to the complexity of the available fund sources and their guidelines.⁷⁹ Reimagining transportation funding and priorities from the bottom up will be critical to build a more sustainable and equitable transportation system.

⁷⁸ Shrode, Garrett. November 4, 2022. "Looking to the Horizon: How Agencies are Anticipating the Mass Transit Fiscal Cliff." <https://www.enotrans.org/article/looking-to-the-horizon-how-agencies-are-anticipating-the-mass-transit-fiscal-cliff/>

⁷⁹ Plotch, Philip Mark. January 8, 2015. "What's Taking So Long? Identifying the Underlying Causes of Delays in Planning Transportation Megaprojects in the United States." https://journals.sagepub.com/doi/full/10.1177/0885412214566116?casa_token=OHVqgy3U5JIAAAA%3A6HKz1sQMZTGO9AAf2_TjhhTs6uuuwGzb5kGZH2pQ9Ly4WDMua3tRgd8arZtHaaUeSwAlmdCE-Z3

Figure 2.17. Projected Operating Deficits FY 24 - FY 28 - The Large 7 Bay Area Transit Operators



Source: Transit operator data provided to MTC, October 2022.

*Note: Accuracy of shortfall estimate may diminish in later years due to operating environment uncertainty. 5-Year operating shortfall forecasts will be assessed in greater detail over the coming months.

Source: Seamless Bay Area.⁸⁰

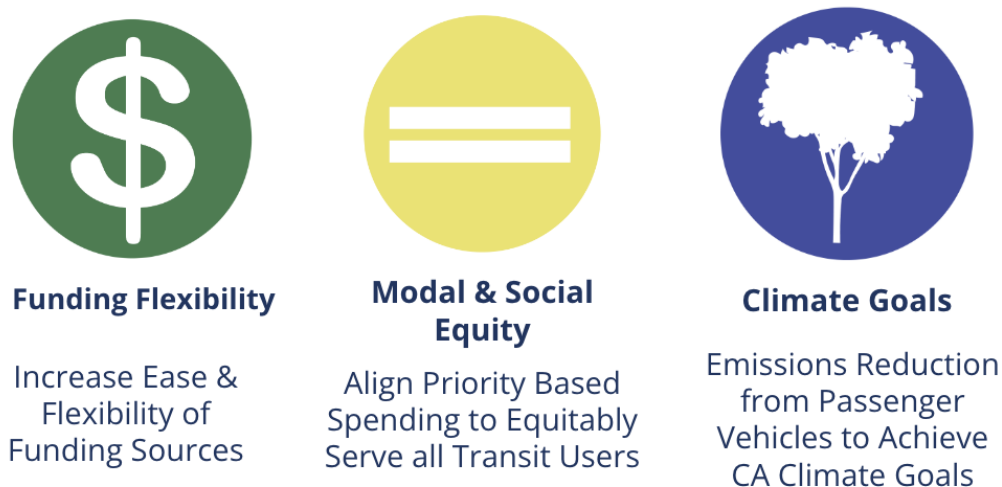
Note: The Large 7 Bay Area Transit Operators are: San Francisco Municipal Transportation Agency; Bay Area Rapid Transit; AC Transit; Valley Transportation Authority; CalTrain; SamTrans; and Golden Gate Bridge, Highway, and Transportation District.

2.5 Recommendations

The following recommendations are based on a framework developed by the author’s around goal-oriented planning. Figure 2.18 shows the three components of the framework to guide recommendations to realize each goal. Many recommendations achieve more than one goal, but they are grouped by their primary goal. Additionally, three near-term Link21 specific recommendations are included.

⁸⁰ Seamless Bay Area. October 11, 2022. “This week, MTC and BART start planning to address transit fiscal cliff.” <https://www.seamlessbayarea.org/blog/2022/10/11/this-week-mtc-and-bart-start-planning-to-address-transit-fiscal-cliff>

Figure 2.18. Recommendation Framework: Goal-Oriented Planning



Source: Author's framework.

2.5.1 Goal 1: Increase Ease & Flexibility of Funding Sources

Recommendation 1.1: Standard Grant Application

The recommendation for a standard grant application for State and regional funding sources is the foundation of simplifying the process to seek out and apply for competitive grants. Every grant has different requirements regarding eligible applicants, eligible projects, eligible phases, requirements about funding matches and funding plans in place, and the documentation that is required. Navigating grant opportunities is a long and time-consuming process for agencies that may already be stretched for resources. Creating one standard format that uses the same terms and clearly spells out requirements is a basic step to decrease the administrative burden. Furthermore, there should not be optional components in applications and instructions should clearly delineate what is or is not required to be competitive for a grant. The State could lead the process of developing a standard grant application for State grants, and then guide regions to do the same for their funding sources.⁸¹

Recommendation 1.2: Loosen Statutory Requirements around Motor Vehicle Revenue

The statutory requirements that dictate how motor vehicle revenue can be spent are outlined in the State Constitution Article XIX. There was an amendment in 2010 that altered some of the language (see section 2.2.8), but the statutory requirements should continue to be further revised to:

- A) Direct revenue into both the Highway Users Account and the Public Transportation Account
- B) Increase the flexibility of language to specify that funds can be used for public transportation such as buses, not just fixed or exclusive guideways, and can be used for operations expenditures.

⁸¹ California Strategic Growth Council. February 18, 2022. "California Transportation Assessment Report: Pursuant to AB 285." https://sgc.ca.gov/resources/docs/20220218-AB_285_REPORT.pdf

Recommendation 1.3: Expand Eligibility Criteria & Increase Flexibility for Fund Sources that Receive Reliable & Streamlined Funding

As Figure 2.12 showed, several state programs receive a higher proportion of funding, but are restricted to funding highways and roads. The following programs are recommended to expand definitions of eligibility criteria so that transit and rail projects may be eligible to receive funding.

- **State Transportation Improvement Program (STIP):** The STIP sets priorities every two years for the State’s surface transportation projects, for projects in the coming years. Funds for the STIP come from the State Highway Account and Public Transportation Account (PTA), however in recent years the Public Transportation Account funds have fallen short of projections and have not been able to cover all programmed projects and limit funding on new projects.⁸² The submission of the STIP to the Federal government maintains eligibility for federal STIP funds. The program provides State and Federal funds for State highway improvements, intercity rail, and county allocations for regional highway and transit improvements. Except for project planning, programming, and monitoring, all STIP projects are capital projects to improve transportation in the region. In California, the list of projects included in the STIP is coordinated through submissions of Regional Transportation Improvement Plans (**RTIP**) and Transportation Improvement Plans (**TIPs**) by MPOs and RTPAs to Caltrans. The STIP is split into the interregional share (25%) governed by the Interregional Improvement Program (**IIP**) which is administered by the State, and the county share (75%) the Regional Improvement Program (**RIP**), which is allocated directly to the counties. County shares allow for programming of five percent of funds for project planning, programming, and monitoring (**PPM**) activities by the regional transportation planning agency.

There are two main recommendations for the STIP. First, projects only remain eligible in the STIP when PTA funds run out if they are eligible to receive Federal funds, which can be a high burden for projects that are not yet federalized. This burden could be solved by redistributing funds to the PTA so that projects do not need to use Federal funds. Second, in the programming of county STIP funds, nearly every county has a budget item for ‘planning, programming, and monitoring’ under their Highway Projects share, while Transit/Rail projects are all budget items that relate to specific projects. Transit/Rail should also receive a ‘planning, programming, and monitoring’ budget item for continual planning and development so that they are ready to compete for other fund sources.

⁸² California Transportation Commission. March 16, 2022. “2022 STATE TRANSPORTATION IMPROVEMENT PROGRAM.” <https://ctc.ca.gov/-/media/ctc-media/documents/programs/stip/2022-stip/2022-adopted-stip-32522.pdf>

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- **State Highway Operation & Protection Program (SHOPP):** The SHOPP program funds projects that pertain to the maintenance, safety, operation, and rehabilitation of the State highway system that do not add new capacity to the system.⁸³ This program’s flexibility could be increased through reassessing projects that are in the pipeline for their alignment with climate goals, in relation to each other to ensure that projects that increase vehicle miles traveled are not prioritized. There is a precedent of the California Transportation Commission passing resolutions that adjust project descriptions and allocations, therefore a resolution is a viable path to make continued adjustments to the program.⁸⁴
 - **Solutions for Congested Corridors (SCC):** The SCC program “provides funding to achieve a balanced set of transportation, environmental, and community access improvements to reduce congestion throughout the state” and funds both highway/road projects and transit/rail projects.⁸⁵ While this fund source has expansive eligibility criteria that can fund transit and rail projects, it is a very competitive program and limited to the construction phase only for projects with a full funding plan. Eligibility should be expanded to include additional phases and create more leniency around a project’s funding plan, such as allowing sources that are high potential but not yet committed to count towards fulfillment of the funding plan requirement.

Link21 specific recommendation 1: Work with the Northern California counties and Metropolitan Planning Organizations to include ‘planning, programming, and monitoring’ for Link21 under the Transit Projects category in the STIP.

- **Local Partnership Program (LPP):** The LPP has a selection formula and competitive program that funds projects pertaining to aging infrastructure, road conditions, active transportation, transit and rail, and projects with health and safety benefits.⁸⁶ The LPP formula program also funds projects that increase capacity on highways, which should be removed as an eligible project. The LPP competitive and formula programs only fund projects with a fully funded phase,

⁸³ California Transportation Commission. 2022. “State Highway Operation and Protection Program (SHOPP) and Transportation Asset Management Plan (TAMP).” <https://catc.ca.gov/programs/state-highway-operation-and-protection-program>

⁸⁴ California Transportation Commission. June 27, 2019. “Delegation of Authority to Adjust Project Allocations And Modify Project Descriptions. RESOLUTION G-19-12 Replacing Resolution G-16-12.” <https://catc.ca.gov/-/media/ctc-media/documents/programs/shoppp/guidelines/20190626-g-19-12-a11y.pdf>

⁸⁵ California Transportation Commission. 2022. “Solutions for Congested Corridors Program (SCCP).” <https://catc.ca.gov/programs/sb1/solutions-for-congested-corridors-program>

⁸⁶ California Transportation Commission. 2022. “Local Partnership Program.” <https://catc.ca.gov/programs/sb1/local-partnership-program>

which creates a ‘chicken or the egg’ situation in which no funding source wants to be the first one on a project. This requirement should be revised to demonstrate a reasonable assumption of a full funding plan, but not a requirement that all funds are committed.

Link21 specific recommendation 2: Apply to the U.S. Department of Transportation’s (USDOT) Prioritization Process Pilot Program during the project selection phase, scheduled to begin in 2024. USDOT’s Prioritization Process Pilot Program \$50 million over 4 years (\$2 million grants). <https://www.whitehouse.gov/wp-content/uploads/2022/05/BUILDING-A-BETTER-AMERICA-V2.pdf#page=439>

2.5.2 Goal 2: Align Priority Based Spending to Equitably Serve All Transit Users

Recommendation 2.1: Increase funding for programs that focus on transit, rail, and active transportation through new innovative funding mechanisms

The newer, innovative transportation funding programs need additional funding if the State hopes to achieve their ambitious goals stated in the California Transportation Plan 2050 and CAPTI, among other plans (see Section 1.1.3). Furthermore, funding needs to be increased, rather than just redistributed, to ensure that buses, rail, bike, and pedestrian projects all receive sufficient funding and lessen the competition against one another. New funding mechanisms include a vehicle miles traveled (VMT) tax, congestion pricing, joint development, and value capture (see Section 3 for more details on these mechanisms). Plan Bay Area 2050 includes these funding mechanisms, and they will be necessary to move ambitious policy forward. In particular, revenue sources that price behavior, such as a VMT tax or congestion pricing, are a promising option as they can have complementary effects of discouraging driving and increasing funds for public transportation. While the details of these funding mechanisms are outside of the purview of this report, Section 3 will address value capture and joint development in more detail. Additional revenue should be distributed among the newer, more innovative programs that focus on sustainable transportation, consider social equity, and tie land use and transportation planning together. In particular, the following programs should receive an increasing amount of funding each cycle as they support planning, construction, and operations of sustainable transportation.

- a. **Active Transportation Program (ATP):** ATP’s purpose is to increase use of active transportation as a mode choice, particularly walking and biking. Planning and construction phases are eligible, as well as non-

infrastructure programs such as educational campaigns.⁸⁷ The lead state agency is Caltrans.

- b. **Affordable Housing and Sustainable Communities Program (AHSC):** The AHSC program goal is to increase the supply of affordable places to live near jobs, stores, and transit by funding projects near transit oriented development that encourage people to walk, bike, or take transit instead of using a personal vehicle.⁸⁸ The lead state agency is California Strategic Growth Council.
- c. **Low Carbon Transit Operations Program (LCTOP):** LCTOP's purpose is to provide operating and capital assistance for transit agencies to reduce greenhouse gas emission and improve mobility.⁸⁹ The lead state agency is Caltrans.
- d. **Transformative Climate Communities Program (TCC):** The TCC program funds community-driven climate projects that reduce greenhouse gas emissions in disadvantaged communities. It funds both planning and implementation grants.⁹⁰ The lead state agency is California Strategic Growth Council.
- e. **Sustainable Transportation Planning Grant Program (STPGP):** The STPGP includes sustainable communities grants, Climate Adaptation Planning Grants, and Strategic Partnership Grants. This is the only dedicated state source to the planning phase of transportation projects.⁹¹ On average over the past three cycles (FY 20/21 - 22/23), only 43 percent of the applications have been funded leaving a large gap in unfunded needs.⁹² There needs to be more reliable funding, so that this can become a consistent source for transportation planning. The lead state agency is Caltrans.
- f. **State Rail Assistance (SRA):** The SRA was established through SB1 and provides funding directly to rail operators for commuter rail and

⁸⁷ Caltrans. 2022. "Active Transportation Program." <https://dot.ca.gov/programs/local-assistance/fed-and-state-programs/active-transportation-program>

⁸⁸ California Strategic Growth Council. 2022. "AHSC Resources - Program Resources." <https://sgc.ca.gov/programs/ahsc/resources/>

⁸⁹ Caltrans. 2022. "Low Carbon Transit Operations Program (LCTOP)." <https://dot.ca.gov/programs/rail-and-mass-transportation/low-carbon-transit-operations-program-lctop>

⁹⁰ California Strategic Growth Council. 2022. "Transformative Climate Communities." <https://www.sgc.ca.gov/programs/tcc/>

⁹¹ Caltrans. 2022. "Sustainable Transportation Planning Grants." <https://dot.ca.gov/programs/transportation-planning/regional-planning/sustainable-transportation-planning-grants>

⁹² Author's calculations based on Caltrans Sustainable Transportation Planning Grants data on number of applications and funded projects per cycle. <https://dot.ca.gov/programs/transportation-planning/regional-planning/sustainable-transportation-planning-grants>

intercity rail.⁹³ The majority of program funding is directed by statutory formula to rail operators, divided equally between commuter rail and intercity operators, but CalSTA awards 25 percent of the intercity portion via discretionary grants. The lead state agency is the California State Transportation Agency.

- g. **Transit and Intercity Rail Capital Program (TIRCP):** Funds for the TIRCP come from the Greenhouse Gas Reduction Fund, plus a portion of Transportation Improvement Fees. The program’s purpose is to “to fund transformative capital improvements that will modernize California’s intercity, commuter, and urban rail systems, and bus and ferry transit systems, to significantly reduce emissions of greenhouse gases, vehicle miles traveled, and congestion”.⁹⁴ TIRCP Cycle six received a large augmentation from the State budget surplus, but this level of funding needs to be continued in the future regardless of the State’s General Fund status. The lead state agency is the California State Transportation Agency.

Link21 Recommendation 3: Apply for Transit and Intercity Rail Capital Program (TIRCP) Cycle 6 funding.

Recommendation 2.2: Redistribute Staffing Resources at Caltrans

Caltrans should dedicate more staff to leading the implementation of the California State Rail plan and playing a coordinating role for projects that cross regions, rather than creating a new level of government at the megaregional level. The new transbay crossing planning is listed in the CA State Rail Plan and the construction for the new transbay crossing is listed in the California State Rail Plan’s 2040 Capital Projects, therefore the stage is set for the State to play a role.

2.5.3 Goal 3: Reduce Emissions from Passenger Vehicles to Achieve Climate Goals

Recommendation 3.1: Reform SB375 Sustainable Communities & Climate Protection Act SB375, which requires MPOs to develop and publish Sustainable Communities Strategies, has been criticized as an unfunded mandate⁹⁵. MPOs can be aspirational in their Long Range Development Plans but need more influence to implement the

⁹³ California State Transportation Agency. 2022. “State Rail Assistance.” <https://calsta.ca.gov/subject-areas/state-rail-assistance>

⁹⁴ Caltrans. 2022. “Transit and Intercity Rail Capital Program (TIRCP).” <https://dot.ca.gov/programs/rail-and-mass-transportation/transit-and-intercity-rail-capital-program#:~:text=The%20Transit%20and%20Intercity%20Rail%20Capital%20Program%20%28TIRCP%29,of%20greenhouse%20gases%2C%20vehicle%20miles%20traveled%2C%20and%20congestion>

⁹⁵ Bullis, Cory Alexander. How well is SB 375 working in the Sacramento region?. Diss. California State University, Sacramento, 2017.

methods advocated to meet their greenhouse gas reductions goals. Reform that would give SB375 more weight with direct financial incentives to local transit agencies to develop and implement transportation improvement plans to be more in line with the Sustainable Communities Strategy, which coordinates transportation, housing, and land use planning is recommended.⁹⁶

Recommendation 3.2: Create a Matrix to Match State Funding and State Goals

The Federal Transit Administration and Federal Highway Administration demonstrated how their budgets were aligned with their stated values as seen in Figure 2.19. This recommendation calls for a similar breakdown of financial spending by the California State Transportation Agency, that shows which programs align with their Strategic and Organizational Goals.

Figure 2.19. Federal Highway Administration FY 2023 Budget Requests by DOT Strategic and Organizational Goals

EXHIBIT II-3 FY 2023 BUDGET REQUEST BY DOT STRATEGIC AND ORGANIZATIONAL GOALS FEDERAL HIGHWAY ADMINISTRATION Appropriations, Obligation Limitations, & Exempt Obligations (\$000)						
	Safety	Economic Strength	Equity	Climate & Sustainability	Transformation	Organizational Excellence
Federal-aid Highways						
Bridge Investment Program	\$128,000	\$288,000	\$64,000	\$32,000	\$64,000	\$64,000
Carbon Reduction Program	\$62,917	\$62,917	\$125,833	\$754,998	\$125,833	\$125,833
Charging and Fueling Infrastructure Grants	\$20,000	\$20,000	\$40,000	\$240,000	\$40,000	\$40,000
Congestion Mitigation & Air Quality Improvement Program	\$258,722	\$517,444	\$517,444	\$776,166	\$258,722	\$258,722
Congestion Relief Program	\$10,000	\$10,000	\$10,000	\$10,000	\$5,000	\$5,000
Construction of Ferry Boats and Ferry Terminal Facilities	\$22,400	\$22,400	\$22,400	\$22,400	\$11,200	\$11,200
Disadvantaged Business Enterprise	\$0	\$4,000	\$4,000	\$0	\$1,000	\$1,000
Emergency Relief	\$28,290	\$18,860	\$0	\$28,290	\$9,430	\$9,430

Source: US DOT Federal Highway Administration Budget Estimates FY 2022-2023.
https://www.transportation.gov/sites/dot.gov/files/2022-03/FHWA_Budget_Estimates_FY23.pdf

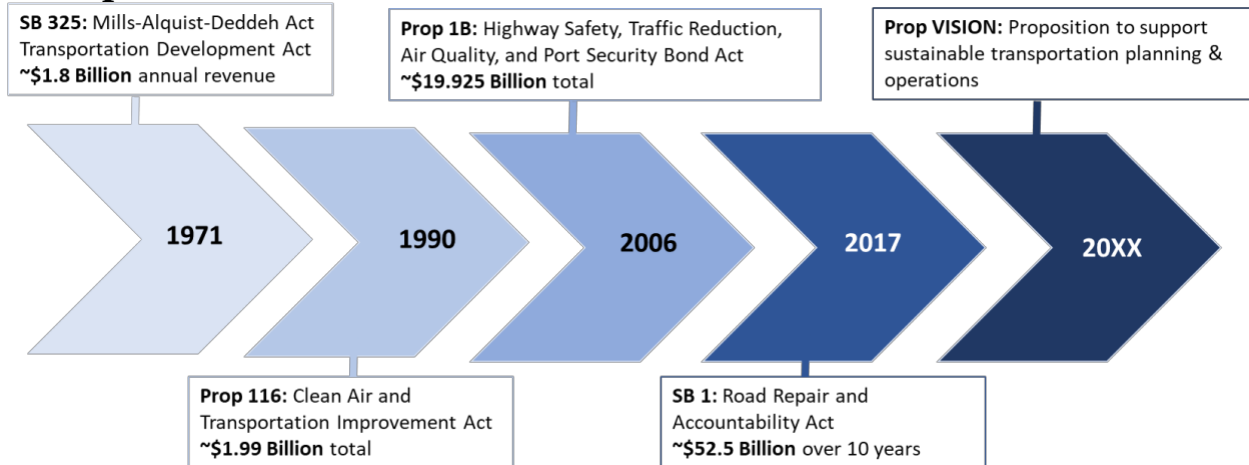
Recommendation 3.3: Lobby for the next state Proposition or Senate Bill for transportation funding

Figure 2.20 shows previous State propositions and senate bills that created a significant influx of funding into transportation programs in California. SB325 and Prop 116 focused more on transit, rail, and sustainable transportation methods, while Prop 1B and SB1 focused more on roads. SB1 was authorized for ten years, until 2027. As California looks to the future, transportation agencies need to advocate for a proposition or senate bill that provides this type of influx and funding for projects that meet the State’s climate change goals, namely transit and rail. A key focus should be to fund daily operations. Operations funding is less flashy devoid of the headline-making, ribbon cutting ceremony projects that are most easily sold by politicians and therefore more

⁹⁶ Barbour, Elisa. January 1, 2016. “Evaluating Sustainability Planning Under California’s Senate Bill 375.” https://journals.sagepub.com/doi/abs/10.3141/2568-04?casa_token=Oo1wW1BGUA4AAAAA:c1RLx2yQbKW_rMFYHrZGhKcbiKW-H9JDt6sV_Hu1_TOYthNRfeE4NI3VAFHgGKmwgYuo1hWNfo88S

easily passed through voter-approved tax referendums.⁹⁷ As such, the State is currently trending towards building large and expensive capital projects rather than much needed maintenance of existing infrastructure.⁹⁸ Prioritizing expansion instead of ensuring timely and consistent services particularly to transit dependent individuals, furthers the divide of modal equity of an already not an equitable system⁹⁹. The next proposition or Senate Bill must be committed to funding our sustainable transportation systems and centering social equity.

Figure 2.20. Prior State Propositions and Senate Bills that Funded Transportation



2.6 Summary

The transportation funding landscape is complicated and messy. It is challenging to trace exactly how funds flow from revenue sources to accounts to programs and finally to projects. Our analysis found that significantly more resources and funding support planning, building, operating, and maintaining the State highway system and roads as compared to transit and rail projects. Furthermore, programs like SHOPP create one streamlined process to plan and develop road and highway projects that can then access additional funding from the State and Federal governments for construction. On the other hand, there are few State programs that fund the planning phase of transit and rail projects, which makes it challenging to complete the necessary work to develop a project and cue it up to compete for Federal grants, which typically fund 80 percent of the estimated costs of construction phase.

Through the analysis, it is apparent that the State grant programs that provide funding for more sustainable transportation methods, such as rail and transit, are funded at a

⁹⁷ Reason Foundation. June 15, 2012. "Interview with University of California Los Angeles Professor of Urban Planning and Department Chair Dr. Brian Taylor." <https://reason.org/commentary/interview-with-university-of-califo/>

⁹⁸ Ibid.

⁹⁹ Blumenburg, Evelyn. Social equity and urban transportation. Chapter 13 in *The geography of urban transportation*, pp. 332-358.




much lower rate than highway and road projects. As a result, it is more challenging to identify funding sources for rail and transit projects, and there is significantly less funding and staffing available for these types of projects.

Table 2.3 shows the complete table of our recommendations, including the priority, timeline, type of action needed, and goals that they align with.

- High priority is defined as achieving two or more matrix goals and being the most impactful at increasing flexibility of finding funding for transit and rail projects in the State.
- Medium priority is defined as achieving one or more matrix goals and more impactful at increasing flexibility of finding funding for transit and rail projects in the State.
- Low priority is defined as achieving one of the matrix goals and a relatively smaller impact on securing funding for transit and rail projects in the State.
-

These recommendations provide tangible next steps, and in tandem collectively work together as a State to reimagine the transportation funding landscape from the bottom up and to streamline the plans and agencies involved.

Table 2.3. Summary of Recommendations

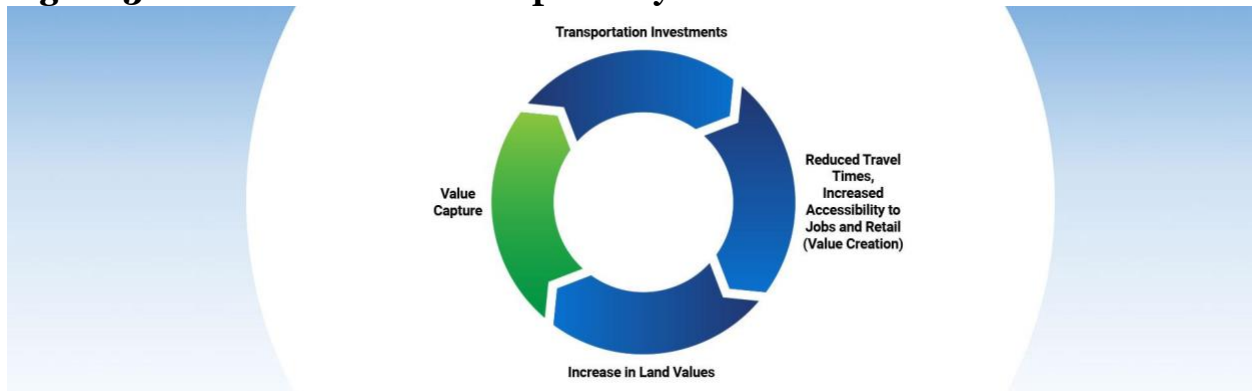
Recommendation	Priority	Timeline	Action	 Flexibility	 Equity	 Climate
1.1 Standard Grant Application	Low	Short-term	Administrative	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.2 Loosen Statutory Requirements for Motor Vehicle Revenue	Medium	Long-term	Legislative	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1.3 Expand eligibility criteria and increase flexibility on use of reliable fund streams	High	Short-term	Administrative	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2.1 Increase long term stable funding for programs focused on transit, rail, and active transportation	High	Long-term	Administrative/ Legislative	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2.2 Redistribute Staffing Resources at Caltrans	Low	Long-term	Administrative	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3.1 Reform SB 375 Sustainable Communities & Climate Protection Act	High	Long-term	Legislative	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3.2 Matrix of state funding alignment with stated goals	Medium	Short-Term	Administrative	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3.3 Lobby for next Prop or SB, identifying source(s) for increased transportation funding	High	Short-term	Administrative/ Legislative	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.0 Value Capture: Evaluation of Alternative Sources of Funding for Public Transit

3.1 Introduction

Public investments in infrastructure can lead to rising values in the surrounding areas, benefitting adjacent property owners.¹⁰⁰ When applied to transit, “Value Capture” refers to a broad set of mechanisms that allow transit agencies to recover this increased land value and reinvest it into system maintenance, operations and expansion. Imagine that BART is building a new subway station: the new station will provide the immediate benefit of expanding the BART system and give the residents and businesses around the new station greater transportation access. But there is an additional long-term effect; because people benefit from having easy access to jobs and amenities, that new BART station will likely raise property values of the surrounding neighborhood.¹⁰¹ This rise in property values rewards landowners who have the good fortune and resources to buy and own property in the right place at the right time.

Figure 3.1: The Transit Value Capture Cycle



Source: Federal Highway Administration

This section seeks to explore value capture through an equity lens using a series of case studies. Section 3.2 includes a review of Joint Development practices in Hong Kong, Washington DC and New York City. Section 3.3 explores Chicago’s application of Equitable Transit-Oriented Development (ETOD) principles. Section 3.4 touches briefly on the innovative use of Land Banking to enhance transit expansion and affordable housing development in Denver and Los Angeles. Section 3.5 describes existing value capture financing tools including special assessments, Mello-Roos districts, enhanced infrastructure financing districts, and tax increment financing. Section 3.6 reviews some theoretical challenges of California’s value capture tools. Lastly, Section 3.7 concludes with key takeaways that have been informed by an extensive literature

¹⁰⁰ Sagehorn, Derek, and Joshua Hawn. 2020. “Transit Value Capture for California.” Common Ground California. <https://cacommonground.org/>.

¹⁰¹ Mohammad et al., “A Meta-Analysis of the Impact of Rail Projects on Land and Property Values.”

review and nine interviews with transit agency staff, affordable housing advocates, transportation planners and scholars.

Racial equity is not a focus of this paper, but it should not be ignored that Bay Area cities, similar to many cities across the country, had redlining policies for much of the 20th century which prohibited Black and other communities of color from accessing mortgages and purchasing property. The effects of these policies are still felt today with white families owning property at a much higher rate than other families of color.

Transit agencies in the United States are perpetually in search of revenue sources to supplement farebox recovery, making value capture an enticing proposition. However, many structural challenges to value capture implementation exist and a robust policy framework is needed to mitigate the detrimental impacts often associated with increased land values such as gentrification, displacement and land speculation.

3.2 Joint Development

Joint development is a form of value capture that is increasingly used by transit agencies to leverage the economic value created by transit investments. Joint development typically includes complex financial agreements between transit agencies, real estate developers, and local governments. In the United States, transit agencies participate in joint development by contributing either property or funding, and benefit from the arrangements by receiving a share of the development revenues and an increased ridership base.¹⁰² The most advanced forms of joint development are practiced overseas, in places like Hong Kong. The Washington Area Metropolitan Transit Authority (WMATA) is considered the most proactive domestic transit agency in incorporating joint development into their expansion plans. Joint development can be risky, however, as we shall see in our Hudson Yards case study from New York City.

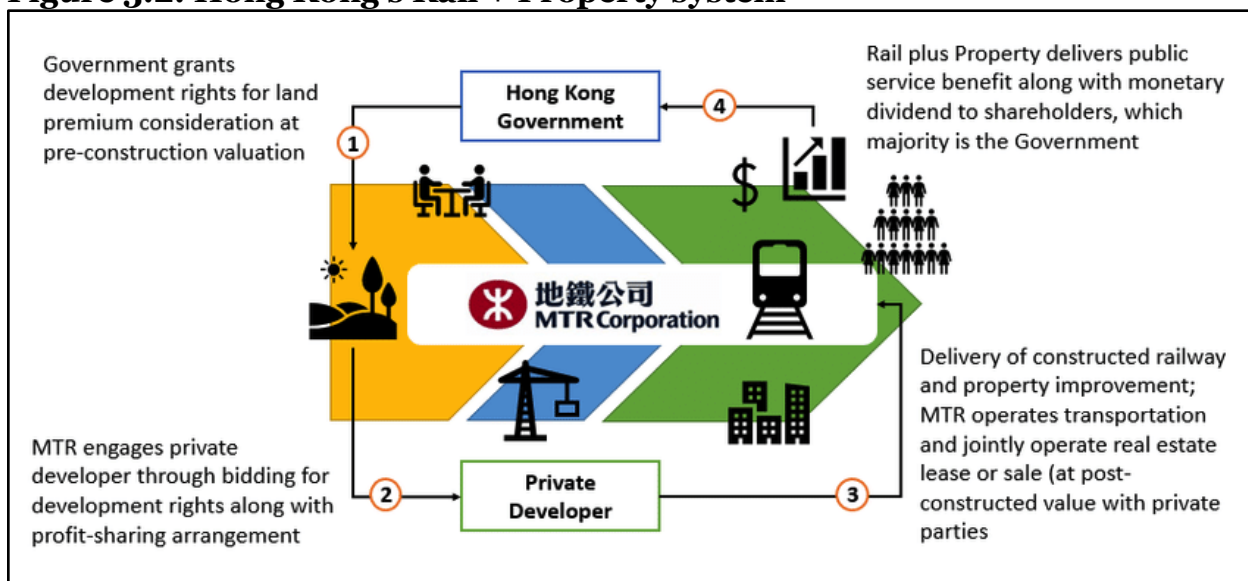
3.2.1 Hong Kong: Mass Transit Railway

Perhaps the most advanced form of joint development is the Rail and Property (R+P) system practiced in Hong Kong by the Mass Transit Railway (MTR). R+P relies upon the granting of exclusive development rights from the Hong Kong government for the land above and adjacent to its stations. This shields the company from purchasing land on the open market thus allowing MTR to capitalize on the full real estate development potential to generate income. The pairing of transit with housing, retail, office, and open space leads to higher real estate premiums which are then reinvested into the transit system for service delivery and expansion. Because of their strategic coordination of land use and rail, several of our interviewees remarked that MTR can be thought of as “a real estate developer that happens to also operate transit.” In fact, MTR’s extensive real estate portfolio accounts for more than twice the amount of income generated by user fares.¹⁰³

¹⁰² “What Is ‘Joint Development?’” Federal Transit Administration. n.d. Accessed December 3, 2022. <https://www.transit.dot.gov/faq/joint-development/what-%E2%80%9Cjoint-development%E2%80%9D>.

¹⁰³ Cervero, Robert, and Jin Murakami. 2009. “Rail and Property Development in Hong Kong: Experiences and Extensions.” *Urban Studies* 46 (10): 2019–43. <https://doi.org/10.1177/0042098009339431>.

Figure 3.2: Hong Kong's Rail + Property system



Source: Prakasa, Yoga, and Shiqi Zhang. 2019. "The Prospect of Implementing Rail-plus-Property Model in the Washington Metropolitan Area." Johns Hopkins University.

3.2.2 Washington DC: Washington Metropolitan Area Transit Authority

The Washington Metropolitan Area Transit Authority (WMATA) has a long history of using joint development to spur economic growth, support transit oriented development (TOD), and provide additional revenue streams for the agency. Since 1975, the agency's portfolio has grown to include 55 projects completed or under construction at 30 stations, totaling more than 31 square feet of mixed-use development.¹⁰⁴

In their recently published 10-Year Strategic Plan for Joint Development, WMATA established a goal to complete 20 new joint development agreements by 2032. According to the agency, future developments could generate 26,000 new housing units near transit and generate \$9 million new annual Metro trips, producing \$40 million in annual fare revenues and \$50 million in annual lease revenues for the agency. As transit agencies face uncertainty following the COVID-19 pandemic, advancing TOD strategies is a crucial part of WMATA's recovery.

Although each joining development project is unique, the NoMa-Gallaudet U Station provides an example of the complexities involved in WMATA's joint development process. The station opened in 2004 along Metro's Red Line, the result of a public-private partnership between WMATA, the federal government, the District of Columbia, and local landowners. The partnership created not only a new station, but a thriving mixed-use community in a formerly industrial area marked by abandoned warehouses, railroad yards and parking lots.¹⁰⁵

¹⁰⁴ "Joint Development." Washington Area Metropolitan Transit Authority. n.d. Accessed December 9, 2022. <https://www.wmata.com/business/real-estate/joint-development.cfm>.

¹⁰⁵ "NoMa: The Neighborhood That Transit Built." 2012. Urban Land Magazine. February 29, 2012. <https://urbanland.uli.org/development-business/noma-the-neighborhood-that-transit-built/>.

Figure 3.3: The NoMa District in Washington D.C. in the 1980s



Source: NoMa BID

Figure 3.4: The NoMa District in 2022 with NoMa-Gallaudet U Station at Left



Source: Bill Cobb, SkylineScenes.com

Ten million dollars in land was donated for the project, critically reducing property acquisition costs. Property owners within 2,500 feet of the future station agreed to increase property taxes through the formation of a special assessment district. A \$25

million general obligation bond funded project costs. The Federal government and the District of Columbia provided additional project funds. The District also adjusted zoning and design codes to allow for increased building height and density in areas adjacent to the new station.¹⁰⁶

Today, the NoMa-Gallaudet U Metro Station is an example of how TOD can catalyze transit ridership and spur regional economic growth. Since the station opened, nearly 21 million square feet of mixed-use development has been built or planned in the half mile surrounding the station. NoMa-Gallaudet U is Metro's 20th busiest station with over 2.6 million annual trips. The project has been a boon for the District as well, generating a three-fold increase in tax revenue from \$11.3 million in 2006 to a projected \$179 million in 2021.¹⁰⁷

3.2.3 New York City: Metropolitan Transportation Authority

The Hudson Yards project in New York City is one of the most expensive real estate developments ever built in the United States. It sits atop an open rail yard and includes large residential, commercial and office buildings, as well as a public park and the 34 Street-Hudson Yards Subway Station.

The project cost \$25 billion, including \$5.6 billion in public subsidies raised through a tax increment financing tool that raised upfront capital through a bond based on future revenues. However, because of negative economic trends caused by the Great Recession and the COVID-19 pandemic, the tax increment revenue did not meet expected forecasts, forcing the City to contribute general fund dollars to make up the shortfall.¹⁰⁸

Despite substantial delays, the first phase of the development was completed and opened to the public in 2019. The second phase is scheduled to open by 2024 and will feature a new public school, along with additional office, residential, and retail space. Champions of this megadevelopment are quick to identify the community benefits of the project: new housing, public art, and greenspace oriented around public transit. However, Hudson Yards has been controversial. Throughout the development timeline, many questioned whether the project was worth the costs, given the many causes worthy of additional funding in a city the size of New York.¹⁰⁹

¹⁰⁶ "FHWA - Center for Innovative Finance Support - Project Profiles." Federal Highway Administration. n.d. Accessed December 6, 2022. https://www.fhwa.dot.gov/ipd/project_profiles/dc_noma.aspx.

¹⁰⁷ "10-Year Strategic Plan for Joint Development." 2022. Washington Metropolitan Area Transit Authority.

¹⁰⁸ deMause, Neil. 2018. "Hudson Yards Has \$4.5 Billion In Taxpayer Money. Will We Ever See It Again?" Gothamist. October 11, 2018. <https://gothamist.com/news/hudson-yards-has-45-billion-in-taxpayer-money-will-we-ever-see-it-again>.

¹⁰⁹ Fisher, Bridget, Flávia Leite, and Rachel Weber. 2022. "Value Creation, Capture, and Destruction: Hudson Yards and the False Promise of Self-Financing Mega-Projects." *Journal of the American Planning Association*, June, 1–12. <https://doi.org/10.1080/01944363.2022.2026808>.

Figure 3.5: The Hudson Yards project in New York City in 2018



Source: PDK Commercial Photographers Ltd/AP/Shutterstock

3.3 Equitable TOD

TOD can bring many community benefits including increased transit ridership, more walkable communities, an increased tax base, and reduced Greenhouse Gas Emissions. However, TOD without an equity lens can exacerbate gentrification and displacement of existing residents. Equitable Transit Oriented Development (eTOD) policies are meant to be inclusive and achieved through comprehensive and meaningful dialogue with existing residents. eTOD is a strategy increasingly used by transit agencies, metropolitan planning organizations, and local jurisdictions to ensure that people of all income-levels experience the benefits of dense, mixed-use, pedestrian-oriented development near transit hubs.¹¹⁰

3.3.1 Chicago: Connected Communities Ordinance

An impact analysis of Chicago’s original TOD policy found a number of troubling outcomes. Between 2016 and 2019, 90 percent of TOD projects were built either in

¹¹⁰ “Equitable Transit-Oriented Development.” Metropolitan Planning Council. n.d. Accessed December 9, 2022. <https://www.metroplanning.org/work/project/30/subpage/5>.

Downtown or in more affluent neighborhoods on the North side. Undeveloped TOD-eligible sites near rail stations were found to be 40 percent more likely to be in areas with predominantly Black and Brown populations.¹¹¹ In short, the policy failed to stimulate investment in historically underserved neighborhoods on the South side of the city, reinforcing existing racial inequities.

In 2021, the city adopted a comprehensive eTOD policy plan, following an 18-month outreach process led by the eTOD Work Group representing city departments, Community Benefit Organizations, the private sector, philanthropies, regional nonprofits and government agencies. The plan provides a roadmap for the city to “advance racial equity, community wealth building, climate resilience and public health goals through equitable Transit Oriented Development.”¹¹²

Figure 3.6: Elevated "L" Train stops at State Street and Roosevelt Street, Chicago



Source: JW_PNW, Shutterstock.com

The plan presents over 40 recommendations including measures that emphasize the importance of building the institutional capacity to support eTOD, such as the dedication of city staff time under the direction of a new eTOD manager. Project evaluation criteria are included along with a mandate for annual performance reports to increase accountability. Finally, all strategies can be tailored to the local context during implementation, to better align with the city’s goal of facilitating development in

¹¹¹ “City Adopts ‘Equitable Transit-Oriented Development’ Plan.” Urbanize Chicago. June 18, 2021. <https://chicago.urbanize.city/post/city-adopts-equitable-transit-oriented-development-plan>.

¹¹² “Chicago Equitable Transit-Oriented Development Policy Plan.” 2021. City of Chicago.

historically disinvested communities, while striving to avoid displacement in neighborhoods experiencing accelerated investment.

The plan was codified in 2022 as the Connected Communities Ordinance, setting a new standard for eTOD in the United States:

- The ordinance more equitably distributes TODs citywide by doubling the area eligible for TOD incentives around transit stations and extending the area to include strategic bus corridors.
- New design guidelines were included to prioritize pedestrian and cyclist safety around transit hubs.
- Major efforts were included to encourage more diverse and affordable housing in every neighborhood. These strategies include eliminating parking requirements for affordable housing.
- The approvals process for affordable developments in high-cost areas was streamlined to require a simple up-or-down vote in the Zoning Committee.¹¹³

According to Roberto Requejo, executive director of the nonprofit Elevated Chicago: “The eTOD policy plan placed equity at the center of the way Chicago develops communities around transit infrastructure. This ordinance has teeth and makes equitable TOD the norm, rather than the exception.”¹¹⁴

3.4 Land Banking

Affordable housing advocates interviewed for this report cited the following challenges as the biggest obstacles for building affordable housing near transit: money, political will, and land. Over the past several years, communities have attempted to take a more direct approach to land use by establishing land banks – public authorities or nonprofit organizations created to acquire, hold, and redevelop property in order to meet community goals, such as the construction of affordable housing.¹¹⁵ Under the right circumstances, transit agencies could pursue land banking with the goal of creating eTOD thereby increasing the amount of land available for affordable housing and community services near transit.

In the United States, transit agencies today have very little land use authority. This changed recently in California following the passage of Assembly Bill 2923 in 2018, which gave BART greater authority to build housing on BART-owned land. However, transit agencies only own a small percentage of land in local areas and due to federal regulations, transit agencies are prohibited from purchasing land before completion of

¹¹³ “Connected Communities Ordinance.” 2022. City of Chicago.

<https://www.chicago.gov/content/dam/city/sites/etod/Pdfs/6-21-22-Connected-Communities-Ordinance.pdf>

¹¹⁴ “Chicago’s Proposed Equitable TOD Ordinance Would Fight Segregation and Car-Dependency.” 2022. *Streetsblog Chicago* (blog). June 4, 2022. <https://chi.streetsblog.org/2022/06/03/chicagos-proposed-equitable-tod-ordinance-would-fight-segregation-and-car-depedency/>.

¹¹⁵ “Land Banks.” n.d. Local Housing Solutions. Accessed February 14, 2023. <https://localhousingsolutions.org/housing-policy-library/land-banks/>.

environmental review under the National Environmental Policy Act (NEPA).¹¹⁶ As a result, transit agencies are unable to take advantage of the full potential of value capture because real estate speculators and others can purchase land adjacent to future transit developments faster than the agencies. However, there are examples of innovative partnerships between government, nonprofits and the private sector to acquire land with the purpose of enhancing public transit while delivering valuable community benefits like affordable housing.

In Denver, Colorado, the nonprofit Urban Land Conservancy (ULC) works with public and private sector investors to proactively acquire and hold properties in neighborhoods designated for future development alongside the growing regional rail network. The Denver Regional TOD Fund was created to supplement the efforts of the ULC. The fund has been used to build new affordable units and preserve existing affordable homes in station areas. As of 2014, the fund had been used to create 626 affordable homes, 120,000 square feet of commercial space and over 700 jobs.¹¹⁷

Figure 3.7: Evans Station, an eTOD project in Denver, Colorado



Source: “It’s Time for Equitable Transit Oriented Development.” 2020. *Streetsblog Denver* (blog). December 1, 2020. <https://denver.streetsblog.org/2020/12/01/its-time-for-equitable-transit-oriented-development/>.

¹¹⁶ Fernandez, Nuria I. 2022. “Dear Colleague Letter: Real Estate and NEPA,” July 11, 2022. <https://www.transit.dot.gov/funding/grants/dear-colleague-letter-real-estate-and-nepa>.

¹¹⁷ Campaign, Tri-State Transportation. 2014. “Land Banking: A Tool to Facilitate Equitable TOD.” *Mobilizing the Region* (blog). July 23, 2014. <http://blog.tstc.org/2014/07/23/land-banking-a-tool-to-facilitate-equitable-tod/>.

In Southern California, Los Angeles County has proposed establishing a regional landbank in an effort to support affordable housing programs and stem gentrification.¹¹⁸ As part of the recently approved LA River Master Plan, the land bank would allow the County to purchase and hold land along the river. The land would be kept out of the speculative market while public investments in river revitalization take place causing property values to rise.¹¹⁹

A similar approach has been proposed for transit, wherein the County would purchase land near future Metro projects for eventual sale to affordable housing developers.¹²⁰ These proposals, however, have not been without controversy. Shortly after the LA Metro Board of Directors voted to pursue land banking, the Federal Transit Administration issued a “Dear Colleague Letter” reminding transit agencies that acquisition of real property cannot occur until after the environmental review process is complete. Failure to comply with environmental review would jeopardize the agency’s ability to use federal funds on future transit projects.¹²¹ Although LA Metro was not specifically named, the letter served as a reminder that without legislative changes, transit agencies remain limited in their authority to develop land around stations.

¹¹⁸ Christensen, Jon, and Sissy Trinh. 2022. “Op-Ed: Can the L.A. River Be Rejuvenated without Displacing Low-Income Communities?” Los Angeles Times. June 6, 2022. <https://www.latimes.com/opinion/story/2022-06-10/los-angeles-river-master-plan-affordable-housing-land-bank>.

¹¹⁹ “LA River Master Plan.” 2022. Los Angeles County and Los Angeles County Public Works.

¹²⁰ Brasuell, James. n.d. “Land Banking to Prevent Transit-Oriented Displacement in Los Angeles.” Accessed December 10, 2022. <https://www.planetizen.com/news/2022/06/117617-land-banking-prevent-transit-oriented-displacement-los-angeles>.

¹²¹ Fernandez, Nuria I. 2022. “Dear Colleague Letter: Real Estate and NEPA,” July 11, 2022. <https://www.transit.dot.gov/funding/grants/dear-colleague-letter-real-estate-and-nepa>.

Figure 3.8: The La Cienega Boulevard Station in downtown Los Angeles



Source: Mel Melcon, Los Angeles Times

Figure 3.9 Property Taxes: Ad Valorem

Sample Annual Property Tax Bill

Property Owner Information		Detail of Taxes Due			
Property ID: 1234567 Mailing Address: Doe, Jane 1234 ABC Street Sacramento, CA 00000		Agency	Rate	Amount	(B) (C) (D)
Property Valuation on Jan 1, 2012		General Tax Levy	1.0000	\$3,500.00	
2012-13 Roll	Assessed Value	Voter-Approved Debt Rates			
Land	\$115,000.00	City	0.0201	\$70.35	
Improvements	\$242,000.00	Water District	0.0018	6.30	
		School District	0.1010	353.50	
		Community College District	0.0102	35.70	
Total	\$357,000.00	Direct Levies			
Less Exemptions	\$7,000.00	Sidewalk District Assessment		\$9.36	
Net Assessed Value	\$350,000.00	Flood Control District Assessment		64.39	
		Street Lighting District Assessment		12.71	
		Mello-Roos District		86.51	
		School District Parcel Tax		125.00	
		Total Taxes Due		\$4,263.82	
		1st Installment		\$2,131.91	
		2nd Installment		2,131.91	

Source: Legislative Analyst's Office¹²²

¹²² Legislative Analyst's Office, "Understanding California's Property Taxes."

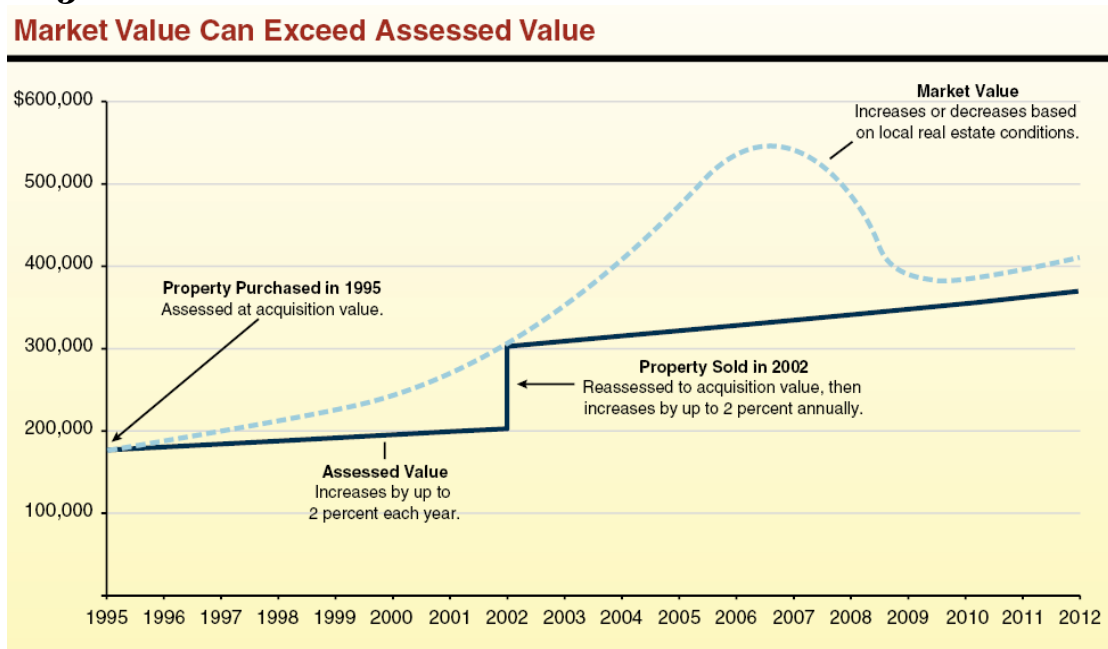
3.5 Existing Value Capture Financing Tools

Governments can use geographically based taxes and financing districts to divert some of that new value to help fund more public projects. Local governments in California currently have some value capture tools to raise revenues through taxation and financing for public projects but the legal landscape places many conditions on using these tools which prohibits localities from using value capture to its fullest extent. This section will outline existing value capture tools - property taxes, special assessments and enhanced infrastructure financing districts- and raise legal and ethical shortcomings of their current use.

Local governments' primary value capture mechanism is the property tax. This tax serves as a major revenue source for cities, counties and other special districts. Property taxes are an annual tax, calculated as a percentage of the assessed value of a given property which is based on the estimated cost of the land and the improvements (like buildings) made to the land. Simply put, if a piece of land becomes more valuable, the property owner must pay more money in taxes. Property tax can act as a value capture mechanism because of the ways that public investments capitalize into private property.

Considering the new station example, if BART builds a new station, the properties immediately surrounding the station will likely increase in value because of the access to a new amenity. In this case, the surrounding properties would then also generate more money in taxes, recapturing some of the value generated by the new BART station to be used for public purposes.

Figure 3.10 Market Value and Assessed Value



Source: Legislative Analyst's Office¹²³

¹²³ Legislative Analyst's Office.

Most states assess their properties every one to five years, which ensures that properties reflect current market values. California uses a different system put in place by Proposition 13, a constitutional amendment passed by California voters in 1978.¹²⁴ Proposition 13 sets a cap of one percent on the total property tax rate and also changes the way that California assesses property values. Rather than reassessing the property every one to five years, California changed its assessment process by setting the assessed value for a property as the purchase price for the property and then limiting the annual rate that assessed values could increase to two percent. This change in assessment has had the effect of separating the assessed value of a property from the actual market value.

This separation of assessed rates from market rates reduces the ability for California's property taxes to act as a value capture mechanism. While a new BART station would raise the market values of properties in the neighborhood, local governments will not realize the full value capture gains until all of the properties in the neighborhood are sold to new owners. There have been many attempts to reform Proposition 13, including a failed voter referendum to institute a different tax assessment schedule to commercial properties, but until the state reforms, California's property tax will continue to serve as an ineffective value capture method.¹²⁵

3.5.1 Special Assessments and Mello-Roos Districts

Because of the limits imposed by Proposition 13, California cities and public agencies often rely on **assessment districts** and **community facilities districts**, also known as **Mello-Roos districts**, to raise funds for basic infrastructure and neighborhood improvements. There are slight differences between these two types of districts (see the Funding and Financing section of the [Third Crossing Studio](#) report) but they both create boundaries that impose a special fee that can be used to build, improve and maintain infrastructure like public transportation. To impose these added fees, special assessments must provide a special benefit to the residents living within the district. Governments can often use these sources for long-term bonds, raising money for capital investments.

Special assessments work as value capture by connecting the cost of local improvements to the people that will benefit the most. A special district for a new BART station could be created around a half-mile radius, targeting the people that would get the greatest accessibility gains from the new amenity. The new fees would recapture some of the added value gained by the properties surrounding the new station and channel that revenue into maintaining and improving the station.¹²⁶

California has specific laws around how to create these special assessments that make it difficult to impose these assessments on a large scale. Proposition 218 of 1996, a follow up ballot measure to Proposition 13 approved by California voters, made it more difficult to create special assessments by requiring agencies to prove that there is a

¹²⁴ Legislative Analyst's Office.

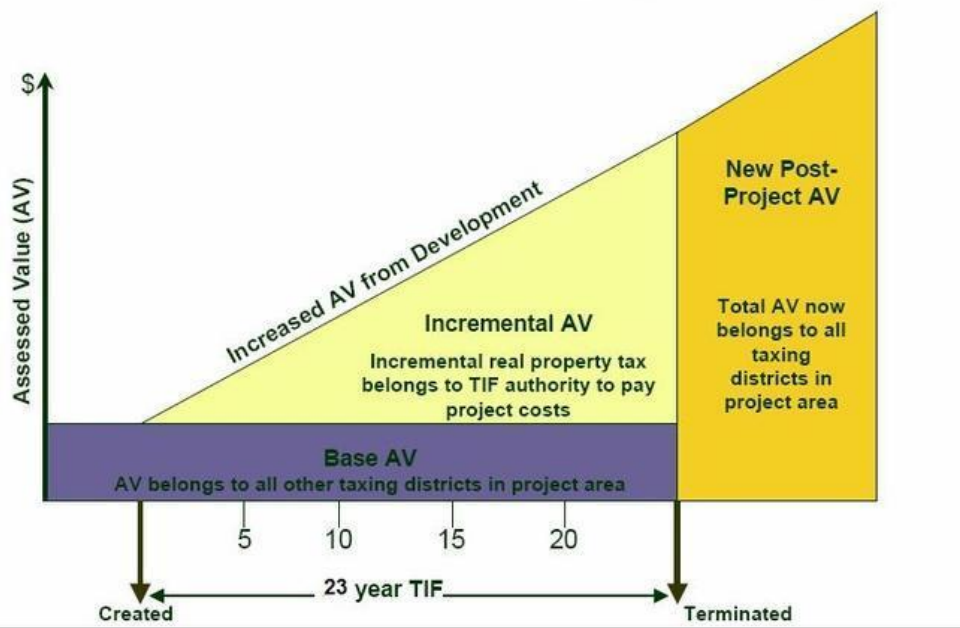
¹²⁵ Myers, "California Voters Reject Big Changes to Landmark Property Tax Measure Prop. 13."

¹²⁶ Korngold, *Land Value Capture in the United States*.

strong nexus between the benefits provided to property owners (in part through expected property value appreciation) and the infrastructure or service being provided. Proposition 218 also established the voter threshold of two-thirds voter approval before instituting a new special tax, creating a high bar for passage.¹²⁷ At the same time, Proposition 218 made it easier for residents to repeal local taxes and requires that governments prove that any disputed fee or assessment charge is legal.¹²⁸ While special assessments and Mello-Roos districts are used in California, they are difficult to implement and are easiest to use when the benefit is clear and the district area is small. The scale of a major infrastructure project like Link21 would be challenging to both show localized benefit while also persuading the two-thirds majority of voters necessary to self-impose an additional tax.

3.5.2 Enhanced Infrastructure Financing Districts

Figure 3.11 TIF Assessed Value (AV) Over Project Life



Source: CivicLab 2012¹²⁹

Propositions 13 and 218 have significantly reduced the potential use of value capture through general and special taxation pushing local governments to find other methods to raise revenues. **Enhanced Infrastructure Financing Districts (EIFDs)** use a financing method known as **tax increment financing (TIF)** to raise upfront capital for targeted geographic infrastructure investments. Unlike the earlier examples of property taxes or special assessments, TIFs are not “fee-based” meaning they do not

¹²⁷ Transportation Planning Studio, “The Third Crossing: A Megaproject in a Megaregion.”

¹²⁸ Legislative Analyst’s Office, “Understanding Proposition 218.”

¹²⁹ “How Do TIFS Work?”

raise money through adding new tax revenue; instead TIFs sequester pre-existing tax revenues (often property tax revenue) of a specific geography.

TIFs raise this money by drawing boundaries for a TIF district and then setting a “base year” value for the property within the district. Any increase of tax revenues above what was collected in the “base year” are set aside to be invested within the district. This increase of revenues above the “base year” is known as the “increment.” TIFs look to generate value by bonding this increment and then using that money to pay for infrastructure investments, like a new BART station, that increase property development and sales more rapidly, triggering reassessment of property values within the district and increasing the total amount of tax revenues.¹³⁰

EIFDs were created to replace Redevelopment Agencies in California, which were eliminated by Governor Jerry Brown and the state legislature in 2012 to help fill a state budget shortfall.¹³¹ EIFDs give local governments, including special districts like BART, the power to create TIF districts to pay for new infrastructure investments but they are more limited than the Redevelopment Agencies. Whereas Redevelopment Agencies were able to leverage the whole tax increment beyond the base year, EIFDs are only able to use the incremental revenues from cooperating cities, counties and special districts.¹³² EIFDs could be created around the sites of new capital investments from Link21 to raise additional revenues, but BART would need to coordinate and secure agreements from partner cities, counties and/or special districts to raise the revenues necessary to be significant for large scale projects. Also, while EIFDs are able to form from governmental agreements, California law requires a 55 percent voter approval within the district before EIFDs can issue bonds.¹³³

TIFs like EIFDs are sometimes considered to be value capture tools because they divert revenue from real estate appreciation that may be due to public investment, but they deal more with the distribution of public resources rather than capturing additional value. TIFs do not raise money by levying additional taxes. Consequently, the general public does not “capture” more of the value created by public investments than it would without the TIF districts.¹³⁴ TIFs may be able to grow the pie of total tax revenue by stimulating new growth within the boundary, but the public does not gain a greater proportional share of the new value. This distinction is especially important because local governments still need to provide the basic services that are expected for all residents across the city. Despite their theoretical and practical flaws, TIFs provide local governments with access to up front capital that can be used to significantly improve public infrastructure in targeted areas.

3.5.3 Equity TIFs

While EIFDs fall short of a full value capture tool, the ability to target geographic areas provides local governments the opportunity to redistribute tax revenues more equitably

¹³⁰ Laurel et al., “Primer on California’s New Tax Increment Financing Tools.”

¹³¹ Taggart, “Explainer.”

¹³² Day, “A New Financing Tool for California.”

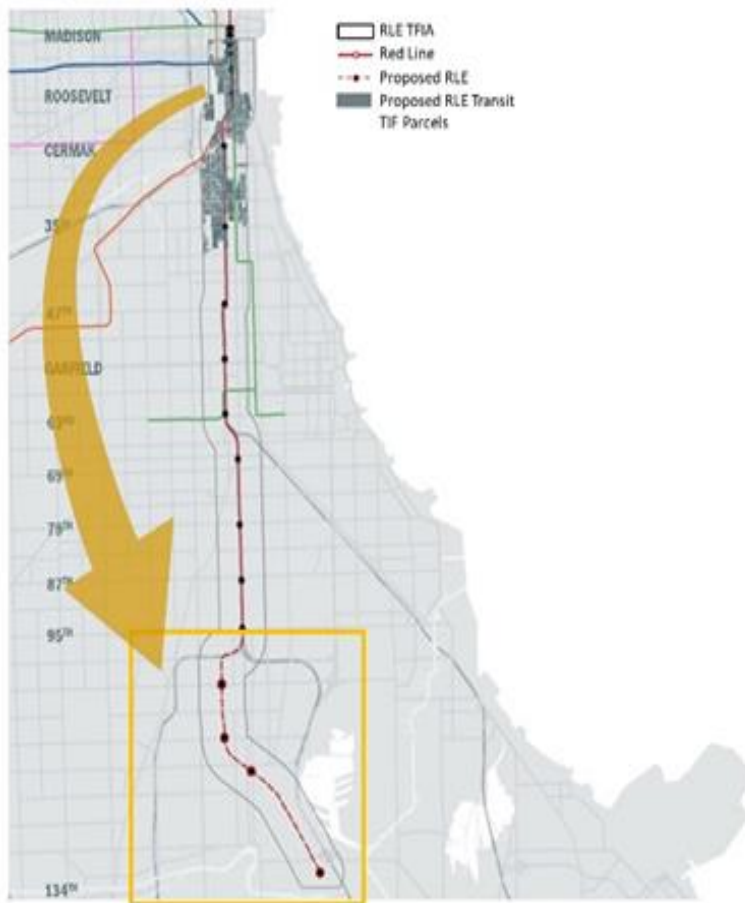
¹³³ Laurel et al., “Primer on California’s New Tax Increment Financing Tools.”

¹³⁴ Merriman, *Improving Tax Increment Financing (TIF) for Economic Development*.

across a metropolitan region. The key to these equitable efforts comes from EIFDs ability to create districts that are not geographically contiguous.

Recent efforts in Chicago showcase this potential through the proposed Red Line Extension TIF by the Chicago Transit Authority (CTA) in what they are calling an “equity TIF.” The proposed TIF would set up a Transit Facility Improvement Area (TFIA) and a Redevelopment Project Area (RPA). The TFIA boundaries can be no more than a half mile from a transit station or proposed right of way. Within the TFIA the City can then set up an RPA also known as a TIF district. Eighty percent of the new tax increment generated in the RPA (excluding the portion allocated to Chicago Public Schools) can be used to fund the development of “new Transit Facilities, expanding or rehabilitating existing Transit Facilities, or both.”¹³⁵

Figure 3.12 Proposed RLE Transit TIF



Source: City of Chicago, Cook County, Esri, HNTB, SB Friedman

Source: City of Chicago 2022¹³⁶

¹³⁵ “Red Line Extension Redevelopment Project Area- Tax Increment Financing Redevelopment Plan and Project.”

¹³⁶ “Red Line Extension Redevelopment Project Area- Tax Increment Financing Redevelopment Plan and Project.”

The TFIA and RPA function as a geographic property tax revenue transfer. Revenues from the wealthier downtown and near southside property tax gains would fund the extension of the red line to the far south side, which is a lower-income neighborhood currently without a subway connection. This TIF looks to address equity of opportunity by transferring revenues from transit rich areas to transit poor areas, giving southside Chicago residents more access to job centers downtown and the wider transit network.¹³⁷ BART and Link21 could follow this example and look into partnering with other Bay area Cities to set up non-contiguous EIFDs. The goal of this type of program would be to connect areas currently experiencing development to support transit expansion and affordable housing development to areas with less transit access that could also be at risk of displacement from gentrification.

3.6 Theoretical Challenges of California's Value Capture Tools

Aside from the legal and implementation challenges, California's value capture tools also come with larger ethical and social equity questions, especially if these tools are being used to directly fund capital infrastructure investments. Value capture supposes that land value will definitely increase due to infrastructure investments, which is true on average but not uniformly. Different infrastructure projects can cause variations of when properties experience land value growth as well as the total amount of growth that is attributable to the new infrastructure, as described below.¹³⁸

3.6.1 Challenges of special assessment and Mello Roos districts

Some projects cause property values to experience growth at the point of project announcement, which is ideal for value capture, but others do not cause property value growth until construction commences or even until project opening. The difference in the timing of property gains poses unique problems for special assessments and Mello-Roos districts. Special assessments are instituted to help fund the construction of the new infrastructure, which precedes the value growth of properties within the district.

Because the amount of growth is unknowable at the start, assessment districts will often use a "cost method" which looks to recoup a proportionate amount of the project cost from properties within the district.¹³⁹ In addition, only a portion of the total benefits of the project will be capitalized into local land values, further increasing the uncertainty.¹⁴⁰ The uncertainty of value gain and assessment cost can lead property owners to believe that the added cost of the special assessments will not equal the projected project benefits. Mediating both real and perceived unfairness in the distribution of project benefits is especially important in California, which requires two-thirds voter approval to impose any special tax.

BART could look into policies that address this perception of fairness in assessment districts including backloading fees to after the new infrastructure is built and creating

¹³⁷ Prim and Harte, "Red Line Extension Is More than a Transportation Story."

¹³⁸ Terrill and Emslie, "What Price Value Capture?"

¹³⁹ Zhao and Larson, "Special Assessments as a Value Capture Strategy for Public Transit Finance."

¹⁴⁰ Terrill and Emslie, "What Price Value Capture?"

eligibility conditions for applications to defer payment of assessments until the sale or transfer of property, but these may not be enough to assuage the concerns of property owners.¹⁴¹ More broadly, if a value capture strategy relying on special assessments is applied only to new infrastructure, property owners within the new districts could view their new added fee as unfair, if it is not also applied to property owners currently served by a public utility (e.g. BART).

By imposing additional costs on living close to a transit station, special assessments penalize people that live close to (and hopefully use) transit which comes with positive externalities, which are indirect benefits to the larger community. This benefit includes reducing traffic congestion for drivers as well as positive environmental benefits like the reduction of air pollution and the emission of greenhouse gases. This special assessment method operates in contrast to our highway system which receives significant federal and state support, essentially socializing the cost of maintaining and expanding the federal highway system (see Section 2 of this report for details on federal and state transportation funding). By focusing only on the areas around transit stations to raise funding, we put a larger burden of the costs on potential transit users while ignoring people and places that might have a greater environmental impact and/or greater ability to pay for transit infrastructure.

3.6.2 Challenges of EIFDs

TIF districts like EIFDs are sometimes considered to be value capture tools because they divert revenue from real estate appreciation that may be due to public investment, but they deal more with the distribution of public resources rather than capturing additional value. The difference between TIF and broader taxation methods of special assessments of property taxes is that the general public “captures” no more of the value created by public investments than it would without the TIF districts. TIFs may be able to grow the pie of total tax revenue, but the public does not gain a greater proportional share of the new value. This is especially important because local governments are still going to need to provide the basic services that are expected for all residents across the city. In addition to the challenge of revenue diversion within cities, TIFs also have been shown to increase competition for economic growth between cities and localities. This can create a reshuffling effect, encouraging a business to move into the TIF district even though they were already planning on expanding within the region.

TIFs also bring a level of speculation to public finance that can risk potential future general revenues. The risk in question comes from bonds based on the speculative growth in property tax revenue. Actual growth might not meet projections, leaving the EIFD’s local government sponsor’s general fund to cover the costs of bond payments. There are many examples of redevelopment projects that failed to attract the investment necessary to pay off the TIF bonds. For example, the City of Costa Mesa used \$62 million of RDA funds to demolish several buildings and construct a new mall in.¹⁴² The project was expected to generate \$1 million in sales tax revenue annually, but the city generated only one fifth of the anticipated revenues and most anchor tenants have

¹⁴¹ Terrill and Emslie.

¹⁴² “Redevelopment Wrecks: 20 Failed Projects Involving Eminent Domain Abuse.”

pulled out of the project, leaving the mall largely vacant. Despite the failure, Costa Mesa is still responsible for repaying the bonds secured to pay for the investment.¹⁴³

While Link21 would be looking to invest in infrastructure rather than direct economic development, EIFDs in support of the project will still rely on many outside factors to ensure that property growth can pay for TIF bonds.

3.6.3 Proposition 13 and Property Tax Reform

Proposition 13 poses one of the most significant challenges to funding public services like transit. Not only do governmental entities like BART lose out on property tax revenue because of the one percent tax cap and two percent annual assessment growth, they are also unable to easily raise funds through location-based value capture tools like special assessments and community facilities districts. Reforms on the use of tax increment financing that replaced Redevelopment Agencies with weaker EIFDs further limit local government’s abilities to raise up front capital. These challenges point to the need for a deeper statewide reconsideration of Proposition 13.

While a full repeal and replacement is not part of the current mainstream political conversation, there has been some discussion of reforms to Proposition 13. Most recently an assembly constitutional amendment (ACA-1 of 2022) was proposed in the California Legislature that would reduce the voter requirement from 66.6 percent to 55 percent of voter approval to levy a new special tax, making it easier for local governments to propose local bond measures and create special assessment and community facilities districts. This bill has been introduced to the legislature and is still active. Another reform option is to adopt a “split role” that would maintain Proposition 13 protections for residential properties but would subject commercial and industrial properties to market rate assessments. While a ballot measure that included this reform, Proposition 15, failed in 2020, the vote was close and a future citizen initiative may be more successful. While Proposition 13 reform will require large coalitions across the state, Link21 can advocate and build power in support of reforms to Proposition 13 to raise funds for future projects. See Section 2.5 for a full list of recommendations related to transit funding.

On a larger scale, Link21 and the megaregion can look to reforming the property tax system by considering a potential land value tax. Currently, property taxes tax the cost of the land as well as the improvements built upon the land equally. In practice, this raises the tax liability of properties with more improvements, which creates a disincentive for property owners to develop their properties to their highest uses. In contrast, a land value tax would maintain (or even increase) the tax on a parcel’s land value while eliminating the tax on improvements, producing what is known as an “efficient tax” that cannot be avoided or shifted to others. A nine county or even 21 county land value tax could offer policy makers a new continuous fund for infrastructure improvements and operations, but any tax increases would require a two thirds majority of voters.

¹⁴³ Blount et al., “Redevelopment Agencies in California: History, Benefits, Excesses, and Closure.”

3.6.4 Alternative Option: Pricing Behavior

Link21 will likely be a transformative project with the potential to reshape Northern California's transportation ecosystem. While value capture has some potential to raise revenues for infrastructure, the theoretical and practical flaws of California's current value capture tools limit its full potential. Other sources of new revenues, like the use of behavioral pricing, are options that may be better suited for the current project. While these sources are outside of the scope of this project, we want to briefly highlight the potential benefits of behavioral pricing and reforms to Proposition 13 and the wider Property Tax system in supporting Link21's goals.

Behavioral pricing originates with Arthur Pigou, a 20th century economist who argued that "an authority of wider reach should intervene to tackle the collective problems of beauty, of air and light."¹⁴⁴ He found that the social cost of a good or service does not always equal the market cost and identified the difference as "an externality" and proposed correcting these externalities through taxes or subsidies. Our modern auto-reliant transportation system contains negative externalities that are mostly unaddressed including emissions from vehicles, increased congestion, and traffic collisions. These negative externalities are not distributed equally, with lower income communities of color often shouldering the burdens of pollution and unsafe infrastructure. At the same time, public transportation systems have the potential to create positive externalities by diverting car trips thereby reducing emissions and car congestion.

Negative externalities show that the individual cost of car trips is artificially low, compared to their social costs. Link21 and Bay Area governments can address these through pricing tools like bridge tolls, congestion pricing and vehicle miles traveled (VMT) fees. All three of these tools have been proposed in some form in the Bay area, and Link21 could expand on these efforts to help fund the next generation of public transit infrastructure.

3.7 Conclusions

As a concept, value capture has a lot of promise. New infrastructure has been shown to create increases in property values which is currently captured by the lucky property owners living nearby. At the same time, new infrastructure can increase speculation, causing property values and rents to inflate, pushing out lower income residents. In speaking with transit agency staff for this project, many noted the appeal of exploring value capture mechanisms to generate new revenue streams for public transit. Because these funds would not be tied to the farebox, they were seen as "money with no strings attached."

Despite the allure of building high density housing near transit, and its potential to provide a source for new ridership, strategies like joint development alone are not a panacea for solving the financial crises facing US transit agencies today or preventing harmful outcomes. Unfortunately, value capture taxation and financing tools as

¹⁴⁴ Pigou, *The Economics of Welfare*.

currently composed have many flaws. While Link21 should explore the use of all revenue sources available, without reform, California’s value capture tools will likely play a minimal role in funding this transformative project. Until necessary reforms are made, Link21 should look to alternative revenue sources like behavioral pricing for additional future revenues.

In the United States, joint development projects have historically generated much less revenue for transit agencies than user fares. For example, revenue from joint development projects were projected to account for roughly one percent of WMATA’s operating budget in 2022.¹⁴⁵ This contrasts with the R+P system in Hong Kong which has used real estate development as a catalyst to drive revenues and fund MTR expansion. International examples of joint development are useful for envisioning the transformative potential of aligning transit with real estate development. However, significant structural and political differences make models such as R+P challenging to fully replicate in the United States. For example, the Hong Kong government holds majority stakeholder status in the MTR granting the agency a level of land use authority not enjoyed by transit agencies in the United States.

Dr. Robert Cervero, UC Berkeley Professor Emeritus, has studied R+P extensively and in an interview for this report he discussed the disparities between the domestic and international approaches to joint development. These disparities can be partially explained by the understanding in much of the world that public transit is “fundamentally a quasi-public good.” This idea runs counter to common belief in the United States where, for the past century, transportation discourse has focused on infrastructure for private automobiles. For joint development to have more than a small impact on domestic public transportation finance, a fundamental shift is required that allows transit agencies to be more entrepreneurial, particularly when it comes to land use and development. Still, Dr. Cervero viewed the increasing willingness of transit agencies to explore the potential of value capture as a positive step towards better alignment between land use and transit.

In Washington DC, WMATA has doubled-down on joint development as a key part of its post-COVID recovery strategy. In Chicago, the City has worked closely with community stakeholders to ensure that social equity is placed at the forefront of future transit-oriented developments. Closer to home, the Bay Area’s Metropolitan Transportation Commission (MTC) recently passed a regional Transit-Oriented Communities Policy that provides equity-centered development guidelines for transit stations in the nine-county region.¹⁴⁶ Finally, transit agencies in Denver and Los Angeles are working closely with government partners to propose innovative strategies like land banking to ensure that future transit expansions will support, not displace, existing residents.

These changes may feel slow or incremental. However, as Dr.Cervero remarked, “Change is often evolution, not revolution.”

¹⁴⁵ “FY2023 Proposed Budget.” 2022. Washington Metropolitan Area Transit Authority.

¹⁴⁶ *Metropolitan Transportation Commission*. 2022. “MTC Adopts Landmark Policy to Promote Housing, Commercial Development Near Transit Stations,” September 28, 2022. <https://mtc.ca.gov/news/mtc-adopts-landmark-policy-promote-housing-commercial-development-near-transit-stations>.

Appendix A

State Transportation Funding Programs: Money Programmed Per Fiscal Year, Transportation Modes Eligible, and Phases Eligible

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